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Revealing Malfeasance: How Local Media Facilitates Electoral Sanctioning of Mayors in Mexico

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ABSTRACT

We estimate the effect of local media outlets on political accountability in Mexico, focusing on malfeasance by municipal mayors. We study federal grants earmarked for infrastructure projects targeting the poor, and leverage two sources of plausibly exogenous variation. First, we exploit variation in the timing of the release of municipal audit reports. Second, and moving beyond existing studies, we exploit variation in media exposure at the electoral precinct level. In particular, we compare neighboring precincts on the boundaries of media stations' coverage areas to isolate the effects of an additional media station. We find that voters punish the party of malfeasant mayors, but only in electoral precincts covered by local media stations (which emit from within the precinct's municipality). An additional local radio or television station reduces the vote share of an incumbent political party revealed to be corrupt by 1 percentage point, and reduces the vote share of an incumbent political party revealed to have diverted funds to projects not benefiting the poor by around 2 percentage points. We also show that these electoral sanctions persist: at the next election, the vote share of the current incumbent's party continues to be reduced by a similar magnitude. The electoral costs of diverting resources away from the poor are especially large for the populist Institutional Revolutionary Party (PRI) party. However, we find no effect of media stations based in other municipalities.

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The functionaries of every government have propensities to command at will the liberty and property of their constituents. There is no safe deposit for these but with the people themselves, nor can they be safe with them without information. Where the press is free, and every man able to read, all is safe. (Thomas Jefferson to Charles Yancey, 1816. ME 14:384).

1 Introduction

A large body of scholarship in political economy asserts that in large democracies: (i) elections are one of the key institutions for producing political accountability; (ii) in order for elections to function well, voters must be adequately informed; and (iii) the mass media play an essential role in informing voters. One important application of this trio, which is especially important in developing democracies, is the electoral sanctioning of malfeasant behavior such as corruption and diverting funds away from the projects for which they are earmarked.

There is, however, little solid evidence that (a) the media actually informs individuals about the behavior of malfeasant politicians, and that (b) voters react to this information by punishing politicians at the polling booth. The strongest evidence is from Ferraz and Finan (2008), who find that incumbent mayors in Brazil who are revealed to be corrupt suffer more at the polls in municipalities with local radio stations. Other studies find that corrupt politicians are more likely to be punished electorally when their corruption is covered in the news, or when political corruption is more salient.[1] However, none of these studies are able to exploit exogenous variation in media or the salience of the media coverage.

Moreover, it is not clear whether voters care about malfeasance,[2] and if so, what types of malfeasance matter most. Some studies find that when incumbent politicians are exposed as corrupt then either the incumbents themselves or the incumbent's party receives significantly fewer votes at the next election.[3] There is also some evidence that information about other aspects of politicians' performance, such as overall rankings or targeting public spending towards the poor, also affects vote choice.[4] However, other studies find mixed results, or no significant relationship between evidence of malfeasance and vote shares.[5] Theorists have responded by providing arguments to

[1] See, e.g., Chang, Golden and Hill (2010), Costas, Solé-Ollé and Sorribas-Navarro (2011), and Eggers and Fisher (2011) for studies of Italy, Spain and England respectively.

[2] Although 65% of Mexican individuals believe that information about malfeasance is important (Castañeda Sabido 2011), it is not clear whether such information matters for vote choice.

[3] See, e.g., Ferraz and Finan (2008), Slomczynski and Shabad (2012), and Banerjee et al. (2014).

[4] See, e.g., Banerjee et al. (2011) and Humphreys and Weinstein (2012).

[5] See, e.g., McCann and Domınguez (1998), Dutta and Gupta (2012), de Figueiredo, Hidalgo

explain why voters might not punish politicians exposed as corrupt.[6]

In this article we identify large effects of local media stations—the total number of AM radio, FM radio and television stations which emit within an electoral precinct's municipality—on political accountability in Mexico, focusing specifically on malfeasance by municipal mayors. Our detailed local data allow us to exploit two sources of plausibly exogenous variation. First, as in Ferraz and Finan (2008), we exploit variation in the timing of the release of municipal audit reports. In particular, we compare mayors who engage in malfeasant behavior—either corruption or diverting funds to other projects that do not benefit the intended poor recipients—that is revealed in audit reports published before an election to similar mayors whose audit reports are not published until after the election. Second, and moving beyond existing studies, we leverage variation in the electoral precincts that receive commercial quality radio and television signals from stations located within the municipality.[7] Mexican voters rely largely on such local media, particularly television, to find out about malfeasance in the use of public funds (Castañeda Sabido 2011). To ensure that differences in local media coverage are not correlated with precinct-level differences in development, we compare neighboring precincts that differ only in the number of commercial quality local media station signals that they receive.

A significant proportion of government spending is administered by Mexico's c.2,400 mayors. In light of widespread concerns about corruption, the Mexican Congress passed a law institutionalizing independent audits of the use of federal funds in 1999. We focus on audit reports pertaining to the Municipal Fund for Social Infrastructure (FISM). FISM is a major social program that provides mayors with funds for infrastructural projects required to benefit impoverished citizens, and represents about 25% of mayors' annual budgets. Whether or not a municipality will be audited is announced the year after the funds have been allocated. The audit reports reveal the share of FISM money spent "in an unauthorized manner," as well as the share spent on projects "not benefiting the

and Kasahara (2013), and Chong et al. (forthcoming).

[6]See, e.g., Rundquist, Strom and Peters (1977), Caselli and Morelli (2004), Besley and Prat (2006), Dutta and Gupta (2012), and Svolik (2013).

[7]Specifically, we provide estimates of the "intention-to-treat" voters with access to media, because commercial quality coverage boundaries reduce the likelihood that voters receive a media signal but cannot preclude coverage entirely. As discussed in more detail below, radio and television signal strengths decay gradually as a function of geographic distance, but are also affected by terrain, large obstacles, ground conductivity, and even weather and temperature. Whether or not a given household can receive a signal may also depend on the equipment—e.g. the type of antenna—the household has. So, the exact boundaries of each station's coverage area are never perfectly accurate (or even completely fixed). Since we lack the data required to compute a first stage and the exclusion restriction is unlikely to hold, we focus on providing unbiased reduced form estimates.

poor." The first figure clearly represents malfeasance, and usually actual corruption. The second figure indicates malfeasance of a different sort—diverting funds from their intended targets. By law, 100% of FISM projects must benefit the poor, so any money not spent on the poor represents illegal misallocation.

Our results demonstrate that voters punish the party of malfeasant mayors, given mayors cannot seek re-election, but only in electoral precincts covered by local media stations.[8] Our point estimates imply that each additional local radio or television station reduces the vote share of an incumbent political party whose mayor was revealed to be corrupt by around half a percentage point. The effects of misallocating funds away from the poor are even larger: our point estimates imply that if the incumbent party's mayor was revealed to have misallocated funds away from the poor, each additional local radio or television station covering a given precinct reduces the party's vote share by between one and two percentage points, depending on the severity of the malfeasance. However, when the incumbent's party's mayor correctly spent the money on the poor, an audit report released before an election increases the party's vote share by half a percentage point for each additional local media station. In general, exposure to additional television station—the most prevalent source of political information—has larger effects on electoral sanctioning than an additional AM or FM radio station. Furthermore, we find that revealing mayoral malfeasance has longer-term consequences: if anything, the electoral cost associated with an additional local media station publicizing malfeasant behavior is larger at the next municipal election.

However, our results demonstrate that non-local media does not affect the sanctioning of municipal mayors. While there are large effects for local media stations, we find no evidence that media stations that cover a precinct but are based outside its municipality matter for municipal political accountability.

We also find evidence suggesting that voters punish parties more for behavior that is not only malfeasant but contrary to the party's ideological reputation. More specifically, voters punish the Institutional Revolutionary Party (PRI) for corruption and diverting FISM funds away from the poor, but do not punish the National Action Party (PAN). The populist PRI has a stronger "pro-poor" reputation than the more right-wing PAN.[9] Thus, it might be more surprising when a PRI mayor is caught misallocating FISM funds, making it more likely that voters significantly update their beliefs about the party's sincerity, commitment, or competence. Alternatively, voters might simply find this behavior by the PRI to be particularly hypocritical, and therefore more egregious and deserving of punishment.

[8]Incumbent mayors could not themselves run for re-election in our sample due to term limits.

[9]For example, according to the 2009 CIDE-CSES survey, voters identify the PRI to the left of the PAN. See the Comparative Manifesto Project codings here.

We show that these findings are robust to a series of sensitivity checks. First, our results are robust to using alternative measures of corruption and misallocating funds away from the poor, and focusing only on incumbents from the PAN and PRI, which are the two strongest parties at the municipal level. Second, by focusing on neighboring electoral precincts within the same municipality, we show that our estimates are not driven by neighboring precincts that cross municipality borders. Lastly, we show that our results are not driven by differences in internet access.[10]

Our findings contribute to the literature in a variety of ways. First, we exploit a source of variation for estimating media effects that has not been explored in the literature on political accountability in developing democracies. A number of previous studies have applied the same general idea—using detailed features of the media market environment to obtain plausibly exogenous variation in the degree of "exposure" to different media outlets or messages—to primarily study phenomena such as the impact of media bias.[11] Snyder and Strömberg (2010) and Fergusson (2014) also apply this idea to study how the media market environment improves accountability in the U.S., but do not provide evidence of a direct link to political malfeasance.

Some of the studies that focus on the degree to which voters respond to corruption and other types of malfeasance also provide evidence of a media linkage, but as noted above the evidence is more suggestive than conclusive. At the municipality level, Ferraz and Finan (2008) find that the number of local AM radio stations located in a given municipality increases the electoral response to mayoral corruption in Brazil. As the authors acknowledge, however, the presence or absence of local media stations may be correlated with a variety of potentially confounding municipal characteristics such as education levels or political engagement.[12] only some of which can be measured and included as controls. Although Ferraz and Finan (2008) control for a battery of municipal-level variables, their empirical strategy cannot rule out the possibility that their estimates are biased due to the presence of such unobserved confounders. Studies from developed countries similarly suggest that media coverage harms incumbents implicated by corruption scandals (Costas, Solé-Ollé and Sorribas-Navarro 2011; Eggers and Fisher 2011), but are vulnerable to the concern that the presence of media coverage is correlated with the severity of the malfeasance.[13]

[10]Internet access is the only variable that neighboring precincts present an imbalance on.

[11]See, e.g., DellaVigna and Kaplan (2007), Chiang and Knight (2011), and Enikolopov, Petrova and Zhuravskaya (2011). See DellaVigna and Gentzkow (2010) for a review of this literature.

[12]Klasnja (2011) and Weitz-Shapiro and Winters (2014) find evidence that voters with greater "political awareness" or literacy are more likely to punish incumbents in scandals.

[13]Eggers and Fisher (2011) find a statistically significant decline in the vote share for British legislators whose misbehavior in the 2009 expenses scandal was serious enough to be featured in the news, but not for other implicated legislators. In Spain, Costas, Solé-Ollé and Sorribas-Navarro (2011) also find that the incumbent's vote share loss was larger for corruption cases that were

Second, we demonstrate the importance of *local* media for local political accountability, rather than media in general. This is an important consideration because local radio and television are often the only way in which isolated voters can learn about the performance of their incumbent politicians, and around 20% and 25% of Mexican electoral precincts are respectively not covered by a single FM or television station.[14] Moreover, understanding the role of local media in supporting political accountability is particularly salient given that local media markets are shrinking in many countries.[15] This trend is particularly worrying given that our evidence provides a clear rationale for politicians to exploit the weakening economic position of local media and to seek its control (Besley and Prat 2006), by purchasing radio stations (Boas and Hidalgo 2011) or preventing "defamation" (Stanig forthcoming).

Third, we show that voters respond differently to different types of malfeasance. As noted above, the bulk of the literature on political accountability in developing democracies has focused on corruption. Two exceptions are Banerjee et al. (2011) and Humphreys and Weinstein (2012). Humphreys and Weinstein (2012) conducted a field experiment in Uganda, and find that providing voters with information about the overall performance of their incumbent legislator relative to other legislators—as measured by an index involving participation in floor debates and votes, participation in committee debates and votes, and constituency service—leads voters to update whether they approve of, or intend to vote for, their incumbent. Banerjee et al. (2011) conducted a field experiment in India, and found that voters living in slums are more likely to vote for their incumbent legislator if they learn that the incumbent allocates more of her discretionary project spending funds to slums rather than other areas. Our findings are analogous to those of Banerjee et al. (2011), since we find that voters are more likely to vote against incumbents who divert funds away from the poor.[16]

Fourth, since whether or not a municipality will be audited is announced after FISM funds

widely reported in the newspapers. While these findings from developed countries are consistent with a media effect, it is also likely that these correlations reflect differences in the types of misbehavior covered by the media. In particular—as the authors of these studies clearly recognize—media outlets are likely to cover "serious" malfeasance more heavily than "minor" malfeasance.

[14]Local radio is less prevalent in Brazil (Ferraz and Finan 2008).

[15]Over the last 15 years, Mexico has experienced a 40% decline in the share of individuals claiming to read political news in newspapers. 60% of Latinobarometer respondents claimed reading political news in newspapers 1996, compared to 36% in 2009. In the U.S., daily newspaper circulation dropped from just over 1.0 newspapers per household in 1950 to about 0.3 per household in 2010.

[16]The analogy is not perfect, since in our case the diversion of funds away from the poor is a direct violation of FISM program rules, while in their case it is not—legislators in India are free to allocate their discretionary project funds anywhere in their districts.

have been allocated, the data suggest that the *possibility* of being audited is insufficient to prevent municipal mayors from engaging in malfeasance. Our study thus complements previous research suggesting that audits can be effective at reducing corruption if politicians know prior to spending that the reports could result in criminal prosecution (Olken 2007) or will be released before an election (Bobonis, Fuertes and Schwabe 2014). Rather, the corruption levels we observe in Mexico are broadly similar to those found in Brazil (Ferraz and Finan 2008), where the municipal audit scheme was only announced after spending had occurred. This suggests that it is only the certainty of being audited that causes politicians to alter their malfeasant behavior in anticipation of being sanctioned if caught. This is consistent with the dynamic optimizing behavior observed in India (Niehaus and Sukhtankar 2013), but partially contrasts with recent findings from Brazil showing that increasing the probability of audit reduces corruption but does not affect spending patterns (Zamboni and Litschig 2014).

The article proceeds as follows. Section 2 provides a brief overview of local governments in Mexico, the FISM funds that we study, the audit of such funds, and local media in Mexico. Section 4 details our data and identification strategy. Section 5 presents our main results and robustness checks. Section 6 concludes.

2 Political accountability in Mexico

Following 70 years of PRI hegemony, national and local politics have become relatively competitive. Elections to the Chamber of Deputies, the lower house of Mexico's national legislature, are held every three years, while the President and Senate are concurrently elected to six-year tenures.[17] State and municipal elections are instead staggered across the electoral cycle and held every two or three years. Currently, three main political parties compete for political control: the left-wing Party of the Democratic Revolution (PRD), the populist PRI, and the right-wing PAN. Competition in most parts of the country is generally between only two of these parties, with the PRI performing best in rural areas and the PAN and PRD performing best in urban areas (Larreguy, Marshall and Querubín 2014).

[17] In the Chamber of Deputies, 300 members elected via plurality rule from single-member districts and 200 members are elected via proportional representation. The Senate comprises 128 Senators, with three elected from each state (including the Federal District) where the largest party receives two Senators and the second largest receives one Senator, and a further 32 allocated according to the national vote share.

2.1 Municipality audits

In Mexico's federal system, states and municipalities exercise significant control over local policy. Mexico's 31 states contain around 2,400 municipalities. Following major fiscal decentralization reforms in the 1990s, the average municipality annual budget has been around nine million U.S. dollars, which constitutes 20% of total government spending.[18] Municipal governments are led by mayors, who are responsible for delivering basic public services and managing local infrastructure. Mayors are normally elected every three years, although they serve four-year terms in some states, and could not stand for re-election.[19]

An important component of a mayor's budget is the Municipal Fund for Social Infrastructure (FISM). This represents 24% of a municipality's total income on average. FISM funds, which are allocated to municipalities according to the Fiscal Coordination Law (LCF) passed in 1997, are direct federal transfers provided exclusively for the funding of public works, basic social actions, and investments that directly benefit the socially disadvantaged population living in extreme poverty. Spending may be allocated in any of the following categories: potable water, sewage, drainage and latrines, municipal urbanization, electrification or rural and poor suburban areas, basic health infrastructure, basic education infrastructure, improvement of housing, rural roads and rural productive infrastructure. Compared to previous social programs, FISM funding has been relatively successful at targeting resources at the poor (Wellenstein, Núñez and Andrés 2006). However, funds are often misallocated. Unlike previous studies focusing on corruption in more general programs (e.g. Ferraz and Finan 2008; Bobonis, Fuertes and Schwabe 2013), the specific targeting of FISM funds allows us to examine the electoral response by voters to both corruption and the misuse of funds intended to serve a disadvantaged population.

The use of FISM funds is subject to independent audits by Mexico's Federal Auditor's Office (ASF). The ASF, which was established in 1999 in response to widespread concerns regarding the mismanagement of public resources, is an independent body with constitutionally-enshrined powers to audit the use of federal funds by the federal, state and municipal governments. In each year since 2000, the ASF has audited FISM spending in multiple municipalities per state.

Audits focus on the spending and management of FISM resources in the prior fiscal year, and the list of municipalities to be audited in a given year is announced the year after the spending occurred. Although the exact formula for selection is not publicly available, official information indicates that municipalities are chosen on the basis of the federal transfers they received, the

[18]Education and health were decentralized between 1992 and 1996 and the decentralization of infrastructure projects followed in 1997 (Wellenstein, Núñez and Andrés 2006).

[19]Re-election will become possible for those running starting in 2015.

importance of these funds relative to the municipal budget, whether they have been audited before, and their history of misallocated expenditure.[20] Since our identification strategy exploits the timing of audits, rather than comparing audited and non-audited municipalities, the ASF's selection rule defines the population to which our estimates apply. Independent ASF auditors check that officials abide by the rules established for the management of FISM resources (e.g., procurement rules, accounting procedures), that the status of the funded projects is in accordance with the books, and that funds are given the use they were intended for. Audit reports are then publicly released two years after the spending actually occurred, when they are presented in Congress by the last working day of February each year and made publicly available online at the ASF's website.[21]

Audit reports break down the use of FISM funds across several dimensions. Most importantly, the reports state the percentage of FISM funds spent on infrastructure projects not benefiting the poor and the percentage of funds used for unauthorized spending. Spending that does not benefit the poor ranges from the diversion of resources to support agricultural production (during election times) to paving the streets of relatively rich urban areas. We interpret unauthorized spending, which includes the diversion of resources of personal expenses of the mayor and funds that are unaccounted for, as corruption.[22] In the Online Appendix, we provide an example of an audit report.

The ASF can impose a variety of punishments on malfeasant public officials. In particular, the ASF can inflict fines on the municipality to recover FISM funds, recommend that the Ministry of Public Function removes, suspends or imposes economic sanctions on officials, or file (or recommend) a criminal case against culpable individuals. In practice, these punishments have not been used regularly: between December 2006 and July 2012, the Ministry of Public Function only recovered two million U.S. dollars, sanctioned 9,000 public employees for serious misdemeanors, and incarcerated one hundred officials.[23]

The largest punishment may be electoral. Since Mexican mayors cannot stand for re-election, any electoral penalty hits the party of a malfeasant mayor. This feature differentiates our study from many preceding studies (e.g. Banerjee et al. 2011; Ferraz and Finan 2008; Humphreys and Weinstein 2012). There are good reasons to believe that a mayor's political party may be punished

[20]Personal interview with the Licentiate Jaime Alvarez Hernández, General Director of Research and Evaluation of the Special Audit of Federal Spending, in July 2012.

[21]Guía para el ciudadano. Qué es y qué hace la Auditoría Superior de la Federación?

[22]This definition resembles Ferraz and Finan (2008) in that we focus on violations that include procurement fraud, diversion and over-invoicing, but differs in that we quantify the relative importance of such corruption. Rather than the percentage of unauthorized spending, Ferraz and Finan (2008) count the number of corruption violations.

[23]El Universal, "A la cárcel, solamente 100 ex servidores", 29th May 2014, link.

by voters at the next election. First, political parties do not disappear with mayors. Although the local coalitions between parties uniting behind a mayoral candidate can change across elections, political parties always back a particular candidate. Second, the top-down internal structure of Mexican parties at the state level ensures that within-party candidate choice is highly correlated (Langston 2003). Finally, previous evidence shows that at least in some cases political parties are punished for the actions of their leaders (e.g. Chong et al. forthcoming).

2.2 Local media

As in many developing countries, radio and television stations are the principal source of news in Mexico. Conditional on providing news, both radio and television stations provide around 12 hours of news coverage a week.[24] While a few television stations are predominantly national in focus, the focus of radio stations and most television stations is predominantly local.

Voters in Mexico are generally unaware of mayoral responsibilities and the use of public funds (Chong et al. forthcoming), as well as the institutions that are responsible for auditing the use of public resources (Castañeda Sabido 2011). Most public spending is invisible and inaccessible to most voters. A study by Castañeda Sabido (2011) indicates that only 33.6 % of surveyed individuals think that municipal governments are transparent about the use of public resources.[25] Moreover, only 25% of surveyed individuals can mention a public institution in charge of auditing the use of public funds, and only 1.4% of those individuals mention the ASF as the main institution responsible for that task.

Voters learn about public spending primarily through media coverage. Figures from the 2009 Latinobarometer indicate that 83% of respondents gather political information from television, 41% gather political information from radio, 30% gather political information from newspapers, and 41% gather political information from family, friends and colleagues (many of whom, of course, gather *their* information from television, radio and newspapers).[26] Internet is not widespread:

[24]These figures are based on IFE monitoring of a non-random sample of 200 radio and television stations providing news coverage during the 2012 Mexican Federal election.

[25]In principle, local governments are required to inform the public about the arrival of FISM funds. However, only about 50% comply with this requirement. Moreover, among those that do comply, the main communication channels used are newspapers and the internet—i.e., two types of mass media. Furthermore, media relies extensively on the ASF audit reports since governments are extremely reluctant to release information about their expenses to the public (Lavielle, Pirker and Serdán, 2006).

[26]These are the only four responses to an open-ended question that received a non-negligible number of mentions.

according to the 2010 Census, only 24% of households in the average electoral precinct have internet access, and this number is lower in the sample we analyze here. Additionally, according to Castañeda Sabido (2011), 83% of individuals report that they receive information about malfeasance in the management of public resources through media, and 61% regard the information as reliable. We thus expect that television may be the most the important media source for political accountability.

The annual release of municipal audit results each February is a much-anticipated media event. This is particularly true for television stations, which widely broadcast footage of the release. However, many types of news reports covering the outcomes of the audits are published in February and March each year. Consistent with this claim, Figures 1a and 1b show that trends in Google searches for the ASF and FISM spike around February and March of each year. We still found many news reports from later in the year, indicating that the results of the audits continue to be salient.

[Figure 1 about here.]

Media reports, which generally cover mayors within a given state or the local vicinity, almost exclusively focus on cases of corruption and mayors not spending FISM funds on projects targeting the poor. Most reports accurately cite the proportions of unauthorized spending and spending on projects not targeted at the poor, and many dig deeper to describe the nature of the malfeasance.[27] Little mention was made of other features of the reports such as the the degree of participation of the community in the allocation of funds or the share of FISM funds that were spent.

The bulk of news reports focus on particularly egregious cases of corrupt and neglectful mayors.[28] For example, in 2013 BBM radio station reported that Oaxaca de Juarez's mayor had created a fake union to collect payments, presided over many public works contracts without offering open tender, diverted payments for advertising and consulting fees, and failed to provide details of considerable quantities of spending.[29] While this particular case represents one of the most corrupt mayors, such behavior was not uncommon: many reports pointed to mayors diverting payments, using FISM funds for personal and family expenses and manipulating tender processes. Failures to

[27]For example, see: BBM Noticias, "ASF: desvió Ugartchechea 370.9 mdp", October 21st 2013, here; El Informador, "Hallan irregularidades en gasto tapatío contra pobreza", February 28th 2013, here; Revolución Tres Punto Cero, "En 2012, se desviaron a campañas 29 millones de pesos para combate a la pobreza en Tabasco", March 6th 2014, here.

[28]Because of this, media coverage may be biased toward large municipalities where the sums involved are large in nominal terms or smaller municipalities where the proportion of FISM funds misallocated is especially large.

[29]BBM Noticias, "ASF: desvió Ugartchechea 370.9 mdp", October 21st 2013, here.

spend FISM funds on the poor were just as common in media reports. In many cases, public works projects were undertaken in urban and affluent parts of the city. In others, the alleged project never materialized despite being paid for, or was diverted for alternative uses such as supporting local candidates from the incumbent's party.

While most media stations cover audit reports relating to their own municipality, an additional local media source may still substantially affect voter beliefs about the incumbent party. First, even in relatively large markets, new media exposes new listeners. Supporting this claim, Prat and Strömberg (2005) show that the introduction of commercial television disproportionately attracts relatively uninformed voters, causing them to become more politically knowledgeable and increase their political participation. Second, local information may be useful to voters and cause them to gravitate toward such media stations. Durante and Knight (2012) similarly show that voters are willing to change their media consumption patterns in response to changes in the types of available media. Third, receiving the same information from multiple sources should increase voter certainty regarding incumbent performance, especially when the information is consistent across outlets with different political biases (Gentzkow and Shapiro 2006; Gentzkow, Shapiro and Sinkinson 2014). Ultimately, if additional access to additional media stations alters voter beliefs, then coverage from an additional media station may cause voters to sanction the party at the election.

We now turn to our data, and to the empirical strategy we use to identify the effects of the release of audit reports in electoral precincts that differ in the number of local media outlets they are covered by.

3 Data

This section describes our main sources of data: electoral results at the electoral precinct level; municipality audit reports released just before and just after an election; and precinct-level radio and television coverage.

3.1 Mayoral election outcomes

Mexico's municipalities (and Congressional districts) are divided into approximately 67,000 electoral precincts. Using data from the Federal Electoral Institute (IFE) and State Electoral Institutes, we collected electoral returns for every available precinct in each municipal election between 2002 and 2012. We thus accumulated up to four election results per electoral precinct, which enabled us to identify the municipal incumbent and incumbent's past vote share in all the elections in our

period of analysis, 2007-2012.[30]

We focus on two main electoral outcomes: the change in incumbent party's vote share at the precinct level, and whether the incumbent party was re-elected at the municipal level. The former measure quantifies the extent of precinct-level voter sanctioning, while the latter captures the municipality-level implications for the identity of the office-holder. When exploiting fine-grained variation in media coverage across precincts, our analysis focuses on changes in the incumbent vote share. We define the vote share as a proportion of voters that turned out.[31] The average incumbent in our sample received 48% of votes in their electoral precinct, and the average decline in the vote share of the incumbent mayor's party was 4.7 percentage points.

Since Mexico's mayors cannot stand for re-election in our sample, we focus on the party of the incumbent mayor. Municipal politics often entail the formation of local coalitions between political parties, and this can change across elections. For example, in 2009 the incumbent mayor of the municipality of Colima represented a two-party coalition containing the PRI and the Green Party (PVEM). However, the 2009 election saw six groups stand for election: the PT, PVEM and PC all stood separately against three coalitions, PAN-ADC, PRI-PANAL and PRD-PSD.[32] To code such cases where the incumbent coalition split at the next election, we determined the party affiliation of each mayor by researching, first, their identity, and second, their party ties.

3.2 Audit reports

Since audit reports are released with a two year lag, reports released in the February of a municipal election year generally refer to the first year the incumbent mayor was in office.[33] Since municipal elections take place later in the calendar year, we define a pre-election audit report release by whether an audit was released in February of an election year.[34] Typically, the report is released 4 months before the election. Our control group will be mayors in municipalities where the audit was released in February the year following the election. In such cases, the audit report generally pertains to their second year in office.

[30]By ending our sample in 2012, our sample does not feature any mayors that can seek re-election.

[31]We obtain similar results when measuring vote share as a proportion of registered voters.

[32]After being revealed as malfeasant, we find some evidence that the coalition is more likely to change, and that the number of coalition partners of the largest party actually may increase at the next election.

[33]In Coahuila, where mayors are elected to four-year terms, the report refers to the second year of their term.

[34]Although states differ in the month in which they hold elections, only Baja California Sur holds elections before mid-February. We adjust for Baja California Sur accordingly.

The results of audit reports, which quantify the use of FISM funds, are publicly available on the ASF's website. We extracted the proportion of funds spent in an unauthorized manner and the proportion of funds not spent on projects benefiting the poor from every available report between 2005 and 2012.[35] This yielded a total of 1,050 municipal audits, which were relatively evenly spread across years and covered 432 unique municipalities. Of these, 429 reports from 297 different municipalities were released in an election year or the year after. We henceforth restrict attention to this subsample of audits, which are shaded by their levels of malfeasance in Figure 2.

[Figure 2 about here.]

We operationalize malfeasance using indicators to capture severity. For corruption, we define indicators for precincts with mayors in the third and fourth quartiles of the distribution of unauthorized FISM spending. For neglectful spending, we similarly define indicators for mayors in the third and fourth quartiles with respect to FISM funds not allocated to spending on the poor. In our sample, only mayors above the median engaged in non-negligible corruption or neglectful spending.[36] We prefer binary performance metrics—which are more also flexible than linear measures—identifying more egregious cases of bad performance since standard theoretical models suggest that voter sanctioning involves cut-off rules (e.g. Barro 1973; Ferejohn 1986). Furthermore, our examination of media reports indicates that only relatively serious cases are widely reported. Nevertheless, we find similar results using a continuous measure where we instead allow sanctioning to be a linear function of revealed performance.

3.3 Media coverage

In addition to our fine-grained electoral data, a key feature of this study is the detail of our media coverage data. Following a major media reform in 2007 (see Serra 2012), the IFE required that every AM and FM radio station and every television station in the country provide signal coverage data.[37] Specifically, for each media station we are able to code the municipality from where the station broadcasts, and define the commercial quality coverage range of their signal.[38] Inside a

[35] We did not collect earlier audit reports because they did not present those figures in a systematic way.

[36] The level of corruption in the median precinct was 0.4% of FISM funds, while neglectful spending in the median precinct was 0%. For both corruption and not spending on the poor, the 25th percentile of the distribution is 0; hence we do not use an indicator for the second quartile.

[37] For only a small number of FM and television stations did the same station broadcast from multiple municipalities. No electoral precincts received the same signal from multiple antennae.

[38] The IFE defines the boundary of the coverage area using a 60 dBμ threshold for signal strength. This is the threshold commonly used to determine a radio station's audience and sell

station's coverage area the signal is of high quality, so precincts inside the area have good access to the station's broadcasts. Precincts outside the coverage area experience increasingly poor coverage as the distance from the boundary increases. See Larreguy, Marshall and Snyder Jr. (2014) for further details of the coverage data.

Figures 3-5 map the location and coverage of each of the 852 AM, 1097 FM and 1255 television stations. Although media coverage is extensive, with most precincts receiving at least one media signal and most municipalities containing at least one media station, there is considerable variation in the number of media stations covering each precinct that emit from within the precinct's own municipality.[39] The figures also clearly indicate that the commercial quality coverage range of AM radio is substantially greater than for FM and television. If AM radio stations thus cater to a broader geographic audience, the sanctioning effects of local AM coverage may be smaller than for FM and television stations because the latter are more focused on local issues.

[Figures 3, 4 and 5 about here.]

Our principal measure of *local* media coverage is the total number of AM, FM or television stations covering a given electoral precinct that broadcast from within the precinct's municipality. The average precinct is covered by 4.4, 5.4 and 2.4 local AM, FM and television stations respectively, while the total number of local media stations covering a precinct ranges from 0 to 40. Given these precinct totals are highly correlated across media types, simply adding the total together yields similar results to examining each type of media separately.[40] As a robustness check, we also examine each type of media separately.

To compare the effects of local media to other types of media, we computed the number of media stations that broadcast within a precinct's state but are not located within its municipality and the number of media stations covered by a precinct that broadcast from outside the precinct's state. The average precinct receives as many FM and television signals from inside their municipality as outside, although the greater signal range of AM stations means that precincts are typically covered by twice as many AM stations emitting from outside their municipality.

advertising space commercially in the U.S., where it "is recognized as the area in which a reliable signal can be received using an ordinary radio receiver and antenna" (NTIA link).

[39]Since the number of radio and television stations has remained constant between 2003 and 2010, we cannot exploit temporal variation in media coverage.

[40]This procedure yielded a Cronbach's alpha of 0.84. The minimum pairwise correlation between the variables is 0.65.

4 Empirical strategy

Our goal is to identify the effect of local media coverage of municipal audits on the incumbent party's electoral performance. To achieve this, we exploit exogenous variation in *both* the release of audit reports and access to local media. We combine the difference-in-differences (DD) design of Ferraz and Finan (2008) with plausibly exogenous variation in the number of local media stations covering neighboring electoral precincts.

4.1 Identifying the effects of audit reports

The DD component of our design rests upon exogenous variation in the timing of audit report releases. To identify the effects of audits we compare municipalities where an audit report was released just before a municipal election to a control group of municipalities where the audit was released after a municipal election. We then move beyond this first difference by also comparing municipalities where the mayor is corrupt or neglectful. The DD sample contains 45,935 precinct-election observations.

As noted above, the types of Mexican municipalities chosen for audits are not random. However, we only examine municipalities that have been audited at least once. Consequently, to identify the causal effects of an audit being released we require only that the *timing* of audits is effectively random. Given the political independence of the ASF, this appears to be a reasonable assumption. Table 1 confirms that differences in the political, demographic, media coverage and economic characteristics between electoral precincts in municipalities where an audit was released in the year before an election and those where an audit was released the following year are consistent with chance. The variables in the final seven rows are taken from the precinct-level Census data from 2010, and are described in greater detail in the Online Appendix.

[Table 1 about here.]

A second potential concern is that the content of audit reports differs across election and non-election years. For example, auditors could be more lenient or more meticulous in the knowledge that a report will be released in an election year. Alternatively, mayors anticipating the release of an audit report in an election year may spend more appropriately. To examine these possibilities we compare audit reports released just before an election to reports released just after an election in Figure 6.[41] The distribution of unauthorized spending and spending not on the poor is very similar.

[41]The graphs are very similar if we compare audits from election years to all non-election years (i.e. not just including audits released in the year after a municipal election).

Combined with our randomization check, this strongly suggests that the audits results released in election years are typical of "normal" auditing.

[Figure 6 about here.]

To identify the effect of revealing a mayor to be corrupt or neglectful before an election, we estimate the following DD equation using OLS:

$$\begin{aligned} Y_{p,m,t} &= \beta_1 audit_{m,t} + \beta_2 audit\ outcome\ Q3_{m,t} + \beta_3 audit\ outcome\ Q4_{m,t} \\ &+ \beta_4 \Big(audit_{m,t} \times audit\ outcome\ Q3_{m,t} \Big) + \beta_5 \Big(audit_{m,t} \times audit\ outcome\ Q4_{m,t} \Big) \\ &+ X_{p,m,t}\gamma + \zeta_t + \varepsilon_{p,m,t}, \end{aligned} \tag{1}$$

where $Y_{p,m,t}$ is the incumbent party's vote share in precinct p in municipality m in year t (or whether the incumbent party won the municipal election), $audit_{m,t}$ is an indicator for an audit being released before the election, and $audit\ outcome\ Q3_{m,t}$ and $audit\ outcome\ Q4_{m,t}$ are indicators for municipalities in the third and fourth quartiles of the distributions of corrupt or neglectful mayors (regardless of whether the audit was released before or after the election). We include year fixed effects ζ_t to ensure that we are comparing municipalities where an audit report was released just after an election to municipalities where the audit was released before the election. To increase the efficiency of our estimates, $X_{p,m,t}$ includes the demographic and socioeconomic variables listed in Table 1 as controls. Throughout, we cluster by municipal election to account for spatial correlation between precincts in the same municipality.

Our main coefficients of interest are β_4 and β_5, which identify the effect of an audit conditional upon it revealing corruption or that the mayor did not spend FISM money on the poor. We are also interested in β_1, which identifies the effect of an audit conditional upon it revealing no malfeasance. By not weighting our observations, our estimates reflect the effect of an audit in an average precinct.[42]

4.2 Identifying the effects of local media stations revealing audit reports

To examine the heterogeneous effects of revealing corruption or neglectful behavior, Ferraz and Finan (2008) further interact $audit_{m,t} \times audit\ outcome_{m,t}$ with the number of AM stations located in a municipality. If the number of AM stations were effectively randomly assigned, then this

[42]This contrasts with Ferraz and Finan (2008), whose unit is the average municipality. We favor equally weighting precincts because this more accurately captures the average Mexican voter's sanctioning behavior, rather than disproportionately weighting smaller municipalities.

would estimate the average effect of an audit report being released for each additional local media station.[43]

However, media stations are not randomly assigned across municipalities. The number of local media stations is significantly positively correlated with smaller precinct area sizes, literacy rates, and living in households with basic necessities and luxury amenities. These correlations may upwardly bias our estimates of local media's effects if, for example, the better educated and informed citizens in such precincts are more willing or able to sanction incumbent mayors (e.g. Alt, Lassen and Marshall 2014; Weitz-Shapiro and Winters 2014).[44] Since controlling for observables cannot necessarily address this concern, we instead exploit plausibly exogenous variation in the number of local media stations.

To generate plausibly exogenous variation in local media coverage, we compare neighboring electoral precincts that differ in the number of local media stations they are covered by. Figure 7 illustrates this design, identifying electoral precincts 1571 and 1583 in the municipality of Villa de Tututepec de Melchor Ocampo as neighbors that differ because only precinct 1583 is covered by a television station emitting from within the municipality. Since some neighbors differ by more than one local media station,[45] we exploit only within-neighbor variation to ensure that our estimates are not confounded by differences in the types of area where neighbors differ by one as opposed to two (or more) local media stations. This design is therefore similar to previous studies exploiting differences in media market boundaries (e.g. Ansolabehere, Snowberg and Snyder 2006; Enikolopov, Petrova and Zhuravskaya 2011; Fergusson 2014; Snyder and Strömberg 2010) or geographic borders without a continuous forcing variable (e.g. Dell 2010; Michalopoulos and Papaioannou 2013).

[Figure 7 about here.]

Although our design shares some features with a geographic regression discontinuity, there are two important differences. First, differences in the number of commercial quality local media signals between neighbors are non-binary because neighbors can differ by more than one media station. Second, because of this non-binary difference, the distance to the coverage border is often

[43] Furthermore, unlike our precinct-level data, this strategy rests upon between-municipality differences in media coverage.

[44] In theory, these correlations could also downwardly bias our estimates if such precincts contain voters with stronger prior belief about their incumbent's quality (Zaller 1992).

[45] 54% of neighbor pairs differ by more than one local media station. Therefore, we cannot simply compare treated and control units because the difference in the number of media stations between the two groups (or the treatment intensity) is not constant.

multidimensional. Beyond the problem that any spatial discontinuity is defined by both latitude and longitude (see Dell 2010), this multidimensionality means that it is not clear how a continuous running variable could be defined.

Broadcast signals decay gradually rather than abruptly, so discrete differences in commercial quality signal coverage do not imply that neighboring precincts differ strictly between receiving or not receiving a station's signal. Rather, we are comparing differences in the proportion of an electoral precinct that can access additional local media. Given the drop-off in coverage across most precincts is relatively substantial, and we are using the information that politicians themselves possess, differences in commercial quality coverage are important in their own right.

Ideally, we could also identify the electoral effect of receiving or consuming an additional media station using instrumental variable techniques. To estimate the relevant first stage, we would need to measure either the proportion of voters in each precinct that can access all media stations or the proportion of voters that actually listen to each radio stations or watch each television station. Unfortunately, such detailed individual-level data is not available. Survey datasets typically cover only 1-2% of all electoral precincts and never ask specifically about which radio or television stations voters have access to or actually consume.[46] Furthermore, since voters are likely to discuss the news that they receive with their friends and family, the exclusion restriction requiring that a commercial quality coverage signal only affects electoral outcomes through either access or especially consumption is hard to sustain.

Operationally, we define a "treated" precinct as one which differs from at least one neighboring precinct in terms of the number of local media stations that it receives. For each such precinct, we then select the best neighboring "control" precinct receiving a different number of local media stations. The best control unit is defined as the neighboring precinct with the smallest Malhanobis distance in terms of the economic and demographic variables at the foot of Table 1.[47] This control strategy increases the efficiency of our estimates and reduces any remaining imbalances. Together, this yields a neighbors sample size of 19,922 observations.

To combine variation in the timing of audit and the number of media stations covering a given electoral precinct, we estimate the following triple-difference (DDD) specification using the neigh-

[46]Although the Comparative Study of Electoral Systems and Mexican Panel surveys did ask whether respondents listen to the radio or television, the surveys are predominantly urban and cover only 1-2% of electoral precincts. The Latinobarometer, which also asks basic questions about media consumption, does not provide precinct-level identifiers for its respondents. Even if such surveys had greater coverage, none of the surveys could identify the number or identity of the media available to voters—such measures would be necessary to compute the relevant first stage.

[47]Since these variables are time-invariant, neighboring pairs are identical for each year.

bor sample:

$$\begin{aligned} Y_{p,k,m,t} &= \beta_1 audit_{m,t} + \beta_2 audit\ outcome_{m,t} + \beta_3\Big(audit_{m,t} \times audit\ outcome\ Q3_{m,t}\Big) \\ &+\beta_4\Big(audit_{m,t} \times audit\ outcome\ Q4_{m,t}\Big) + \beta_5 media_{p,m} + \beta_6\Big(audit_{m,t} \times media_{p,m}\Big) \\ &+\beta_7\Big(audit_{m,t} \times audit\ outcome\ Q3_{m,t} \times media_{p,m}\Big) \\ &+\beta_8\Big(audit_{m,t} \times audit\ outcome\ Q4_{m,t} \times media_{p,m}\Big) + X_{p,m,t}\gamma + \xi_k + \zeta_t + \varepsilon_{p,k,m,t}, \quad (2) \end{aligned}$$

where ξ_k is a neighbor fixed effect, which ensures our estimates identify only off within-neighbor variation in media coverage. To estimate the effect of local media, $media_{p,m}$ is the total number of local media stations. We also examine the effect of the total number of media stations within the state (excluding those broadcasting within the municipality) and also the number received from outside the state. Since our sample contains some precincts at municipality borders to maximize our sample size, we exploit both within- and across-municipality variation. However, if we only allow within-municipality neighboring pairs or include municipality fixed effects, we obtain very similar results.

Our identifying assumption is that neighboring precincts differ only in their local media coverage. Restricting attention to within-neighbor variation a wide variety of potential confounds. The main concern is sorting, such that certain types of voters choose to live in areas with better local media coverage or media stations strategically choose the strength of their signal to exclude certain types of voters. However, such sorting is very unlikely. First, if voters were migrating according to media availability, they would likely move further than the neighboring precinct to a location with guaranteed high-quality signal coverage. Second, media stations lack the technology to precisely target certain types of voters: beyond the fact that excluding voters is challenging when signals are not discontinuous, the antennae strengths that media stations purchase are highly discrete.[48]

[Table 2 about here.]

Furthermore, we find no evidence for such concerns. Controlling for neighbor and year fixed effects (as in equation (2)), Table 2 shows that the correlations between the number of local media stations and audit, political, demographic and economic variables is consistent with chance. Importantly, there is no significant difference in the number of non-local media stations, ensuring that

[48]The power output in watts for the AM, FM and television stations in our sample are almost exclusively round thousands and divisible by 5.

the presence of non-local media stations is not driving our estimates.[49] For the two cases of slight imbalance, our robustness checks demonstrate that neither can explain our estimates.

5 Results

We first examine whether audits revealing a mayor to be corrupt or neglectful before an election reduce a mayor's vote share and probability of re-election. However, our main contribution is to identify the effect of local media in holding politicians to account. Our results demonstrate that an additional media station significantly increases the electoral punishment that the party of a corrupt or neglectful mayor faces. Furthermore, we find that this punishment continues to affect the incumbent party at the next election. Reinforcing the importance of local media, we also show that non-local media do not enhance electoral accountability.

5.1 Audits and political accountability

Table 3 presents our DD of the average effect of an audit revealing a mayor to be corrupt or neglectful of the poor on the mayor's electoral prospects. The outcome in columns (1) and (2) is the change in the mayor's vote share at the precinct level, while the outcome in columns (3) and (4) is whether the mayor was re-elected in the municipality.

[Table 3 about here.]

The results indicate that an audit released before an election can have substantial electoral implications. Column (1) shows that revealing a mayor to be in the most corrupt quartile before the election, on average, reduces the vote share of a corrupt mayor by four percentage points. Although effect is not statistically significant, the magnitude represents 9% of the average incumbent's initial vote share. Column (2) finds that revealing that a mayor is neglectful before an election also reduces their vote share: the vote share of mayors in the third quartile declines by nearly five percentage points, while mayors in the fourth quartile lose a further four percentage points. In both cases, however, the audit coefficient in the first row—which captures the baseline category of essentially zero or negligible malfeasance—shows that the parties of mayors whose reputations

[49]The Online Appendix shows that the effective random assignment of audits continues to hold in the neighbors sample. Note that the DD and neighbors samples differ somewhat: corruption is five percentage points less prevalent in the neighbors sample, while precincts are generally less socio-economically developed.

are not negatively affected by the audits increase their vote share, especially when they actually spent the FISM funds on its intended poor recipients.

Looking at the probability of re-election similarly suggests that voters may severely punish mayoral malfeasance. Measured at the municipal level, the change in incumbent vote share maps to large reductions in the probability of being re-elected. Column (3) finds that revealing a mayor as one of the most corrupt reduces their re-election probability by 22 percentage points, although this is again not statistically significant.[50] Column (4) shows that the publication of an audit report showing that a mayor did not spend FISM federal transfers on the poor is 26 percentage points less likely to be re-elected. For both audit outcomes, the effect is much larger for mayors in the fourth quartile relative to the third.

The substantial electoral sanctioning implied by these results is broadly similar in magnitude to that found by Ferraz and Finan (2008) in Brazil, although we measure corruption in terms of stolen funds rather than the number of corrupt spending violations. However, our results also suggest that incorrectly spending money earmarked for the poor evokes sanctioning of similar magnitude to corruption.[51] However, our DD estimates are relatively noisy. A plausible explanation for our lack of precision is that audit reports only affect voter behavior when the information is clearly conveyed.

5.2 The effects of local media coverage of audit reports

We now address the central question of this article: is the party of a malfeasant mayor more likely to be sanctioned by voters who live in areas covered by media stations that publicize audit reports revealing the mayor's behavior in office? Combining our DD and within-neighbor designs, we first examine the effects of local media stations—those emitting from the same municipality as an electoral precinct—before turning to within-state and out-of-state media stations. Since mayoral corruption and neglect are primarily important local issues, we expect to find that local media is more effective at facilitating electoral accountability.

Table 4 provides our estimates for the sanctioning effect of an additional media station emitting from the precinct's own municipality. Since we now focus on precinct-level variation in media coverage, our analysis focuses on the change in the incumbent's vote share at the precinct level.

[50]The relative lack of precision reflects the fact that we have 481 audited municipalities, of which only 51 had mayors that were revealed to be corrupt before the election.

[51]The Online Appendix reports quantitatively similar, but far noisier, estimates for the neighbors sample, which includes only a selection of precincts from 330 municipality elections and only identifies out of within-neighbor variation.

[Table 4 about here.]

The results for revealing a corrupt mayor provide some evidence that local media supports electoral accountability. In column (1), mayors in the third quartile of the corruption distribution experience a significant loss in their vote share—almost one percentage point for each additional local media station. A standard deviation increase in the number of media stations, which entails 11.5 more media stations, thus reduces the vote share of an incumbent revealed to be corrupt by nine percentage points. The positive interactions between our audit dummy and a mayor's corruption quartile indicate that revealing a mayor to be corrupt is not punished electorally in precincts covered by no media stations. Although there is also a negative coefficient for more egregious cases of corruption, in Q4, the effect is not statistically significant. However, we find below that the weakness of this result reflects the fact that only additional television stations induce voters to sanction the most corrupt mayors.

In precincts where local media reveals a mayor to have neglected the poor, the effect is larger and increasing in the severity of a mayor's neglect. Column (2) shows that an additional local media station reduces a neglectful mayor's vote share by 1.1 percentage points for mayors in the third quartile and 1.9 percentage points for mayors in the most neglectful quartile. A standard deviation increase in the number of local media stations thus entails a 22 percentage point decrease in the vote share of the most neglectful mayors if their behavior is revealed before an election. This represents a decline of almost half their vote share. Again, the positive interaction between the pre-election audit release and not spending on the poor shows that in locations with zero local media stations the party of the mayor is not sanctioned electorally. Furthermore, the significant positive interaction between revealing an audit and the total number of local media stations shows that parties that were revealed to spent FISM funds on the poor are boosted at polls, although not as much as malfeasant mayors are punished. Consistent with the DD estimates in Table 3, these results thus clearly indicate that the *media-induced* electoral response to revealing neglect of the poor is larger than the electoral response to corruption.[52]

[Table 5 about here.]

These results provide clear evidence that local media coverage is necessary for voters to punish the parties of malfeasant mayors. However, it remains possible that coverage from any type of media source is equally effective. To test whether non-local media also facilitates electoral sanctioning, we again implement our neighbors identification strategy to isolate variation in within-state

[52]It is possible that corruption is punished less in this context because our measure—unauthorized spending—is broader than those used in previous studies.

and out-of-state media coverage. The results of these tests are presented in Table 5. The triple interaction between revealing an audit before the election, the audit's outcome and non-local media provides no evidence that either the number of media stations broadcasting from within the state (excluding those within the municipality) or from outside the state affect the incumbent party's vote share. Comparing these estimates to those for local media in Table 4, the effect of such non-local media is always smaller than for local media and is never significantly negative.[53]

5.3 Robustness checks

By exploiting two sources of plausibly exogenous variation, there are good reasons to be confident in our estimates. Nevertheless, we now show that our local media estimates are robust to a variety of specification checks. Table 6 presents the results of these checks, focusing on the triple interactions identifying the effects of local media revealing mayoral malfeasance.

First, we show that the results are not being driven by small parties. Accordingly, we restrict attention to incumbents containing the PAN or PRI, which are the two strongest parties at the municipal level. Panel A of Table 6 shows that our estimates slightly increase in magnitude for the 88% of precincts where the PAN or PRI were incumbents.

[Table 6 about here.]

Second, panels B-D examine different types of media separately. As noted above, television may be more effective for sanctioning voters because voters report that television is their main source of political information (Castañeda Sabido 2011). Furthermore, AM radio stations may provide less locally-targeted news because its relatively extensive coverage ranges may cause such stations to appeal to a broader geographic demographic. For both an additional FM and especially an additional television station, we observe that corruption—especially the most egregious cases—is punished substantially. Consistent with these expectations, local media's effects are generally largest for FM radio and especially television. However, we treat such estimates with caution since neighbors that differ in terms of their FM and television coverage may be more located in more urban areas where voters are more able or willing to act upon information concerning their mayor's performance.

[53] We also find the same results when using the neighbors sample used to estimate the effect of local media. Similarly, the Online Appendix shows that the effects of local media are robust to simultaneously controlling for the interaction of audit outcomes with both measures of non-local media.

Third, it is possible that our local media estimates are driven by neighboring units that cross municipality borders. Such neighbors could be picking up unobservable features of their respective municipalities. To demonstrate that this is not the case, panel E shows similar results when the set of potential neighboring pairs is restricted to precincts within the same municipality.

Fourth, our balance checks highlighted a significant imbalance in internet access. Given audit reports were also released online, it is possible that local media coverage is simply a proxy for internet access. However, since the imbalance is extremely small in magnitude and internet is not prevalent in Mexico, it is hard to believe that this correlation could account for our large estimates. Furthermore, panel F shows that controlling for a triple interaction between audit results and the proportion of the precinct with internet access barely affects our point estimates, although the Q3 corruption coefficient now falls slightly outside statistical significance. The internet coefficients suggest that precincts with greater internet access are more likely to punish corrupt, but not neglectful, mayors. However, since internet access may still be correlated with precinct characteristics like education and political interest, further work is required to establish whether the association with internet access is causal.

Fifth, we consider a linear specification of the audit report results. In particular, we use the share of unauthorized spending and spending not on the poor instead of the binary approaches used above. This allows for alternative types of voter punishment strategies. Panel G shows substantively similar results, supporting our claim that media facilitates voter sanctioning of worse behavior in office.

Sixth, at the cost of losing randomization in local media, we estimate equation (1) in the larger DD sample to check the external validity of the neighbor sample estimates. The results, provided in the Online Appendix, are broadly similar to the neighbor estimates. For both corruption and spending not on the poor, a mayor revealed to be in the most malfeasant quartile experiences a significant decrease in their vote share for each additional local media station. Although the neighbors and DD samples yield relatively similar results, the estimates suggest that not accounting for differences correlated with media availability slightly downwardly biases media's amplifying effects of spending not on the poor.

5.4 Heterogeneity by party

Our main finding shows that electoral punishment of malfeasance requires the presence of local media stations publicizing the results of independent audit reports. However, it is possible that punishment differs by party, given that parties vary in their political platforms and reputations. For example, voters might be more likely to update their beliefs about the sincerity, commitment, or

competence of parties when the incumbent's behavior in office contradicts the campaign promises of their party or voter expectations of politicians.[54] Alternatively, voters might find some behavior particularly hypocritical, and therefore more egregious and deserving of punishment.

In the context of Mexican politics, the main parties differ in the extent to which they promise to support the poor. Since the PRI is a populist party appealing to the relatively disadvantaged masses, we might expect revelations of failing to spend on the poor to hurt the PRI more than other parties. The PAN, which also has a significant number of mayors, is instead the party of richer voters. Although most parties have been linked with corruption, the audit reports suggest that PRI mayors engage in the least municipal malfeasance. This contrasts with the PRI's association with electoral fraud. However, it is possible that voters expect populist parties like the PRI to be more reluctant to steal funds. Accordingly, voters may also be more likely to punish PRI corruption.

Table 8 examines these relationships by comparing the effects of local media between PRI and non-PRI incumbents.[55] Although PRI municipalities could be correlated with other relevant characteristics, the results suggest that electoral sanctioning is primarily driven by the precincts with a PRI incumbent. In particular, for each additional media station the PRI loses approximately two percentage points more when its incumbents are revealed as corrupt or negligent. Except in the case of the most egregious cases of not spending on the poor, the results indicate that only the PRI is being punished for malfeasance in office. This evidence implies that voters are particularly willing to punish politicians that claim to support poorer voters but which ultimately neglect them—either by not spending on the poor or engaging in corruption.

[Table 8 about here.]

These results also provide evidence consistent with voters updating in a relatively sophisticated way. In addition to voters linking the current mayor to their party, voters also appear to understand that malfeasance is not equally likely among all parties. This suggests that voters are not simply punishing a party they can link to malfeasance.

[54] See, e.g. Alt, Lassen and Marshall (2014), who show that opposition claims that the economy is performing well or government claims that the economy is performing badly have larger effects on voter evaluations of government. Similarly, Chiang and Knight (2011) for evidence that "surprising" newspaper endorsements have a significant effect on voter behavior but "expected" endorsements do not.

[55] Although the PRD is perhaps the most left-leaning party, the number of PRD mayors is quite small and these mayors often hold office in coalition with other local parties.

5.5 Longer-run effects

Finally, we turn to the longer-run effects of audits revealing poor mayoral performance. In particular, we look at the performance of the incumbent political party one further election into the future. Theoretically, there are good reasons to believe that negative electoral shocks can persist. One potential avenue is incumbency advantage (e.g. Lee, Moretti and Butler 2004): if incumbency bolsters incumbent performance through exposure or resources, losing office could cause the current incumbent party to continue to suffer in the future. Alternatively, voters may permanently update their beliefs about political parties, and continue to punish the party of a malfeasant mayor at the next election. Table 9 presents our estimates for equation (2), where the outcome is the incumbent's vote share at the next election after an audit is revealed.

[Table 9 about here.]

The results show that effects of revealing malfeasance are if anything felt harder at the following election. We again find that each additional local media station publicizing corruption or negligence substantially reduces the incumbent's vote share. With the exception of Q3 not spending on the poor, the longer-run coefficient estimates are larger in magnitude. Unfortunately, our research design is not able to differentiate alternative explanations for these large longer-run effects.[56]

6 Conclusion

Many scholars call media "the fourth estate," due to its potential to inform voters about the behavior of politicians in office. Both national and local media are needed: while national media outlets cover national level actors, local media are necessary to inform voters about the performance of local politicians. However, since local media is often monopolistic or oligopolistic, it may be especially vulnerable to capture in developing democracies (Besley and Prat 2006).

Using detailed local data and an identification strategy that exploits differences in signal coverage across neighboring electoral precincts, we identify the impact of the media environment on

[56]To do so, we would need two of the following sources of variation. First, to control for incumbency, we could use random variation in incumbency that is orthogonal to the audit information. However, we are unaware of such a source of variation. Second, we could use variation on audit information that does not affect incumbency. However, since mayors typically last three years in office, and there is a two-year lag between the year the money is spent and the year that information is released, it is not possible to generate such variation within a mayor's term.

political accountability. We show that voters punish the party of malfeasant mayors, but only in electoral precincts covered by local media stations. In particular, we find that each additional local radio or television station reduces the vote share of an incumbent political party revealed to be corrupt by nearly one percentage point, and reduces the vote share of an incumbent political party revealed to have diverted funds away from the poor by about 1-2 percentage points. Furthermore, we find that these electoral costs do not abate by the election. However, we find no effect of media stations that cover the municipality but are based in other municipalities. Thus, our findings demonstrate the importance of media, especially local media, in supporting political accountability by sanctioning malfeasant behavior.

The electoral costs of diverting resources away from the poor are especially large for the populist PRI party. One interpretation of this finding is that voters punish parties more for behavior that is not only malfeasant but contrary to the party's ideological reputation. This raises important questions about voter sophistication and, therefore, about the scope for politicians to engage in malfeasant behavior in office. Further work is clearly needed to understand the conditions under which different types of politicians are punished by voters.

References

Alt, James E., David D. Lassen and John Marshall. 2014. "Information sources, belief updating, and the politics of economic expectations: Evidence from a Danish survey experiment." Working paper.

Ansolabehere, Stephen, Erik C. Snowberg and James M. Snyder. 2006. "Television and the incumbency advantage in US elections." *Legislative Studies Quarterly* 31(4):469–490.

Banerjee, Abhijit V., Donald Green, Jeffrey McManus and Rohini Pande. 2014. "Are Poor Voters Indifferent to Whether Elected Leaders are Criminal or Corrupt? A Vignette Experiment in Rural India.". Working paper.

Banerjee, Abhijit V., Selvan Kumar, Rohini Pande and Felix Su. 2011. "Do Informed Voters Make Better Choices? Experimental Evidence from Urban India." Working paper.

Barro, Robert J. 1973. "The control of politicians: an economic model." *Public choice* 14(1):19–42.

Besley, Timothy and Andrea Prat. 2006. "Handcuffs for the grabbing hand? Media capture and government accountability." *American Economic Review* 96(3):720–736.

Boas, Taylor C. and F. Daniel Hidalgo. 2011. "Controlling the airwaves: Incumbency advantage and community radio in Brazil." *American Journal of Political Science* 55(4):869–885.

Bobonis, Gustavo J., Luis R. Camara Fuertes and Rainer Schwabe. 2013. "Monitoring Corruptible Politicians." Working paper.

Bobonis, Gustavo J., Luis R. Cámara Fuertes and Rainer Schwabe. 2014. "Monitoring Corruptible Politicians." Working paper.

Caselli, Francesco and Massimo Morelli. 2004. "Bad politicians." *Journal of Public Economics* 88(3):759–782.

Castañeda Sabido, Fernando. 2011. "Investigación sobre la percepción ciudadana acerca de la transparencia, rendición de cuentas y fiscalizacin en el uso de los recursos públicos en México." *Reporte para la Auditoría Superior de la Federación* .

Chang, Eric C.C., Miriam A. Golden and Seth J. Hill. 2010. "Legislative malfeasance and political accountability." *World Politics* 62(2):177–220.

Chiang, Chun-Fang and Brian Knight. 2011. "Media bias and influence: Evidence from newspaper endorsements." *Review of Economic Studies* 78(3):795–820.

Chong, Alberto, Ana De La O, Dean Karlan and Leonard Wantchekon. forthcoming. "Does Corruption Information Inspire the Fight or Quash the Hope? A Field Experiment in Mexico on Voter Turnout, Choice and Party Identification." *Journal of Politics* .

Costas, Elena, Albert Solé-Ollé and Pilar Sorribas-Navarro. 2011. "Do voters really tolerate corruption? Evidence from Spanish Mayors." Working paper.

de Figueiredo, Miguel F.P., F. Daniel Hidalgo and Yuri Kasahara. 2013. "When Do Voters Punish Corrupt Politicians? Experimental Evidence from Brazil." Working paper.

Dell, Melissa. 2010. "The persistent effects of Peru's mining mita." *Econometrica* 78(6):1863–1903.

DellaVigna, Stefano and Ethan Kaplan. 2007. "The Fox News effect: Media bias and voting." *Quarterly Journal of Economics* 122(3):1187–1234.

DellaVigna, Stefano and Matthew Gentzkow. 2010. "Persuasion: Empirical Evidence." *Annual Review of Economics* 2(1):643–669.

Durante, Ruben and Brian Knight. 2012. "Partisan control, media bias, and viewer responses: Evidence from Berlusconi's Italy." *Journal of the European Economic Association* 10(3):451–481.

Dutta, Bhaskar and Poonam Gupta. 2012. "How Do Indian Voters Respond to Candidates with Criminal Charges: Evidence from the 2009 Lok Sabha Elections." University Library of Munich, MPRA Paper Series, No. 38417.

Eggers, Andrew and Alexander C. Fisher. 2011. "Electoral Accountability and the UK Parliamentary Expenses Scandal: Did Voters Punish Corrupt MPs?" SSRN working paper.

Enikolopov, Ruben, Maria Petrova and Ekaterina Zhuravskaya. 2011. "Media and political persuasion: Evidence from Russia." *American Economic Review* 101(7):3253–3285.

Ferejohn, John. 1986. "Incumbent performance and electoral control." *Public choice* 50(1):5–25.

Fergusson, Leopoldo. 2014. "Media markets, special interests, and voters." *Journal of Public Economics* 109(C):13–26.

Ferraz, Claudio and Frederico Finan. 2008. "Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes." *Quarterly Journal of Economics* 123(2):703–745.

Gentzkow, Matthew and Jesse M. Shapiro. 2006. "Media bias and reputation." *Journal of Political Economy* 114(2):280–316.

Gentzkow, Matthew, Jesse M. Shapiro and Michael Sinkinson. 2014. "Competition and ideological diversity: Historical evidence from U.S. newspapers." *American Economic Review* 104(10):3073–3114.

Humphreys, Macartan and Jeremy Weinstein. 2012. "Policing Politicians: Citizen Empowerment and Political Accountability in Uganda Preliminary Analysis." Working paper.

Klasnja, Marko. 2011. "Why Do Malfeasant Politicians Maintain Political Support? Testing the "Uninformed Voter" Argument.".

Langston, Joy. 2003. "Rising from the ashes? Reorganizing and unifying the PRI's state party organizations after electoral defeat." *Comparative Political Studies* 36(3):293–318.

Larreguy, Horacio, John Marshall and James M. Snyder Jr. 2014. "Leveling the playing field: How equalizing access to political advertising helps locally non-dominant parties in consolidating democracies." Working paper.

Larreguy, Horacio, John Marshall and Pablo Querubín. 2014. "What is the Effect of Turnout Buying? Theory and Evidence from Mexico." Working paper.

Lavielle, Briseida, Kristina Pirker and Alberto Serdán. 2006. "Monitoreo de Programas Sociales en Contextos Electorales." Fundar Working paper.

Lee, David S., Enrico Moretti and Matthew J. Butler. 2004. "Do voters affect or elect policies? Evidence from the U.S. House." *Quarterly Journal of Economics* pp. 807–859.

McCann, James A. and Jorge I. Domınguez. 1998. "Mexicans react to electoral fraud and political corruption: an assessment of public opinion and voting behavior." *Electoral Studies* 17(4):483–503.

Michalopoulos, Stelios and Elias Papaioannou. 2013. "Pre-Colonial Ethnic Institutions and Contemporary African Development." *Econometrica* 81(1):113–152.

Niehaus, Paul and Sandip Sukhtankar. 2013. "Corruption Dynamics: The Golden Goose Effect." *American Economic Journal: Economic Policy* 5(4):230–269.

Olken, Benjamin A. 2007. "Monitoring Corruption: Evidence from a Field Experiment in Indonesia." *Journal of Political Economy* 115(2).

Prat, Andrea and David Strömberg. 2005. "Commercial Television and Voter Information.". CEPR Discussion Paper No. 4989.

Rundquist, Barry S., Gerald S. Strom and John G. Peters. 1977. "Corrupt politicians and their electoral support: some experimental observations." *American Political Science Review* pp. 954–963.

Serra, Gilles. 2012. "The Risk of Partyarchy and Democratic Backsliding Mexico." *Taiwan Journal of Democracy* 8(1):93–118.

Slomczynski, Kazimierz and Goldie Shabad. 2012. "Perceptions of political party corruption and voting behaviour in Poland." *Party Politics* 18(6):897–917.

Snyder, James M. and David Strömberg. 2010. "Press Coverage and Political Accountability." *Journal of Political Economy* 118(2):355–408.

Stanig, Piero. forthcoming. "Regulation of Speech and Media Coverage of Corruption: An Empirical Analysis of the Mexican Press." *American Journal of Political Science* .

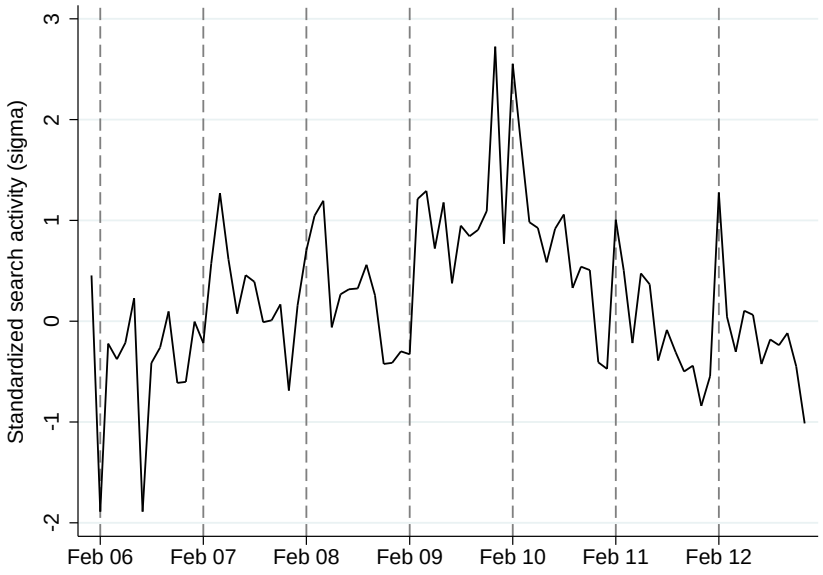
Svolik, Milan W. 2013. "Learning to love democracy: electoral accountability and the success of democracy." *American Journal of Political Science* 57(3):685–702.

Weitz-Shapiro, Rebecca and Matthew S. Winters. 2014. "Discerning corruption: Credible Accusations and the Punishment of Politicians in Brazil." Working paper.

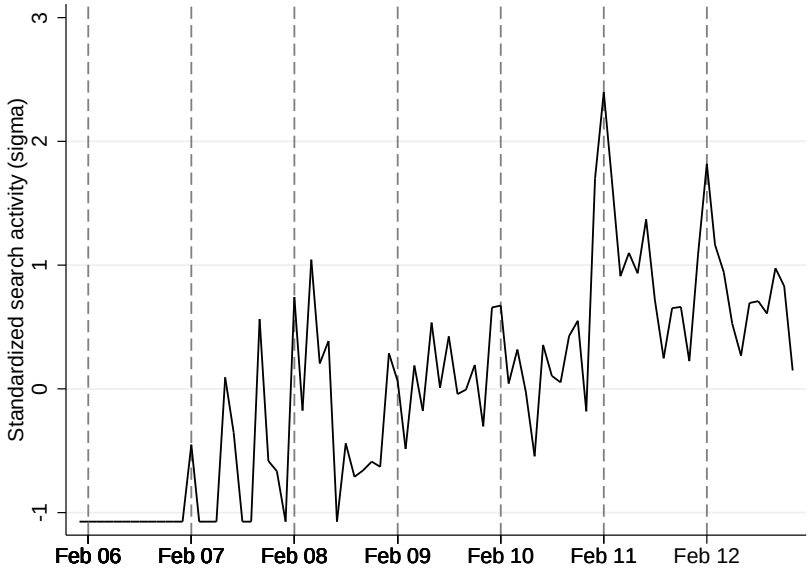
Wellenstein, Anna, Angélica Núñez and Luis Andrés. 2006. Social Infrastructure: Fondo de Aportaciones para la Infraestructura Social (FAIS). In *Decentralized service delivery for the poor, Volume II: Background papers*, ed. The World Bank. Mexico City: The World Bank pp. 167–222.

Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge University Press.

Zamboni, Yves and Stephan Litschig. 2014. "Audit Risk and Rent Extraction: Evidence from a Randomized Evaluation in Brazil." Working paper.



(a) Searches for ASF



(b) Searches for FISM

Figure 1: Google searches related to audit reports by month, 2006-2012

Notes: Extracted using Google Correlate (http://correlate.googlelabs.com) on 15th July 2014. The data cover Google searches in Mexico for the period used in our sample.

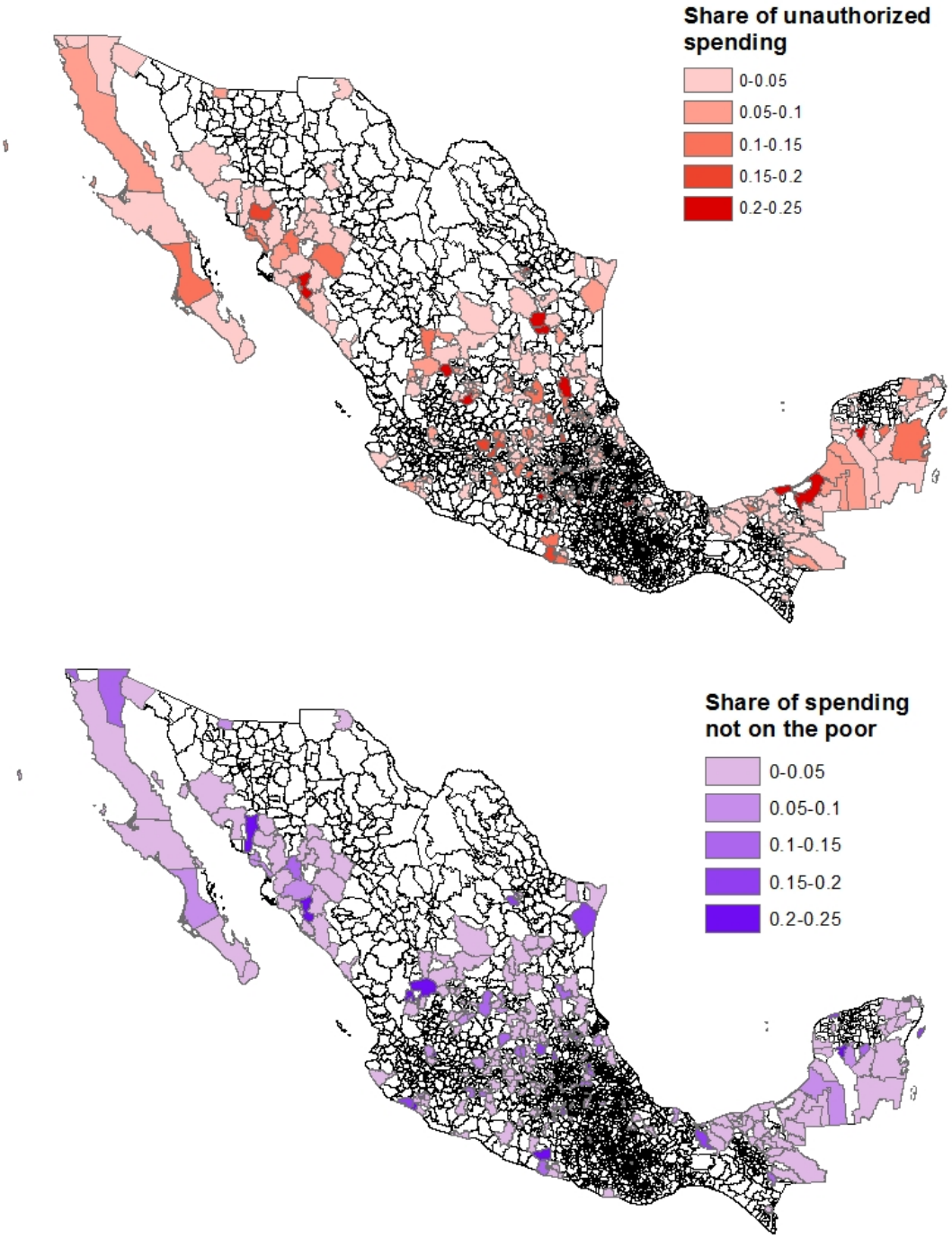


Figure 2: Distribution of audit report outcomes by municipality.

Notes: Only the 268 municipalities in our final sample are included. Where more than one audit occurs, we take the average audit outcome.

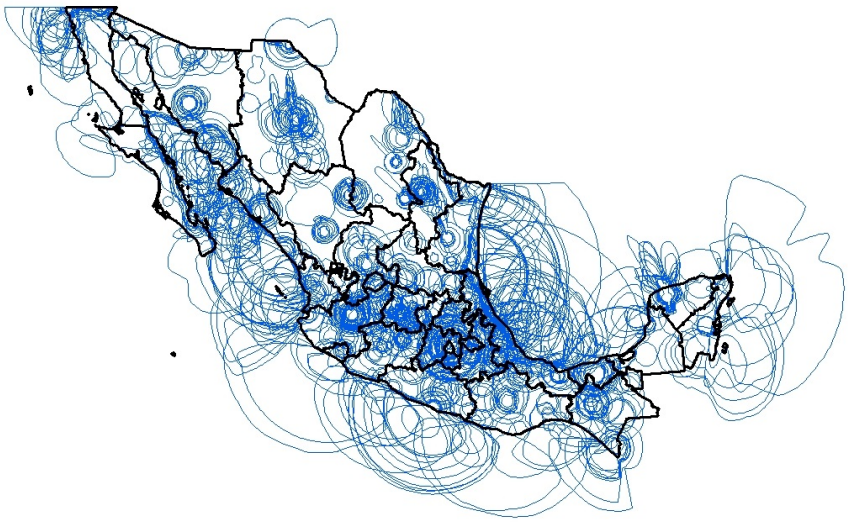


Figure 3: AM radio signal coverage areas (source: IFE).

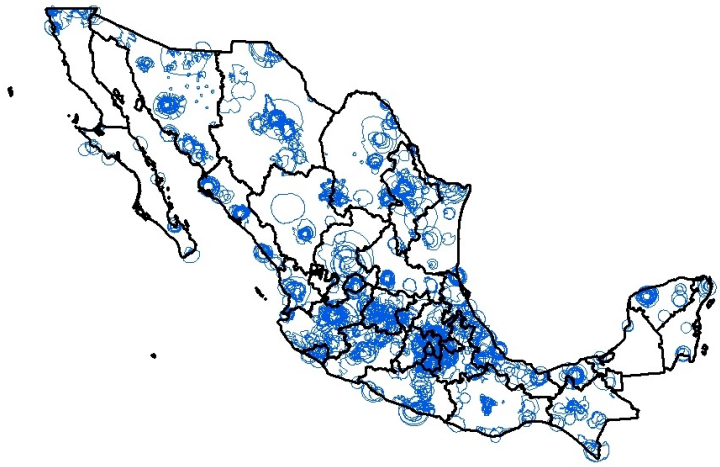


Figure 4: FM radio signal coverage (source: IFE).

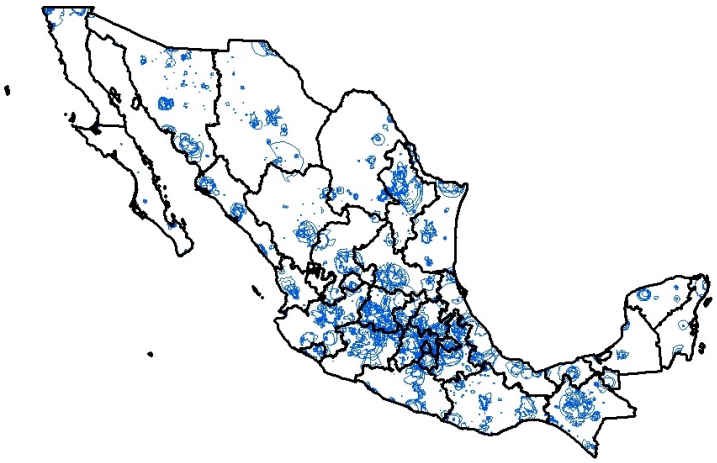


Figure 5: TV signal coverage (source: IFE).

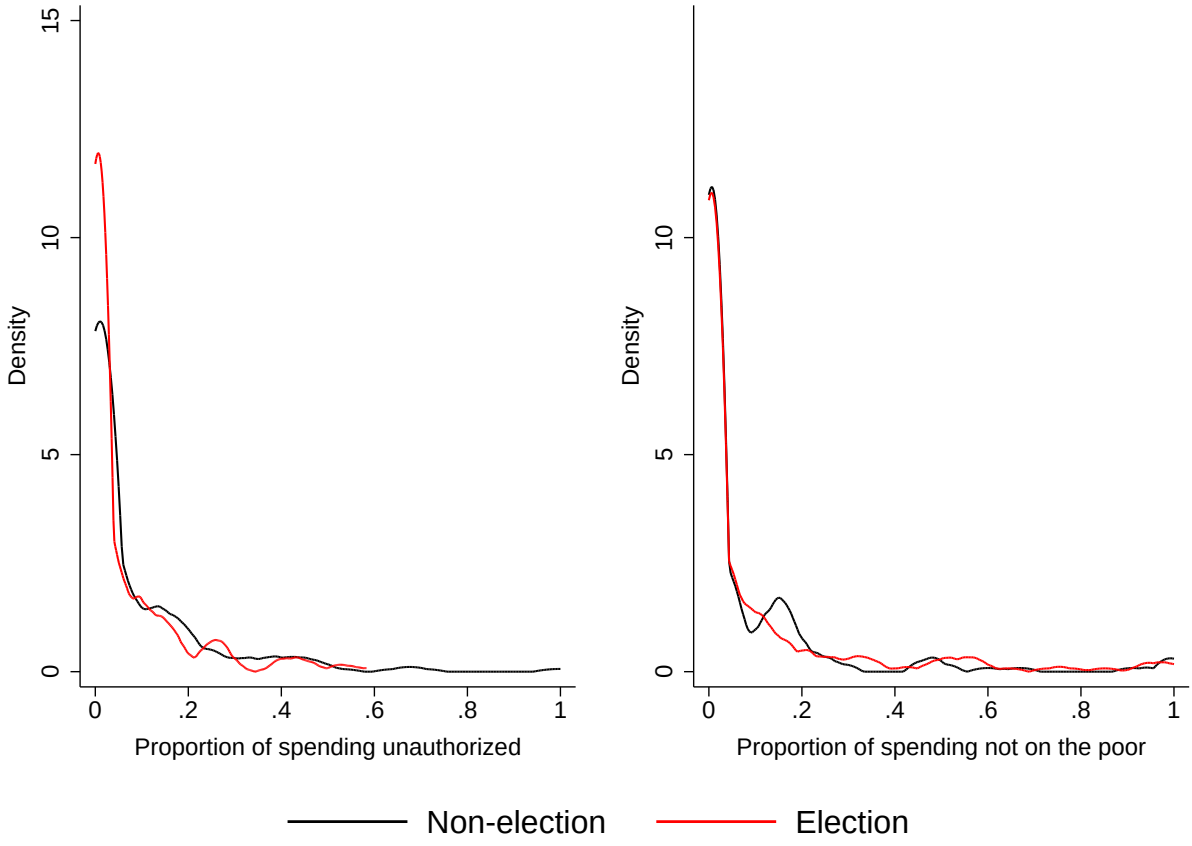


Figure 6: Distribution of audit report results

Notes: The distributions are based on the 202 audits released in election years and the 227 that were released the year after the election that comprise our DD sample.

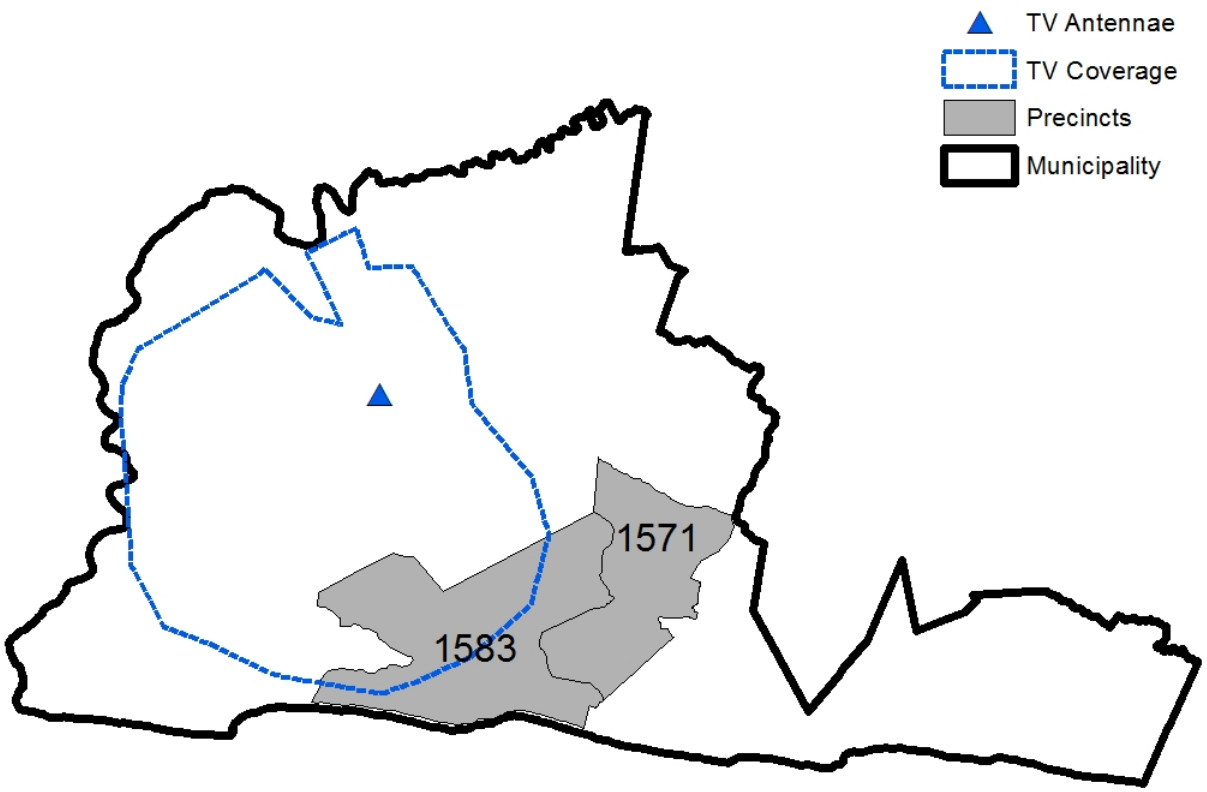


Figure 7: Identification strategy example

Note: Both precincts are from the municipality of Villa de Tututepec de Melchor Ocampo in the state of Oaxaca. While precinct 1583 is covered by the television emitting from within the municipality, 1571 is not.

Table 1: Summary statistics by audit status (DD sample)

	Control (no audit) mean	Audit difference	
Unauthorized spending	0.106	-0.026	(0.030)
Corrupt Q3	0.223	0.059	(0.068)
Corrupt Q4	0.297	-0.080	(0.077)
Spending not on the poor	0.094	0.022	(0.032)
Not poor Q3	0.247	0.007	(0.074)
Not poor Q4	0.246	0.000	(0.076)
Incumbent precinct vote share (lag)	0.478	0.004	(0.014)
Incumbent victory margin (lag)	0.146	-0.003	(0.022)
Coalition partners	1.740	0.041	(0.228)
Registered voters	1,328.15	-40.88	(77.16)
Area (km^2)	19.982	0.074	(4.332)
Local media	10.403	3.190	(2.308)
Non-local media	20.603	-2.008	(3.383)
Share employed	0.952	0.001	(0.002)
Share illiterate	0.059	-0.002	(0.006)
Share with household necessities	0.801	0.031	(0.023)
Current schooling scale	0.760	0.006	(0.006)
Completed schooling scale	0.280	-0.012**	(0.006)
Share with household amenities	0.605	0.023	(0.017)
Share with internet	0.222	0.021	(0.018)

Notes: The audit difference results are from regressions of the outcome variables on the left-hand-side of the table on an indicator for an audit being released the year before an election, where standard errors clustered by municipality election are in parentheses. There are 45,935 observations for each variable. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 2: Linear balance over local media (neighbor sample)

	Coefficient on local media	
Unauthorized spending	0.000	(0.002)
Corrupt Q3	0.001	(0.003)
Corrupt Q4	-0.001	(0.006)
Spending not on the poor	-0.001	(0.003)
Not poor Q3	0.009	(0.006)
Not poor Q4	-0.001	(0.004)
Incumbent vote share (lag)	0.001	(0.001)
Win margin (lag)	0.000	(0.001)
Coalition partners	-0.003	(0.017)
Registered voters	16.28	(11.39)
Area (km^2)	1.583*	(0.868)
Non-local media	-0.054	(0.104)
Share employed	0.000	(0.000)
Share illiterate	0.000	(0.000)
Share with household necessities	0.000	(0.001)
Current schooling scale	0.000	(0.000)
Completed schooling scale	0.000	(0.000)
Share with household amenities	0.000	(0.001)
Share with internet	0.002***	(0.001)

Notes: Each coefficient is from a separate OLS regression of the variable in each row on the total number of local media stations, controlling for neighbor and year fixed effects. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 3: The effects of audits revealing malfeasance before an election (DD sample)

	Change in incumbent vote share		Incumbent re-elected	
	(1)	(2)	(3)	(4)
Audit	0.030	0.059**	0.082	0.106
	(0.021)	(0.024)	(0.116)	(0.107)
Corrupt Q3	0.011		0.038	
	(0.026)		(0.147)	
Audit × Corrupt Q3	-0.000		0.121	
	(0.042)		(0.181)	
Corrupt Q3	0.007		0.159	
	(0.043)		(0.151)	
Audit × Corrupt Q4	-0.038		-0.221	
	(0.051)		(0.205)	
Not poor Q3		0.026		-0.117
		(0.024)		(0.159)
Audit × Not poor Q3		-0.048		0.104
		(0.038)		(0.191)
Not poor Q4		0.042		-0.028
		(0.040)		(0.142)
Audit × Not poor Q4		-0.088*		-0.255
		(0.048)		(0.185)
Observations	45,935	45,935	45,935	45,935

Notes: All specifications include demographic and socioeconomic controls and year fixed effects, and are estimated using OLS. Similar estimates for the neighbor sample are provided in the Online Appendix. The omitted category for corruption and not spending on the poor is Q1 and Q2. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 4: Effects of local media publicizing audits reports revealing malfeasance before an election (neighbor sample)

	Change in incumbent vote share	
	(1)	(2)
Audit	-0.028	-0.023
	(0.034)	(0.031)
Local media	0.000	-0.003
	(0.003)	(0.003)
Audit × Local media	0.001	0.005*
	(0.003)	(0.003)
Corrupt Q3	-0.108**	
	(0.052)	
Audit × Corrupt Q3	0.120**	
	(0.050)	
Audit × Corrupt Q3 × Local media	-0.008**	
	(0.003)	
Corrupt Q4	0.058	
	(0.052)	
Audit × Corrupt Q4	0.001	
	(0.060)	
Audit × Corrupt Q4 × Local media	-0.004	
	(0.006)	
Not poor Q3		-0.078
		(0.057)
Audit × Not poor Q3		0.137**
		(0.068)
Audit × Not poor Q3 × Local media		-0.011*
		(0.006)
Not poor Q4		-0.017
		(0.042)
Audit × Not poor Q4		0.044
		(0.068)
Audit × Not poor Q4 × Local media		-0.019***
		(0.006)
Observations	19,922	19,922

Notes: All specifications include demographic and socioeconomic controls and neighbor and year fixed effects, and are estimated using OLS. The omitted category for corruption and not spending on the poor is Q1 and Q2. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 5: Effects of within-state and out-of-state media publicizing audits reports revealing malfeasance before an election (neighbor sample)

Panel A: Within-state media	Change in incumbent vote share	
	(1)	(2)
Audit × State Media	0.005***	0.004
	(0.002)	(0.003)
Audit × Corrupt Q3 × State Media	-0.002	
	(0.005)	
Audit × Corrupt Q4 × State Media	-0.004	
	(0.003)	
Audit × Not poor Q3 × State Media		0.005
		(0.003)
Audit × Not poor Q4 × State Media		-0.001
		(0.005)
Observations	7,983	7,983
Panel B: Out-of-state media	Change in incumbent vote share	
	(1)	(2)
Audit × Non-state media	-0.003	0.005
	(0.004)	(0.003)
Audit × Corrupt Q3 × Non-state media	0.000	
	(0.005)	
Audit × Corrupt Q4 × Non-state media	0.001	
	(0.006)	
Audit × Not poor Q3 × Non-state media		-0.003
		(0.005)
Audit × Not poor Q4 × Non-state media		-0.008
		(0.007)
Observations	4,634	4,634

Notes: The estimates in this table are computed using the neighbors research design for the number of out-of-state media stations covering a precinct. All specifications include demographic and socioeconomic controls and neighbor and year fixed effects, and are estimated using OLS. The omitted category for corruption and not spending on the poor is Q1 and Q2. Lower order interaction terms are omitted, but available in our replication code. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 6: Robustness checks (neighbor sample)

Panel A: PAN and PRI incumbents	Change in incumbent vote share	
	(1)	(2)
Audit × Corrupt Q3 × Local media	-0.008**	
	(0.004)	
Audit × Corrupt Q4 × Local media	-0.008	
	(0.006)	
Audit × Not poor Q3 × Local media		-0.010
		(0.007)
Audit × Not poor Q4 × Local media		-0.026***
		(0.006)
Panel B: AM radio	Change in incumbent vote share	
	(1)	(2)
Audit × Corrupt Q3× Local AM	0.005	
	(0.010)	
Audit × Corrupt Q4× Local AM	0.021	
	(0.018)	
Audit× Not poor Q3 × Local AM		-0.020
		(0.019)
Audit× Not poor Q4 × Local AM		-0.028*
		(0.017)
Panel C: FM radio	Change in incumbent vote share	
	(1)	(2)
Audit × Corrupt Q3 × Local FM	-0.033***	
	(0.010)	
Audit × Corrupt Q4 × Local FM	-0.008	
	(0.010)	
Audit × Not poor Q3 × Local FM		-0.021*
		(0.012)
Audit × Not poor Q4 × Local FM		-0.032***
		(0.008)
Panel D: television	Change in incumbent vote share	
	(1)	(2)
Audit × Corrupt Q3 × Local TV	-0.016	
	(0.015)	
Audit × Corrupt Q4 × Local TV	-0.028*	
	(0.014)	
Audit × Not poor Q3 × Local TV		-0.027*
		(0.015)
Audit × Not poor Q4 × Local TV		-0.037**
		(0.016)

Notes: All specifications are estimated using OLS and include demographic and socioeconomic controls and neighbor and year fixed effects. All regressions have 19,922 observations except Panel A which contains 17,597 observations. The omitted category for corruption and not spending on the poor is Q1 and Q2. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 7: Robustness checks (neighbor sample) (continued)

Panel E: within-municipality neighbors	Change in incumbent vote share	
	(1)	(2)
Audit × Corrupt Q3 × Local media	-0.012**	
	(0.006)	
Audit × Corrupt Q4 × Local media	0.000	
	(0.007)	
Audit × Not poor Q3 × Local media		-0.015**
		(0.007)
Audit × Not poor Q4 × Local media		-0.020**
		(0.010)
Panel F: control for internet access	Change in incumbent vote share	
	(1)	(2)
Audit × Corrupt Q3 × Local media	-0.006	
	(0.005)	
Audit × Corrupt Q4 × Local media	-0.001	
	(0.007)	
Audit × Corrupt Q3 × Internet	-0.152	
	(0.158)	
Audit × Corrupt Q4 × Internet	-0.438***	
	(0.138)	
Audit × Not poor Q3 × Local media		-0.012**
		(0.006)
Audit × Not poor Q4 × Local media		-0.022***
		(0.006)
Audit × Not poor Q3 × Internet		0.173
		(0.155)
Audit × Not poor Q4 × Internet		0.128
		(0.157)
Panel G: linear audit measures	Change in incumbent vote share	
	(1)	(2)
Audit × Unauthorized × Local media	-0.008	
	(0.020)	
Audit × Spending not poor × Local media		-0.044***
		(0.015)

Notes: All specifications are estimated using OLS and include demographic and socioeconomic controls and neighbor and year fixed effects. All regressions have 19,992 observations, except Panel G which contains 16,314 observations. The omitted category for corruption and not spending on the poor is Q1 and Q2. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 8: Heterogeneous effects of local media publicizing audits reports revealing malfeasance before an election, by political party (neighbor sample)

	Change in incumbent vote share	
	(1)	(2)
Audit × Local media	-0.011	0.002
	(0.010)	(0.005)
Audit × Local media × PRI	0.018*	0.003
	(0.010)	(0.006)
Audit × Corrupt Q3 × Local media	0.007	
	(0.010)	
Audit × Corrupt Q3 × Local media × PRI	-0.032**	
	(0.015)	
Audit × Corrupt Q4 × Local media	0.014	
	(0.009)	
Audit × Corrupt Q4 × Local media × PRI	-0.027**	
	(0.011)	
Audit × Not poor Q3 × Local media		0.001
		(0.009)
Audit × Not poor Q3 × Local media × PRI		-0.031***
		(0.012)
Audit × Not poor Q4 × Local media		-0.019**
		(0.009)
Audit × Not poor Q4 × Local media × PRI		-0.015
		(0.012)
Observations	17,597	17,597

Notes: The sample includes only PRI and PAN incumbents. All specifications include demographic and socioeconomic controls and year fixed effects, and are estimated using OLS. The omitted category for corruption and not spending on the poor is Q1 and Q2. Lower order interaction terms are omitted, but available in our replication code. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

Table 9: Longer-run effects of local media publicizing audits reports revealing malfeasance before an election (neighbor sample)

	Change in incumbent vote share at next election	
	(1)	(2)
Audit × Local media	0.013***	0.005
	(0.004)	(0.003)
Audit × Corrupt Q3 × Local media	-0.023***	
	(0.008)	
Audit × Corrupt Q4 × Local media	-0.008	
	(0.012)	
Audit × Not poor Q3 × Local media		-0.005
		(0.008)
Audit × Not poor Q4 × Local media		-0.019**
		(0.008)
Observations	10,999	10,999

Notes: All specifications include demographic and socioeconomic controls and neighbor and year fixed effects, and are estimated using OLS. The omitted category for corruption and not spending on the poor is Q1 and Q2. Lower order interaction terms are omitted, but available in our replication code. Standard errors are clustered by municipal election. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.