

# Saliency and Accountability: School Infrastructure and Last-Minute Electoral Punishment<sup>i</sup>

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## Abstract

Can seemingly unimportant factors influence voting decisions by making certain issues salient? We study this question in the context of Argentina 2015 presidential elections by examining how the quality of the infrastructure of the school where citizens were assigned to vote influenced their voting choice. Exploiting the quasi-random assignment of voters to ballot stations located in different public schools in the city of Buenos Aires, we find that individuals assigned to schools with poorer infrastructure were significantly less likely to vote for Mauricio Macri, the incumbent mayor then running for president. The effect is larger in low-income areas - where fewer people can afford private substitutes to public education - and in places where more households have children in school age. The effect is unlikely to be driven by information scarcity, since information on public school infrastructure was readily available to parents before elections. Rather, direct exposure to poor school infrastructure at the time of voting is likely to make public education - and the poor performance of the incumbent - more salient.

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# 1 Introduction

Being informed about government actions is crucial for voters to correctly evaluate politicians and punish or reward them come election time. Yet, though information about government performance is widely available, evidence suggests that voters do not always translate it into useful knowledge. For example, they can mistakenly infer politicians' quality from their performance (e.g., attributing the effect of luck to effort (Healy et al., 2010)), or can be swayed by seemingly irrelevant factors such as the order of the names on the ballot (Blom-Hansen et al., 2016).

Whether these lapses are due to the frictional costs associated with information processing or to the existence of mental gaps (Handel and Schwartzstein, 2018), the form and context in which information is presented to voters is also likely to matter. Indeed, prior evidence suggests that information provided in a more visible way and at the appropriate time can have a larger effect on individuals' decision-making process (DellaVigna, 2009; Mani and Mukand, 2007; Harding and Stasavage, 2013; Robinson and Torvik, 2005).

In this paper we investigate to what extent exposure to information about government performance at the time of voting affects voters' electoral choices by making certain issues more salient. Focusing on the issue of public education and school infrastructure quality, we study whether voters assigned to vote in schools with poorer infrastructure are less likely to support the incumbent. Specifically, we test the hypothesis that being directly exposed to the poor state of public schools at the time of voting, makes the issue of public education more salient and voters more likely to punish the incumbent government for its inadequate performance in the provision of this key public good.

Our analysis focuses on the presidential elections held in Argentina in 2015 which, for various reasons, represent a particularly suitable context to study this question. First, one of the main candidates running for president was Mauricio Macri, until then mayor of Buenos Aires. As mayor, Macri had been in charge of the city's public school system for the prior eight years, and could therefore be considered responsible for the state of local public schools. Indeed, the issue of public education, and the promise of more investments in public schools, had been a cornerstone of Macri's campaign for mayor and then for president.<sup>1</sup> Furthermore, the improvement of Buenos Aires public education system achieved under his tenure, was regularly praised by his presidential campaign.<sup>2</sup>

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<sup>1</sup>For example, Macri's commitment to improve the quality of Argentina's early education system and to build 3,000 new kindergartens once elected president, received extensive media coverage during the 2015 campaign. See for example: <https://www.bigbangnews.com/politica/campana-kinder-macri-prometio-3000-nuevos-jardines-de-infantes-2015-9-4-5-33-0>.

<sup>2</sup>See, for instance: <https://chequeado.com/ultimas-noticias/macri-aumenta-sistematicamente-la>

The second aspect, which is key to our identification strategy, concerns the way Argentinian voters are assigned to vote in particular ballot stations located, without exception, in schools. Indeed, within each of the narrow electoral circuits<sup>3</sup> in which each electoral district is divided, voters are assigned to ballot stations based on the alphabetical order of their last name. Exploiting the quasi-random nature of this procedure, we try to gauge the causal impact of exposure to school infrastructure, by comparing the electoral behavior of voters assigned to schools in good vs. bad infrastructural conditions. What is key for our identification strategy is that the distribution of last names is not systematically correlated with the quality of school infrastructure within circuits. Indeed, even if the frequency of certain last names was correlated with some observable or unobservable voters' characteristics (e.g., if last names starting with the letter A were more common among rich than among poor people), we would still identify a causal effect as long as these characteristics are not systematically correlated with school quality within circuit (e.g., if voters with last names starting in A are not assigned to schools with better infrastructure). To corroborate this assumption, using data on voters' age and gender at the ballot station level, we document that, at least along these dimensions, voters assigned to schools with good infrastructure are similar to those assigned to schools with poorer infrastructure.

Following this approach, and using comprehensive ballot-station level data for the entire city of Buenos Aires, we find that voters assigned to "poor-infrastructure" schools are significantly less likely to support Macri than those voting in "good-infrastructure" ones. On average, exposure to poor school infrastructure is associated with a decrease in Macri's vote share of 0.22 percentage points.<sup>4</sup> The effect is mainly concentrated in areas populated by voters that value or benefit disproportionately from public schools. These include low-income circuits, where fewer people can afford private substitutes to public education (effect between 0.49-0.53 p.p.), and areas with a higher share of households with kids in school age (0.52-0.60 p.p.). The effect reaches its peak - 0.58-0.67 p.p. - in places with both these characteristics. This pattern suggests that the increased salience of public school infrastructure is especially effective at shaping the voting choice of those individuals that have a higher stake in the provision of this public good. This result is also informative with respect to the possible mechanism(s) through which the effect may operate. Indeed, since the groups that are most affected by the experience at the polling booth are also more likely to be aware of the quality of public schools in their community even before the election, it seems unlikely that the effect may be solely due to the availability of new information. Rather, experiencing

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matricula-de-la-escuela-publica-de-la-ciudad/.

<sup>3</sup>Electoral circuits could be thought as neighborhoods, there are 169 of them in the City of Buenos Aires.

<sup>4</sup>To put this number in context, the last polls before the different election rounds estimated between 11% and 20% of undecided voters. See, for example [Elypsis](#), [Perfil](#) and [La Nacion](#).

poor school infrastructure so visibly minutes before casting their ballot, is likely to make the issue salient to voters right around the time their final decision is made. Consistent with this hypothesis, we also show that the effect is identical whether people live relatively closer to the schools were they vote (and thus, that are more likely that have already passed by them) or farther away.

We find no effect of school infrastructure quality on both voter turnout and on the proportion of invalid vote. The non-result on turnout is reassuring that the effect is indeed driven by exposure to school infrastructure and not by other confounds, since voters can witness the quality of the school premises once at the voting booth and not before. To the extent that invalid ballots are considered a form of protest vote ([Power and Garand \(2007\)](#)), this non-result indicates, instead, that voters' direct their disappointment with the quality of public schools specifically to the former mayor and not to the political establishment in general.

All the above-mentioned results are robust to different specifications and to the inclusion of a range of controls both at the school and at the polling booth level. Taken together, these findings support the view that making information about public policy salient can have a significant impact on the way voters evaluate government performance and, ultimately, on their ability to keep elected officials accountable.

Our paper relates to several strands of literature. First, it is related to previous work on the impact of contextual factors on voting decisions (see among others [Shue and Luttmer \(2009\)](#), [Berger et al. \(2008\)](#), [Marcinkiewicz \(2014\)](#), [Koppell and Steen \(2004\)](#), [Miller and Krosnick \(1998\)](#)). Unlike these contributions, however, we ascribe the documented effect not to confusion or unconscious factors, but, rather, to increased salience of the issue of public education triggered by the infrastructure quality of the school were individuals vote, as hinted by the fact that the effect is driven by those individuals that have greater stakes in the quality of schools.

In this regard, our findings also relate to the literature on the effect of limited attention and salience on consumer and investor behavior (surveyed in [DellaVigna \(2009\)](#)). These contributions document that, when individual attention is scarce, even small amount of information, presented at the appropriate time, can have a disproportionate effect on individual decisions.<sup>5</sup> Our paper documents that inattention and salience also impact voting decisions.

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<sup>5</sup>For example, [DellaVigna and Pollet \(2009\)](#) show that stock prices react more strongly to information published at times when people are less distracted by other events (e.g., weekdays vs. Friday). [Chetty et al. \(2009\)](#) show that the demand for a certain product is lower when the sales tax becomes salient (i.e., included in the price tag). [Hossain and Morgan \(2006\)](#) document that the average sale price of two equivalent auctions on eBay differs depending on how salient the shipping cost is from the consumer's point of view. Finally, [Finkelstein \(2009\)](#) shows that toll rates increase when drivers start using electronic tolls systems, which make the payment less salient.

Second, our paper relates to previous work on the effect of the visibility of public spending on voting. This literature has shown that democratic governments tend to over-invest in more visible policies that voters weigh disproportionately when assessing incumbent performance (Mani and Mukand (2007), Harding and Stasavage (2013), Robinson and Torvik (2005)). Our findings confirm that, when exposed to visible policy outcomes such as school infrastructure, voters tend to punish the incumbent, and that investing in visible yet inexpensive actions prior to elections, may have significant electoral return.

Finally, our paper relates to the literature on electoral accountability and retrospective voting (Besley (2007), Banerjee et al. (2011), Casaburi and Troiano (2015), Duggan and Martinelli (2017), Casas et al. (2017)). This body of work has documented that informing voters about government performance can have a considerable impact on electoral decisions (Ferraz and Finan (2008), Chong et al. (2014), Drago et al. (2014), Dias and Ferraz (2017), Larreguy et al. (2015)). Our results qualify these findings by showing that information on incumbent performance is especially effective when provided at the time voters make their decision.

The remainder of the paper is structured as follows: Section 2 explains the institutional background, Section 3 describes the data, Section 4 discusses the empirical strategy, Section 5 presents the main results and interpretation, and concluding remarks follow in Section 6.

## 2 Institutional Background

### 2.1 Presidential Elections

Argentina is a presidential democracy in which the president is directly elected by popular vote every four years. To become president a candidate must obtain a qualified majority of 45% or obtain at least 40% of the votes with a difference of 10% or more over the candidate in second position. If none of these conditions is met, a runoff election is held between the top two candidates and the one obtaining more votes is elected president. An important feature of the Argentinian system is that voting is compulsory for anyone aged 18 to 69 (optional for individuals aged 16 to 17 and older than 69). Therefore, turnout for presidential elections is typically high, around 80% for each of the last five presidential elections.<sup>6</sup>

In 2011, a new system to elect candidates running in the general elections was introduced. Until then, every party was free to select its candidates using its preferred method, whether through primaries or through internal discussion. The new system, called PASO (Spanish acronym for Simultaneous and Mandatory Open Primaries), requires parties to select candi-

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<sup>6</sup>See <https://www.idea.int> for a regional comparison.

dates through open primaries. Primaries for all parties are held simultaneously. The setting is identical to that of a general election, with the only difference being that parties can present more than one candidate (though many do not). The candidate that obtains the simple majority within each party is selected to represent the party in the general election. Only parties that obtain more than 1.5% of the votes in the PASO are eligible to participate in the general election. Since participation in the PASO is compulsory and turnout generally high, these elections are considered, by parties and the media alike, almost as important as the general election which typically takes place a few months later.

## 2.2 The 2015 presidential election

The PASO elections were held in Argentina in August of 2015, while the first and second round of the general elections took place in October and November of the same year, respectively. Eleven parties run in the PASO, though only seven obtained enough votes to run in the the general election. The main competing parties are described in Section 8.1 in the Appendix, while Appendix Figure 4 reports the results of both elections at the national level.

One of the main candidates in the 2015 elections was Daniel Scioli, then Governor of the Province of Buenos Aires, running for the Frente para la Victoria (FpV), the Peronist party that controlled the federal government since 2003. The main opposition candidate was Mauricio Macri, mayor of the City of Buenos Aires since 2007, who run for the moderate center-right party Cambiemos. Hence, the citizens of the City of Buenos Aires had the chance to punish or reward Macri, who had been in charge of the city for the past eight years and was now aspiring to become president.

Both elections were very close: in the PASO, FPV obtained 38% of the votes against 30% for Cambiemos. In the first round of the general election, FPV obtained 37% of the votes against 34% for Cambiemos. In the runoff, Cambiemos won the election with 51.3% of the votes against FPV's 48.7%. Mauricio Macri became President in December 2015.

## 2.3 The role of Mayors

Argentina is a federal democracy with three levels of government: federal, provincial and municipal. There are 23 provinces ruled by governors directly elected every four years. In addition, there is the City of Buenos Aires, an autonomous jurisdiction identical, in every

aspect, to a province, governed by a mayor, also elected every four years.<sup>7</sup>

Following a series of reforms carried out in the early 1990's, the provision of key public goods and services was largely decentralized from the federal government to the provinces and the City of Buenos Aires.

In the domain of education, for example, while prior to the reform 44% of the high schools and 2% of the primary schools were managed by the federal government, by 1994 all schools would fall under the jurisdiction of provincial governments and of the City of Buenos Aires.<sup>8</sup>

As a consequence, spending in education has become one of the most significant items in provinces' budgets accounting, on average, for about one third of total public spending (Rivas and Dborkin (2018)). A similar pattern holds for the City of Buenos Aires, where education represents the largest spending item (even larger than health care) accounting for between one fourth and one third of of the City's total budget.<sup>9</sup>

The poor quality of schools' infrastructure has traditionally been a source of concern for the people of the City of Buenos Aires, and public education has generally been a key issue in the local political debate and in campaign promises of mayoral candidates.

For example, in November 2007, one month before taking office as mayor, Mauricio Macri conducted a survey on school infrastructure which concluded that two thirds of the schools in the city were in critical conditions. The results of the survey attracted extensive media coverage,<sup>10</sup> which pressured the city council into declaring a state of "infrastructural emergency" in a law approved in the first week of Macri's government which, among other things, gave the local government more discretion to allocate funds for investments in school infrastructure.

Although the conditions of Buenos Aires schools have improved over the past decade (e.g., less than 15% of schools were deemed to be very bad or critical condition in 2015), the issue is still very relevant for many citizens, particularly those that cannot afford private substitutes to public schools. Indeed, almost every year since 2007, massive teachers' strikes and students' demonstrations have taken place in Buenos Aires to demand better infrastructure.<sup>11</sup>

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<sup>7</sup>The City of Buenos Aires is entirely distinct and independent from the Province of Buenos Aires whose capital city is La Plata. We will henceforth use Buenos Aires to refer to the City of Buenos Aires.

<sup>8</sup>A handful of special schools, part of the national public university system, have remained under the authority of the federal government. For a comprehensive account of the decentralization experience of the Argentinian school system see: <http://www.bnm.me.gov.ar/giga1/documentos/EL004000.pdf>, in Spanish

<sup>9</sup>Security is the other domain that accounts for a large share of provinces' spending. This was not the case, however, for the city of Buenos Aires, whose police forces were, until 2016, funded and controlled by federal government.

<sup>10</sup>See for instance [here](#).

<sup>11</sup>These demonstrations attracted much attention from local and national media alike. Examples of news coverage of these events include: "[Thirteen public schools remain on strike \(2015\)](#)", "[The strike in Mariano Moreno school continues \(2010\)](#)", "[Fourteen schools have been taken over by students \(2011\)](#)".

## 2.4 The voting process

Argentina is divided into 24 electoral districts, corresponding to the 23 provinces plus the City of Buenos Aires. Districts are divided into sections - typically smaller than municipalities - which in turn are divided into circuits. Within each circuit eligible residents are assigned to vote in a specific “precinct”, which typically corresponds to one or multiple classrooms within a school.<sup>12</sup> Each province is in charge of defining the boundaries of the circuits in its territory according to the distribution of the population, limits which rarely change.

The City of Buenos Aires, where about 2.5 million registered voters reside, is divided into 167 electoral circuits. These comprise over 7,300 precincts located in about 800 schools. Figure 1 shows both the boundaries of the circuits (lines) and the location of the schools (dots).

Each polling station within a circuit and a school hosts a fixed number of registered electors. Within each electoral circuit, voters are assigned to a given ballot station based solely on the alphabetical order of their last names. For example in circuit #1, once electors are ordered by alphabetical order, the first  $X$  voters are assigned to polling station #1, voters from  $X+1$  to  $Y$  to polling station 2, and so on (see Casas et al. (2017) for a detailed explanation of the process). Hence, conditional on the electoral circuit, allocation of voters to schools is random. Within a given election year, the allocation of voters to polling stations does not change between the PASO and the general election, and between the first and second round of the latter. Also, it barely changes even between election years, since the distribution of last names in the population remains very stable.<sup>13</sup>

## 3 Data and Sample

Our analysis focuses on the 2015 Argentinian Presidential Election and uses information from both the PASO and the two rounds of the general election. Due to data availability, we restrict our focus to the City of Buenos Aires which, nonetheless, represents a suitable context of analysis since we can examine how voters rewarded (or punished) the presidential candidate who was, until right before the election, the city’s mayor.

Electoral data come from the Cámara Nacional Electoral (CNE) the federal agency responsible for the organization of the electoral process, including the counting and publication

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<sup>12</sup>The entire electoral procedure is described in the National Electoral Code (Codigo Electoral Nacional), which is available on the webpage of the Ministry of Justice ([link](#))

<sup>13</sup>A voter will be assigned to a different polling station if, for example, an increase in the number of eligible voters between the two elections leads to a change in the alphabetical order and a consequent reshuffle of some marginal voters. Yet, even in this case, the new ballot station may be located in the same school.

of the official results. The data include information on: i) the total number of registered voters, ii) the number of voters by polling station, iii) the number of valid votes cast, iv) the number of votes cast for each party and each candidate in each of the elections and rounds.

Our main dependent variable is the share of votes cast for Mauricio Macri over total valid votes. We restrict our focus to polling stations located in public schools since these are the only ones for which systematic information regarding the quality of school infrastructure is available. Table 1 reports the descriptive statistics at the school level separately for the PASO and for each round of the general election.

Our main regressor of interest is the quality of school infrastructure. We use data gathered by the Directorate General for School Infrastructure in the second half of 2015 (i.e., around election time), which cover a sample of 456 public schools distributed in 158 electoral circuits. The data include information on the name of the school, the address, and a score for the quality of the school’s infrastructure on a 4-point scale (i.e., Very bad, Bad, Good, Very good). Unfortunately, no information is available regarding the specific infrastructural problems recorded in each school, namely on how visible they might have been to a casual observer.

Figure 2 shows the distribution of schools by infrastructural quality, while Table 2 reports the descriptive statistics of the electoral results by quality of school infrastructure.<sup>14</sup> In the main analysis we collapse the school quality data to two categories, defining school quality as “Good” (“Very Good” or “Good”) or “Bad” (“Very bad” or “Bad”) schools. As show in Figure 3, good and bad schools are evenly scattered along the map in most of the areas of the city. For robustness, we also present the results using the four different levels of quality. We do this because, as Figure 3 shows, the proportion of schools defined as “Very good” or “Very bad” is small and thus these types of schools are not present in most of the circuits.

In our analysis we also employ individual-level data for all voters registered in the City of Buenos Aires including information on the polling station they were assigned to, their gender, and, only for male voters, their age. We use this information - which comes from the official registry of voters eligible for the 2015 Buenos Aires local elections - to confirm that gender and age are balanced with respect to the quality of the infrastructure of the schools were voters are assigned to vote.<sup>15</sup>

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<sup>14</sup>The original electoral data contained a few extreme values most likely due to entry errors. To address this issue, we exclude data from polling stations in which Macri’s vote share was two standard deviations or more above or below the average for the other pooling stations in the same school, which amount to approximately 2% of the sample (1% per each tail). The results, available upon request, remain identical when using the complete dataset, which suggests that potential errors are randomly distributed with respect to the treatment.

<sup>15</sup>Though useful, these data have two limitations. First, they do not include the age of female voters. Second, though the registry for Buenos Aires 2015 local elections - and the corresponding allocation of voters to ballot stations - should be almost identical to that for the national elections held two months later, some small discrepancies may exist. In particular, voters who turned 18 between one election and the other would

Hence, our final dataset results from the combination of electoral data at the polling-station level and data on infrastructure at the school level. We also include a series of controls at the school level to enrich the analysis and perform robustness checks. First, to proxy for the average wealth of the area in which the school is located, we compute the average selling price of dwellings in the block around the school based on data from early 2016 available from one of the largest online real estate online marketplaces in Argentina ([www.properati.com](http://www.properati.com)).<sup>16</sup> The distribution of this variable across electoral circuits is depicted in Figure 5. To proxy for the distance between voters and the school where they were assigned to vote, in the absence of information regarding each voter’s address, we compute the average distance from each school to the centroid of the circuit. This variable captures the idea that a randomly drawn individual will be farther away from schools located away from the circuit’s center.

Finally, we use data from the latest Argentinian Census (2010) to measure household characteristics at the electoral circuit level. In particular, we compute the proportion of children in schooling age per household, a relevant variable that can potentially mediate the effect of school infrastructure on voting decisions.

## 4 Empirical Strategy

To identify the causal effect of the exposure to poor school infrastructure quality on voting, we exploit the random assignment of voters to schools within electoral circuits. This natural experiment allows us to compare the behavior of voters with similar characteristics that were assigned to vote in schools with different infrastructure quality. The following equation summarizes our econometric strategy:

$$Macri_{psct} = \alpha BadQuality_s + \lambda X_s + \Lambda X_p + \eta_c + \gamma_t + \epsilon_{psct} \quad (1)$$

The variable  $Macri_{psct}$  represents the share of valid votes cast for candidate and former mayor Mauricio Macri in polling station  $p$  located in school  $s$  in circuit  $c$  in election/round  $t$ .  $BadQuality_s$  is a dummy variable for whether the school  $s$  where the polling station  $p$  is located has poor infrastructure.  $X_s$  is a set of school-level controls including dwelling value in the block where the school is located and the distance from the circuit’s centroid.  $X_p$  is a set of polling station-level controls including the number of registered voters, the share of male voters, and their average age.  $\eta_c$  and  $\gamma_t$  are circuit and election/round fixed effects, respectively. In all regressions, standard errors are clustered at the school level.

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be registered for the presidential elections but not for the local ones.

<sup>16</sup>We are grateful to Federico Bayle for kindly sharing these data with us.

Controlling for the the average dwelling value in the proximity of a school, allows to account for the possible impact on voters of passing by a wealthy (poor) or safe (unsafe) street on their way to the ballot station. Controlling for how far the school is relative to the center of the circuit, should capture the potential effect of a longer vs. shorter ride to the polling station. Accounting for the number of individuals assigned to vote in a given polling station is important to rule out any effect on voting of facing long queues and waiting times, which is not uncommon in Argentina. Controlling for the share of male voters and their average age should instead capture plausible idiosyncratic differences in the distribution of voters by gender and age between schools with better vs. worse infrastructure. Finally, circuit fixed effects account for all observable and unobservable factors common to all polling stations in the same electoral circuit, while election/round fixed effects capture any aggregate shock in candidates popularity in the PASO and in each round of the general election.

We are also interested in exploring what segments of the voting population may be more likely to be affected by being exposed poor school infrastructure. To this end, we estimate the following augmented version of equation 1:

$$Macri_{psct} = \alpha BadQuality_s + \beta BadQuality_s * Z_c + \lambda X_s + \Lambda X_p + \eta_c + \gamma_t + \epsilon_{psct} \quad (2)$$

where  $Z_c$  represents some relevant observable characteristics of circuit  $c$  that can mediate the effect of school infrastructure quality on voting, such as income or the presence of kids in school age. Hence,  $\beta$ , the coefficient on the interaction term, would capture whether the effect of poor school infrastructure is more pronounced in areas that are poorer and where people have more kids in school age, since in these places people may value public school quality disproportionately.

Our identification strategy relies on the assumption that, within the same electoral circuit, the alphabetical order of voters' last names is orthogonal to the infrastructure quality of the school they are assigned to. Even if last names were correlated with some voter individuals characteristics (e.g., last names starting with A were over represented among wealthier or more educated families), our strategy would still allow to identify a causal effect as long as these characteristics are not systematically related to school quality within circuit (e.g., if wealthier and more educated voters are not more likely to vote in schools with better infrastructure).

We can partially test for this possibility using data on the distribution of voters by gender and age in schools with good vs. poor infrastructure. In addition, we can explore whether schools with different infrastructure quality differ with regard to the average number of voters

assigned to each polling station, and to the average value of dwellings in the surrounding area. The results of this test, reported in table 3, indicate that voters assigned to schools with poor infrastructure quality are not significantly different than voters assigned to schools with better quality. Furthermore, low infrastructure quality schools are not characterized by a higher number of voters per polling station, and do not tend to be located in poorer areas. Though limited to a relatively small set of variables, this evidence is reassuring of the fact that school infrastructure quality is unrelated to voter and location characteristics that may influence voting decisions in other ways.

## 5 Results and Interpretation

Figure 7 shows the kernel density of Macri’s vote share separately for polling stations located in schools with good and poor infrastructure quality, pooling together the PASO and the two rounds of the general election. It indicates that, overall, electoral support for the former mayor increases as school infrastructure quality improves. Appendix Figure 6, which shows the kernel density for each of the four categories in the original infrastructure quality classification, suggests that the relationship is monotonic, with a very clear difference between “very bad” schools (red dashed line) and “very good” ones (green dashed line).

Though suggestive, the graphical evidence does not control for differences between voters living in different electoral circuits, across polling stations, or across election rounds. To test more systematically for the relationship between school quality and voting, in Table 4 we estimate equations 1 and 2.<sup>17</sup>

In the first four columns the dependent variable is the share of total valid votes cast for Macri in the PASO elections, while in the following three is the share of total valid votes cast for his coalition, *Cambiamos*, in the two rounds of the national election. All regressions include electoral district fixed effects, election/round fixed effects, and school and polling stations controls.

The results in columns 1 and 4 confirm that electors voting in schools with low infrastructure quality are significantly less likely to support Macri. The average effect of voting in a bad-quality school as opposed to a good-quality one is about 0.2%. In the following columns we examine how the effect varies depending on voters’ characteristics at the electoral circuit level.

First we examine whether poor infrastructure quality had a different impact in areas with lower vs. higher income. The relationship between income and the demand for public education - and hence the electoral punishment of the incumbent’s poor performance in this

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<sup>17</sup>For robustness, Table 8 in the Appendix show the estimations with different set of controls.

domain - is *a priori* unclear. On the one hand, households with higher education - and higher income - may put a higher value on education and on the quality of public schools. On the other hand, wealthier families who are more likely to send their kids to private schools may have less of a stake in the quality of public education.<sup>18</sup> In fact, richer taxpayers that do not use public schools may prefer *lower* spending in public education as opposed to other public goods and services they can benefit from.<sup>19</sup> Results in columns 2 and 5 support the second hypothesis, i.e., that the reaction to poor school quality is stronger among poorer individuals that have less access to private schools. Indeed, the effect is concentrated in circuits with below-median income, where voting in a poor-quality school decreases Macri's vote share between 0.49% and 0.53%, while it is virtually zero in richer ones. We find consistent results when comparing electoral circuits with different levels of education (columns 3 and 7), which is not surprising given the strong correlation between income and education at the circuit level (i.e., the pairwise correlation is 0.79 in our sample).

We then examine how the effect varies with the number of kids in school age per household. The results, reported in columns 4 and 8, indicate that poor school quality only affects voting in circuits where families have above-median number of kids in school age. In these areas, voting in a poor quality school reduces Macri's vote share by between 0.52% and 0.60%.<sup>20</sup>

In Table 5 we further explore the heterogeneity of the effect by comparing schools circuits across *both* the income dimension and the density of school-age children. The results confirm that the effect of school quality on voting is concentrated and stronger in schools located in circuits with lower income and more school-age children. For these schools the effect is even more significant and larger in magnitude, i.e., between 0.58 and 0.67 percentage points depending on what dependent variable is used. These magnitudes are quite sizable especially considering the rather mild nature of the treatment which did not involve any direct information sharing or priming.

Finally, in Table 7 we test whether school quality affects turnout, a measure of political participation, as well as the share of invalid votes, a proxy for voters' attitudes towards the political establishment. With regard to the first outcome, a priori we would not expect

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<sup>18</sup>In the context of Argentina, access to private education varies drastically with income. While, according to official figures, about 50% of all school-age kids attend private schools, this percentage is 30 points higher for households at the top quartile of the income distribution than for those at the bottom one, even within the same neighborhood.

<sup>19</sup>See [Epple and Romano \(1996\)](#) and [Stiglitz \(1974\)](#) for a discussion about voting and the demand for public services when private alternatives are available.

<sup>20</sup>In Tables 9 and 10, we show the results using the four categories of infrastructure quality which confirm that the punishment increases as the quality of school worsens. These results should be taken with some caution since within-circuit variation is limited. Indeed, only few circuits have schools in all four categories of infrastructure quality.

school quality to influence citizens' decision to turnout since one could only be exposed to the quality of school infrastructure once at the ballot station and not before. In line with this hypothesis we find no significant effect of school quality on turnout. Similarly, we find no tangible effect of school quality on the share of invalid votes cast. This result suggests that voters' disappointment with the poor quality of the school premises specifically translates into lower support for the incumbent mayor - directly responsible for local public education - and not into general disenchantment with the political system.

Taken together our results indicate that: i) exposure to visible manifestations of poor public good provision can have a tangible impact on voting decisions, ii) this effect is stronger for individuals that are more likely to use public goods and have limited access to private substitutes, and iii) voters blame the poor public good provision specifically on the relevant incumbent politicians rather than on the entire political class.

These findings also shed some light on the possible mechanism(s) through which the documented effect operates. In particular, the fact that the effect is stronger for voters that are more likely to use public schools suggests that it is not driven by a pure informational update since these same individuals were also more likely to be exposed to and informed about school infrastructure before the election. To further test this hypothesis, in table 6 we examine whether the effect is weaker in circuits where citizens vote in schools that are located, on average, closer to where they live. Indeed, to the extent that people are more likely to know and send their children to schools located closer to their homes, exposure to school quality on election day should provide less new information than for schools located farther away. We find no evidence that the effect varies with average distance to the schools which further confutes the information channel.

Our findings seem more in line with existing theories of information frictions and mental gaps ([Handel and Schwartzstein \(2018\)](#)) according to which even readily available information may not translate into usable knowledge. In this regard, the fact that school infrastructure quality becomes salient at the polling station right before votes are cast, insures that voters pay attention and take this information into account when evaluating the incumbent performance. Our findings highlight how the form and the context in which information is presented is crucial, and that salient information provided at the right time can have a bigger impact on decision-making ([DellaVigna \(2009\)](#)). They also support the view that intervening on more visible items can be more effective at boosting government popularity than equally important but less noticeable policies ([Mani and Mukand \(2007\)](#), [Harding and Stasavage \(2013\)](#), [Robinson and Torvik \(2005\)](#)).

## 6 Conclusions

In this paper we examine whether and how voting choices are influenced by contextual factors that make certain issues more salient. Specifically, we investigate to what extent citizens can extract new information from the physical settings of the polling station about the quality of public good provision and use it to punish or reward incumbent politicians. Focusing on the 2015 presidential elections in Argentina, we study whether individuals assigned to vote in schools with poorer infrastructure quality were less likely to support the former mayor who had been in charge of public schools over the previous eight years. Our identification strategy exploits the fact that, within a given electoral circuit, Argentinian voters are assigned to vote in a given public school based on the alphabetical order of their last name.

We find that individuals assigned to vote in schools with relatively poorer infrastructure are 0.18 percentage points less likely to vote for the outgoing mayor. Though the baseline effect is rather small, it is much larger (up to 0.6 p. p.) in areas with lower income and a higher number of kids in school age, where families care value public education and have less access to private schools. The magnitude of the effect is quite large considering the mild nature of the treatment, and is in line with previous findings on the electoral impact of more “intense” treatments involving explicit information-sharing and priming campaigns [Chong et al. \(2014\)](#); [Dias and Ferraz \(2017\)](#).

Taken together, our results indicate that voters can extract valuable information from seemingly unimportant elements which can in turn influence their evaluation of politicians’ performance. They also highlight the power of contextual factors in making certain issues salient, and the importance of the timing and form in which information is presented for decision-making.

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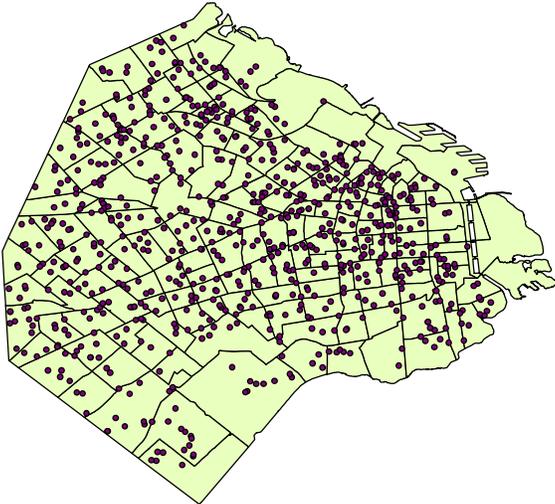
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# 7 Tables and Figures

Figure 1: Electoral Circuits and Schools in the City of Buenos Aires



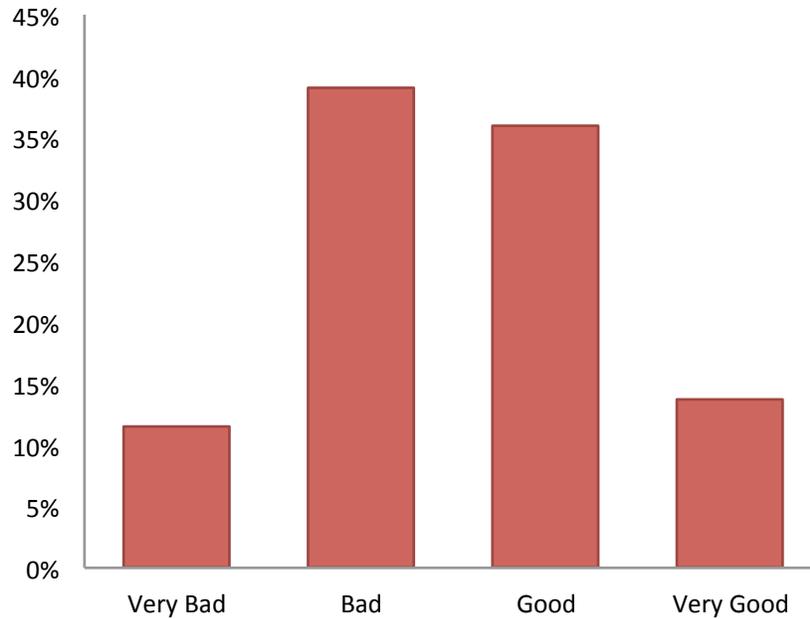
Source: Buenos Aires Data and La Nacion

Table 1: Electoral Descriptive Statistics (by polling booth)

	Electors	Turnout (percentage)	Positive votes ratio (percentage)	Votes for Macri (percentage)	No. of Polling Booths
PASO	346	73.1 (2.95)	98.1 (6.1)	40 (1.6)	4,331
1 <sup>st</sup> Round	346	78.2 (2.99)	98.8 (4.7)	48.5 (1.7)	4,331
2 <sup>nd</sup> Round	346	77.8 (2.99)	97.8 (4.2)	63.1 (1.9)	4,331
Pooled Elections	346	76.4 (2.99)	98.2 (5.5)	50.5 (1.8)	4,331

Definitions: Electors: total number of registered voters. Turnout: total number of votes for any candidate plus blank votes divided by the total number of registered voters. Positive votes ratio: total number of votes for any valid candidate divided by the total number of votes. Votes for Macri: number of votes cast for the candidate Mauricio Macri divided by the total number of valid votes. No. of Polling Booths: sum of all the polling booths in the sample. PASO: primary elections, 1<sup>st</sup> Round: first round of the general election, 2<sup>nd</sup> Round: runoff round of the general election. Mean values at the "precinct" (school) level in first rows, standard deviations in parentheses.

Figure 2: Distribution of School Infrastructure Quality



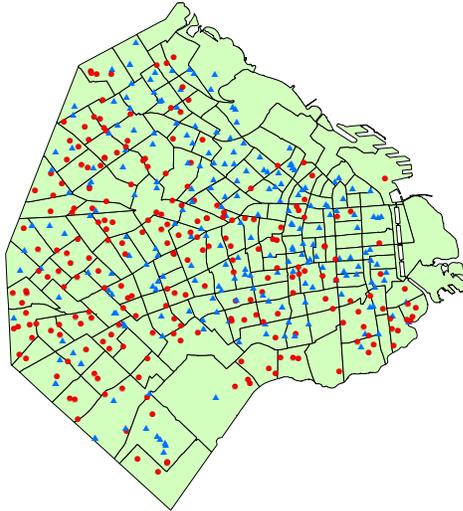
Source: Ministry of Education, City of Buenos Aires

Table 2: Electoral Descriptive Statistics (by schools level of infrastructure)

	Very Bad	Bad	Good	Very Good
No. of "precincts (schools)	53	180	166	63
Turnout (percentage)	76.8 (7.3)	77 (6.2)	76.8 (7.1)	75 (6.9)
Positive votes ratio (percentage)	98.2 (3)	98.1 (2.0)	98.2 (1.4)	98.2 (1.2)
Votes for Macri (percentage)	45.7 (12.9)	49.2 (13.5)	51.6 (14.8)	53.7 (13.8)
Number of Electores per polling station	346.4 (3.1)	346.5 (3.0)	346.9 (3.0)	346.8 (2.8)

Definitions: Turnout: total number of votes for any candidate plus blank votes divided by the total number of registered voters. Positive votes ratio: total number of votes for any valid candidate divided by the total number of votes. Votes for Macri: total number of votes cast for the candidate Mauricio Macri divided by the total number of valid votes. "Very Bad", "Bad", "Good", "Very Good" are the four different categories used to measure the infrastructure quality of schools.

Figure 3: Distribution of "Good" and "Bad" schools



Note: Circles represent the "bad" schools, triangles represent the "good" schools

Table 3: Balance test

	No. Electors	Housing Prices	Age	Male
Bad Quality	-0.09 (0.07) [-0.03 $\sigma$ ]	49 (70) [0.07 $\sigma$ ]	0.09 (0.065) [0.002 $\sigma$ ]	0.0007 (0.012) [0.0014 $\sigma$ ]
Observations	12.958	12.958	531,272	1,100,374
R-Squared	0.03	0.03	0.03	0.03

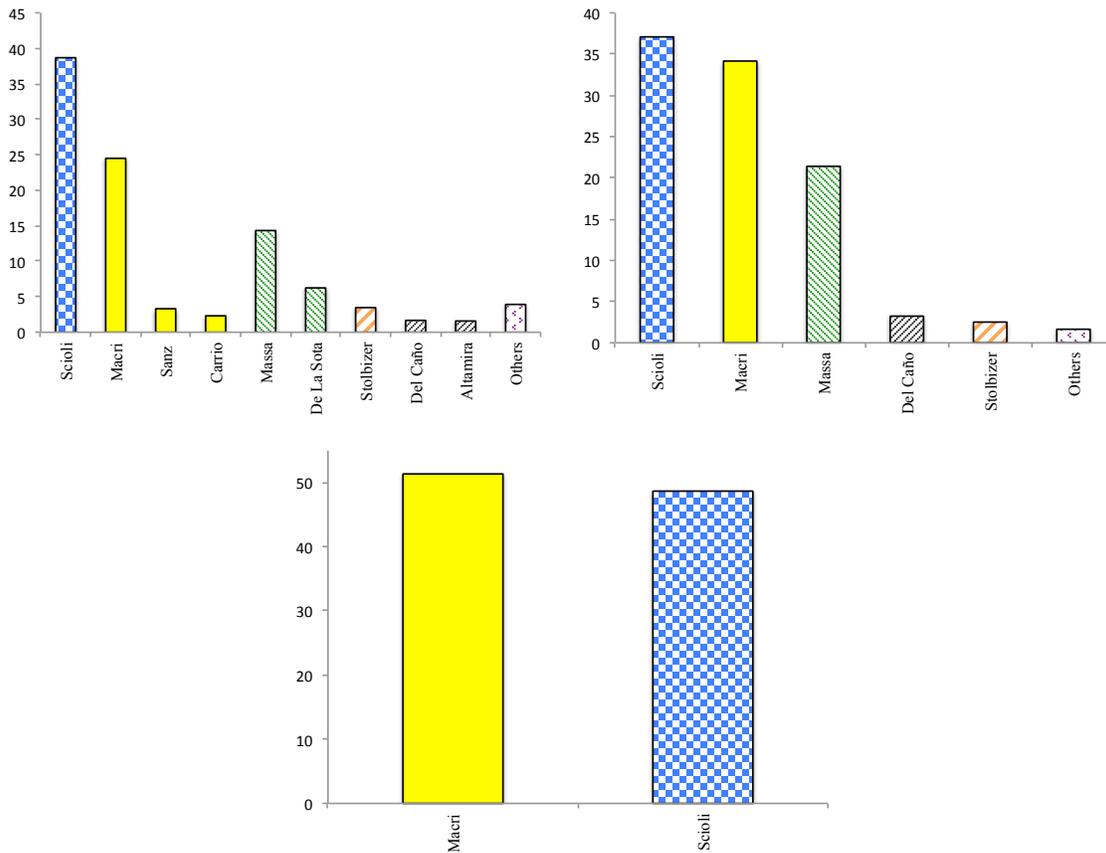
Standard Errors clustered at the school level in parentheses\*\*\* p < 0.01, \*\* p < 0.05, \*p < 0.1

Regressions include electoral circuit fixed effects.

(A): Age is defined in years and correspond only to male voters.

(B): Male: takes a one if the voter is a male and a 0 otherwise

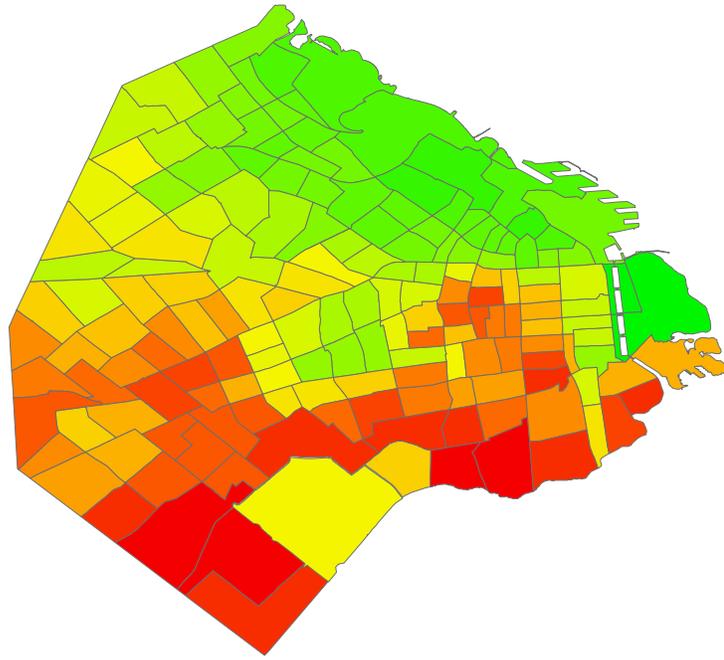
Figure 4: Electoral Results at the National Level (percentage)



Source: Camara Nacional Electoral

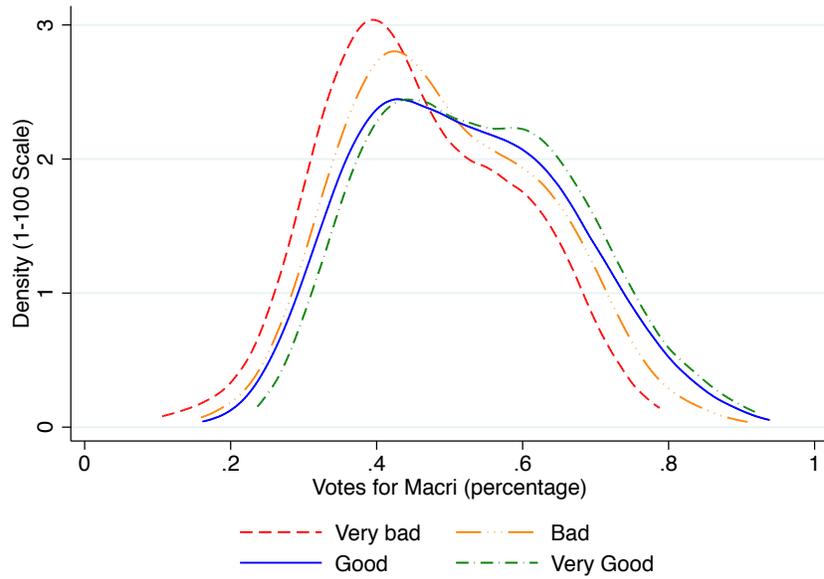
Note: The 1<sup>st</sup> figure corresponds to the results of the PASO election; the 2<sup>nd</sup> and 3<sup>rd</sup> figures correspond to the 1<sup>st</sup> and 2<sup>nd</sup> rounds of the general election. Bars are grouped by party: Scioli (FPV), Macri, Sanz, Carrio (Cambiemos), Massa and De la Sota (UNA), Stolbizer (Progresistas), Altamira and Del Caño (FIT). The description of each party/coalition can be found in the Appendix.

Figure 5: Average housing selling prices by circuit in US\$



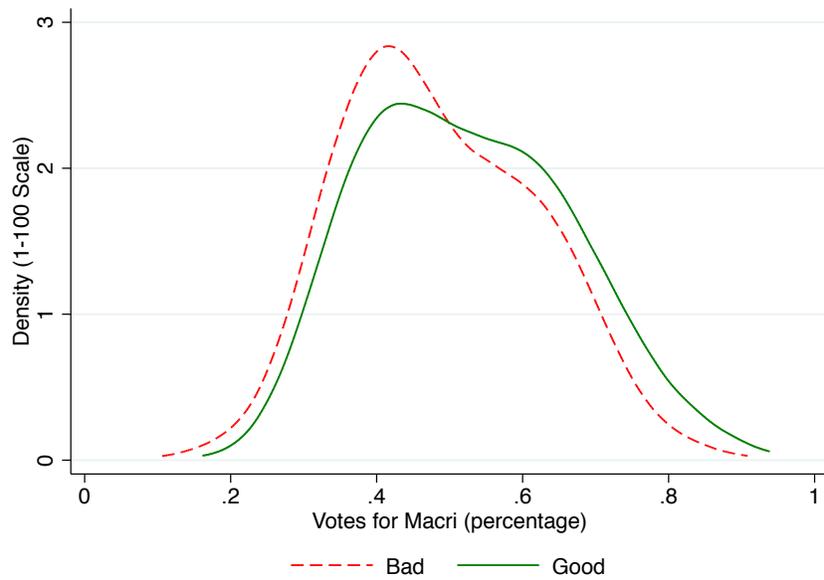
Source: [www.properati.com](http://www.properati.com)

Figure 6: Kernel Density Estimation: Votes for Macri by School Quality Level



Note: Bandwidth:0.05. Votes at the polling booth level, three rounds of elections pooled.

Figure 7: Kernel Density Estimation: Votes for Macri by School Quality Level (aggregated)



Note: Bandwidth:0.05. Votes at the polling booth level, three rounds of elections pooled.

Table 4: Effect of School Quality on Voting for Macri (percentage)

	(A)				(B)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bad Quality	-0.23*	-0.03	-0.04	-0.014	-0.27*	0.00	-0.03	-0.016
	(0.12)	(0.15)	(0.15)	(0.14)	(0.13)	(0.16)	(0.15)	(0.15)
Bad Quality * Poor		-0.55**				-0.57**		
		(0.22)				(0.22)		
Total Effect (Poor)		-0.52***				-0.56***		
		(0.18)				(0.19)		
Bad Quality * Low Ed.			-0.33				-0.34	
			(0.21)				(0.22)	
Total Effect (Low Ed.)			-0.37***				-0.37**	
			(0.17)				(0.18)	
Bad Quality * HDC				-0.57***				-0.66***
				(0.21)				(0.23)
Total Effect (HDC)				-0.56***				-0.65***
				(0.18)				(0.19)
Obs.	12,626	12,626	12,626	12,626	12,626	12,626	12,626	12,626
R-Squared	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92

Standard Errors clustered at the school level in parentheses

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

Regressions include electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3.

(A): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (PASO election, first round of the general election and runoff of the general election).

(B): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (first round of the general election and runoff of the general election). Total number of votes for Macri or any other candidate in the Cambiemos Alliance divided by the total number of valid votes (PASO election).

"Poor": 1 if the average housing price in the circuit is below the median of the city, 0 otherwise. "Low Ed.": 1 if the proportion of individuals living in the circuit, with less than a higher education degree is below the median of the city. "HDC" means "High Density of Children": 1 if the average proportion of households in the circuit with children between 0 and 15 is above the median of the city, 0 otherwise.

Table 5: Effect of School Quality on Voting for Macri (percentage)

	(A)			(B)		
	(1)	(2)	(3)	(4)	(5)	(6)
Bad Quality (BQ)	-0.23* (0.12)	0.10 (0.52)	0.00 (0.15)	-0.27* (0.33)	0.12 (0.17)	0.01 (0.16)
BQ * Poor		-0.38 (0.33)			-0.32 (0.34)	
BQ * Low Ed.			0.05 (0.34)			-0.11 (0.35)
BQ * HDC		-0.46 (0.39)	-0.73 (0.44)		-0.48 (0.43)	-0.72 (0.53)
BQ * Poor * HDC		0.12 (0.52)			0.06 (0.56)	
BQ * Low Ed. * HDC			0.14 (0.52)			0.04 (0.66)
Effect on Poor + HDC		-0.61***			-0.56***	
Effect on Poor + LDC		-0.27			-0.21	
Effect on Not Poor + LDC		-0.35			-0.36	
Effect on Not Poor + HDC		0.10			0.12	
Effect on Low. Ed + HDC			-0.54***			-0.62***
Effect on Low Ed. + LDC			0.05			0.12
Effect on High Ed. + LDC			0.00			0.01
Effect on High Ed. + HDC			-0.73*			-0.70
Obs.	12,626	12,626	12,626	12,626	12,626	12,626
R-Squared	0.83	0.83	0.83	0.83	0.86	0.86

Standard Errors clustered at the school level in parentheses

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

Regressions include electoral circuit fixed effects, round fixed effect and the time-varying school controls described in Section 3. Regressions include electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3.

(A): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (PASO election, first round of the general election and runoff of the general election).

(B): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (first round of the general election and runoff of the general election). Total number of votes for Macri or any other candidate in the Cambiemos Alliance divided by the total number of valid votes (PASO election).

"Poor": 1 if the average housing price in the circuit is below the median of the city, 0 otherwise. "Low Ed.": 1 if the proportion of individuals living in the circuit, with less than a higher education degree is below the median of the city. "HDC" means

"High Density of Children": 1 if the average proportion of households in the circuit with children between 0 and 15 is above the median of the city, 0 otherwise. "LDC" means "Low Density of Children": 1 if the average proportion of households in the circuit with children between 0 and 15 is below the median of the city, 0 otherwise.

Table 6: Effect of School Quality on Voting for Macri (percentage)

	(A)		(B)	
	(1)	(2)	(3)	(4)
Bad Quality (BQ)	-0.21*	-0.23*	-0.27**	-0.67***
	(0.11)	(0.12)	(0.11)	(0.12)
BQ * Distance (centered)		0 (0.003)		0 (0.004)
Obs.	12,626	12,626	12,626	12,626
R-Squared	0.83	0.83	0.86	0.86

Standard Errors clustered at the school level in parentheses

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

Regressions include electoral circuit fixed effects, round fixed effect and the time-varying school controls described in Section 3. Regressions include electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3.

(A): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (PASO election, first round of the general election and runoff of the general election).

(B): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (first round of the general election and runoff of the general election). Total number of votes for Macri or any other candidate in the Cambiemos Alliance divided by the total number of valid votes (PASO election).

"Distance" in meters is centered (i.e, demeaned)

Table 7: Effect of School Quality on Turnout and Valid Votes (percentage)

	Full Controls		School Controls		Round and Circuit FE	
	Turnout	Valid	Turnout	Valid	Turnout	Valid
Bad Quality	-0.007 (0.09)	0.005 (0.02)	-0.009 (0.09)	0.004 (0.03)	0.02 (0.09)	0.02 (0.03)
Obs.	12,652	12,652	12,652	12,652	12,652	12,652
R-Squared	0.83	0.83	0.83	0.83	0.86	0.86

Standard Errors clustered at the school level in parentheses

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

Set of control per column: "Full controls" includes electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3. "School Controls" includes electoral circuit fixed effects, round fixed effect, and school controls as described in Section 3. "Round and Circuit FE" includes electoral circuit fixed effects and round fixed effect.

Definition of the dependent variables: "Turnout" is the number of votes (valid or not) divided by the number of electors in a polling station. "Valid" is the number of valid votes divided by the number of votes in a polling station.

## 8 Appendix

### 8.1 Main Parties

Formally, eleven parties competed in the PASO (compulsory primary elections), although only five obtained at least 1.5% of the votes and therefore could compete in the general election:

**Frente para la Victoria (FPV):** Led by the incumbent President Cristina Fernandez de Kirchner. The party was in charge of the federal government from 2003 to 2015. It is the

most recent faction of the Peronist party. The party had only one candidate in the PASO elections: Daniel Scioli.

**Cambiamos:** A coalition led by Mauricio Macri, who was the Mayor of the City of Buenos Aires from 2007 to 2015. Typically associated with the modern, center-right political trend. The party had three candidates running against each other in the PASO elections: Mauricio Macri – who obtained the vast majority of the votes within the coalition – Ernesto Sanz and Elisa Carrió.

**Unidos por una Nueva Alternativa (UNA):** A coalition formed by the biggest faction of the Peronism not aligned with the FPV. Normally associated with a conservative center-right ideology. Two candidates ran for this party's nomination in the PASO elections: Sergio Massa and José de la Sota.

**Progresistas:** A progressive coalition, associated with the center-left. The party had only one candidate for the PASO elections: Margarita Stolbizer.

**Compromiso Federal:** A conservative/centrist faction of the Peronist party, but with a very specific regional origin in the province of San Luis, where the party has continuously governed since 1983. Alberto Rodríguez Saa was the party's presented only candidate for the PASO elections.

**Frente de Izquierda y de los Trabajadores (FIT):** A left wing coalition. The party presented two candidates for the PASO elections: Nicolás del Caño and Jorge Altamira.

## 8.2 Additional Tables

Table 8: Robustness (I): Effect of School Quality on Voting for Macri (percentage) with no controls

	Full Controls			School Controls			Round and Circuit FE		
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)
Bad Qual. (BQ)	-0.23*	0.03	0.014	-0.23*	0.027	0.018	-0.16	0.046	0.035
	(0.12)	(0.15)	(0.14)	(0.12)	(0.15)	(0.14)	(0.11)	(0.15)	(0.14)
BQ * Poor		-0.55***			-0.54**			-0.43**	
		(0.22)			(0.22)			(0.21)	
Tot. Effect (Poor)		-0.52***			-0.52***			-0.39**	
		(0.18)			(0.17)			(0.16)	
BQ * HDC			-0.57***			-0.59***			-0.46**
			(0.21)			(0.21)			(0.21)
Tot. Effect (HDC)			-0.56***			-0.57***			-0.43**
			(0.18)			(0.18)			(0.17)
Obs.	12,652	12,652	12,652	12,652	12,652	12,652	12,652	12,652	12,652
R-Squared	0.83	0.83	0.83	0.83	0.86	0.86	0.83	0.83	0.83

Standard Errors clustered at the school level in parentheses

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

Regressions include electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3.

Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (PASO election, first round of the general election and runoff of the general election).

"Poor": 1 if the average housing price in the circuit is below the median of the city, 0 otherwise. "Low Ed.": 1 if the proportion of individuals living in the circuit, with less than a higher education degree is below the median of the city. "HDC" means "High Density of Children": 1 if the average proportion of households in the circuit with children between 0 and 15 is above the median of the city, 0 otherwise.

Set of control per column: "Full controls" includes electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3. "School Controls" includes electoral circuit fixed effects, round fixed effect, and school controls as described in Section 3. "Round and Circuit FE" includes electoral circuit fixed effects and round fixed effect.

Table 9: Effect of School Quality on Voting for Macri by four quality levels of school infrastructure (percentage)

	(A)		(B)	
	(1)	(2)	(3)	(4)
Very Bad Quality	-0.50*	-0.12	0.00	-0.17
	(0.25)	(0.36)	(0.33)	(0.38)
Very Bad Quality * Poor		-0.80		0.91*
		(0.50)		(0.52)
Very Bad Quality Total Effect (Poor)		-1.1***		-1.08***
		(0.37)		(0.37)
Bad Quality	-0.35*	-0.04	-0.37*	0.00
	(0.18)	(0.23)	(0.20)	(0.25)
Bad Quality * Poor		0.72**		0.83**
		(0.30)		(0.39)
Bad Quality Total Effect (Poor)		-0.83***		-0.83***
		(0.30)		(0.30)
Good Quality	-0.18	-0.09	-0.19	-0.06
	(0.17)	(0.21)	(0.18)	(0.23)
Good Quality * Poor		-0.21		-0.34
		(0.36)		(0.38)
Good Quality Total Effect (Poor)		-0.31		-0.40
		(0.28)		(0.29)
Obs.	12,626	12,626	12,626	12,626
R-Squared	0.92	0.92	0.92	0.92

Standard Errors clustered at the school level in parentheses

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

Regressions include electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3.

(A): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (PASO election, first round of the general election and runoff of the general election).

(B): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (first round of the general election and runoff of the general election). Total number of votes for Macri or any other candidate in the Cambiemos Alliance divided by the total number of valid votes (PASO election).

"Poor": 1 if the average housing price in the circuit is below the median of the city, 0 otherwise. "Low Ed.": 1 if the proportion of individuals living in the circuit, with less than a higher education degree is below the median of the city.

Table 10: Effect of School Quality on Voting for Macri by four quality levels of school infrastructure (percentage)

	(A)		(B)	
	(1)	(2)	(3)	(4)
Very Bad Quality	-0.50*	0.00	0.00	-0.028
	(0.25)	(0.33)	(0.33)	(0.35)
Very Bad Quality * Poor		-1.1**		-1.24*
		(0.48)		(0.50)
Very Bad Quality Total Effect (Poor)		-1.1***		-1.27***
		(0.37)		(0.37)
Bad Quality	-0.35*	-0.06	-0.37*	-0.05
	(0.18)	(0.22)	(0.20)	(0.24)
Bad Quality * Poor		-0.78**		-0.86**
		(0.30)		(0.39)
Bad Quality Total Effect (Poor)		-0.84***		-0.92***
		(0.31)		(0.31)
Good Quality	-0.18	-0.07	-0.19	-0.09
	(0.17)	(0.20)	(0.18)	(0.22)
Good Quality * Poor		-0.36		-0.35
		(0.36)		(0.37)
Good Quality Total Effect (Poor)		-0.43		-0.45
		(0.29)		(0.30)
Obs.	12,626	12,626	12,626	12,626
R-Squared	0.92	0.92	0.92	0.92

Standard Errors clustered at the school level in parentheses

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

Regressions include electoral circuit fixed effects, round fixed effect, school and polling station controls as described in Section 3.

(A): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (PASO election, first round of the general election and runoff of the general election).

(B): Definition of the dependent variable: total number of votes for Macri divided by the total number of valid votes (first round of the general election and runoff of the general election). Total number of votes for Macri or any other candidate in the Cambiemos Alliance divided by the total number of valid votes (PASO election).

"Poor": 1 if the average housing price in the circuit is below the median of the city, 0 otherwise. "Low Ed.": 1 if the proportion of individuals living in the circuit, with less than a higher education degree is below the median of the city.