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Media Attention and Bureaucratic Responsiveness

Aaron Erlich*, Daniel Berliner†, Brian Palmer-Rubin‡, Benjamin E. Bagozzi§

*McGill University; †London School of Economics and Political Science; ‡Marquette University; §University of Delaware

Address correspondence to the author at d.berliner@lse.ac.uk

Abstract

How does media attention shape bureaucratic behavior? We answer this question using novel data from the Mexican federal government. We first develop a new indicator for periods of anomalously heightened media attention, based on 150,000 news articles pertaining to 22 Mexican government ministries and agencies, and qualitatively categorize their themes. We then evaluate government responsiveness using administrative data on roughly 500,000 requests for government information over a 10-year period, with their associated responses. A panel fixed-effects approach demonstrates effects of media attention on the volume of outgoing weekly responses, while a second approach finds effects on the "queue" of information requests already filed when anomalous media attention begins. Consistent across these empirical approaches, we find that media attention shapes bureaucratic behavior. Positive or neutral attention is associated with reduced responsiveness, while the effects of negative attention vary, with attention to government *failures* leading to increased responsiveness but attention to *corruption* leading to reduced responsiveness. These patterns are consistent with mechanisms of reputation management, disclosure threat, and workload burden, but inconsistent with mechanisms of credit claiming or blame avoidance.

Introduction

How does media attention shape bureaucratic behavior? When bureaucratic organizations are the focus of heightened media coverage, their responsiveness to the public may shift in different ways. For example, they may become *less* responsive out of fear that increased scrutiny will expose information damaging to political principals, or *more* responsive in an effort to bolster reputations for accountability with key stakeholders. Whether bureaucratic organizations respond to intense media attention by "clamping down" or "opening up" is of central importance for the quality of democratic accountability. If agencies open up during times of heightened coverage, increased attention can contribute to a virtuous cycle between public oversight and good governance. In contrast, if agencies clamp down during such moments, this may contribute to a vicious cycle wherein accountability processes break down precisely when most needed.

Using a combination of quantitative and qualitative media text analysis, we analyze daily indicators of bureaucratic responsiveness by Mexican federal government agencies during *media anomalies*—periods of agency-specific heightened media attention. To measure responsiveness, we study the timing and type of official responses to requests for government information filed under Mexico's 2002 access-to-information (ATI) law. The disclosure of information about government activities corresponds to two components of bureaucratic responsiveness. First, it

constitutes one of the few spaces where individual citizens interact directly with bureaucrats in ministry headquarters, revealing information about these officials' efficiency, professionalism, and commitment to democratic norms. Second, information requests are a crucial means by which citizens monitor government performance, thereby informing other forms of electoral and nonelectoral participation and accountability. Responses to information requests also offer a particularly rich source of information on bureaucratic behavior at a fine-grained temporal level, enabling us to observe the precise days of receipt and response.

We combine our data on information requests and responses with a novel measure of media attention toward 22 Mexican federal government agencies over the period 2005–15. We use a corpus of roughly 150,000 news articles mentioning specific ministries or agencies by name and apply anomaly-detection methods to identify periods of anomalously heightened attention (which we generally refer to in this paper as "anomalies") to each entity. After identifying these anomalies, we review each to categorize the underlying events as being focused on policy, personnel, external events, government failure, or corruption, as well as coding for negative attention. These categorizations enable us to differentiate the effects of heightened media attention by theme.

We assess the effects of media anomalies on government responsiveness using two approaches, which yield largely consistent results. First, we use a panel fixed-effects approach at an agency-week level to assess the effects of media anomalies both on the volume of requests received and the volume of outgoing responses, comparing each anomaly-affected agency both with itself in other periods and with other unaffected agencies at the same time. Second, we focus on the queue of requests that were already filed—but were still awaiting response—on the eve of each anomaly onset. Importantly, these "exogenous" requests are exposed to the anomaly's effects despite being filed beforehand. We match each such anomaly-exposed request with other similar requests filed to the same agency but at other times.

Our approach has two advantages over existing analyses of media attention and government behavior. First, by differentiating between positive and negative coverage and specific themes of media coverage, we build on previous research that has found an accountability-producing effect of highly publicized corruption scandals (e.g., Camerlo and Pérez-Liñán 2015; Nyhan 2017) or of media exposure in general (e.g., Snyder and Strömberg 2010). Second, we build on the few existing studies that do differentiate between positive and negative coverage, yet tend to do so using aggregate data on media attention over longer periods of time (e.g., Maor, Gilad, and Bloom 2013; Maor and Sulitzeanu-Kenan 2013, 2016). In contrast, we analyze short periods of unusually heightened media coverage, allowing us to focus on changes in bureaucratic behavior when media attention is likely to be most salient.[1]

Drawing on existing theoretical approaches, we assess several possible mechanisms shaping bureaucratic responsiveness under heightened media attention, each suggesting a different pattern of behaviors across different types of attention. Our findings suggest that anomalously heightened media attention has markedly different effects depending on the nature of the media attention. These findings are inconsistent with either a simple mechanism of credit claiming—predicting that officials "open up" with increased responsiveness during periods of positive media attention—or a simple mechanism of blame avoidance—predicting that officials "clamp down" with worsened responsiveness during periods of negative attention. Instead, we find that positive and neutral attention—such as after a new policy announcement—lead to *reduced* responsiveness, likely due to increased workload burdens. Furthermore, we find that negative media attention leads to different types of responses depending on whether the agency is under scrutiny for poor performance or for corruption. Negative attention owing to government failure—for example botched responses to natural disasters—is associated with *increased* responsiveness, likely in an effort to salvage the agency's reputation. On the other hand, attention to corruption leads to *reduced* responsiveness. In such cases, the mandate to "stop the bleeding" by withholding information that could extend coverage prevails for officials facing scrutiny. We thus find evidence consistent with three distinct mechanisms of bureaucratic behavior: reputation management, disclosure threat, and workload burden.

These nuanced results suggest several implications. First, with respect to poor government performance, media attention stimulates bureaucratic responsiveness, driving officials to "open up" and thus bolster their organizations' reputations for accountability. However, this effect does not extend to media attention related to corruption, which causes officials to "clamp down" to protect themselves and their colleagues.

1 Our study focuses on responsiveness explicitly in response to queries, as opposed to proactive publicity that may also be an important part of agency strategies. Although evidence suggests that responsiveness in "reactive" and "proactive" transparency tend to go together across government entities in Mexico (Fierro et al. 2014), some agencies may at times substitute one for the other. Nonetheless, we focus in this study on responsiveness to requests, as this offers a context featuring temporally fine-grained information on disclosure decisions, both before and after key events.

These differences highlight the importance of comparing not only between positive and negative media attention, but also between different causes of media attention. Research on corruption scandals alone, or on negative media coverage in general, may fail to capture the full picture of media effects on bureaucratic behavior.

These findings also hold important lessons concerning the accountability-generating potential of ATI institutions. Many emphasize that information about government activities and performance is crucial for citizens to hold politicians and officials accountable (e.g., Przeworski, Stokes, and Manin 1999; Weber 1978). Moreover, in semi-institutionalized democracies such as Mexico, ATI systems increasingly play a central role in obtaining such information, both by ordinary citizens and by organized civil society, political parties, private firms, and the media. These institutions' importance is amplified during moments of heightened media attention. Where agency personnel are able to exercise discretion over disclosure decisions—as previous research has shown in the case of Mexico (e.g., Almanzar, Aspinwall, and Crow 2018; Bagozzi, Berliner, and Almquist 2019; Berliner et al. 2020; Fox, Haight, and Palmer-Rubin 2011)—they can either limit or promote the ability of ATI to inform democratic processes during these crucial periods.

Although we expect that the behaviors we identify are considerations for all ATI systems, the relative weight of these mechanisms certainly varies. The Mexican federal government has a strong ATI law (Bookman and Guerrero Amparán 2009; Michener 2015), but operates under conditions of high levels of corruption and moderately high bureaucratic capacity. In democracies with lower levels of bureaucratic capacity and record-keeping systems, we may expect workload burden effects to be even more substantial (e.g., Hyun, Post, and Ray 2018; Mutula and Wamukoya 2009; Neuman and Calland 2007). In more institutionalized democracies, one could expect the effects of workload burden and disclosure threat to be more muted, given higher levels of bureaucratic capacity and less prevalent corruption. Yet on the other hand, mishandling of ATI responses in the face of media scrutiny and political threats has been widely documented in these contexts (e.g., Roberts 2006).

Media Attention and Bureaucratic Responsiveness

Bureaucratic responsiveness—the degree to which civil servants respond to citizens' needs or desires in the implementation of policies (Saltzstein 1992)—is often analyzed as a matter of routine, day-to-day government–citizen interaction. For instance, many studies assess responsiveness to citizen requests for services, assistance, or information (e.g., Buntaine, Hunnicutt, and Komakech 2020; Costa 2017; Distelhorst and Hou 2014; Jilke, Van Dooren, and Rys 2018; Porter and Rogowski 2018; White, Nathan, and Faller 2015). We observe responsiveness quite literally—in the actual *responses* that agency personnel provide to citizen[2] requests for information. Although we focus here on formal information requests, our findings have implications for responsiveness in other contexts of citizen-government interaction, both informational—emails, complaints, and more informal requests for information—and service-oriented. Previous studies have analyzed responses to information requests as functions of the traits of the citizens that make requests (e.g., partisanship or ethnicity) or of the institutions that respond (e.g., institutional capacity) (Almanzar, Aspinwall, and Crow 2018; Fox, Haight, and Palmer-Rubin 2011; Wood and Lewis 2017; Worthy, John, and Vannoni 2017; Lagunes and Pocasangre 2019; Michener et al. 2020; Poole 2019). The context of such day-to-day interactions does not remain constant, however. Citizen–agency interactions may take place during periods of heightened salience for the entire government, such as in the lead-up to an election, or for a specific agency in particular, such as during the roll-out of a new policy initiative, a high-profile failure, or a scandal involving agency personnel.

We analyze the effects of these periods of agency-specific heightened media attention on responsiveness. Our approach differs from previous scholarship, which tends to measure the effect of media attention on responsiveness over longer time periods. For example, some public administration research focuses on media attention to bureaucratic agencies (e.g., Maor and Sulitzeanu-Kenan 2013, 2016), or the policy matters being dealt with by officials (e.g., Bevan 2015; Carpenter 2002), but over timescales of years that obscure the dynamics associated with specific periods of intense media scrutiny. Studies in political economy analyze spatial variation in media exposure to assess long-run differences in government responsiveness (e.g., Besley and Burgess 2002; Snyder and Strömberg 2010). Still others do examine temporally specific media attention, but focus only on other actors like voters, politicians, parties, or judges (Edwards and Wood 1999; Green-Pedersen and Stubager 2010; Marshall 2016; Philippe and Ouss 2018; Strömberg 2015), not bureaucratic agencies. In contrast, we address bureaucratic responsiveness during media anomalies, periods when agencies receive disproportionately

2 We use "citizen" here and below to denote any nongovernmental actor, including individuals, civil society organizations, journalists, business entities, and any intermediaries acting on behalf of these actors.

heightened media attention concerning a single event or process. A second departure from existing literature is that we test the effect of a broad range of *types* of media attention on responsiveness. Prominent studies on media effects tend to limit analyses to corruption scandals alone (Berlinski, Dewan, and Dowding 2012; Camerlo and Pérez-Liñán 2015; Hirano and Snyder 2012; Nyhan 2015, 2017; Puglisi and Snyder 2011). In contrast, we disaggregate anomalies into different categories, depending on the type of media attention.

Our analysis allows us to adjudicate between several distinct mechanisms that may characterize how the behavior of bureaucratic agencies shifts during periods of intense media scrutiny. Drawing on existing theories, we assess mechanisms of *credit claiming*, *blame avoidance*, *workload burden*, *disclosure threat*, and *reputation management*. Each of these mechanisms suggests different patterns of observable implications across different types of media attention.

First, mechanisms of credit claiming and of blame avoidance offer relatively straightforward predictions: that agencies will "open up" in response to positive media attention in order to "claim credit," or alternately that they will uniformly "clamp down" in response to negative media attention in order to "avoid blame." The first of these mechanisms draws on a long line of research on *credit claiming*, wherein politicians seek to make themselves more visible in the wake of positive attention (e.g., Fiorina 1977; Mayhew 1974). Although developed in the context of elected officials, credit claiming incentives have also been identified in the context of bureaucratic officials and agencies (e.g., Gilad, Alon-Barkat, and Braverman 2016; Maor 2011; Nielsen and Moynihan 2017). In the ATI context, this logic predicts that officials will be particularly eager to engage with the public by responding promptly to information requests after highly publicized successes, high-profile new appointments, or the roll-out of new policies.

On the other hand, many scholars suggest that motivations for credit claiming are outweighed by those for *blame avoidance* (Hong 2019; Hood 2010; Weaver 1986), which predicts that officials will be less responsive in the presence of negative media attention. Indeed, studies of ATI systems around the world cite blame avoidance as a fundamental problem, as officials are reticent to disclose information about their activities that may cast them in a negative light. For example, Hood (2007) (drawing on Roberts 2006) notes that ATI policies "typically involve more active and defensive central management of information than before, to lower political risks of blame" (205).

Given our empirical setting, in which we can distinguish negative media attention from neutral or positive, these first two mechanisms thus yield straightforward predictions that positive attention will lead to increased responsiveness, and negative attention to reduced responsiveness. However, we contrast these well-established mechanisms of behavior with a set of alternative mechanisms highlighting other possible patterns, applicable in all or in specific settings: workload burden, reputation management, and disclosure threat. We present these mechanisms in order from most to least generally applicable.

First, we suggest that all periods of heightened media attention—whether positive or negative—may result in moderately reduced responsiveness simply due to the increased *workload burdens* placed on officials during these times. Practically all instances where an agency receives intense media attention will occur during times of particularly high agency workload. Increased demands on agency personnel's time could result from the episode that drew the media's attention in the first place, such as an important transition or the revelation of a new problem that requires action. Additionally, increased media attention itself may distract or preoccupy the agency's leadership. With these additional demands on their time and attention, routine agency activities, such as responding to citizen requests, may be lowered in priority. Finally, media attention may drive an increase in the volume of citizen requests, leading to increased backlogs and thus delays. Past research on street-level bureaucratic behavior has found high workloads associated with reduced performance and organizational commitment, and increased coping mechanisms (Jewell and Glaser 2006; Jong and Ford 2016; Tummers et al. 2015). By taking into account the realities of resource-constrained bureaucracies, this mechanism thus yields predictions that contradict those of credit claiming. Workload burden would potentially be relevant under all types of media attention, but potentially superseded by other conflicting behavioral mechanisms in some situations.

Second, we also take advantage of an empirical setting where we can differentiate between different types of negative media attention. As such, we further draw on existing theoretical approaches to distinguish mechanisms of bureaucratic responsiveness that predict *different* behaviors depending on whether negative scrutiny concerns government failure or corruption.[3] Drawing on scholarship on bureaucratic reputations, a *reputation management* mechanism predicts increased, rather than decreased (as with a blame avoidance mechanism), responsiveness in the face of negative media attention. On

3 Similarly, Gilad, Maor, and Ben-Nun Bloom (2015) differentiate between agency responses to criticisms of under-regulation and of over-regulation.

the other hand, a *disclosure threat* mechanism predicts decreased responsiveness in the face of negative media attention, but is relevant primarily in cases of attention to corruption. As we suggest below, the key difference between mechanisms of reputation management and of disclosure threat lies in whether the negative attention threatens the overall reputation of the organization, or rather the political or career concerns of specific individuals.

Periods of negative media attention may result in increased bureaucratic responsiveness due to goals of *reputation management*, as officials seek to bolster their agencies' reputations for accountability with independent oversight bodies, citizens, media and interest groups, and fellow officials. Where government agencies are evaluated and compared on responsiveness metrics and subject to procedural scrutiny by oversight bodies, responsiveness to information requests has an important effect on agencies' reputations. Positive interactions with citizens also help improve the agency's image. Finally, being forthcoming with subsequent information can also be part of an effort to engage in "damage control" and spin the story to reflect positively on the organization. For example, Maor (2011) suggests that under some circumstances, regulatory agencies will "opt for high public observability" of their responses to major errors in order to protect their reputations (559). During media anomalies characterized by negative attention, this goal likely supersedes the effect of workload burden as agency leadership calls on staff to prioritize salvaging the agency's image.

This reputation management mechanism draws, in particular, on Busuioc and Lodge 's (2016) reputational approach to accountability, which diverges from principal-agent approaches by understanding accountability activities as "about sustaining one own reputation vis-a-vis different audiences" and "about being seen as a reputable actor" (2). Rather than expecting organizations to resist accountability, "giving account" is seen as a strategy to enhance organizational reputations. Indeed, Busuioc and Lodge (2016) specifically expect greater reputation-driven accountability when organizations are subject to heightened reputational threats such as "bad press" (7). We link this approach to responsiveness, an important component of accountability processes.

Finally, negative media attention may result in decreased responsiveness due to the *disclosure threat* posed by revelations of information that implicate the agency's personnel or their political principals in corruption. In such instances, information requests may create further adverse media attention or revelations of wrongdoing for agency leadership. After initial revelations of corruption, there is "blood in the water," and future information requests may be more likely to originate from investigative journalists or activists seeking to uncover more information about the affair. Such periods increase both the "demand side" and "supply side" for additional adverse information about an agency and its leadership, as more requests are likely to be politically threatening, and the information disclosed in response is more likely to receive public attention. Staving off such additional revelations—and the escalation of already-heightened attention into an even larger scandal—is of the highest priority for agency personnel (Gill and Hughes 2005; Berliner et al. 2020), and we expect this supersedes organizations' incentive to be forthcoming with information in order to improve reputations. Such prioritization will particularly be the case in Mexico, as this country's lack of civil service protections means responding officials can easily be fired, making the career and partisan goals of their political principals of prime importance (Benton 2002). Notably, this mechanism is more salient for responsiveness in the domain of ATI—where the threat posed by disclosed information plays a key role—than to broader forms of bureaucratic responsiveness.

The contrast between these latter two mechanisms of bureaucratic behavior constitutes a refining of conventional wisdom that officials will uniformly "clamp down" on information in the face of negative attention as a blame avoidance mechanism predicts. Instead, these mechanisms yield distinct expectations for different types of negative attention: improved responsiveness due to attention to performance failures, and reduced responsiveness due to attention to corruption. Performance failures pertain more to the organization as a whole and its core competencies, thus leading to attempts to bolster its reputation. Conversely, negative attention to corruption such as bribery, fraud, or patronage poses a specific threat to individual officials and politicians and thus is more likely to activate the principal-agent logic behind the disclosure threat mechanism. That is, responding officials may need to "clamp down" on information flows in order to protect superiors, thus overriding the organization's reputation management goals and leading to declines in responsiveness instead.

We summarize the empirical expectations suggested by each of these mechanisms in table 1. Each mechanism suggests a different pattern of findings across different types of media attention, thus increasing our ability to conclude in favor of some and against others. The credit claiming and blame avoidance mechanisms expect positive effects on responsiveness where news is positive, and negative effects where news is negative, respectively. The workload burden mechanism, on the other hand, predicts reduced responsiveness to all requests during media anomalies—although possibly

Table 1. Potential Mechanisms Characterizing the Effects of Different Types of Heightened Media Attention on Government Responsiveness, Along With the Corresponding Expected Effects on Responsiveness of Different Types of Media Attention for Each Mechanism

Potential Mechanism	Negative Attention to *Gov. Failure*	Negative Attention to *Corruption*	*Positive/Neutral* Attention
Credit claiming			+
Blame avoidance	–	–	
Workload burden	–	–	–
Reputation management	+	+	
Disclosure threat		–	

Note: Plus signs indicate expected positive effects of the specified type of media attention on responsiveness, whereas minus signs indicate expected negative effects. Blank cells indicate no relevant expectation.

outweighed by other mechanisms in some circumstances. A reputation management mechanism predicts positive effects on responsiveness arising from negative media attention. However, when such negative media attention pertains to corruption, rather than to government failures, we may instead see the final mechanism of disclosure threat at work, as motivations to protect individual officials and political principals prevail.

Context

ATI requests to the Mexican government constitute a particularly opportune venue to observe the relationship between media attention and bureaucratic responsiveness. First, these requests offer a source of massive and highly granular data about citizen–government interaction. Over a period of 18 years, Mexican citizens have made an average of nearly 200 information requests *per day* to the federal government. More than 20 ministries and agencies—ranging from Social Security to the Environment to the Defense Ministry—regularly receive over 1,000 requests per year, offering a wide range of policy areas in which to observe over-time variation in citizen requests and responsiveness. Second, unlike other routine modes of citizen–government interaction—such as visits to public clinics or paying taxes—information requests can be relevant to the political environment. Information requests offer a tool for citizens to engage with every facet of an agency's operations. Research has shown both that the volume and focus of information requests change in line with key events (Berliner, Bagozzi, and Palmer-Rubin 2018) and that agency personnel exercise discretion in responding (or not) to information requests, motivated by partisan electoral goals as well as personal career incentives (Berliner et al. 2020). Future research should expand our approach to observe whether these results replicate to other modes of citizen-state interaction that are less politically relevant.

Mexico's *Ley Federal de Transparencia y Acceso a la Información Pública Gubernamental* (Federal Law on Transparency and Access to Public Information, henceforth LFTAIPG) was passed in June 2002 and took effect one year later. The law has been widely hailed as one of the strongest in the world, particularly for its independent information commission, online platform, high volume of citizen usage, and impressive statistics on response times and low rates of denial that compare favorably with many developed democracies (Berliner and Erlich 2015; Bookman and Guerrero Amparán 2009; Michener 2011). Mexico's independent information commission, the *Instituto Federal de Acceso a la Información* (IFAI),[4] was tasked with promoting awareness and usage of the new law, monitoring bureaucratic compliance, and hearing appeals. The law also created an online information system, unique in the world at the time, to manage requests. Citizens file requests[5] and receive responses primarily through this system, originally called the *Sistema de Solicitudes de Información* but ultimately called INFOMEX.

We study the responsiveness of this process across 22 federal government entities, chosen purposively to achieve breadth among highly requested agencies. Fifteen of these are cabinet-level ministries, whereas seven are agencies with more specific roles, as regulatory agencies, service providers, or state-owned enterprises. All entities included are among the 30 federal entities with the highest volume of requests. Some other most-requested entities were omitted, however, to ensure greater diversity of different types of entities. For example, Instituto Mexicano de la Propiedad Industrial and Instituto Nacional de Migración were included even though some higher-request-volume ministries were excluded, in order to ensure greater representation of noncabinet-level entities in the study. Table 2 lists all included entities.

4 In 2015, the agency name changed to INAI—"national" instead of "federal"—but we refer to it as IFAI in this article in accordance with the time period under study.

5 Though unavailable in the data analyzed below, past analyses of requesters' self-reported occupations found that—of the requesters volunteering this information—32% identified their occupation as student or academic, 18% as business, 12% as government, 9% as media, and 30% as other (Bookman and Guerrero Amparán 2009).

Table 2. Government Entities Included in This Study

Abbreviation	Name	Cabinet Level
CFE	Comisión Federal de Electricidad	No
COFEPRIS	Comisión Federal para la Protección contra Riesgos Sanitarios	No
CONAGUA	Comisión Nacional del Agua	No
IMPI	Instituto Mexicano de la Propiedad Industrial	No
IMSS	Instituto Mexicano del Seguro Social	No
INM	Instituto Nacional de Migración	No
PEMEX	Petróleos Mexicanos,	No
PGR	Procurador General de la República	Yes
SAGARPA	Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación	Yes
SCT	Secretaría de Comunicaciones y Transportes	Yes
SEDENA	Secretaría de la Defensa Nacional	Yes
SEDESOL	Secretaría de Desarrollo Social	Yes
SEECO	Secretaría de Economía	Yes
SEGOB	Secretaría de Gobernación	Yes
SEMARNAT	Secretaría de Medio Ambiente y Recursos Naturales	Yes
SENER	Secretaría de Energía	Yes
SEP	Secretaría de Educación Publica	Yes
SFP	Secretaría de la Función Pública	Yes
SHCP	Secretaría de Hacienda y Crédito Público	Yes
SRE	Secretaría de Relaciones Exteriores	Yes
SSA	Secretaría de Salud	Yes
SSP	Secretaría de Seguridad Pública (only included through 2013 when merged with SEGOB)	Yes

Existing evidence, both from our own interviews[6] and from others' research (particularly surveys conducted by Ríos, Carmen Castañeda, and García 2017), supports the relevance of the mechanisms shown in table 1. Government officials in each agency's transparency liaison units (*unidades de enlace*, UE, later renamed to *unidades de transparencia*) face an array of competing pressures. We review here evidence suggesting the challenges and constraints of their task in responding to information requests, the often-conflicting pressures they face both for and against responsiveness, and the ways that media attention shapes these.

First, responding officials face substantial burdens on their time and workloads. Responding to information requests typically involves several different members of agency personnel, including the person handling the request, staff at the sub-ministry that holds the specific information requested, and the members of the transparency committee (*comité de transparencia*, CT), who make determinations about whether information is reserved, nonexistent, or the responsibility of a different agency.

According to a 2015 survey of government agencies (Ríos, Carmen Castañeda, and García 2017), the average UE staff size for the 299 centralized and decentralized agencies of the Mexican federal government was only 2.6. The median UE staff for the agencies considered in this study—which tend to be much larger—is still only six.[7] The head of the UE is dedicated full-time to issues of transparency in only 8 of these 22 agencies. In the remainder, this position has other responsibilities and sometimes is a head of an entirely different operational area. Many requests involving information that is potentially reserved or difficult to locate also require meetings of the CT, which typically involves high-ranking agency officials who are in high demand during periods of turmoil.

Furthermore, the irregular nature of demand for information poses a challenge for staffing. Although agencies may staff their UE based on demand in a typical week, request volume is quite irregular and tends to escalate significantly during media anomaly periods (as our results confirm). Interviewed staff members at several UEs suggested that daily request volumes could increase up to 10-fold on exceptional days, often brought about by media attention, presenting severe challenges to staff. Others reported that responding to information requests is deemphasized during agency transitions (e.g., new leadership) or intense activity (e.g., roll-out of a new policy).

Second, officials routinely face conflicting pressures for and against responsiveness. Existing evidence suggests that transparency personnel exercise discretion in withholding information that could be potentially damaging to agency leadership (e.g., Berliner et al. 2020; Gill and Hughes 2005). An

6 Based on interviews conducted with officials in the *unidades de enlace* of seven different Mexican government agencies in March 2017, under Arizona State University IRB number 00005773.

7 Here we exclude the Secretaría de Seguridad Pública because it did not exist at the time of the survey.

interviewee suggested that officials are more conservative in disclosure decisions when agency personnel are under scrutiny for alleged corruption. Federal government agencies are frequently involved in allegations of patronage and corruption. As a "semi-institutionalized" democracy (Levitsky and Murillo 2009), Mexico's bureaucracy is uneven, combining highly trained experts with patronage appointees within the same ministry. And while oversight and auditing institutions are formally strong, *de facto* practices in the Mexican bureaucracy are much more haphazard and discretionary than the technocratic veneer would suggest (Cejudo 2008). Agency personnel are also well aware that information requests can seek potentially damaging information about scandals. Mexico boasts a mature news media, highly attuned to investigating corruption and several NGOs that specialize in using Mexico's transparency institutions to investigate and denounce corruption.

However, UE personnel also report that they and their superiors attribute importance to projecting openness in their responses to information requests, and many are committed to normative principles of transparency. Moreover, many UE personnel are highly trained with legal or other advanced degrees (Ríos, Carmen Castañeda, and García 2017). Agencies are also evaluated both by other institutions within the Mexican government and by civil society organizations, which conduct evaluations and publish statistics on transparency performance. The IFAI plays a key role in monitoring compliance and in handling appeals, which can overturn UE response decisions and even threaten sanctions. More important, as interviewed UE officials suggested, is the threat of the additional scrutiny and effort required by responses that are appealed. In the words of one interviewed official, "If we get in trouble with IFAI, it will only make things worse."

Finally, agencies broadly view their responses to information requests as central to public relations. Although no interviewed personnel explicitly suggested that they are more careful or faster about responding when the agency is in the news for poor performance, this is the area where they are most involved in direct and regular contact with citizens. Officials are also well aware of how media attention intersects with their work. Interviewed UE staff exercise caution with requests that they suspect are filed by journalists. One interviewed official admitted that a frequent saying in their office was that "today's headline is tomorrow's information request."

Together, these insights suggest that UE staff face multiple and often-conflicting incentives during periods of intense media attention, which shape both their likelihood of providing the information requested and the length of time they take to respond. The tone and type of the anomaly itself likely tilt the balance to determine whether the context urges greater responsiveness or a more cautious approach. We now introduce the data enabling us to test these propositions empirically.

Data and Methods

Our analysis focuses on two sets of data: newspaper data and information requests made to the Mexican federal government, over the period June 2005–August 2015.

Newspaper Data and Anomaly Detection

Our newspaper data encompass articles from the *Reforma* newspaper that mention one or more of the 22 Mexican government agencies under study. *Reforma* is the Mexican newspaper with the second-highest circulation and readership (Nava 2017). However, in comparison to the frontrunner, *El Universal*, *Reforma* has a more neutral and independent image, in part because it relies far less on official government advertising for revenue compared to other newspapers (Lawson 2002, 90). *Reforma* also offers coverage in the Lexis-Nexis database for a longer period of time and with fewer gaps. To obtain a corpus of newspaper articles mentioning each agency, we used a series of targeted searches in Lexis-Nexis according to the following structure: MINISTRY AGENCY NAME OR ABBREVIATION OR MINSTER'S TITLE (for ministries only).[8] For example, one search was for the following: "Secretaría de Comunicaciones y Transportes" OR "SCT" OR "Secretario de Comunicaciones y Transportes."

The raw data for this newspaper corpus contain 219,354 articles. Because we collected articles through multiple search terms, some may appear multiple times. After removing duplicate articles and those that do not contain any text, we obtain 153,336 clean and unique articles.

We seek to identify the effect of periods of unusually heightened media attention on bureaucratic behavior, taking full advantage of the temporally fine-grained data available. Such an approach requires us to develop a measure that varies over time at a daily level and that varies independently for different agencies. We refer to these periods of unusually heightened media attention as "anomalies" and develop an approach to measuring them while also accounting for changes in attention that agencies would reasonably anticipate, resulting from seasonal shifts or broader trends over time. Some

8 For three ministries whose common abbreviations would yield too many false positives, the search omitted the abbreviation. In all subsequent analyses, we include agency fixed effects, in part to account for such differences.

of these anomalies reflect scandals over corruption or government failure, yet we do not assume that anomalous attention is always due to such negative causes.

Media attention to bureaucratic organizations appears as an increased number of articles mentioning those organizations within newspaper coverage. We call these periods "agency-anomaly periods." Note that any single agency can have a varying number of agency-anomaly periods ranging from many to none. A given underlying event may also be associated with anomaly periods appearing across multiple agencies at similar times. For example, a major policy announcement could involve media attention to two agencies at the same time.

To match our conceptual interest in periods of unusually heightened media attention, we draw inspiration from social media techniques (Vallis, Hochenbaum, and Kejariwal 2014), where (as in most time-series analysis) we consider each of the a time series of agency-newspaper coverage with time units t as being composed of a trend component (M_{at}), a seasonal component (S_{at}), and a residual (R_{at}). After removing both M_{at} and S_{at}, we are interested in finding time periods with large residuals.

Accounting for these different sources of variation is essential. Media coverage of some agencies tends to expand or contract continuously over time, and agencies can anticipate these trends. Coverage for other agencies is potentially also subject to seasonal variation. For example, one would expect Mexico's social development ministry (SEDESOL) to have increased attention during the routine annual periods where it publicizes calls for social program applications. Again, agencies would reasonably anticipate this seasonal coverage.

We first model each agency's coverage as a weekly aggregated independent time series. For each time series, M_{at} is removed by applying a moving average to our time series. We only consider past values for detrending in order to avoid using future data. For each year, each detrended series is subsequently purged of any seasonal component S_{at}, leaving the residual component R_{at} capturing all remaining variation.[9]

Having obtained the residual time series, we assume that they approximately follow a Gaussian distribution and are thus well suited to generalized ESD tests (Rosner 1983) to identify anomalies. The G-ESD takes a parameter k, which is the upper bound for the number of anomalies (outliers) it can detect per series.[10] In our case, we set $k = 10$.[11] We then take the identified unusually large positive residuals and consider these our periods of anomalously heightened media attention.

Since this approach relies on aggregation into weeks, we perform a naive bootstrapping process in order to relax this constraint and allow for anomalies of variable duration. We repeat the weekly time-series aggregation seven times, each time using a different day of the week as a starting point. To calculate an agency's anomaly periods, the day interval of each detected anomaly was found for each of the seven anomaly-week ranges. The overlapping intervals were merged, giving us a date range for an anomaly specified to the day. We repeated this procedure for each agency.

This procedure yields a total of 135 anomalies over the 2005–16 period. Supplementary figures 1–5 show the daily time series of news article mentions for selected government agencies, while highlighting periods that the anomaly-detection algorithm identifies as anomalies. Some anomalies clearly stand out visually, whereas others are distinguished only after the removal of the trend and seasonal components. Notably, the anomaly-detection procedure is run separately for each agency, meaning that an anomalously high number of mentions for one might be a very low number for another. Our approach is thus not appropriate to compare the overall number of anomalies across agencies. We accordingly include agency fixed effects in all models further below.

To assess the substantive focus of each anomaly, two of the authors reviewed the news articles associated with each identified anomaly. The authors developed and applied a coding scheme and agreed on a consolidated set of labels based on a two-step process of independent coding followed by discussion. See Supplementary Appendix C for the complete coding rules and definitions applied in this process.

This process resulted in a description of each underlying anomaly event, with an associated categorization into one or more of the following five themes: policy (72), personnel (21), external events (45), government failure (29), and corruption (27). Five anomalies were excluded from further analysis as they pertained to unrelated entities or were an artifact of unusual news features. Eight more were excluded as there was no single clear event underlying the media attention.

Each anomaly was also coded for whether or not the underlying event posed a substantial risk of negative scrutiny or controversy. Although this "negative" label was applied automatically for cases of government failure or corruption, it was necessary to further distinguish the tone of media coverage for events pertaining to other themes. For instance, some policy events pertained to highly controversial issues, such as a reform

9 For more detail, see Supplementary Appendix B.1.

10 G-ESD also takes an α parameter, for the levels of statistical significance. We set $\alpha = .05$.

11 We also test for $k = 20$ and find no substantial differences. A larger k did not increase the number of anomalies, providing additional certainty that we are not missing anomalies.

Table 3. Ten Example Media Anomalies, With Description and Categorization

Entity	Year	Description	Theme	Negative
SEMARNAT	2008	National Reforestation Day with goal of planting 5 million trees.	Policy	0
IMSS	2013	Proposals to raise payroll deductions for social security.	Policy	1
SENER	2006	New Secretary announced as Calderón enters office.	Personnel	0
SAGARPA	2009	New Secretary announced.	Personnel	0
SEECO	2012	Egg shortages lead to price increases, so Secretary temporarily allows tariff-free importation.	External (+ Policy)	0
SAGARPA	2013	Mass death of farmed shrimp due to bacteria.	External (+ Gov. failure)	1
CONAGUA	2007	Water contamination at Valsequillo Dam.	Gov. failure	1
SRE	2015	New passport system faces technical failure, linked to earlier questionable contracts.	Gov. Failure (+ Corruption)	1
CFE	2011	Investigation of corruption by former CFE Director of Operations accused of accepting bribes including a yacht and a Ferarri.	Corruption	1
SAGARPA	2011	Accusations SAGARPA involved in vote-buying in Michoacán governor election.	Corruption	1

permitting private investment in the state oil company. And some external events clearly "looked bad" for the agency in question even when there was no obvious governance failure (or where the relevant failure pertained to some *other* entity). In some models, we use a separate indicator specifically to capture these negative anomalies that are *not* also coded as either corruption or government failure, calling these "controversy."

Given that our information request data run through mid-2015, we further exclude 14 more anomalies that fall after this (after already excluding those that qualitative coding indicated were not relevant), for a total of 108 anomalies used in the analyses that follow. Table 3 lists 10 example anomalies, along with our qualitative interpretation of the focus of each. See Supplementary Appendix D for a more extended set of examples for each category.

Information Requests and Responses

To assess the effect of anomalously heightened media attention on government responsiveness, we draw on a collection of every ATI request filed with Mexican federal government agencies, along with their associated responses. Roughly 500,000 of these pertain to agencies included in this study from 2005 to 2015. Each entry contains the full text of the request as entered by the requester into the INFOMEX system, the date and time filed, request medium,[12] the agency the request is directed to, the date of response, the nature of the response, and links to any attached files associated with either the request or the response. We exclude all requests for (confidential) requester personal data, as while these are contained in the same publicly available database from INFOMEX, they are governed by different legal requirements, and additionally do not make public their request texts. However, we consider these personal data requests in a robustness check.

We draw on previous studies (Berliner, Bagozzi, and Palmer-Rubin 2018; Berliner et al. 2020) that used quantitative text analysis methods to observe the topics and other characteristics of these requests, and more generally in public administration (Hollibaugh 2019). To enable comparisons among similar requests across agencies and over time, we use the 20 topics produced by a Latent Dirichlet Allocation model in Berliner, Bagozzi, and Palmer-Rubin (2018). Further details, justification of parameter choices, and a full interpretation of each topic are found in that study. Following Berliner et al. (2020), we include several other measures, including word length (logged), readability, inclusion of an attached file, the medium of the request, an index of legalistic words, and punctuation.

In some models, we aggregate each agency's volumes of requests received and of responses provided to the level of agency-weeks. But in other approaches, we model responsiveness at the level of individual requests themselves, using two alternative dependent variables to capture both the timing and the nature of the response.

In the context of information requests, responsiveness is the extent to which citizens receive the information they seek, in useful form, and in a timely fashion, *except* in cases legitimately subject to legal exemptions from disclosure. Thus, more responses within the legal time limit equate clearly to greater responsiveness. However, a greater number of denied requests does not necessarily equate to poor responsiveness, if those requests fall outside of the scope of the LFTAIPG, were sent to the wrong agency, or seek information falling under legal exemptions such as personal data, national security, or commercial secrets.

To account for these complexities, we construct two different measures of responsiveness. First, we simply

12 Electronic requests comprise 97% of the total, versus manual requests entered into the INFOMEX system by officials.

measure the (logged) time-to-response in working days, after excluding both weekends and official Mexican government holidays. One might be skeptical of focusing on timeliness, given that a delayed-but-positive response still delivers the requested information according to legal mandates. However, many requests are time sensitive, particularly those of investigative or political relevance. Journalists—as well as civil society groups investigating corruption or electoral improprieties—face internal and/or external deadlines that may lead them to abandon a line of inquiry in the face of delays. Activist organizations may likewise face decision-making deadlines in the political processes they are attempting to influence.

Second, we measure the type of response, based on official categories of response recorded by agency personnel. Importantly, requests may be denied for legally compliant reasons, and official response designations may not always be accurate (Fox, Haight, and Palmer-Rubin 2011; Lagunes and Pocasangre 2019). Following Berliner et al. (2020), we combine three commonly abused forms of response: Claims that the requested information does not exist, claims that the requested information is fully or partially classified, or responses requiring the requester either to appear physically at an office or to pay a fee for information to be shipped rather than delivered electronically. Past research on ATI in Mexico has suggested that these response designations are often misused in legally noncompliant ways to avoid disclosure or raise barriers to the requester (Almanzar, Aspinwall, and Crow 2018; Fox, Haight, and Palmer-Rubin 2011; Lagunes and Pocasangre 2019). This combined "bad response" indicator takes values of one for 15% of responses from the agencies included in this study.

Modeling Approach

We seek to assess the effect of anomalous periods of media attention on bureaucratic responsiveness. Given the complex structure of our data, we study this question in two complementary ways, both at the agency-week level and at the individual request level.

First, we construct a panel of agency-weeks. For each agency-week, we count the total number of requests received and the total number of responses emitted. We also measure the proportion of each agency-week that is "exposed" to anomalous media attention, either in general or for specific subcategories of media anomalies. This data structure enables us to use a panel fixed-effects approach to compare anomaly-exposed agencies both with themselves during nonanomaly periods and with other nonexposed agencies at the same time. The ability to account for both agency and week fixed effects also captures any other unobserved differences, either across agencies or pertaining to particular time periods.

Using this approach, we model response output to understand how government officials' activity is affected by such media attention.[13] We control for agency and week fixed effects and for lagged values of both request volume and response volume. Under many circumstances, inclusion of a lagged dependent variable alongside fixed effects would raise concerns of Nickell bias, but in this case, the number of periods is sufficiently large (over 500 weeks) that this is not a concern. We cluster standard errors by agency.

Although the panel fixed-effects approach is appealing both for its simplicity and ability to make comparisons over time and across agencies, it has two shortcomings. First, it aggregates away from our fine-grained data on each individual request and response. Second, some responses during anomaly-exposed weeks may be to requests filed after the onset of the anomalous media attention, and thus potentially endogenous to it. To examine exogenous requests exclusively, our second empirical approach thus focuses on the *queue* of requests that had been filed, but were awaiting response, on the eve of each anomaly onset.[14] Making appropriate comparisons is more difficult in this context, particularly as requests that are "in queue" for longer periods before receiving a response will also have higher exposure to potential media anomalies than will requests that receive rapid responses. Our solution is to compare each request from "exposed" queues with a set of matched comparison requests (on the same topic, and with the same number of days already elapsed in queue) drawn from comparison queues at the same agency but during nonanomaly periods. Our procedure is described in full in Supplementary Appendix E.

After constructing matched comparison groups, we model time-to-response and indicators of "bad" response, within comparison groups, as a function of anomaly exposure (either in general or for subcategories of anomaly), with and without request-level control variables. By including fixed effects for each comparison group, we automatically account for fixed effects for each anomaly and for each agency. We can also differentiate results by the characteristics of each anomaly. Standard errors are clustered by comparison group.

13 In Supplementary Appendix F, we also model request volume itself to better understand whether different types of anomalous media attention result in increased numbers of requests filed with corresponding agencies.

14 In Supplementary Appendix H, we explicitly test whether requests themselves might trigger anomalous media attention and find no evidence that higher incoming request volume predicts anomaly onset.

Given that both empirical strategies require very large numbers of fixed effects, all approaches use linear models. In the panel fixed-effects approach, the dependent variables are the logged count of responses provided per week.[15] In the queue-based approach, the dependent variables are the logged number of days remaining until response, and a dichotomous indicator for "bad" responses.

Note that for the panel fixed-effects models of responses provided per week, a positive coefficient reflects *greater* responsiveness, whereas for the queue-based models of individual requests' time-to-response or "bad" response, a positive coefficient reflects *worse* responsiveness.

Results

In table 4, we assess the effects of media anomalies on government responsiveness measured as the weekly volume of responses provided.[16] The first model shows that there is no overall average effect of media anomalies on responses by agency-week. However, disaggregating by anomaly types demonstrates important differences. The second model shows that, while there is no overall effect for negative anomalies, other anomalies (positive or neutral) are associated with *reduced* response activity, equivalent to roughly 22.4% fewer responses provided per week. The third model further differentiates negative media anomalies by type, finding that the preceding null effect of negative anomalies actually masks opposing effects of government failure and corruption. Media anomalies reflecting government failure are associated with roughly 21.7% *more* responses per agency-week, while anomalies reflecting corruption are associated with roughly 20.1% *fewer* responses per agency-week. We find no significant effect for negative controversy attention without either government failure or corruption. Finally, the fourth model differentiates anomalies only by themes, again finding opposing effects of government failure and corruption.

In table 5, we consider this pattern of results in light of the theoretical mechanisms summarized in table 1. We observe a pattern that is most consistent with three of the mechanisms, and least consistent with two others. We can first rule out a mechanism of credit claiming, which expects that positive and neutral media attention will be associated with *greater* responsiveness. We instead find an association with *worsened* responsiveness for positive and neutral attention, consistent only with workload burden. This decrease in responsiveness from non-negative attention suggests that being in the media spotlight, on its own, may reduce responsiveness simply by increasing government officials' workloads or drawing their attention away from the daily task of responding to ATI requests.

Turning to negative media anomalies, these appear to follow distinct dynamics depending on the specific theme of attention. We find improved responsiveness during media anomalies related to government failure, which is expected only in line with a reputation management mechanism, wherein agency personnel attempt to counteract negative media attention by projecting an image of competence and openness. However, for corruption-related anomalies we instead find a negative relationship with responsiveness. Although here a negative relationship could be consistent with multiple mechanisms, the opposite findings for negative attention to corruption and to government failures appears most consistent with a disclosure threat mechanism being not only in operation, but salient enough to outweigh the positive influence of the reputation management mechanism. We thus interpret this as support for a disclosure threat mechanism, wherein agency personnel are less responsive to information requests in contexts where providing more information could potentially exacerbate an ongoing scandal that threatens key personnel or political principals.

We now turn to our second empirical strategy, which focuses on purely "exogenous" requests that were already filed prior to anomaly onset. These models compare individual requests in anomaly exposed queues to comparison requests filed with the same agency, on the same topic, and with the same number of days elapsed since filing on other comparison dates with no anomaly exposure. As above, we compare within these matched groups in assessing either the logged number of days remaining until response, or an indicator for commonly abused response types. Recall that the direction of coefficients here is reversed, with positive coefficients reflecting reduced government responsiveness.

Findings using this second approach are largely consistent with the first approach. In Supplementary Appendix G, we first model average effects of anomaly exposure. The first set of results shows a small average effect in the direction of faster responses. Yet the second set of results shows that anomaly exposure has a small average effect, increasing the rate of "bad" responses. As request-level covariates make little substantive difference to the main coefficients of interest, we omit them from subsequent models. In table 6, we again unpack these average effects and differentiate by type of media anomaly. Models 1 and 2 show consistent effects in different directions for negative as opposed to positive or neutral anomalies. Negative media anomalies

15 All results are highly similar when using an inverse hyperbolic sine transformation in place of log.

16 See Supplementary Appendix F for models assessing anomaly effects on incoming request volume itself.

Table 4. Panel Fixed-Effects Models of the Logged Number of Responses Provided by Agency-Week

	Model 1	Model 2	Model 3	Model 4
Lagged request volume (log)	0.258***	0.258***	0.258***	0.258***
	(0.000)	(0.000)	(0.000)	(0.000)
Lagged response volume (log)	0.157***	0.157***	0.157***	0.157***
	(0.000)	(0.000)	(0.000)	(0.000)
Anomaly exposure	−0.039			
	(0.487)			
Anomaly exposure: negative		0.006		
		(0.924)		
Anomaly exposure: positive/neutral		−0.202**	−0.202**	
		(0.039)	(0.039)	
Anomaly exposure: gov. failure			0.197**	0.182
			(0.028)	(0.137)
Anomaly exposure: corruption			−0.187**	−0.166**
			(0.026)	(0.044)
Anomaly exposure: controversy			0.023	
			0.793	
Anomaly exposure: policy				−0.090
				(0.229)
Anomaly exposure: personnel				0.032
				(0.726)
Anomaly exposure: external				0.022
				(0.790)
N	1,924	11,924	11,924	11,924
R^2	.740	.741	.741	.741

Note: All models include agency fixed effects and week fixed effects. Larger coefficients indicate higher government responsiveness. SE clustered by agency. *p*-values are displayed in parentheses.

***$p < .01$, **$p < .05$, *$p < .01$.

Table 5. Summary of Results, Contrasted With Original Table 1 of Potential Mechanisms and the Corresponding Expected Effects on Responsiveness of Different Types of Media Attention for Each Mechanism

Potential Mechanism	Negative Attention to *Gov. Failure*	Negative Attention to *Corruption*	*Positive/Neutral* Attention
Credit claiming			+
Blame avoidance	−	−	
Workload burden	−	−	−
Reputation management	+	+	
Disclosure threat		−	
Observed relationships	+	−	−

Note: Plus signs indicate expected or observed positive effects of the specified type of media attention on responsiveness, whereas minus signs indicate expected or observed negative effects. Blank cells indicate no relevant expectation.

are associated both with faster responses (conditional on the number of days already elapsed) and a lower rate of "bad" responses, whereas other media anomalies are associated both with slower responses and a higher rate "bad" responses. Models 3 and 4 further disaggregate negative media anomalies into three types, as before, and again find effects in different directions for government failure and corruption, although not all statistically significant. Models 5 and 6 then disaggregate media anomalies by theme only, finding no significant effects for government failure and corruption, but in opposite directions for time-to-response.

Importantly, the relative directions of these results are largely consistent with the preceding results from the panel fixed-effects approach, when comparing the effects of negative and positive media anomalies on government responsiveness, and when comparing anomalies focused on government failure and corruption. The differences in findings across types of media anomaly again support three mechanisms (a) a workload burden mechanism that pertains to all anomalies; (b) a reputation management mechanism that pertains to negative anomalies concerning government failures; and (c) a disclosure threat mechanism that pertains to anomalies involving corruption.

A final set of analyses follows the same empirical strategy as the panel fixed-effects models above, but

Table 6. Linear Models of Request-Level Response Time and Response Type, Within Matched Comparison Groups

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Dependent variable:	Time	Type	Time	Type	Time	Type
Anomaly exposure: negative	−0.040***	−0.014**				
	(0.005)	(0.036)				
Anomaly exposure: positive/neutral	0.042*	0.057***	0.042*	0.057***		
	(0.100)	(0.000)	(0.100)	(0.000)		
Anomaly exposure: gov. failure			−0.038	−0.035***	−0.028	−0.008
			(0.138)	(0.003)	(0.414)	(0.586)
Anomaly exposure: corruption			0.005	0.006	0.037	−0.010
			(0.848)	(0.627)	(0.174)	(0.456)
Anomaly exposure: controversy			−0.048**	−0.010		
			(0.031)	(0.348)		
Anomaly exposure: policy					0.000	0.033***
					(0.982)	(0.000)
Anomaly exposure: personnel					−0.102***	0.020
					(0.002)	(0.185)
Anomaly exposure: external					−0.018	−0.041***
					(0.534)	(0.003)
N	82,359	82,359	82,359	82,359	82,359	82,359
R^2	.448	.451	.448	.451	.448	.451

Note: Each anomaly-exposed request from the queue of requests awaiting response on the day before anomaly onset is matched with comparison requests to the same agency, on the same topic, and awaiting response for the same number of days as of sampled comparison dates. Larger coefficients indicate lower government responsiveness. All models include fixed effects for each comparison group. SE clustered by comparison group. *p*-values are displayed in parentheses.

***$p < .01$, **$p < .05$, *$p < .01$.

focused on requests for *personal data* rather than requests for *government information*. These personal data requests are filed via the same centralized INFOMEX system, but are governed by different legal requirements and (for good reason) do not make public the requests themselves or their responses. However, we do still have information on both request and response dates, enabling us to study weekly agency response effort as we did for information requests. Usefully, personal data requests offer a setting in which we can rule out the relevance of any mechanism pertaining to shaping information flows, as the responses to these requests are provided only to requesters and presumably concern only private matters. Thus, as a form of government responsiveness, these can be considered closer to nonpublic processes like answering individual requests for assistance or processing program applications.

In this setting, we should have no reason to expect mechanisms of disclosure threat or of credit claiming and blame avoidance to be relevant. We may still clearly expect, however, a workload burden model to be relevant. A reputation management mechanism may also be relevant, as nonpublic responsiveness also matters to key stakeholders like citizens and the information commission.

We see many of the same results as for responses to information requests (see Supplementary Appendix I for full table of results). Negative anomalies are still associated with greater responsiveness and positive or neutral anomalies with worsened responsiveness. But in this setting, the negative anomalies' effect is driven only by controversies, not by government failures or corruption. This provides additional confirmation of the relevance of a workload burden mechanism, as well as of a reputation management mechanism, in a setting where these remain applicable. The lack of evidence of a disclosure threat mechanism—in this setting where we would not expect it to be relevant—supports the earlier finding of corruption anomalies' adverse effect on government responsiveness to requests for public information.

Discussion and Conclusion

When bureaucratic agencies experience media scrutiny, to what extent do they "clamp down" or "open up" in their responsiveness to citizens? We evaluate these questions in the context of 22 Mexican federal government agencies during the years 2005–15. To measure responsiveness, we use roughly half a million official responses to requests for government information filed under Mexico's 2002 access-to-information (ATI) law. To operationalize media attention, we collect a corpus of roughly 150,000 unique news articles mentioning specific Mexican agencies by name, applying anomaly detection methods to identify periods of anomalously heightened attention to each entity. Qualitative

interpretation further allows us to differentiate those anomalies associated with substantial negative media attention or controversy, and to separate them by themes including government failure and corruption. Together, these strategies enable us to measure and assess bureaucratic behaviors, and media scrutiny, at extremely fine-grained levels.

Across two separate empirical strategies, we find broadly consistent results that the effect of media attention is contingent on the nature of the coverage. We first find that non-negative media attention decreases bureaucratic responsiveness. By contrast, when faced with negative media attention, we find that officials react differently based on the cause: responsiveness increases in the face of heightened attention over government failures, but decreases in cases of corruption-oriented attention. These nuanced findings are inconsistent with simplistic mechanisms of credit claiming or blame avoidance and instead are most consistent with mechanisms of bureaucratic behavior emphasizing workload burden, disclosure threat, and reputation management.

Our results have several important implications. First, the media spotlight matters for bureaucratic behavior. Going beyond macro-level spatial relationships between media and government responsiveness (e.g., Besley and Burgess 2002; Snyder and Strömberg 2010), we demonstrate that media exposure effects can also be identified at a micro level, comparing specific government agencies over specific time periods. Second, at least when it comes to government failures, pressure from the media plays an important role leading to increased responsiveness by government officials. However, media coverage may play a counterproductive role during corruption scandals, "tipping off" agency personnel to the threat posed by further investigation and yielding reduced responsiveness. Third, research specifically on corruption scandals may be limited in its generalizability, as we find the effect of corruption-related attention to be distinct from the effect of other negative attention. Finally, our novel method for measuring media attention suggests a useful new approach that avoids *ex ante* specification of specific types of media attention through the use of keyword searches. Instead, our approach looks first for anomalous periods of heightened media attention and then evaluates the substantive focus of those periods. This approach could fruitfully be applied to other contexts, such as studying how media anomalies shape other public services provision, or even detecting anomalous mentions of government agencies in social media.

These findings also suggest potential policy recommendations for the design of ATI systems. Encouraging is the novel finding that agencies use ATI institutions to communicate with citizens after high-profile instances of failure. This behavior is compatible with a virtuous cycle of information and accountability. On a more cautionary note, we have uncovered two liabilities of ATI systems during media anomalies. First, agency responsiveness may suffer in these crucial periods simply due to increased workloads. This finding once again underscores the importance of proactive government transparency systems that relieve personnel of the need to handle information requests when their attention is needed elsewhere. Second, we confirmed the relatively unsurprising prediction that agencies become less forthcoming about their activities in the midst of corruption scandals. Given this tendency, well-functioning horizontal accountability institutions—such as anti-corruption commissions—are essential. It may simply be too much to ask for agencies to disclose information that indicts leadership when they enjoy the discretion not to.

Future research may explore the generalizability of our findings beyond the Mexican context. Perhaps in countries with ATI systems less subject to discretionary disclosure, we would not find an effect of negative media coverage on responsiveness because officials' hands would be tied in responding, whether or not it contributes to their goals of reputation management or limiting threatening disclosures. Furthermore, results may differ where more government information is already available online; particularly in functional systems of "targeted transparency" in which proactive disclosure is tailored to likely uses of information (Fung 2013). In such a context, we would expect a dampened workload burden effect, as the volume of real-time information requests could be depressed by the prior availability of relevant information.

An important qualification of our study is the focus on responsiveness specifically in a context of citizen–government interactions, and particularly requests for information. Further extensions could test for these effects across different arenas of bureaucratic responsiveness, not just informational but also service-oriented (e.g., public clinics, passport processing). Compared with these, responsiveness in the informational context is notable in two ways. First, demand increases during media anomalies, with each additional request constituting a significant marginal time investment for agency personnel. Thus, this arena of responsiveness may be particularly sensitive to shocks in workload. Second, responses that constitute publicity of agency activities may be more prone to disclosure threat pressures. In service-oriented arenas of responsiveness, such motivations for decreased responsiveness should be less salient, whereas reputation management may remain similarly important. If this is the case, we would expect to find agencies performing better during all modes of negative coverage, with little effect of positive anomalies.

Supplementary Material

Supplementary data are available at *Journal of Public Administration Research and Theory* online.

Data Availability

Replication code and data are available at https://doi.org/10.7910/DVN/O9GXL4.

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References

Almanzar, Tanya, Mark Aspinwall, and David Crow. 2018. Freedom of information in times of crisis: The case of Mexico's war on drugs. *Governance* **31**(2): 321–39.

Bagozzi, Benjamin E., Daniel Berliner, and Zack Almquist. 2019. When does open government shut? Predicting government responses to citizen information requests. *Regulation & Governance*. doi:10.1111/rego.12282

Benton, Allyson. 2002. *Diagnóstico institucional del sistema de servicio civil de México*. Inter-American Development Bank.

Berliner, Daniel, Benjamin E. Bagozzi, and Brian Palmer-Rubin. 2018. What information do citizens want? Evidence from one million information requests in Mexico. *World Development* **109**: 222–35.

Berliner, Daniel, Benjamin E. Bagozzi, Brian Palmer-Rubin, and Aaron Erlich. 2020. The political logic of government disclosure: Evidence from information requests in Mexico. *Journal of Politics* 83(1). doi:10.1086/709148

Berliner, Daniel, and Aaron Erlich. 2015. Competing for transparency: Political competition and institutional reform in Mexican States. *American Political Science Review* **109**(1): 110–28.

Berlinski, Samuel, Torun Dewan, and Keith Dowding. 2012. *Accounting for Ministers: Scandal and Survival in British Government 1945–2007*. Cambridge, UK: Cambridge Univ. Press.

Besley, Timothy, and Robin Burgess. 2002. The political economy of government responsiveness: Theory and evidence from India. *The Quarterly Journal of Economics* **117**(4): 1415–51.

Bevan, Shaun. 2015. Bureaucratic responsiveness: Effects of elected government, public agendas and European attention on the UK bureaucracy. *Public Administration* **93**(1): 139–58.

Bookman, Zachary, and Juan-Pablo Guerrero Amparán. 2009. Two steps forward, one step back: Assessing the implementation of Mexico's Freedom of Information Act. *Mexican Law Review* **1**(2): 25–49.

Buntaine, Mark, Patrick Hunnicutt, and Polycarp Komakech. 2020. The challenges of using citizen reporting to improve public services: A field experiment on solid waste services in Uganda. *Journal of Public Administration Research and Theory* **31**(1): 108–127. doi:10.1093/jopart/muaa026

Busuioc, Madalina, and Martin Lodge. 2016. The reputational basis of public accountability. *Governance* **29**(2): 247–63.

Camerlo, Marcelo, and Aníbal Pérez-Liñán. 2015. Minister turnover, critical events, and the electoral calendar in presidential democracies. *The Journal of Politics* **77**(3): 608–19.

Carpenter, Daniel. 2002. Groups, the media, agency waiting costs, and FDA drug approval. *American Journal of Political Science* **46**(3): 490–505.

Cejudo, Guillermo. 2008. Explaining change in the Mexican public sector: The limits of new public management. *International Review of Administrative Sciences* **74**(1): 111–27.

Costa, Mia. 2017. How responsive are political elites? A meta-analysis of experiments on public officials. *Journal of Experimental Political Science* **4**(3): 241–54.

Distelhorst, Greg, and Yue Hou. 2014. Ingroup bias in official behavior: A national field experiment in China. *Quarterly Journal of Political Science* **9**(2): 203–30.

Edwards, George, and B. Dan Wood. 1999. Who influences whom? The president, congress, and the media. *American Political Science Review* **93**(2): 327–44.

Fierro, Ana, Adriana García, Alejandra Ríos, Rodrigo Velázquez, and Dirk Zavala. 2014. *Métrica de la transparencia: Reporte nacional 2014*. Mexico City: CIDE.

Fiorina, Morris. 1977. *Congress, keystone of the Washington establishment*. New Haven: Yale Univ. Press.

Fox, Jonathan, Libby Haight, and Brian Palmer-Rubin. 2011. Proporcionar transparencia hasta qué punto responde el gobierno mexicano a las solicitudes de información pública? *Gestión y Política Pública* **20**(1): 3–61.

Fung, Archon. 2013. Infotopia: Unleashing the democratic power of transparency. *Politics & Society* **41**(2): 183–212.

Gilad, Sharon, Saar Alon-Barkat, and Alexandr Braverman. 2016. Large-scale social protest: A business risk and a bureaucratic opportunity. *Governance* **29**(3): 371–92.

Gilad, Sharon, Moshe Maor, and Pazit Ben-Nun Bloom. 2015. Organizational reputation, the content of public allegations, and regulatory communication. *Journal of Public Administration Research and Theory* **25**(2): 451–78.

Gill, Juliet, and Sallie Hughes. 2005. Bureaucratic compliance with Mexico's new access to information law. *Critical Studies in Media Communication* **22**(2): 121–37.

Green-Pedersen, Christoffer, and Rune Stubager. 2010. The political conditionality of mass media influence: When do parties follow mass media attention? *British Journal of Political Science* **40**(3): 663–77.

Hirano, Shigeo, and James Snyder. 2012. What happens to incumbents in scandals? *Quarterly Journal of Political Science* **7**(4): 447–56.

Hollibaugh, Gary. 2019. The use of text as data methods in public administration: A review and an application to agency priorities. *Journal of Public Administration Research and Theory* **29**(3): 474–90.

Hong, Sounman. 2019. A behavioral model of public organizations: Bounded rationality, performance feedback, and negativity bias. *Journal of Public Administration Research and Theory* **29**(1): 1–17.

Hood, Christopher. 2007. What happens when transparency meets blame-avoidance? *Public Management Review* **9**(2): 191–210.

———. 2010. *The blame game: Spin, bureaucracy, and self-preservation in government*. Princeton: Princeton Univ. Press.

Hyun, Christopher, Alison Post, and Isha Ray. 2018. Frontline worker compliance with transparency reforms: Barriers posed by family and financial responsibilities. *Governance* **31**(1): 65–83.

Jewell, Christopher, and Bonnie Glaser. 2006. Toward a general analytic framework: Organizational settings, policy goals, and street-level behavior. *Administration & Society* **38**(3): 335–64.

Jilke, Sebastian, Wouter Van Dooren, and Sabine Rys. 2018. Discrimination and administrative burden in public service markets: Does a public–private difference exist? *Journal of Public Administration Research and Theory* **28**(3): 423–39.

Jong, Jaehee, and Michael Ford. 2016. The lagged effects of job demands and resources on organizational commitment in federal government agencies: A multi-level analysis. *Journal of Public Administration Research and Theory* **26**(3): 475–92.

Lagunes, Paul, and Oscar Pocasangre. 2019. Dynamic transparency: An audit of Mexico's Freedom of Information Act. *Public Administration* **97**(1): 162–76.

Lawson, Chappell H. 2002. *Building the fourth estate: Democratization and the rise of a free press in Mexico*. Berkeley: Univ. of California Press.

Levitsky, Steven, and María Victoria Murillo. 2009. Variation in institutional strength. *Annual Review of Political Science* **12**: 115–33.

Maor, Moshe. 2011. Organizational reputations and the observability of public warnings in 10 pharmaceutical markets. *Governance* **24**(3): 557–82.

Maor, Moshe, Sharon Gilad, and Pazit Ben-Nun Bloom. 2013. Organizational reputation, regulatory talk, and strategic silence. *Journal of Public Administration Research and Theory* **23**(3): 581–608.

Maor, Moshe, and Raanan Sulitzeanu-Kenan. 2013. The effect of salient reputational threats on the pace of FDA enforcement. *Governance* **26**(1): 31–61.

———. 2016. Responsive change: Agency output response to reputational threats. *Journal of Public Administration Research and Theory* **26**(1): 31–44.

Marshall, John. 2016. *Political information cycles: When do voters sanction incumbent parties for high homicide rates?* New York: Columbia University.

Mayhew, David. 1974. *Congress: The electoral connection*. New Haven: Yale Univ. Press.

Michener, Greg. 2011. FOI laws around the world. *Journal of Democracy* **22**(2): 145–59.

Michener, Gregory. 2015. Assessing freedom of information in Latin America a decade later: Illuminating a transparency causal mechanism. *Latin American Politics and Society* **57**(3): 77–99.

Michener, Gregory, Rafael Velasco, Evelyn Contreras, and Karina Rodrigues. 2020. Googling the requester: Identity-questing and discrimination in public service provision. *Governance* **33**(2): 249–67.

Mutula, Stephen, and Justus Wamukoya. 2009. Public sector information management in east and southern Africa: Implications for FOI, democracy and integrity in government. *International Journal of Information Management* **29**(5): 333–41.

Nava, Ivan. 2017. *Periódicos ¿cuál es el más leído por entre los mexicanos?*, https://www.merca20.com/periodicos-leido-los-mexicanos.

Neuman, Laura, and Richard Calland. 2007. Making the access to information law work: The challenges of implementation. In *The right to know*, ed. A. Florini. New York: Columbia Univ.

Nielsen, Poul, and Donald Moynihan. 2017. How do politicians attribute bureaucratic responsibility for performance? Negativity bias and interest group advocacy. *Journal of Public Administration Research and Theory* **27**(2): 269–83.

Nyhan, Brendan. 2015. Scandal potential: How political context and news congestion affect the president's vulnerability to media scandal. *British Journal of Political Science* **45**(2): 435–66.

———. 2017. Media scandals are political events: How contextual factors affect public controversies over alleged misconduct by U.S. governors. *Political Research Quarterly* **70**(1): 223–36.

Philippe, Arnaud, and Aurélie Ouss. 2018. 'No hatred or malice, fear or affection': Media and sentencing. *Journal of Political Economy* **126**(5): 2134–78.

Poole, Ed Gareth. 2019. How institutional culture trumps tier effects: Evidence from government responsiveness to FOI requests. *Journal of Public Administration Research and Theory* **29**(2): 210–26.

Porter, Ethan, and Jon Rogowski. 2018. Partisanship, bureaucratic responsiveness, and election administration: Evidence from a field experiment. *Journal of Public Administration Research and Theory* **28**(4): 602–17.

Przeworski, Adam, Susan Stokes, and Bernard Manin. 1999. *Democracy, accountability, and representation*. Cambridge, UK: Cambridge Univ. Press.

Puglisi, Riccardo, and James Snyder. 2011. Newspaper coverage of political scandals. *The Journal of Politics* **73**(3): 931–50.

Ríos, Cázares, Alejandra Carmen Castañeda, and Adriana García. 2017. *Transparencia. Diagnóstico Institucional 2016*. Mexico City: CIDE.

Roberts, Alasdair. 2006. *Blacked out: Government secrecy in the information age*. Cambridge, UK: Cambridge Univ. Press.

Rosner, Bernard. 1983. Percentage points for a generalized ESD many-outlier procedure. *Technometrics* **25**(2): 165–72.

Saltzstein, Grace Hall. 1992. Bureaucratic responsiveness: Conceptual issues and current research. *Journal of Public Administration Research and Theory* **2**(1): 63–88.

Snyder, James, and David Strömberg. 2010. Press coverage and political accountability. *Journal of Political Economy* **118**(2): 355–408.

Strömberg, David. 2015. Media and politics. *Annual Review of Economics* **7**(1): 173–205.

Tummers, Lars, Victor Bekkers, Evelien Vink, and Michael Musheno. 2015. Coping during public service delivery: A conceptualization and systematic review of the literature. *Journal of Public Administration Research and Theory* **25**(4): 1099–26.

Vallis, Owen, Jordan Hochenbaum, and Arun Kejariwal. 2014. A novel technique for long-term anomaly detection in the cloud. https://www.usenix.org/conference/hotcloud14/workshop-program/presentation/vallis.

Weaver, Kent. 1986. The politics of blame avoidance. *Journal of Public Policy* **6**(4): 371–98.

Weber, Max. 1978. *Economy and society: An outline of interpretive sociology*. Berkeley: Univ. of California Press.

White, Ariel, Noah Nathan, and Julie Faller. 2015. What do I need to vote? Bureaucratic discretion and discrimination by local election officials. *American Political Science Review* **109**(1): 129–42.

Wood, Abby, and David Lewis. 2017. Agency performance challenges and agency politicization. *Journal of Public Administration Research and Theory* **27**(4): 581–95.

Worthy, Ben, Peter John, and Matia Vannoni. 2017. Transparency at the parish pump. *Journal of Public Administration Research and Theory* **27**(3): 485–500.