

Disentangling the incumbent's advantage: New estimates of partisan and candidate separate effects*

Rodrigo Aguirre[†]

Matias Brum[‡]

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Abstract

This paper separately estimates individual and partisan incumbency effects for Uruguay's regional elections in 1971-2020. It contributes to a small but growing literature applying the novel method of Diff-in-Disc to solve endogeneity and bias problems, obtaining 'clean' effects estimated with the same underlying data and setting. To do so, it exploits constitutionally established term limits and strong electoral enforcement. Results yield a positive and significant individual incumbency effect of around 75 to 80 percentage points and statistically non-significant partisan effects. This suggests that the candidate 'owns' his voters' votes and sheds light on the intertwined relationships between parties, (potential) candidates and political parties.

Key words: Term limits, incumbent effect, dif-in-disc, Uruguay.

JEL classification: D72, H11, H70, R50

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[†]Departamento de Economía, Facultad de Ciencias Económicas y Administración, Universidad de la República. rodrigo.aguirre@fcea.edu.uy. **Corresponding author.**

[‡]Instituto de Economía, Facultad de Ciencias Económicas y Administración, Universidad de la República

1 Introduction

Political scientists have been studying incumbents' relatively high reelection rates (the so-called incumbent effects) for at least fifty years (Erikson, 1971; Jacobson, 1978), a phenomenon which has also attracted the attention of political economists more recently (Uppal, 2009; Redmond and Regan, 2015; Lee, 2008). Nevertheless the literature review shows that research first struggled with endogeneity issues when estimating 'naive' incumbency effects, and moved on to causal studies to estimate a set of parameters that are unbiased but cannot be fully or genuinely estimated as incumbent effects due to superposition of party and individual incumbencies.

To address this problem, this paper exploits term limits and applies the newly developed Differences-in-Discontinuities methodology to estimate independent and 'clean' partisan and candidate incumbent effects. The legal framework prohibits the re-election of Mayors after two terms, forcing 'legal open elections', which differ from 'de facto open elections' (incumbent *decides not to run* for re-election). Intuitively, Diff-in-Disc applies Regression Discontinuity Design to 'legal open' and 'closed' elections, and computes the difference to 'clean up' the individual incumbency effect from the partisan incumbency estimation. Uruguay is an ideal case for the application of this methodology: mandatory voting, impeccable electoral institutions, high democratic quality but facing typical Latin American woes (Altman and Pérez-Liñán, 2002; O'donnell et al., 2016; Bergara et al., 2006).¹

There are three main driving forces behind the study of incumbency effects. First, incumbency is related to attitudes regarding continuity versus change when considering society's decision-making processes. This motivation lies in the intersection of political science and economics, disciplines with significant theoretical contributions on how individual decisions and preferences are aggregated in a democracy (Arrow, 1950; Downs, 1957; Dahl, 2008). Democratic societies make important decisions through free and contestable elections that directly and indirectly affect the distribution of economic resources and political power (Acemoglu, 2003), and operate as a means of holding parties and individuals, accountable (Klašnja and Titiunik, 2017; Klašnja, 2015). Therefore, properly measuring the existence and magnitude of partisan and candidate incumbency helps in understanding the degree of discrimination or unfairness that may exist when deciding whether to keep or remove an individual or party from power, and thus the distortions that may exist when attempting to (re)distribute economic resources and political power. For example, incumbency is linked to low levels of economic development (Uppal, 2009), high corruption (Klašnja, 2015), differential access to information (Macdonald,

¹Mandatory voting, with a stable turnout rare above 90% prevents large fluctuations in the electoral influx and confidence in results, which adds to the strength of institutions and solves many empirical problems (e.g., addressing effects and/or controlling for turnout). In a nutshell, institutions are strong enough as to make fraud impossible, but Latin American enough as to allow pork barrel and petty corruption at the regional level: close elections are truly close but once elected, incumbents can manoeuvre to obtain advantages through legal (ethical or unethical) or illegal methods.

2014), electoral system rules (Ariga, 2015) and weak institutions (Klašnja and Titiunik, 2017).²

Second, obtaining properly estimated individual and partisan incumbent effects matters by itself. Comparison of correctly estimated individual and partisan incumbent effects with those obtained from ‘naive’ RDD estimation *using the same country, period, elections and institutional setting*, matters to understand the potential bias and error involved in previous estimates in the literature. Also, proper estimation of both effects matters in terms of understanding the complex relationship between candidates, parties, and voters. In other terms, one motivating force behind this paper is to compare partisan and candidate (properly estimated) incumbency effects, and thus *disentangle the relative weight that the electorate assigns to each when defining their vote*. In crass terms, if citizens vote for individuals and not for parties, candidates have greater bargaining power when internal political power struggles arise within parties. If citizens vote for parties, individuals are the ones who must work within party structures to be seen worthy of an election. Finally, the actual size of the effect matters as well: a large incumbent advantage suggests that the political system rewards candidates for good public service, or that voters prevent bad challengers from getting into office.

Third, proper estimation of incumbency effects is the first step towards better understanding the origins and mechanisms behind these advantages in the first term. The literature reviewed in the following section suggests four potential drivers of positive incumbent effects. First, an incumbent has an advantage over a challenger for the simple reason of being known by the electorate, just for the fact of already holding office.³ In a more detailed fashion, the incumbent may provide *constituency services*: by responding to the demands of the constituency and delivering on promises, the incumbent may be rewarded with further votes, as there is confidence and trust, as performance is an indicator of quality.⁴ Similarly, the incumbent may engage in *credit claiming*, passing public works of good performance that are accidental or orthogonal to the incumbent’s actions, as her own (Bickers et al., 2007; Grimmer et al., 2012). Finally, through *pork barrel* practices the incumbent may obtain advantages through sheer or sophisticated techniques of old fashioned vote buying.⁵ A properly estimated individual incumbent effect below or equal to zero would suggest none of these channels are working. Alternatively, an incumbent for whom the term limits are binding has incentives to misbehave and engage in corruption, embezzling and other illegal (or legal but unethical) activities since there is no

²For example, a strong individual incumbent effect should be taken into account for minority inclusion policies, as they could become an additional barrier faced by minority challengers.

³The first empirical studies on leadership were conducted in developed countries and focused on leadership at the candidate level (Erikson, 1971; Jacobson, 1978, 1990; Krasno and Green, 1988; Gelman and King, 1990). Most of them found positive effects attributed to the differences between incumbent and challenging candidates due to the benefit of the political and economic resources that the incumbents have at their disposal during the time of their management. Note also that incumbents may have an advantage in terms of obtaining funds and donations for their campaigns (financial incumbency, Fournaies and Hall (2014)

⁴See Cain et al. (1984) for an international review, and Chasquetti (2014) for the case of Uruguay.

⁵See Samuels (2002) for an international review, and Azar (2022) for the case of Uruguay.

possibility of punishment in the ballots. A properly estimated partisan incumbent effect above or equal to zero would suggest that this is not the case.

As can be seen, studies on incumbency are also motivated by, and are the first step in, understanding channels and mechanisms behind electoral advantages of incumbency. Besides, note how the second and third driving forces behind these studies make the topic relevant from a policy perspective, in terms of policy making and evaluation, and in terms of identifying how much room parties and candidates have for bad behaviour, evaluating strength or weakness of institutions, among others.

Though there is abundant empirical research documenting either individual or partisan incumbency effects through *non-causal* methodologies, causal studies are scarce. Briefly, studies can be traced back to the seminal work of Erikson (1971), while the causal revolution studies start with Lee (2008). The latter is the first study to apply Regression Discontinuity Design (RDD) to estimate incumbent effects exploiting -and giving rise to a literature- *close elections*. After this starting gun, there has been a significant increase in incumbency studies using RDD.⁶ Still, causal estimates from this literature tended to confound partisan and individual effects, even when they focused on only one of them. The literature estimating both effects in the same setting using the same sample and elections, with a methodology that ensures clean and separate estimation of both effects, is small and recent (Kendall and Rekkas, 2012; Fowler and Hall, 2014; Lopes da Fonseca, 2017; De Benedetto, 2020).

Note that in strict terms, only the previous four papers have adequately identified incumbency effects, finding positive individual effects and null to negative partisan effects, for the United States, Portugal, Italy and Canada. Results from previous studies are biased; still, in very general terms, results for developed countries find positive individual and/or partisan effects, while studies for developing countries find negative individual and/or partisan effects. We find a positive and significant individual incumbency effect of 73.7% (the incumbent candidate has a 73.7 percentage point advantage over the challenger when re-running for the position). We also find non-significant partisan effects. Our results are in line with the new Diff-in-Disc literature, but positive individual effects stand in contrast with (biased) results for developing countries. In other terms, results for Uruguay lie in the middle of precedents for developed and developing countries; this is consistent with strong electoral institutions and relatively good economic and social indicators, but negative Latin American characteristics, such as poverty, inequality, corruption, violence, crime, etc.

As stated, we address endogeneity concerns and provide clean estimates of both effects in the same setting by exploiting the advantages of Uruguay as a case study and exploiting term

⁶Focused on partisan incumbency (Ade et al., 2014; Ariga et al., 2016; Eggers and Spirling, 2017; Klačnja, 2015; Klačnja and Titunik, 2017; Macdonald, 2014) and individual incumbency (Ariga, 2015; De Magalhaes, 2015; Linden, 2004; Redmond and Regan, 2015; Uppal, 2009; Lee, 2016).

limits to apply Diff-in-Disc methodology. The paper makes three main contributions to different streams of the literature. First of all, results by itself are a contribution given the scarcity of empirical studies of this type and represent the third estimates in the literature of this sort and the first for a Latin American country. Our paper closely follows but also differs significantly from the small growing literature on the topic, as is discussed in the literature review. (Fowler and Hall, 2014; Lopes da Fonseca, 2017; De Benedetto, 2020; Kendall and Rekkas, 2012). In a nutshell, we follow closely Fowler and Hall (2014) and De Benedetto (2020). We depart from both as we recover separate incumbency effects for a Latin American developing country instead of a developed country (United States and Italy respectively). We differ from the former since we estimate effects for an executive rather than legislative position, and from the latter as we work at a regional instead of municipal level. Note although a Latin American developing country, Uruguay ranks as a full democracy.^{7, 8}

Lopes da Fonseca (2017) exploits the discontinuity given by close elections and a difference in time by exploiting the introduction of term limits to estimate a Diff-in-Disc, while in our case we do not rely on time variation as terms limits are present throughout the whole period; hence our Diff-in-Disc requires less assumptions regarding time invariances. Finally, Kendall and Rekkas (2012) estimate separate incumbent effects for the Canadian parliament based on the key assumption of no strategical exit. This assumption that is strong and not needed in our case since we exploit term limits. Hence in principle, our results should be more trustworthy than some of the previously estimated in the literature, based on weaker assumptions and obtained from a full democracy from a new region. To the best of our knowledge, it is the second paper to provide estimates of this kind (with proper separate causal estimation) for a developing country, after Klašnja (2015) for Rumania.⁹ Moreover, as voting is mandatory and turnout ranges 90%, it is also the first paper to estimate incumbent effects without considering turnout issues. Finally, note that the electoral system of Uruguay is based on the principle of proportional representation, in stark contrast with the cases of Canada and United States, two of the main related papers.

Moreover and in second place, extensions show differential results before and after a constitutional reform that separated (in time) national and regional elections and limited the

⁷Uruguay has a Polity IV score of 10 (full democracy) since 1989 (and above 8 for all elections considered in the estimations) according to the Polity IV Project (Marshall et al., 2019)

⁸Note also that Fowler and Hall (2014) focus on incentives for financial misbehaviour stemming from term limits. As separate contributions or differences with this paper, we mainly focus on obtaining clean separate estimates. We devote less effort to exploring the financial misbehaviour channel but also look at another channel, and estimate the effects of an institutional reform.

⁹Note that Cardarello (2011) provide an excellent description of the institutional context and nuts and bolts of the electoral and party systems in Argentina, Brazil and Uruguay. Note that the author present valid descriptive statistics but that do not represent a precedent in terms of causal estimation of incumbent effects (the author merely computes the proportion of times in which a candidate that runs for re-election is actually re-elected, omitting endogeneity issues, controls, etc.).

number of candidacies.¹⁰ They also show descriptive evidence suggesting that: i) there are no differences in behaviour of mayors that are forced not to run for reelection and those who make that decision; ii) incumbents may obtain larger campaign donations compared to challengers.

Third, methodologically, the paper contributes to the growing literature that compares naive RDD estimates that exploit close elections only, with Diff-in-Disc estimates that exploit two sources of variation. Our paper shows that results differ by methodology (in line with [Fowler and Hall \(2014\)](#)) confirming the importance of using Diff-in-Disc to obtain clean incumbency effects.

Fourth, as one extension the paper contributes to a literature on the effects on reforms to the legal framework, by estimating incumbency effects before and after a constitutional reform changing electoral rules and affecting the costs, benefits, and incentives in general faced by (potential) candidates, parties, and voters. As another extension, the paper explores transmission mechanisms that could lie behind the candidate and party incumbency effects. Though preliminary and non-causal, it should be noted that research in the area is usually limited to the estimation of incumbency effects, or narrowly focuses on one particular incumbency channel. While our paper clearly belongs to the first stream of the literature, it contributes in terms of widening the scope of research and setting a starting point for future work that complements and integrates both streams.

Taken together, results show that incumbency is a personal, individual matter. In other terms, when open elections take place, the new candidate of the incumbent party is not able to capitalize on his or her party's past performance. Moreover, non-positive partisan effects imply that political parties are not able to mobilize popular support for an incumbent candidate to the following one just due to the fact that both belong to the same party. One possible interpretation of these results is that incumbents have greater strength and autonomy in their decisions, as political parties would not have a credible threat of appointing another person as a candidate in the following elections if they disagreed with the incumbent ([Klašnja and Titiumik, 2017](#)).¹¹ If the incumbent decides to 'misbehave' due to the lack of accountability enabled by term limits, the political cost could be transferred to the new candidate of his party, which could explain null or negative party incumbency effects. Consistent with this view and in line with ([Cardarello, 2011](#)), results suggest that the reappointment of an incumbent reduces the effective number of candidacies in the incumbent's political party, but does not affect the political system as a whole.

¹⁰Under the new system, each party has to have internal elections to choose the candidates for *Intendente*. There are no limits to the number of candidates for internal elections but there can be up to three candidates for the general election. On top of that, candidates must be convalidated by an internal party organ (*Convencion*). These changes affect the rules of the game and it can be shown that it tended to reduce the number of effective candidates presented by each party in each *Departamento*

¹¹Since the ruler can not be presented in the next elections, he does not have the incentive to limit himself to practices that he considers would have a political cost.

The rest of the paper is structured as follows. Section 2 reviews the literature, Section 3 briefly presents the historical and institutional context and Section 4 presents the data, methodology, identification strategy and its main challenges, and estimating equations. Section 5 presents the main results, Section 6 discusses extensions and robustness checks and Section 7 concludes.

2 Literature review

The first empirical studies on leadership were conducted in developed countries and focused on leadership at the candidate level (Erikson, 1971; Jacobson, 1978, 1990; Krasno and Green, 1988; Gelman and King, 1990). Most of them found positive effects that were attributed to the differences between incumbent and challenging candidates due to the benefit of the political and economic resources that the incumbents have at their disposal during their time in office

The political advantages on the part of incumbents are various and political scientists have been eloquent in naming the different aspects of the political use of management. In the first place, for the development of their functions, the incumbents must address the claims, concerns and interests of the voters of the constituency in which they were elected. The nature of this exchange between actors with asymmetric power depends on each case, but it is always a democratic obligation that comes from the exercise of a position and is known under the name of *constituency service* (Cain et al., 1984; Chasquetti, 2014).

On the other hand, the political use of public resources such as the discretionary allocation of aid or public works to different constituencies has become known as *pork barrel* (Samuels, 2002; Azar, 2022). These two mechanisms will seek to be used by the incumbent to achieve the position he holds again. The Political Science literature calls *credit claiming* the ability of politicians to claim the political revenue of a work, management or result, whether or not it is of their own merit.

These political advantages give the Mayor greater exposure and recognition for there being only one incumbent per constituency. In any case, the possibility of making the most out of all these elements will be associated with the clarity with which the electorate can associate the performance of politicians with management results. Moreover, from an economic point of view, being incumbent also implies advantages. Fourinaies and Hall (2014) call “financial incumbency” the effect found that the incumbents receive substantially higher donations than the defiant to finance their electoral campaigns.

A milestone in the literature referring to incumbency is marked by Lee (2008) when analyzing the district elections of United States representatives in 1946-1998. It stands out for being the first study to apply the Regression Discontinuity Design (RDD) to estimate the

effects of the incumbent, giving rise to the literature known as *close elections*.¹² Also, by treating incumbency at the political party level instead of at the individual level, as it was the trend until then.

Since then, there has been a significant increase in incumbency studies using RDD. On the one hand, there are those who have focused on incumbency at the political party level (Ade et al., 2014; Ariga et al., 2016; Eggers and Spirling, 2017; Klašnja, 2015; Klašnja and Titiunik, 2017; Macdonald, 2014) and on the other those that focus on the candidate level (Ariga, 2015; De Magalhaes, 2015; Linden, 2004; Redmond and Regan, 2015; Uppal, 2009; Lee, 2016). The RDD methodology prevailed, because it makes it possible to build credible counterfactuals with which to make comparisons, treatment assignment is usually simple and without ambiguities, and generally less data is required to make causal estimates.

One aspect that deserves to be particularly highlighted is that research is strongly extended to developing countries (previously marginal) finding negative incumbent effects that contradict the evidence found in developed countries. This defied the existing interpretations of the nature of the incumbent effect, and forced researchers to build new theories. The new mechanisms that explain negative incumbency are related to low levels of economic development (Uppal (2009)), corruption (Klašnja, 2015), differential access to information (Macdonald, 2014), electoral system rules (Ariga, 2015; Ariga et al., 2016; Lee, 2016) or the institutional context (e.g., weak political parties; see Klašnja and Titiunik (2017)).

For India, Uppal (2009) finds that the number of health centers per capita, income per capita, and poverty are positively related to individual incumbency. Moreover, the higher the level of poverty within a state the greater the probability of local elites seizing power for their own benefit, and thus the greater the probability that candidates will be re-elected. Nevertheless, when focusing on India, Lee (2016) discards socioeconomic variables (including poverty) and points to candidates' agency as the driver of negative incumbency: the centrality of political parties and laws that limit partisan discrepancy conspire against incumbency. For Zambia, Macdonald (2014) shows that access to information and economic conditions (measured as access to radio and electricity) negatively and positively influence political incumbency respectively. Moreover, incumbency is heterogeneous by these key variables. For Romania, Klašnja (2015) finds that incumbency decreases when the cost of committing acts of corruption falls, the quality of the candidates worsens, and when the profits from corruption increase. For Japan, (Ariga, 2015) focuses on multimember-districts that allow intra-party competition, and finds no individual incumbent effect, in contrast with the literature focusing on single-member-districts that finds a positive effect, strongly suggesting that incumbency advantages vary across electoral systems. As stated, there are only a few papers related to ours, that simultaneously

¹²Although the RDD already appears in Thistlethwaite and Campbell (1960), it was only after Lee (2008) that it became the standard technique for estimating incumbent effects.

estimate individual and partisan incumbency in a causal and precise fashion.

Regarding partisan incumbency, one could assume that the electorate values the candidate, but also the political party in office, and consider both when voting. For this reason, the new candidate of the incumbent party may be able to do *credit claiming* with respect to his predecessor and capitalize on his electoral support on the basis of their shared political party. In fact, the outgoing incumbent could campaign and support the new candidate to help him succeed. Nevertheless, studies have found negative or null party influence (Kendall and Rekkas, 2012; Fowler and Hall, 2014; Lopes da Fonseca, 2017; Klašnja and Titiunik, 2017), which would imply that popular support seems not to move from one candidate to another for the simple fact that they share a political party. According to Fowler and Hall (2014), this finding gives incumbents greater strength and autonomy in their decisions because it would mean that political parties would not have a credible threat of appointing another person as a candidate in the following elections if they disagreed with the decisions-management of the politician. In line with this, Klašnja and Titiunik (2017) propose that the politician in office acts with greater discretion when the following elections are open by law, which prevents *accountability*. If this action on the part of the incumbent takes place, the political cost could be transferred to the new candidate of his party, which could explain the null or negative party effect.

As part of the literature review, it should be noted that Cardarello (2011) studies incumbency in the sub-national governments of Argentina, Brazil and Uruguay. It reviews Uruguay's main institutional changes throughout history, and presents various descriptive statistics by department and political party. It computes the proportion of re-elected incumbents and finds re-election rates (which cannot be interpreted as incumbent effects of any sort) between 30% to 69% for 1984-2005. Finally, some works account for changes in the effects of the incumbent over time in developed and developing economies and with positive and negative effects (Gelman and King, 1990; Linden, 2004; Uppal, 2009; Kendall and Rekkas, 2012; Jacobson, 2015).

3 Institutional setting

Uruguay is located between Argentina and Brazil and hosts 3.5 million inhabitants. It is a representative democracy with a history of peaceful and democratic elections and a stable political system, interrupted only in 1933-1934 and 1973-1984. The electoral system is one of the oldest in Latin America and the world, in place since its independence in the 1820s.

The country is divided into 19 regions (*Departamentos*) where regional mayors, *Intendentes*, are elected. Montevideo is the smallest *Departamento* in size and the largest in population (1.5 million inhabitants) and hosts the countries' capital (Montevideo). Uruguay has a thriving economy, with a GDP of over \$50 billion and is a high income country (Fantom and Serajuddin, 2016), with per capita GDP of about USD 25,000 in PPP in 2021 (World Bank,

2021). The economy is partly based on agriculture, with the main exports being meat, wool, and dairy products. The country also has sizeable manufacturing sector, and the main industries are textiles, chemicals, and food processing. A well-developed infrastructure, with good transport links and a modern telecommunications system makes it a regional hub in terms of tourism and Latin American trade, especially so as it is a member of trading bloc MERCOSUR. The main trading partners of Uruguay are Brazil, Argentina, China and the United States.

3.1 Electoral system

Uruguay has a unique electoral system: proportional representation and direct elections are carried out in the same day and electoral sheet, and voting is secret and *mandatory* for all citizens. Each sheet features a President and Vice President (direct elections) and members of Congress (proportional representation). The system is managed by the *Corte Electoral*, an independent body that is responsible for the registration of eligible voters, the organization of all elections, and the management of the electoral process. It also has the power to annul any elections that a majority of its members considers fraudulent or illegal.¹³ Other measures to ensure free and fair elections include independent monitors and international observers. The Uruguayan electoral system as depicted in this paper has been in place since 1924 and has been largely successful in ensuring that all citizens are able to participate in the democratic process. International observers have praised the country for its fairness and transparency, and the manual mechanism is considered to be one of the most advanced and secure electoral systems in Latin America and the world.¹⁴

3.2 Elections at the *Departamento* level

From the beginning of the country's democratic life until 1917 (first constitutional reform) power at the departmental level was in the hands of *Political Chiefs*, appointed by the President. Starting in 1917, a collegiate Executive Power was established (until a new constitutional reform in 1934) which created departmental executive figures (Municipal Mayor, *Intendente*) and legislative bodies (Departmental Board, *Junta Departamental*), which last until today. It established that elections are won by simple majority under the Double Simultaneous Vote (DSV) system: the candidate *and* the political party are elected jointly. The elected Mayor is the most voted candidate of the most voted political party, allowing intra- and inter-party competition. Importantly, the 1934 constitution established that *Mayors could not run for*

¹³It is composed of nine members: a president, a vice-president, and seven ministers, who are appointed by the General Assembly (which comprises all representatives of both the upper (*Senadores*) and lower (*Diputados*) chambers of congress). *Corte Electoral*

¹⁴See for instance [Freedom House \(2022\)](#).

*elections after two consecutive periods in power.*¹⁵ Another constitutional reform in 1952 re-established collegiate authorities at the regional and national level, which reverted back to the previous system with the approval of a new constitution in 1966 (Bottinelli et al., 2012).

The 1971 elections are special for several reasons. Previous to this election the collegiate impedes the estimation of incumbent effects; the 1971 elections are the first after the reform of 1966, thus the first than can be used for estimation. Also, they are the first in which the Broad Front (*Frente Amplio*, center-left coalition formed in 1971 as well) participates at all levels.¹⁶ This are also the last elections before the 1973 military coup and subsequent dictatorship (that lasts until 1984). The coup implied that some Mayors elected in 1971 were removed and replaced by ‘interveners’.¹⁷ Once democracy was restored, the electoral system returned to normal.¹⁸

A new constitutional reform in 1997 makes two important changes to regional elections. First, they are separated in time from national elections: voters can now choose one party at the presidential elections in October, and a different one at the Regional elections in May. Second, there is a limit of up to three candidates per party per department, and these candidates must be convalidated by internal democratic bodies of each party (*Convencion*). At stated, the first obvious effect of the reform is that it allowed voters to choose two different political parties in the national and departmental elections.¹⁹ The reform also implies that the Mayor achieves greater visibility and the voter is able to better assess its characteristics, and it clearly limits the number of candidates.²⁰

A trend that should be noted since the return to democracy is the growing importance of the position of Mayor as a stepping stone in the formation of leaderships and accumulation of broader political capital (Cardarello, 2011). In particular, Chasquetti (2014) documents growing interest of politicians from outside the capital to get to the position of Mayor as an important milestone in their political careers to then reach higher echelons (e.g., congress). This greater “appetite for the position of Mayor” naturally impacts the quality of challengers

¹⁵It also established that Mayors could be re-elected only if they left the post three months prior to the elections.

¹⁶The introduction of a third party into the political arena potentially affects and changes the relationship between the electorate, the parties and (potential) candidates, and we think it is better to focus the estimation efforts on relatively homogenous period of time in terms of these relationships, hence the lack of consideration of prior elections.

¹⁷In turn, two ‘interveners’ ran in the 1984 elections. We do not code them as incumbents due to the idiosyncratic nature of their position during the dictatorship; robustness checks leaving 1971 and 1971-1984 out show that results do not depend on this observations.

¹⁸Except for 1984: there were proscribed *presidential* candidates (Broad Front’s Liber Seregni) and political prisoners (Partido Nacional’s Wilson Ferreira Aldunate); the 1984 elections did not have any particularity in terms of regional elections, presidential proscriptions should not affect regional estimates.

¹⁹Until then, as both elections were held on the same day an envelope wit sheets for different parties at the national and regional elections would be annulled.

²⁰Not only directly through the three candidate limit, but also indirectly as the candidates must be selected by an elected *Convencion* almost a year before the departmental elections: whoever intends to be a candidate must ensure that support.

that incumbent candidates must face.

Summing up, both the formal requirements and the legal limitation of not governing more than two consecutive terms remain unchanged since the creation of the figure of the Mayor in 1934, and the one-person position is effective from 1934 to 1952, and after 1966. We focus on elections after 1966, given that *Frente Amplio* enters the political arena after 1966 and due to the complexities of that election.²¹ We work with the elections of 1971, 1984, 1989, 1994, 2000, 2005, 2010, 2015 and 2020.²²

4 Data and methodology

4.1 Data

We use the [Schmidt et al. \(2020\)](#) dataset, with features information at the department, political party and candidate level of national and departmental elections from 1918 onwards. We consider elections after 1966; the first four take place simultaneously with the national elections, the remaining ones are separated in time and with a cap of three candidates per party per department (as per 1997 constitutional reform).

The data shows an under-representation of women: of 1,273 individual observations, 68 correspond to women and 752 to men.²³ We restrict the data at the political party level to the main political parties (*Partido Colorado* and *Partido Nacional*, with liberal and conservative factions, and *Frente Amplio*, a center-left coalition created in 1971), which had real possibilities to challenge each other and conquer Departmental governments.²⁴ After cleaning the data, it comprises 513 observations at the political party level, exclusively taking candidates from the three main parties.

Table 1 presents basic descriptive statistics, complemented with information from [Cardarelli \(2011\)](#).²⁵ The Table shows that, except for 1971, more than half of elected Mayors run for office in the following elections. In turn, the victory rate of the incumbent mayors exceeds 50% in all the elections except the first three considered.²⁶

²¹On election day in 1966, individuals voted to accept or reject a new constitution that would affect those same elections. Individuals introduced in the urn a vote regarding the constitution, and *two* sets of votes: one valid under the old constitution and one valid under the new one. Parties presented multiplicities of candidates for the Collegiate system and the Presidential one, making it a very complex election.

²²Robustness check exclude the 1971 elections, and the 1971 and 1984 elections, and find no significant changes in results.

²³Gender is inferred from names; the remaining 453 observations feature only surname

²⁴The only exception is Montevideo where in 2015 and 2020 *Partido Nacional* and *Colorado* joined other minor parties in the center and right of the political spectrum to challenge *Frente Amplio*, under a common party name ‘*Partido de la Concertación*’ and in 2020 under the slogan “Independent Party”.

²⁵We take from Cardarelli information on mayors that didn’t complete their mandate due to death or other major motives (three cases in all the period). The substitute is coded as incumbent in those cases.

²⁶The exception seen in 1971 can be explained by the dictatorship, as the decision to ‘run for re-election’ is

Table 1: Running and winning reelections: number and rates for incumbents.

	1971	1984	1989	1994	2000	2005	2010	2015	Total
Individual incumbents	19	19	19	19	19	19	19	19	152
Run for re-election	4	15	10	13	10	12	9	11	84
Win re-election	0	6	3	9	5	7	6	7	43
Re-run rate (%)	21,1	78,9	52,6	68,4	52,6	63,1	47,3	57,8	55,2
Victory rate (%)	0	40	33,3	69,2	50	58,3	66,6	63,6	51,1

Source: [Schmidt et al. \(2020\)](#) and [Cardarello \(2011\)](#)

While this suggests strong individual incumbency, the unconditional rate of winning a reelection is not a causal estimate. To make causal claims we exploit differences in reelection rates between legally open and close elections. Table A.2 in the Appendix classifies each election as ‘Legally Open’ (25.2%) ‘De Facto Open’ (25.7%), or ‘Closed’ (50.9%).

4.2 Identification and estimation strategies

The main goal is to estimate the change in the probability of reelection of a given candidate and political party due to the fact that they currently hold office (incumbency effect). The individual incumbent effect could be defined as the difference in votes that two candidates running for an incumbent political party would obtain, when the candidate is incumbent and non-incumbent in the same election, department, and year. Similarly, the effect of the party incumbent could be defined as the difference in the votes obtained by two non-incumbent candidates when one runs through an incumbent party and the other through the same party but without being incumbent in the same election, department and year. This is a classical example of causal estimation with the absence of observations in the context of the Rubin Causal Model ([Rubin, 1974](#)). This implies that what can be formulated theoretically is difficult to estimate in practice because **only part** of these potential results can be observed. To address selection bias when treatment assignment is not random, economic theory exploits natural experiments and applies causal econometric techniques to non-experimental data.

The naive approximation would be to estimate a regression through ordinary least squares of the probability of being elected against a dummy for incumbent/challenger. However, even including a wide battery of controls, as long as any relevant element is missing from the regression (e.g., a measure of quality, motivation, etc.), this approximation yields biased estimates (see [Erikson \(1971\)](#), [Jacobson \(1978\)](#) and [Gelman and King \(1990\)](#)).²⁷ Hence, the true in-

taken 13 years later, not 5.

²⁷For example, if the incumbent is more able or has more electoral appeal than the challenger for any unobservable reason, it has an advantage over the challenger irrespective of the mechanisms of channels previously discussed. Moreover, an observably strong incumbent (or challenger) may lead to strategic withdrawal of the

cumbent effects are better estimated, in an unbiased, causal fashion, when election to the first period mimics random assignment.

As seen in Section 2, the RDD methodology was the first step taken to solve endogeneity concerns due to candidate selection bias. In the cases of close elections in period t , assignment to treatment (winning) in the area around the cut-off point is quasi-random, solving selection bias.²⁸ This implies that those who won elections in t *by chance* can be taken as similar to challengers in $t + 1$, and thus incumbent effects can be estimated with a causal interpretation. However and as discussed in Section 2, RDD estimates still face issues in terms of identification of the *parameters* of interest *from a political economy point of view*. As discussed, incumbents almost always run for re-election as members of the same party for which they were elected; alternatively, parties always run in regional elections, whether with incumbent or challenger candidates. This implies that *the individual candidate incumbency effect will be contaminated by the partisan incumbency effect*. Thus, even applying RDD methods, the *estimates* (coefficients) will be unbiased but the desired *parameters* (incumbencies) of interested will be contaminated.

To overcome this difficulty and jointly *and independently* determine the effects of individual and partisan incumbencies, we apply the Differences in Discontinuities (*Diff-in-disc*) methodology proposed by [Grembi et al. \(2012\)](#). *Diff-in-disc* is a combination of the Regression Discontinuity Design (RDD) and the Differences in Differences (*Diff-in-Diff*) techniques. According to [Lopes da Fonseca \(2017\)](#) the *Diff-in-Disc* design is superior to the RDD as it captures a second source of variation and provides estimates that are robust to potential omitted variables and manipulation of electoral results. Intuitively, the RDD component exploits the quasi-randomness that occurs around the cut-off point: winners and losers do not differ in unobservable characteristics and the difference in votes in favour of the winner, is quasi-random. Then, the *Diff-in-Diff* component identifies effects comparing treated and untreated units. In our case, *Diff-in-Disc* adapts the *Diff-in-Diff* component and compares closed elections (incumbent runs for reelection) with legally open elections (incumbent cannot run for reelection due to constitutional limits). Summing up, intuitively *Diff-in-disc* computes the difference between two RDD estimates (one for each situation defined in the *Diff-in-Diff*) applying an optimal and common bandwidth (that can differ from those found with individual RDD estimates).

In the following section we present results of naive RDD estimation of both individual and partisan incumbency effects, and proper independent estimation of both parameters through the application of Diff-in-Disc methods. This allows us to compare both methodologies in the same setting and using the same period and data, contributing to the literature.

challenger (or incumbent), complicating the estimation of true incumbent effects.

²⁸For example, [Uppal \(2009\)](#) shows how the differences between variables related to the electoral attractiveness of the candidates lose statistical significance as the margin of victory in t becomes smaller and smaller.

4.2.1 Running variable

The *running variable* used in the *Diff-in-Disc* design and naive RDD estimates is the Minimum Margin of Victory (MMV) by which the winner won the election. To make margins of victory comparable across departments and years we follow [Kendall and Rekkas \(2012\)](#) and adjust by the number of total inhabitants that are registered to vote by department and year.²⁹ We then redefine MMV such that it reflects what percentage the margin of victory represents over the total number of those legally registered to vote in the department. Note that voting is mandatory in the country, and turnout usually stands at about 90% in all elections.^{30,31}

The MMV is easily computed for the naive RDD for the case of political party estimates. For individual candidates, the winner is the most voted candidate of the most voted political party. This implies considering intra-party and inter-party margins of victory. We follow [Luechinger et al. \(2020\)](#) and take as MMV the minimum of both margins. The intuition behind this procedure is that for each candidate the MMV reflects the minimum votes needed to win or lose the Mayor’s Office (taking into account the votes within their political party and between parties). The cut-off point is the value 0, so the treatment variable will be a dummy that will take the value 1 when the MMV is greater than 0 and 0 otherwise (see example in [A.3](#) in the Appendix).

4.2.2 Outcome variable

Intuitively, the outcome variable should capture the electoral success or failure that a candidate and/or party obtains when running for re-election. However, at the candidate level the attrition problem arises: it is not the case that the same individuals appear in all the data set.³² One option is to exclude from the sample candidates who do not run for the second time, as some authors do ([Uppal, 2009](#); [Lee, 2016](#)). However, this can lead to biased estimates, as discussed by [De Magalhaes \(2015\)](#); [Lee \(2008, 2016\)](#); [Macdonald \(2014\)](#); [Redmond and Regan \(2015\)](#).³³ We

²⁹The same 1000 vote advantage represents less than 0.1% of the voters of Montevideo but 4% of those in Flores.

³⁰At age 18 all citizens must obtain a voting ID (*Credencial*) and *Corte Electoral* automatically registers all eligible voters for a given election. In principle all living individuals aged 18 or older at the moment of the election are automatically registered to vote. Those who have not voted in the last two elections (e.g., migrants) are automatically excluded (though they can vote throughout a re-registration procedure). Prisoners and convicts, mentally ill and some cases of legal disabilities are also excluded.

³¹The lack of turnout of about 10% of those registered to vote responds to individuals who choose not to vote (and pay a fine), migrants, deceased, hospitalized, etc.

³²In the period of study many candidates died, entered politics after 1971 or retired before 2020, etc. This problem does not affect party incumbency as parties usually run in all elections (with different candidates in any case).

³³The alternative is to consider a “hardcore RDD” estimation strategy, where only candidates that run for re-election are considered, and the outcome variable takes values 1 and 0 for winners and losers (conditional on re-running). This strategy may overestimate the effect of the individual incumbent if the re-run rates of challengers and incumbents differ significantly.

follow these authors and keep the entire sample and estimate the effect of winning one election on the probability of winning the next one, unconditional on running. In this "unconditional RDD" the result variable takes value 1 when the candidate wins re-elections and 0 otherwise.³⁴ We base our decision on following the option most used by researchers, hence turning our paper comparable (in this dimension) to theirs.

4.2.3 Validation of the identification and estimation strategy

Note that in our case, a spillover from the treatment group to the control group is not possible since allocation and participation are equivalent. In addition, the timing of the implementation of the reform can be considered quasi random and there are no other contemporary treatments beyond those considered. Two additional assumptions are needed for the RDD: non-manipulation of the *running variable* and continuity of observables around the cutoff point. The first must be met both at the candidate and party levels, while for the second we consider only party level and test for continuity of departments and parties. Note however that the identification assumptions required for unbiased and proper *Diff-in-Disc* estimation are a combination of those required for RDD and *Diff-in-Diff* (Gamalerio, 2017). Though researchers are still discussing which assumptions should be met for full validation, we follow Gamalerio (2017) who works with three conditions or tests that should be met in both closed and open elections (legally and de facto depending on the case): i) No manipulation of the running variable around the cutting point; ii) continuity of observables around the cutting point; iii) parallel trends above and below the cutting point.³⁵

First, no manipulation of the running variable means no fraud or manipulation of the electoral result by any candidate or political party. In the case of Uruguay, with long-standing strong institutions in charge of organizing, carrying out, and announcing the results of the votes, and no precedent of fraud it is safe to assume it holds.³⁶ Still, to check, we perform two McCrary tests (McCrary, 2008) for closed and de facto open elections. Results in Table 2 show no evidence of manipulation, at the usual levels of statistical confidence.

³⁴Both re-election losers and those who do not run for re-election are coded as 0.

³⁵Though other authors (De Benedetto, 2020; Lopes da Fonseca, 2017) consider that the first two conditions are sufficient for unbiased and proper implementation of *Diff-in-Disc*, we follow Gamalerio (2017) as we consider it more strict, and test the three conditions.

³⁶See Finch (1985); O'donnell (1994); O'donnell et al. (2016); Bergara et al. (2006); Chasquetti (2014); Altman and Pérez-Liñán (2002); Tummino and Bintrim (2016).

Table 2: McCrary Test: manipulation of *running variable* in Closed and Legally open elections

	Election type			
	Closed		Legally open	
	Left	Right	Left	Right
Cutoff: $C = 0$				
Total observations	175	87	80	40
Estimation command:	Panel A: <i>rdrobust</i> command			
Effective observations	54	56	34	30
Polynomial order for estimation (p)	2	2	2	2
Polynomial order for bias (q)	3	3	3	3
Optimal bandwidth (h)	16.288	19.428	28.480	30.834
t-statistic	-0.4150		-0.1365	
p-value	0.6782		0.8914	
Estimation command:	Panel B: <i>rdcont</i> command			
Effective observations	8	9	9	8
Effective neighbourhood	-1.312	1.586	-6.285	5.735
Q	17		17	
p-value	1		1	

Source: own elaboration based on [Schmidt et al. \(2020\)](#).

The second assumption indicates that incumbents and challengers do not differ substantially in observable characteristics around the cutoff when legally open and closed elections are considered. For example, the number of people eligible to vote (among other variables) should not differ significantly on one side and the other of the cut-off point. Results show a minor difference in closed elections in political parties, as seen in Table 3. This implies that there are political parties that tend to be located more to the left and others more to the right of the cut-off point when the incumbent candidate stands for election. This result is consistent with Uruguay's institutional-electoral history: Partido Colorado won 44.4% of all national elections in the period, and Partido Nacional won 64.3% of all departamental elections in the period.³⁷ Still, the preferred estimation controls for political parties dummies in order to account for this.

³⁷In other words, out of 19 departamentos in 9 electoral cycles (171 elections), Partido Nacional won 110.

Table 3: Test: continuity of observables in closed and legally open elections

Cutoff: $C = 0$	Departments				Political parties			
	Closed		Legally Open		Closed		Legally Open	
	Left	Right	Left	Right	Left	Right	Left	Right
Coefficient	0.0573		0.0551		-0.379		-0.00391	
p-value	0.991		0.941		0.096		0.945	
Observations	175	87	80	40	175	87	80	40
Effective observations	68	59	23	21	54	52	16	15
Pol. Order estim. (p)	1	1	1	1	1	1	1	1
Pol. Order bias (q)	2	2	2	2	2	2	2	2
Optimal bandwidth (h)	23.633	23.633	18.519	18.519	16.243	16.243	17.424	17.424
Bandwidth bias (b)	30.327	30.327	32.750	32.750	25.378	25.378	25.920	25.920

Own elaboration based on *Boreluy*. Robust standard errors.

The third assumption stems from the *Diff-in-Diff* component of the methodology. It is usually assumed that treated and controls do not differ significantly after to the application of a treatment, an assumption that is not testable. Instead, we look for non-parallel trends above and below the cut-off point in legally open and closed elections through placebo *Diff-in-disc* estimations. We generate a dummy variable with the same mean and standard deviation as the one that identifies legal open elections from closed elections but with distributed randomly across the sample, and run all the estimations of the following section. Results are null as shown in Table A.9 in the Appendix.

4.3 Estimation

We first estimate two naive RDD models for individual and partisan incumbency. We follow [Gelman and Imbens \(2019\)](#) and keep polynomial orders below or equal to two, and we use optimal bandwidth as developed and estimated by [Calonico et al. \(2014b,a\)](#). We follow [Cattaneo et al. \(2019\)](#) for general and standard procedures regarding RDD estimation. We then move on and follow [De Benedetto \(2020\)](#) and [Lopes da Fonseca \(2017\)](#) to estimate a *Diff-in-Disc* model.³⁸ The starting point is equation 1:

$$y_{i,t,j} = \alpha_0 + \alpha_1 MMV_{i,t-1,j} + \beta_0 d_{i,t-1,j} + \beta_1 d_{i,t-1,j} \times MMV_{i,t-1,j} + \epsilon_{i,t-1,j} \quad (1)$$

The outcome variable $y_{p,d,t}$ is a dummy that takes value 1 if political party p won elections in department d in period t , and 0 otherwise. The running variable $MMV_{p,d,t-1}$ captures the

³⁸In particular, see pages 87 to 91 of [Lopes da Fonseca \(2017\)](#) for a step-by-step explanation of the development of the model and equations in this section.

Minimum Margin of Victory that party p obtained in department t in the previous elections ($t - 1$).³⁹ The main variable of interest is $d_{p,d,t-1}$, a dummy that indicates whether party p held office in department d in the previous period $t - 1$; that is, it is a dummy that takes value 1 for incumbent parties and 0 otherwise. An interaction term is included, and $\epsilon_{p,d,t}$ is an idiosyncratic error term. In this equation α_0 is a constant that can be interpreted as the intercept of a regression line at the left of the cutoff point or, in other terms, a term that captures the unconditional probability for the challenger party in period t of winning elections in t given that the party lost the previous elections ($t - 1$) by one vote. α_1 measures the direct effect of the margin of victory on the independent variable, and can be understood as the slope of the curve to the left of the cutoff point: how the probability of winning in t for the challenger in t falls with each additional vote for which it lost elections in period $t - 1$. β_0 represent increase in the probability, with respect of the challenger, that the incumbent party has in period t of winning elections in given that it *won* the previous elections ($t - 1$) by one vote. $\alpha_0 + \beta_0$ represent the intercept of the regression line at the right of the cutoff point. β_1 is the slope of the regression line at the right of the cutoff.

Here the parameter of interest that, *naively*, would capture the partisan incumbent effect, is given by β_0 . But, [Fowler and Hall \(2014\)](#) and [Erikson et al. \(2015\)](#) show that in the equation before, estimating β_0 by RDD leads to estimating the *double* of the partisan incumbent effect and a term that actually duplicates individual *and* partisan incumbent effect.⁴⁰ As the authors show, the mapping between coefficients and parameters of interest is as follows:

$$\beta_0 = 2 \times Incumbency_{Party} + 2 \times P(Rerun_{Candidate}) \times Incumbency_{Candidate} \quad (2)$$

In the above equation, $Incumbency_{Party}$ represents the true unbiased partisan incumbent effect or advantage over the challenger party; $P(Rerun_{Candidate})$ represents the probability that an individual candidate currently holding office runs for re-election; and $Incumbency_{Candidate}$ stands for the true unbiased individual candidate incumbent effect or advantage over the challenger candidate. Recall that the Constitution establishes that Mayors cannot hold office for more than two consecutive periods. This limitation configures an ideal situation to distinguish the effect of the individual incumbent and at the party level, which usually occur together. The *Diff-in-Disc* methodology exploits this additional source of variation and estimates the difference in the margin of victory of candidates around the cut-off point between elections

³⁹Note that since this equation is formulated at the party level, $MMV_{p,d,t-1}$ is simply the inter-party margin of victory in this case.

⁴⁰Intuitively, estimating the effect of the incumbent is similar to betting \$1: if party A has 1 and bets it against party B , it ends up with 2 when winning and 0 if it loses. Betting 1 leads to a change in wealth of 1 but to a total wealth of 2 if winning (twice the amount bet). The difference between winner and loser is 2. Returning to incumbency, the incumbent effect measured by Equation 1 captures both the advantage of the incumbent for the party in office *and* the disadvantage of the challenger for not being in office

with and without an incumbent (open and legally closed elections). Following [Fowler and Hall \(2014\)](#), the corresponding equation is:

$$y_{p,d,t} = \alpha_0 + \alpha_1 MMV_{p,d,t-1} + d_{p,d,t}(\beta_0 + \beta_1 MMV_{p,d,t-1}) + b_{p,d,t-1}[\gamma_0 + \gamma_1 MMV_{p,d,t-1} + d_{p,d,t-1}(\delta_0 + \delta_1 MMV_{p,d,t-1})] + \epsilon_{p,d,t-1} \quad (3)$$

An additional treatment variable (and interactions) is added ($b_{i,t,j}$), which takes value 1 if the elections are open and 0 otherwise⁴¹. As mentioned, the coefficient β_0 combines the effects of the incumbent while δ_0 is the *Diff-in-Disc* estimator that measures the difference in the probability of political parties winning the next elections between instances in which the incumbent political party can and cannot field its incumbent candidate. According to ([Lopes da Fonseca, 2017](#)) δ_0 can be written as follows:

$$\delta_0 = -P(Rerun_{Candidate}) \times Incumbency_{Candidate} \quad (4)$$

The previous developments give rise to a system of equations on β_0 and δ_0 , functions of the coefficients from equations estimated through plain OLS.⁴² This system is as follows:

$$Coefficients : \begin{cases} \beta_0 = 2 \times Incumbency_{Party} + 2 \times P(Rerun_{Candidate}) \times Incumbency_{Candidate} \\ \delta_0 = -P(Rerun_{Candidate}) \times Incumbency_{Candidate} \end{cases} \quad (5)$$

The system can be solved leading to the following expressions for partisan and individual incumbencies. Here lies one of the main contributions of the authors to the problem: it would be wrong or misleading to interpret the coefficients obtained in 3 and 4 as the incumbent effects, as due to the duplication problem expressed before, and the consideration of the probability of rerunning, a transformation is needed to obtain truly unbiased and independent incumbency effect. Moreover, note how the Partisan incumbency is the ‘cleanest’ parameter that can be obtained, as it stems directly from simple operations over regression coefficients, without the need to estimate the probability of rerun (this issue is addressed in the following section). The system of solutions is:

$$Parameters : \begin{cases} Incumbency_{Candidate} = -\delta_0 / P(Rerun_{Candidate}) \\ Incumbency_{Party} = \beta_0 / 2 + \delta_0 \end{cases} \quad (6)$$

⁴¹As robustness check we include de facto open choices

⁴²There are 152 Mayors between 1971 and 2015. 36 are legally impeded to run for reelection. Of the remaining 116, 84 decide to run again. This is the re-running rate that we use in the paper. In other terms, $P(Rerun_{Candidate}) = 72.41\%$ Period 1971-2015.

5 Results

5.1 Naive RDD estimation

First, we use individual level data (candidates) and study candidate incumbency effects applying the RDD methodology. This ignores the fact that almost always parties and incumbents re run together. We follow equation 3 and estimate the model through the *rdrobust* command in STATA Calonico et al. (2014a). Second, we use party level data and study incumbency again applying the RDD methodology. Results for individual and partisan incumbency effects are shown in Table 4. The first columns show a positive and significant incumbent effect at 1% at the candidate level. Specifically, in around the cut-off where the electoral result is quasi-random, the incumbent candidate *seems to have* a 26.9% greater probability of winning the next election vis-a-vis the challenger. Likewise, the last columns indicate a negative partisan incumbency effect that cannot be distinguished from zero at usual levels of significance. This *seems to suggest* zero partisan incumbency.

Table 4: RDD estimation: individual and partisan incumbency effects

Cutoff $C = 0$	Individual		Partisan	
	Left	Right	Left	Right
Coefficient	0.269		-0.10619	
p-value	0.007		0.892	
Observations	994	152	303	152
Effective observations	181	98	66	64
Polynomial order (p)	1	1	1	1
Standard. Dev. order (q)	2	2	2	2
Bandwidth (h)	8.251	8.251	10.643	10.643
Bandwidth biased (b)	12.648	12.648	18.630	18.630

Own elaboration based on *Boreluuy*.

Note that the individual effect is positive, statistically different from zero, and has a causal interpretation given the assumptions for the RDD do hold. Nevertheless, the fact that β_0 has causal interpretation does *not* imply that it adequately captures the individual incumbency effect. This stems from the fact that in almost all cases the individual holding office decides to run for re-election as a member of the same party, which means that the coefficient for individual incumbency is contaminated by, or also captures part of, the partisan incumbency effect (and vice versa). To properly estimate the independent effects, we proceed to estimate incumbencies through *Diff-in-Disc* in the following subsection.

5.2 Diff-in-Disc estimation

One way to separate the effects of individual and party incumbent is to use data at the political party level and distinguish open elections (where the incumbent candidate does not run) from closed ones. When the observations correspond to closed elections, party and candidate are repeated, so the estimated incumbency contains both elements. On the contrary, in the case of open elections, the effect that can be calculated corresponds to the political party, since the incumbent candidate is not present. If properly differentiated, measures of party and candidate incumbency can be obtained. As discussed in the previous section, the *Diff-in-disc* basically performs two RDD estimates with the same *running variable* and then finds their difference (according to the *Diff-in-Diff* specification) taking into account a common bandwidth. Thus, by making this difference, it is possible to obtain an estimate of political party responsibilities separate from individual responsibilities.

Table 5: Main results: Difference in Discontinuities estimations

VARIABLES	(1) $P(Win_t)$	(2) $P(Win_t)$	(3) $P(Win_t)$	(4) $P(Win_t)$
MMV_{t-1}	0.0143** (0.00680)	0.0141** (0.00680)	0.0140*** (0.00417)	0.0137*** (0.00416)
Incumbent	0.277*** (0.0914)	0.290*** (0.0920)	0.312*** (0.0719)	0.320*** (0.0718)
Incumbent \times MMV_{t-1}	0.00624 (0.00957)	0.00615 (0.00974)	0.00156 (0.00615)	0.000962 (0.00621)
Legally open elections	0.269* (0.154)	0.262* (0.156)	0.278* (0.147)	0.258* (0.150)
Legally Open \times MMV_{t-1}	0.0168 (0.0105)	0.0165 (0.0107)	0.0171* (0.00897)	0.0164* (0.00934)
Legally open \times Incumbent	-0.419* (0.238)	-0.408* (0.242)	-0.453** (0.230)	-0.430* (0.234)
Legally Open \times Incumbent \times MMV_{t-1}	-0.0174 (0.0181)	-0.0176 (0.0188)	-0.0127 (0.0164)	-0.0120 (0.0171)
Party & Department FE	NO	YES	NO	YES
Observations	147	147	219	219
R ²	0.220	0.225	0.238	0.245

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: Own elaboration based on *Boreluy*. Columns 1 and 2 consider legally open elections, while 3 and 4 consider both legal and de facto open elections.

Table 5 shows the main estimates *Diff-in-disc*. The outcome variable in all estimates

reflects electoral success in the next election. Estimates (1) and (2) are made taking into account a definition of open legal and in estimates (3) and (4) the open legal ones are added to the open ones in fact. Specification (2) and (4) unlike (1) and (3) introduce department and party controls. The considered bandwidth is from -20 to 20, which reflects that a political party won/lost an election by a margin of between -20% and 20% of the votes cast in the election. The coefficient *Diff-in-disc* is the one associated with the interaction between open elections and party incumbency. Regarding the first model, the *running variable* and the fact that the elections are open contribute positively to electoral success in the following elections with a significance of 5%. Party incumbency also shows to be positive and significant at 1%. On the other hand, the coefficient *Diff-in-disc* has a negative sign and is significant at 10%. The introduction of controls does not substantially change the estimates. When the definition of open becomes more lax, the estimated coefficients do not differ substantially from the previous ones. Moreover, both the *running variable* and the *Diff-in-disc* coefficient become more significant, which can be partly explained by having a larger sample. This table is showing us that the endogeneity that can occur due to “strategic withdrawal” (the incumbent decides not to run for fear of failure) does not create large biases in the estimates. Indeed, when the decision not to apply is exogenous (legal impediment) the coefficient *Diff-in-disc* is slightly lower.

Table 6: Main results: individual and partisan separate incumbency effects (system solution)

	Individual				Partisan			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Incumbency estimate	0.758	0.738	0.821	0.779	-0.280	-0.262	-0.297	-0.27
Standard Dev.	(0.429)	(0.433)	(0.463)	(0.471)	(0.223)	(0.225)	(0.244)	(0.249)
P-value	0.077	0.088	0.076	0.098	0.209	0.244	0.224	0.278
Party & Department FE	NO	YES	NO	YES	NO	YES	NO	YES

Standard errors obtained by bootstrap (300 repetitions, seed 123). Source: own elaboration based on *Boreluy*. Columns 1 and 2 consider legally open elections, while 3 and 4 consider both legal and de facto open elections.

In any case, to obtain the effects of the individual incumbent and of the political party, the system of two equations and two unknowns shown in equation 5 must be solved. To obtain the standard errors and the confidence intervals, the bootstrap technique will be applied using the coefficient *Diff-in-disc* and the one associated with ‘Incumbent’ from Table 5 together with the probability that a candidate incumbent is re-nominated, which is 72.4%.⁴³ Table 6 presents

⁴³For simplicity, descriptive statistics are used for the re-nomination rate, which only affects individual incumbency, not political party. In any case, a regression was carried out with data at the candidate level where the dependent variable was a dummy that indicates with a value 1 if the candidate runs again in the next election and 0 otherwise and covariates sex, political party, year and if the candidate in question won the current election. The coefficient associated with ‘Winner’ is 0.348 with the complete sample and 0.539 when

the results of solving the system of equations. These results confirm the RDD estimates of individual and party incumbency obtained independently from pooled data at the candidate and party level, respectively.

The individual estimate of 0.737 is significantly higher than the 0.269 found with RDD techniques (candidate level data when the party effect was still involved). This implies that the incumbent candidate will have an advantage of 73.7 percentage points in relation to a challenging candidate, for the simple fact of being an incumbent candidate. This effect is significant at 10% for the different definitions of open elections and the application of controls. Party influence is negative (-0.262) and more than double that the one found with data from political parties (-0.106). In any case, it cannot be held to be different from 0 since it does not show to be significant at the usual levels of significance. In a very summarized way we could say that incumbency is a personal matter: citizens appear to feel attracted to the candidate, not the political party and vote accordingly.

5.3 Discussion

The results found are in line with those reported in the bibliographic review and go in line with one potential working hypothesis referring to the Uruguayan case and individual and partisan responsibility. Indeed, as in developed countries, in Uruguay there is positive influence at the candidate level. This incumbency is related to the strength of the institutions and the possibility of the incumbents to make use of the political and economic resources that come from the exercise of the elective position (*constituency service, pork barrel* and the economic incumbency favour *credit claiming*).

The value found of 73.7 % is also higher than what was first suggested by descriptive statistics and the previous work by [Cardarello \(2011\)](#). Indeed, thanks to the separation of open and closed elections it is possible to distinguish between individual and partisan responsibility. In this way, it is possible to discount the incumbency of the party from the incumbency of the individual and explain a significantly higher value of the latter.

On the other hand, incumbency at the political party level is negative or with values that are not distinguishable from 0, as was also seen in other works ([Kendall and Rekkas, 2012](#); [Fowler and Hall, 2014](#); [Lopes da Fonseca, 2017](#); [Klašnja and Titiunik, 2017](#)). The mechanisms by which this happens in the works cited are different and in the case of Uruguay a first effort in this direction is presented in Section 7. To interpret results regarding the electoral reform, recall

those candidates who cannot stand in the next election due to being legally impeded are excluded. The second estimate is considered to be the correct one, since in the first there are cases of non-application beyond the control of the candidates. Beyond these considerations, taking lower values of the reapplication rate would only increase the effect of the individual incumbent, so the value of the descriptive statistics in any case biases the results downwards and should be taken as a lower bound.

that it implied three opposing effects that could modify the individual incumbency effect: the separation of national and departmental elections, the limitation of the offer (up to 3 candidates per political party per department that must be approved by a convention a year before the election) and the increase in the ‘quality’ of the candidates (the ‘appetite for the position of Mayor’, as discussed by [Chasquetti \(2014\)](#)).

Table 6 reflects a negative difference in favor of the effect of the incumbent prior to the Constitutional Reform in relation to the subsequent period. This would be suggesting to us that the increase in the “quality” of the candidates would prevail over the limitation of the offer of candidacies. On the other hand, the results also seem to indicate that the Constitutional Reform moderates the disadvantage of being an incumbent political party, since significant negative incumbency is passed to one that cannot be significantly distinguished from zero.

The evidence collected allows us to argue, roughly, that at the moment of defining their vote, the electorate concentrates more on the candidate than on the political party he represents, an effect nuanced by the Constitutional Reform. This implies that when open elections take place, the incumbent party’s candidate cannot capitalize on his party’s management and carry out efficient *credit claiming*. It also implies that it is the candidate who provides votes to his political party and that the latter has a weak coercive capacity over the incumbent candidate based on his electoral dependency.

6 Robustness checks, extensions and limitations

6.1 Robustness checks

The results of the robustness checks are reported in the Appendix, leaving their comments for this section. Unless otherwise stated, the estimate (2) of Table 4 will be taken as the reference specification to perform the contrasts. The first checks carried out were included in the previous section and had to do with the introduction of controls and the relaxation of the definition of open elections to include open ones in fact. As seen, these modifications generate small changes in the coefficients’ values but do not affect the sign or the significance of the variables.

In second place, we repeat the estimations leaving key elections out; results are reported in Table A.8 in the Appendix. Concretely, we leave out 1971, 1984, 1971 *and* 1984, and 2005. Dropping 1971 leads to estimated coefficients with the same sign but lower significance. The same happens when dropping 1984, but with higher significance of covariates. Joint exclusion of 1971 and 1984 leads to coefficients with the same sign but a dramatical loss of significance (which at least partially must be due to the large drop in sample size). 2005 was the first national election won by the left wing party *Frente Amplio*, which may have affected departmental elections through a ‘coattail effect’ (see for example [Ames \(1994\)](#) for the case of Brazil). When

excluding 2005 from the estimation, we see that the significance of the coefficient of interest *Diff-in-disc* and that associated with open elections improves in relation to the estimates with the complete sample, but the constant ceases to be significant. This can be interpreted as the effect that national fluctuations have on the departmental results in the 2005 election when *Frente Amplio* reached the national government for the first time and, hand in hand, a series of departmental governments.

In third place, we run a set of placebo tests. We randomly reassign the values of the variables *Open*, *Margins of Victory* and *Incumbency* across the sample, maintaining their mean and standard deviation, and repeat the estimations. Results are reported in Table A.9 in the Appendix. In general, the coefficients change sign in relation to the original estimates and that the coefficient of interest *Diff-in-disc* decreases its significance, just like the Incumbent variable. Overall, using placebo variables leads to null results.

Fourth, we consider bandwidths. Recall that the *Diff-in-disc* estimate does not have a command to efficiently calculate a bandwidth based on the data. At the same time, *Diff-in-disc* does not require or apply kernels or approximations through polynomials of various degrees, as is the case with RDD. Still, we present results in Table A.10 in the Appendix manually restricting the sample to different bandwidths. Recall that all estimates presented until now are constructed based on a bandwidth of (-20,20). Reducing the bandwidth implies reducing the sample, and results remain significant with a smaller bandwidth of (-15,15) based on 122 observations. Nevertheless, a bandwidth of (-10,10) reduces the sample size to 91 and the *running variable* is no longer significant.

Fifth, to test the hypothesis that the results could be affected by the capital city, that includes half of the country's population, we exclude observations from Montevideo and repeat the estimation. Results are shown in Table A.11 in the Appendix. The coefficients retain sign and significance in relation to the original estimate, which shows that local variations in the way of choosing candidates and parties do not affect the results.

Finally, we conduct a placebo test of the Constitutional Reform. We artificially modify the reform's application year to 1990, 1997 and 2001, and perform a statistical test of equality of Pre and Post coefficients in all cases. We report results in Table A.12 in the Appendix. No significant changes occur in the pre-post variations (except in the covariate 'Open'). We also separately compute individual and partisan incumbencies for the three cases and present them in Table A.13 in the Appendix. From it, we can say that the observed changes can be seen in all the years considered, but that there is a distinction between pre-post 1990 in relation to pre-post 1997 and 2001. Indeed, although in 1990 the individual and of party are modified, their signs are not altered beyond the loss of significance. In the 1997 and 2001 variation, there is a loss of significance in the post-period together with a change in the sign of the estimated incumbencies.

In short, results jointly suggest that the Constitutional Reform did indeed have an effect on incumbencies. This robustness check, which reflects changes in individual and party responsibilities between periods (pre-post 1990, pre-post 1997 and pre-post 2001), invites us to reconsider the Constitutional Reform as a turning point by conceptualizing it as a consolidation of changes already being processed in the Uruguayan political system. One of these changes is the growing predisposition, after the return to democracy, of political actors to lead departmental executives as part of their political careers. Said “appetite for the position of mayor” (Cardarello, 2011; Chasquetti, 2014) influences the increase in the ‘quality’ of the candidates, which could explain the changes perceived between periods.

6.2 Extensions

In this subsection we extend the results in three directions. First, we investigate whether the effects found for the whole period are different before and after the constitutional reform of 1997. Then, we perform two simple estimation exercises to shed light into *which* mechanism may be behind the null party incumbency and positive individual incumbency.

Electoral Reform

To evaluate the effect of the Constitutional Reform on the incumbent’s effect, we divide the sample in two. A first sub-sample consists of the elections of 1971, 1984, 1989 and 1994, and the second comprises 2000, 2005, 2010, 2015 and 2020). We repeat all estimations for both sub-samples and investigate whether they differ. We repeat Diff-in-Disc estimates and present results for our preferred specification (2) in Table A.12 in the Appendix. When observing the p-values, note that all the coefficients remain unchanged except those associated with Incumbent and the coefficient of interest *Diff-in-disc*, keys for estimating individual incumbency and of political party. This suggests that both effects should change due to the reform; estimates of personal and party incumbency parameters are reported in Table 7 below

Table 7: Extension: *Diff-in-disc* estimation, pre and post 1997 electoral reform

VARIABLES	Pre-1997	Post-1997	
	$P(Win_t)$	$P(Win_t)$	
MMV_{t-1}	0.0205*** (0.00684)	-0.000449 (0.0128)	2.18 0.1397
Incumbent	0.502*** (0.101)	-0.0261 (0.160)	7.93 0.0049
Incumbent \times MMV_{t-1}	0.000946 (0.00999)	0.00762 (0.0195)	0.10 0.7466
Legally Open	0.460** (0.186)	0.0700 (0.227)	1.82 0.1770
Legally Open \times MMV_{t-1}	0.0177 (0.0158)	0.0283 (0.0235)	0.26 0.6086
Open \times Incumbent	-0.923*** (0.263)	0.0529 (0.314)	5.44 0.0197
Legally Open \times Incumbent \times MMV_{t-1}	-0.000764 (0.0225)	-0.0284 (0.0320)	0.74 0.3897
Party & Department FE	YES	YES	
Observations	82	65	
R-squared	0.505	0.079	

Standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The third column presents the t-statistic and p-value associated with test of difference between coefficients in columns 1 and 2. Source: own elaboration based on *Boreluy*

Results show that, first, the effects of the incumbent estimated with data prior to the reform turn out to be significant, unlike what happens with the post-1997 data. Second, note that beyond the significance levels of the estimated post-reform coefficients, their values are outside the confidence intervals of the estimates made with data prior to the reform. This implies that the Constitutional Reform caused a decrease in the effects of the individual incumbent and an increase in that of the political party.

Table 8: Extension: individual and partisan separate incumbency effects (system solution) before and after electoral reform

	Candidate		Party	
	Before	After	Before	After
Parameter	1.672	-0.095	-0.672	0.039
S.D.	(0.618)	(0.831)	(0.326)	(0.439)
p-value	0.007	0.908	0.04	0.928
Party & Department FE	YES	YES	YES	YES

Standard errors obtained by bootstrap (300 repetitions, seed 123). Source: own elaboration based on *Boreluy*. All estimates control for party and department fixed effects and consider only legally open elections.

Drivers of individual and party incumbency results

Next, we study the negative incumbency at the party level and positive incumbency at the candidate level. For this purpose, we use two additional datasets.⁴⁴ First, we use statistics compiled by the Uruguayan Territorial Observatory (OTU), which depends on the Office of Planning and Budget (OPP) for the period 1993 to 2018. This data set includes variables at the departmental level that reflect the standard of living and the heterogeneity of the territory: average income, poverty level, Gini index, unemployment level, income and expenses of departmental governments and therefore, fiscal result, number of employees in the public sector (budgeted and not budgeted),⁴⁵ political affinity (correspondence of political sign between the national and departmental government) and if the management corresponds to the first or second term of the Mayor.

Second, we revisit the *Boreluy* dataset and extract variables at the candidate level, and use information on campaign funding compiled by the Corte Electoral for 2010, 2015 and 2020. The candidates and political parties submit the rendering of accounts after the promulgation of Law No. 18485 of 2009 that establishes said obligation, limitations on donations and the amounts of contributions per valid vote (13 units indexed by suffrage to the value of the date of the election) to that previously established in specific laws that were sanctioned prior to each election period. This publicly available dataset comprises all the reported sources of income that

⁴⁴We would like to acknowledge and thank the collaboration of Adrián Rodríguez-Miranda for sharing departmental socioeconomic data prior to 2006, and of José Raúl Rodríguez for providing disaggregated data on public officials of departmental governments.

⁴⁵In Uruguay, public sector positions are highly protected and public employees are virtually impossible to fire. At the departmental level, Mayors usually employ a certain number of workers that effectively function as public employees but operate under special contracts, than can be revoked or not renewed, that is, that lack the protection of the proper public jobs. The difference between is summarized in this paper as whether the worker appears in the official set of public employees and is part of the budget (hence there should be funds to cover his wage indefinitely) or he appears under a special contract, meaning that his future is uncertain.

financed the campaign of each candidate: contribution per valid vote, donations nominative, anonymous, candidates for elective positions, donations in kind and others.⁴⁶

Empirically, we first study a potential mechanism behind party results following the argument developed by [Klašnja and Titiunik \(2017\)](#). Incumbent candidates facing a second term of government are unable to appear for a third term of government given the legal limitations established by the Constitution. For this reason, in the absence of *accountability*, the incumbents could engage in questionable practices that would entail a political cost to their parties in the following elections. We make a first attempt at testing this hypothesis, by running estimating four sets of regressions by OLS.

First, we regress the fiscal result (which is always negative, thus in practice its fiscal deficit in uruguayan pesos) against the dummy capturing whether the Mayor is serving his first or second period, and different controls in four specifications. Results in Table A.15 in the Appendix show that the dummy coefficient is small and not statistically significant in all cases. Then we regress the number of total public employees, the share of budgeted employees, and the total number of budgeted and non-budgeted employees, against the dummy of interest and a set of controls (Table A.16 in the Appendix). We then regress the same four outcome variables against the same controls but excluding fiscal result (Table A.17 in the Appendix). Taken together, results do not seem to suggest that the Mayor engages in ‘bad practices’: being forced to leave the post does not seem to systematically affect variables that would show nepotism or bad behaviour.

Empirically, in second place, we study the potential mechanism of ‘financial incumbency’ developed by [Fouirnaies and Hall \(2014\)](#). The idea is that the incumbents have substantially higher incomes than the defiant ones to finance their electoral campaigns and consequently they would obtain better results. We make a first attempt at testing this hypothesis by estimating a regression by OLS. We seek to understand if amount of economic resources available for each candidate’s campaign is affected by a set of control variables, including a key dummy that classifies the candidates as incumbent or challenger. Results are reported in Table A.18 in the Appendix. In column 1, where the sample is restricted to 2010, 2015 and 2020, a total of 373 observations are reached. Being incumbent is significant in explaining the level of income a candidate obtains to finance his campaign. However, if we again restrict the sample to "comparable" candidates (with an MMV between -20 and 20) as done in column 2, the observations drop dramatically to 135 and the significance associated with being incumbent is lost to explain the amount of income.

This result is not conclusive, but it supports the intuition that as new elections and new surrenders take place, it will be possible to clearly establish that the incumbents have signifi-

⁴⁶The government helps funding political parties and candidates campaigns, by providing money for the votes that the candidate will get (which are estimated based on his/her past performance)

cantly higher incomes in relation to the comparable challengers.

6.3 Limitations

In the first place, without detracting from the substantive contribution that the RDD and *Diff-in-disc* techniques imply in the determination of causal effects, it is worth mentioning that the estimates obtained are of a local nature in the neighbourhood of the cutoff point that defines the treatment between winning or losing a departmental election. This implies that those candidates/parties that won or lost by a wide margin are not directly considered in the estimates.

Secondly, individual incumbency was determined by incumbents who served up to the time of the election, leaving out other estimates such as the effect of having been incumbent in previous periods and not in the directly preceding period. That is to say, mayors who seek mediate and not immediate re-election. Likewise, the definition of open or closed elections corresponds to the elected mayors, leaving those who acted as auditors out of the analysis. A third aspect to comment on is that the individual incumbency estimated through the “unconditional RDD” may overestimate the effect of the incumbent based on different application rates. Considering a “conditional RDD” is beyond the scope of this paper and is recognized as a limitation.

A fourth limitation is related to the differential effort that a mayor at the head of the administration can make when faced with legal limitations and there is no possibility of *accountability* at the individual level. This could affect the management of the Municipal governments and consequently, the role of the political party in open elections. The estimates are based on the assumption of an identical responsibility of the political party in open and closed elections.

Last and in relation to the above, another limitation that this work presents is not contemplating the mayor’s management or the citizens’ evaluation on said management. Cases of corruption, misuse of public funds or inability to carry out policies can affect the chances of candidates and parties to be re-elected. Moreover, including economic policy variables related to the management of administrations can help to better understand the nature of the responsibility of parties and candidates and therefore an interesting extension to be carried out in future work.

7 Conclusion

As mentioned in the introduction, studying incumbency implies in general terms asking about the preferences of the population regarding permanence versus change and the relationship

between citizenship and the political system. The primary analysis of descriptive statistics provides evidence in favour of a positive individual incumbent effect, but it does not allow estimating causal effects as it does not properly compare incumbents with challengers, nor does it allow us to understand what happens with the political party incumbent.

In the absence of information regarding the "quality" of the candidates, the estimation through OLS is biased and through VI it is virtually impossible. In turn, the estimation through RDD leads to an effect that combines individual responsibility and that of the political party. Fortunately, the local institutional context, which prohibits the nomination of mayors after two terms in office, configures cases of open elections where the incumbent is absent exogenously and beyond his control. By exploiting these situations through the *Diff-in-disc* (combination of RDD and *Diff-in-diff*) it is possible to separate individual and party incumbencies and achieve causal estimates.

The individual incumbency estimated in this way allows us to say that the incumbent candidate will have a 73.7% greater probability of winning the next election in relation to a challenging candidate close to the cut-off point for the simple fact of being an incumbent candidate. This positive and significant individual incumbency brings Uruguay together with developed countries, where resources for the development of the public function give incumbents an advantage over challenging candidates. In turn, a negative and insignificant party estimate is found, which is in line with the works that efficiently manage to distinguish both types of incumbencies.

Both findings, subjected to different robustness checks, imply that when open elections take place, the candidate of the incumbent party is not able to capitalize on his party's management and perform *credit claiming* efficiently. It also means that the candidate provides votes to his political party and that the latter has a weak coercive capacity over the incumbent candidate based on his electoral dependency. All of the above allows us to say that incumbency in Uruguay is a matter of candidates.

On the other hand, note that results show changes in incumbencies before and after the Constitutional Reform. This finding invites us to conceptualize the Reform not as a breaking point, but as a consolidation of changes that were already being processed in the Uruguayan political system.

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A Auxiliary tables and figures

A.1 Descriptive statistics

Table A.2: Closed, Legally and De Facto open elections by department and year.

Department	Election								
	1971	1984	1989	1994	2000	2005	2010	2015	2020
Artigas	C	LO	C	C	DFO	C	C	C	C
Canelones	C	LO	C	C	C	LO	C	LO	C
Cerro Largo	C	LO	C	LO	DFO	C	LO	C	LO
Colonia	DFO	DFO	DFO	DFO	C	LO	C	LO	C
Durazno	DFO	C	C	C	DFO	C	LO	DFO	C
Flores	DFO	DFO	C	LO	C	LO	DFO	DFO	C
Florida	DFO	DFO	DFO	C	C	C	C	C	LO
Lavalleja	DFO	C	C	C	LO	C	LO	C	LO
Maldonado	C	LO	C	C	LO	C	C	LO	C
Montevideo	DFO	DFO	DFO	DFO	C	LO	DFO	DFO	C
Paysandu	C	LO	DFO	C	LO	DFO	C	C	C
Rio Negro	DFO	DFO	C	LO	DFO	DFO	C	LO	C
Rivera	DFO	DFO	C	C	DFO	C	LO	C	LO
Rocha	DFO	DFO	C	C	C	C	C	LO	C
Salto	C	DFO	C	C	C	LO	C	C	C
San Jose	DFO	DFO	C	LO	C	C	LO	C	LO
Soriano	DFO	DFO	C	DFO	C	LO	C	LO	DFO
Tacuarembó	C	LO	C	LO	C	LO	C	LO	DFO
Treinta y Tres	C	DFO	C	LO	DFO	C	C	C	LO
<i>Legally open</i>	0	6	0	6	3	7	5	7	6
<i>De Facto Open</i>	11	11	4	3	6	2	2	3	2
<i>Closed</i>	8	2	15	10	10	10	12	9	11

Robust standard errors in parenthesis. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. Source: own elaboration based on *Boreluy*.

A.2 Computation of the MMV

Table A.3 below presents an example of the computation of the minimum margin of victory in a case of two candidates by party and two parties, for a given department. Within Party 1, Candidate A wins against Candidate B by 380 votes; while Party 1 wins over Part 2 by 70 votes.⁴⁷ Intra and inter party margin of victories, together with the actual MMV are displayed in the Table.⁴⁸ Candidate A is the winner and the only one with a positive MMV value. It is possible then to construct an increasing order from the most negative values to the least negative to finish with the only positive observation that corresponds to the winner; the MMV captures which candidates were closest to winning the departmental government.

Table A.3: Example: minimum margin of victory with multiple candidacies by party

Party	Candidates	Votes	Difference		Minimum Margin of Victory
			Intra party	Inter party	
1	A	400	380	70	70
1	B	20	-380	70	-380
2	C	250	150	-70	-70
2	D	100	-150	-70	-150

Source: Own elaboration.

⁴⁷In the event that a political party nominates a single candidate, the value of the "intra" variable will be simply the number of votes received by that candidate.

⁴⁸Candidate A has an advantage of 70 votes over party 2 and 380 votes over Candidate B. The smallest difference (70) is shown in bold. Alternatively, Candidate B needs to obtain 380 votes to surpass his party partner and be Mayor; Candidate C requires 70 votes more to surpass Party 1, while Candidate D needs 150 votes to win the election.

A.3 RDD Validation

Table A.4: McCrary Test: manipulation of *running variable* at the party level

Cutoff: $C = 0$	Left	Right
Total Observations	342	171
Estimation command:	Panel A: rdrobust command	
Effective observations	101	111
Polynomial order for estimation (p)	2	2
Polynomial order for bias (q)	3	3
Optimal bandwidth (h)	16.190	20.141
t-statistic		0.2959
p-value		0.7673
Estimation command:	Panel B: rdcont command	
Effective observations	26	25
Effective neighbourhood	-2.304	2.196
Q		51
p-value		1

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
 Source: own elaboration based on *Boreluy*.

Table A.5: Test: continuity of observables

Cutoff $C = 0$	Political parties		<i>Departamentos</i>	
	Left	Right	Left	Right
Coefficient	-0.22469		-0.05105	
p-value	0.275		0.876	
Observations	342	171	342	171
Effective observations	94	89	100	94
Pol. Order estim. (p)	1	1	1	1
Pol. Order. bias (q)	2	2	2	2
Optimal bandwidth (h)	14.964	14.964	16.085	16.085
Bandwidth bias (b)	22.448	22.448	24.519	24.519

Robust standard errors . Source: own elaboration based on *Boreluy*.

Table A.6: McCrary Test : manipulation of *running variable* at the candidate level

Cutoff $C = 0$		Left	Right
Total observations		1102	171
Estimation command:	Panel A: rdrobust command		
Effective observations		196	106
Polynomial order for estimation (p)		2	2
Polynomial order for bias (q)		3	3
Optimal bandwidth (h)		8.524	8.319
t-statistic			-0.8797
p-value			0.3790
Estimation command:	Panel A: rdcont command		
Effective observations		24	20
Effective neighbourhood		-0.823	0.738
Q			44
p-value			0.652

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
 Source: own elaboration based on *Boreluy*.

Table A.7: Test: continuity of observables for selected variables and individual level data

Cutoff $C = 0$	Re-run		Incumbents		Parties		Departments	
	Left	Right	Left	Right	Left	Right	Left	Right
Coefficient	0.10992		-0.15044		-0.11782		0.51522	
p-value	0.386		0.059		0.330		0.774	
Observations	994	152	1102	171	1102	171	1102	171
Effective observations	197	103	142	95	320	130	317	128
Pol. Order estim. (p)	1	1	1	1	1	1	1	1
Pol. Order. bias (q)	2	2	2	2	2	2	2	2
Optimal bandwidth (h)	9.066	9.066	6.339	6.339	12.435	12.435	12.313	12.313
Bandwidth bias (b)	13.105	13.105	10.416	10.416	19.167	19.167	19.139	19.139

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
 Source: own elaboration based on *Boreluy*.

A.4 Robustness checks and extensions

Table A.8: Robustness check: *Diff-in-disc* estimations excluding selected elections.

VARIABLES	Full sample $P(Win_t)$	w/out 1971 $P(Win_t)$	w/out 1984 $P(Win_t)$	w/out 1971 & 84 $P(Win_t)$	w/out 2005 $P(Win_t)$
MMV_{t-1}	0.0141** (0.00680)	0.0129* (0.00787)	0.0141** (0.00707)	0.0125 (0.00830)	0.0128* (0.00708)
Incumbent	0.290*** (0.0920)	0.225** (0.102)	0.262*** (0.0950)	0.192* (0.108)	0.316*** (0.0994)
Incumbent \times MMV_{t-1}	0.00615 (0.00974)	0.00498 (0.0119)	0.00620 (0.0100)	0.00514 (0.0126)	0.00470 (0.0104)
Legally Open	0.262* (0.156)	0.231 (0.159)	0.188 (0.168)	0.151 (0.172)	0.403*** (0.153)
Legally Open \times MMV_{t-1}	0.0165 (0.0107)	0.0173 (0.0116)	0.0152 (0.0110)	0.0165 (0.0120)	0.0253** (0.0103)
Legally Open \times Incumbent	-0.408* (0.242)	-0.335 (0.248)	-0.257 (0.258)	-0.179 (0.266)	-0.768*** (0.219)
Legally Open \times Incumbent \times MMV_{t-1}	-0.0176 (0.0188)	-0.0163 (0.0203)	-0.0179 (0.0186)	-0.0167 (0.0204)	-0.00494 (0.0149)
Party & Department FE	YES	YES	YES	YES	YES
Observations	147	133	131	117	131
R-squared	0.225	0.175	0.217	0.160	0.272

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*

Table A.9: Robustness check: *Diff-in-disc* placebo estimations

VARIABLES	(1) $P(Win_t)$	(2) $P(Win_t)$	(3) $P(Win_t)$	(4) $P(Win_t)$
MMV_{t-1}	0.0141** (0.00680)	0.0162*** (0.00489)	0.0231*** (0.00530)	-0.000839 (0.00450)
Incumbent	0.290*** (0.0920)	0.253** (0.0989)	0.0849 (0.101)	0.614*** (0.0835)
Incumbent \times MMV_{t-1}	0.00615 (0.00974)	-0.00242 (0.00723)	-0.0113 (0.00958)	0.0102 (0.00709)
Legally Open	0.262* (0.156)	0.0433 (0.120)	0.128 (0.0968)	-0.0501 (0.0670)
Legally Open \times MMV_{t-1}	0.0165 (0.0107)	0.00278 (0.0109)	0.00245 (0.00633)	-0.000573 (0.00668)
Legally Open \times Incumbent	-0.408* (0.242)	-0.00783 (0.173)	-0.320* (0.179)	0.115 (0.142)
Legally Open \times Incumbent \times MMV_{t-1}	-0.0176 (0.0188)	-0.00220 (0.0154)	-0.000730 (0.0155)	-0.0124 (0.0114)
Party & Department FE	YES	YES	YES	YES
Observations	147	160	147	158
R-squared	0.220	0.294	0.165	0.445

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*. *Diff-in-disc* estimates with party and department fixed effects, bandwidth (-20,20). Column (1) reproduces the main estimation found in Column 2 of Table 5. Columns 2, 3 and 4 repeat the estimation procedure with placebos for Open elections, Incumbents, and the Margin of Victory.

Table A.10: Robustness check: *Diff-in-disc* estimations with different bandwidths.

VARIABLES	BW:(-20,20) $P(Win_t)$	BW:(-15,15) $P(Win_t)$	BW:(-10,10) $P(Win_t)$
MMV_{t-1}	0.0141** (0.00680)	0.0239*** (0.00737)	0.0109 (0.0191)
Incumbent	0.290*** (0.0920)	0.360*** (0.0900)	0.386*** (0.120)
Incumbent \times MMV_{t-1}	0.00615 (0.00974)	0.00206 (0.0104)	0.00377 (0.0303)
Legally Open	0.262* (0.156)	0.291* (0.158)	0.322* (0.180)
Legally Open \times MMV_{t-1}	0.0165 (0.0107)	0.000969 (0.0168)	-0.0164 (0.0337)
Legally Open \times Incumbent	-0.408* (0.242)	-0.665*** (0.219)	-0.689*** (0.249)
Legally Open \times Incumbent \times MMV_{t-1}	-0.0176 (0.0188)	0.00162 (0.0234)	0.00484 (0.0457)
Party & Department FE	YES	YES	YES
Observations	147	122	91
R-squared	0.225	0.223	0.136

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*

Table A.11: Robustness check: *Diff-in-disc* estimations excluding the capital (Montevideo).

VARIABLES	(1) $P(Win_t)$
MMV_{t-1}	0.0141** (0.00680)
Incumbent	0.290*** (0.0920)
Incumbent \times MMV_{t-1}	0.00615 (0.00974)
Legally Open	0.262* (0.156)
Legally Open \times MMV_{t-1}	0.0165 (0.0107)
Legally Open \times Incumbent	-0.408* (0.242)
Legally Open \times Incumbent \times MMV_{t-1}	-0.0176 (0.0188)
Party & Department FE	YES
Observations	147
R-squared	0.225

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*.

Table A.12: Robustness check: placebo electoral reforms (contrasting pre and post coefficients)

VARIABLES	Pre-Post contrasts		
	1990	1997	2001
MMV_{t-1}	0.14 (0.7098)	2.18 (0.1397)	1.07 (0.3001)
Incumbent	17.13 (0.000)	7.93 (0.0049)	8.20 (0.0042)
Incumbent \times MMV_{t-1}	0.16 (0.6917)	0.10 (0.7466)	0.02 (0.8864)
Legally Open	4.85 (0.0277)	1.82 (0.1770)	6.40 (0.0114)
Legally Open \times MMV_{t-1}	1.48 (0.2240)	0.26 (0.6086)	0.02 (0.8745)
Legally Open \times Incumbent	11.50 (0.0007)	5.44 (0.0197)	12.44 (0.0004)
Legally Open \times Incumbent \times MMV_{t-1}	0.33 (0.5644)	0.74 (0.3897)	0.15 (0.6943)

The table reports χ^2 and p-values (in parenthesis) of testing the difference between coefficients of pre-post models (based on the preferred specification with party and department fixed effects) taking three different cutting points for the pre and post periods (1990, 1997, 2001). Source: own elaboration based on *Boreluy*.

Table A.13: Individual and partisan separate incumbency effects (system solution), for placebo timing of Constitutional Reform

Period	Incumbency	Coefficient	SD	P-value
(Pre 1990)	Candidate	2.761	1.174	0.019
	Party	-1.140	0.651	0.080
(Post 1990)	Candidate	0.072	0.538	0.893
	Party	-0.006	0.276	0.982
(Pre 1997)	Candidate	1.672	0.618	0.007
	Party	-0.672	0.326	0.040
(Post 1997)	Candidate	-0.095	0.831	0.908
	Party	0.039	0.439	0.928
(Pre 2001)	Candidate	1.767	0.558	0.002
	Party	-0.745	0.296	0.012
(Post 2001)	Candidate	-0.771	0.837	0.357
	Party	0.339	0.400	0.396

Robust standard errors computed by bootstrap (300 repetitions, seed 123). Source: own elaboration based on *Boreluy*.

Table A.14: Robustness check: shuffling Open elections variable. *Diff-in-disc* estimation of separate incumbent and partisan effects.

Model	Incumbency	Coefficient	SD	P-value
(1)	Candidate	0.737	0.432	0.088
	Party	-0.262	0.225	0.244
(2)	Candidate	-0.089	0.311	0.773
	Party	0.217	0.145	0.134

Robust standard errors estimated by bootstrap, 300 repetitions, seed 123. All estimations include party and department fixed effects. Source: own elaboration based on *Boreluy*.

Table A.15: Extensions: OLS regressions of Fiscal Result at the departmental level.

VARIABLES	(1) Fiscal Result	(2) Fiscal Result	(3) Fiscal Result	(4) Fiscal Result
Workers	-128,884*** (28,628)	-0.0000*** (370,118)	-102,595*** (22,316)	128,537*** (44,422)
Affinity	39,060,000** (17,190,000)	27,980,000* (16,390,000)	33,940,000** (16,390,000)	33,940,000 (16,690,000)
Period	15,460,000 (12,450,000)	14,240,000 (12,960,000)	13,160,000 (12,240,000)	13,160,000 (12,550,000)
Gini	-3,410,000 (2,093,000)	-5,437,000** (2,188,000)	-3,596,000* (2,092,000)	-4,974,000** (2,137,000)
Average Income	86.57 (13,907)	3,999 (14,736)	-923.2 (13,931)	-1,253 (13,953)
Unemployment rate	1,696,000 (1,680,000)	573,873 (1,612,000)	1,149,000 (1,622,000)	91,302 (1,624,000)
Poverty rate	-759,343 (1,670,000)	-68,400 (1,596,000)	-1,072,000 (1,601,000)	-399,271 (1,577,000)
Observations	468	468	468	468
R-squared	0.249	0.227	0.269	0.245

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*

Table A.16: Extensions: OLS regressions of departmental public servants (I).

	(1)	(2)	(3)	(4)
	# of civil servants	share of servants in the budgeted	# of budgeted civil servants	# of non-budgeted civil servants
Fiscal Result	-0.0000*** (0.0000)	0.0000** (0.0000)	-0.0000*** (0.0000)	0.0000** (0.0000)
Affinity	109.1*** (29.18)	-1.781 (1.767)	93.46** (39.58)	15.60 (21.21)
Period	-17.37 (18.44)	3.187** (1.272)	-39.69 (27.57)	22.32 (17.56)
Gini	11.90** (4.643)	0.277 (0.316)	11.86* (6.916)	0.0317 (3.834)
Average income	0.000770 (0.0179)	-0.00321** (0.00156)	-0.00888 (0.0292)	0.00965 (0.0199)
Unemployment rate	9.754*** (3.026)	-0.0977 (0.241)	7.033 (4.752)	2.721 (2.707)
Poverty rate	-7.741*** (1.874)	0.251* (0.147)	-12.71*** (2.901)	4.971** (1.941)
Observations	468	468	468	468
R-squared	0.964	0.680	0.754	0.922

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*

Table A.17: Extensions: OLS regressions of departmental public servants (II).

	(1)	(2)	(3)	(4)
	# of civil servants	share of servants in the budgeted	# of budgeted civil servants	# of non-budgeted civil servants
Affinity	99.04*** (29.52)	-1.344 (1.764)	74.44* (40.26)	24.60 (21.31)
Period	-24.47 (18.73)	3.497*** (1.292)	-53.15* (28.96)	28.68 (18.48)
Gini	13.88*** (4.796)	0.191 (0.316)	15.63** (7.176)	-1.747 (3.839)
Average Income	0.000775 (0.0178)	-0.00321** (0.00154)	-0.00887 (0.0286)	0.00964 (0.0196)
Unemployment rate	9.578*** (3.073)	-0.0901 (0.240)	6.699 (4.803)	2.879 (2.702)
Poverty rate	-7.837*** (1.880)	0.255* (0.145)	-12.89*** (2.839)	5.057*** (1.892)
Observations	468	468	468	468
R-squared	0.962	0.674	0.734	0.919

Robust standard errors in parenthesis. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: own elaboration based on *Boreluy*

Table A.18: Extensions: OLS regressions of candidate's campaign income.

	(1)	(2)
	Campaign income	Campaign income
Incumbent	2,073,000*** (798,487)	457,755 (666,103)
Open	-44,891 (222,878)	484,648 (839,240)
Voters	54.09 (79.07)	606.1** (293.9)
Gender	829,637 (661,980)	2,402,000 (1,800,000)
2015	-112,239 (400,964)	-3,370,000*** (1,150,000)
2020	777,629 (547,594)	-1,422,000 (2,024,000)
Party % Department FE	YES	YES
Observations	373	135
R-squared	0.366	0.521

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors in parenthesis. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. Source: own elaboration based on *Boreluy* and government financial accounts for 2010, 2015 y 2020.