Incumbency Advantage, Money and Campaigns: A Note on Some Suggestive Evidence from Chile[*]

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Abstract

This paper uses a regression discontinuity design to estimate the causal effect of incumbency status on the unconditional probability of winning a mayoral election in Chile. Moreover, it studies how it varies over time and after a reform in the political campaign law that limited advertisement and modified the way in which campaigns were financed. I find a significant incumbency advantage only after the reform implemented in 2016. For the mayoral elections between 1996 and 2012, I do not find statistically significant advantage but in 2016 election being the incumbent increases significantly the unconditional probability of being elected by 38 percentage points. This finding suggests that the reform benefited the incumbents.

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1. Introduction

It is a well documented fact that a high number of incumbents in political positions subject to popular elections run for the same positions. These candidates running for reelection could possibly enjoy what has been called an incumbency advantage. However, it is known that a high percentage of reelection is not necessarily evidence of incumbency advantage given that elected candidates in first place may be of higher electoral quality than challengers. Nonetheless, many papers have estimated a causal effect of incumbency on electoral outcomes following a regression discontinuity design proposed in this context by Lee (2008) and documented a positive effect in congressional and mayoral elections, and under proportional and first-pass-the-post systems in developed countries such as Germany (Freier (2015), Hainmueller and Lutz (2008) and Ade, Freier, and Odendahl (2014)), Portugal (Lopes da Fonseca (2017)), US (Erikson and Titiunik (2015) and Ferreira and Gyourko (2009)), Ireland (Redmond and Regan (2015)), among others. In the case of developing countries, the results have been mixed. For example, a negative causal effect has been found for India (Uppal (2009)), Guatemala (Morales (2014)), and Brazil (Klašnja and Titiunik (2017)), whereas a positive effect is found in parlamentiary elections for Chile (Salas (2016)). The existence of an incumbency advantage can damage the equality of opportunity to access political positions and diminish the competitiveness of electoral races and political accountability (Carson, Engstrom, and Roberts (2007)).

The determinants of this advantage or disadvantage have been less studied empirically, although there are many options proposed in the literature, for example: access to resources, increased media presence, name recognition, redistricting, strategic entry and exit, political benefits from economic prosperity, the role of advertisement and campaign spending, legal restrictions to campaign contributions, ballot access, political parties in power, and secured pork-barrel spending in the incumbent's district. Recently some papers have also tried to explain the incumbency disadvantage previously mentioned in a theoretical principal-agent framework using the existence of corruption, weak parties, and term limits (Klašnja and Titiunik (2017) and Klašnja (2016)).

This paper adds to the two previously mentioned strands of literature. First it provides a causal estimate of the incumbency advantage in mayoral elections in a developing country such as Chile. This estimate assesses the effect of holding the position on the unconditional probability of being elected again in the next election. Second, I contribute to the literature of determinants of incumbency advantage by looking how it changes around a reform in the campaign rules applied in 2016, which limited advertisement, restricted some ways of private funding and increased public funding of campaigns. This was done in order to reduce the increase in spending and change the logic focused in publicity towards another focused on ideas and programmatic proposals. In addition, it adds to the literature studying the effects of advertisement on electoral outcomes (see for example da Silveira and de Mello (2011), and Goldstein and Ridout (2004)).

I find a significant incumbency advantage of 10-12 percentage points when estimating a model where the elections between 1996 and 2016 are pooled. However, when I estimate the effect separately for each election I find that there exist an incumbency effect only after the reform implemented in 2016. For the previous elections, I do not find statistically significant advantage but in 2016 election being the incumbent increases significantly the unconditional

probability of being elected by 38 percentage points. This finding suggests that the changes implemented in 2016 benefited the incumbents.

The paper is organized as follows. Section II describes the institutional setting and the campaign rules reform implemented in Chile since the 2016 election. Section III describes the data set and presents the methodology. Section IV reports the main results and discussion. Finally, section V has some concluding remarks.

2. Institutional Setting and Campaign Reform

2.1 Institutional Setting

In Chile, a municipality is an autonomous corporation in charge of the management of a commune or a group of communes. There are 345 municipalities and 346 communes. The municipalities are led by a mayor and a municipal council constituted by between 6 to 10 members according to its population, who are elected directly for a period of 4 years and can be reelected indefinitely. Since 2004, the mayor is elected by first majority system. Previously, for the elections of year 1996 and 2000, the elected mayor corresponded to the candidate with the highest number of votes that also belonged to the list with the highest number of votes or whom list had more than 30% of the votes. Otherwise, the mayor was the most voted member from the most voted list.[1]

2.2 Political Campaign Rules Reform in 2016

In March 2015, driven in part by several political-financing scandals,[2] the president of Chile created a committee of 16 members headed by the economist Eduardo Engel called "Comisión Asesora Presidencial contra los Conflictos de Interés, el Tráfico de Influencias y la Corrupción"[3] with the aim of proposing a list of administrative, legal, and ethical changes of immediate and medium term application in the field of business and public service, as well as the relationship between them.

In April 24 of 2015 the committee published a final report (see Engel et al. (2015)) with concrete proposals classified into 5 broad categories: Prevention of corruption; regulation of conflicts of interest; political financing to strengthen the democracy; confidence in markets; and integrity, ethics and citizen rights.

A group of proposals from the third category were adopted[4], which affect directly the mayoral elections.[5] In particular, the committee suggested to change significantly the way in

[1] This implies that in 1996 and 2000's election the vote shares of candidates are not the only determinant of victory (something required for a sharp regression discontinuity). However, in practice the winner is usually the candidate with most votes.

[2] These political issues were not directly related to municipalities, they were associated mainly to members of the parliament.

[3] "Committee advisoral of the president against conflict of interest, traffic of influences and corruption."

[4] Most of them through a law approved by 04/11/2016. A follow-up of adopted measures can be found in https://observatorioanticorrupcion.cl.

[5] The first category also included some proposals that affect mayoral elections such as: limiting the number of short term contracts, ban their use within 6 months before elections, limiting the increase in publicity spending before elections and limiting reelection up to two terms. However, none of these recommendations have been adopted.

which political campaigns were done, in order to reduce the increase in spending and change the logic focused in publicity towards another focused on ideas and programmatic proposals. This is a summary of the actions proposed and implemented:

With the goal of promoting equity in electoral competition: Increase the public support given to political candidates, reduce the limit of donations by natural persons to avoid capture, increase transparency in donations with the exception of small ones, and eliminate donations from juridical persons (i.e., firms) to political campaigns.

With the goal of promoting electoral campaigns focused on ideas: Clarify the definition of electoral propaganda to consider any public manifestation that seeks to position the name or image of a candidate or political party, clearly delimit the time in which the campaign is allowed, limit the space in which propaganda can be installed in public spaces, and restrict the size of the electoral posters used in campaigns.[6]

With the goal of increasing transparency and ability of control by the people: Establish ways in which citizens could denounce propaganda located in non-allowed places to the Electoral Service and the cost of taking propaganda out from non-allowed places would be discounted from the refund for campaign spending of candidates.

Additionally, the Electoral Service was also reformed to improve its independence and institutional capacity to serve its administrative role in organizing elections and inspecting how they are being realized or financed.

In sum, these changes imply that advertisement was somewhat limited while the funding of campaigns was restricted when originated from private sources but increased when originated from public sources.

3. Data and Methodology

3.1 Data

The data set comes from the Electoral Service, it is publicly available on their web site[7] and comprises six mayoral elections in Chile, which correspond to the years 1996, 2000, 2004, 2008, 2012, and 2016. These elections[8] are run to decide the mayor of these local governments in one ballot and the council of the local government in a separated ballot.[9] The data set contains the names of the candidates, commune, gender, votes including null and blank votes, political party, and electoral list of all the candidates running for the positions.

Table 1 shows the number of observations per election, within certain margin of victory, the number of mayors running for reelection and the number of mayors reelected in the next mayoral election cycle. From this table, we see that the number of incumbent mayors who run again has been stable in this period but the number of reelected mayors markedly increased in the election of 2016.

[6]Before this change, during campaign they used to locate advertisement in many public spaces.

[7]www.servel.cl.

[8]Since 2012 Chile has automatic registration and voluntary vote.

[9]Elections in year 1996 and 2000 used one single ballot to choose the council and mayor according to the system described in the previous section.

Table 1: Number of observations

	1996	**2000**	**2004**	**2008**	**2012**
Total	5470	4512	1243	1231	1159
5 % margin	202	146	129	152	126
4 % margin	164	129	106	111	95
3 % margin	124	90	83	79	73
2 % margin	89	59	58	52	48
1 % margin	45	32	18	22	20
Mayor running in next election	308	304	272	289	291
Reelected in next election	203	204	174	173	212

3.2 Empirical Strategy

Using mayoral elections in Chile, I study how incumbency status impacts the probability of winning the next election. To do so, I define the outcome $y^c_{i,t+1}$ as a dummy variable that takes a value equal to 1 if the candidate c (who run in election t at municipality i) was elected as mayor in year $t+1$ for municipality i and 0 otherwise. I adopt the approach suggested by De Magalhaes (2015) where the probability of interest is the unconditional probability of being elected, in other words, I do not compute the probability conditional on running for re-election.

The treatment is denoted by a dummy variable $d^c_{i,t} \in \{0, 1\}$, which is equal to 1 if the candidate c competing in the election of year t for major of the municipality i was elected in the election of the year t and 0 otherwise. I define a variable $m^c_{i,t}$, the running variable, as the difference between vote share of the winner and the runner-up when the candidate c is the highest voted candidate in municipality i but it corresponds to her vote share minus the highest vote share of the municipality i when she is not the winner. Hence the treatment is defined as:

$$d^c_{i,t} = 1[m^c_{i,t} > 0] \tag{1}$$

where 1[.] denotes an indicator function.

This set-up generates a discontinuity that can be used to identify the effect of the incumbency status using a regression discontinuity design following the methodological approach first applied in this context by Lee (2008). Assuming that candidates at either side of the cutoff 0 are comparable, I am able to estimate the "average treatment effect" at the cutoff 0, following what has been called the continuity-based RD approach (Cattaneo, Idrobo, & Titiunik, 2017).

I estimate this local treatment effect with a nonparametric strategy using a local polynomial approach, where the estimate is:

$$\hat{\tau} = \hat{\beta}_{+,0} - \hat{\beta}_{-,0} \tag{2}$$

with:

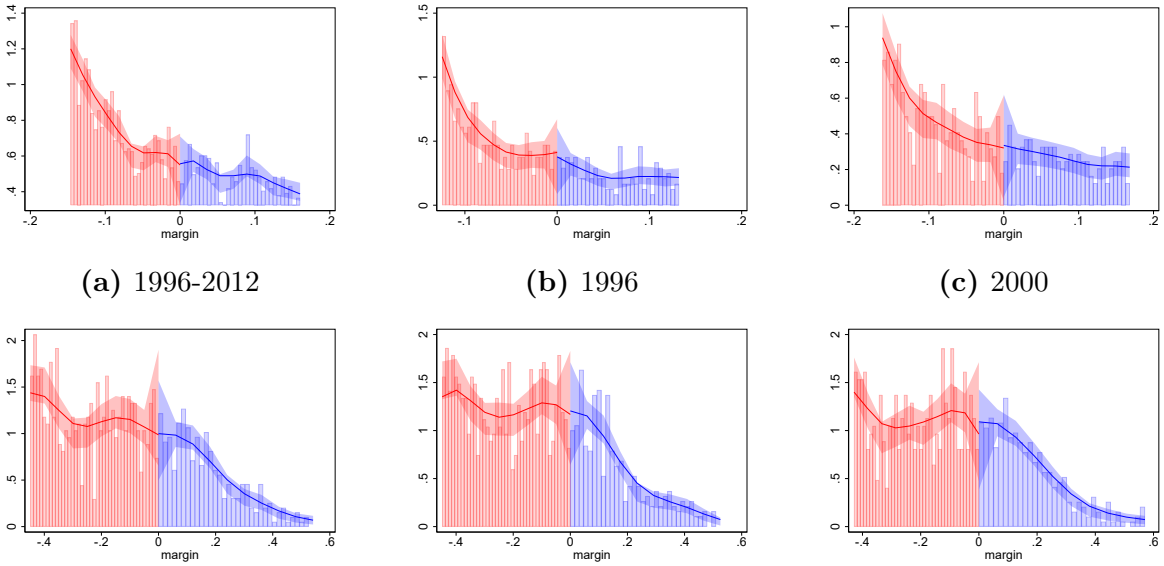
$$\hat{\beta}_{+} = argmin \sum_{i=1}^{n} 1(m_t > 0)(y_{t+1} - \beta_{+,0} - \beta'_{+,p} f^p(m_t))^2 K(\frac{m_t}{h})$$

$$\hat{\beta}_{-} = argmin \sum_{i=1}^{n} 1(m_t < 0)(y_{t+1} - \beta_{-,0} - \beta'_{-,p} f^p(m_t))^2 K(\frac{m_t}{h})$$

where $f^p(m_t)$ is a p-vector with the polynomial of a chosen order p on m_t, $\beta_{+,p}$ and $\beta_{-,p}$ are p-vector of coefficients, $K()$ is a chosen kernel that weights the observations, and h is a chosen bandwidth. The subscripts of candidate c and municipality i were omitted for simplicity.

Before moving to the results, I do two standard checks for robustness and validity of the regression discontinuity design. First, I run a density test where the null hypothesis is that the density of the running variable is continuous at the cutoff. Figure 1 reports a plot of the densities pooling the data and for each election separately. I do not observe clear discontinuities at the cutoff of the running variable and the null hypothesis is not rejected in all the cases.

Figure 1: Density test



(a) 1996-2012 **(b)** 1996 **(c)** 2000

(d) 2004 **(e)** 2008 **(f)** 2012

Second, I run a falsification test examining whether treated municipalities are similar to control municipalities near the cutoff in terms of observable characteristics. As reported in Table 2, I do not find discontinuities in the total number of candidates or in the total number of votes by municipality.

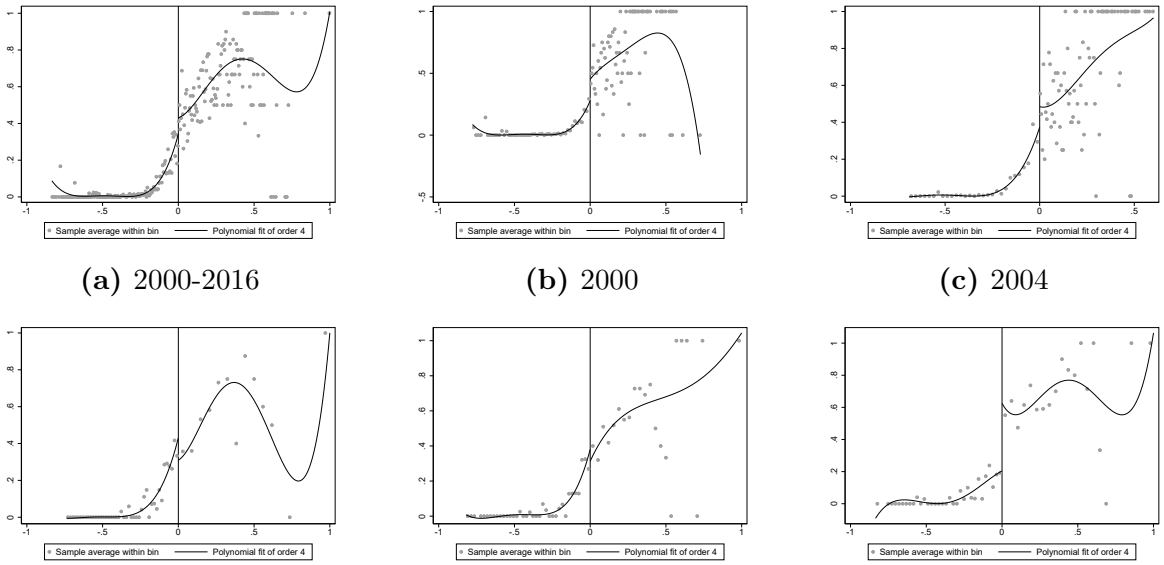
Table 2: Placebo test

	Coef.	s.e.	p.v.	Coef.	s.e.	p.v.
1996	-3179.46	5710.35	0.58	-1.03	1.27	0.41
2000	-683.66	5350.04	0.90	0.25	0.83	0.76
2004	-409.02	7353.36	0.96	-0.13	0.38	0.73
2008	-1523.52	5204.72	0.77	-0.09	0.37	0.81
2012	-195.89	4082.66	0.96	-0.01	0.26	0.95
2016	-1472.43	3950.91	0.71	-0.23	0.58	0.69
All	-618.72	2892.31	0.83	-0.44	0.77	0.57

4. Results

Figure 2 shows the standard regression discontinuity design plot fitted with a polynomial of order 4. Figure 2a shows the plot with pooled data from all the elections between 2000 and 2016, it can be seen that there is a jump around the threshold at 0. The other figures show the plot using data from each election separately. In the case of 2016 election there is a clear discontinuity but in all the other elections the evidence is less clear. All these estimations are done excluding observations where the running variable is higher than zero but the mayor was not elected because of a tie or the different rules in the first two elections. However, the results are qualitatively the same if they are not excluded.

Figure 2: Main results: Incumbency effect on the unconditional winning probability

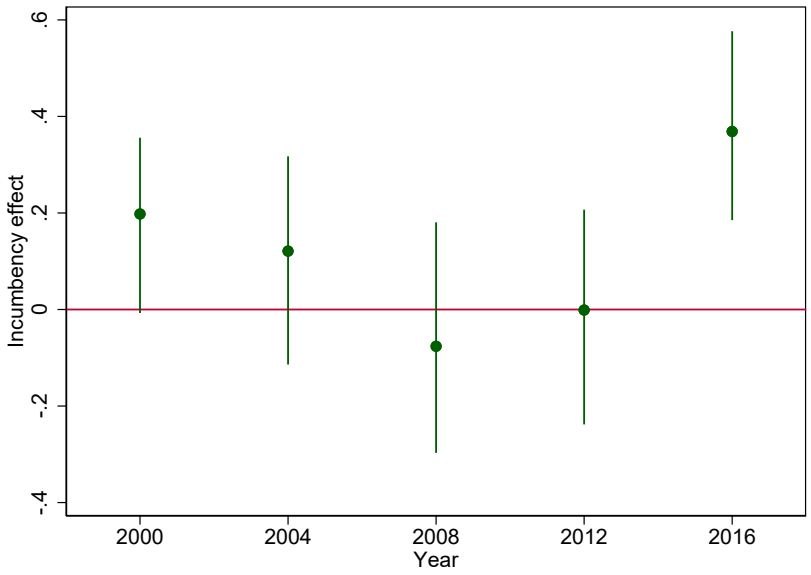


(a) 2000-2016 **(b)** 2000 **(c)** 2004

(d) 2008 **(e)** 2010 **(f)** 2016

Table 3 reports the nonparametric estimation using a local polynomial, a triangular kernel

Figure 3: Main results: Incumbency effect on the unconditional winning probability



and a data-driven optimal choice of bandwidth.[10] The first four columns report an estimate pooling all the elections, I find an incumbency advantage that ranges between 11 and 13 percentage points. However, when estimated separately (see Figure 3) I find that during most of the elections there is no statistically significant effect of the incumbency status but in 2016 election there is a significant incumbency advantage of approximately 38 percentage points. This difference highlights the potential heterogeneity hidden in the estimate when data from different elections is pooled[11] and suggest that the changes to the electoral law implemented in 2016 may have benefited the incumbents.

To put these numbers in context, the estimate in 2016 is similar to what has been recently documented for mayoral elections in western's Canada four largest cities (Calgary, Edmonton, Vancouver, and Winnipeg) by Lucas (2019) using the same methods. In addition, the increase in the magnitude of the advantage is comparable to the rise observed in the 1950s in Canada, which is attributed to a period of near-monopoly by non-partisan slating groups.

5. Concluding Remarks

This paper estimates the causal effect of incumbency status on the unconditional probability of winning a mayoral election in Chile using a regression discontinuity design. After estimating this effect with data from elections between 1996 and 2016, I analyze how the effect has changed over time to look at the potential impact of a reform that changed the campaign rules in 2016. The reform implied that political advertisement was limited while

[10] All the estimation was done using the package rdrobust in Stata (see Calonico, Cattaneo, and Titiunik (2014a)) and using robust standard errors following Calonico, Cattaneo, and Titiunik (2014b).

[11] Sekhon and Titiunik (2012) discuss this point.

Table 3: Main results: Incumbency effect on the unconditional winning probability

	2000-2016	2000-2016	2000-2016	2000-2016	2000	2004	2008	2012	2016
Coefficient	.116	.126	.133	.134	.177	.0987	-.0582	-.0156	.383
Standard error	.0495	.0509	.0536	.0573	.0927	.11	.122	.114	.1
p-value	.0194	.0135	.013	.0192	.0559	.37	.633	.89	.000137
N left	11884	11884	11884	11884	5122	4168	896	885	813
N right	1703	1703	1703	1703	334	338	343	344	344
Polynomial order	1	1	1	2	1	1	1	1	1
h left	.18	.161	.13	.251	.171	.173	.164	.176	.224
h right	.18	.155	.13	.251	.171	.173	.164	.176	.224

Notes: Standard errors are clustered by municipality.

the funding of campaigns was restricted when originated from private sources but increased when originated from public sources.

I find a significant incumbency advantage of 11-13 percentage points when estimating the model pooling all the elections. However, when I estimate the effect separately for each election I find that there exist an incumbency advantage only after the reform implemented in 2016. For the elections between 1996 and 2012, I do not find an statistically significant advantage but in 2016 being the incumbent increases the unconditional probability of being elected by 38 percentage points.

My findings suggest that the reform applied in 2016 in order to make the campaign more focused on ideas and programmatic proposals ultimately benefited the incumbents. In addition, it suggests that advertisement is an important tool used by challengers to overcome the advantages of the incumbent–at least in the context of local elections–as theoretical models of electoral competition assume (see for example, Pastine and Pastine (2012)).

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