Guilty by association: The spillover effects of corruption-related prosecutions

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Abstract

Corrupt politicians are expected to be held accountable when they are caught in wrong-doing, but does their involvement in a criminal trial affect the way voters cast votes for their co-partisans? In this paper, I leverage variation in criminal corruption charges among Mexican governors after the legislative elections of 2015 to identify if such proceedings affected the votes received by legislators in 2018. I find that legislative candidates in districts where governors were involved in a criminal trial received around 6% less votes than legislators in districts with governors that were not involved in a criminal trial. This effect exist independently of the existence of corruption scandals, suggesting that criminal trials can shape citizen's political actions even in countries like Mexico, where corruption is pervasive and trust in the judiciary is extremely low. This electoral punishment, which I call "guilt by association," can help scholars understand the role that criminalization of corruption can play in enforcing vertical accountability mechanisms in developing democracies.
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1 Introduction

Do the political effects of criminal corruption cases expand beyond those directly involved? An important subset of the literature on accountability and the fight against corruption has argued that, following Becker's economic take on crime,[1] holding corrupt politicians accountable can help curb corruption by decreasing the expected utility of abusing their office. In addition, prosecuting corrupt politicians might altogether prevent "bad" politicians from entering the pool of candidates, or it might set an example to deter politicians that would engage in malfeasance if it were not for the possibility of facing legal punishment. Yet the literature has not explored the possibility that prosecuting criminal politicians might help strengthen the quintessential democratic accountability mechanism: elections.

Prosecuting corruption can obviously affect or weaken the accused politicians and his partners in crime,[2] but I argue that a criminal trial can also have consequences, specifically electoral ones, for candidates that share the same party label as those directly involved in the criminal case. Using a difference-in difference strategy of electoral results of legislative elections in Mexico, I show that candidates of the same party as former governors received a lower share of votes when the latter were criminally investigated for corruption. Importantly, this effect is robust even after controlling for corruption scandals, or the degree to which a governor is associated with corruption. This finding suggests that involvement in a trial directly impacts co-partisans, and that such effect is distinct from accusations of corruption. I argue that candidates to legislative seats in Mexico are, in a way, tried by voters and found to be "guilty by association."

I conclude the paper by suggesting that this "guilt by association" is more than just a by-product of the criminal behavior of one politician: it is also a phenomena that shows how democratic practices (judicial trials and elections) can reinforce each other. Furthermore,

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[1]Becker 2000.

[2]Ang 2017.

when the effects of corruption-related trials extend to other members of the party that are not directly involved, party structures might be incentivized to monitor the behavior of other members. In a country like Mexico, where citizens are worn out by constant scandals and prevailing impunity, and where most of the literature would predict apathy or cynicism, this phenomena sheds a light of democratic hope.

2   Existing research

When do voters punish corrupt behavior and how do they do so? In democracies, voters can rely on elections to serve as the main institutional mechanisms to hold corrupt politicians accountable. Free and fair elections are a popular procedure, albeit a diffuse and somewhat weak one, through which citizens can either hire (elect) or fire (not reelect) public officials.[3] In elections, voters have the opportunity to revise the government's actions and decide whether such governments should be punished for their poor performance or allowed to continue to govern.[4]

However, elections can be diffuse or weak mechanism of accountability. They are diffuse because voters must often consider a multiplicity of topics in a single election. Voters might have different priorities when it comes to evaluating politicians,[5] or even different conceptions of what corruption is.[6] Furthermore, elections occur at specific points in time, enabling politicians to group "unpopular with popular actions"[7] and avoid punishment for the former ones. Elections are a weak mechanism because voting is, after all, choosing a candidate from a fixed menu of options that are not guaranteed to provide a good or universally better alternative. Vote choice is better understood not only as a function of the

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[3]Manin, Przeworski, and Stokes 1999; Adsera, Boix, and Payne 2003.

[4]See Przeworski, Stokes, and Manin 1999; Grzymala-Busse 2007.

[5]Cheibub and Przeworski 1999.

[6]See, for example, Redlawsk and McCann 2005.

[7]Ferejohn 1999.

incumbent's performance and what the rest of the politicians can offer (and how credible such offer is) to the electorate.[8]

But, how are citizens supposed to hold politicians accountable unless they know who has done what? By themselves, elections cannot guarantee that voters will be able to punish corrupt individuals. Corruption, particularly when it is illegal, is often kept hidden, so voters will need information about the politicians' actions and performance while in power. Indeed, scholars have found that learning about malfeasance of politicians decreases vote intention for those candidates,[9] although this might be mediated by factors such as risk propensity[10]or degree of coverage in the media.[11] Research has also found evidence that information on malfeasance negatively affects campaigning strategies and reelection rates[12], even when such information is randomly disseminated.[13]

Despite the fact that information on the politician's behavior is necessary, it is not a sufficient condition for electoral accountability. In fact, its effects seem to be mediated by the context in which the voter operates and makes decisions. The literature has identified a point of saturation in which the voters become somewhat resilient to the wrongdoings of politicians, and stop punishing them electorally.[14] Furthermore, practices such as clientelism and patronage can prevent voters from freely exercising their right to choose, further weakening the link between information and electoral accountability. Studies of clientelism in Japan and Mexico have shown that clientelistic practices gives incumbents

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[8]Maravall 1999.

[9]Chong et al. 2015.

[10]Morgenstern and Zechmeister 2001.

[11]Chang, Golden, and Hill 2010.

[12]Rennó 2008.

[13]Ferraz and Finan 2008.

[14]Corruption scandals are also not universally damaging for the voters. In a paper studying the Spanish housing boom and the ensuing rise in scandals, Barberá et al found that voters are willing to reward corruption if it is beneficial for them. In another experimental study, Klasjna and Tucker find that voters in highly corrupt societies are only willing to punish corruption if the state of the economy is also poor. See Fernández-Vázquez, Barberá, and Rivero 2016; Klašnja and Tucker 2013.

an excessive advantage,[15] while also deteriorating the quality of opposition,[16] and even rendering it incapable of positioning themselves as clear alternative in terms of differentiated policy proposals.[17]

In addition, research has also found that corruption scandals erode the links between decrease politicians and citizens, and that this impacts behavior such as turnout. Corruption scandals deteriorate the trust in the specific actors involved or accused of malfeasance, as well as in institutions and the political process as a whole.[18] The literature has also found that the more knowledge of corruption there is, citizens' cynicism increases and they turn out to vote less frequently. The correlation between corruption and depressed turnout has been a consistent result across democracies[19] and, importantly for this paper, it has been documented in Mexico.[20]

If elections are the citizen's tool to hold politicians accountable, criminally prosecuting them is the state's tool for doing so. After all, corruption in liberal states is not only about letting voters down, but also about public bureaucrats exceeding their capacities and [illegally] abusing their public office for private gain. These state-led efforts to bring politicians into justice can have positive effects in public trust.[21] More generally, the perception that the government is efficiently fighting corruption can also positively impact trust in institutions.[22]

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[15]See Scheiner 2006 and Magaloni 2006.

[16]Since the opposition cannot gain government expertise, its quality decreases Morgenstern and Zechmeister 2001.

[17]Grzymala-Busse 2007.

[18]See Bowler and Karp 2004. Similarly as with vote choice, citizens can reach a point of 'scandal fatigue' in which a single scandal does not have large effects in satisfaction with democracy Kumlin and Esaiasson 2012.

[19]Stockemer, LaMontagne, and Scruggs 2013.

[20]McCann and Domínguez 1998; Chong et al. 2015.

[21]Chandler 2006 for a Bosnia case study

[22]For evidence on China, Japan, and South Korea, see Kim and Voorhees 2011.

Voting out corrupt politicians and prosecuting them are different accountability mechanisms, but they do not operate independently from each other. Whereas elections are diffuse because of the reasons listed above, a criminal trial is focused because charges, responsibilities, and penalties in case of guilt must be specified in the accusations. But this specificity bounds only the legal prosecution, not its effects on the actions and votes of the citizens. In this way, besides the immediate and direct effects of prosecution (for example, being found guilty and jailed), prosecution can affect voting behavior: there are documented effects of loss of support from voters in cases where the accused politicians be able and willing to run again for office.[23] Furthermore, a comparison of the effect of corruption scandals and corruption prosecution found that the latter had a much larger impact in the voter's choice to reelect politicians.[24]

3   "Guilty by association"

My argument directly speaks to this literature by claiming that the effects of criminal prosecution are not only limited to those legally involved in criminal proceedings. Instead, I argue that elections are an arena where voters can punish individuals associated, however loosely, with the allegedly or legally proven criminal politician. The legal specificity of corruption prosecution cannot contain the responses of voters, who might take the information provided by the criminal cases, and use it to punish candidates in electoral races where criminal politicians might not even be participating. I refer to this mechanism as finding candidates to be "guilty by association." But why are voters transferring this guilt, and how can we observe it?

I argue that for citizens in political systems that are riddled with corruption, criminal trials fall short of fulfilling the voter's demand for punishment. To understand this demand for

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[23]For evidence on the US, see Peters and Welch 1980.

[24]Costas-Pérez, Solé-Ollé, and Sorribas-Navarro 2012.

punishment, I draw from psychological theories that have suggested that wrongdoings trigger individual desires to right a wrong (*just deserts theory*),[25] or that individuals expect retribution to prevent future wrongdoings.[26] In any case, my argument suggest that in countries where corruption abounds, a criminal trial is not punishment *enough*. This means that arresting and prosecuting a corrupt politician is not perceived to either right the wrongs caused by corruption, or as sufficient to deter future malfeasance. Citizens, then, are unsatisfied with trials as a response to the abuse of a public office, and turn to elections as another method to satisfy this demand.

Some of the language used by the press illustrates the idea that prosecuting a criminal governor is not enough to right the moral wrong. For example, moments after the arrest of a former governor, a picture was taken. The picture shows him on the back of a van next to a policeman, his hands hidden from the picture but positioned in an odd way that suggests he is cuffed. He is smiling. An op-ed written said of that picture:

> The smile of Javier Duarte is obscene and murky. Obscene because where there should be contrition, there is mockery, and murky because it shows the teeth as strategy. Standing before justice, with his head held high, he shows off as though he is untouchable; behind closed doors, he informs the network of accomplices that enabled his enrichment with the voracity of a pirate that there is nothing to worry about, that nothing will happen while he feels protected.[27]

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[25]Research has shown that individuals perceive differently an inflicted harm than harm inflicted *intentionally*. The latter is received with moral outrage and the desire for retribution. See Darley and Pittman 2003 For an experimental approach on the different considerations that constitute appropriate or just punishment, see Scott et al. 2001.

[26]This latter theory follows the economic approach to crime, proposing that individuals want to prevent future malfeasance by increasing the cost of poor behavior. Although these two motivations are discussed at length by the literature, empirical evidence suggests that most individuals demand punishment based on the just deserts theory, not the economic rational one. See Carlsmith, Darley, and Robinson 2002.

[27]"La sonrisa de Javier Duarte es obscena y tenebrosa. Obscena porque donde debiera haber arrepentimiento hay burla, y tenebrosa porque Duarte muestra los dientes como estrategia. Ante la justicia, con la barbilla en alto, se pavonea como si fuera intocable; puertas adentro, le dice a la red de cómplices que le permitió enriquecerse con la voracidad de un pirata que no hay de qué preocuparse, que nada sucederá mientras se sienta protegido." Diego Fonseca (Apr. 2017). "Opinión | Javier Duarte y la sonrisa obscena de los políticos en México". es-MX. in: *The New York Times*. ISSN: 0362-4331. URL: http://tinyurl.com/y58psmk5 (visited on 03/07/2019).

This quote suggests that the arrest is not enough, because nothing will happen. First, the governor does not even regret stealing or abusing. But more importantly, the system will remain the same, enabling personal enrichment and protecting those who are caught.[28] The idea that political elites have an agreement to protect each other is shared among scholars as well.[29] I argue that under these circumstances of high corruption, trials are seen not as fulfilling a punitive role, but as further evidence of networks of corruption. It is this latter idea, I argue, what connects criminal corruption of one individual to the electoral punishment of entire political parties. Citizens view these abuses and the criminal proceedings triggered by them, and they transfer guilt to individuals in other institutions, like political parties, that enabled or even participated in such abuses.

How do voters punish these politicians considered to be "guilty by association"? Or put differently, how can we empirically evaluate the existence of the mechanism set forth in this paper? I propose that reactions to criminal trials can trigger two distinct behaviors. First, it could be that voters view these trials as evidence of a network of protection conformed by fellow members of their parties. In such case, I expect citizens to cast less votes, on average, by fellow members of the party of the criminal politician. Furthermore, this effect should be patent even in non-gubernatorial races, further suggesting that the spillover effects affect politicians in different offices. I therefore propose the next hypothesis:

> **Hypothesis 1**: Legislative candidates of the parties of criminal governors will suffer electoral losses larger than legislative candidates of the party of non-criminal governors.

On the other hand, it could be that voters believe that the entire political system is enabling such malfeasance. In this case, I argue that it is likely that voters will punish politicians by

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[28]Similar statements were made after the leader of the Teachers Union, widely known for her corrupt practices, was arrested. See: Denisse Dresser et al. (Mar. 2013). "Análisis: 5 artículos de opinión sobre caída de Elba Esther - Aristegui Noticias". In: *AristeguiNoticias, website*. URL: http://tinyurl.com/y2byo6gl (visited on 03/14/2019).

[29]María Amparo Casar (Nov. 2014). "Tapaos los unos a los otros". es. In: *Excélsior*. URL: http://tinyurl.com/yyq2el7a (visited on 03/14/2019).

not voting at all. This argument follows existing literature that proposes that widespread corruption increases cynicism among voters, thus depressing turnout rates. However, my argument further specifies that, if this mechanism were indeed operating, its effects would be higher in states where criminal governors operated. Thus, I propose:

> **Hypothesis 2**: Legislative candidates in states of criminal governors will have a lower turnout rate than legislative races in states with no criminal governors.

4   Empirical strategy

To illustrate the existence of this "guilt by association" mechanism, I draw from evidence of the impact that gubernatorial criminal prosecutions have in district-level legislative electoral results. I leverage temporal and subnational variation to present a difference-in-difference design,[30] which compares a set of units at two points in time. Some of the units will have experienced a treatment between time 1 and time 2. By comparing how the outcome of interest changed across time among treated units to the change across time among untreated units, we can identify an effect of the treatment in the outcome. Thus, I compare electoral outcomes of legislative districts where former governors have been involved in a criminal corruption case to the electoral outcomes of legislative districts with no involvement in a criminal corruption case. If there is evidence of a difference in the *change* of the electoral outcomes among districts between two different elections, then this difference is supportive of the existence of "guilt by association."

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[30]Lechner 2011.

I present evidence from the 2015 and 2018 Mexican elections for deputies.[31] I choose this case because the relationships among members of the political elite facilitate the association between them, making it a most likely case to observe this association. Since the Mexican democratic transition and the subsequent decentralization policies, governors have amassed access to economic and electoral resources with very little oversight. Governors receive considerable amounts of federal money, and command almost all the bureaucratic posts in their state. As a result, they are the chief directors of politics in their state, and a subsequent implication, documented by the literature[32] is that they exert considerable control on the federal legislators representing the state, particularly those who are co-partisans.

Following the hypotheses proposed above, I study two relevant outcomes of interest. The first relevant outcome follows from hypothesis 1, and is the proportion of votes per district in the legislative elections of 2015 and 2018 cast in favor of the party of the governor who was in power while the elections of 2015 took place. As an example, take the state of Coahuila, where Rubén Moreira from the PRI governed from 2011 until 2017. Because of this, the outcome of interest of all districts in Coahuila is the proportion of votes in favor of the PRI in the legislative elections of 2018. The second outcome of interest follows hypothesis 2, and it is the electoral turnout in a given legislative district.

4.1   Criminal governors

The relevant independent variable, or treatment, is whether the governor of a state was involved in a criminal corruption case between 2015 and 2018. Importantly, governors in Mexico enjoy immunity from prosecution, so they can only be subjected to a criminal

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[31]Although Mexico has a mixed electoral system, voters only cast a single ballot for deputies. That is, the lower chamber is composed of 300 plurality representatives in single-member districts (SMD), and 200 proportional representation (PR) representatives in 40 circumscriptions. Voters cast a single ballot expressing a preference for a candidate in their district, and that same vote is then aggregated to establish party quotas for the PR representatives.

[32]Langston 2010; Rosas and Langston 2011.

process after a political trial,[33] or once they have left their office. Out of the 32 federal entities, I identified governors who had been in power during or after the 2015 election, and that had finished their terms before the 2018 elections. Out of the 32 governors that fulfilled this requirements, 5 (in 4 states) had been arrested or issued an arrest warrant due to involvement in corrupt activities.[34] Figure 1 shows the timing of the involvement of these governors in criminal corruption cases.

Figure 1: Timeline of involvement of governors in criminal corruption cases.
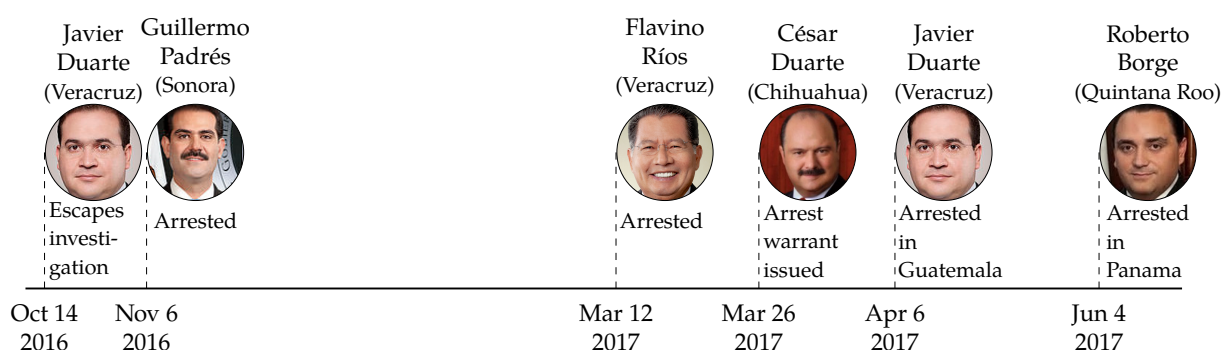
The first governor from the left, Javier Duarte, has been dubbed "the worst governor in history."[35] Javier Duarte, a PRI affiliated politician, won the governorship of Veracruz in 2010. From the very beginning of his administration, corruption made headlines both in Veracruz and in the federal newspapers and media outlets. For example, in 2012, two of his collaborators were arrested while traveling on the state-owned aircraft carrying suitcases

[33]It is important to note that although legally possible, no governor in modern Mexico has ever been stripped from immunity through a political trial (*juicio de desafuero*).

[34]These numbers do not include Tomás Yarrington or Eugenio Hernández, former governors of Tamaulipas who was arrested in 2017. Both governors left their office before 2015. It does not include Rodrigo Medina either, who was arrested in 2017, but released within hours. I chose not to include him because there was no criminal proceeding open against him.

[35]See David Agren (Sept. 2018). "Mexico: 'worst governor in history' sentenced to nine years for corruption". en-GB. in: *The Guardian*. ISSN: 0261-3077. URL: http://tinyurl.com/ybfnc7tq (visited on 01/16/2019).

with over 25 million pesos in cash.[36] Throughout his tenure, Veracruz became one of the most violent entities in the country, as mass graves were frequently found, and 17 journalists were murdered while Duarte was governor. But the largest corruption scandal occurred in May of 2016, when a news portal (*Animal Político*) published that Duarte and members of his government had been embezzling millions of dollars using an ambitious network of shell companies.[37]

Hit by this well-documented story that sparked the public's attention, Duarte stepped down just a few weeks shy of the end of his administration[38] so that he could "face this accusations."[39] Two days after Javier Duarte's resignation, he vanished. The criminal investigation into his administration continued, and he was finally found and arrested under charges of criminal association and money laundering in Guatemala in April of 2017. He was found guilty and sentenced to nine years in prison in September of 2018.[40]

In the meantime, when Javier Duarte stepped down, his Secretary of Government Flavino Ríos, was appointed interim governor. After Duarte fled, Ríos was accussed of enabling his escape and helping a fugitive. Ríos was arrested in March of 2017[41] and sentenced to one year in prison. Thus, although Ríos was not the governor in 2015 nor was he elected, I have included his case in the timeline shown in figure 1. No other interim of substitute governor from the period of interest has been involved in a criminal investigation.

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[36]Just under 2 million dollars at the time. See Animal Político (Jan. 2012). "Retienen avión de Javier Duarte con 25 mdp en efectivo". es-ES. in: *Animal Político*. URL: http://tinyurl.com/y8k5ylfr (visited on 01/16/2019).

[37]See Animal Político (May 2016). "Empresas Fantasma de Veracruz". es. In: URL: http://tinyurl.com/y7yhep5m (visited on 01/16/2019).

[38]This also happened just a couple of weeks after the PRI suspended his membership, the first time that the PRI had done that with a sitting governor.

[39]Interview with Loret de Mola, quoted on El Universal (redacción) (Oct. 2016). "Anuncia Javier Duarte que pedirá licencia como gobernador de Veracruz". es. In: *El Universal*. URL: http://tinyurl.com/yc2zd52d (visited on 01/16/2019).

[40]David Agren (Sept. 2018). "Mexico: 'worst governor in history' sentenced to nine years for corruption". en-GB. in: *The Guardian*. ISSN: 0261-3077. URL: http://tinyurl.com/ybfnc7tq (visited on 01/16/2019).

[41]Iván Ríos (Mar. 2017). "Dictan un año de prisión a Flavino Ríos, acusado de encubrir a Duarte". In: *El Financiero*. URL: http://tinyurl.com/ydyb46eg (visited on 01/16/2019).

The second event depicted in the timeline is Guillermo Padrés' (PAN) arrest. Much as Javier Duarte, Padrés' administration was surrounded by scandal. Most notably, he was accused of building an irregular dam in his ranch that allegedly caused the water supply of the town nearby to decrease considerably.[42] Padrés finished his term in late 2015 and was issued an arrest warrant less than a year after that. He was being accused of fiscal fraud and money laundering. In November of 2016, he and his son, who also had an arrest warrant, turned themselves to the authorities.[43]

César Duarte (also from the PRI, no relation to Javier Duarte), governor of Chihuahua from 2010 until 2016, is the fourth governor that was involved in a criminal corruption case. In March 2017, the federal authorities accused the members of César Duarte's cabinet[44] of embezzlement and tax fraud, and issued arrests warrants. Simultaneously, Duarte's successor, Javier Corral, announced that an arrest warrant for the former governor had been issued, and that César Duarte was now a fugitive likely hiding in the United States.[45] The judicial search for César Duarte spread and Interpol issued a red notice against him. He has been allegedly seen in the US,[46] but as of the day this draft was written, he was still at large.

The former governor of Quintana Roo Roberto "Beto" Borge–also a PRI member– is the final governor accused of fraud and embezzlement charges. While in power, Borge and close allies of his were accused of forging documentation regarding made-up labor cases against unsuspected land owners, cases that ended in multi-million fines. They would then send the judicial police to charge this fines, and when landowners either refused

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[42]Months after the dam irregularities were reported by national newspapers, Padrés had to destroy the dam. See Ernesto Méndez (Sept. 2014). "Guillermo Padrés tiene rancho con presa incluida". es. In: *Excélsior*. URL: http://tinyurl.com/ydcl5wug (visited on 01/16/2019) and **animal˙gobernador˙2015**.

[43]He was released in February of 2019 after posting bail. His trial is still ongoing.

[44]Luis Fierro (Mar. 2017). "Encarcelan a ex alcalde Javier Garfio por peculado". es. In: *El Universal*. URL: http://tinyurl.com/yb2fwmno (visited on 01/16/2019).

[45]El Diario (Mar. 2017). "Huyó Duarte a El Paso para evitar arresto: Corral - El Diario". es. In: *El Diario de Juárez*. URL: http://tinyurl.com/ya3h547j (visited on 01/16/2019).

[46]BBC (Feb. 2018). "Chihuahua ex-governor's bison seized". en-GB. in: URL: http://tinyurl.com/y8jhsnmc (visited on 01/16/2019).

to pay or claimed to be in the dark, the land would be taken in lieu of the fine. In this way, Borge and his cronies plundered land in the coveted Riviera Maya, a famous tourist corridor.[47] Borge left his office in September of 2016, and was accused of the irregular acquisition of state debt and embezzlement.[48] Beto Borge was arrested in Panama in 2017 and extradited to Mexico in January of 2018.

4.2   Model and identification strategy

Based on these variables, we can write the empirical strategy in model form:

$$Vote\_for\_gov_{d,s,y} = \mu_d + \gamma * criminal_s + \delta * Y\_2018 + \tau(criminal_e * Y\_2018) + \sum \beta \mathbf{X}_{d,e,y} + \epsilon_{d,e,y}$$

The main dependent variable, or outcome of interest $Vote\_for\_gov_{d,s,y}$ is the proportion of votes cast in favor for the governor's party in district d, state s, at time t. As discussed in the previous section, however, my argument also suggests that criminal trials might shape electoral behavior other than votes for the governing party, which is why I also conduct similar estimations using electoral turnout by district as a dependent variable. The first set of estimators, μ_d are district-specific intercepts, which capture the average support received by a party in each district. The variable $criminal_s$ is an indicator variable that takes the value of 1 if the governor of state s was involved in a criminal proceeding and 0 otherwise, and the term Y_2018 also stands for an indicator that takes the value of 1 if the election observed is on 2018, and 0 if not.

The main estimator of interest is τ, which is associated to the interaction between the geographic variation, $criminal_e$ and the time variation, Y_2018. This interaction will take the value of 1 if the observed electoral result occurred in a state with a corrupt governor after the governor was involved in a criminal proceeding. Following the "guilty by association"

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[47]Mariel Ibarra and Silber Meza (July 2016). "Los piratas de Borge: El saqueo de bienes institucionalizado en Quintana Roo". es. In: *Expansión*. URL: http://tinyurl.com/y9ce746d (visited on 01/16/2019).

[48]Fátima Vázquez (Dec. 2016). "Indagarán deuda de 20 mil mdp de Borge; hallan desvío en empresa estatal". es. In: *Excélsior*. URL: http://tinyurl.com/yc9u5oxh (visited on 01/16/2019).

mechanism, specifically in hypothesis 1, τ should be negative and statistically distinguishable from 0: it is precisely states where the governor was involved in a criminal corruption case where we should expect a higher decrease in votes cast for the party of the governor in legislative elections of 2018.

The final term $\mathbf{X}_{d,s,y}$ captures a number of control variables. First, and most importantly, it could be that whatever behavioral impact corrupt governors might have is not a result of their criminalization, but rather of corruption itself. If this were true, the estimator of interest (τ) could be "picking up" the effects of corrupt, or even very corrupt governors. I address this by adding a *Scandal* measure: a variable that captures a given governor's involvement in a scandal between 2015 and 2018. For this, I draw from google trends,[49] a tool that presents data on the relative frequency that a particular term has been searched in a specific geographic area and time period. For each governor in the dataset, I obtained weekly searches of their name in Mexico from January 2016 until June 2018, the period between elections. Figure 2 shows two examples of these trends, Sonora's governor Padrés and Mexico's city mayor Mancera. As can be seen, governor Padres' searches spike right around the time he was arrested, whereas Mancera maintains a somewhat more constant interest among google users.

I take advantage of these spikes in interest to capture the existence of scandals of a governor within the period of interest. I do so by calculating the distance between the median searches of their name and the maximum possible search frequency (100)–a distance that would be lower among governors that are frequently searched and higher among governors who sparked sudden interest among citizens. Of course, this gives us a measure of a spike in interest within each governor, and is not necessarily comparable across governors. After all, searches of governors could vary across states, something that would not be captured with this measure. To incorporate variation across states, I also obtained the relative frequency of the search of the term *gobernador* (governor) in each state.

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[49]See Google. *The homepage explained - Trends Help*. URL: https://support.google.com/trends/answer/6248105?hl=en&ref_topic=6248052 (visited on 03/05/2019).

Figure 2: Relative frequency of Google search terms for two governors

Guillermo Padrés (Sonora)

Miguel Ángel Mancera (CDMX)
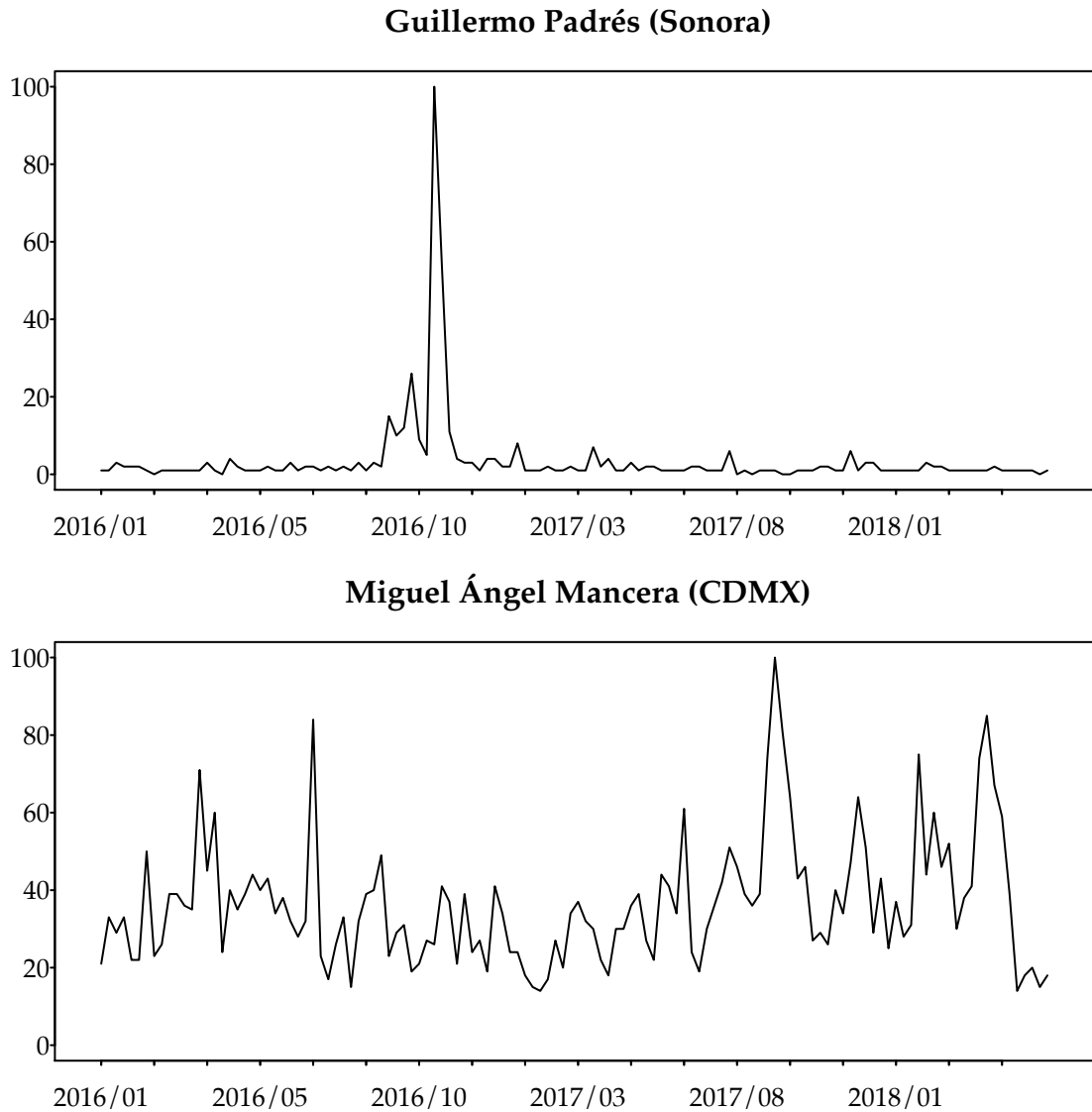
Plot 3 shows the relationship between these peaks in scandal (horizontal axis) and the interest across states, measured as the relative frequency of the search for the term "governor" by state (vertical axis), both scores normalized to vary between 0 and 1. The gray markers show those governors who were not involved in a criminal trial in the period of interest, whereas the black markers show those who were. As expected, criminal governors score high on peakedness, and some spark more interest in their states relative to other governors. Thus, I interacted these two measures and present the resulting score as a measure of *scandal*.

Figure 3: Two dimensions of scandal
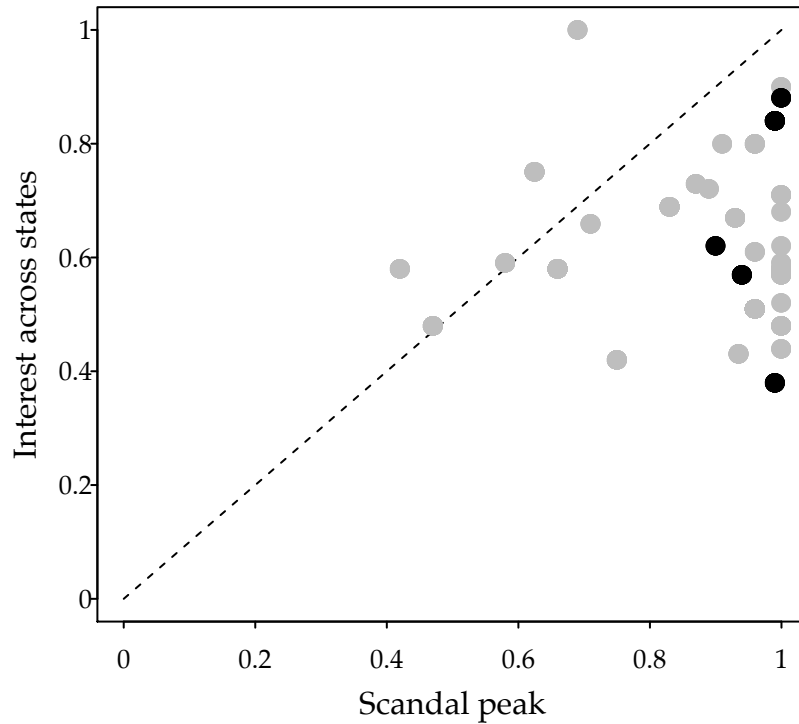
I also include two socioeconomic variables that could explain voting behavior. First, it could be that voters are more willing to vote a certain way, for example punishing those they associate with corruption, if they think that voting matters. This explanation, often referred to as "political efficacy," is mostly related to the institutions that are set in place that might improve or worsen the translation from votes to desired outcomes[50]. Since institutions are quite similar across all states, I instead control for the population of each district (logged). The underlying logic here is that larger populations should decrease the sense of political efficacy, as one's votes is marginally less relevant for the electoral outcome. I also control for the GDP at the state level: it is likely that states with predatory

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[50]Kostadinova 2009.

or corrupt governors have a lower GDP.[51] In addition, clientelistic networks that distort vote choice are also more common among poorer constituencies[52]

Finally, I address two alternative explanations that could also be explaining the legislative outcomes as well as prosecution. First, I control for the average *economic growth* of each state in the year before the elections. The inclusion of this variable accounts for the possibility that governors that perform poorly are less likely to draw electoral support, and they might also be more prone to prosecution due to miss-management of state resources. Second, I control for violence in each state. This is a crucial possible confounder particularly in the case of Mexico, where drug-related violence has increased everywhere, but not at the same rate. In particular, organized crime in Mexico is so closely related to politicians that scholars agree that sometimes it is hard to disentangle structures of drug trafficking and structures of the State.[53] Thus, it could be that governors that allow organized crime to operate freely are both more likely to be arrested and to lose support from voters. I control for this possibility by controlling for the *homicides* per 100,000 people committed in the state in the first half of the year.[54]

Before presenting the estimations, I discuss the crucial assumptions that underpin the difference-in-difference approach. The first assumption, often referred to as no spillover effects, points out that the treatment in one unit should not affect the outcome in other units. This assumption is important for τ to be an unbiased estimate of the effect of criminal trials in electoral outcomes. Although it is likely that this assumption does not hold in the data used here–after all, criminal politicians in one state are observed by voters in other states– I argue that any spillover would decrease the difference between treated and non-treated units, biasing τ towards 0, and making it even harder to find an effect of trials

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[51]Corruption has often thought to hinder economic growth, particularly in places with dysfunctional or no democratic institutions at all, although some authors have found that corruption can actually increase governmental efficiency. See Drury, Krieckhaus, and Lusztig 2006 and Khan 1996

[52]Weitz-Shapiro 2012, Medina and Stokes 2007.

[53]See Bataillon 2015 The collusion between organized crime and state coercive forces, like the police, is widely documented in the disappearance of the 43 Ayotzinapa students. See Illades 2015.

[54]Codebook and descriptive statistics can be seen in the Appendix, see Table A.

in electoral outcomes *even when there is one*. Therefore, the estimations that I present here can be seen as a floor or minimum effect of criminal trials on electoral outcomes.

Secondly, any difference-in-difference design also assumes that absent any treatment, the change of the legislative outcomes of treated and non-treated units should be parallel. Put differently, this assumption states that if there had been no governors involved in a corruption scandal, any difference in legislative outcomes from 2015 to 2018 could not be attributed to state effects other than the ones included in the regression analysis. This is an often hard assumption to fulfill, but I present an analysis that could help us assess how plausible is this assumption. The test follows the next logic: if there were any relevant systematic unobserved differences regarding states that ended up prosecuting their governors and states that did not, then these systematic differences would have an effect in the outcomes of the legislative elections in 2015. That is, we would be able to observe different electoral results in states that prosecuted and states that did not prosecute *even before the prosecutions took place*. Table B in the Appendix show a series of estimations of the electoral results in 2015, including all the relevant regressors, and shows no systematic differences between states with *criminal* governors and states with no criminal governors.[55]

4.3   The electoral costs of criminal corruption

I present the first set of results in table 1. The outcome variable, as discussed, is the proportion of votes cast in favor of the party of the governor. The data used here is panel data where we observe the same district twice in time, and the electoral districts are perfectly nested within states. To avoid biased estimators, I added district fixed effects in all specifications, state fixed effects in model 4, and party of the governor fixed effects in model 5. To avoid the issue of correlated errors (after all, districts within states are likely not independent from each other), I estimated the model using a multilevel approach. This approach

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[55]Of course, this test is limited and shows merely no systematic differences in electoral outcomes before prosecutions.

estimates the fixed effects as coefficients from the same underlying distribution, and establishes the correlation structure between errors of the fixed effects based on grouping variables (for example, districts or states).

The first row shows the estimate for the indicator variable that takes the value of 1 if the state s had a governor who was involved in a criminal scandal. The table shows that states whose governor was involved in a criminal trial received more support, on average, for the governor's party in legislative elections. This effect, however, is not statistically distinguishable from 0 once we control for state-specific effects The second row shows the average change in votes supporting the governor's party in 2018 compared to the ones obtained in 2015. As can be seen, the popularity of the governor's party seems to have plummeted from one legislative election to the next: on average, the governor's party lost around 13 percentage points in these three years (significant at the 99% level across all specifications).

The third line of results shows the coefficient associated to the interaction effect, and the results support the argument set forth here. As discussed above, this coefficient captures the additional effect of having a governor involved in a criminal corruption case once his involvement occurred. This coefficient, I argued, should be negative. After all, if "guilt by association" exists, it will manifest in a loss of votes for the governor's party in the elections of 2018. The results show indeed that this happened: districts in states with criminal governors suffered a loss of 6% to 7% of their vote share. This is in addition to the loss of 13 percentage points suffered by the parties of all ruling governors. From the table of summary statistics (table A) we can see that the average proportion of legislative votes cast in favor of the governor's party is 0.25, suggesting that this effect is considerable.

Importantly, this effect is slightly smaller, but still statistically significant, once we control for the *scandal* surrounding a given governor. Model 3 includes this covariate both as an additive effect and as an interaction with the indicator variable for year 2018. I included this covariate following the difference in difference approach precisely because *scandal* is a possible alternative treatment of the units (districts). That is, if what is driving the

Table 1: Criminal governors and their effects on legislative elections (hierarchical estimation)

	Votes issued for legislative candidates of governor party				
	Model 1	Model 2	Model 3	Model 4	Model 5
Criminal	0.030*	0.027*	0.048***	0.037	0.008
	(0.016)	(0.016)	(0.018)	(0.040)	(0.014)
Y_2018	−0.130***	−0.139***	−0.098***	−0.129***	−0.129***
	(0.006)	(0.006)	(0.018)	(0.006)	(0.005)
*Criminal*Y_2018*	−0.069***	−0.070***	−0.056***	−0.068***	−0.069***
	(0.014)	(0.014)	(0.015)	(0.014)	(0.014)
Scandal			−0.117***		
			(0.041)		
*Scandal*Y_2018*			−0.073**		
			(0.032)		
Population (logged)	0.114***	0.116***	0.117***	0.072***	0.088***
	(0.026)	(0.025)	(0.025)	(0.022)	(0.024)
State GDP (logged)	−0.007	−0.004	−0.016**	0.010	−0.007
	(0.006)	(0.006)	(0.007)	(0.018)	(0.006)
Economic growth		−0.004	−0.004		
		(0.005)	(0.005)		
Homicides		0.003***	0.002		
		(0.001)	(0.001)		
Constant	−1.058***	−1.140***	−0.917***	−0.740**	−0.766**
	(0.346)	(0.344)	(0.346)	(0.365)	(0.327)
FE district	✓	✓	✓	✓	✓
FE state				✓	
FE party					✓
Observations	600	600	600	600	600

*Note:* *p<0.1; **p<0.05; ***p<0.01

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loss of support in 2018 is the scandal of corruption, rather than its criminalization, then scandal would operate only in 2018. The table shows, first, that the legislative candidates of the party of governors that turned out to be scandalous were weaker to begin with, as evidenced by the -11% share of votes received (coefficient associated with the variable *scandal*). Furthermore, once the scandals broke out said governors cost, on average, 9% to their legislative candidates. These estimations are consistent with expectations of how scandals operate among voters, but they nevertheless allow me to show that the association between criminalization and vote choice holds even after controlling for the scandal surrounding a governor.

Only one of the four control variables included in the models is statistically significant: population in a district. This coefficient is also positive, suggesting that larger populations are less likely to punish legislators of the party of the candidate, a finding consistent with the political efficacy hypothesis discussed above (although I am cautious of reading too much into this particular coefficient). *Homicides* per 100,000 people is statistically significant but positive in model 2, suggesting that more homicides would leak to larger vote shares for the governor's party. That effect disappears once we add controls for *scandal*. The economic control variables, *state GDP* and *economic growth*, seem to have no effect, as only the latter is statistically significant in one estimation.[56]

I show the substantive effects of being criminally investigated in figure 4.3. The horizontal axis indicates an increase in population (measured in hundreds of thousands), and the vertical axis shows the predicted vote for the party of the governor. The markers in gray are the predictions for districts with no criminal investigation, and the black markers shows predictions and their 95% confidence interval for districts with an investigated governor.

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[56]Table D of the Appendix shows similar estimations but only among states that conducted gubernatorial elections between 2015 and 2018. Arguably, this table presents a more appropriate counterfactual because states that had no elections were not as likely to observe a criminal governor than those who did. The substantive conclusions of the analysis remain.

Figure 4: Predicted vote for governor party in 2018 legislative elections
(Mean and 95% C.I.)
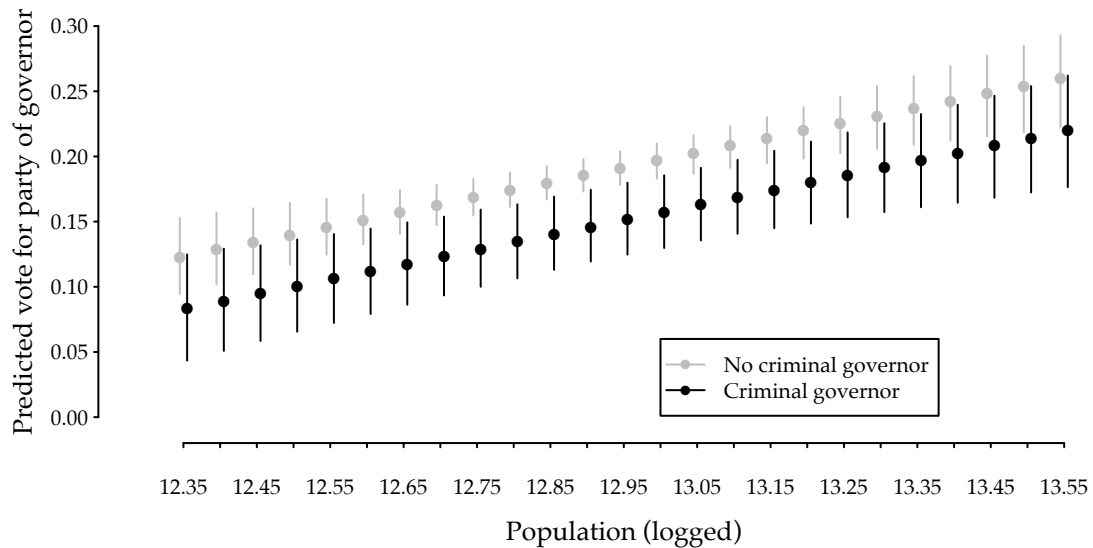
Note: Predictions estimated based on model 1 of table 1. Bootstrapped predictions for electoral results in 2018, with other covariates set at their means.

Before discussing the effects of judicial processes on other voting behavior, I address two possible alternative interpretations of the evidence presented here. First, it could be that precisely because legislators are close to the governors, they themselves are suspected or openly accused of corruption. After all, most politicians who are corrupt are corrupt not in spite of their close political allies, but sometimes precisely because they are enabled by them. Thus, it could be that legislators are not "guilty by association," but guilty of conspiring or colluding. Yet this particular interpretation is unlikely: since the governors of interest were in power in 2015 but not in 2018, they were, on average, closer to the legislators in the first election. Relatedly, since there is no reelection, any electoral punishment received cannot be (systematically) attributed to the performance of the candidates as federal legislators.

Secondly, it could be that these effects are party-specific. Of the 6 governors in 5 states that were involved in a criminal process, 5 were from the PRI. It is not rare to find op-eds or columns blaming the PRI-led government of president Enrique Peña Nieto of allowing

governors of this party to enrich themselves at the expense of taxpayers,[57] and even the party leadership created a commission to study the electoral defeat in the 2018 elections. The commission published a document in which they allegedly blamed the corruption perpetrated or enabled by political leaders.[58] Because of this, it is possible that the effects picked up by the interaction term in table 1 are not reflective of the investigations themselves, but rather, that they are a by-product of the party of the governors that were investigated. In short, it could be that these terms are picking up the average decrease in votes cast for the PRI, as opposed to the average decrease in votes for the party of the governor.

I analyze the plausibility of this interpretation by looking at the electoral results of PRI legislative candidates in the country and PAN results separately. These estimations will tell us if there are reasons to think that the effect can be attributed to the national-level crisis that the PRI experiences in 2018. Two possible results would suggest that these findings are indeed party-specific: if PRI candidates lose electoral votes *regardless* of whether they are candidates in districts where the governor was corrupt, and if the effect identified above only holds for the PRI and not the PAN.

Table 2 presents results similar to the ones estimated above but including only states governed by the PRI (models 1 and 2), and only states governed by the PAN (models 3 and 4). The main result holds, as the coefficient associated with the interaction effect, *Criminal*Y_2018* is consistently negative and statistically distinguishable from 0. Importantly, the effect is smaller in size and loses significance (from 99% to 90%) for the PAN governor once controlling for scandal (model 4). I attribute this to the fact that only one unit (Sonora) received the treatment in this subsample, and that the size of the sample itself is

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[57]In a recent deposition, for example, Pena Nieto was directly accused of benefitting from the irregular public contracts approved by César Duarte's government. Redacción 2019.

[58]Quoted in García-Soto 2018.

Table 2: Electoral results by party

	Votes issued for legislative candidates of governor party			
	Model 1	Model 2	Model 3	Model 4
Criminal	−0.003	−0.003	0.083**	0.136***
	(0.014)	(0.014)	(0.040)	(0.038)
Y_2018	−0.134***	−0.140***	−0.073***	−0.160***
	(0.006)	(0.007)	(0.023)	(0.030)
*Criminal*Y_2018*	−0.046***	−0.047***	−0.157***	−0.081*
	(0.013)	(0.013)	(0.042)	(0.044)
Scandal		−0.059		0.677***
		(0.079)		(0.217)
*Scandal*Y_2018*		0.136**		0.468***
		(0.066)		(0.139)
Population (logged)	0.087***	0.086***	−0.095	0.031
	(0.023)	(0.023)	(0.077)	(0.074)
State GDP (logged)	−0.016**	−0.016**	0.150***	−0.065
	(0.006)	(0.007)	(0.038)	(0.061)
Economic growth	−0.002	−0.0001	0.038***	0.040***
	(0.005)	(0.005)	(0.012)	(0.011)
Homicides	−0.002	−0.001	0.002	0.015***
	(0.002)	(0.002)	(0.004)	(0.004)
Constant	−0.565*	−0.558*	−0.486	0.601
	(0.316)	(0.316)	(1.015)	(1.011)
State governor	PRI	PRI	PAN	PAN
FE district	✓	✓	✓	✓
Observations	354	354	109	109
Note:				*p<0.1; **p<0.05; ***p<0.01

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much smaller: only 6 states were governed by the PAN whereas 20 were governed by the PRI.[59]

These results further support the existence of a "guilty by association" phenomena. This is even taking into consideration the fact that the PRI and PAN electoral results were plummeting across the board: the table shows that PRI candidates in PRI-governed states lost an average of 13 percent points in the 2018 elections compared to the candidates that ran for election in 2015, and PAN candidates in PAN-governed states lost between 7% and 16% points (estimations vary greatly, probably because of the small sample size). This result is statistically significant, showing that indeed voters punished the party PRI. Of course, given the outrageous performance of the PRI at the federal-level,[60] we cannot adjudicate this effect solely to the corrupt practices of governors.

4.4   Does criminal corruption affect participation?

In this section, I explore the argument formalized in hypothesis 2: that criminal corruption also shapes electoral behavior understood as attendance to the polls. This hypothesis is consistent with some findings reported in the existing research on corruption. Scholars have found that corruption decreases attendance to the polls in democracies at large[61], and a recent field experiment conducted in Mexico found that informing voters of corruption depressed turnout.[62]However, these findings are not universal. Some researchers

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[59]Table E shows a similar set of estimations but removing Veracruz from the sample. I present this robustness check due to the fact that the Duarte administration and its ensuing incarceration was particularly extreme, both in the amount of mismanaged funds and the outrage provoked among the people. Substantive interpretations do not change, although the average effect associated with the interaction is around 5%.

[60]President Enrique Peña Nieto left the government amidst an economic, social, and security crisis. By the end of 2017, Mexico's public debt had had an accumulated growth of 41% (Fundar 2018, p. 49). By the end of his administration, 53.3 million people lived under the poverty line **ACFP**, more than when he started his tenure. His last year in government was the most violent year ever recorded in Mexico, with over 26,000 murders reported by the end of November Galván 2018.

[61]Stockemer, LaMontagne, and Scruggs 2013.

[62]Chong et al. 2015.

have argued that more corruption should lead to a higher turnout because it can serve as a salient issue that can mobilize voters and help candidates place themselves around issues of transparency or a clean government. Anecdotally, countries with high levels of corruption have enabled extreme right-wing populist leaders like Duterte in the Philippines and Bolsonaro in Brazil, both of which have been able to mobilize important voting blocs. There are reasons, however, to be cautious of the extent to which corruption can serve as a mobilizing force. Dahlberg and Solevid find that this increase in turnout occurs only where corruption is not prevalent.[63]

Ideally this possibility would be investigated using individual data of attendance to the polls and vote choice in 2015 and 2018, as is associated with knowledge of (or opinions about) the criminalization of former governors. To my knowledge, all panel electoral surveys in Mexico are representative at the national level, but not at the state level. Therefore, I look at whether district level voter turnout decreased in districts with criminally involved governors. I present a series of models similar to the ones estimated in table 1, but using electoral turnout as a dependent variable.

Yet table 3 does not support that interpretation. The table shows a series of estimations of total turnout,[64] and we can see that, on average, states with *criminal* governors had lower turnouts than states whose governors were not prosecuted. In addition, the table shows an increase in turnout in 2018 by an around 15% compared to 2015. This is not surprising as presidential elections tend to draw more attention than mid-term elections.

Crucially, the coefficient associated with the interaction term *Criminal*Y_2018* shows that there is no evidence to suggest a depressed turnout rate in those places where governors were criminally investigated. Of course, this lack of statistical significance could be the result of a small effect, undetectable in a sample of 600 districts.[65] Interestingly, however,

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[63]Dahlberg and Solevid 2016.

[64]Total turnout is defined as number of people that turned out to vote as a proportion of the registered voters (*lista nominal*).

[65]Gelman and Weakliem 2009.

Table 3: Criminal governors and their effects on turnout (hierarchical estimation)

	Effective turnout for legislative elections				
	Model 1	Model 2	Model 3	Model 4	Model 5
Criminal	−0.050***	−0.048***	−0.057***	−0.064**	−0.052***
	(0.014)	(0.013)	(0.014)	(0.031)	(0.013)
Y_2018	0.156***	0.170***	0.105***	0.158***	0.156***
	(0.007)	(0.007)	(0.021)	(0.006)	(0.007)
*Criminal*Y_2018*	0.011	0.014	−0.008	0.012	0.011
	(0.016)	(0.017)	(0.018)	(0.016)	(0.016)
Scandal			0.049		
			(0.033)		
*Scandal*Y_2018*			0.120***		
			(0.039)		
Population (logged)	−0.028	−0.038	−0.037	−0.049**	−0.031
	(0.026)	(0.025)	(0.025)	(0.022)	(0.025)
State GDP (logged)	0.005	−0.0003	0.009*	−0.005	−0.001
	(0.005)	(0.005)	(0.005)	(0.014)	(0.005)
Economic growth		0.002	0.001		
		(0.004)	(0.004)		
Homicides		−0.005***	−0.003***		
		(0.001)	(0.001)		
Constant	0.781**	0.990***	0.822**	1.171***	0.889***
	(0.340)	(0.337)	(0.335)	(0.333)	(0.329)
FE district	✓	✓	✓		✓
FE state				✓	
FE party					✓
Observations	600	600	600	600	600

Note:	*p<0.1; **p<0.05; ***p<0.01

Model 3 suggests that voters were not moved to vote (or to refrain from voting) by criminal charges, but that they did attend the polls more when their governors were scandalous. That is, the coefficient associated with the interaction between *scandal* and *Y_2018* is positive and statistically significant, suggesting that governors that raised interest in the internet also mobilized more voters to the polls. Finally, the models show that the number of homicides in a given state decreased district-level turnout. This decrease, although small, is negative and statistically significant, a finding also consistent with existing literature on the effects of violence and political participation.[66]

5   Discussion and concluding remarks

Taken together, these results suggest that the effects of criminal prosecution indeed extend beyond the courts purview. Criminal trials can damage the co-partisans of those directly indicted by the courts, a damage that is palpable in the electoral results obtained (even months after) the criminal trial started. This, according to my argument, is evidence consistent with the existence of "guilt by association," a mechanism in which voters punish legislators of the same party as the governors. Specifically, I find evidence to suggest that such punishment is electoral, meaning that votes will not be cast for the criminal governor's party (hypothesis 1). I find no evidence that this punishment takes the form of turnout (hypothesis 2).

Before concluding, I offer a brief reflection on the broader implications of my argument and findings. I begin by noting that Mexico's politicians are well-known for being corrupt and for operating with total impunity. The Mexican context is, according to some of the predictions in the literature discussed here, a most-likely case to observe general apathy and cynicism among voters. The constant stream of corruption accusations saturates media and probably tires citizens. Yet it seems like despite this grim outlook, voters in 2018

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[66]Trelles and Carreras 2012; Ley 2018.

used their vote to punish those who shared a party with criminal governors, thus showing how mechanisms of vertical and horizontal accountability can reinforce each other.

This, I argue, is a somewhat hopeful interpretation of the electoral effects of criminalizing corruption. Particularly, it is worth noting that if politicians realize that they are suffering not because of what they do, but because of what members in their group do, they might be incentivized to monitor and punish corruption within their ranks. An indication that this might be happening can be found on the expulsion of Javier Duarte from the PRI, something that had never happened to a sitting governor, or on the *mea culpa* published in the PRI document evaluating the disastrous results of the 2018 elections. Should this trend continue, and even expand to other parties, Mexico's prospects of democratic consolidation might not seem so elusive.

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Appendix

Codebook

- *Vote_pro_governor*: For each district d in state s year y, *Vote_pro_governor* $= \frac{votes_{d,s,y}}{effective\_votes_{d,s,y}}$; where *votes* is the number of votes cast in favor of candidates of the party of the governor that was in office in 2015 in each district d of state s, and *effective_votes* are the number of effective votes in that district. Source for 2015: INE 2015. Source for 2018: INE 2018

- *Turnout*: For each district d in state s and year y, *turnout* is reported as: $\frac{total\_turnout_{d,s,y}}{voter\_registry_{d,s,y}}$, where *total_turnout* is the total number of voters at the polls, and *voter_registry* is the total number of people registered to vote in that district. Source for 2015: INE 2015. Source for 2018: INE 2018

- *Criminal*: 1 if governor of state s in 2015 or after was issued an arrest warrant or arrested between July of 2015 and June of 2018. Source: Own.

- *Scandal*: For each governor of state s that left office after 2015, *scandal* is obtained: $scandal\_peak_g * scandal\_within_g$, where $scandal\_peak_s$ is equal to $100 - scandal_g^m/100$, or the difference between 100 (maximum relative frequency) and the median relative frequency (weekly) normalized to be between 0 and 1. $Scandal\_within_s$ is the relative frequency of the search term "*gobernador*" across states. In states with two governors corresponding to that period, I kept the highest score. Source: *The homepage explained - Trends Help*, searches from January 2016 until June 2018.

- *Y_2018*: 1 if electoral results are from 2018, 0 otherwise.

- *Population (logged)*: Population by electoral district (logged). Estimates of the population for year 2015 are based on the 2010 district-level information, and estimates for the population in year 2018 were posted in 2015 after the midterm elections. Source: INEGI 2010; INEGI 2015

- *State GDP (logged)*: State GDP base 2013 (logged) in the year before the election. 2017 values might be subject to updates. Source: INEGI 2018

- *Economic growth*– For each state s in year y, the economic growth is obtained with the next formula: $\frac{(Q_{2,y}-Q_{1,y})+(Q_{1,y}-Q_{4,y-1})+(Q_{4,y-1}-Q_{3,y-1})}{3}$; where $Q_{2,y}$ is the GDP in that state in the second quarter of the year, and so on. Source: INEGI 2014

- *Homicides*– For each state s in year y, I obtained estimations of homicides by population: $\frac{Hom_{s,y01}+Hom_{s,y02}+Hom_{s,y03}+Hom_{s,y04}+Hom_{s,y05}+Hom_{s,y05}}{population_{s,y}} * 100000$; where $Hom_{s,y01}$ are the count of homicides in the month of January of year y for state s, and so on. Source of homicide counts: Delictivos 2015

Descriptive statistics

Table A: Descriptive statistics

	Min.	1stQ.	Med	Mean	3rdQ	Max.	N
Vote_pro_governor	0.01	0.16	0.24	0.25	0.33	0.59	600
Turnout	0.23	0.47	0.57	0.56	0.65	0.81	600
Criminal	0.00	0.00	0.00	0.15	0.00	1.00	600
Scandal	0.23	0.40	0.49	0.53	0.62	0.90	600
Y_2018	0.00	0.00	0.50	0.50	1.00	1.00	600
Population (logged)	12.34	12.79	12.87	12.86	12.94	13.54	600
State GDP (logged)	11.41	12.66	13.25	13.33	13.99	14.93	600
Economic growth	-2.23	0.39	0.78	0.82	1.18	5.55	600
Homicide rate	0.47	2.33	3.42	4.67	5.76	22.47	600

Plausibility probe for parallel trends assumtpion

Table B: Plausibility probe for parallel trends assumptions

	Votes issued for legislative candidates of governor party	
	Model 1	Model 2
Criminal	0.056	0.020
	(0.052)	(0.042)
Scandal	−0.106	−0.0004
	(0.137)	(0.123)
Population (logged)	0.076***	0.075***
	(0.027)	(0.027)
State GDP (logged)	−0.029	−0.012
	(0.028)	(0.022)
Economic growth	−0.006	−0.001
	(0.016)	(0.013)
Homicides	−0.004	0.002
	(0.008)	(0.007)
Constant	−0.208	−0.528
	(0.550)	(0.489)
FE state	✓	✓
FE party		✓
Observations	300	300
Note:		*p<0.1; **p<0.05; ***p<0.01

Models estimated with alternative scandal measure

Table C: Alternative scandal measure

	Votes issued for legislative candidates of governor party	
	Model 1	Model 2
Criminal	0.027*	0.033
	(0.016)	(0.039)
Y_2018	−0.150***	−0.142***
	(0.006)	(0.006)
*Criminal*Y_2018*	−0.070***	−0.069***
	(0.013)	(0.013)
Scandal	0.131*	0.033
	(0.071)	(0.171)
*Scandal*Y_2018*	0.318***	0.337***
	(0.055)	(0.055)
Population (logged)	0.110***	0.073***
	(0.024)	(0.022)
State GDP (logged)	−0.014**	−0.005
	(0.007)	(0.018)
Economic growth	−0.003	
	(0.005)	
Homicides	0.003**	
	(0.001)	
Constant	−0.935***	−0.556
	(0.331)	(0.359)
FE district	✓	✓
FE state		✓
Observations	600	600
Note:		*p<0.1; **p<0.05; ***p<0.01

Models estimated in subset of states that had gubernatorial elections

Table D: Criminal governors (only subset of states that had a gubernatorial election)

	Votes issued for legislative candidates of governor party				
	Model 1	Model 2	Model 3	Model 4	Model 5
Criminal	0.021	0.020	0.050**	0.033	−0.015
	(0.019)	(0.019)	(0.022)	(0.052)	(0.015)
Y_2018	−0.139***	−0.144***	−0.144***	−0.136***	−0.137***
	(0.008)	(0.010)	(0.028)	(0.009)	(0.008)
*Criminal*Y_2018*	−0.054***	−0.059***	−0.058***	−0.055***	−0.055***
	(0.016)	(0.016)	(0.019)	(0.016)	(0.016)
Scandal			−0.147**		
			(0.062)		
*Scandal*Y_2018*			0.009		
			(0.049)		
Population (logged)	0.168***	0.170***	0.170***	0.144***	0.156***
	(0.036)	(0.036)	(0.036)	(0.030)	(0.032)
State GDP (logged)	0.019**	0.020**	0.008	−0.0004	−0.007
	(0.009)	(0.009)	(0.010)	(0.029)	(0.007)
Economic growth		−0.003	−0.003		
		(0.008)	(0.008)		
Homicides		0.003	0.001		
		(0.002)	(0.002)		
Constant	−2.092***	−2.144***	−1.904***	−1.535***	−1.674***
	(0.473)	(0.477)	(0.487)	(0.528)	(0.432)
FE district	✓	✓	✓	✓	✓
FE state				✓	
FE party					✓
Observations	297	297	297	297	297

Note:	*p<0.1; **p<0.05; ***p<0.01

Models estimated without Veracruz

Table E: Criminal governors and their effects on legislative elections (without Veracruz)

	Votes issued for legislative candidates of governor party				
	Model 1	Model 2	Model 3	Model 4	Model 5
Criminal	0.034*	0.033*	0.037**	0.028	0.010
	(0.018)	(0.019)	(0.018)	(0.041)	(0.016)
Y_2018	−0.132***	−0.140***	−0.077***	−0.132***	−0.131***
	(0.006)	(0.007)	(0.019)	(0.006)	(0.006)
Criminal*Y_2018	−0.047***	−0.049***	−0.046***	−0.046***	−0.047***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Scandal			−0.104**		
			(0.046)		
Scandal*Y_2018			−0.116***		
			(0.035)		
Population (logged)	0.122***	0.123***	0.121***	0.079***	0.096***
	(0.027)	(0.026)	(0.026)	(0.023)	(0.025)
State GDP (logged)	−0.006	−0.003	−0.018**	0.013	−0.005
	(0.006)	(0.007)	(0.007)	(0.018)	(0.006)
Economic growth		−0.007	−0.007		
		(0.005)	(0.005)		
Homicides		0.002**	0.001		
		(0.001)	(0.001)		
Constant	−1.181***	−1.240***	−0.950***	−0.864**	−0.891***
	(0.358)	(0.357)	(0.359)	(0.376)	(0.337)
FE district	✓	✓	✓	✓	✓
FE state				✓	
FE party					✓
Observations	559	559	559	559	559

Note: *p<0.1; **p<0.05; ***p<0.01