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Staying in Power: How Does Political Continuity Shape Debt

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Abstract

This paper investigates the relationship between political continuity and public municipal debt in Colombia, highlighting how political cycles influence fiscal behavior at the subnational level. Unlike national cycles, local political dynamics, marked by consecutive electoral victories of the same party, significantly impact fiscal policy and debt accumulation. Using a Kink Regression Discontinuity design, we explore the effects of these electoral outcomes on public financial debt. Our findings reveal that municipalities governed by the same party or coalition across successive elections exhibit a 0.25% increase in debt levels for every percentage point increase in their election win margin. This trend becomes more pronounced over time, with debt levels peaking in election years. The robustness of our results is confirmed through various bandwidths and placebo tests, which include random shuffling of electoral outcomes and reassignment of electoral results from different years. Our study contributes to the understanding of how political stability or continuity can shape fiscal outcomes at the regional level, a topic that has received limited attention in the political economy literature.

JEL Classification: P25, H63, H72, D72

Keywords: Public Finances, Local Debt, Political Processes, Elections and Voting Behavior

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Permanecer en el poder: ¿cómo influye la continuidad política en la deuda?

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Abstract

Este artículo investiga la relación entre la continuidad política y la deuda pública municipal en Colombia, destacando cómo los ciclos políticos influyen en el comportamiento fiscal subnacional. A diferencia de los ciclos nacionales, la dinámica política local, marcada por victorias electorales consecutivas del mismo partido, impacta significativamente la política fiscal y la acumulación de deuda. Utilizando un diseño de Regresión Discontinua, exploramos los efectos de estos resultados electorales sobre la deuda financiera pública. Nuestros hallazgos revelan que los municipios gobernados por el mismo partido o coalición a lo largo de elecciones sucesivas exhiben un aumento del 0,25% en los niveles de deuda por cada punto porcentual de aumento en su margen de victoria electoral. Esta tendencia se vuelve más pronunciada con el tiempo, y los niveles de deuda alcanzan su punto máximo en los años electorales. La solidez de nuestros resultados se confirma a través de varios escenarios y pruebas placebo, que incluyen la mezcla aleatoria de resultados electorales y la reasignación de resultados electorales de diferentes años. Nuestro estudio contribuye a la comprensión de cómo la estabilidad política o la continuidad pueden dar forma a los resultados fiscales a nivel regional, un tema que ha recibido poca atención en la literatura de economía política.

Clasificación JEL: P25, H63, H72, D72

Palabras clave: Finanzas públicas, deuda local, procesos políticos, elecciones y comportamiento electoral.

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1 Introduction

When fiscal expenditure needs exceed fiscal revenues, countries, regions, and cities find in debt an important source of resources to provide public goods and services. However, there is a significant heterogeneity between indebtedness across levels of governments in Colombia. While central government reached a level of indebtedness of roughly 70% of the national Gross Domestic Product (GDP) in 2020, municipalities and departments had lower than 3% of GDP (Ayala et al., 2022). In addition, richer subnational governments have more access to loans given their higher institutional and fiscal capacity. As Bonet and Acosta (2022) illustrated, the fact that richer municipalities have more access to fiscal debt can contribute to economic divergence between regions and create social gaps that are challenging to bridge. Understanding the reason behind the lower level of local indebtedness is critical for central governments, especially in countries like Brazil, Mexico, or Colombia, where regions heavily rely on national-origin transfers (Fretes and Ter-Minassian, 2015).

This paper contributes to this literature by studying one of the potential determinants of indebtedness: the political continuity. The causes of low debt levels may vary, ranging from regulatory barriers to limited technical capacity, or preferences towards transfers from the central government (Fretes and Ter-Minassian, 2015). However, a key factor at the subnational level may be local political cycles (Hallerberg and Strauch, 2002), which, in the case of Colombia, do not align with national political cycles. This paper studies the relationship between political continuity and public financial debt. We say there is political continuity when the new mayor or governor is from the same political party as the previous ruler at the regional level. Politicians from the same political party as the previous ruler may increase fiscal spending on ongoing projects, whereas opposing political parties may reduce fiscal expenditures on projects related to the previous rulers.

Following Meyerson (2014), we take advantage of the win-loss margins to create an exogenous variation that isolates the endogeneity between political cycles and debt levels. We create a running variable defined as the victory or loss margin of the political party in the contemporary elections and which won in the previous period. For those who won the elections, the margin reflects the vote distance relative to the runner-up, and for the losers, the margin reflects the distance relative to the election winner. At the margin's limit (positive or negative), winning or losing the election can be attributed to outcomes determined by chance. Through a Kink Regression Discontinuity design, the effect of repeating a political election on debt is recovered. The results show that in municipalities where political parties manage to repeat, the debt is much higher, and this relationship becomes more pronounced as the victory margin becomes larger.

Results indicate that municipalities with the same party winning consecutive elections tend to experience a 0.21% increase in debt levels for every percentage point increase in their win margin, suggesting a strong link between political continuity and rising indebtedness. The analysis reveals that while the debt impact is not significant in the year immediately following an election, it escalates over time, with debt levels peaking in election years. Specifically, from the baseline year 2016, debt increases by up to 0.28% by 2018, demonstrating a clear pattern of fiscal behavior influenced by political cycles. The robustness of the results is further validated across varying bandwidths, with the analysis consistently demonstrating significant effects on debt levels even when adjusting the bandwidth from a narrow 0.154 to a broader 0.27, underscoring the stability of the findings under different analytical conditions.

The placebo tests conducted in this study are crucial in verifying the robustness of our conclusions. We implemented randomization tests by arbitrarily shuffling electoral outcomes while maintaining constant debt levels, thereby testing the null hypothesis that the observed effects might occur by chance, independent of any genuine political impact. The outcomes of these tests revealed that only a small fraction (0.3%) of placebo coefficients were higher than the actual estimates, suggesting a very low probability that the observed effects were due to random variations. Subsequently, we undertook another set of placebo tests where we reassigned electoral results from different years (2011 and 2019) to the 2016 debt data, thus evaluating the impact under various political scenarios while keeping debt levels consistent. These tests showed no significant changes in debt levels, indicating that the observed effects are not dependent on specific electoral outcomes but are consistently evident across different electoral cycles.

From our knowledge, no research in political economy has addressed the channels through which political continuity can shape fiscal aggregate at the subnational level. The closest study is by Conlin and Thompson (2023), which uses regression discontinuity designs to examine tax referenda. They demonstrate that the agenda-setting abilities of local taxing authorities can introduce biases in RD designs, particularly when using wider bandwidths, thus questioning the validity of such identification strategies in these contexts.[7] This makes analyses that rely on small differences in voting results to identify causal effects less reliable. However, Conlin and Thompson (2023) do not examine the effect of political continuity.

The relationship that could exist between the fiscal performance of a territory and political non-continuity or stability has been previously addressed in the international context (Roubini & Sachs, 1989; Alesina, & Perotti, 1995; Calcagno, & Escaleras, 2007), but without any consensus. It is recognized that those fragmented governments have a negative relationship with respect to the functioning of the fiscal deficit (Roubini & Sachs, 1989).

Some authors have examined this relationship in terms of the adjustment that a government can make and identified that coalition governments do not usually have optimal results for fiscal adjustment (Alesina, & Perotti, 1995). This behavior is mostly explained because unified governments are characterized by having a constant credit level which allows them to maintain a uniform government program (Hernández, 2023). Following this same line of study, other authors similarly identify that political alternation has a negative effect on the fiscal deficit (Rumi, C. 2009; Calcagno, & Escaleras, 2007). Rumi (2009) proposes and uses the Index of Political Alternation (IPA), which measures the political competition that a political party can have and finds that the alternation in politics increases the deficit and, as a result, the debt. Frey (2021), Chortareas et al. (2016), and Litschig and Morrison (2010) have delved into understanding the empirical relationship between electoral cycles and local public spending. These studies conclude that local leaders are incentivized to redirect public spending in their favor to modify electoral behavior prior to elections.

From a theoretical perspective, Drazen and Eslava (2010) and Raveh and Tsur (2020) find similar results when empirically testing the models. Unlike the previous cases, our research seeks to explore the effects on fiscal aggregates once elections have been won. In other

[7] It means that when local authorities proposing taxes have the power to decide aspects like the amount of the tax, the timing of the vote, and the type of tax, they can influence the voting outcomes.

words, it does not inquire about changes in fiscal aggregates to affect voters' expectations (and to stay in power), but rather, once the leaders have been re-elected, how these fiscal aggregates change.

2 Subnational debt in Colombia

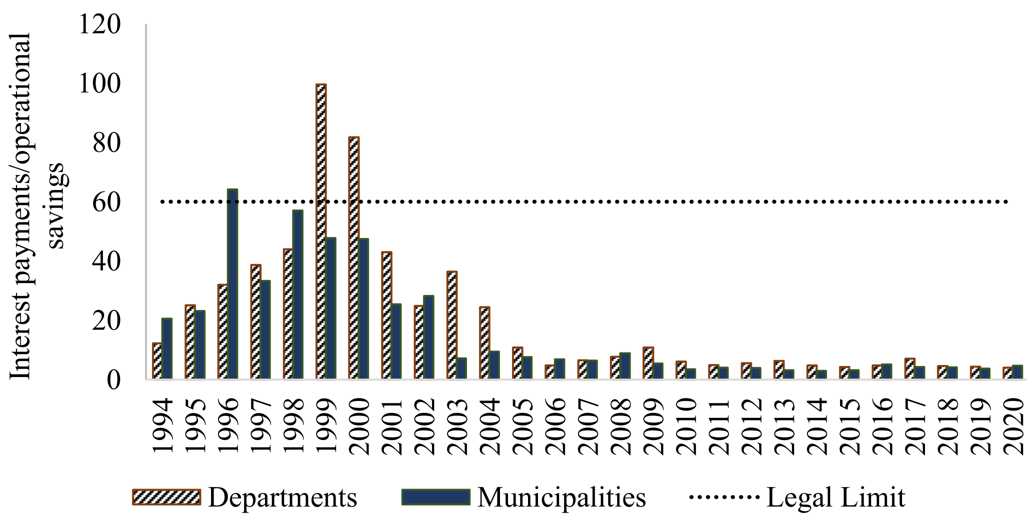
The Colombian political constitution of 1991 significantly increased the level of fiscal decentralization in the country (Pérez *et al.,* 2021). It gave municipalities and departments more responsibilities and resources to comply with the assigned tasks. Among those responsibilities were the provision of basic public services such as education, healthcare, water and sewage services (Iregui et al., 2001; Sánchez. 2008). However, there was no clear limit to the level of debt that municipalities and departments could have. There was an important increase on the level of indebtedness of local governments risking the macroeconomic stability (Lozano *et al*,.2008). As a result, several fiscal rules and fiscal responsibility laws were created to achieve fiscal viability and economic stability of subnational governments (Lozano *et al*, 2008; Pérez *et al*,.2021). Fiscal rules have evolved in line with overcoming fiscal crises improving the fiscal administration through decrees or laws that seek to promote commitment and transparency. Some authors identify these different laws by the fiscal focus, that is, whether they are directed at debt, revenue, expenses, or a combination of some (Pérez *et al*., 2021; Godoy, 2013).

The first one was the Law 358 of 1997, known as the "Traffic Light Law" (*Ley de semáforos*), which limited the level of indebtedness depending on affordability indicators. Law 358 of 1997 indicates that debt cannot exceed your payment capacity, measured two indicators: solvency and liquidity. The solvency indicator is the ratio between debt and current revenue, and the liquidity indicator is the ratio between interest payments and operational savings. The subnational government will have an instance in red if the payment capacity exceeds 60% or the solvency exceeds 80%, which imply that the territorial entity would need an authorization from the Ministry of Finance and Public Credit to increase debt (Vega & Sosa 2004). In the case of the instance in yellow, the debt of the department or municipality must have a liquidity in a range between 40% and 60%, and finally for a green instance the territory in question must have a debt such that its payment capacity is less or equal to 40%, for this instance the territorial entity enjoys debt autonomy. It is important to highlight that the yellow instance of

Law 358 of 1997 was revoked by Law 795 of 2002 through the financial reform, but this did not imply non-compliance with the provisions of Law 358 for the other instances (Sánchez, 2008).

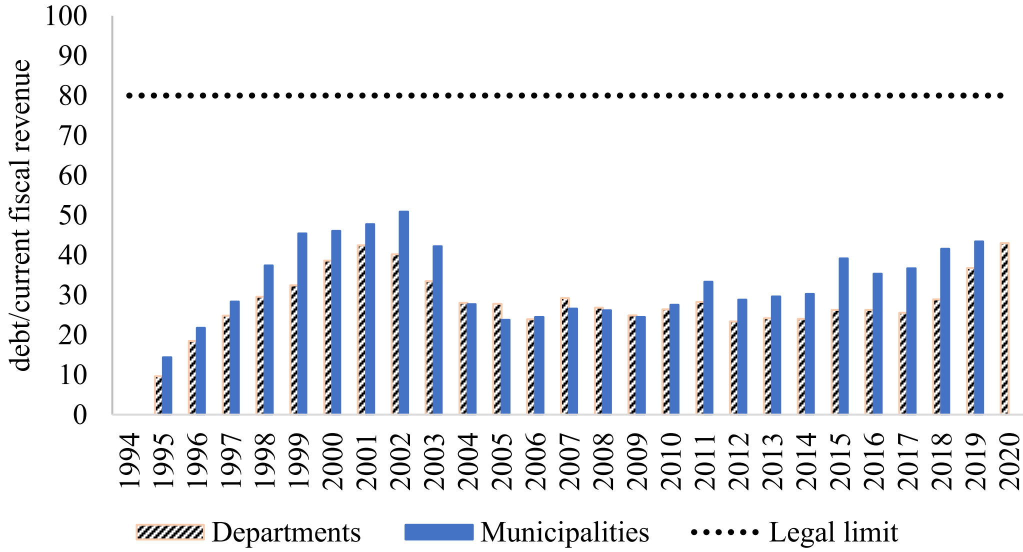
Then, Law 819 of 2003 established the Medium-Term Fiscal Framework (MFMP) and the rules to increase transparency on fiscal expenditure. The purpose was to have a medium-term vision of the subnational government´s fiscal management that allows for an anticipated surplus that ensures the payment of the debt (Lozano *et al*,.2008; Pérez *et al*,.2021; Vega & Sosa 2004; Carvajal & Camero 2023). Finally, Law 617 of 2000 focused on creating rules of fiscal responsibility and transparency through limitations on operating expenses as a percentage of the not earmarked current revenues (ICLD by its Spanish acronym), in other words, this law sought to monitor and control fiscal spending. However, as is shown in Figure 1, the aggregate level of payment capacity (measured as the ratio between interest payments and operational savings) in municipalities and departments is significantly lower than the limit established by Law 358 of 1997. For more than 20 years, municipalities and departments have managed levels of debt significantly lower than their possibilities, and since 2005, the indicator has been relatively stable. On the other hand, the solvency indicator (debt balance as a share of current fiscal revenue) remains constantly below the legal limit of 60%, as is shown in Figure 2.

Figure 1. Debt capacity indicator by subnational governments, 1994-2020.



Source: Calculations by the authors based on information from the National Planning Department (DNP) and the Ministry of Finance.

Figure 2. Sustainability indicator by subnational governments, 1994-2020.



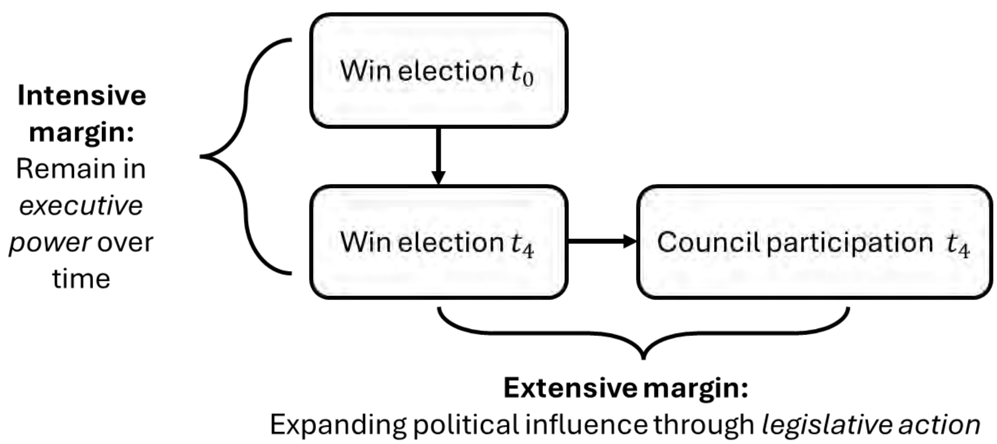
Source: Calculations by the authors based on information from the National Planning Department (DNP) and the Ministry of Finance.

3 Political leeway: Intensive and Extensive margin

It is worthwhile to distinguish between the margins of political power, as they each uniquely influence governance and policymaking, including debt management. Understanding both the intensive and extensive political margins sheds light on how political leaders and parties consolidate and expand their influence. For the goal of this paper, we define **intensive political margin** as situations in which a party has been reelected, focusing on the deepening of political influence within already established structures. It emphasizes the consolidation of power, effective implementation of the party's political agenda, and ensuring the *continuity of projects* and policies across successive political terms. According to Figure 3, a party expands its intensive political margin when it wins more than two consecutive municipal elections.

Conversely, the **extensive political margin** pertains to the ability of the party to broaden their influence by gaining significant representation in legislative bodies, such as the municipal councils. This margin involves the expansion of the scope and breadth of political influence. This is especially critical for local finances because municipal councils must approve any changes related to enacting budgetary rules, issuing the annual budget, and adopting local taxes and expenditures.[8] Any fiscal change, including the incurrence of debt, must pass through the council. This implies, for example, that if the mayor, who belongs to Party A, wants to increase investment spending through debt, it must be approved by the council. The more members of Party A that are on the council, the higher the likelihood that this debt will be approved.

Figure 3. Intensive and Extensive margin



Source: Own elaboration

The Intensive and Extensive margins together serve complementary functions within political dynamics. The extensive margin facilitates the expansion of influence through the adoption of new legislation and policies, while the intensive margin supports the consolidation of power crucial for realizing long-term political objectives and implementing administrative strategies.

This dynamic is evident in two key cities of the country. In Bogotá, the capital city, the council sanctioned a debt increase of 10.8 trillion Colombian pesos (COP) in 2021 and 11.8 trillion COP in 2022; these amounts constituted 26% of the district's development plan for 2020-2024, totaling 87.7 trillion COP. A parallel development occurred in Barranquilla, which, according to the 2023 elections, will have been governed by the same political party

[8] Articles 272 and 313 of the Colombian Political Constitution (1991).

for five consecutive terms from 2008 to 2027, with the same mayor serving three of those terms. At the beginning of 2024, the municipal council approved an increase of 3 trillion COP to complete the initiatives outlined in the 2020-2023 development plan, costing an estimated 13.2 trillion COP, or 22.2% of the plan. In a similar vein, the Inter-American Development Bank issued a loan of 0.39 trillion COP (100 million USD) at the end of 2023, a move also endorsed by the council.

Analyzing the interplay between these margins offers a more comprehensive understanding of how political parties manage and adapt their power strategies in various electoral and administrative contexts to implement government development plans and policies, and consequently, modify fiscal finances and debt.

4 Empirical strategy and data

A key contribution of this research is the causal impact of being re-elected on local debt level. The main problem in comparing municipal finances in cases of re-election is the intrinsic endogeneity when incentives to get re-elected via targeting public spending and modifying electoral behavior make the election outcome non-random. In this section, we explain how our empirical strategy deal with this issue, as well as the data used in our empirical analysis.

4.1 Regression Kink Design

4.1.1 Review Regression Discontinuity Desigin

The Regression Discontinuity Design (RDD) is a method with more than 60 years of history which is used by a wide range of social science and statistics fields. According to Villamizar-Villegas *et al*. (2022), the method takes its origins from 1960's (Thistlethwaite & Campbell, 1960; Sween, 1965) with two big waves 1970's and 2000's. The 1970's wave was led by Goldberger (1972), Barnow (1972), Rubin (1974), and Trochim and Spiegelman (1980). In this wave the method had been considered as special case of another causal inference methods as Differences in Differences (Sween et. al, 1965) or Instrumental Variables (Angrist & Krueger, 2001).

The resurgence in the 2000s brought a formalization of RDD, distinguishing between sharp and fuzzy designs. Key advancements during this period were made by Hahn *et al*. (1999), Angrist & Lavy (1999), Hahn, Todd & VanderKlaauw (2002), Leuven & Oosterbeek (2004), Card and Shore-Sheppard (2004), McCrary (2008), and Imbens & Kalyaraman (2012). More recent works by Card *et al*. (2015, 2016), Imbens & Lemieux (2008), and Cattaneo *et al*. (2019, 2024) have further refined the methodology, providing practical guidelines for implementing RDD and its extensions.

4.1.2 Identification

The empirical methodology of the paper corresponds to an extension of RD design called regression kink design (RKD), first mentioned by Nielsen (2010). RKD states in the same idea as RDD. In RDD a policy variable is assigned based on a known rule that exhibits a discontinuity. In contrast, in a RKD the policy rule shows a **kink** where the relationship between the policy variable and the assignment variable changes abruptly. This may occur, for example, when a benefit formula has minimum or maximum values, or when marginal tax rates jump discretely Card *et al*. (2016). The RKD examines how the slope of the relationship between the outcome variable and the assignment variable changes right at the policy kink. If individuals on either side of the kink threshold are similar, any change in the slope can be attributed to the policy effect. Unlike RDD, which estimates a shift in the intercept, RKD aims to estimate a change in the slope using local polynomial regressions near the threshold.

Following Card *et al*. (2015, 2016) and Nielsen (2010) notation[9], we define V as the running variable and T as treatment variable of interest. T is a function of V, in particular:

$$T(V) = \begin{cases} 0, & V < v_0 \\ 1, & V \geq v_0 \end{cases} \tag{1}$$

Where $v_0 = 0$. For our purposes, V is win or loss vote margin of the political party in charge in the contemporary elections. V captures the **intensive margin** mentioned in the above section. For instance, if a j party that won the last elections in t_0 (2011), presents itself again in t_4 (2015) and it wins it will be a **repeater** (treated, $T = 1$) with a positive running variable, $v_j \geq 0$. Conversely, if it had lost the elections, the margin v_j would be negative, meaning that

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[9] Formally, the authors use B instead of T. In this case, we chose to use T because they define B as a continuous, deterministic function of V with a change in slope at v. In the context of this research, T is a deterministic function, but it is not continuous in V and features a jump at v. Prior to v, its value is 0 and after v it is 1, thus the denominator of equation (1) is not defined in terms of values but rather in terms of treatment status.

j party is a non-repeater ($T = 0$, non-treated). U is an error term and Y is defined as $y(T, V, U)$ representing our outcome of interest, municipality gross debt. The focus is the causal effect of T on Y (being a repeater), particularly the partial derivate $y_1(T, V, U)$, the changes slope at $V = v_0$. The treatment effect is defined by Nielsen *et al.* (2010) as follows:

$$E[y_1(1,0,U)|V = v_0] = \frac{\lim\limits_{v_0 \to 0^+} \frac{dE[Y \mid V = v]}{dv}\Big|_{v=v_0} - \lim\limits_{v_0 \to 0^-} \frac{dE[Y \mid V = v]}{dv}\Big|_{v=v_0}}{\lim\limits_{v_0 \to 0^+} T\,|_{v=v_0} - \lim\limits_{v_0 \to 0^-} T\,|_{v=v_0}} \tag{2}$$

This RKD parameter relates the change in slope of the outcome variable to the change in the running variable, capturing the average treatment effect, termed as treatment-on-the-treated (TOT) by Florens *et al*. (2008) and local average response (LAR) by Altonji and Matzkin (2005). This effect is seen as a weighted average of the treatment effects across the population, more pronounced for individuals near the kink threshold (v_0). For robust identification, RDD regularity conditions must be hold, primarily ensuring that the variation across the threshold is only due to the change in the $V = v_0$ of point of running variable. This can be checked by evaluating the smoothness of the assignment probability density function of V and the conditional expectation of any covariate variable, $E[X|V = v]$.

4.1.3 Estimation

The standard specification for estimating the RDK treatment effect is:

$$Y_i = \alpha + \tau T_i + f(v_i) + U_i \tag{3}$$
$$\forall v_i \in (v_0 - h, v_0 + h)$$

Where Y_i is the outcome of interest, municipal debt, T_i is the treatment of being re-elected, v_i is the running variable and h is a neighborhood around v_0. The control function is $f(v_i)$, which is usually an n-order polynomial on each side of v_0. In the RD standard design β provides the effect (*jump*) of the treatment. However, as we mentioned before, in this case we do not focus on the *jump* to capture the treatment effect but in the first derivate, that is, the change in the slope after v_0 value. This implies that we must expand the control function to explicitly the change in the slope, in particular:

$$f(v_i) = \beta v_i + \phi T_i v_i \tag{4}$$

Usually, $f(v_i)$ has high order polynomials components but it could be problematic. Many authors suggest using local linear or quadratic polynomials because in higher polynomial estimations the implicit weights for high order polynomial approximations are not convenient, since the results are sensitive to the order of the polynomial approximation, and conventional inference has poor properties in these settings (Hahn *et al*., 2002; Porter, 2003; Calonico *et al*., 2014 and Gelman & Imbens, 2019). Combining, (3) and (4) equation, our parameter of interest is:[10]

$$\phi = \triangle \frac{\partial y_i}{\partial v_{i|T_i=k}} \; for\ k = 1,0$$

Which reflects $E[y_1(1,0,U)|V = v_0]$, the change of the slope between treated and non-treated municipalities along the win margin. In this setup, the usual assumptions used in RD also apply to RDK, including methods to select optimal bandwidths h^*(Imbens and Kalyanaraman, 2012). The authors propose a criterion based on minimizing the Mean Squared Error (MSE) specifically at the point of discontinuity. Theoretically, h^* should be selected as the value that minimizes MSE, but since this ideal bandwidth is not feasible in practice, we approximate it using values close to zero and consider asymptotic properties. However, as highlighted by Card *et al*. (2017), the approach of MSE-optimal bandwidth selectors will in general introduce an asymptotic bias in the resulting estimator. As a result, it may estimate bandwidths that are smaller than those estimated by other methods such as Calonico *et al*. (2014), which include regularization terms. In practice, we will estimate with different variations of the bandwidth selected by the MSE-optimal.

Additionally, another crucial factor is the choice of kernel for the estimation process. Cheng *et al*. (1997) demonstrate that the triangular kernel is optimal at the boundary. However, based on practical applications and Monte Carlo simulations, Card *et al*. (2016) indicate that the efficiency losses when using a uniform kernel are relatively minor compared to a triangular one. The advantage of the uniform kernel lies in its simplicity for implementation – it transforms the RKD issue into a straightforward OLS/2SLS problem by using data within a h^* from v_0 rendering it a compelling option.

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[10] $\frac{\partial y_i}{\partial x_{i|t_i=0}} = \beta$; $\frac{\partial y_i}{\partial x_{i|t_i=1}} = \phi + \beta$

4.2 Data description

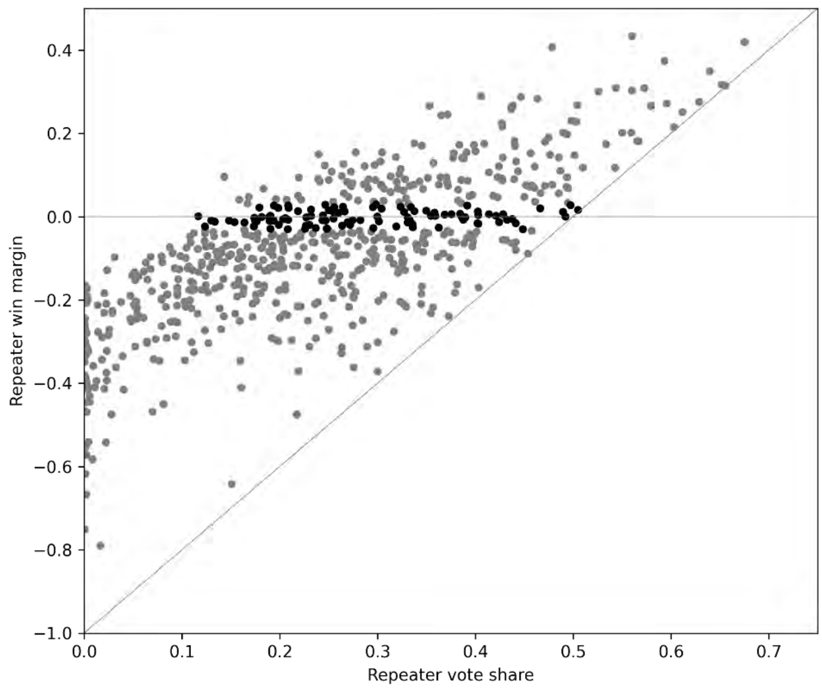
Data on municipal elections come from Pachón and Sanchez (2014), which include 1958-2011 electoral results data base.[11] The data is reported at the municipal level, the primary unit of analysis. In the year 2015, mayoral elections were held for the 2016-2019 term, with 1,100 municipalities participating nationwide. Approximately 387 parties and 408 coalitions (alliances of parties and political movements) took part in these elections. Of the parties that were victorious in the previous elections (2011), 705 decided to run again in the 2015 elections, either individually or in coalitions. If any of the candidates from these 705 parties were re-elected, the treatment variable is assigned a value of 1, and 0 otherwise.

The running variable used in the RDK design is defined as the difference in votes between the party seeking re-election (repeater) and the party with the highest vote count not seeking re-election (non-repeater), naturally centering the cutoff point at zero. Consequently, the treatment indicator is equal to 1 when this measure, the repeater margin, is positive, and zero when it is negative. Each municipality will have a value of the repeater win margin anywhere between -1 and 1.

An especially advantageous aspect of the RDK design used in Colombian municipalities is observed in the pattern of voter fragmentation among various parties, leading to narrowly contested elections across a broad spectrum of underlying repeater vote shares. As depicted in Figure 4, the graph plots with the repeater win margin against the repeater vote share for the year 2015. Near the horizontal gray line, which indicates the cutoff, the range of total vote shares for repeater parties varies, starting from slightly less than 10 percent (where the vote is divided among numerous parties) and extending to 50 percent (where the vote is more concentrated within a smaller number of parties). Therefore, the RD treatment effect is not confined to a single point of preference, but rather reflects a wide variety of political scenarios. Furthermore, this variation allows for the direct testing of a fundamental premise of the design: that repeater preferences are consistently distributed across the cutoff.

[11] It contains detailed information about the elections of mayors, governors, council members, assembly members, the chamber and senate, and the presidency. It has been maintained by Centro de Estudios de Desarrollo Económico (CEDE) staff adjunt to Facultad de Economía-Universidad de los Andes.

Figure 4. Repeater win-loss margin and Repeater vote share in 2015



The graph shows the total vote share for the repeater party plotted against the repeater win-loss margin—the difference between the repeater party's vote share and the largest non-repeater party's vote share—both in 2015. Observations within 2 percentage points of the threshold at zero are in black. The diagonal line is the hypothetical one-to-one relationship between the two variables in an election with only two parties.

The main outcome variable, municipal debt, comes from National Department of Planning and the control variables come from Panel Municipal from *Centro de Estudios de Desarrollo Económico* (CEDE). The existing literature in the field of institutional economic history has established that a significant portion of contemporary economic development has been shaped by the proximity to or distance from institutional frameworks, which, in turn, were influenced by geographical factors (Acemoglu *et al*. 2001; Dell, 2010; Sanchez *et al*., 2010). This understanding has led to the utilization of historical controls such as the year of creation of the municipality and its distance from colonial roads in the 18th century. Their contemporary counterparts include the rurality index (share of rural population) and the distance to the departmental capital. In terms of geographical and demographic factors, considerations include the altitude of municipalities above sea level *(MASL*), population, latitude, longitude, distance to Magdalena River (km) and distance to coast (km).

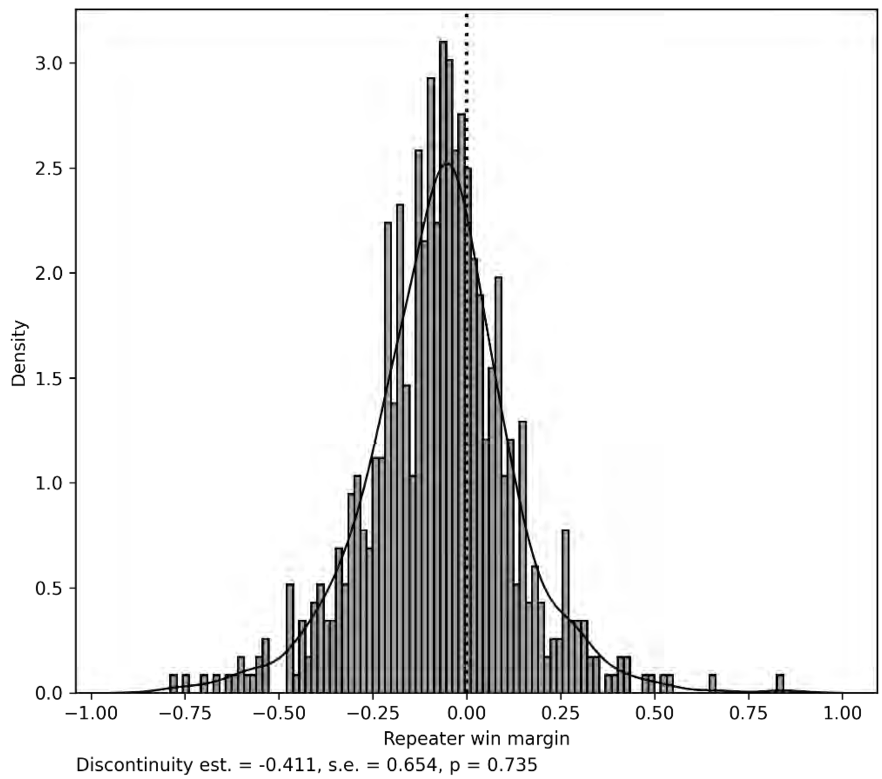
Table 1. Summary statistics

	Repeater	Non-repeater	Difference	P-value difference
	(1)	(2)	(3)	(4)
Main outcome variable				
Municipal per capita debt (millions COP)	0.11	0.09	0.02	0.00
Main explanatory variables				
Repeater	1.00	0.00	1.00	0.00
Win margin (pp)	0.13	-0.16	0.30	0.00
Vote share (%)	0.45	0.20	0.25	0.00
Council share (%)	0.37	0.24	0.13	0.00
Covariates				
Historic institutional access				
Year of creation	1865.77	1869.31	-3.53	0.30
Distance to colonial royal road (km)	20.03	28.35	-8.33	0.00
Contemporary institutional access				
Rurality index (% rural population)	0.58	0.55	0.04	0.00
Distance to department capital (km)	76.20	82.61	-6.40	0.00
Geography				
Population (thousands)	30.21	37.21	-7.00	0.06
MASL	1250.97	1111.09	139.88	0.00
Latitude	5.91	5.63	0.27	0.00
Longitude	-74.67	-74.76	0.09	0.04
Distance to Magdalena River (km)	96.99	99.75	-2.76	0.18
Distance to coast (km)	215.64	216.82	-1.17	0.75
Observations	225	482	707	707

Notes: Columns 1 and 2 reports the mean of each variable for repeaters and non-repeaters respectively. The third column presents the difference between the two groups and the fourth has the corresponding p-value.

In Table 1, the descriptive statistics for the previously discussed variables are presented. A total of 707 parties that were victorious in the 2011 elections participated again in the 2015 elections. Municipalities that won again (225), henceforth referred to as repeaters, exhibit an average per capita debt of 0.11 million COP. In contrast, municipalities that did not win again (482), referred to as non-repeaters, have an average per capita debt of 0.09 million COP. Repeaters have an average total vote share of 45%, a win margin of 13 percentage points (pp), and a council share of 37%. Non-repeaters, on the other hand, have an average vote share of 20%, a loss margin of 16 pp, and a council share of 24%. According to the difference (column 3) and its corresponding p-value (column 4), the differences between the two groups are statistically significant.

Figure 5. McCrary density test: win margin distribution



Note: The figure displays a histogram of the win-loss margin to visually examine whether the margin is continuous at the threshold. The bins are set at 1 percentage point (pp). Below is the density plot from the McCrary (2008) test, which assesses the presence of any discontinuity in the density of the win-loss margin. The Kernel used is triangular.

For more than half of the covariates, there are differences between the two groups. The average year of creation is 1865, while the distance to the colonial road averages 20.3 km for repeaters and is 8 km greater for non-repeaters. Both groups have a rurality index of 0.56, and the distances to the department capital are 76.2 km for repeaters and 82.6 km for non-repeaters, respectively. Although statistically significant differences are observed in the last two variables, their practical significance is negligible. Geographical differences also exist but are not material from a geographical or economic standpoint. Repeaters have a population of 30,000 inhabitants, which is 7,000 inhabitants less than non-repeaters. Additionally, repeaters are situated 140 MASL compared to their non-repeater counterparts. Similar cases are observed with latitude and longitude. Lastly, the distances to the Magdalena River and the coast are 99 km and 215 km respectively, with no statistically significant differences.

Following the approach of Imbens and Lemieux (2008), we conduct two validity checks. Initially, we assess the local continuity of the win-loss margin around the designated cutoff point. Figure 5 displays a histogram of the running variable across the entire range, segmented into 2 percent bins. Beneath this, we present results from the McCrary (2008) density test, which probes for a potential jump at the discontinuity. The test upholds the null hypothesis that there is no discontinuity, as evidenced by both the histogram and the McCrary test results, which show no significant sorting around the cutoff point (p-value above 0.7)

Secondly, in Figure A1 of the Appendix 1, we evaluate continuity through regressions of the main control variables against the running variable. This graph displays local averages of the outcomes in 4-percent bins plotted against the win margin, complemented with its corresponding standard error and p-value. None of the graphs indicate any significant (magnitude or statically significance) jumps at the cutoff, consistent with the assumption that Colombian voters' preferences were continuous across the cutoff point.

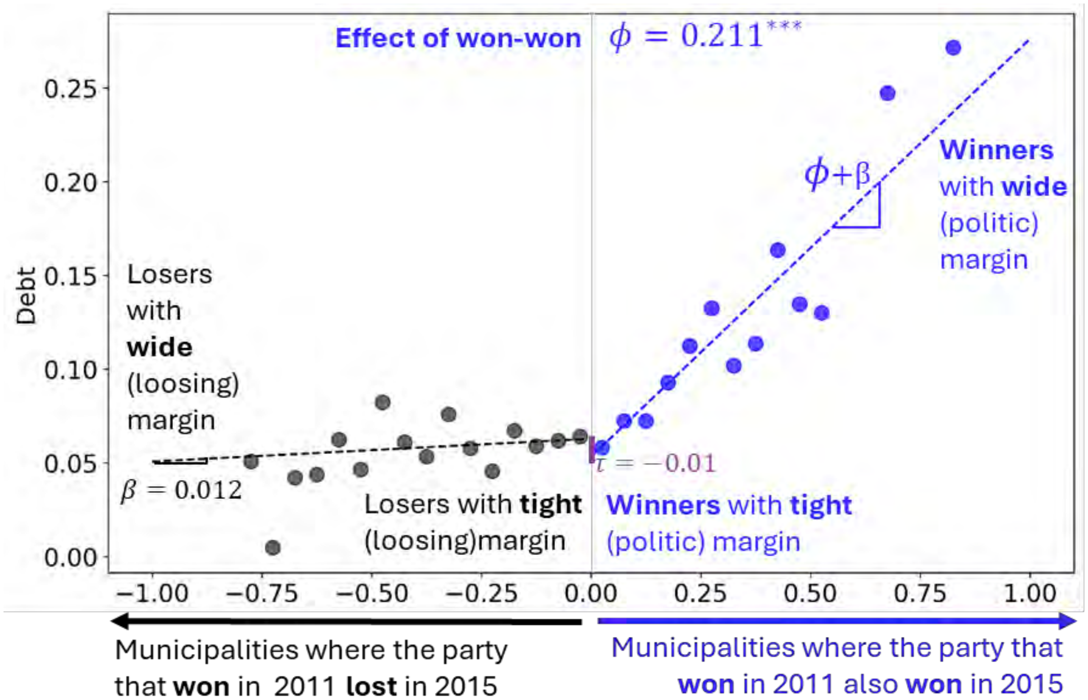
5 Results

5.1 Intensive Margin

We will begin by discussing the principal findings using graphical intuition as illustrated in Figure 6. Since debt is a flow variable, we use the log of municipal per capita gross debt in millions of COP as the dependent variable. This approach allows us to interpret the coefficient ϕ in terms of semi-elasticity. Given that the win margin ranges continuously from -1 to 1, it is possible to interpret the parameter directly without the need to multiply it by 100.

In Figure 6, the log of 2016 per capita debt, segmented into 8 percentage bins, is plotted against the 2015-win margin. On the left side of the graph, we observe the relationship between non-repeaters (who won in 2011 but lost in 2015) and their debt. This relationship along with the loss margin is captured by the β parameter, which is 0.012 and not statistically significant. For the year following the election (2016), it is evident that the debt curve remains flat, indicating that for non-repeaters, neither a large nor a narrow losing margin affects the debt level.

Figure 6. Graphic RDK results: Effect of political continuity (2011-2015) on municipal debt (2016)



Note: The figure displays the log of 2016 per capita debt across eight percentage bins against the 2015-win margin. The left side illustrates the relationship between non-repeaters (who won in 2011 but lost in 2015). The right side illustrates the relationship between repeaters (who won both in 2011 and 2015).

On the right side of the graph, the repeaters (who won both in 2011 and 2015) side, there is not a significative jump ($\tau = -0.01$) but there is a positive correlation between the win margin and debt. This relationship is captured by the β+ϕ parameters, which show a slope of 0.223. The difference between the two slopes, represented by ϕ, 0.211. This parameter captures the impact of being a repeater on debt along the win margin. This upward trend indicates that a larger win margin is associated with higher levels of indebtedness. Specifically, an increase of one percentage point in the win margin results in a 0.21% rise in debt.

Table 2. Win margin baseline results

Outcome	Municipal gross per capita debt (log)				
	(1)	(2)	(3)	(4)	(6)
	Main explanatory variables				
non-treated: β	0.012	0.012	-0.006	0.003	-0.007
	(0.036)	(0.036)	(0.036)	(0.035)	(0.035)
jump: τ	-0.01	-0.011	-0.007	-0.009	-0.008
	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)
Slope difference: ϕ	0.211***	0.209***	0.239***	0.222***	0.251***
	(0.066)	(0.066)	(0.066)	(0.066)	(0.066)
	Covariates				
Historic Inst. Acc.	✗	✓	✓	✓	✓
Cont.Int. Acc.	✗	✗	✓	✓	✓
Geography	✗	✗	✗	✓	✓
Fixed effects	✗	✗	✗	✗	✓
Outcome mean (level)	0.068	0.068	0.068	0.068	0.068
Banwidth	1	1	1	1	1
R2	0.030	0.032	0.058	0.112	0.176
Observations	707	707	707	707	707

Table 2 outlines the impact of different covariates and fixed effects on the relationship between political continuity and municipal debt levels. The results vary with the inclusion of covariates related to historical institutional access, contemporary institutional access, and geography covariates.

Table 2 displays the results, which vary according to the inclusion of different covariates and fixed effects. The initial results referred to above correspond to the first columns. The subsequent rows reference the inclusion of various groups of covariates. Each estimation progressively adds an additional group while retaining the previous groups. All estimations encompass all municipalities, meaning the bandwidth ranges from -1 to 1. When covariates related to historical institutional access are added, the parameter is set at 0.208. Including contemporary institutional access and geography covariates adjust the parameter to 0.239 and 0.222, respectively. Furthermore, the inclusion of all covariates raises the parameter to 0.251. In other words, conditional on historical and contemporary institutional access, as well as geographic, an increase of one percentage point in the win margin results in a 0.245% rise in debt. For instance, if a party that won in 2011 also emerged victorious in 2015 with a 40%

vote share, and its closest competitor garnered 30%, the average increase in debt is likely to be around 2%.

5.2 Bandwidths

One of the key challenges in RDD (Regression Discontinuity Design) is choosing an appropriate bandwidth or window around the cutoff point. As we have mentioned, a smaller bandwidth provides a more precise estimate around the threshold, but it may lead to noise if the bandwidth is too small, potentially losing statistical power or precision, and thus increasing the variance or uncertainty. As we mentioned, Card *et al*. (2016) show that MSE-optimal bandwidth selectors will in general introduce an asymptotic bias in the resulting estimator.

Table 3. Win margin baseline results varying bandwidths

Outcome	Municipal gross per capita debt (log)			
Bandwidth	Global	h^*	$2h^*$	$h^* \leq h \leq 2h^*$
	(1)	(2)	(3)	(4)
non-treated: β	-0.007	0.015	0.057	0.061
	(0.035)	(0.117)	(0.059)	(0.07)
jump: τ	-0.008	0.016	-0.012	-0.013
	(0.012)	(0.015)	(0.014)	(0.015)
Slope difference: ϕ	0.251***	-0.134	0.23**	0.255**
	(0.066)	(0.186)	(0.106)	(0.124)
Covariates	All	All	All	All
Fixed effects	✓	✓	✓	✓
Outcome mean	0.068	0.066	0.066	0.067
Banwidth	1	0.154	0.308	0.27
R2	0.176	0.243	0.201	0.200
Observations	707	430	622	590

Note: The table presents the parameter ϕ across different bandwidths for the study of political continuity's effect on municipal debt, including all covariates and fixed effects. The first column uses the entire range from -1 to 1 as the bandwidth. The second column applies an optimal bandwidth (h^*) of 0.154 based on the minimum standard error method, covering 430 observations. The third column doubles this optimal bandwidth to include more observations. The fourth column explores a bandwidth of 0.27, positioned between the optimal and double bandwidth, to examine the sensitivity of the estimated effects.

Table 3 presents ϕ across different bandwidths. All include all covariates and fixed effects. The first column refers to the baseline estimation with the Global sample [-1,1]. The second column shows the optimal bandwidth. The h^* estimated by the optimal MSE method was relatively small, 0.154, where 430 observations are included. Here, the effect is negative and not significant. One reason for this could be due to the RDK design examining the change in slope, so observations around v_0 may not have sufficient statistical strength to make the change in slope significant. In the third column, the bandwidth considered is two times h^*. In this case the effect of an increase in the wing margin leads to a rise of 0.23 in debt. In this case, the estimated coefficient is like the global estimation (0.251). Finally, the fourth column aims to explore the sensitivity of the bandwidth to the significance of the estimates, i.e., finding the h that is between $h^*$and $2h^*$where the estimation starts to be significant. The h founded is 0.27. The effect here is 0.255, practically equal to the global effect of 0.251.

5.3 Does the effects last throughout the political term?

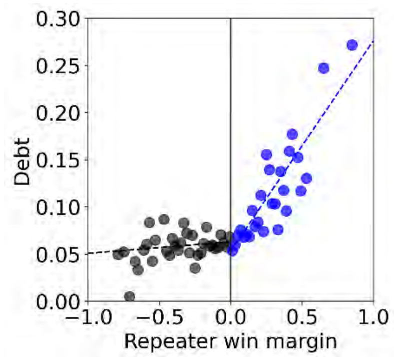
Table 4. Baseline results varying years after the re-election

Outcome	Municipal gross per capita debt (log)			
Year	2016	2017	2018	2019
	(1)	(2)	(3)	(4)
non-treated: β	-0.007	-0.021	-0.035	-0.064*
	(0.035)	(0.031)	(0.033)	(0.037)
jump: τ	-0.008	-0.005	-0.009	-0.009
	(0.012)	(0.011)	(0.011)	(0.013)
Slope difference: ϕ	0.251***	0.206***	0.281***	0.274***
	(0.066)	(0.058)	(0.061)	(0.069)
Outcome mean	0.068	0.068	0.077	0.096
R2	0.176	0.158	0.187	0.189
Covariates	Yes	Yes	Yes	Yes
Fixed effects	0.176	Yes	Yes	Yes
Observations	707	707	707	707

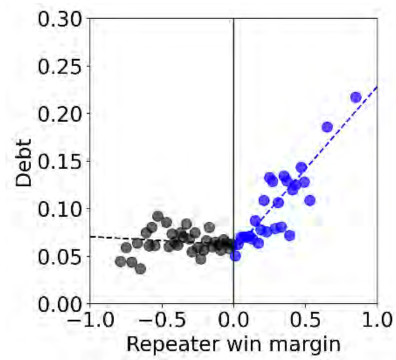
Note: The table investigates the duration of political continuity's impact on municipal debt over multiple years. The baseline estimation column analyzes debt levels in 2016, with subsequent columns examining debt in 2017, 2018, and 2019. This setup allows assessment of whether the effect of electoral victories on debt levels persists or normalizes beyond the first year following an election.

One hypothesis to explore is the possibility that the effects only hold during the first year after winning elections. After the first year, the political leeway could decrease, leading to a normalization of the level of indebtedness between the repeaters and non-repeaters. Table 4 explores this hypothesis. The first column presents the baseline estimation (set in 2016, one year after the election year of 2015), and the subsequent columns account for the debt in the following periods of the political term: 2017, 2018, and 2019 (the election year for the 2020-2023 period).

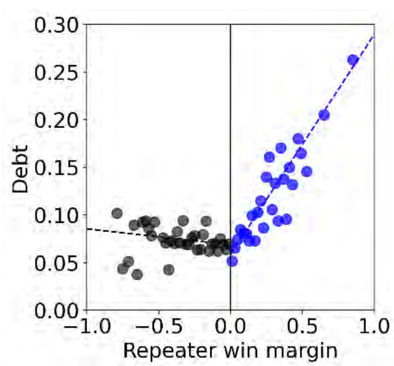
Figure 7. Graphical illustration of KRD results year after of re-election



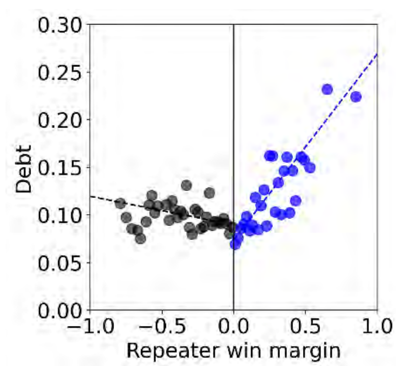
(a) Debt in 2016



(b) Debt in 2017



(c) Debt in 2018



(d) Debt in 2019

Note: In the figure, we present the graphical results of the estimations showed in Table 4.

In 2016, two years after the election, the estimated effect of the increase in debt was 0.206, 0.04 pp lower than the baseline. Subsequently, three years later (2017), the effect increased to 0.281, even surpassing the initial levels. By the fourth year, the effect had fallen to 0.01 points. All effects were significant at the 1% level. Despite the decline, we observe an ascending pattern in the effect, indicating that over time the differences in debt increase between parties that repeat mandates and those that do not are widening.

These results may be the consequence of political and legislative dynamics over time. On one hand, it is likely that in the first year, the debt level was higher than in the second because the incoming government wanted to start implementing its own projects but also had to complete those inherited from the previous administration as required by law. Consequently, in the second year, the borrowing capacity would decrease, and it would also be a period for executing projects aligned with the development plan of the re-elected government. In the third and fourth years, the borrowing capacity would likely improve and as the results for the upcoming elections draw near, this would increase the incentives to incur debt to focus spending even more to influence voter behavior in the upcoming elections and secure re-election.

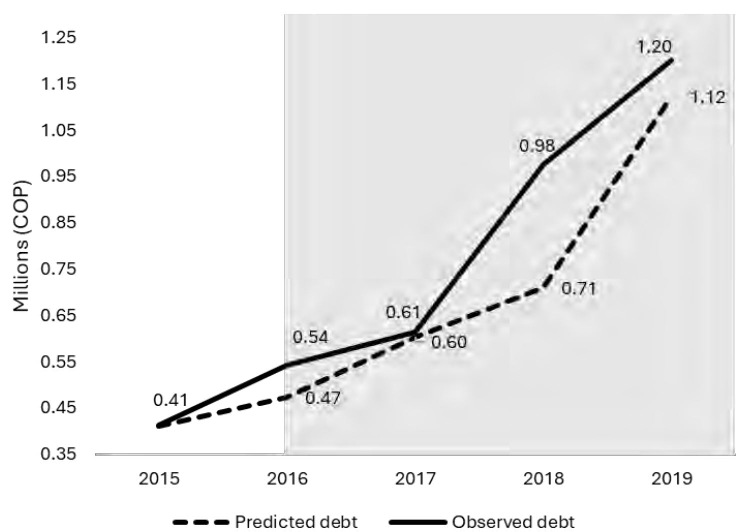
This behavior aligns with findings from both theoretical literature (Raveh and Tsu, 2020) and empirical studies (Chortareas *et al*., 2016; Litschig and Morrison, 2010). In Brazil, Frey (2021) demonstrates that politicians may increase the inclusion of non-poor households in welfare programs to enhance their reelection prospects, manipulating the distribution of benefits to gain electoral support. In the context of Colombian municipalities, Drazen and Eslava (2010) show that there is an increase in voter-attractive infrastructure spending, such as road and basic utilities construction, in election years, while interest payments and transfers to retirees decrease. Additionally, they find that voters penalize the governing party for accruing large deficits before elections and reward it for increasing targeted spending observed before the elections.

In Figure 7, four panels (a, b, c, and d) graphically present the results. It is observed that in 2017 the slope is slightly lower than in 2016, while for 2018 and 2019 it is steeper. An interesting pattern is observed between the behavior in the first and last year in those municipalities that do not repeat parties. In the first year, the relationship between debt and the 'margin' of loss (before v_0) is not significant; however, in the last year, it is significant. It is important to note that municipalities that are further to the left represent those that came in second against the first with a much larger margin of loss. Given that the coefficient is negative, we can interpret it in a manner like how we have interpreted the right side. Thus, even though in the first years a municipality with a non-repeating party does not see changes in debt in response to increases in the margin of victory, in the last year of the legislature it does. Specifically, an increase of one point in the margin of victory leads to a 0.064 percent increase in debt. This is consistent with the discussion of political cycles and spending mentioned in years before of elections.

5.4 How big are the effects and how accurate is the model?

Consider the case of Barranquilla, a city where the same party that won in 2011 also triumphed in 2015 by a margin of 56 percentage points. The winning party secured 73% of the vote, while the nearest competitor garnered 17%. As mentioned earlier, this is the fourth largest city in the country with more than 1.2 million inhabitants, and it is one of the most indebted. In 2015, the per capita debt was 0.41 million Colombian pesos (MCOP), equivalent to 150 US dollars at the 2015 average exchange rate. That year, the minimum wage in Colombia was 0.64 million COP. This means that, if every inhabitant of Barranquilla earned the minimum wage, they would need to contribute 63% of their salary to pay off the debt. By 2019, four years after the election, the per capita debt had reached 1.20 million COP, which was equivalent to 1.44 times the minimum wage for that year (0.84 million COP), meaning that each inhabitant should work one month and half to pay the debt.

Figure 8. Observed and predicted debt increases throughout 2015 and 2019 in Barranquilla



Note: Figure 8 illustrates the predicted versus observed debt levels in Barranquilla from 2016 to 2019, based on model coefficients from Table 4 and conditional on the 2015 election victory margin (v_i =0.56). Dashed lines indicate the model's predictions, while solid lines show the actual debt.

In Figure 8, the debt of Barranquilla between 2016 and 2019 is predicted by the model from the coefficients presented in Table 4. The prediction is conditional on the debt and the victory margin in elections of 2015, that is, $E[Y|T_i = 1 \wedge v_i = 0.56]$. The dashed lines represent the predicted debt, and the solid line is the observed debt. In this case, the observed debt is only 0.07 million COP above from predicted in 2016 and 0.01 million COP above in 2017.

In 2018, the differences are significant, with the observed debt at 0.98 million COP and the predicted debt at 0.71 million COP, resulting in a difference of 0.27 million COP. However, in 2019, the difference was only 0.08 million COP above the model's prediction. It is worth noting that from the 2007 elections to the 2015 elections, the city has been governed by mayors from the same political party. As of the time of writing this research (2024), this has not changed, as the candidate from the same party won the 2019 and 2023 elections as well. The same mayor has governed during three of the five elections, including the current term (2024-2027).

Overall, the model predicts the observed debt well. For the four years, the RMSE and MAE are 0.14 million COP and 0.11 million COP, respectively. However, if we exclude the third year (2018), these statistics improve to 0.05 (RMSE) and 0.04 (MAE). Part of the explanation for the model's higher forecast error in the third year could be that the estimates account for the effect of two consecutive terms in office, but not three or more.

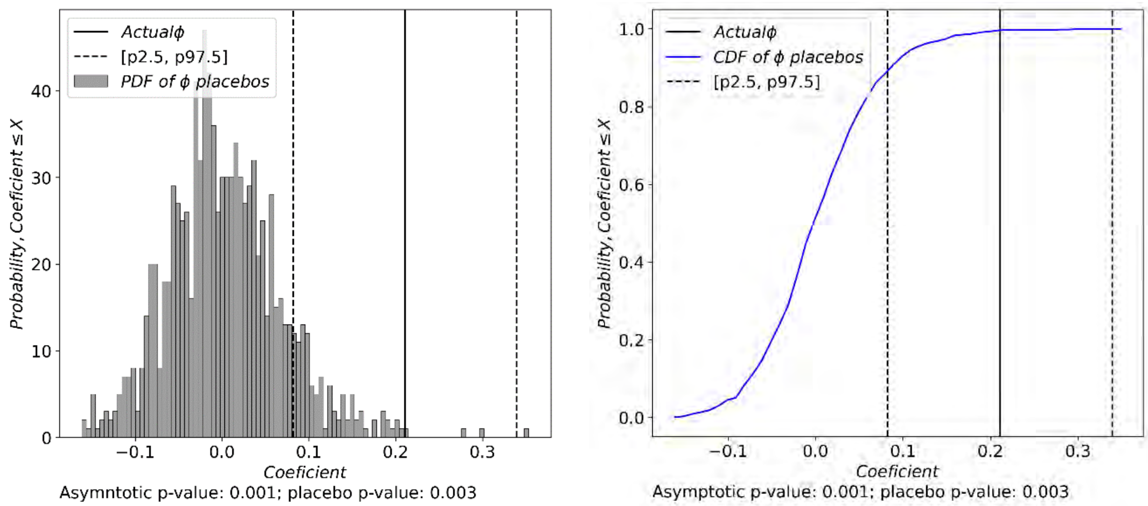
It is also important to mention that at the end of 2019, Barranquilla concluded a debt restructuring agreement. This behavior aligns with the findings of Bonet and Ayala (2016), who noted that while under a restructuring agreement, territorial entities remain under control, but upon concluding such agreements, they tend to become fiscally disorganized.

In conclusion, the model empirically captures the debt dynamics observed in one of the largest and most indebted cities in the country. Additionally, it aligns with the literature, which highlights increased spending prior to election years as a tool to influence voter behavior.

5.5 Robustness check

To validate the stability of the previously results, we present two statistical exercises that aim to introduce random placebo variations into the estimations. This is known as randomization inference and has an extensive tradition in statistical literature (Fisher, 1935; Lehmann and Stein, 1949) and more recently in Economics (Bertrand et al., 2004; Imbens and Rosenbaum, 2005; Abadie *et al.*, 2010; Athey *et al.*, 2014; Athey & Imbens, 2017). The idea is to demonstrate that in the face of such variations, the results do not yield anything significant or relevant, indicating that our results do not occur by chance.

Figure 9. Probability density function and Cumulative density function of ϕ placebos



(a) PDF (b) CDF

Note: Figure 9 displays the results of the permutation test for the RDK analysis, where each estimate is derived from randomly assigning the dependent variables of one municipality to another while keeping overall debt levels constant. Panel (a) shows the probability density functions for all ϕ placebos in gray and the actual ϕ in black, with its confidence intervals marked by continuous and dotted lines. Panel (b) presents the cumulative density functions, illustrating that the bulk of placebo effects cluster below the lower confidence limit of the actual effect, reinforcing the non-random nature of electoral impacts on municipal debt, and affirming the methodological soundness of the RDK approach.

The first test exercise is based on Imbens and Lemieux (2008) suggestion for the RD design — 'testing for a zero effect in settings where it is known that the effect should be 0' — to the RDK design by estimating slope changes in municipalities where there is no change in the slope. In general terms, the test seeks to evaluate the robustness of estimated impacts of being reelected or defeated in two consecutive political terms by comparing the regression slopes at actual points of electoral success or failure with those at simulated, non-informative points, termed placebo points. This comparison is grounded in the critical assumption that the occurrence of reelection or defeat can be considered randomly drawn from a predefined set of possible electoral outcomes. This assumption is essential as it underpins the validity of the inference about the causal impact of election results on subsequent political actions and policies.

The test specifically aims to determine whether the observed changes in the regression slope at the actual points of electoral success or failure significantly deviate from what would be expected under a scenario where no effect of electoral outcome exists—that is, where any observed change is merely due to random chance rather than a result of being reelected. In summary, the test seeks to affirm or reject the hypothesis that the outcome of being elected or not in two consecutive political terms has a genuine, non-random effect on subsequent political actions such as increase indebtedness.

Figure 9 presents the graphical results of the test. Each estimate corresponds to a random assignment of v_0 and consequently the T_i from permutations from other observations, while keeping the realization of the debt constant. In other words, it involves randomly assigning to municipality i the dependent variables of another municipality j, and so on for all cases in such a way that the distribution of the debt and the margin of victory remains the same. In panel (a) we present the probability density functions of all ϕ placebos in gray, while the actual ϕ and its respective upper and lower confidence intervals are shown in black continuous and dotted lines, respectively. As we can see, in just 0.3% of the cases, the placebo coefficients are higher than the actual estimate. This empirical p-value is higher than p-value derived from asymptotic theory (0.01), but it still being significative. This is consistent with the cumulative density functions (panel b), where we can see that the effects found from the lower bound of the actual effect, where 84% of the placebo effect distribution is located, show a stable trend around the actual effect. The higher estimated placebo values that exceed the actual effect are found within the upper interval. In other words, the cumulative distribution of the placebo effects is primarily concentrated before the confidence intervals of the actual estimated effect. In summary, the test effectively demonstrates the non-randomness of electoral impacts on debt increases, highlighting the robustness of the RDK methodology.

A valid point could be the possibility that, since debt is a flow variable, by chance municipalities with repeating parties may have had high levels of indebtedness years before the elections. The second approach addresses this possibility by checking how robust the outcomes of debt in 2016 are against the electoral results of past elections (2011) and future elections (2019). How would the estimates change if we hold the 2016 debt constant but change the treated and untreated groups (and their margins) according to the elections in 2011 and 2019? This mental experiment could be considered a way to test the null hypothesis that there should be no effects of increases in debt in period $t_0 + 1$ (2016) by considering the electoral results (the parties that repeat and do not repeat) in elections at $t_0 - 1$ (2011) or in elections at $t_0 + 4$ (2019). Put in another way, we should not find effects of increases in debt in 2016 if we consider the distribution of electoral outcomes in the future or the past.

Table 5. Time placebos: 2016 Debt and 2019 and 2011 treated

Outcome	Municipal gross debt		
	Actual	Placebo	Placebo
Treated and v_i from	2015	2011	2019
Debt from	2016	2016	2016
non-treated: β	-0.007	-0.0	0.031
	(0.035)	(0.04)	(0.035)
jump: τ	-0.008	0.004	-0.018
	(0.012)	(0.012)	(0.011)
Slope difference: ϕ	0.251***	-0.072	-0.023
	(0.066)	(0.072)	(0.073)
Outcome mean	0.068	0.063	0.066
R2	0.176	0.318	0.294
Covariates	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	707	339	501

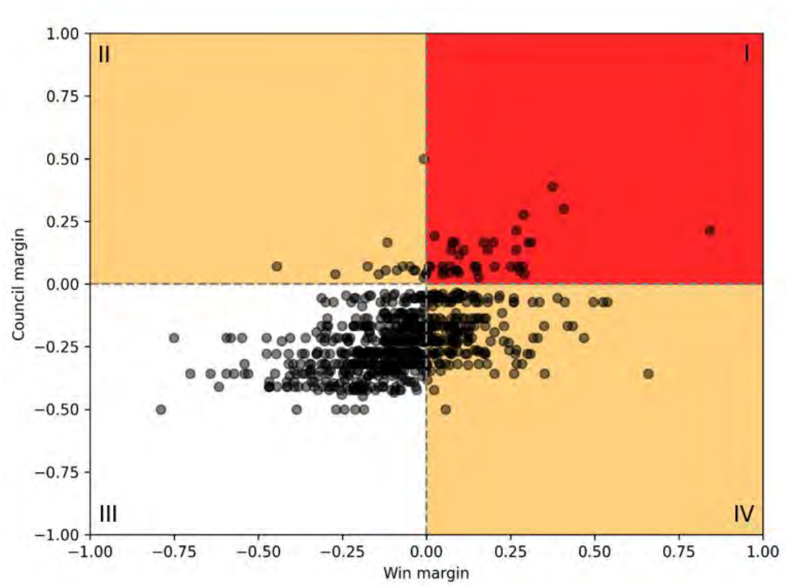
Note: Table 5 explores the impact of electoral results from different years (2011 and 2019) in 2016 municipal debt levels, holding debt constant to test the influence of political continuity. Results across all columns show no significant differences, confirming the null hypothesis that variations in electoral outcomes do not affect municipal debt levels in 2016, suggesting the debt observed is independent of past or future election results.

Table 5 tests this hypothesis. The first column shows the baseline estimation, that is, debt in 2016 with electoral results from 2015. The second and third columns maintain the 2016 debt but with electoral results from 2011 and 2019, respectively. The number of observations is smaller because not all parties and coalitions that presented in the municipalities for the 2016 elections did so in 2007 and 2011. Similarly, this occurs for the data four years later in 2019. The results show that no significant effects are found from a statistical standpoint, nor in terms of magnitude. This implies that the previously stated null hypothesis cannot be rejected. Thus, we can interpret these results as indicating that the baseline effect found (0.251) is not due to debt carried over from the past by the municipalities nor to any realization of electoral results, whether in the past or in the future.

6 Possible mechanisms behind the results

Which ones are the channels behind the results? In other words, how the re-elected party governments can lead to an arising in debt? We can list at least two possible mechanisms.

Figure 10. Scatterplot: win margin vs council share



Note: The scatter plot between win-loss margin and council margin (number of councilors who belong to elected party or coalition over the total number of councilors).

The first mechanism relates to the extensive margin, specifically the extent of the re-elected party's presence in the council (the legislative counterpart). Figure 10 illustrates the relationship between the win-loss margin and the council margin (extensive), defined as the proportion of councilors who belong to the elected party or coalition relative to the total number of councilors. In this case, the Spearman correlation between both margins is 0.74. This implies that the higher the win margin of a party, the greater the likelihood that a significant proportion of the council will belong to that party. As we mentioned, municipal councils must approve any changes related to fiscal affairs, including debt. Consequently, the more council members from the governing party, the higher the likelihood that proposed debt measures will be approved.

Another critical factor is the stability of public administration workers. In addition to requiring council approval, it is crucial for municipalities to possess the administrative and technical capacities to propose and implement policies and projects that influence debt through changes in revenues and expenditures. These capacities hinge on the human capital and job stability of public administration employees.

In many Colombian municipalities, government institutions play a significant role in the labor markets, especially in smaller municipalities. The dynamics of these labor markets are deeply influenced by the political cycle. Our hypothesis posits that when a government is re-elected, the turnover among heads of secretaries (such as planning, finance, infrastructure, etc.) and lower-level positions is reduced. Furthermore, if changes occur, they tend to be less abrupt compared to a government newly in power. In other words, political stability leads to lesser degradation of human capital and the knowledge acquired by public employees.

This topic has been extensively studied in the field of public administration. Fernandez and Moldogaziev (2012) find that employee empowerment—and its stability—is positively related to job satisfaction, organizational commitment, and performance in the public sector. Studies by Boyne (2003), Boyne et al. (2003), and Pollitt (2000) collectively emphasize that public service improvements and management reforms are significantly influenced by employee-related factors such as job satisfaction, security, and morale, which in turn affect the effectiveness of public sector performance. These works highlight the interconnectedness of structural and administrative changes in public management with the well-being and efficiency of public sector employees, underscoring the critical role of human capital in achieving successful governmental performs.

7 Conclusions

This paper delves deeply into the relationship between political continuity and public debt at the municipal level in Colombia, employing a regression kink discontinuity design to analyze how political cycles affect fiscal behavior. It finds that municipalities governed by the same political party across successive elections tend to see an increase in debt levels, with a 0.25% rise in debt for every percentage point increase in their win margin. This effect is even more pronounced during election years, suggesting that political stability can lead to increased fiscal expenditures that are not immediately reversible.

The implications of these findings are significant for understanding fiscal policy dynamics at the local level. Political continuity, while potentially beneficial for policy implementation consistency, may also lead to a higher burden of debt due to the accumulation of obligations over successive terms. The research highlights the need for careful monitoring and management of fiscal policies, especially in regions where political parties hold extended power.

Furthermore, this paper contributes methodologically to the political economy literature by providing a robust framework for assessing the impacts of political variables on fiscal outcomes. It offers a comprehensive analysis that not only sheds light on the fiscal implications of political continuity but also sets a foundation for future studies to explore similar dynamics in different regional or national contexts.

Could the increases in debt contribute to closing social gaps by enhancing public expenditure? Is the efficiency of social spending being adequately assessed? Further analysis is essential to determine whether the additional fiscal burdens from prolonged political tenure led to effective social investments or merely accumulate financial liabilities without tangible benefits to the community. This inquiry sets the stage for future research to assess the true cost-effectiveness of increased public spending under stable political regimes.

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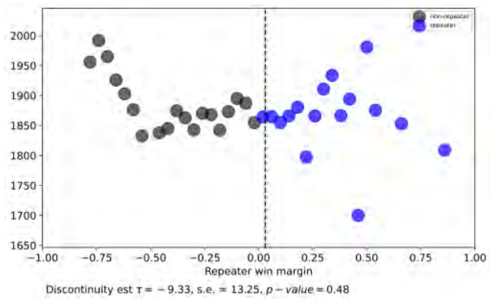
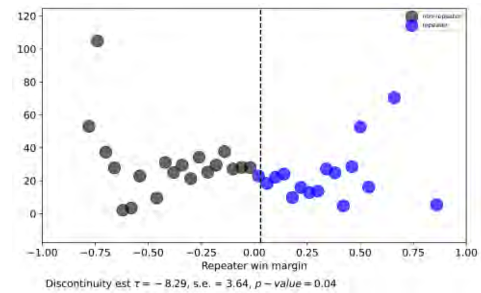
APPENDIX 1

Figure A1. Smoothness of main covariates around v_0

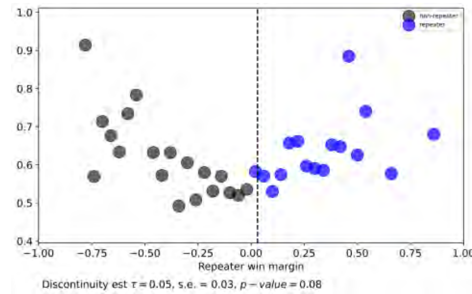
A. Year of creation



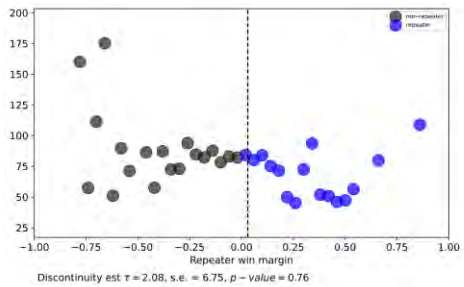
B. Distance to colonial road



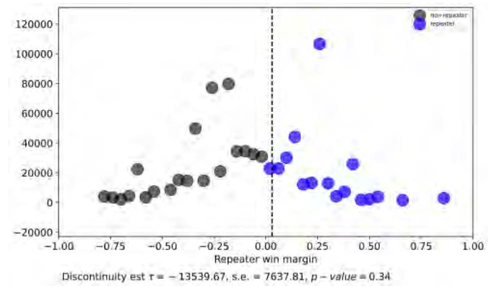
C. Rurality index



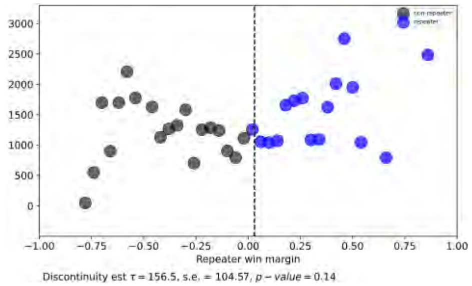
D. Distance to dep. Capital



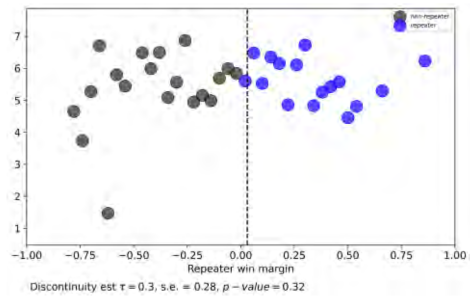
E. Population



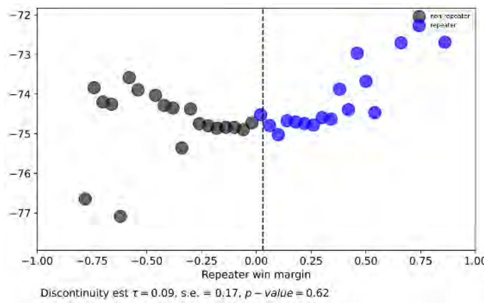
F. MASL (Altitude)



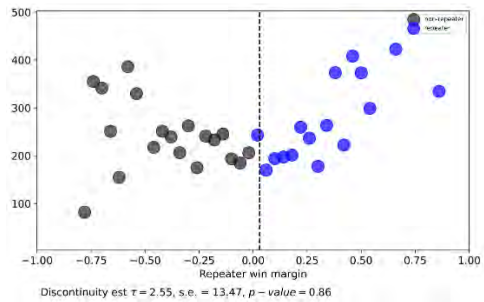
G. Latitude



H. Longitude



I. Distance to coast (km)



Note: The panel presents regressions of the main control variables against the running variable. This graph displays local averages of the outcomes in 4-percent bins plotted against the win margin, complemented with its corresponding standard error and p-value.