

ACCOUNTABILITY, POLITICAL CAPTURE, AND SELECTION INTO POLITICS: EVIDENCE FROM PERUVIAN MUNICIPALITIES

Miriam Artiles, Lukas Kleine-Rueschkamp, and Gianmarco León-Ciliotta*

Abstract—We estimate the effects of political accountability on the selection of politicians when accountability mechanisms are prone to political capture. We compare the characteristics of candidates running in municipalities where the previous incumbent was ousted from office through a recall referendum with those who run where the recall referendum failed by a small margin. Having a recalled incumbent in the previous term causes a negative selection of candidates in terms of their education and previous experience. They are also less representative of indigenous groups. The results are driven by localities where the accountability institution is likely used for political purposes.

I. Introduction

IN most democratic systems, different mechanisms and institutions can be used to increase voters' control over politicians, among them, reelection incentives, free press, and impeachment and recall mechanisms. The objective of these institutions is to improve government quality and the provision of public goods by disciplining elected politicians or punishing the inefficient or corrupt ones, or both (Persson & Tabellini, 2000; Barro, 1973; Ferejohn, 1986). These mechanisms not only have effects over politicians' actions, but also on their selection: by holding them accountable, they affect the expected value of office (Besley, 2007). However, in countries with low state capacity, where accountability institutions are at risk of being captured or manipulated by political elites or special interest groups, these objectives can be distorted.

In this paper, we study how accountability institutions affect the type of politicians who decide to run for office and show the way in which these institutions can lead to a negative selection when they are misused (through legal channels) by a group with political interests, that is, when they are prone to political capture. Using a comprehensive dataset on the characteristics and background of candidates running for mayor in the last three rounds of municipal elections in Peru, we implement a close election regression discontinuity design,

comparing the characteristics of candidates who decide to run for mayor in municipalities where the incumbent lost a recall referendum by a small margin with those running in places where the previous mayor barely survived the recall. We hypothesize that having a mayor recalled from office in a municipality affects the expected value of office for potential candidates by updating their beliefs about the probability that they are recalled for political purposes, that is, irrespective of their performance in office (a similar mechanism as in Avis, Ferraz, & Finan, 2018). In this framework, high-ability politicians and those who derive a high level of utility from providing public goods (especially to their coethnics) refrain from running, lowering the quality of the pool of candidates in the next regular election cycle and negatively affecting representation.

Our empirical results show that having a mayor ousted through a referendum in the previous period causes a reduction in the quality of candidates running for mayor: candidates in treated municipalities have about half a year less education and are 22% less likely to be university educated, and the proportion of candidates with only secondary education is higher. Looking at other dimensions correlated with politicians' quality and policymaking, we find that candidates in municipalities where a mayor was recalled also have less experience in elected office; in particular, they have 0.4 fewer years serving as municipal mayor, have less experience working in the public sector, and are less likely to have served in a party office. Importantly, these candidates are not less likely to belong to a national political party. These characteristics are negatively correlated with policy outcomes in our setting, suggesting that overall high-ability candidates are selecting out of the race and instead lower-quality candidates are entering politics. Additionally, we show that candidates in municipalities in which the mayor was ousted from office are not less likely to have an indigenous background on average (as measured by a novel classification of surnames), but we do observe a decrease in representativeness in municipalities with an indigenous majority. Finally, we show that despite the negative selection of candidates, elections still play an important role, and the negative effects on the pool of candidates are mostly offset by voters, who select the most qualified politicians among a lower-quality pool. However, relevant policy outcomes are still negatively affected by the lower quality of candidates.

Recall referenda are a direct democracy institution widely used around the world that allows voters to hold politicians accountable outside the regular election terms (Serdült & Welp, 2012). In Peru, recall referenda are pervasive at the local level (Welp, 2015). For example, in the 2010 electoral period, 20% of mayors in the country faced a recall election, and one-fourth of them were ousted from office. Importantly,

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*Artiles: Universitat Pompeu Fabra, Barcelona GSE, and IPEG; Kleine-Rueschkamp: OECD; León-Ciliotta: Universitat Pompeu Fabra, Barcelona GSE, IPEG and CEPR.

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it has been documented that recall referenda are often used as a political tool, and this is true around the world (Altman, 2010; McCoy, 2006) as well as in our study setting (Welp, 2015; Holland & Incio, 2019; Tuesta Soldevilla, 2014).

We present a simple framework where an increase in accountability allows voters to punish low-quality and corrupt politicians, reducing their expected term length and generating a positive selection. However, the political use of accountability mechanisms generates the possibility that high-quality and policy-motivated candidates are punished by voters, regardless of their performance, deterring some of them from running for office, leading to negative selection. When accountability institutions are at risk of being captured, as is often the case in settings with low state capacity, well-intended institutions can backfire. In the analysis, we show evidence consistent with the hypothesized mechanisms. The negative selection of candidates is almost entirely driven by municipalities where the main promoter of the recall referendum is a politician who ran for office in the previous election. Our effects are independent of the previous mayor's performance in office, and we show that candidates who select into the race after a mayor was recalled have a lower opportunity cost. Our results are not driven by preexisting differences in the characteristics of the incumbents or their opponents or time-variant characteristics of the political situation of the municipality at the moment of the recall referendum, or related to the absence of an incumbent mayor in municipalities where she was recalled.

Our interpretation of the results relies on the assumption that potential candidates are uninformed about the prevalence of politically motivated recalls and update their beliefs when they observe a mayor being recalled in their municipality. More than 90% of recall elections take place in municipalities with fewer than 5,000 voters (Welp, 2015), which are rarely covered by national media. We empirically provide evidence consistent with this information transmission mechanism. We analyze the patterns of candidate selection in municipalities that did not have a recall election, but had a close neighbor where a close recall election took place, comparing municipalities in which a close neighbor had the mayor ousted with those where the neighbor's mayor barely survived the recall. The results are entirely consistent with our main hypotheses.

Finally, in our empirical analysis, we investigate whether having a lower-quality pool of candidates affects the quality of elected mayors and their policy outcomes. Our findings, though suggestive due to a reduced sample size, show that elections mostly offset the negative effect of recalls on the candidate pool, and elected mayors in treated areas are only slightly less educated (not significant) than those who win the election in municipalities where a mayor barely survived the recall referendum. Even though there are no major differences in the mayors' characteristics, we observe that municipalities that had the incumbent recalled in the previous period spend less and collect less revenue, which could be explained by, for example, the lower quality of the opposition and less oversight.

Peruvian municipalities provide an ideal setting for studying the effects of accountability institutions on candidate selection. First, unlike other contexts where information on the characteristics of politicians is available only for those who are elected, the national electoral office collects and publishes detailed data on all candidates running for any public office, from the presidency down to the municipal council. These data allow us to look not only at the effects on the number of candidates and political competition, like previous studies, but, importantly, to who decides to run for office and who is deterred, emphasizing characteristics that are likely to cause better performance in office, as education and previous experience in the public and private sectors. Second, it is not often the case that one can observe variation in accountability (and the misuse of these institutions) at the local level, and when one does, it is not easy to disentangle observed or unobserved factors that determine the level of accountability and other outcomes to study. In our setting, close results in recall elections allow us to identify the effect of being exposed to (and learning from) an accountability institution that can be used for political purposes, and therefore causes a shorter expected term in office that is unrelated to performance or individual characteristics. Finally, recall referenda in Peru are at risk of being captured by political interest groups, a claim supported by qualitative and statistical evidence, allowing us to shed light on the mechanisms that explain why accountability can lead to a negative selection of candidates.

Our work contributes to and bridges the literature studying the effects of voter control mechanisms and the one analyzing the motivations and selection of politicians. First, we contribute to the literature looking at the broad question of politicians' motivations and selection (e.g. Diermeier, Keane, & Merlo, 2005; Dal Bó et al., 2017). In this paper, we show empirically a specific mechanism that affects the selection of politicians, which sheds light on their motivation for running for office.

Second, a large body of theoretical literature shows that increases in accountability allow voters to discipline politicians, for instance, in the form of reelection incentives, term limits, and information availability (Barro, 1973; Ferejohn, 1986). Most political agency models predict that these information asymmetries have effects on the incidence of both moral hazard and adverse selection; however, the empirical work analyzing the effects of accountability institutions has focused on the former.¹ Avis et al. (2018) show that Brazilian mayors exposed to a random audit are less likely to engage in corruption or mismanagement. As the framework in our paper argues, mayors are misinformed, and when an audit takes place, they update their priors. The main hypothesis presented in our paper is in a similar vein and assumes that mayors do not have perfect information about the probability of having

¹Examples of this literature are Besley and Case (1995), List and Sturm (2006), Ferraz and Finan (2008, 2011a), Besley and Burgess (2002), Bobonis, Cámara Fuentes, and Schwabe (2016), and Casey (2015), who study the effects of different accountability mechanisms on government responses and reelection of incumbents.

a politically motivated recall, and update their beliefs when they observe a mayor being recalled in their municipality.

The selection of politicians who decide to run for office is as important as their behavior, since their honesty, competence, and motivation determine the quality of public policies implemented, either directly (Martinez-Bravo, 2017; Besley, Montalvo, & Reynal-Querol, 2011; Besley, Pande, & Rao, 2005) or through their effects on political competition and more generally on the political equilibrium (Acemoglu, Egorov, & Sonin, 2013; Besley, Persson, and Strum, 2010). Few empirical papers so far have looked at the effects of accountability institutions on the selection of candidates.² Unlike these papers, we analyze an accountability institution that is used for political purposes, which distorts its objectives and hence generates negative selection.

More closely related to the predictions of agency models, as well as highlighting the importance of considering endogenous selection into politics (in the spirit of citizen candidate models, e.g., Osborne & Silvinski, 1996, and Besley & Coate, 1997), a group of papers analyze the effects of monetary incentives on politicians' selection and performance (Ferraz & Finan, 2011b; Gagliarducci & Nannicini, 2013; and Pique, 2019). Others investigate the role of natural resource revenues and institutional rules on the selection of candidates (Brollo et al., 2013, and Beath et al., 2016). Similar to these papers, we use detailed data on candidates to analyze the effects of a treatment that affects the expected value of office. Our results complement those from Dal Bó and Rossi (2011), who show the effects of different lengths in office on the performance of legislators in Argentina, holding selection constant. We add to this literature by documenting that institutions intended to increase citizen control of politicians can have negative consequences when they are likely to be captured by specific interest groups.

II. Institutional Background

A. Local Governments in Peru

Municipalities (also referred to as districts) are the lowest administrative level in Peru. The highly decentralized structure of the country gives significant decision power to municipal governments, which execute a large share of the national budget and are in charge of basic public goods provision—street pavement, local security, trash collection, and street cleaning, among others. Municipal budgets account for more than 20% of the national budget and around 45% of the country's total public investment (Pique, 2019).

During our study period, municipal mayors and their councilors were elected for four-year terms with the option of reelection (which was banned in 2015). The mayor is elected by simple majority, and the party that gets the largest share of votes automatically earns the majority in the council, with

the rest of the seats being assigned to other political parties, proportional to their vote shares. Local-level politics are fragmented. A significant number of candidates run for independent parties, which have few links outside the municipality and are often seen as election vehicles centered around the candidate rather than a political program or ideology (see Bland & Chirinos, 2014). For example, in the 2014 municipal election, the average municipality had 7.26 candidates running for office, and only 36.9% of them represented a national political party.

B. Recall Elections

Peruvian citizens have the right to recall any local elected official (mayors, councilors, and regional presidents but not MPs or the president). The introduction of this direct democracy mechanism in 1993 followed a set of similar reforms in other Andean countries (Colombia, Ecuador, and Bolivia) and emulated already existing ones elsewhere in the world (e.g., the United States, Poland, and Uganda). The main objective of this institution is to hold politicians accountable outside regular election times.

A recall referendum can be called in the second or third year of the mayor's term. To initiate a recall procedure, the promoter has to (a) buy a: "recall kit, which includes the official forms to collect signatures from supporters; (b) name the authorities subject to recall and provide a reason for recalling them; and (c) collect valid signatures of 25% of eligible voters in the constituency. Figure A.1 shows the timing of elections and the steps required to call a recall referendum. Once these requirements are fulfilled, the national electoral commission (JNE) calls the referendum. Voters are able to vote for the recall of each authority under scrutiny. An incumbent is recalled if turnout is at least 50%, and at least 50% plus 1 of the valid votes are cast in favor of the recall. Recall referenda are common in Peruvian politics. Between 1997 and 2013, there were more than 20,000 recall attempts (kits purchased), and more than 5,000 officials faced a recall referendum in 45% of all municipalities in the country (747 out of 1,645).³

When a mayor is recalled, the first councilor from the list takes office until the next regular election cycle. If the mayor and at least a third of the council are recalled, there are new elections, and the elected mayor serves in office until the end of the original term. Over our sample period, these new elections in the middle of the term take place in less than 18% of cases.

³While Peru is the country where recall referenda are used most often (followed by the United States and Poland), there is an increasing use of this institution around the world. Welp (2015) reports that "recall referendums have become one of the most intensively used mechanisms of citizen participation in South America, particularly in the Andean countries. To give just a few examples, between 2008 and 2010 more than 700 recall attempts were registered in Ecuador of which more than 100 resulted in a referendum. Hundreds of attempts have been registered in Bolivia since 2012 and Colombia has seen a large number of recall attempts since its legal introduction in 1991, including a process against the Mayor of Bogotá, Gustavo Petro, in 2012."

²Some notable recent exceptions are Alt, Bueno de Mesquita, and Rose (2011), Fisman, Schulz, and Vig (2017), Cavalcanti, Daniele, and Galletta (2018), Drago, Nannicini, and Sobbrío (2014), and Gamalerio (2019).

C. Recall Elections and Political Capture

Recall elections are direct democracy mechanisms intended to increase accountability; however they are often used as political tools. Given the large number of candidates running for office and the absence of runoff elections, it is not uncommon that mayors are elected with a very low percentage of votes. For example, in the 2014 election, the average mayor was elected with 35.1% of the votes, and in municipalities with above-median political competition (as measured by the number of candidates), this number drops to 29.4%. It is therefore not hard for losing candidates to put together a coalition with enough support to promote a recall referendum (Bland & Chirinos, 2014). The JNE shows that in the 2012 recall cycle, 22% of the promoters of a recall referendum were candidates who lost in the preceding election. If one considers that many times, politicians have political operators representing them as the official person promoting the recall, we should expect the true number to be even larger. These statistics, on top of the fact that the number of recall referenda has varied widely across years, add to the uncertainty any candidate has about the probability of being ousted from office through a recall referendum due to political grievances (i.e., independent of their performance in office). The political use of impeachment and recall procedures and their failure to achieve effective accountability are not unique to Peruvian politics. A number of examples of high-profile recalls have been linked to elite power grabs.⁴

Two papers provide detailed accounts of how Peruvian recall elections are often used as a tool to pursue political goals. Holland and Incio (2019) quantitatively analyze the determinants of recall elections. Using data for the same period as our study, they find that “losing politicians organize recall referenda, but office performance matters when citizens vote to retain their politicians.” As evidence of the political use of recalls, they document that (a) 18% of the recall requests are filed by former political competitors, (b) the most common reasons given for these recall requests are unverifiable claims (e.g., failure to fulfill electoral promises, incompetence, poor management), and (c) more than 50% of recall petitions are filed as soon as legally possible, providing little time to evaluate the incumbent’s performance. Welp (2015) argues that the combination of low institutionalization of political parties and the relative ease with which recall referenda are activated generate incentives for political opposers to use these mechanisms to undermine the incumbent.

It is important to highlight that after almost twenty years that recall elections had been in place and hundreds of politicians had faced recall referenda, policymakers and experts in the area in Lima were not aware of the prevalence of the

political capture of recall elections.⁵ This is mostly due to the fact that most of these recall referenda take place in small municipalities and national media rarely covers these processes. The JNE documents that between 1997 and 2012, 1,015 municipalities held a recall referendum and 91.7% of them had fewer than 5,000 registered voters (Welp, 2015). If policymakers and experts were not aware of these details of the effective implementation of the recall elections, it is safe to assume that potential candidates are also uninformed about the prevalence of political capture.

In table A.1, we provide quantitative evidence supporting the claims we have presented and regress the presence of a recall referendum on different covariates that presumably predict recall elections: the observable characteristics of the mayor and variables describing the political scenario of the previous election (turnout, number of candidates, and win margin). After including in the regression municipality and election fixed effects, the variables that have more predictive power are those related to the level of political competition. Importantly, none of the mayor’s characteristics have economically or statistically significant effects on the probability of a recall election taking place. This is consistent with the claim that the recall referenda are used as a political tool rather than as a citizen control mechanism.⁶

Presumably, the political objective of a recall referendum is to weaken the incumbent for a future election. In municipalities where a recall petition was initiated through a signature collection, the incumbent runs for reelection in 79.7% of cases (compared to 68%, where there was no signature collection at all). Incumbents who faced a referendum and survived it ran for reelection 72% of the time, and 18% of them won reelection. In contrast, 48% of incumbents who were recalled do run for reelection, but only 4.8% of them win these elections (see table A.3).

III. Conceptual Framework and Empirical Strategy

A. Conceptual Framework

In this section, we outline a simple framework to help conceptualize the expected effects of a politically captured accountability institution on political selection and guide the

⁵This is evidenced by the fact that only in 2012, after a politically motivated recall attempt against the mayor of Lima (Miró-Quesada Rada, 2013, and Vásquez Oruna, 2014), a change in the regulation was introduced to reduce the benefits for political opposers from having a mayor recalled. This new regulation allowed every elected mayor to handpick her successor in case of a recall, therefore blocking political opponents from gaining access to the municipal seat. The effect of this change was that in the 2014–2018 electoral period, only 29 municipalities in the entire country had a recall election.

⁶In a similar analysis, we consider the correlates of recall attempts (i.e., buying a “kit”). The results also point in the same direction. Municipalities with a lower win margin have a higher probability of having someone attempting to recall the incumbent. On top of this, we see that some individual characteristics that are unlikely to be related to performance in office, for example, being a woman, the number of years in elected office or party affiliation, are also significantly associated with the probability of a recall attempt. These results are shown in table A.2.

⁴Altman (2010) (as cited in Holland & Incio, 2019), in a global study of direct democracy mechanisms, describes recalls as “motivated by political reasons” (p. 16). For additional references, see McCoy (2006); Helmke (2017); Pérez-Linan (2007); Breuer (2007); Welp and Milanese (2018); and Miró-Quesada Rada (2013).

empirical analysis. In our framework, three dimensions characterize politicians: ability, office motivation, and corruption. High-ability politicians are also more productive in the private sector, and their opportunity cost of entering politics is higher (Besley, 2005). Politicians derive utility from delivering public goods, and their level of utility increases with coethnicity. This is consistent with empirical evidence on policies targeted toward the politician's identity group, both for welfare transfers and public goods (see, e.g., Pande, 2003, and Burgess et al., 2015). Finally, corrupt politicians are motivated by extracting rents from office (Ferraz & Finan, 2011a). The introduction of a well-functioning control and accountability mechanism increases the cost of rent extraction and inefficient policymaking, deterring corrupt and low-quality candidates from entering the political arena (Persson & Tabellini, 2000).

How does the political capture of an accountability institution (recall elections) affect the decision to run for office? When a politician learns about the political capture of an accountability institution, there is a reduction in her expected term length, and this reduction is unrelated to her potential performance in office. This in turn leads to a decline in the direct benefits from office in the form of wages earned or ego rents, for example. The first implication derived from this simple framework is that at the margin, potential politicians with a higher opportunity cost are more likely to be deterred from running for office when they learn about the political use of recall elections. Conversely, we would see low-ability politicians entering the race. One proxy for the opportunity cost is the candidate's level of education.

A shorter term in office implies that the opportunities to take on public works and deliver public goods are reduced. On top of this, a recall referendum implies that the incumbent has to spend time campaigning, displacing time otherwise devoted to policymaking. The second implication of the framework is that upon learning about the political use of recall elections, policy-motivated politicians would be less likely to run for office. Moreover, if we consider that the utility politicians derive from public good delivery is increasing in the level of coethnicity of the recipients, we should expect that more representative politicians (i.e., indigenous politicians in localities with a high proportion of Quechua or Aymara speakers) to be less likely to run. Finally, the prediction in terms of the selection of corrupt politicians is ambiguous, since a shorter term implies fewer opportunities for rent extraction, but also the recall itself lowers reelection incentives, lowering the cost of engaging in corruption. In the next sections, we test the first two predictions; unfortunately, data availability constraints prevent us from testing the last one.

B. Empirical Strategy

In the ideal experiment to test the predictions of our framework, we would randomly allocate information about the political capture of an existing institution that allows voters to

hold elected officials accountable. Obviously, random variation of this sort is nearly impossible to find (or generate), since we would need to know ex-ante the set of municipalities where the institution has actually been captured and provide evidence on this. Instead, we rely on the observation that the political use of the accountability institution is not likely to be public knowledge and exploit quasi-random variation in events that are likely to reveal information about political capture.

In a sample of municipalities where the accountability institution is active (i.e. where a recall election took place in the previous period), we compare the characteristics of candidates running for office in municipalities where the mayor barely survived a recall with those running in a municipality where the mayor was ousted from office by a small margin. The underlying assumption is that the fact that a mayor is recalled is a salient event that reveals information about the political use of the recall election. In additional tests, we provide evidence consistent with the information acquisition story.⁷

Following the description of the ideal experiment, our identification strategy uses a sharp regression discontinuity design (Lee & Lemieux, 2010; Imbens & Lemieux, 2008), which relies on the assumption that municipalities in which the mayor was barely ousted are similar in observable and unobservable characteristics to those in which the mayor barely managed to stay in office. Our main regression equation is as follows:

$$Y_{ijt} = \alpha + \beta \text{Recalled}_{jt-1} + \gamma f(\text{VoteShare}_{jt-1}) + \varepsilon_{ijt}, \quad (1)$$

where, Y_{ijt} are characteristics of candidate i running for office in municipality j in election t . In our main regressions, these characteristics include educational level, years of experience in private and public office, demographic characteristics, and whether the candidate is of an indigenous group and if she is representative. Our main interest lies in β , the coefficient associated with having a mayor recalled in electoral term $t - 1$. The running variable is the share of votes in favor of the recall, and thus we include in all of our regressions a flexible polynomial of this variable $f(\text{VoteShare}_{jt-1})$. Our preferred specification uses a local linear regression with triangle kernel weights (we also show the results for other specifications for robustness). ε_{ijt} is the error term, which we cluster at the level of the treatment, municipality $\times$ election level.

⁷The revelation of information about the political use of recall elections can take place at two stages: when the referendum occurs and when the mayor is recalled. We indeed see these two steps as a continuous signal revelation process in which potential candidates learn something about the motives for the recall at both stages. However, we view the actual recall of a mayor as a more salient event that highlights the potential consequences of the recall and in which the performance of the incumbent is observed and the motives of the proponents of the recall are evident. Additionally, note that a comparison between municipalities where there was a recall referendum with those where the referenda did not take place would confound the effects of the referenda and (limited information of) political capture. Instead, the comparison we make isolates the effect of the information on political capture. Given that some information is revealed when the recall election is initiated, our estimates should be considered as a lower bound for the real effect of a captured political institution on the selection of candidates.

Given that we are comparing candidates in elections where a recall election was barely won or lost and consistent with the ideal experiment to test our predictions, our analysis sample is restricted to municipality $\times$ election observations in which a recall election was held. In addition, we restrict the sample to municipality $\times$ elections where the vote share in favor of the recall is close enough to the threshold, $VoteShare_{jt-1} \in [0.5 - \epsilon, 0.5 + \epsilon]$, where ϵ is determined with optimal bandwidth selection procedure based on Imbens and Kalyanaraman (2012). We also present robustness checks with alternative bandwidths.

To provide evidence that the reduced-form effects are consistent with our main hypotheses, namely, that a successful recall of a mayor informs potential candidates about the political capture of the accountability institutions, we use different strategies. First, we explore the heterogeneity of the results by variables that indicate that the recall was initiated for political purposes and not related to the mayor's performance in office. For example, we identify recall elections that were initiated by someone who was a candidate in the previous election (following Welp, 2015, and Holland & Incio, 2019) and use proxies of the mayor's performance (measured by the municipality's revenues and spending during her tenure). Second, potential candidates are likely to learn about the political use of recall elections not only through electoral results in their own municipality, but also from those that are close by. We test this by looking at the selection of candidates in municipalities that did not have a recall election, but had one occurring in a neighboring municipality (within two hours of travel time) and do a similar exercise as above.

IV. Data

A. Data Sources

Our main outcome variables are compiled from www.infogob.com.pe, a government website that publishes all candidates' curriculum vitae (*Hoja de vida*). An example of the CVs posted online can be found in figures A.3 to A.5. We scraped the website to assemble a novel and comprehensive dataset with the characteristics and background of candidates who ran for mayor in the 2002, 2006, 2010, and 2014 elections.

Despite the differences in the format and level of detail provided in the original datasets for different years, we compute a series of consistent variables related to the candidates' schooling: (a) ever attended university, (b) attended only up to technical education, (c) attended up to secondary school, and (d) attended up to primary school. From these variables, together with information on whether each level of schooling was completed, plus the number of years of schooling at the postsecondary level, we impute the number of years of education. The dataset also includes information on the candidates' work and political experience, as well as political party service, from where we compute the number of years of experience in (a) elected public office (mayor, councilor, or regional counselor), (b) the position of mayor, (c) service

in the party office, and (d) whether a candidate is a member of a national political party, (e) has work experience in the public sector, or (f) has work experience in the private sector. Finally, we obtained information on the candidates' demographic characteristics (e.g., gender and age). While the CVs online have fields for previous convictions or open trails, and wealth, these are seldomly filled, and therefore we can't use them for our analysis.

While candidates are not legally mandated to submit their CVs to the national electoral office, conditional on reporting it, the information has to be truthful or they could face legal charges and even exclusion from the race. Overall, we have information on educational attainment for 94.7% of candidates running in the 2014 election and 93.9%, 84.8%, and 84.1% for those in contention for the mayor's seat for 2010, 2006, and 2002, respectively.⁸

To construct a measure of the ethnic background of candidates and the degree to which they are representative of the local population, we first do a text analysis of all candidates' surnames and classify them as indigenous (Quechua or Aymara) or other (Spanish or foreign). To do this, we use different dictionaries and we include the main Hispanic surnames used in Latin America and the United States. We identify Quechua and Aymara surnames by matching the linguistic roots of all surnames with the most established dictionaries containing native roots. This classification is based on the procedure and data in Artiles (2020). Details on dictionary construction and sources are in appendix A. Once the origins of all candidates' surnames have been identified, we classify them as indigenous if they have at least one or two Quechua or Aymara surnames. To measure how representative candidates are of the local population, we use the 2007 census to compute the percentage of the municipality's population that has an indigenous language as their mother tongue and define a candidate as representative if she has some indigenous surname and at least 25%, 50%, or 75% of the municipality's population speaks an indigenous language.

Finally, we obtained from the national electoral office (ONPE) information on all relevant political outcomes at the municipality level, namely, the list of candidates running for each election, their party affiliations, and vote shares. These data allowed us to compute the win margin of the elected mayor. They also gave us access to data on the number of kits bought to attempt a recall, the names of the authorities they attempt to recall, the name and ID number of the person who filed the recall petition, and whether a recall referendum took place in a municipality (and its date) and its outcome. Data on the percent of budget executed, revenues, and expenditures of the municipality were obtained from the Ministry of Economy and Finance (MEF).

⁸While the website does not provide a direct link to the CVs of candidates running for the 2002 elections, we do have the list of their ID numbers. The information for the 2002 candidates is taken from the CVs reported in subsequent elections. Our main analysis is centered on the characteristics of candidates running in the 2006, 2010, and 2014 elections, and we use the information from 2002 for robustness and validity checks.

B. Descriptive Statistics

Recall referenda are fairly common in Peru. Figure A.2 shows the incidence of recall referenda over the previous three electoral periods. Recalls have been attempted (i.e., “kits” purchased) in 35% to more than 60% of municipalities, with a clear upward trend in time. These attempts have been successful in about 35% of cases in each period, meaning that between 10% and 20% of municipalities in the country had a recall referendum, leading to between 2% to 6% of municipalities having a recalled mayor. Our main analysis sample is drawn from the subset of municipalities $\times$ elections in which a recall referendum was held. Overall, the statistics from figure A.2 reinforce the fact that there is wide time variation in the incidence of recall referenda and that the probability of being recalled is quite uncertain.

Table A.4 provides the basic descriptive statistics of our data for the full sample and the restricted sample of municipalities $\times$ elections in which the vote share in favor of recalling the mayor was around the 50% threshold. To select this sample, we use the optimal bandwidth selection criteria in Imbens and Kalyanaraman (2012). Candidates running for mayor in Peruvian municipalities have a relatively high level of education: 39% of candidates in our RD sample attended university, and they have on average fourteen years of education. Similarly, around 7% of candidates during the analysis period have primary education or less, while around 34% have attended only secondary school. Candidates that ended up elected as mayors have on average extremely similar educational levels. In terms of their previous experience, elected mayors are also similar to the ones facing a recall election. They have on average 1.9 years of experience in elected office, of which about 70% comes from their experience as mayors in the past. A relatively low number of candidates (slightly less than 40%) belong to a political party that nationally competes in elections. The fact that the majority of candidates run for a regional or local party or movement illustrates the fragmentation of the political and party system in Peru at the municipal level.

Mayor elections are strongly contested, with on average more than seven candidates running for office. We compute a measure of political competition as the effective number of candidates. For this, we take the inverse of the sum of squared vote shares of each running candidate within an electoral race. If all candidates have the same vote share, then this measure is equal to the actual number of candidates. If one candidate wins all votes, the effective number of candidates is one. The average effective number of candidates (below five) is smaller than the actual number of candidates. In conjunction with the other electoral measures and the high level of voter mobilization (85%), this demonstrates that elections for mayor are in many instances extremely competitive.

Overall, the average municipality in the country has around 29% of people who speak a native language as their mother tongue. A comparison between the average share of indigenous people, as measured by the share of population with a

native mother tongue (29%) and the average share of elected mayors who are classified as having an indigenous background according to their two surnames (only 8%) speaks about the political underrepresentation of this historically disadvantaged group.

V. Results: Accountability and Candidate Selection

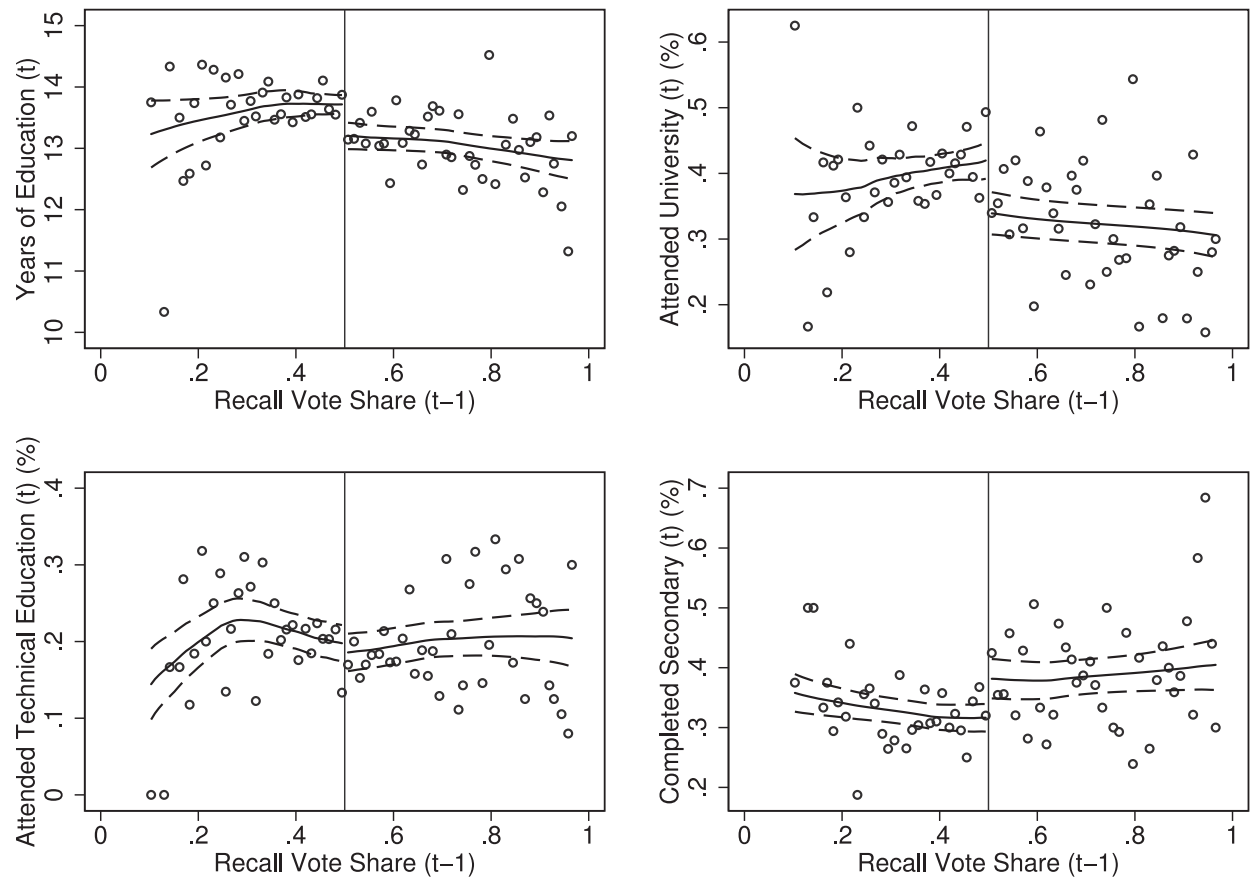
A. Candidate Education, Experience, and Representativeness

Figure 1 shows our main results using nonparametric plots with breaks at the 50% vote share. Candidates who run in elections in municipalities where a mayor was recalled in the previous electoral period have fewer years of education, are less likely to have attended university, and are more likely to have attended only up to secondary education. In table 1, we formally test for the magnitude and significance of the observed effects from figure 1, showing the results of regression equation (1). Panel A shows our preferred specification, where we run the regression discontinuity using a local linear regression for the running variable and triangle kernel weights. All results are shown restricting the sample to an optimal bandwidth, but they are not sensitive to the choice of bandwidth in each regression.⁹ Candidates running in municipalities with a higher salience of the recall institution have 0.5 fewer years of education and are 22% less likely to have attended university. The proportion of candidates with just a technical education is unchanged, but there is a sharp increase of 23% in the proportion of candidates who attended only secondary education. Panels B and C of table 1 show a specification check in which we use a linear or quadratic polynomial, and the results remain unchanged. Generally, the qualitative and quantitative results are not sensitive to the choice of bandwidth or polynomial specification (see tables A.6, A.7, and A.8).

While there seems to be a robust relationship between the leader's educational level and economic performance, a leader's quality is a multidimensional concept. Our data allow us to look at other characteristics that are also presumably related to the mayor's performance in office. Using our preferred specification, the results in the first two panels of table 2 show the selection effects for the candidates'

⁹Table A.5 shows the results of a naive OLS regression on the sample of municipalities $\times$ elections where a recall referendum took place (panel A). The results are of a similar magnitude as the ones in our RD approach (if anything, slightly larger). We also run a similar regression to analyze the correlation between having a recall election and the educational level of candidates running in the following election. These results are shown in panel B of A.5. Consistent with the idea that the different steps of the recall process are a continuous signal revelation process, we see that places where a recall election took place have candidates with lower levels of education in the next election. Using an alternative identification strategy exploiting the discontinuity provided by the number of signatures needed to hold a recall referendum, we find effects similar to those in the OLS regression. However, this identification is weaker than the one shown for the main results of this paper since opposers could submit signatures to the electoral office multiple times, thus generating a larger mass of observations on one side of the discontinuity and raising concerns about selection into the treatment. These results are available upon request.

FIGURE 1.—NONPARAMETRIC RD PLOT: CANDIDATE’S EDUCATION



The figures show the results from kernel-weighted local polynomial smoothing plots with Epanechnikov kernels and the 95% confidence intervals for our main outcome variables.

TABLE 1.—ACCOUNTABILITY AND CANDIDATES’ EDUCATION

	Dependent Variable			
	Years Education	University	Technical	Secondary
Panel A: Local Linear Regression				
Recalled Incumbent in $t - 1$	-0.5241* (0.2964)	-0.0849** (0.0410)	-0.0006 (0.0356)	0.0795* (0.0479)
Triangle Kernel	Yes	Yes	Yes	Yes
Observations	3,390	3,698	2,962	3,394
Mean Dep.	13.511	0.388	0.191	0.342
Panel B: Linear Polynomial Regression				
Recalled Incumbent in $t - 1$	-0.5398** (0.2655)	-0.0744** (0.0363)	-0.0198 (0.0296)	0.0788* (0.0405)
Linear Polynomial	Yes	Yes	Yes	Yes
Observations	3,390	3,698	2,962	3,394
Mean Dep.	13.511	0.388	0.191	0.342
Panel C: Quadratic Polynomial Regression				
Recalled Incumbent in $t - 1$	-0.5183* (0.2679)	-0.0652* (0.0365)	-0.0222 (0.0300)	0.0882** (0.0417)
Quadratic Polynomial	Yes	Yes	Yes	Yes
Observations	3,390	3,698	2,962	3,394
Number Municipality $\times$ Election	611	679	538	612
Mean Dep.	13.511	0.388	0.191	0.342

Regression equations follow equation (1) in the paper. In each regression, the sample considered is based on the optimal bandwidth, following Imbens and Kalyanaraman (2012). * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$. Clustered standard errors at the municipality $\times$ election level.

experience before deciding to stand for office and their demographic characteristics. Candidates who decide to stand for election in municipalities where a referendum recalled the incumbent in the previous period have fewer years of experience in elected office (not significant); in particular, they have 0.4 fewer years serving as a district mayor. There is also suggestive evidence that they are less likely to have experience holding an office in a political party (0.2 years fewer, not statistically significant). Importantly, having a recalled mayor in the past does not have differential effects on the proportion of candidates affiliated with national political parties. We also find that candidates in the treatment group are 11 percentage points less likely to have any experience working in the public sector (from a base of 55%), and they are a year and a half younger (not significant).

Office-motivated politicians derive utility from the delivery of public services and the level of utility derived is higher when the public goods are provided to coethnics. Unfortunately, we do not have a good measure of public service motivation in our data. However, we can study whether having a mayor recalled in the previous period affects the proportion of candidates coming from historically disadvantaged ethnic groups (Quechua and Aymara) and if the effects are more or less important in municipalities where they are more

TABLE 2.—ACCOUNTABILITY, CANDIDATE CHARACTERISTICS, AND REPRESENTATION

	Dependent Variable				
	Panel A:				
	Num. years elected office	Num. years as mayor	Num. years party experience	National Party Affiliation	
Recalled Incumbent in $t - 1$	−0.3035 (0.3362)	−0.3711** (0.1859)	−0.2260 (0.2308)	0.0212 (0.0492)	
Triangle Kernel	Yes	Yes	Yes	Yes	
Observations	2,502	3,849	2,902	3,047	
Number	430	666	500	514	
Municipality $\times$ Election					
Mean Dep.	1.329	0.897	0.618	0.394	
	Panel B:				
	Public Sector Experience	Private Sector Experience	Age	Female	
Recalled Incumbent in $t - 1$	−0.1133** (0.0522)	−0.0389 (0.0551)	−1.5026 (0.9998)	0.0134 (0.0178)	
Triangle Kernel	Yes	Yes	Yes	Yes	
Observations	2,093	2,703	3,058	4,865	
Number	347	453	515	842	
Municipality $\times$ Election					
Mean Dep.	0.566	0.427	45.984	0.075	
	Panel C:				
	At least one native surname	Two native surnames	Representative (25 percent)	Representative (50 percent)	Representative (75 percent)
Recalled Incumbent in $t - 1$	−0.0178 (0.0709)	−0.0231 (0.0283)	−0.0431 (0.0639)	−0.0605 (0.0693)	−0.1143** (0.0450)
Triangle Kernel	Yes	Yes	Yes	Yes	Yes
Observations	2,028	2,478	2,478	1,892	2,466
Number	341	425	425	316	422
Municipality $\times$ Election					
Mean Dep.	0.331	0.062	0.151	0.132	0.078

Regression equations follow equation (1) in the paper. In each regression, the sample considered is based on the optimal bandwidth, following Imbens and Kalyanaraman (2012). * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$. Clustered standard errors at the municipality $\times$ election level.

representative—namely, those with a larger share of the population of the same ethnic background. To do this, we create a new measure of the politician's ethnicity based on her surnames and exploit information from the census on the percentage of people who speak Quechua or Aymara as their mother tongue. Columns 1 and 2 in panel C of table 2 show that having a mayor recalled in the previous electoral cycle does not affect the number of candidates with at least one or two indigenous surnames, respectively. We define an indigenous candidate (someone with at least one indigenous surname) as being representative if she is running for mayor in a municipality where more than 25%, 50%, or 75% of the population have the Quechua and/or Aymara languages as mother tongue (columns 3–5, respectively). In municipalities with a large proportion of Quechua and/or Aymara population (over 75%), having a mayor recalled in the past does have a large effect on the proportion of indigenous candidates who decide to run for office.

Overall, the results indicate that candidates who decide to run in elections after a mayor was recalled are not only less educated; they also seem to be new entrants to politics and to the public sector in general: they have less experience in elected office and work in the public sector and are younger.

Additionally, they are less representative of the indigenous population.

More educated leaders have been shown to cause better public good provision and economic growth (Martinez-Bravo, 2017; Besley et al., 2005, 2011). However, the relationship between the other observed characteristics of politicians and their performance in office is less clear. We use data on municipal finances for the period of analysis to evaluate at the correlational level how candidate characteristics are associated with relevant policy outcomes. Table A.9 shows the result of OLS regressions with municipality and electoral period fixed effects in which we include variables related to the mayor's education and experience. The dependent variables are the log of expenditures and revenues over the past three years of the mayor's term. Mayors with higher levels of education (measured in years or as level dummies) on average show higher levels of expenditures and revenues during their tenure. Similarly, more years of experience serving in a political party and experience working in the public sector are associated with more revenue and spending, while younger politicians tend to spend and collect less money. While correlational, this evidence suggests that the characteristics that we find to be relevant in our selection analysis are associated

with important policy outcomes at the municipality level, and therefore they support the idea that generally the quality of candidates falls in municipalities where the previous mayor was recalled by a small margin.

B. Identification Assumptions

The identification assumption in our empirical design is that observations at both sides of the threshold are comparable along observable and unobservable characteristics. Figures A.6 through A.10 show the continuity tests for different municipality $\times$ election observable characteristics. We focus on variables related to (a) the educational level (figure A.6) and (b) previous experience and characteristics of the incumbent during the period when the recall referendum took place (figure A.7), (c) variables related to the political process in the previous electoral period (figure A.8), and (d) educational level and the characteristics of the runner-up in the previous electoral period (figures A.9 and A.10, respectively). There are no significant jumps along the threshold in most of the variables of interest. We formally test the continuity assumption in a regression framework in table A.10.

A second important assumption of a regression discontinuity design is that there is no sorting into the treatment. One indication that units could be sorting into the treatment is that the density of observations is discontinuous at the threshold (McCrary, 2008). Figure A.11 shows a graphical depiction of the McCrary (2008) test, and, as expected, the density of observations is continuous around the 50% vote share threshold. This ensures that selection into treatment is not a concern.

Overall, the robustness and specification checks implemented provide assurance that our results are not driven by selection and that there is a causal relationship between having a recalled mayor in the municipality in the previous electoral period and the quality of the candidates who decide to run for office.

VI. What Drives the Negative Selection of Candidates?

How could it be that an institution that increases voters' ability to hold politicians accountable while in office generates a negative selection of candidates? We argue that having a mayor recalled in a certain municipality updates potential candidates' priors about the probability that they are recalled from office for political reasons, and unrelated to their performance (a similar mechanism as in Avis et al., 2018). An increase in the perceived probability of being recalled decreases the expected value of office and therefore affects the selection of candidates.¹⁰

¹⁰ An alternative interpretation with similar reduced-form predictions is that the salience of the accountability institution and, more specifically, politically motivated recalls, raise the perceived probability of being removed from office. This is consistent with evidence showing that people overestimate the probability of an event right after it has occurred (e.g., sales of flood insurance increase after a hurricane, or the number of beachgoers drops after a shark attack at that beach).

While there could be other mechanisms at play in this selection process, in this section we provide evidence that the incentives given by the expected rents from office for potential candidates are the main drivers of the reduced-form effects. We first test whether our main effects are driven by politically motivated recall referenda. Testing for a hypothesis involving the *intentions* of the recall promoters is inherently difficult; therefore, we proxy for this using data on whether the recall petition was initiated by someone who was a political contender in the previous electoral period (as argued in Welp, 2015, and Holland & Incio, 2019). In panel A of table 3, we show the results of our baseline regression, interacting the main treatment variable with a dummy for whether the recall petition was initiated by a former political contender. A large share of the main effect of the presence of a recalled mayor on the educational level of the candidates running in the next election is driven precisely by elections where the recall was promoted by a political opponent.

Our hypothesis implies that the negative selection should be driven by elections where the potential candidates perceive that they could be recalled from office regardless of their performance. In panel B of table 3, we directly test this implication by interacting our main treatment variable with a proxy for the performance in office of the incumbent subject to a recall: the percentage of the budget executed. The negative selection of candidates is unrelated to the performance of the incumbent in office, since the coefficient of the interaction is small in magnitude and statistically insignificant. Table A.11 shows a similar result for other measures of the incumbent's performance.¹¹

An important assumption in our analysis is that the reason that the observed candidate selection pattern arises after observing a mayor being recalled is that potential candidates learn that the accountability institution is used for political purposes, updating their beliefs about their own expected term length. To indirectly test this, we analyze other events in which this information can be transmitted. When a neighboring municipality holds a recall election and the mayor is ousted, the information travels, and potential candidates in other municipalities learn about political capture. We define neighboring municipalities as those that share a border and for which the travel time by car between the two municipal capitals is less than two hours (the results are robust to using other definitions, e.g., one hour). We collect the travel time information using Google Maps Services.¹²

¹¹ While imperfect, the percentage of the budget executed is commonly used in the popular press as an indicator of performance. Budget execution is typically low, and it is not rare to see that a local government manages to spend only half of its budget by the end of the fiscal year. For some examples of press reports highlighting this issue and explicitly taking the percent of the budget execution as a proxy for performance, see <https://elcomercio.pe/lima/invirtio-obras-distrito-contamos-155429> or <http://larepublica.pe/sociedad/1155111-regiones-y-municipios-no-pudieron-gastar-todo-su-presupuesto-este-ano>.

¹² Note that the definition of neighboring municipalities is time invariant. Information on travel time using the Google Maps Distance Matrix API was accessed in May 2019.

TABLE 3.—MECHANISMS

	Dependent Variable			
	Years Education	University	Technical	Secondary
Panel A: Political Opponents				
Recalled Incumbent in $t - 1$	-0.2346 (0.2526)	-0.0360 (0.0347)	-0.0163 (0.0312)	0.0473 (0.0423)
Recalled in $t - 1 \times$ Political Opp. in $t - 1$	-0.5696* (0.3088)	-0.0793* (0.0436)	-0.0229 (0.0349)	0.0704 (0.0449)
Linear Polynomial	Yes	Yes	Yes	Yes
Observations	3,385	3,693	2,957	3,389
Number Municipality $\times$ Election	610	678	537	611
Mean Dep.	13,516	388	191	341
Panel B: Performance prior Recall				
Recalled Incumbent in $t - 1$	-0.5860** (0.2748)	-0.0875** (0.0379)	-0.0339 (0.0305)	0.0942** (0.0458)
Recalled in $t - 1 \times$ % Budget Executed	0.1343 (0.1337)	0.0276 (0.0250)	-0.0203 (0.0161)	-0.0068 (0.0268)
Linear Polynomial	Yes	Yes	Yes	Yes
Observations	2,565	2,791	2,237	2,565
Number Municipality $\times$ Election	384	422	336	384
Mean Dep.	13.439	0.381	0.180	0.355
Panel C: Recalled Neighbors				
Recalled Neighbor Incumbent in $t - 1$	-0.9264*** (0.2541)	-0.1327*** (0.0400)	-0.0015 (0.0180)	0.1301*** (0.0333)
Triangle Kernel	Yes	Yes	Yes	Yes
Observations	6,225	5,902	10,003	5,591
Number Municipality $\times$ Election	1,018	958	1,704	895
Mean Dep.	14.289	0.498	0.185	0.270
Panel D: Opportunity Costs				
Dependent Variable: Predicted Wage				
Recalled Incumbent in $t - 1$	-139.0638*** (52.2649)	-137.8319** (58.7260)		
Linear Polynomial	Yes	No		
Local Linear Regression	No	Yes		
Observations	3,608	3,608		
Number Municipality $\times$ Election	661	661		
Mean Dep.	1,234.929	1,234.929		

Regression equations follow equation (1) in the paper. In each regression, the sample considered is based on the optimal bandwidth, following Imbens and Kalyanaraman (2012). The share of budget executed refers to the de-measured version of the variable. Opportunity costs are imputed based on Enaho survey data on income from individuals' primary job and observable characteristics from the candidates' CV: age, age-squared, gender, education, and a dummy for urban area. * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$. Clustered standard errors at the municipality $\times$ election level.

In panel C of table 3 we run our main RD regression, using a sample of municipalities $\times$ elections that did not have a recall process, but for which at least one of her neighbors had a close recall election, and compare the selection pattern that arises when the mayor of the neighboring municipality was barely recalled versus when she survived the referendum. The running variable in these RD regressions therefore corresponds to the vote share in favor of the recall in the neighboring municipality with the closest result. The results shows a robust negative effect of having a recalled mayor in a neighboring municipality on the level of education of the candidates who decide to run for office in the next election.¹³

¹³Table A.12 shows the results for alternative functional form specifications, obtaining similar results. The results also remain unchanged if we limit the sample to municipalities that only had one neighbor with a recall referendum, that is, excluding municipalities that received conflicting signals (more than one neighboring municipality with recall referendum in $t - 1$, resulting in one successful recall and one non-successful recall). See table A.13.

Moreover, the magnitude of these effects is even larger than the ones shown in table 1, which is consistent with the hypothesis that having a mayor recalled is a more salient event, yet the recall election in itself also reveals information about the motives for the recall. This evidence is hard to reconcile with alternative mechanisms unrelated to the information being revealed through the recall of a mayor.¹⁴

A final piece of evidence consistent with our main hypothesis is presented in panel D of table 3, where we check if it is indeed the case that potential candidates with high ability, and therefore high opportunity cost, are the ones who are self-selecting out of the electoral race. In the absence of data on the opportunity cost of the candidate, we assume that the wage that one would earn in the private sector represents this

¹⁴We can use this neighbor's specification to replicate all the main tables in the paper, obtaining very similar results and leaving all the qualitative conclusions of the study unchanged. These results are available upon request.

opportunity cost. We use information from the Peruvian Standards Measurement Survey (ENAH) to generate a predicted wage in the private sector for each candidate. To do this, we run a Mincer regression for people who report working in the private sector and use as regressors all the variables that are also available on the candidates' CVs (age, age squared, gender, rural/urban, and education dummies). Using the coefficients from this regression, we generate a predicted value of the opportunity cost for each candidate, which we use as the dependent variable in the regressions in panel D of table 3. The results using specifications with different functional forms show that candidates running for office in municipalities that had a mayor recalled in the previous term have a lower opportunity cost of around 11%.

A. *Alternative Mechanisms*

While many alternative mechanisms are consistent with our reduced-form results from section V, in this section we provide evidence rejecting some of these potential stories and in support of our main hypothesis.

A first concern with our results is that in municipalities that had a mayor recalled, the mayor's seat was taken by someone else, generating policy changes that could have affected the incentives for potential candidates to enter the race. However, this argument does not hold for municipalities that did not have a recall election, as those included in the results shown in panel C of table 3. Instead, in these municipalities, the only thing that changes between the treatment and control municipalities is the recall of the mayor of a neighboring municipality.

Second, in municipalities where there is a lower-quality mayor, the chances that voters oppose her in a referendum are higher, and thus opponents have larger incentives to campaign for a recall. This implies that municipalities with low-quality mayors are more likely to lose a recall election, introducing concerns about omitted variables and selection. However, as shown in figures A.6 and A.7, incumbents in municipalities at both sides of the threshold are similar in terms of their educational achievement, previous job experience, and demographics. In figure A.11, we showed that the density is continuous around the threshold; hence, candidates are not sorting differentially at the threshold. Further, in panel A of table A.14, we include in our preferred specification controls for the characteristics of incumbent mayors (educational level, experience, age, and gender), and our main results are not only qualitatively similar, but also the magnitude of the coefficients is very stable (though some coefficients are no longer significant).

Third, certain political scenarios might increase the chances of a successful recall and at the same time deter specific types of candidates to run for election. For example, when an election is more contested, the chances of a successful recall are higher and promoters will work harder to get the mayor recalled. Again, all available political controls are balanced across the threshold (figure A.8), and including

these variables in the main regression (panel B in table A.14) does not significantly affect our results.

Fourth, the presence of a strong incumbent who has high chances of being reelected might provide more incentives for proponents to campaign against the mayor and therefore weaken the incumbent's reelection prospects. If high-quality incumbents decide not to run for office because they have been recalled while other low-quality incumbents who barely survived a recall referendum are still up for reelection, we would have a lower quality pool of candidates in places where a mayor was recalled. Panel A of table A.15 excludes from the regression sample all incumbents (i.e., including those who survived the recall), and the results are robust to this exclusion. In a related argument, some people could be better at running campaigns to recall mayors. If politically motivated recalls are run by those who lost previous elections, we should expect that including these characteristics affects the main estimates. First, we observe that the characteristics of the runners-up are continuous across the threshold (figures A.9 and A.10), and including these characteristics in the main regressions keep the results unchanged (panel B in table A.15).

Finally, an alternative hypothesis explaining our results is that political competition determines the quality of candidates who run for office. Lower-quality politicians are deterred from running when an incumbent is in the race. Instead, when the incumbent loses the recall election, they face an open seat election and decide to run for office. Unfortunately, we are unable to test empirically this conjecture, since only 4.8% of recalled mayors run for office. However, it is unlikely that this hypothesis explains our results. Unlike in the United States, incumbents in Peru (and in many developing countries) do not seem to have an incumbency advantage (Uppal, 2009; Klačnjak & Titunik, 2017; Córdova & Incio, 2013). While between 60% and 80% of mayors run for reelection, a very low proportion of those (18% to 20%) get reelected.

B. *Candidate Entry or Exit?*

Candidates running in elections after a mayor was recalled in a referendum are, on average, less educated, have less experience in the public sector, and are less representative of the indigenous population, and the evidence presented at the start of section VI suggests that the effect runs through a reduction in the expected term length, which differentially affects the incentives to run for different types of politicians. One question that remains is whether it is indeed the case that high-quality candidates who would have otherwise run are not entering the race or that lower-quality candidates are the ones entering the political arena.

To look into this question, as well as how the political landscape is affected in municipalities that had a recall election in the previous period, in table 4 we analyze the effects of having a recalled mayor on turnout, the number of candidates,

TABLE 4.—ACCOUNTABILITY AND POLITICAL OUTCOMES

	Dependent Variable			
	Turnout	Candidates	Win Margin	Eff. Num. Candidates
Recalled Incumbent in $t - 1$	-0.7000 (1.0067)	0.0947 (0.3907)	-1.4477 (1.2230)	0.1431 (0.1839)
Triangle Kernel	Yes	Yes	Yes	Yes
Observations	527	748	476	833
Number Municipalities	425	563	390	608
Mean Dep.	86.040	6.820	8.784	4.447

Regression equations follow equation (1) in the paper. In each regression, the sample considered is based on the optimal bandwidth, following Imbens and Kalyanaraman (2012). * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$. Robust to heterogeneous and serially correlated standard errors.

win margin, and political competition. Voter participation in elections does not change significantly after a recall referendum. The results in columns 2 and 5 show that the number of candidates and effective candidates in these elections does not change significantly either, suggesting a reshuffling in the candidate pool: while high-ability candidates are being deterred from running, some low-ability ones are entering races that they would have otherwise not participated in. Consistent with the entry of low-ability candidates in the pool, we observe that the win margin does not change significantly, but the level of political competition remains unchanged. These results are consistent with the framework discussed above.

VII. Do Recalls Lead to Lower-Quality Mayors?

Does the lower average quality of the pool of candidates imply that the elected mayor will also be of lower quality? To explore this question, we run a similar analysis as before, comparing the characteristics of elected mayors in municipalities that had a mayor recalled or not in the previous term. The results of this analysis are reported in table 5. Due to the lower number of observations, we have lower statistical power. Overall, the point estimates in these regressions indicate that, if anything, the effects of having a recalled mayor in the past on the selection of candidates is significantly reduced when looking at the characteristics of elected mayors. For example, elected mayors have 0.15 fewer years of education and are 3 percentage points less likely to have attended university (not significant). In table A.16 we explore the effects on past political and job experience, as well as other characteristics. Overall, we do not see that having a mayor recalled in the past leads to elected mayors who have lower experience in public office. Despite the lower average quality of the pool of candidates, it seems that elections still serve as a mechanism to elect high-quality politicians.

Finally, in panel B of table 5, we study whether having a mayor recalled in the past causally affects relevant policy outcomes. In particular, we analyze the effects on total expenditures and revenues. Municipalities where the previous mayor was recalled have lower expenditures and revenues. However, the interpretation of these results is not obvious, since the reduced-form effects could reflect the causal effect

of having a (marginally) lower-quality mayor, less political competition, or a lower quality of the opposition.

VIII. Summary and Discussion

All democratic systems have mechanisms intended to allow citizens to hold politicians accountable for their actions in office. However, accountability institutions not only affect the behavior of politicians while in office, but also have an effect on potential politicians' decision of whether to run. Most of the empirical literature analyzing the effects of accountability institutions has focused on their disciplining effects. Unlike these studies, in this paper we analyze how accountability affects the selection of politicians (candidates) and highlight the pervasive effects generated by the capture of accountability institutions by political interest groups. We study the effects of recall referenda in Peru, a direct democracy mechanism that allows voters to recall elected mayors from office, and compare the characteristics of candidates who decide to run in municipalities that had a mayor recalled from office in the previous term with those who run in municipalities where the mayor was not recalled. The fact that a mayor was recalled in a referendum in a municipality updates potential candidates' information about the prevalence of politically motivated recalls and therefore increases the perceived probability that, if elected, one could be ousted from office independent of the performance.

Using a close election regression discontinuity design, our results show that candidates who run in municipalities that had a recall referendum in the last period are of lower quality, as measured by their educational attainment and previous experience. They are also less likely to have held elected office in the past and, in particular, to have served as mayor. These candidates also have a lower likelihood of having worked in the public sector. All in all, the results suggest that having a recalled mayor in the past lowers the quality of the candidate pool, while new entrants to politics are more likely to run. Additional results indicate that in municipalities that had a recalled mayor, candidates are less representative of the indigenous population.

We provide qualitative and quantitative evidence that recall elections are often used as a political tool, with candidates who lost the elections in the previous period being the promoters of the recall election. If this is the case, the probability of being ousted is independent of the elected mayor's performance, discouraging politicians who have a high opportunity cost or are motivated by a public good provision (and especially to their coethnics).

Finally, we analyze whether the availability of an average pool of candidates of poorer quality leads to the election of lower-quality mayors. Our results show that despite having a pool of candidates that is on average lower, elections are still doing their job, and voters select the best out of the available candidates; hence, mayors in municipalities where an incumbent was recalled in the previous period have levels of education and experience similar to those who run in

TABLE 5.—ACCOUNTABILITY, WINNERS' CHARACTERISTICS, AND POLICY OUTCOMES

	Panel A: Dependent Variable			
	Years Education	University	Technical	Secondary
Recalled Incumbent in $t - 1$	−0.1557 (0.4469)	−0.0301 (0.0861)	−0.0728 (0.0712)	0.1422 (0.0981)
Triangle Kernel	Yes	Yes	Yes	Yes
Observations	706	593	597	479
Number Municipalities	547	478	480	398
Mean Dep.	13.833	0.417	0.204	0.317

	Panel B: Dependent Variable	
	Ln(Expenditures)	Ln(Revenues)
Recalled Incumbent in $t - 1$	−0.4019** (0.1821)	−0.4902** (0.2062)
Triangle Kernel	Yes	Yes
Observations	491	421
Number Municipalities	402	356
Mean Dep.	15.964	16.259

Regression equations follow equation (1) in the paper. In each regression, the sample considered is based on the optimal bandwidth, following Imbens and Kalyanaraman (2012). In panel B, regressions include municipality and election fixed effects. In column 1, the dependent variable is the log of the budget executed during the last three years of the mayor's term. In column 2, the dependent variable is the log of the total revenues received during the last three years of the mayor's term. The information is provided by the Peruvian Ministry of Economy and Finance. $p < 0.1$, $**p < 0.05$, and $***p < 0.01$. Robust to heterogeneous and serially correlated standard errors.

municipalities where the mayor barely survived the recall referendum. However, policies are still affected, and in these municipalities, expenditures and revenues are lower.

Our results have far-reaching consequences for the design of citizen control mechanisms. While these institutions are supposed to increase the chances that voters exert control over public and elected office, and deter poor-quality and corrupt politicians from standing for office, when they are at risk of being captured, their initial objectives can be distorted, leading to a poorer quality of the government and public service provision. These institutions should incorporate safeguards to prevent capture. For example, as in the cases of presidential impeachment, promoters have to present plausible evidence of mismanagement or poor performance, which is evaluated before proceeding to the vote. These types of mechanisms could help avoid the political use of an otherwise well-intended mechanism of citizen control.

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