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Corruption in Peru
Evidence from Nepotism in Congress

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“Corrupción en Perú. Evidencia de Nepotismo en el Congreso”

Resumen: Los estudios sobre nepotismo en cargos públicos tienden a centrarse en su prevalencia dentro del área de influencia inmediata de los políticos, específicamente en cómo emplean su poder para contratar a personas dentro de la burocracia que supervisan directamente. Utilizando los datos electorales de 2016 y una base de datos de Perú de todos los empleados públicos de todas las ramas del gobierno entre 2013 y 2022, empleo un diseño de regresión discontinua (RD) intra-partido para identificar el efecto de una victoria electoral en la contratación de familiares para puestos públicos dentro de toda la burocracia peruana. Primero examino los efectos de una victoria en el Congreso sobre el nepotismo en la burocracia legislativa. En comparación con los candidatos no electos del mismo partido y distrito electoral, los individuos que apenas ganaron sus elecciones al Congreso contratan a más empleados que comparten sus apellidos y destinan una mayor suma de dinero a sus contratos. Luego analizo los efectos de ganar el cargo en la contratación de posibles parientes en otros poderes del Estado. Encuentro un efecto positivo de las victorias parlamentarias sobre estas contrataciones en los gobiernos regionales -sobre los que los miembros del Congreso peruano ejercen mayor influencia-, pero no hallo ningún efecto en el Poder Ejecutivo ni en el Judicial. Estos resultados subrayan el impacto del nepotismo más allá del área de influencia directa de un político y sugieren que los estudios anteriores subestiman su prevalencia.

Palabras clave: Perú, Nepotismo, Economía Política, Diseño de Regresión Discontinua, Poder Legislativo.

Códigos JEL: D72, D73, J45.

“Corruption in Peru. Evidence from Nepotism in Congress”

Abstract: Studies of nepotism in public office tend to focus on its prevalence within politicians' immediate area of influence—specifically how politicians employ their power to hire individuals within the bureaucracy they oversee directly. Using a large database from Peru of all public employees between 2013 and 2022 across all branches of government, as well as electoral data from 2016, I employ an intra-party regression discontinuity (RD) design to identify the effect of an electoral victory on hiring relatives to public positions within the country's entire bureaucracy. I first examine the effects of congressional victory on nepotism in the legislative bureaucracy. I find that, compared to non-elected candidates of the same party and electoral district, individuals who barely won their congressional elections hire more employees that share their last names and allocate a larger sum of money to their contracts. I then analyze the effects of winning office on the hiring of potential relatives in other branches of government. I document a positive effect of congressional victories on these hirings in regional governments—over which members of Peru's Congress exercise a sizable influence—but find no effect within the Executive or the Judiciary. These results underscore the impact of nepotism beyond a politician's direct area of influence and suggest previous studies underestimate its prevalence.

Keywords: Peru, Nepotism, Political Economy, Regression Discontinuity Design, Legislative Power.

JEL Codes: D72, D73, J45.

1 Introduction

The practice of using political power or influence to secure jobs or unfair advantages for members of your own family—commonly known as nepotism—constitutes one of the most pervasive forms of corruption. Indeed, global efforts to assess the prevalence of corruption, such as the Corruption Perception Index (CPI) produced by Transparency International, consider nepotism within the civil service to be one of the central dimensions of corruption in politics (Transparency International, 2022). Despite the fact that most countries have laws in place that prohibit public officials from hiring their relatives, nepotism remains ubiquitous in several contexts.

The effects of nepotism pose a challenge to policy implementation, development and good governance more generally. Indeed, while the theoretical predictions from economic theory about the effects of nepotism are somewhat ambiguous, a growing empirical literature has established the pernicious impact of nepotism on state capacity and public goods provision.¹ Evidence suggests that favoritism towards family members results in less competent employees, on average. In particular, public employees hired as a result of nepotism tend to have less education and experience and more records of prior misconduct than non-nepotistic hires. This situation often leads to lower productivity in offices where nepotism is more prevalent (Brassiolo *et. al.*, 2021; Riaño, 2021; Ríos-Figueroa and Soto Tamayo, 2021).

While the power and influence of politicians often extends far beyond their immediate area of influence, existing studies focus on the exercise of nepotism by high-level bureaucrats in the departments and agencies that they oversee directly. For example, studies of Latin America document nepotistic practices by judges in the Mexican federal judiciary (Brassiolo *et. al.*, 2021; Ríos-Figueroa and Soto Tamayo, 2021) and by top non-elected bureaucrats in the public sector in Colombia (Riaño, 2021). Similarly, a study on the Philippines finds that elected mayors employed nepotism to hire public employees in their municipalities (Fafchamps and Labonne, 2017).

In this paper, I examine the prevalence of nepotism across the entire government bureaucracy, including not only the extent to which politicians leverage their power to favor relatives in the agencies and departments that they oversee directly, but also the *indirect* effects of politicians' influence in the hiring of relatives in other branches of government. Measuring both the direct and indirect channels through which nepotism can operate is crucial for two reasons. First, focusing solely on nepotism in the areas that politicians oversee directly risks underestimating its extent. Second, examining politicians' ability to secure the employment of relatives for positions that are not directly within their jurisdiction can assist in the development of public policies to curb nepotism in government, as many of the laws in place today focus on curbing favoritism towards relatives in government positions that are directly under an individual

¹For a recent review of the theoretically ambiguous effects of nepotism, see Riaño (2021).

politician or top bureaucrat.²

My empirical focus is on the case of Peru, a country that (similar to many countries in Latin America) is characterized by several factors that are thought to increase the likelihood of nepotism: high inequality, strong family ties, and low productivity (Alesina and Giuliano, 2010; Robinson and Verdier, 2013). By all accounts, nepotism is pervasive in the Peruvian context. Reports that local and national officials hire their relatives to public office are commonplace in Peruvian newspapers.³ Moreover, laws have repeatedly been enacted to attempt to combat nepotism—including a 2021 amendment following a new set of nepotism scandals—with little apparent effect.⁴

To assess the prevalence of nepotism across the entire Peruvian bureaucracy, I compiled a large dataset on all public-sector employees hired between 2013 and 2021 and information about all congressional candidates in the 2016 election. I first focus on the direct effects of holding office on nepotism: the effects of a congressional victory on nepotism within the congressional structure. I demonstrate the presence of an electoral cycle in the firing and hiring of public employees in the legislative arena, showing that incoming legislators often replace a large portion of the existing public employees. To be sure, this is not necessarily due to nepotism; it may reflect the hiring of individuals politicians trust but are not necessarily relatives. Leveraging an intra-party regression discontinuity design, I examine whether access to congressional office has a positive effect on nepotism in the hiring for positions within the legislative branch. To measure nepotism, I rely on naming conventions to assess family links to candidates and obtain the number of nepotistic hires as well as their total and average salary. My results show that, when compared to non-elected candidates in their same party and electoral district, members of Congress hire more employees that share their last names and allocate a greater amount of funds to contracts with them, while the difference in the mean contract is not significantly different from zero until the last reported period, suggesting nepotism in Peru concentrates on the extensive margin rather than on the intensive margin.

After measuring nepotism in the legislative branch, I analyze the ability of legislators to ensure the hiring of family members in other branches of government. The estimates for the hiring of employees that share the candidates' last names in the executive and judicial bureaucracy are both positive but not statistically significant.

²Indeed, if nepotism extends far beyond a politician's immediate area of influence, existing policies may even displace it to other areas of government (see e.g. Riaño 2021).

³See, for example, www.infobae.com/america/peru/2022/08/19/jose-luis-gavidia-lloro-por-las-acusaciones-a-su-hija-y-a-su-esposa-es-el-precio-que-tengo-que-pagar-por-servir-a-mi-patria/ and www.infobae.com/america/peru/2022/10/08/elecciones-2022-todo-queda-en-familia-nuevos-alcaldes-tendran-a-sus-familiares-en-los-municipios/.

⁴Law 26,771 was passed in 1997 to prevent nepotism up to the fourth degree of consanguinity, second degree of affinity, and by reason of marriage. Law 31,299 further strengthened the fight against nepotism in 2021, as it included common-law unions, cohabitation and explicitly prohibiting parents to hire their offspring. Similar efforts to prevent nepotism can be seen worldwide.

Crucially, I find a large, positive effect of a congressional victory on the hiring of potential relatives in regional governments, over which legislators have an important though indirect influence.

The paper contributes to the understanding of nepotism by elected politicians by studying its prevalence across the entire Peruvian bureaucracy. To the best of my knowledge, this is the first study to identify congressional nepotism in Latin America. Beyond confirming the extent and magnitude of nepotism in this context, the granularity of the data used in the analysis allows me to examine nepotism by members of Congress within other branches of government. The findings suggest that studies that only consider nepotism in positions directly under politicians' jurisdiction probably provide a lower bound on the extent of nepotism.

2 Research on Nepotism in the Public Sector

Nepotism is ubiquitous across human organizations, as it is directly associated with the natural human desire to protect and promote the well-being of people of their own kin (Bahrami-Rad *et. al.*, 2022). The growing literature on the subject has measured nepotism and its effects on a wide array of organizations, such as private firms, public sector administration, and other nonprofit institutions like academia (Allesina, 2011; Durante *et. al.*, 2011; Lentz and Laband, 1989). Despite being ubiquitous, the prevalence, magnitude, and characteristics of nepotism are highly dependent on cultural traits, rules or legislation, and enforcement. For instance, nepotism in the public sector is negatively correlated with economic development and human capital, while positively correlated with strong family ties, high inequality and low productivity in the private sector (Alesina and Giuliano, 2010; Perez-Alvarez and Strulik, 2021; Robinson and Verdier, 2013).

Economic theory is ambiguous in its predictions about the effects of nepotism on state capacity and public goods provision. Nepotism can reduce the informational challenge of bureaucratic recruitment, facilitating the hiring of candidates about whom the employer has the most information and/or those whom the employer can trust, while taking advantage of transfers of specific knowledge and social connections among relatives. On the other hand, it can merely come from the impulse to favor family members, hiring relatives even when they do not have the necessary qualifications or when better candidates are available, consequently reducing the quality of employees.

Empirical evidence has shown that negative effects outweigh the positive ones, and thus nepotism is detrimental to state capacity when prevalent in public administration. Apart from reducing the average quality of employees, nepotism has been shown to decrease applications of potential new employees when the perception of this practice is high, and to decrease job satisfaction among employees that perceive an unfair work environment (Burhan *et. al.*, 2020; Büte, 2011; Deserranno and León-Ciliotta, 2021; Estrada, 2019). Evidence suggests it is also detrimental for the relatives that get hired,

as they are perceived by their colleagues as less competent, even if they are qualified for the job (Padgett *et. al.*, 2015). These effects explain why nepotism is associated with a decrease in productivity (Brassiolo *et. al.*, 2021; Riaño, 2021).

There are two crucial measurement challenges in the study of nepotism. The first challenge is the measurement of familiar connections. Ideally, a study on nepotism should have a complete dataset on familiar links, but this data is usually unavailable,⁵ so many papers rely mostly on shared last names as a proxy of the prevalence of nepotism (Allesina, 2011; Brassiolo *et. al.*, 2021; Durante *et. al.*, 2011; Fafchamps and Labonne, 2017; Gagliarducci and Manacorda, 2020; Grilli and Allesina, 2017; Ríos-Figueroa and Soto Tamayo, 2021; Sundell, 2014). The effectiveness of this technique depends on the empirical strategy and on the naming conventions of the particular case study, and it has some obvious limitations, as two individuals can share a last name and not be related, or, on the other hand, they can be related without sharing any last name. Some papers address this issue with different methods, for example, they rely on the distribution of last names within the general population to compare it with the distribution of last names in a particular office, aiming to detect anomalies that suggest nepotistic practices (Gagliarducci and Manacorda, 2020; Grilli and Allesina, 2017; Ríos-Figueroa and Soto Tamayo, 2021). The second challenge is the difficulty in disentangling when nepotism occurs due to a demand of the superior or by an action of others who expect to be favored in return in the future. This problem is present in all the papers in the literature, which consider this mechanism as nepotism.

The literature on nepotism in the public sector can be classified following two different criteria: one that divides nepotism based on whether the person engaging in nepotistic practices is in an elected position or not, and another one based on whether these practices are directed to hires in agencies and departments that he or she oversees directly, or in indirect areas of influence. The main studies on nepotism in the public sector are categorized following these criteria on Table 1.

⁵For some exceptions, see Folke *et. al.* (2017), Riaño (2021), and Scoppa (2009).

Table 1: Categorization of Studies on Nepotism in the Public Sector

	Elected Position	Non-Elected Position
Direct Influence	Fafchamps and Labonne (2017)	Scoppa (2009) Ríos-Figueroa and Soto Tamayo (2021) Brassiolo, Estrada, Fajardo, and Martínez-Correa (2021) Riaño (2021)
Indirect Influence	Gagliarducci and Manacorda (2020) Folke, Persson, and Rickne (2017)	Riaño (2021)

Elected officials have been found perpetrators of direct and indirect forms of nepotism. The most direct example of this sort of influence can be found in the Philippines, where evidence suggests that people that are related to an elected mayor are more likely to be employed in better-paid occupations across the public administration (Fafchamps and Labonne, 2017). More interestingly, recent evidence finds an indirect channel of nepotism that has been previously neglected: relatives of elected politicians in Italy and Sweden have better economic outcomes, even when working in the private sector (Folke *et. al.*, 2017; Gagliarducci and Manacorda, 2020). Authors suggest that this effect comes from the fact that private firms are imperfectly substituting bribes for family hires as an indirect source of political favors. To address the issue of selection, where families with high skills may have members in high positions in both private and public sectors, the first study adopts a close elections approach. Meanwhile, the second study demonstrates that the timing of appointments in the private sector aligns with their hypothesis, and their findings remain robust after restricting the sample to individuals with a family member in office at any point over the period of analysis.

Non-elected officials like judges and top bureaucrats have also been widely studied. Judges in Mexico have been found to be involved in nepotistic hires that decrease the productivity of their particular offices (Brassiolo *et. al.*, 2021; Ríos-Figueroa and Soto Tamayo, 2021). Nepotism by bureaucrats has been also found both in Colombia and in Italy, also associated with a decrease in the employees' average capacities and in the performance of these offices (Riaño, 2021; Scoppa, 2009). These papers also point out that these employees have, on average, a worse history of misconduct than regular employees. In addition, Riaño (2021) studies the effects of the introduction of anti-nepotism laws and shows evidence of indirect nepotism: while these rules are not always completely enforced, powerful individuals can adapt to these changes using

their influence to relocate their relatives to new offices where, under the prevailing rules, their employment is legal.

This paper focuses on nepotism practiced by elected legislators and studies both their direct and indirect influence to secure jobs for their relatives in different government offices. Familiar links are measured by using shared last names as a proxy while including different points to address the concerns regarding this method. The empirical strategy is a regression discontinuity design.

3 Political Context

The period under study was defined by a significant political confrontation between the Executive and Legislative branches. In the 2016 elections, the newly formed political party *Peruanos Por el Kambio* narrowly secured the presidency with 18 seats in Congress, while the established *Fuerza Popular* obtained a significant 73 seats despite losing the presidential race. This disparity in representation fueled a rivalry between the two branches, with allegations of obstructing government functioning and corruption being exchanged.

In March 2018, President Kuczynski resigned from his position due to mounting pressure from Congress, triggered by corruption charges associated with the Odebrecht scandal and the imminent threat of impeachment. The tensions continued as Congress pressed for the appointment of new members to the Constitutional Court. In response, newly appointed President Vizcarra threatened to utilize a vote of confidence, which eventually took place in September 2020.⁶ This vote, aimed at preventing the appointment of Constitutional Court members, was eventually approved by Congress, but only after the inclusion of a new member in the Court. President Vizcarra interpreted this approval as a *de facto* vote of no confidence. According to the Peruvian constitution, the president holds the authority to dissolve Congress after two votes of no confidence. As a previous such vote occurred in 2017, Vizcarra dissolved Congress and called for elections. In response, Congress attempted to suspend Vizcarra, but their efforts proved unsuccessful.

To complete the 2016-2021 congressional period, elections were held in January 2020, resulting in *Fuerza Popular* retaining only 15 seats, significantly reshaping Peru's political landscape.

4 Data

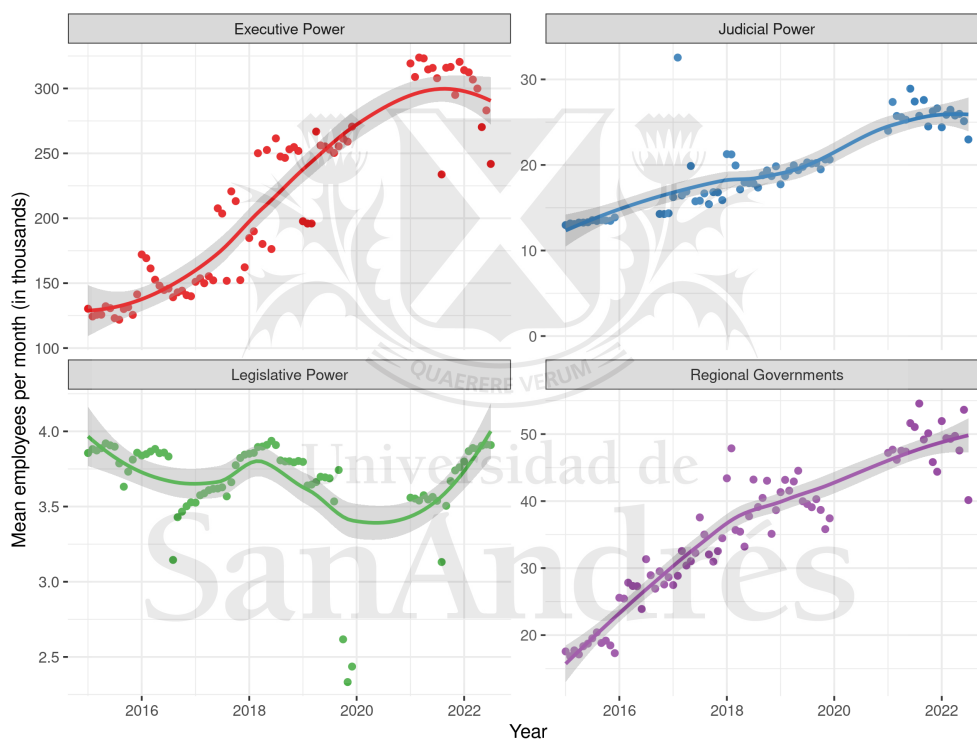
Data on elections for members of Congress in Peru in 2016 comes from the *Junta Nacional Electoral* and includes electoral returns at both the party and individual

⁶See, for example, www.economist.com/the-americas/2019/10/03/martin-vizcarra-dismisses-perus-congress.

candidate level.⁷ Data for each candidate includes first name, paternal and maternal last name as well as gender. 1,267 candidates run for the 2016 election, but 444 remain after dropping candidates from parties that did not win any seat or, inversely, won seats for all the candidates running in that particular district.

Data on public employees for the Executive, Legislative, and Judicial Power as well as Regional Governments is reported by each individual entity on a monthly basis and published in Peru's *Transparencia* portal.⁸ Data is available for the 2013-2022 period and includes the first name, paternal and maternal last name, the type of contract, position, dependency, salary, and benefits of each employee.⁹

Figure 1: Number of Employees per Month per Government Office



The figure displays the evolution of the total amount of employees per month in each Government Office, from 2015 to 2022. Values for 2020 were excluded in all branches due to a political crisis that affected the data. Values for the Judicial Power between January and September 2016 were also excluded because of a lack of data.

Figure 1 shows the evolution of the total amount of public employees in Peru for the same period by Government Office.¹⁰ There is an upward trend for the Executive

⁷ Available at infogob.jne.gob.pe.

⁸ Available at www.transparencia.gob.pe.

⁹ Values for 2020 were excluded in the analysis due to a political crisis that affected the data quality.

¹⁰ Figure A1 in the Appendix aggregates all branches of government.

Power, the Judicial Power, and Regional Governments. The Legislative Power is quite stable across time, ranging from 3.5 to 4 thousand. A significant decrease can also be seen in August for 2016 and 2021, matching the period in which members of Congress began to hold office.¹¹

5 Empirical Strategy

To examine the causal effect of an electoral victory on hiring relatives in public positions, I implement a regression discontinuity (RD) design. A simple comparison of elected and non-elected politicians could yield biased estimates as politicians with more power prior to an election are both more likely to win office and also of having stronger connections that lead to more jobs for their family members. The RD essentially compares elected members of Congress to non-elected candidates of their same party and electoral district, and shows the difference in the outcome for individuals who barely won their congressional elections. This empirical strategy exploits the fact that candidates cannot fully control how many votes they receive on election day, so the small differences in votes between winners and losers can be interpreted as random. This is especially true in open-list proportional-representation systems such as the one used in the Peruvian congressional elections, where voters can cast votes for specific candidates within party lists. These votes decide the candidates from each party that are elected to office, effectively creating close elections for candidates within each party and district.

In Peru, within each district, seats are first distributed to parties or coalitions according to the D'Hondt formula. This method relates the proportion of votes to the number of seats allocated to each party. Since the latter is an integer, the goal of this formula is to minimize the number of votes that will be left out so that the rest of the votes have exactly proportional representation. Within their preferred party, voters also express their preference for individual candidates: each voter can choose up to two specific candidates when they vote for a political party. In parties or coalitions that won seats, the candidates are ranked by the number of personal votes they obtained, and the seats won by the party are given to those with the highest share of preferential votes (Cruz, 2006).

I focus on these close intra-party elections to study the effect of individual electoral victories on the hiring of relatives in different public positions. I follow the adaptation of the RD design to the open-list proportional-representation rules developed by Boas, Hidalgo, and Richardson (2014), as the Brazilian electoral system is similar to the one described in Peru. I will therefore describe their method and introduce the small differences that were included for this paper.

¹¹Figure A2 in the Appendix presents the monthly evolution of employees in Congress.

Formally, a party or coalition list j wins s_j seats.¹² Each candidate is indexed by i , which also denotes intra-list rank, as determined by his v_{ij} votes. The candidates with $i \leq s_j$ win office and become incumbents, while those with $i \geq s_j$ lose. The ‘last winner’ is the candidate with $i = s_j$, whose vote total can be written as $v_{i=s_j,j}$. The ‘first loser’ is the candidate with $i = s_j + 1$, whose vote total is denoted as $v_{i=s_j+1,j}$. Candidate i ’s raw margin of victory or of defeat, M_{ij} , can be defined as:

$$M_{ij} = \begin{cases} v_{ij} - v_{i=s_j+1,j} & \text{if } i \leq s_j \\ v_{ij} - v_{i=s_j,j} & \text{if } i > s_j \end{cases}$$

A winning (losing) candidate’s vote margin will be the difference between his vote total and that of the first loser (last winner). Vote margin determines the electoral outcome: candidates with a positive margin are elected to office while those with a negative margin are not. I again follow Boas, Hidalgo, and Richardson (2014) in measuring M_{ij} , the forcing variable, in terms of raw vote margin rather than as a share of total votes as this is more appropriate for electoral systems with substantial variation in district magnitude. In Peru, the district of Lima elects thirty-four candidates, whereas no other district elects more than six. As the number of candidates depends highly on the number of seats available and the number of parties, the mean individual share of votes for each candidate in a small district will be substantially higher than the one in Lima.¹³ Therefore, using the share of total votes per district as the forcing variable would underrepresent small districts.

My main sample is based on all the individuals who ran for office during the 2016 Congressional election in all party lists that won at least one seat, a total of 444 candidates. Out of the 26 electoral districts, only two are not represented in my sample since all the available seats were won by the same party, leaving no losing candidates.¹⁴

The basic regression discontinuity model that captures the causal effect of incumbency is:

$$Y_{ij} = \alpha + \beta_1 Win_{ij} + \beta_2 M_{ij} + \beta_3 Win_{ij} \times M_{ij} + \delta_j + \epsilon_{ij} \quad (1)$$

$$\forall i, j \text{ s.t. } |M_{ij}| < \lambda,$$

where Win_{ij} is a binary indicator equal to one if candidate i in coalition j was elected and β_1 measures its causal effect. M_{ij} is the forcing variable defined above, δ_j are Congressional list fixed effects, and ϵ_{ij} is the error term. λ is an arbitrarily

¹²In Peru, both parties and coalitions can run for office. Candidates need their parties to pass a threshold of 5% of total votes or 7 elected candidates, nationally, in order to be able to get elected. Coalitions raise the threshold in 1% and 1 candidate for each additional party involved.

¹³In 2016, Lima had 353 candidates and a mean individual vote share of 0.24%. The rest of the districts had between 15 and 73 candidates and a mean individual vote share between 0.76% and 4.59%.

¹⁴This is the case for Lima Provincias and Ucayali.

small vote margin that defines the study group for each estimation. I choose this optimal bandwidth and estimate Equation 1 following the robust estimation procedure described in Calonico, Cattaneo, and Titiunik (2014). To address potential concerns about sample size and as a robustness check, I also report balance tests and main results for alternative bandwidths.

An implication of the design assumptions is that the empirical density of the vote margin should be continuous around the cutoff. Reassuringly, the density test based on the local polynomial density estimator proposed in Cattaneo, Jansson, and Ma (2020) fails to reject the null hypothesis of no difference in density at the cut point (p-value=.46).¹⁵

Table 2: Balance Tests for 2016 Data on Candidates

	Est.	95% CI	<i>p</i> - val	<i>n</i> _c <i>n</i> _t	<i>h</i>
Personal Characteristics					
Gender	0.085	[-0.206 , 0.430]	0.489	60 41	6,298
Common Surname	0.116	[-0.064 , 0.288]	0.211	75 48	8,164
Original Place in List	0.465	[-1.108 , 2.375]	0.476	71 45	7,520
Party Affiliation					
Fuerza Popular	-0.008	[-6.954 , 3.177]	0.465	109 65	11,226
Alianza p/ el Progreso del Perú	-0.013	[-0.328 , 0.264]	0.834	116 67	12,261
FA por Justicia, Vida y Libertad	0.006	[-0.276 , 0.213]	0.801	111 66	11,601
Peruanos por el Kambio	0.004	[-0.11 , 0.1]	0.928	94 57	9,580

Estimate is average treatment effect at cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth. Columns 3-7 report, respectively, 95% robust confidence intervals, robust p-values, units in treatment (*n*_t) and control (*n*_c) within the optimal bandwidth, and main optimal bandwidth. FE per electoral district and/or political party.

Table 2 shows that close winners and losers are similar in terms of their pre-treatment covariates. The candidates are balanced on gender and on having a common last name, measured as the proportion in which each last name appears in the complete list of Peruvian public employees in March 2016 (the month before the election). Candidates are also balanced on the original place they have in their parties' lists, which highlights the importance of preferential votes in Peruvian elections. Although the main optimal bandwidth is reported, these results are robust to several different bandwidths.¹⁶ Similar results are obtained when assessing whether candidates are bal-

¹⁵Figure A3 in the Appendix reports the visual density test.

¹⁶Figure A4 in the Appendix shows the results of these balance tests when choosing different bandwidths.

anced with respect to their political partisanship and the electoral district where they competed.¹⁷

The main outcome of interest is a measure of nepotism: the number of employees in the Legislative Power that share the candidate’s paternal last name in their own paternal or maternal last name. The RD design allows me to estimate the treatment effect of winning office by making the assumption that the distribution of potential outcomes is a smooth function of the vote margin. Under this assumption, I can identify a local causal effect at the cutoff since, on either side of the threshold, the outcomes of winners are a valid counterfactual for the outcomes of losers.

To measure nepotism, I follow Brassiolo *et. al.* (2021) and Fafchamps and Labonne (2017), who use the number of public employees that share a politician’s last name. This allows me to take advantage of the fact that the data identifies the paternal and maternal last names separately, making it easier to identify family ties through family names, particularly under the Spanish naming conventions. One potential concern with this method is the possibility of bias introduced by candidates whose last names are particularly common. For instance, if people tend to elect candidates with common last names because they feel they are more familiar to them, this would lead to more matches in the employees’ data, incorrectly suggesting nepotism. The opposite would be true if people tend to elect candidates with uncommon last names because they remember them better after seeing electoral propaganda.

I take three steps to address this issue. First, I calculate the proportion of appearances of candidates’ last names in the universe of government employees in the month prior to the 2016 election. This serves as a measure of how common each last name is. I use this to compare the rates of common last names across treatment and control groups. As I show in Table 2, treatment and control candidates are balanced with respect to this trait. Second, rather than focusing on the raw outcomes (e.g. raw number of employees), I focus the analysis on the first difference with respect to the number of employees sharing the candidate’s last name during the month before the election. This focus on differences helps account for the fact that common last names were most likely part of the Peruvian bureaucracy even before the election. Although the count of employees sharing a last name is not indicative of nepotism, my claim is that changes in this variable, in the absence of nepotism, should be orthogonal to the election of new members of Congress. Third, I run my analysis for a sub-sample that drops candidates with the most common last names to show that the results are similar in magnitude and significance.¹⁸

¹⁷Table A1 in the Appendix shows the results for the balance tests on electoral districts.

¹⁸Table A2 in the Appendix shows the results for this sub-sample.

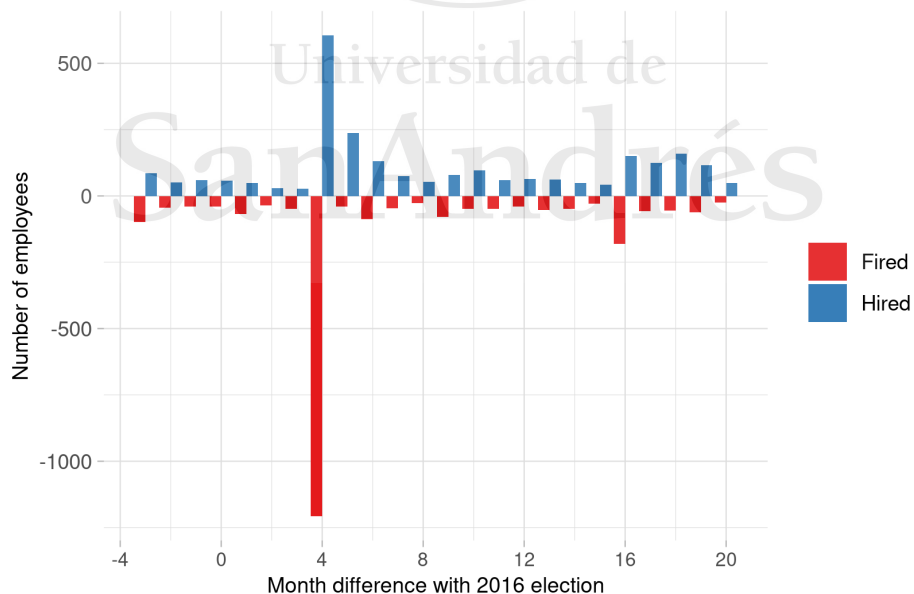
6 Effects of Congressional Victories on Nepotism Within Congress

6.1 Electoral Cycles in the Congressional Bureaucracy

I start with a descriptive analysis of the hiring and firing patterns within the legislative staff. Figure 2 shows the number of hiring and firing that took place in the legislative bureaucracy each month during the two years surrounding the 2016 election (between January 2016 and December 2017). This figure shows that the firing and hiring of public employees closely follows the electoral cycle in legislative bureaucracy as it is evident that when elected candidates take their seat (4 months after the election takes place) there is a peak in firing and hiring of employees.¹⁹ A small peak can also be seen in April 2017, possibly associated to one-year contracts, but it is not comparable in size to the one seen when elected candidates take their seats.

Considering the results discussed in Section 1, the effect is big in size: approximately 25% of employees are fired once the new members of Congress take their seats, and replaced soon thereafter. This figure makes it evident that the staff in Congress is subject to political changes and discretionary decisions, probably made by the newly appointed members of Congress.

Figure 2: Electoral Cycle in the Legislative Bureaucracy



The figure shows the number of employees that were fired or hired in the Legislative Power between January 2016 and December 2017. Month 0 corresponds to the 2016 elections.

¹⁹The pattern is strikingly similar in the 2021 election, as can be seen in Figure A5, available in the Appendix.

6.2 Full period effects of incumbency on nepotism

First, I show in Table 3 the effects of incumbency on the number of contracts for people that share the member of Congress' last name, as well as the total and mean amount of these contracts. Every variable is presented for the full period but calculated as the mean per month. As discussed in Section 5, outputs are calculated as the first difference with respect to their values during the month before the election (March 2016) to account for effects coming from common surnames. The RD design allows me to interpret the results as the local causal effect of incumbency on each measure. In other words, the result compares the output of a candidate that was elected with the outcome of a non-elected candidate, across districts and parties (as fixed-effects are included in the specification). The coefficients estimate the difference in each measure that comes from the fact of winning the election.

Three distinct measures associated with nepotism are reported. For each of them, an employee is considered to be a candidate's relative if he or she has a paternal or maternal last name that matches the candidate's paternal last name. The outputs presented are three. First, the difference in the number of contracts indicates if more potential relatives are being hired. Second, the difference in the total payroll earned by those employees shows if more money is spent on these contracts overall. Third, the difference in the mean salary earned by those employees indicates if these employees are getting higher contracts. Taken together, these different measures can be interpreted as indicative of the presence of nepotism and its characteristics, as it can provide evidence of concentration on the extensive margin (more contracts with similar amounts per contract), on the intensive margin (higher contracts without particularly increasing the number of hires), or both.

Full period results show that there is a small significant effect both in the number of contracts and in the total amount of contracts. Overall, these results suggest that, when compared to non-elected candidates in their same party and electoral district, members of Congress hire more people that share their last names, and allocate a greater amount of funds to contracts with them, while the difference in the mean contract for each of these employees is not significantly different from zero. A more detailed description of the size and timing of these effects can be found in the following section.

Table 3: Main Results: Congressional Nepotism in the Legislative Branch

	Est.	95% CI	$p - val$	$n_c n_t$	h	$mean_c$
Full-period: Difference from election period, mean by month						
Nr. of contracts	0.97	[-0.24 , 3.10]	0.094	111 66	11,547	13.25
Contracts total (SOL)	9,840	[3,311 , 20,795]	0.007	90 55	9,327	67,610
Contracts mean (SOL)	177	[-328 , 947]	0.341	68 45	7,292	3,957

Estimate is average treatment effect at cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth. Columns 3–7 report, respectively, 95% robust confidence intervals, robust p-values, units in treatment (n_t) and control (n_c) within the optimal bandwidth, and main optimal bandwidth. Column 8 ($mean_c$) reports the mean value for the control group in the period. FE per electoral district and political party.

A potential concern regarding these results is the sample size, which may be considered small for a regression discontinuity design. To address this concern, I present additional analyses in the following sections that demonstrate the robustness of the effects across various specifications. For instance, I combine the data by different time periods to assess the consistency of the findings.²⁰ Furthermore, I examine the effects using several different bandwidths in Figure A6 in the Appendix. The results remain robust across alternative bandwidths, although they tend to lose statistical significance as the windows become larger. This is expected since candidates who won by margins greater than 15,000 votes differ significantly from candidates who lost by the same margin.

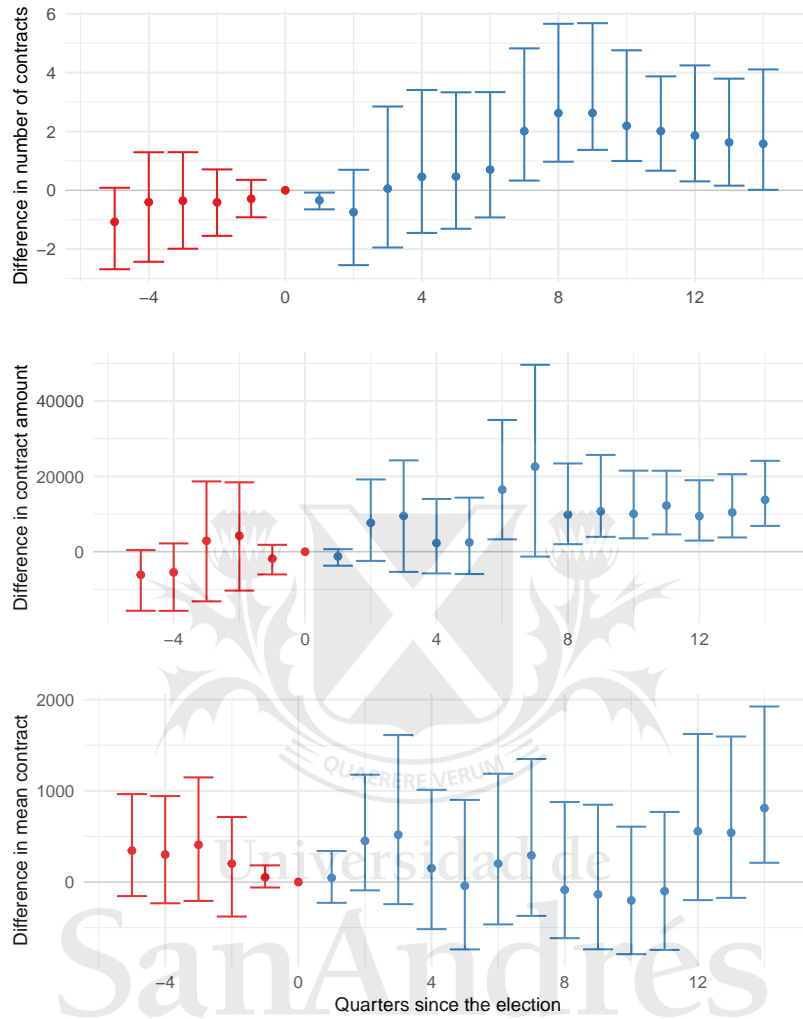
6.3 Quarterly effects of incumbency on nepotism

In this section, I show the effects of incumbency on nepotism in the legislature staff, presented by quarter for five quarters before the election and fourteen quarters after it. This approach is taken to show that the measures presented in the previous section vary along the period in which members of Congress serve. Although they are grouped by quarter, the outputs are measured as the monthly mean and all the same considerations explained in the previous section apply to this one as well.

Figure 3 shows the same measures in the previous section, in the same order. The first panel shows the difference in the number of contracts, while the second displays the difference in the total amount of contracts, and the third reports the difference in the mean contract. Crucially, note that there is no effect in the quarters *prior* to the election across outcomes.

²⁰Table A3 in the Appendix presents the results by year, showing similar patterns.

Figure 3: The timing of Nepotism: Effects by Quarter



The figure shows the effects of incumbency on the measures that suggest nepotism in the Legislature staff, presented by quarter and calculated as the mean per month. The first panel presents the difference in the number of legislative employees that share the candidate's paternal last name. The second panel displays the total payroll earned by those employees. The third panel shows the difference in the mean salary earned by them. FE per electoral district and political party.

In the first panel, I find a positive effect of incumbency on the number of relevant hires concentrated between quarters 7 to 12 after the election (between the second and the third years of the legislative term). The size of the effect is between 2 and 3 extra hires, which is considerable if compared with the mean amount of these contracts per month for each candidate in this entire period (12.56), increasing by approximately 20%.

The same effect is calculated for the total amount of these contracts and shown in

the second panel. The effect is also significant after the second year, although it stays significant for the whole period. The difference in the total amount of the contracts is larger than 10,000 SOL, with 63,056 SOL being the average total contract amount during this period (a 17% increase).

The last panel presents the difference in the mean contract amount, which can be interpreted as a wage premium of being a relative of an elected candidate. Although it only shows a significant result for the last quarter, when taking all three panels in consideration some important insights can be drawn from the figure. The results suggest that potential nepotistic practices were concentrated on the number of employees hired, thus mechanically increasing the total contract amount, while there is no evidence of an increase in the salary of each employee, calculated for all employees that share a candidate's last name in every period.

With 3,761 SOL being the mean contract per month in this period,²¹ the effects of the first panel and second panel are consistent with this hypothesis. For example, an elected candidate might have hired 3 more potential relatives than a non-elected candidate. If the contract offered to them was similar to the average contract in the Legislative Power, the mechanical increase in the total amount of contracts matches the estimates of the second panel. In other words, nepotism was concentrated on the extensive margin rather than on the intensive margin.

Interestingly, this effect is concentrated in the middle of the term that each member of Congress serves, suggesting that they might be choosing this period to avoid scandals near the elections. Although a law against nepotism did exist in 2016 and was further strengthened in 2021, these practices are difficult to eradicate. The results for the last quarter suggest that they might be replacing the extensive margin with the intensive margin when elections approach. Unfortunately, the results in this paper are truncated due to the dissolution of Congress on 30 September 2019.

As highlighted in Section 3, a significant political rivalry between the Legislative and the Executive power took place during the period under study. Notably, the resignation of President Kuczynski in March 2018 marked a pivotal moment and it coincides with the highest observed value for the effect of incumbency on the number of potential nepotistic contracts. This might suggest a potential strategic response by members of Congress to the shifting political landscape. In fact, it is worth noting that President Vizcarra, upon assuming office, implemented reforms aimed at combating corruption.

Additionally, it is important to consider that regional and municipal elections took place in October 2018, with the newly elected officials assuming their positions in the first quarter of 2019. These electoral changes may have further influenced the behaviors and practices of Congress members during the study period.

²¹Roughly 1,150 USD. In the same period, the average income in Peru was 1,370 SOL and the minimum income was 850 SOL, according to the official statistics office for Peru (INEI).

7 Effects of Congressional Victories on Nepotism in Other Branches and Government Offices

Members of Congress may have an indirect influence on other branches of government and they would be particularly interested in using their political power to allocate relatives there, as laws and protocols would have more difficulty establishing irregularities in these cases. An influence on the Judicial Power might be associated with belonging to the same elite, but I would not expect to find significant effects as the connections are more intricate. An effect on the Executive Power might be expected, especially for members of Congress that belong to the incumbent party. Regional Governments are expected to have a sizable effect, as these governments are run at the same level of government in which members of Congress are elected.

Table 4 reports the full period results for all Branches and Government Offices. The effect is weaker than in the Legislative Power, where members of Congress have a direct influence. However, they go in the same direction: more contracts for the candidates that were elected and a bigger total amount of contracts, but no significant effect in the mean contract.

Overall, all point estimates for the lowest p-values are positive and show some effect on the Executive and Judicial Power and in Regional Governments (both in the total amount of contracts and in the number of employees). Point estimates are bigger in magnitude than the ones found in the Legislative Power, but when the mean value for each measure is taken into account, the effects are very similar. Interestingly, the results are significant for the Regional Governments, as expected. In this Government Office, however, results are concentrated on the first year in office.²²

²²Figure A7 in the Appendix presents three panels with the effects by quarter for this branch of government.

Table 4: Congressional Nepotism in Other Branches and Government Offices

	Est.	95% CI	$p - val$	n_c n_t	h	$mean_c$
Full-period: Difference from election period, mean by month						
Executive Power						
Nr. of contracts	102.36	[-48.74 , 243.38]	0.192	76 48	8,255	702.36
Contracts total (SOL)	638,720	[-347,974 , 1,541,672]	0.216	75 48	8,213	2,866,729
Contracts mean (SOL)	61	[-127 , 335]	0.378	71 47	7,776	4,047
Judicial Power						
Nr. of contracts	35.19	[-14.33 , 83.66]	0.166	77 48	8,261	56.97
Contracts total (SOL)	166,161	[-42,460 , 375,133]	0.118	77 48	8,293	238,832
Contracts mean (SOL)	-224	[-1,897 , 771]	0.408	61 41	6,505	3,297
Regional Governments						
Nr. of contracts	30.04	[5.06 , 64.99]	0.022	104 61	10,447	135.28
Contracts total (SOL)	91,069	[11,901 , 187,996]	0.026	93 56	9,485	350,217
Contracts mean (SOL)	239	[-523 , 930]	0.583	79 48	8,494	2,323

Estimate is average treatment effect at cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth. Columns 3–7 report, respectively, 95% robust confidence intervals, robust p-values, units in treatment (n_t) and control (n_c) within the optimal bandwidth, and main optimal bandwidth. Column 8 ($mean_c$) reports the mean value for the control group in the period. FE per electoral district and political party.

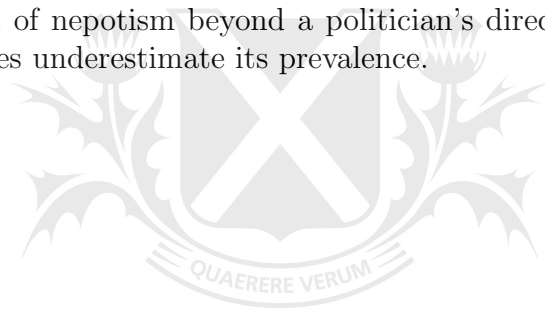
8 Conclusions

Nepotism reduces state capabilities, productivity, and efficiency, damaging the fight against poverty and inequality. Latin America has many ingredients that make nepotism a more salient problem: a long history of corruption and weak state capacities, combined with strong family ties and a private sector where informality is high. Many countries have been sanctioning laws in order to avoid these kinds of practices. However, distant family connections are difficult to identify and public employees can respond to the reforms strategically, by allocating employees in other offices where they have an indirect influence (Riaño, 2021).

To study the magnitude and timing of nepotism in the Peruvian Congress, I first build a large database of public employees from Peru that spans the entire Peruvian bureaucracy from 2013 to 2022. I combine it with information from congressional candidates to the 2016 election and use a regression discontinuity (RD) design to look at close elections and estimate the causal effect of access to political office on the hiring of potential relatives to public office within the legislative body as well as in the executive, judiciary, and the regional governments.

The results show a small but robust effect of incumbency on the number of employees that share their last name with members of Congress and the total salary amount assigned to these potential relatives. Members of Congress hire between 2 and 3 extra employees of this kind per month during their second and third years in office than non-elected candidates. Although this mechanically increases the total payroll destined for them, I do not find an effect in the mean contract amount per employee until the last quarter. A detailed analysis of the timing of the effects suggests that elected candidates may tend to hire these employees in periods that maximize the time distance with elections, when the threat of accountability is less salient. When elections approach, they reduce their hiring while keeping their total amount of contracts unchanged.

Evidence suggests a smaller effect going in the same direction for other Government Offices. This is especially interesting in regional governments, where results are statistically significant. Not surprisingly, these offices are probably more connected to the members of Congress, as they are also elected on a regional basis. These results underscore the impact of nepotism beyond a politician's direct area of influence and suggest previous studies underestimate its prevalence.



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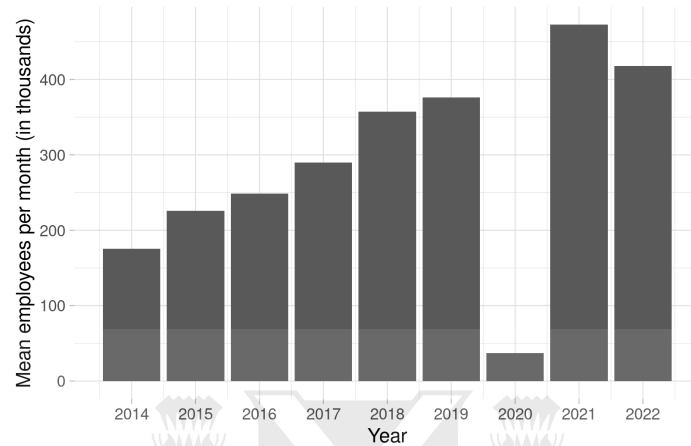
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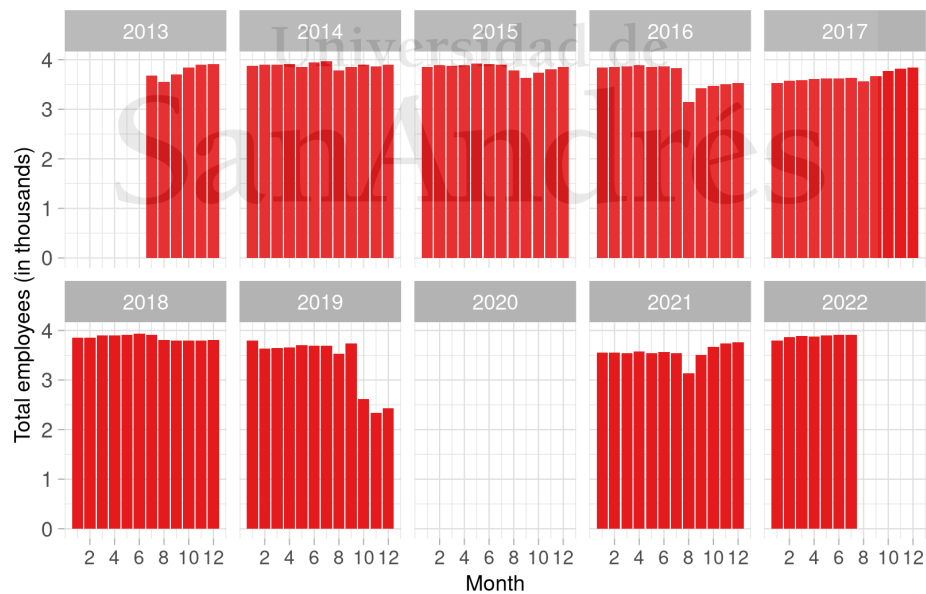
Supplementary Appendix

Figure A1: Mean Employees per Month for All Government Offices



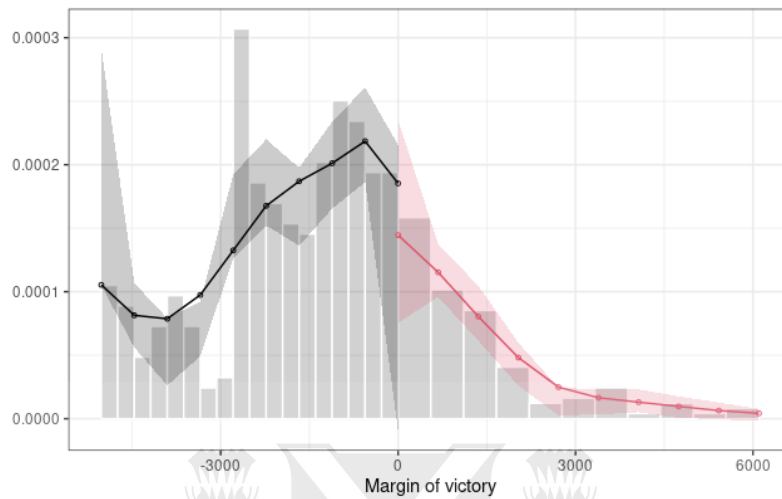
The figure shows the mean total amount of public employees per month in Peru during the 2014-2022 period. The fall in 2020 coincides with a large political crisis.

Figure A2: Legislative Power: Employees per Month



The figure presents the total amount of employees in the Legislative Power per month. The absence of data in 2020 coincides with a large political turmoil.

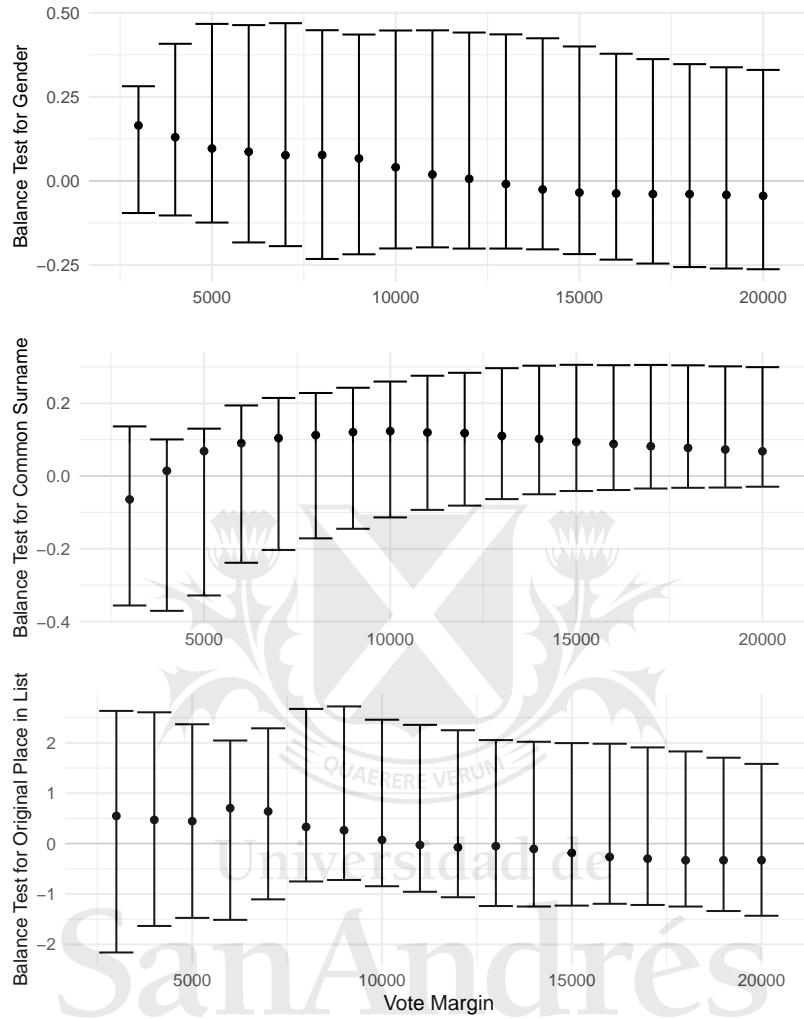
Figure A3: Density Test for the Running Variable



Density Test based on the local polynomial density estimator proposed in (Cattaneo, Jansson, and Ma, 2020)

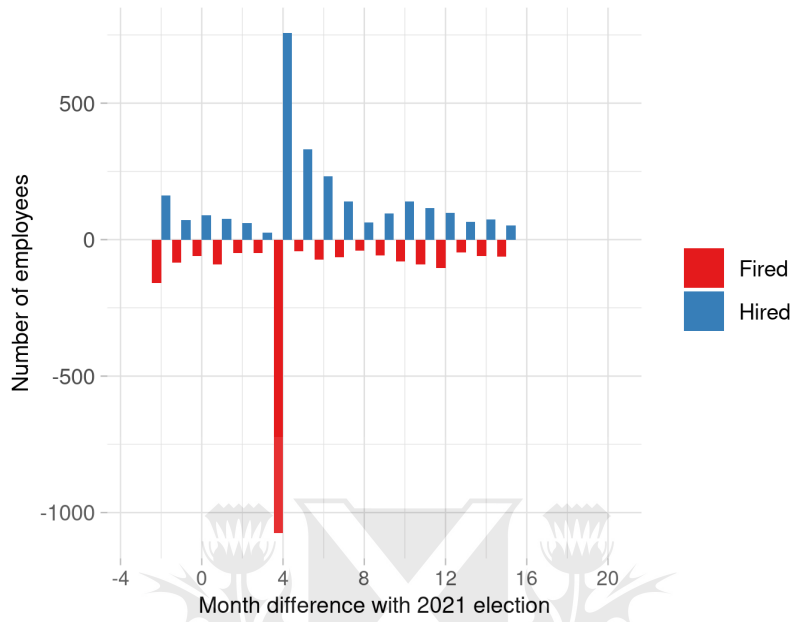
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Figure A4: Balance Tests Using Different Bandwidths



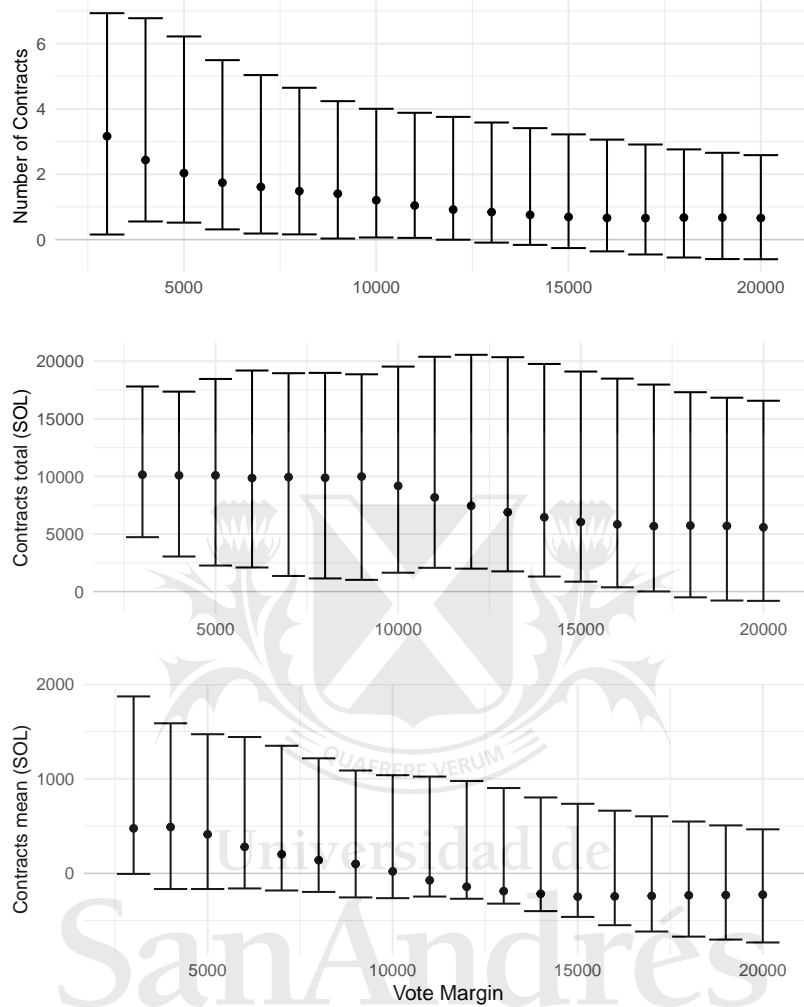
The figure shows estimates and 95% robust confidence intervals for balance tests made on personal characteristics from the candidates using several different bandwidths. Candidates remain balanced in gender, common surnames and original place in list across all the different cutoffs presented.

Figure A5: Electoral Cycles in the Legislative Bureaucracy



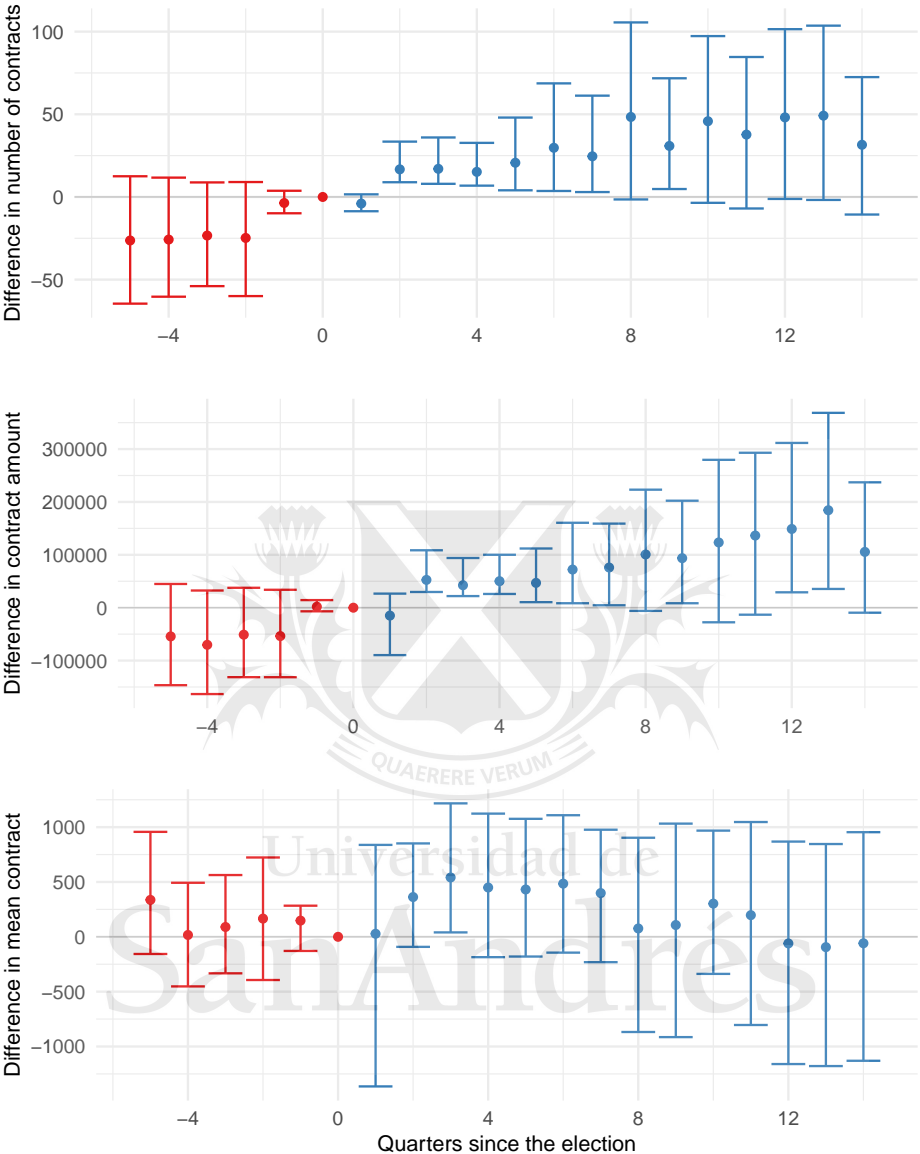
The figure shows the number of employees that were fired or hired in the Legislative Power between January 2021 and December 2022. Month 0 corresponds to the 2021 elections.

Figure A6: Main Results Using Different Bandwidths



The figure shows the same results as in Table 3, using different bandwidths. These full period results show that there is a small significant effect both in the number of contracts and in the total amount of contracts. The former becomes not significant shortly after increasing the 10,000 votes cutoff, while the latter remains significant until reaching the 18,000 votes cutoff.

Figure A7: The Timing of Nepotism in Regional Governments: Effects by Quarter



The figure shows the effects of incumbency on the measures that suggest nepotism in the staff from Regional Governments, presented by quarter and calculated as the mean per month. The first panel presents the difference in the number of RG employees that share the candidate's paternal last name. The second panel displays the total payroll earned by those employees. The third panel shows the difference in the mean salary earned by them. FE per electoral district and/or political party

Table A1: Balance Tests on Electoral Districts for 2016 Data on Candidates

	Est.	95% CI	$p - val$	n_c n_t	h
Electoral District					
Amazonas	-0.001	[-0.014 , 0.014]	0.983	121 70	13,075
Ancash	0.005	[-0.14 , 0.172]	0.844	140 81	14,922
Apurimac	0	[-0.138 , 0.151]	0.933	160 89	18,417
Arequipa	0.049	[-0.082 , 0.192]	0.434	173 90	19,878
Ayacucho	0.006	[-0.182 , 0.149]	0.844	121 70	12,867
Cajamarca	0.002	[-0.261 , 0.317]	0.849	135 76	14,102
Callao	0.003	[-0.137 , 0.167]	0.849	121 70	13,001
Cusco	-0.005	[-0.054 , 0.048]	0.917	63 42	6,713
Huancavelica	-0.009	[-0.059 , 0.036]	0.635	117 69	12,480
Huanuco	-0.01	[-0.076 , 0.063]	0.852	160 89	18,276
Ica	-0.019	[-0.075 , 0.021]	0.273	77 48	8,281
Junin	-0.007	[-0.079 , 0.051]	0.670	122 70	13,142
La Libertad	-0.004	[-0.087 , 0.063]	0.761	118 70	12,538
Lambayeque	0.002	[-0.084 , 0.064]	0.786	113 66	11,870
Lima	0.017	[-0.203 , 0.353]	0.599	89 54	9,182
Loreto	-0.006	[-0.051 , 0.041]	0.831	138 77	14,360
Madre de Dios	-0.021	[-0.189 , 0.12]	0.660	141 81	14,926
Moquegua	-0.023	[-0.203 , 0.145]	0.742	140 81	14,669
Pasco	0.027	[-0.037 , 0.081]	0.462	253 99	28,277
Piura	0.046	[-0.14 , 0.265]	0.546	121 70	12,713
Puno	0.001	[-0.103 , 0.121]	0.878	124 72	13,278
San Martin	0.029	[-0.159 , 0.205]	0.802	129 74	13,588
Tacna	-0.004	[-0.028 , 0.019]	0.702	104 61	10,534
Tumbes	0	[-0.003 , 0.009]	0.350	97 59	9,938

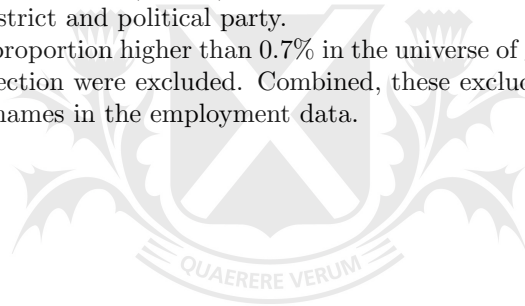
Estimate is average treatment effect at cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth. Columns 3-7 report, respectively, 95% robust confidence intervals, robust p-values, units in treatment (n_t) and control (n_c) within the optimal bandwidth, and main optimal bandwidth. FE per electoral district and/or political party.

Table A2: Congressional Nepotism in the Legislative Branch, Excluding Common Last Names

	Est.	95% CI	$p - val$	n_c n_t	h	$mean_c$
Full-period: Difference from election period, mean by month						
Nr. of contracts	0.70	[-0.28 , 2.01]	0.140	99 61	11,124	9.43
Contracts total (SOL)	8,415	[1,100 , 19,459]	0.028	74 45	8,598	47,622
Contracts mean (SOL)	191	[-279 , 957]	0.282	58 38	6,378	3,865

Estimate is average treatment effect at cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth. Columns 3-7 report, respectively, 95% robust confidence intervals, robust p-values, units in treatment (n_t) and control (n_c) within the optimal bandwidth, and main optimal bandwidth. Column 8 ($mean_c$) reports the mean value for the control group in the period. FE per electoral district and political party.

Last names representing a proportion higher than 0.7% in the universe of government employees in the month prior to the 2016 election were excluded. Combined, these excluded 10 last names accounted for roughly 9% of the last names in the employment data.



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Table A3: Main Results: Congressional Nepotism in the Legislative Branch by Year

Outcome Period	Est.	95% CI	$p - val$	$n_c n_t$	h	$mean_c$
Nr. of contracts: Difference from election period.						
Mean by month, annual results.						
Year -1	-0.36	[-1.66 , 0.87]	0.541	73 47	7,893	13.46
Year 1	-0.28	[-1.76 , 1.25]	0.742	115 67	12,195	12.66
Year 2	1.38	[-0.04 , 4.27]	0.055	103 61	10,303	13.37
Year 3	2.02	[0.84 , 4.39]	0.004	105 63	10,881	13.74
Year 4	1.76	[0.26 , 4.09]	0.026	85 50	8,941	13.19
Contracts total (SOL): Difference from election period.						
Mean by month, annual results.						
Year -1	-30	[-10,012 , 9,314]	0.944	89 54	9,187	67,113
Year 1	4,472	[-2,046 , 12,408]	0.16	83 49	8,832	67,139
Year 2	12,654	[2,812 , 29,138]	0.017	90 55	9,358	71,494
Year 3	10,008	[3,087 , 19,646]	0.007	104 61	10,491	66,337
Year 4	12,028	[5,593 , 21,901]	0.001	77 48	8,331	63,331
Contracts mean (SOL): Difference from election period.						
Mean by month, annual results.						
Year -1	222	[-98 , 658]	0.146	80 48	8,664	3,847
Year 1	322	[-129 , 989]	0.131	66 43	7,022	4,075
Year 2	146	[-424 , 1,054]	0.404	61 41	6,471	4,110
Year 3	42	[-569 , 934]	0.634	61 41	6,374	3,799
Year 4	678	[50 , 1,696]	0.038	55 40	6,079	3,729

Estimate is average treatment effect at cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth. Columns 4–8 report, respectively, 95% robust confidence intervals, robust p-values, units in treatment (n_t) and control (n_c) within the optimal bandwidth, and main optimal bandwidth. Column 8 ($mean_c$) reports the mean value for the control group in the period. FE per electoral district and/or political party