

Under Pressure: Essays on Stakeholder Suppression as a Stakeholder Engagement Tactic

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A dissertation

submitted in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

University of Washington

2025

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Program Authorized to Offer Degree:

Foster School of Business

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Abstract

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A fundamental question in non-market strategy literature is how firms engage with non-market actors to avoid accountability for socially costly activities and outputs. While the literature has explored tactics like cooperation, lobbying, compliance, and voluntary disclosures, it has largely ignored the use of comparatively antagonistic tactics such as suppression. This dissertation explores the threat of suppression tactics and how this threat affects the generation (or abatement of generation) of environmental negative externalities. Across three empirical chapters, I focus on how the threat of litigation, in particular, influences the generation of a relatively well-studied externality: toxic waste. In the first chapter, I examine whether firms change how toxic waste is managed when they have less power to threaten stakeholders through litigation. I find that, following the introduction of constraints on the ability to effectively use litigation to stifle dissent, facilities shift how the toxic waste generated through the production process is managed

rather than the overall generation of that waste. I find that the shift in how waste is managed is driven by the expected stakeholder concerns and the potential to shift liability. In chapter 2, I continue my examination of the effect of the introduction of constraints on the ability to effectively use litigation as a suppression tactic. In this chapter, I leverage the fact that these constraints are introduced at different times at a state level and examine how firms leverage that heterogeneity across jurisdictions. I focus specifically on how this heterogeneity affects the movement of waste from the source locations to other offsite locations. I find that following the introduction of constraints on the effectiveness of litigation as a suppression tactic, facilities significantly increase the transfer of waste to locations without those constraints and significantly decrease the transfer of waste to locations with these constraints. This suggests that facilities leverage the state-level heterogeneity in the introduction of these constraints and engage in regulatory arbitrage. In chapter 3, I move away from the context of constraints on the effectiveness of litigation as a suppression tactic and focus on the threat of litigation itself. I explore how regulatory scrutiny may lead to unintended consequences and how prior filings of litigation may be perceived by the firm as a barrier to regulatory scrutiny. I leverage county-level designation data based on the National Ambient Air Quality Standards (NAAQS) for ground ozone. I find that following increased regulatory scrutiny related to ground ozone, facilities significantly increase the generation of pollutants that are not associated with the scrutiny. I do not find that the prior filings of litigation influence the generation of non-ozone-related pollution following increased scrutiny. Together, these chapters examine how the threat of litigation may be perceived as a means to suppress dissent and how the costs associated with that threat affect the generation and management of negative externalities.

Acknowledgments

It is often the case that behind every successful PhD and complete dissertation is a team of supporting friends, patient mentors, and an endless supply of coffee. This dissertation would not have been possible without the support and contributions of many people through the ups and downs of the PhD.

First, I would like to thank my advisor and committee, who have guided, challenged, and believed in me at every stage of this journey. Dr. David Tan, my supervisor/chair/advisor, spent countless hours over the last six years explaining concepts, supporting my ideas, directing my energies to where they would be most productive, and mentoring me. Dr. David Sirmon and Dr. Warren Boeker helped me understand how to frame my ideas and paper better, how to ground my ideas more clearly in theory, and provided diverse perspectives. Dr. Jerald Herting helped me bolster my technical skills and also provided guidance through the process of putting together this work. I am grateful for your collective support from the time I was a first-year PhD student with little understanding of the academic world to a PhD candidate about to graduate.

Second, I am also immensely thankful for faculty outside my committee who have mentored me and supported me through this program. Dr. Alicia DeSantola exposed me to how other faculty in our field conduct research and provided me with insight into other areas within our field. Dr. Emily Cox Pahnke provided insight on becoming a better writer and went through various early-stage ideas I had before I ended up focusing on what became my dissertation today. My co-author, Dr. Abhinav Gupta, shared his insight on the field, the publishing process and pushed me to explore my other research ideas. Many other faculty, including Dr. Suresh Kotha, Dr. Ben Hallen, Dr. Kevin Steensma, Dr. Ming Zhu Wang, have supported me in meaningful

ways, offering professional guidance, intellectual engagement, and access to academic resources, as well as personal encouragement and moral support throughout this program.

Third, to all the friends I have made along the way, thank you for standing by me in the pressure and the quiet — your belief in me never wavered. You have all supported me through the highs and the lows of living far away from family and pursuing a PhD. To Jen Rhymer, Michelle Lee, Yu Tse Heng, Anna Fung, Joseph Shin, Nicole West, Misha Miriam, Eun Hee Bae, Jennifer Lu, and Keehea Moon — thank you for providing me with the support network I needed the moment I set foot on campus. You gave guidance when I needed it, but more importantly, you gave me friendship and support at a time when I knew no one else. To Sung Ho Park and Evelyn Smith — thank you for your support and friendship through the years we were in the program together and for dragging me along with your collective chaos. To William Schulze — thank you for your support through this journey, and for often providing the fuel I needed to get through long writing sessions. To Ellie Cleasby — thank you for being my “non-business PhD” buddy. You gave me perspective, support, and friendship. To my dear friend Namrata Ramaprasad — thank you for everything you have done through these long years to support me, be it in the form of seven-hour-long discord calls or check-in texts, regardless of distance and differing time zones. To my Commodore Duchesses Xue Li, Anusuya Bannerjee, and Ek Onkar Khalsa — I am glad we had each other for this journey, through the highs and the lows. Thank you for all you have done for me throughout the program, whether it was a soft place to land or a supportive shoulder to lean on. To my other wonderful PhD colleagues Scott Taylor, Brit Middleton, Keehyuk Ra, Rohan Radke, Vishal Rituraj, Ojaswi Malik, and Wei Xia — you made this journey worthwhile and enjoyable, and I am glad we had each other as we made our way through the program. To Sandeep Krishnamurthy and Srivani Jade, thank you for providing me

with a home away from home. I appreciate all you did to make me feel welcome early on in my time here, as well as your support even after you had moved away.

Last, but certainly not least, I want to thank my family. To my parents, Geeta and Ganesh Prabhu, and younger brother, Rahul Prabhu, thank you for your support and understanding through every step of this journey. Through managing time zone differences, a pandemic that prevented me from coming home, and long, almost-daily calls, you have supported me through every high and every low, especially when I thought I would not be able to support myself through those hard times. I also want to thank my grandparents, uncles, aunts, and cousins for their continued support and kind words; whether through words of encouragement, check-ins, or quiet understanding, you reminded me that I was never far from home.

To all those whose names may not be mentioned but have played a role, big or small, in shaping my academic journey, I thank you for your part in this process.

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Introduction

In 2017, an episode on the coal industry was aired as part of John Oliver's show Last Week Tonight. In it, Oliver examined the practices within the industry, using the largest privately owned coal company in the United States- Murray Energy- as his primary example. Shortly afterward, John Oliver and HBO found themselves the defendants of a lawsuit filed by Murray Energy's CEO Bob Murray and the various organizations he was a board member, chairperson, and CEO of. Murray's lawyers claimed that there were a series of claims made on the show that the plaintiff found problematic and incorrect. For example, the defendants took issue with a claim Oliver made during the broadcast, that contrary to Murray's statements, there was "no evidence of a naturally occurring earthquake" that could have caused a mine collapse in Utah that killed several miners. The defendants also took issue with Oliver joking that Murray Energy and Mr. Murray were "on the same side as black lung" when discussing Murray Energy's position regarding coal dust regulation. The defendants claimed that Oliver and HBO continued to ruthlessly attack the plaintiff's reputation and participated in character assassination when Oliver described Mr. Murray as someone who looked like "a geriatric Dr. Evil". The case was dismissed by the West Virginia Circuit Court in 2018, after which the plaintiff filed an appeal to the West Virginia Supreme Court. In 2019, Murray Energy withdrew its lawsuit, and Oliver and HBO aired another episode on Last Week Tonight to discuss the lawsuit. While the courts did not characterize it as such during the suit's initial dismissal, Oliver alleged that the lawsuit was a maliciously filed and frivolous attempt to silence him, his show, and HBO—a type of case colloquially known as a Strategic Lawsuit Against Public Participation, or SLAPP suit.

Such tactics are not, unfortunately, unheard of or limited to actors like John Oliver and HBO. While the intent behind a lawsuit is difficult to ascertain and the categorization of a

lawsuit as being malicious in nature can only be done by a court of law, there is anecdotal evidence and examples of lawsuits from both within the United States and outside that suggests that lawsuits can be used to intentionally suppress dissent in such a manner. In the context of the Murray Energy example, the organization has sued not only a comedian like John Oliver, but also journalists at traditional, television, and online news sources (e.g. Murray v. Chagrin Valley Publ'g Co., 2014; Murray et al v. TheHuffingtonPost.com, Inc. Et al, 2014; The Marshall County Coal Company et al v. Oliver et al, 2017).

The target of such lawsuits can vary. However, these targets tend to be *informed* actors, i.e., actors that have access to potentially unfavorable information about the firm and (or) the ability to disseminate said information to a broader set of actors. Another example of lawsuits being used in such a manner against actors with information about the firm is the lawsuit filed by Green Group Holdings against a small resident activist group in Uniontown, Alabama. Uniontown, Alabama, is “a poor and predominantly Black community with a median per capita income of around \$8,000” (ACLU, 2017). Residents and activists who were part of the Black Belt Citizens Fighting for Health & Justice filed a complaint to the EPA related to the Arrowhead Landfill. This particular landfill, owned by Green Group Holdings, collected coal ash “from communities and customers east of the Mississippi River, including Northeast, Mid-Atlantic, and Southeast states as well as Oklahoma and Texas.” (Arrowhead Landfill, n.d.). In particular, the waste dumped in the Arrowhead Landfill was coal ash from Tennessee after the Tennessee Valley Authority coal ash landfill spilled and contaminated the areas around it in December 2008 (ACLU, n.d.).

Similar to the lawsuit Murray Energy filed against John Oliver and HBO, Green Group Holdings allegedly took issue with statements made by the resident activists, over and above the

complaint to the EPA. Some examples of these complaints include statements like “[The landfill] affected our everyday life” and “The landfill’s pollution problems are influencing the decrease of property values while increasing health concerns”. Another statement Green Group Holdings took issue with said “The toxic...landfill continues to hurt/violate/oppress the community with the desecration of the adjacent cemetery, the constant run-off of contaminated water, the bad odors and smells, and the depression of property value” (ACLU, n.d.). These statements vary in terms of tone and how they target the landfill in question. Regardless, Green Group Holdings first sent a settlement letter to the resident activities demanding (1) Complete control of the residents’ Facebook group, (2) Withdraw claim before the EPA, (3) Examination of all interaction the residents may have had with environmental groups, and (4) Refrain from engaging in any further dissent. In essence, through this settlement letter, Green Group Holdings appeared to demand control of many of the resident activists’ means of sharing and disseminating information with one another and others. When the resident activists did not agree to the letter, Green Group Holdings sued the resident activists for \$30 million. While the lawsuit was eventually withdrawn, a former Uniontown resident noted “It has scared a lot of people in this area from speaking up...because those individuals are afraid to [face] the backlash, not knowing that it’s just a scare tactic to get you to leave things alone so they can continue their power and control to do what they want” (UNIONTOWN, 2019).

These lawsuits represent a particularly interesting and understudied corporate tactic-suppression tactics. To understand what these tactics are, their potential impact, and the relevance of these tactics in terms of theoretical context, it is important to position these tactics within the broader literature. We know, from existing literature, that the presence (Doshi, Dowel & Toffel, 2013; Anand & Giraud-Carrier, 2020) or absence of regulation or targeted regulatory

action (Fremeth & Shaver, 2014; Evans, Gilpatric & Shimshack, 2018; Delmas, Russo & Montes-Sancho, 2007) and pressure by internal (Berrone & Gomez-Mejia, 2009) and external stakeholders (McDonnell, King, & Soule, 2015; Lenox & Eesley, 2009; Delmas & Toffel, 2008). Here, the term stakeholders refers to those entities in the firm's environment who "are or might be influenced by, or are or potentially are influencers of, some organizations" (Starik, 1994: 90; Mitchell et. al., 1997: 858). These entities can induce costs on the firm in response to socially irresponsible or undesirable activities, which may affect a firm's resources or legitimacy (Eesley & Lenox, 2006; McDonnell, 2016). Firms may be more or less responsive to stakeholder demands based on the willingness and the ability of the firm (Bundy, Shropshire & Buchholtz, 2013; Durand, Hawn & Ioannou, 2019), which in turn is driven by attributes of stakeholders (Agle, Mitchell & Sonnenfeld, 1999; Mitchell et al, 1997; Driscoll & Starik, 2004; Neville et. al., 2011) and the firm (Bowen, 2002; Darnall, Henriques & Sadorsky, 2010).

However, firms are not passive actors. To avoid or manage the costs associated with being targeted by stakeholders, firms may engage in a variety of stakeholder engagement tactics. Firms may choose to concede when expected gains from conceding to demands exceed the private gains from externalizing costs of activities (Henisz, Dorobantu & Nartey, 2014) or when the expected costs of harm increase as a result of stakeholder actions (Chatterji & Toffel, 2010; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013). Firms may also proactively invest in the abatement of socially undesirable activities or outcomes, as it may provide the firm with relative benefits (Dorobantu, Kaul & Zelner, 2017), such as competitive advantage (Fremeth & Shaver, 2014) or lowered cost of capital (Eccles, Ioannou & Serafeim, 2014).

In some contexts, firms may choose to proactively engage in tactics that, in essence, allow the firm to avoid being targeted by or held accountable by stakeholders. For example,

firms may choose to take up lobbying, where firms attempt to influence policymakers and politicians to draft and approve policies, laws, and programs that are favorable to the firm (Lambert, 2019; Hegde & Sampat, 2015). This may allow the firm to mitigate the impact of stakeholder demands by transforming the environment in its favor. In some contexts, firms may avoid being held accountable through cooperation with stakeholders, through means like collaborations (Odziemkowska, 2022). Firms may also take up non-cooperative actions where they do not choose to collaborate directly with the stakeholders, through tactics like social investment (Brammer & Pavelin, 2005), corporate philanthropy (Luo, Kaul & Seo, 2018), or voluntary regulation (Aragón-Correa, Marcus & Vogel, 2020; King & Lenox, 2000; Short & Toffel, 2010) through disclosure (Reid & Toffel, 2009; Luo, Wang, & Zhang, 2017) or certification (Delmas & Toffel, 2008; Delmas & Montes-Sancho, 2010; Jiang & Bansal, 2003).

However, this literature has broadly ignored tactics like the use of litigation to silence stakeholders, such as the alleged cases of Murray Energy and Green Group Holdings. While theoretical work has posited that firms do take up combative tactics (Bundy, Vogel & Zachary, 2018) or actively resist pressures (Oliver, 1991), we lack empirical evidence of such tactics being used and, more specifically, work focused on the use of litigation in such a manner. The key reason such lawsuits are important to examine, especially within the context of the firm's strategic calculus when it comes to its stakeholders, is due to the potential of such tactics to directly impact society's ability to hold the firm accountable and manage socially costly negative externalities. Specifically, firms may use these comparatively antagonistic tactics to avoid accountability, and this may result in firms being less willing to address socially costly activities or relatively buffered from the mechanisms that allow stakeholders to induce costs on the firm.

In this dissertation, I aim to address this gap. I focus on the use of litigation as a tactic against stakeholders, used primarily to silence dissent. I refer to tactics like this as suppression tactics, defined as actions taken by a firm to increase the expected costs for stakeholders who criticize or disclose unfavorable information about the firm. Some other examples of firms allegedly suppressing their stakeholders are anti-union practices, the use of restrictive contracts with confidentiality clauses or non-disparagement clauses, or non-disclosure agreements that limit an employee's ability to speak out about their experiences or negative information about the firm. It is difficult to empirically examine suppression due to concerns related to the measurement of variation and potential endogeneity. Given that strong threats may deter the very actions that those threats are targeting, we cannot measure the threat of litigation using instances of the threats carried out by the firm. It is also difficult to establish causality as firm decisions that affect negative externalities may be determined by the same underlying unobserved factors that determine the firm's choice to invest in tactics that suppress its stakeholders. Additionally, it is difficult, ex-ante, to determine the intention behind lawsuits that are filed by firms.

Given these concerns, I do not explicitly measure or address suppression tactics in this dissertation. This dissertation focuses less on providing empirical evidence that suppression tactics exist and more on the idea of the ability of these tactics to act as a deterrent to dissent and other activities deemed undesirable by the firm. What is unique in this dissertation is the idea of the deterrence effect of litigation from the firm's end, not being limited to market activity and actors, but instead potentially affecting non-market actors. I focus specifically on the effect of the threat of suppression tactics on environmental negative externalities.

In Chapter 1, I focus on whether firms change how negative externalities are managed when they have less power to threaten stakeholders with suppression. To do this, I leverage state-

level legislation known as anti-SLAPP laws, which aim to address the costs associated with unmeritorious lawsuits filed to disincentivize or suppress speech. These lawsuits are colloquially referred to as “strategic lawsuits against public participation” (SLAPP). In the United States, between 1981 and 2022, 32 states and the District of Columbia passed some form of anti-SLAPP law. Given that a common subject matter of these lawsuits is the environment, I focus on how the enactment of these laws affects a relatively common form of environmental negative externality within existing literature: toxic waste (Berrone et al., 2010; Doshi et al., 2013; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006). I use facility-level Toxic Release Inventory (TRI) data and enactment data from the Reporters Committee for Freedom of the Press (RCFP). In this chapter, I find that following the enactment of anti-SLAPP law in a state, facilities do not significantly change the overall generation of toxic waste. Instead, facilities respond to the enactment of the law by shifting how the waste generated is managed based on expected stakeholder concerns and the potential to shift liability.

In Chapter 2, I shift my focus to specifically explore how firms leverage the state-level heterogeneity in anti-SLAPP law. Specifically, given that anti-SLAPP law is enacted at the state level and at different points in time, firms may choose to strategically move their waste based on the presence (or absence) of stakeholder protections in the target states in the form of anti-SLAPP law. I continue to use the facility-level Toxic Release Inventory (TRI) data and the anti-SLAPP enactment information from RCFP but focus specifically on the movement of toxic waste from the source facility’s state to off-site locations. These off-site locations may either be in the same state or other states, and out-of-state locations may vary in terms of whether the states where those offsite locations are located do or do not have anti-SLAPP laws enacted. This chapter finds that following the introduction of stakeholder protections in the form of anti-

SLAPP law in the source state, facilities significantly increase the movement of toxic waste to out-of-state locations that do not have any form of anti-SLAPP law. While facilities also significantly increase their offsite transfers in general, this general increase is largely driven by transfers out of state. More specifically, facilities significantly increase out-of-state transfers while significantly reducing transfers to locations within the state. In this chapter, I posit that the significant increase in transfers to states without anti-SLAPP law is indicative of regulatory arbitrage, which is supported by the finding that, following the enactment of the law, facilities significantly reduce their transfers to states with the law.

In Chapter 3, I move away from the context of anti-SLAPP law and focus instead on litigation filing. The mere filing of a lawsuit is often sufficient to disincentivize actors from sharing information about the firm and cause harm to the defendant (Tu & Stump, 2020). Given this, in settings where there is some degree of dependency between different stakeholders for information about the firm's activities, litigation may be considered a useful tactic for the firm, specifically due to the ability of litigation to mitigate the ability of information to act as a disciplining mechanism. In this chapter, I explore how regulatory scrutiny may lead to unintended consequences and how prior filings of litigation may be perceived as a barrier to regulatory scrutiny. Leveraging county designation data based on the National Ambient Air Quality Standards (NAAQS) for ground ozone, I explore how increased regulatory scrutiny towards a county affects the generation of pollutants targeted and not targeted by the scrutiny. I also explore how the parent firm's prior litigation filings may be perceived as a buffer against this scrutiny. The results in this chapter indicate that following an increase in regulatory scrutiny, facilities significantly increase the generation of pollutants that are not associated with the scrutiny. However, the results do not indicate that prior litigation filings influence the generation

of these pollutants, nor do the results indicate that facilities reduce the generation of regulated pollutants. In follow-up analyses for this chapter, I find that these results may vary based on whether or not the facility generates pollutants associated with ground ozone.

Chapter 1- Taking Out the Trash: The Power to Suppress Stakeholders and the Management of Toxic Waste

Introduction

A core motivation behind numerous streams of research on business-society relations is the problem of negative externalities: firms may profit by externalizing the costs of business activities to other sectors of society. To understand pathways for mitigating this problem, research on social activism and regulation has explored various ways in which non-market actors in society attempt to counteract firms' private gains from negative externalities by raising firms' expected costs of engaging in activities that carry a risk of harm to other sectors of society (e.g., Hiatt, Grandy, & Lee, 2015; King, 2008; Vasi & King, 2012). Firms may concede to stakeholder demands when expected costs of risky activities increase due to stakeholder actions (e.g., Chatterji & Toffel, 2010; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013) or expected gains from conceding to demands exceed the private gains from externalizing the costs of risky activities (e.g., Henisz, Dorobantu & Narthey, 2014). Firms may also attempt to avoid conceding to stakeholder demands by engaging in lobbying (e.g., Lambert, 2019; Hegde & Sampat, 2015) or attempt to avoid accountability by coopting stakeholders (e.g., Odziemkowska, 2022), making social investments (e.g., Brammer & Pavelin, 2005), or engaging in corporate philanthropy (e.g. Luo, Kaul & Seo, 2018).

However, an important aspect of the dynamic between firms and stakeholders that has not received as much attention is the power of firms to engage in stakeholder suppression. We define stakeholder suppression as actions by a firm that are intended to increase stakeholders' expected costs of criticizing or revealing unfavorable information about a firm. Information has long been recognized as an important disciplining mechanism. Besides formal, top-down regulatory

mechanisms, an important way in which information about firm activities can be revealed is through informal, bottom-up mechanisms, such as from whistleblowers, journalists, community groups, nonprofit organizations, or members of the public. Against this wide range of potential informal, bottom-up sources of information, perhaps the most commonly invoked mechanism of suppression by firms is the threat of litigation. For firm employees, the threat of litigation can significantly magnify potential whistleblowers' expected costs beyond simply the threat of job loss. The threat of litigation can also be invoked against the wide range of non-employee stakeholders who are potential sources of unfavorable information about firms. Importantly, the threat of litigation does not necessarily need to be grounded in legal merit to be effective in suppressing stakeholders. Even the expected legal costs of defending against frivolous litigation by a firm can have a chilling effect on stakeholders and, in turn, weaken the disciplining effect that stakeholders may have on firm activities.

In this study, we examine whether firms change how negative externalities from their activities are managed when they have less power to threaten stakeholders with suppression. Empirically, answering this question requires solving two methodological challenges. First, it requires being able to measure variation in threat, rather than instances of stakeholder suppression. The methodological challenge with studying threats is that the stronger a threat is, the more likely it is to deter actions that require the threat to be carried out. Therefore, a threat cannot be measured using instances of the threat being carried out. Second, identifying a causal effect requires exogenous variation. Firm decisions that affect negative externalities may be determined by the same underlying unobserved factors that also determine decisions to invest in resources or capabilities that increase a firm's threat against stakeholders.

To overcome these two methodological challenges, we take advantage of exogenous shocks in the form of state-level legislation against unmeritorious lawsuits filed primarily to suppress speech, which are colloquially referred to as Strategic Lawsuits Against Public Participation (SLAPP). Firms allegedly use SLAPP lawsuits to silence speech and prevent parties in society from drawing attention to unfavorable information about firms. From 1981 to 2022, 32 states and the District of Columbia passed legislation intended to protect defendants against SLAPP lawsuits. This legislation provides a useful source of exogenous variation in the threat of stakeholder suppression that is not subject to the concerns inherent to attempting to measure threat via instances of threats being carried out.

We estimate the effects of anti-SLAPP legislation on firms' toxic releases. While SLAPP suits can relate to a variety of matters, one particularly common matter is the environment (Pring & Canan, 1991; Merriam & Benson, 1993). Anecdotally, firms have used SLAPP suits to attempt to suppress speech regarding the environmental impact of firms' activities. By examining whether and how firms' toxic releases change in response to anti-SLAPP legislation, we provide a window on whether firms alter how negative externalities are managed when they have less power to engage in stakeholder suppression.

In this paper, we focus specifically on how firms manage a relatively well-studied negative externality: toxic waste (Berrone et al., 2010; Doshi et al., 2013; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006). We leverage the theoretical variation in the perceived costs associated with different toxic waste, driven by how said waste is managed. To do this, our empirical analysis uses facility-level Toxic Release Inventory (TRI) data to examine whether or not the shift in expected payoffs associated with using litigation as a suppression tactic for the

firm incentivizes facilities to reduce their toxic waste. The data allows us to use facility-level fixed effects and examine within-facility changes over time.

Our results show that following anti-SLAPP legislation, facilities do not significantly change the overall generation of toxic waste. Instead, facilities respond to the introduction of constraints on the ability to effectively use litigation as a suppression tactic by shifting their waste management processes. Specifically, we find that following the enactment of anti-SLAPP law in a state, facilities significantly reduce the amount of waste released into the environment and the amount of waste treated onsite, while significantly increasing the amount of waste transferred to offsite locations. These results suggest that following the introduction of constraints on suppression tactics, facilities strategically change how they manage their waste by reducing waste management processes that pose regulatory or stakeholder-based risks while increasing waste management processes that allow for the shifting of liability and reduction of costs associated with potential or expected stakeholder concern.

Theoretical Development

Stakeholders, Stakeholder Suppression, and Negative Externalities

A core motivation behind numerous streams of research on business-society relations is the problem of negative externalities: firms may profit by externalizing the costs of business activities to other sectors of society. To understand pathways for mitigating this problem, research on social activism and regulation has explored various ways in which non-market actors in society attempt to counteract firms' private gains from negative externalities by raising firms' expected costs of engaging in activities that carry a risk of harm to other sectors of society. In response to such activities, firms may choose to concede when expected gains from conceding to

demands exceed the private gains from externalizing costs of activities (Henisz, Dorobantu & Nartey, 2014) or when the expected costs of harm increase as a result of the actions of nonmarket actors (Chatterji & Toffel, 2010; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013). Firms may also adopt tactics that enable them to avoid or mitigate the costs induced by the actions of these actors, such as lobbying (Lambert, 2019; Hegde & Sampat, 2015), collaborations with stakeholders (Odziemkowska, 2022), social investment (Brammer & Pavelin, 2005), corporate philanthropy (Luo, Kaul & Seo, 2018) and voluntary regulation (Aragòn-Correa, Marcus & Vogel, 2020) through disclosure (Reid & Toffel, 2009; Luo, Wang, & Zhang, 2017) or certification (Delmas & Toffel, 2008; Delmas & Montes-Sancho, 2010; Jiang & Bansal, 2003).

However, an important aspect of the dynamic between firms and stakeholders that has not received as much attention is the power of firms to engage in stakeholder suppression. We define stakeholder suppression as actions by a firm that are intended to increase stakeholders' expected costs of criticizing or revealing unfavorable information about a firm. Implicit in this definition of stakeholder suppression is the role of information as a crucial mechanism through which stakeholders can hold firms accountable for engaging in irresponsible or undesirable behavior. Information has long been recognized as an important disciplining mechanism. Existing literature notes that the access to or availability of information about a firm's activities is necessary for the identification of problematic or undesirable activities and that the dissemination of information about a firm's non-compliance with regulatory standards can "shame" firms into adopting responsible behaviors. For example, Dyck, Morse & Zingales (2010) find that the ability to access information about a firm's potential misconduct or irresponsibility is critical to the discovery of corporate fraud. Scholars have also noted that when information about a firm is disclosed to the public, the targeted firms improve or address the concerns or attributes under

scrutiny (Benneer & Olmstead, 2008; Jin & Leslie, 2003; Chatterji & Toffel, 2010). Disclosure of information about a firm's activities may encourage other actors to disincentivize the firm's non-compliance with regulatory standards (Yadin, 2019) and also incentivize non-targeted firms to address their lack of compliance (Johnson, 2020). This literature has often focused on the role of formal, top-down regulatory mechanisms, where regulatory agencies or the government enact regulations or laws that change how and when information about a firm's activities is accumulated and made available, which in turn incentivizes firms to alter their generation of negative externalities.

However, outside these formal, top-down regulatory mechanisms, an important pathway through which information about firm activities can get revealed or publicized is through informal, bottom-up mechanisms, through actors like whistleblowers, journalists, community groups, nonprofit organizations, or members of the public. These actors play a significant role in the accumulation and dissemination of information about the firm's activities. In some contexts, the information revealed or publicized by these actors could be in the form of private information. In other contexts, the disciplining effect of information can also be facilitated through the targeted dissemination of public information that may be difficult or expensive for the general public to access and evaluate. For example, Johnson (2020) found that publicizing a facility's OSHA violations led to other facilities improving their compliance. Data on OSHA inspections and violations are publicly available on the agency's website. However, the issuing of press releases disseminating information about these violations shifted the expected costs associated with non-compliance, and facilities chose to improve compliance to avoid similar negative attention. Actors may also reveal private information that changes the interpretation of public information. For example, in the context of the Deepwater Horizon disaster, the public

was aware of the oil spill that took place but had little knowledge of what had led to it. Later, those who had worked on the rig spoke up about safety concerns related to the blowout, which began to be circulated by the media (e.g., Barstow, Rohde, & Saul, 2010; Cattaneo, 2017). This shifted the public's interpretation of the oil spill from one of an accidental oil spill to one of alleged gross negligence and mismanagement.

Some actors have better access to information than other actors as they are better positioned to access and accumulate information about a firm's activities (Kim, Wan, Wang, & Yang, 2019; Lee & Luo, 2022). As a result, actors in a firm's environment may not be perfectly informed about the firm's activities. The resulting information asymmetry may buffer firms against disciplining mechanisms that would otherwise incentivize firms to reduce negative externalities. Firms may be able to leverage the imperfect distribution of information by targeting those actors who are easily able to release and publicize information about their activities. A common way that firms can do this is by suppressing those actors who are able to and willing to release and publicize information, which mitigates the firm's expected costs associated with reduced information asymmetry.

If, as prior research shows, the disclosure or publication of information has a disciplining effect and can incentivize firms to reduce negative externalities, then we theorize that the power of firms to engage in stakeholder suppression should affect firms' negative externalities. Specifically, given that stakeholders play a critical role in inducing the disciplining effect associated with the release of information, the power of firms to utilize stakeholder suppression tactics against these actors should allow the firm to limit and potentially control the kind of information made available about their activities. This, in turn, ensures that information

asymmetry persists and that the expected costs associated with the release and publicizing of the firm's undesirable activities are avoided.

Perhaps the most commonly invoked mechanism of suppression by firms is the threat of litigation. For firm employees, the threat of litigation can significantly magnify potential whistleblowers' expected costs beyond simply the threat of job loss. The threat of litigation can also be invoked against the wide range of non-employee stakeholders who are potential sources of unfavorable information about firms. Anecdotally, the use of litigation can suppress stakeholders who can disseminate information about the firm. Filing a claim at a court is often sufficient to induce reputational, personal, financial, and psychological harm to the defendant as well as allow the filer to reap indirect benefits as these suits disincentivize future parties from bringing public attention to issues out of fear of retaliation (Tu & Stump, 2020). For example, in a lawsuit between Murray Energy and Chagrin Times (Murray v. Chagrin Valley Publ'g Co., 2014), Murray Energy sued Chagrin Valley Times for covering a local protest outside Murray Energy's Ohio headquarters. The company claimed that Chagrin Valley Times and the protesters had defamed Murray Energy. The presiding judge noted that while the defendants had won the case, "The fact that the Chagrin Valley Times website has been scrubbed of all mention of Murray or this protest is an example of the chilling effects this [lawsuit] has." Overarchingly, the use of litigation or the mere threat of such lawsuits has the potential of increasing a nonmarket actor's expected costs associated with disseminating information, which in turn may weaken the disciplining effect of information.

Importantly, the threat of litigation does not necessarily need to be grounded in legal merit to be effective in suppressing stakeholders. Frivolous litigation where plaintiffs file unmeritorious claims to induce a chilling effect on participation in public debate (Pring, 1989) is

colloquially referred to as strategic lawsuits against public participation, or SLAPP suits. The intent of plaintiffs of such lawsuits is rarely to win, but instead to cause a “chilling effect” on stakeholders that have made demands and those who may make demands in the future (Tate, 2000). Legal scholars like Glover & Jimison (1995) note that “the detrimental effect of this type of lawsuit is long term. The folklore and old war stories passing from one community to another which detail the plight of “would-be” activists who were forced to pay thousands of dollars to defend themselves in SLAPP suits will likely prevent others from moving forward on similar development projects in their areas.” Specifically, in the context of such lawsuits, the filing of the claim, while unmeritorious, increases the expected costs associated with acting against the plaintiff’s interests for both the defendant and potentially future dissenters.

Given that stakeholders play a critical role in disciplining firms through the dissemination of information through informal, bottom-up mechanisms, the threat of litigation in the form of SLAPP suits allows firms to directly target these actors regardless of the absence of meritorious claims. In doing so, firms may be able to limit and control what kind of information about the firm is made available and accordingly mitigate the expected costs associated with the dissemination of information. Additionally, given that these actors are not perfectly informed about the firm’s activities, the threat of litigation may also allow firms to directly target interdependencies between these actors. That is, the information asymmetry may force actors to depend on one another to disseminate information for information so they can accordingly take effective action against the firm. In such contexts, in disincentivizing certain actors from disseminating information, the threat of litigation may also have the potential to make it more difficult for these actors to hold the firm accountable in the absence of easily accessible information.

Often, the targets of litigation like SLAPP suits are actors making claims or disseminating information about the environment or environmental harm. This may be because protecting the environment often depends on and requires public participation. We need local communities to report spills and environmental concerns, for information intermediaries like newspapers to share information about these events with the broader public, and for individuals and organizations to protest against actions that increase environment-related externalities. The use of litigation like SLAPP suits against these stakeholders can mitigate the effectiveness of information disclosure through informal, bottom-up mechanisms as a means of disciplining firms.

A potential example of this could be *Green Group Holdings vs Shaeffer* (2017). Residents and activists who were part of the Black Belt Citizens Fighting for Health and Justice filed a complaint to the EPA related to the Arrowhead landfill. This particular landfill was owned by Green Group Holdings and “accepted waste for disposal from communities and customers east of the Mississippi River including Northeast, Mid-Atlantic, and Southeast states as well as Oklahoma and Texas.” (Arrowhead Landfill, n.d.). More specifically to this lawsuit, this landfill was accepting coal ash that was originally being dumped at the Tennessee Valley Authority coal ash landfill (ACLU, n.d.). However, following a spill from the landfill in 2008, the waste was directed to the Arrowhead Landfill in 2009.

Following the filing of the complaint to the EPA and citizen statements such as “[The landfill] affected our everyday life” and “[W]e all should have the right to clean air and clean water” (ACLU, n.d.), Green Group Holdings sued the resident activists in Uniontown, Alabama for \$30 million. Notably, Uniontown was “a poor, predominantly Black town with a median per capita income of around \$8,000” (ACLU, 2017). While the court itself did not classify the lawsuit as a SLAPP suit, legal scholar Rachel Deming noted that the lawsuit “has all three

elements of a classic SLAPP: (1) unrealistically high dollar demands, (2) unnamed defendants (to chill others), and (3) naming individuals [as defendants] but not the organizations they represent” (Deming, 2022: 352). The effect of this lawsuit was felt in the community, as noted by a former Uniontown resident in a documentary about the situation – “It has scared a lot of people in this area from speaking up...because those individuals are afraid to [face] the backlash, not knowing that it’s just a scare tactic to get you to leave things alone so they can continue their power and control to do what they want” (UNIONTOWN, 2019).

States are cognizant of the potential threat associated with the use of such lawsuits and have attempted to counteract the effects of these lawsuits through laws colloquially referred to as anti-SLAPP laws. An anti-SLAPP law allows the defendant protections against unmeritorious or maliciously filed lawsuits that intend to freeze their ability to exercise their free speech. A central feature of these laws is that they are designed to reduce or eliminate the costs and other burdens that the defendant faces when a SLAPP suit is filed by incorporating mechanisms that allow for the early dismissal of meritless lawsuits, staying discovery, and the potential recovery of attorney fees and costs if the defendant wins the suit. By eliminating or reducing the costs associated with being a defendant in a SLAPP suit, anti-SLAPP laws directly target a firm’s ability to disincentivize actors from releasing or publicizing information about the firm’s undesirable activities. Such laws limit the firm’s ability to effectively use litigation as a means of mitigating the disciplining effect of information, which in turn increases the expected costs associated with potentially undesirable activities. While the constraints introduced by anti-SLAPP laws do not necessarily directly target environmental outcomes such as the generation of waste, they do indirectly affect the environment by providing protections for activists and advocacy groups that engage in public participation activities related to environmental issues. In the case of Green

Group Holdings vs Shaeffer (2017), Alabama did not have an anti-SLAPP law. It is possible that had the state had some form of anti-SLAPP protection, the chilling effect on the resident activists in Uniontown may have been mitigated.

Given this, we posit that the enactment of anti-SLAPP law in a state may mitigate the potential effects of SLAPP suits in that state, which in turn may disincentivize firms from engaging in such tactics to target stakeholders disclosing information about the generation of environmental externalities such as waste. That is, we hypothesize that:

Hypothesis 1: Following the enactment of anti-SLAPP legislation, facilities will reduce the generation of waste.

Stakeholder Suppression and Waste Management

While the generation of toxic waste is an environmental negative externality that is likely to be of concern to stakeholders, not all toxic waste is necessarily created equal. More specifically, as the waste is generated as a result of the production process, facilities may choose to handle that waste by releasing the waste into the environment, treating the waste onsite, or transferring the waste to offsite locations for further treatment or handling. Following prior work, we view these three types of end-of-pipe (EOP) waste management methods as theoretically distinct (Rothenberg et al., 2001; King & Lenox, 2001; Sharma, 2001; Rothenberg et al., 2001; Dutt & King, 2014). In the context of this paper, the theoretical distinction between the waste released into the environment, waste treated onsite, and waste transferred to offsite locations is driven by the anticipated costs associated with said waste based on a facility's stakeholders.

Releasing waste into the environment, for example, involves a direct discharge of waste into the environment. While this is cheap in the short term, given it allows facilities to avoid

capital investment in technologies, changes in internal processes, and reduced need for operational control. This waste management method, however, also carries risks associated with the facility's stakeholders. More specifically, this waste is likely to garner attention and both pecuniary and non-pecuniary penalties from regulators and local communities.

In contrast, the treatment of waste onsite potentially reflects a facility's commitment to internalizing the costs of waste by requiring up-front capital investment in systems and technologies and the introduction and maintenance of internal processes. While this particular form of waste management may moderate regulatory risk, by mitigating potential penalties from regulators, some stakeholders may still resist this form of waste management. This is because some stakeholders, such as local community members, may follow the "not in my backyard" (NIMBY) logic, where individuals or communities have a negative attitude to projects or activities near them regardless of the positive or negative impact on them or the broader community. NIMBY stakeholders may evaluate toxic waste treated onsite to have greater marginal cost to them as compared to other forms of end-of-pipe treatment. Given their proximity to the facility, these stakeholders may also find it easier to accumulate information about the facility's activities, especially activities like the treatment of waste onsite. The negative attitude towards any projects or activities near them drives these stakeholders to view waste treatment onsite through a more critical lens than other forms of EOP treatment.

Compared to releases into the environment and treatment onsite, offsite transfers introduce a distinct spatial and operational separation between the source facility and the waste itself. By moving the waste generated by a facility to an offsite location, facilities introduce both physical and organizational distance between the source location and the undesirable output. This, in turn, shifts the liability associated with the waste and reduces the source facility's

immediate regulatory risk, while also increasing monitoring costs for stakeholders. This increase in monitoring costs and the increased distance between the waste and the source facility also reduces the willingness of stakeholders to maintain oversight over the facility's activities. Additionally, with the introduction of distance from the waste transferred, stakeholders most proximal to the firm may now be more willing to free-ride as the waste is no longer "in their backyard" and is someone else's problem. Through this shift in liability and the decreased willingness of stakeholders to monitor the facility's activities, the movement of waste allows facilities to externalize stakeholder scrutiny.

Given the risks associated with each end-of-pipe treatment method for the facility and the perception of these methods by stakeholders, stakeholder suppression through litigation can be a useful tool to mitigate the risks associated with releasing waste into the environment and the treatment of waste onsite. Focusing first on the release of waste into the environment, the use of tactics like SLAPP suits would allow facilities to disincentivize informed stakeholders from disclosing unfavorable information about the facility to stakeholders that may use said information to induce pecuniary or non-pecuniary penalties on the facility. The chilling effect that results from the use of SLAPP suits, then, protects the facility from oversight for the waste they choose to release into the environment. When a facility's state enacts an anti-SLAPP law, the state essentially introduces constraints on the facility's ability to use litigation as a means to avoid the disciplining effect of information disclosure. As a result, facilities may view releasing waste into the environment as more risky as, without the ability to effectively suppress public discourse about unfavorable information about the facility, facilities may face a greater risk of being targeted by pecuniary and non-pecuniary penalties driven by stakeholders. Given this, we hypothesize that:

Hypothesis 2: Following the enactment of anti-SLAPP legislation, facilities will reduce the release of waste into the environment.

Suppression tactics like the use of SLAPP suits also affect how a facility views the treatment of waste on-site. When SLAPP suits can still be used effectively to induce a chilling effect on dissent, facilities may not view NIMBY stakeholders as a potential threat. However, when states introduce constraints on a firm's ability to effectively use SLAPP suits to suppress dissent, the expected costs associated with ignoring NIMBY stakeholders increase as these stakeholders may no longer be easily silenced. Given this, we hypothesize that:

Hypothesis 3: Following the enactment of anti-SLAPP legislation, facilities will reduce the treatment of waste onsite.

Unlike waste released into the environment and waste treated onsite, the transfer of waste to offsite locations does not pose a risk to the facility via stakeholder dissent. The shift of liability to a third-party vendor and the introduction of geographical, temporal, and organizational distance between the source facility and the waste itself introduces an increased cost to the stakeholder for monitoring the facility's undesirable activities. As a result, when anti-SLAPP law is introduced in a state, facilities may not necessarily view the transfer of waste as a risky end-of-pipe treatment option, but instead view it as a potentially efficient way to ensure continued silence on their activities. More specifically, by moving waste to offsite locations, facilities may be able to disincentivize dissent regardless of no longer being able to effectively use suppression tactics, as stakeholders may not be willing or able to monitor the waste transferred offsite. Given this, we hypothesize that:

Hypothesis 4: Following the enactment of anti-SLAPP legislation, facilities will increase the transfer of waste to offsite locations.

Research Design

Empirical Context

In this paper, we use the term suppression to refer to those stakeholder engagement tactics that disincentivize stakeholders from making demands of the firm. Some examples of firms allegedly suppressing their stakeholders are anti-union practices, litigation, the use of restrictive contracts with confidentiality clauses or non-disparagement clauses, or non-disclosure agreements that limit an employee's ability to speak out about their experiences or negative information about the firm. It is difficult to empirically examine the suppression of stakeholders for two specific reasons: measurement of variation and potential endogeneity concerns. Suppression is difficult to measure as it is a combination of threats that have been made and could be made by the firm. Given that strong threats may deter the very actions that those threats are targeting, we cannot measure the threat of litigation using instances of the threats carried out by the firm. It is also difficult to establish causality as firm decisions that affect negative externalities may be determined by the same underlying unobserved factors that determine the firm's choice to invest in tactics that suppress its stakeholders.

To overcome these methodological challenges, we take advantage of state-level legislation known as anti-SLAPP law. These laws provide protection against unmeritorious or maliciously filed lawsuits (also known as SLAPP suits) that intend to freeze their ability to exercise their free speech. We focus on suppression as an outcome of such litigation, where the firm files a claim against a stakeholder who has spoken out about the firm. Being the defendant

in a lawsuit may be sufficient to silence the stakeholder, who may then retract any claims they have made about the firm. Litigation may also disincentivize stakeholders that may not have made demands of the firm due to observed costs incurred by the stakeholders that were sued. The enactment of anti-SLAPP law introduces constraints against a firm's ability to induce costs through litigation. Given that litigation is an inherently costly and lengthy affair for the plaintiff firm, the introduction of constraints on the firm's ability to use litigation as a suppression tactic may shift the expected payoffs associated with such actions so that litigation is no longer deemed a potentially beneficial activity from the firm's perspective.

Empirically examining suppression through the lens of anti-SLAPP law has several benefits. Firstly, it allows us to work around measurement concerns. Lawsuits can only be classified as a SLAPP suit by the court. Limiting our analysis to those lawsuits that are classified as SLAPP suits limits our ability to understand suppression as a phenomenon as it assumes that all litigation filed with the intent to disincentivize dissenters is eventually categorized as a SLAPP suit. Additionally, suppression is not solely driven by being the defendant of such lawsuits. Suppression through litigation is driven by the act of filing a lawsuit and the threat of filing lawsuits in the future. Focusing solely on SLAPP suits would ignore the role that strong threats play in deterring dissent. By focusing on anti-SLAPP laws, we indirectly examine suppression through the response of firms to shifts in expected payoffs associated with the use of suppression tactics, where firms change their behavior as a result of the shift in expected payoffs associated with the threat of litigation.

Secondly, using the enactment of anti-SLAPP law as a context also addresses potential causality concerns. Anti-SLAPP laws are meant to be an intervention by the state government to address the tendency of some actors to file unmeritorious or maliciously filed lawsuits with the

intent of silencing dissent or free speech. A central feature of these laws is that they are designed to reduce or eliminate the costs and other burdens that the defendant faces when a SLAPP suit is filed by incorporating mechanisms that allow for the early dismissal of meritless lawsuits, staying discovery, and the potential recovery of attorney fees and costs if the defendant wins the suit. By design, these laws introduce new costs associated with the filing of SLAPP suits and shift the expected payoffs associated with the firm's filing of such lawsuits. These laws do not, however, directly target the activities that necessitate the use of SLAPP suits by firms. Given this, it is unlikely that the enactment of these laws is driven by the underlying unobservable factors that influence firm choices that determine negative externalities.

Strategic Lawsuits Against Public Participation (SLAPP) as a Means to Suppress Stakeholders

This paper focuses on the use of litigation as a suppression tactic, specifically in the form of strategic lawsuits against public participation (or SLAPP suits). SLAPP suits refer to those lawsuits that are filed to induce a chilling effect on participation in public debate (Pring, 1989). These lawsuits are “actions without substantial merit brought against individuals or groups with the intention of “silencing [the] opponents, or at least... diverting their resources” (Tate, 2000:802; Barker,1993). The motivation behind the filing of these lawsuits includes but is not limited to (1) retaliation for successful opposition on an issue of public interest, (2) preventing expected future, competent opposition, and (3) intimidation of potential opposition (Canan, 1989). We focus on suppression as an outcome of such litigation, where the firm files a claim against a stakeholder who has spoken out about the firm. The negative effects associated with SLAPP suits arise from the filing of the claim itself, where filing a claim at a court is often sufficient to induce reputational, personal, financial, and psychological harm to the defendant as

well as allow the filer to reap indirect benefits as these suits disincentivize future parties from bringing public attention to issues out of fear of retaliation (Tu & Stump, 2020). The intent of plaintiffs of such lawsuits is rarely to win, but instead to cause a “chilling effect” on stakeholders that have made demands and those who may make demands in the future (Tate, 2000). The implications of such lawsuits are of public concern, as indicated by the *Webb v Fury* (1981) ruling by the West Virginia Court of Appeals:

“we shudder to think of the chill...on the exercise of the freedom of speech and the right to petition were we to allow this lawsuit to proceed. The cost to society...is beyond calculation. This cost would be especially high were we to prohibit the free exchange of ideas on such pressing social matters...Competing social and economic interests are at stake. To prohibit robust debate on these questions would deprive society of the benefit of its collective thinking and, in the process, destroy the free exchange of ideas which is the adhesive of our democracy.”

While the use of litigation as a suppression tactic may be an inherently costly and lengthy affair for the firm, the expected payoffs associated with chilling effects on dissent may potentially outweigh the legal costs associated with pursuing such a tactic. For example, in a lawsuit between Murray Energy and Chagrin Times (*Murray v. Chagrin Valley Publ’g Co.*, 2014), Murray Energy sued Chagrin Valley Times for covering a local protest outside Murray Energy’s Ohio headquarters. The company claimed that Chagrin Valley Times and the protesters had defamed Murray Energy. The presiding judge noted that while the defendants had won the case, “The fact that the Chagrin Valley Times website has been scrubbed of all mention of Murray or this protest is an example of the chilling effects this [lawsuit] has.” The chilling effect of lawsuits is not limited to the complete removal of mentions of the firm. Litigation can also alter the kind of information that may be provided about the firm. For example, in 2006, Morton Grove Pharmaceuticals sued the Ecology Center and some members of the Michigan Chapter of the American Academy of Pediatrics due to a campaign launched to restrict the use of

pharmaceutical lindane. After two years of litigation, the Ecology Center agreed to issue clarifications about statements on its website (Morton Grove Pharmaceuticals, Inc. v. The National Pediculosis Association, 2007). A more difficult-to-observe aftereffect of such lawsuits is the spillover effect on individuals who are not defendants of the lawsuit. While it is difficult to observe this chilling effect given the dependence on the absence of stakeholder demands, the dynamic is in line with the opinions of legal scholars like Glover & Jimison (1995) who note:

“The detrimental effect of this type of lawsuit is long-term. The folklore and old war stories passing from one community to another which detail the plight of “would-be” activists who were forced to pay thousands of dollars to defend themselves in SLAPP suits will likely prevent others from moving forward on similar development projects in their areas.”

Data & Methods

For the data on the generation and management of toxic waste, we make use of the EPA’s Toxic Release Inventory (TRI) database. Following concerns triggered by the Union Carbide disaster in Bhopal, India, the Emergency Planning and Community Right-to-Know Act (EPCRA) was passed in 1986. Section 313 of this Act required the EPA to facilitate the reporting of hazardous and toxic chemicals through the Toxic Release Inventory Program. The TRI program mandates disclosure of toxic release information from establishments that (1) process more than 25,000 pounds or otherwise use more than 10,000 pounds of a TRI-listed chemical during the year, (2) fall within an industry sector covered by the TRI, or is federally owned or operated (two-digit SIC codes 20-39), and (3) has ten or more full-time employee equivalents (U.S. Environmental Protection Agency, 2022).

The TRI data includes data on the amount of toxic waste generated by an establishment, the amount of waste that is processed through different EOP treatments, the establishment’s location, industry classification, parent company, and data about each qualifying chemical. Data

is collected annually from facilities by July 1st and has been published every year since 1987. This data is publicly available on the EPA website (www.epa.gov/tri). While this data is self-reported, evidence suggests that the potential effects of misreporting are marginal (Bui & Mayer, 2003). The EPA conducts audits of the data to check for misreporting, which can lead to criminal or civil penalties (Xu & Kim, 2022). Following prior research, we set 1991 as the start year for our time period as there was a major shift in TRI reporting guidelines in 1991 (Berchicci, Dutt & Mitchell, 2019; King & Lenox, 2000; Doshi et. Al., 2013).

From this data source, we create facility-level data by calculating the total sum of toxic waste that is generated, released, treated, and transferred by each facility in a given year. We also incorporate data from the TRI database regarding the movement of waste from the source facility to offsite locations. This allows us to construct relevant variables that note the total sum of waste transferred to different offsite locations based on the state and the characteristics of the state where the offsite location is located. Following prior research, we set 1991 as the start year for our time period as there was a major shift in TRI reporting guidelines in 1991 (Berchicci, Dutt & Mitchell, 2019; King & Lenox, 2000; Doshi et. Al., 2013).

We collect information about the enactment of anti-SLAPP laws from the Reporters Committee for Freedom of the Press (RCFP, 2025), which is then verified by checking each law via Thomson Reuters Westlaw. The time period of our study ends in 2020 to avoid the potential effect of the Uniform Public Expression Protection Act (“UPEPA”) which was first enacted in Washington state in 2021 (Uniform Public Expression Protection Act, 2021). This was a model law drafted by the Uniform Law Commission to target SLAPP suits to provide states with a clear framework for an anti-SLAPP law that was broader than prior laws (UPEPA, 2025). Within the time period of 1991 and 2020, 32 states and the District of Colombia had enacted some form of

anti-SLAPP law. Our data on anti-SLAPP law enactment also incorporates two instances of repeals. In 2015, Washington State’s Supreme Court struck down the state’s anti-SLAPP law, effectively repealing it. A similar event took place for Minnesota’s anti-SLAPP law in 2017. Information about the enactment and repeal of anti-SLAPP laws is reported in Table 1.1.

We aggregate the data from the TRI database to the facility-year level. We then merge this data with the anti-SLAPP enactment year data by the state the source facility is located in. The resulting database consists of 55,976 facilities (695,905 facility-year observations), across a time period of 1991 to 2020. For our analysis, we first conduct a visual pattern analysis. To do this, we subset the facility-year dataset to only those facilities that are located in states that have enacted some form of anti-SLAPP law in the time period of our study. The resulting database consists of 38,251 facilities (465,216 plant-year observations). We then plot yearly descriptive statistics relative to enactment years, which differ across states. To show within-plant changes, plant-year values are normalized by subtracting the plant-level mean. Next, we run a regression analysis using ordinary least square (OLS) regression, incorporating facilities located in states that have enacted anti-SLAPP law at some point in time during our time period and facilities located in states that have never enacted any form of anti-SLAPP law. Our models include plant and year-fixed effects. Standard errors are clustered at the plant level. For our analysis, we use the following key variables.

Toxic Waste Release. Following prior literature using the Toxic Release Inventory data (Berrone et al., 2010; Doshi et al., 2013; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006), our variables are all logged after adding one. Our hypotheses address both the generation of waste by a facility and how it is managed post-production, in the form of releases into the environment, transfers offsite, and treatment onsite. Given this, we construct four separate dependent variables.

First, we construct the variable *log of total waste generated*, which is the log releases of the toxic chemical waste generated after adding one. Total chemical waste includes the total pounds reported by a plant in a given year as waste treated onsite, waste released as emissions, and waste transferred offsite. Next, we construct three variables addressing the amount of waste that goes through end-of-pipe treatment. *Log of Total Waste Released into the Environment* refers to the log of waste released into the environment after adding one. This accounts for toxic chemicals from industrial facilities that enter the air, water, and land. *Log of Total Waste Treated Onsite* is the log of waste treated onsite after adding one. Waste treated onsite refers to waste that a facility chooses to treat within the facility's premises through recycling, energy recovery, or treatment. *Log of Total Waste Transferred Offsite for Further Treatment* refers to the log of waste transferred offsite after adding one. Waste transferred offsite refers to waste that a facility transfers to offsite facilities for disposal, recycling, energy recovery, or treatment.

Enactment of Anti-SLAPP Law. Our independent variable of interest is the enactment of these laws, where the variable takes a value of 1 starting in the year after a facility's state enacts anti-SLAPP legislation and zero otherwise. This is because the TRI program requires facilities to report their activities by July 1st of every year. Regardless of when the law is enacted in a year, the choices associated with this law would likely only be reported in the following reporting year. Two states, Washington and Minnesota, repealed their anti-SLAPP laws in 2015 and 2017, respectively. For facilities in these states, the indicator variable takes a value of zero starting in the year after anti-SLAPP legislation is repealed. Descriptive statistics can be found in Table 1.2

Results

To examine whether or not the enactment of anti-SLAPP legislation has an impact on the generation and management of waste, we first examine the raw patterns in the data. Figure 1.1

shows the yearly total waste at the facility level before and after the enactment of the anti-SLAPP law. To plot yearly descriptive statistics relative to enactment years, which differ across states, the figure considers only facilities in states that have enacted anti-SLAPP laws at some point in the time period of our study. To show within-facility changes, facility-year values are normalized by subtracting the facility-level mean. The upper panel of Figure 1.1 shows the total yearly waste at the facility level before and after the enactment of anti-SLAPP laws. The bottom panel of Figure 1.1 shows the total yearly waste generated by a facility based on how the waste generated is managed by the facility.

The first key insight from Figure 1.1 is that following the enactment of the anti-SLAPP law, the within-facility generation of waste changed. Facilities appear to have higher within-facility waste generation prior to the enactment of the law. In the period after the enactment of the law, the average within-facility generation of toxic waste appears to be less than the pre-enactment level. The second key insight from Figure 1 is that following the enactment of the anti-SLAPP law, facilities not only change how they manage their waste, but that change differs based on how the waste is managed. That is, the average waste released into the environment and treated onsite is less than the pre-enactment level and facilities continue to reduce waste released and waste treated onsite at different rates.

We next focus on Table 1.3, which reports the results of linear regression models examining the effect of the enactment of anti-SLAPP law on facility-level toxic waste generation and waste management. All models are clustered at the facility level and include facility and year-fixed effects. We run four models to provide evidence for the hypothesis. The models include facilities located in states that have, at some point, enacted anti-SLAPP laws and facilities located in states that have never enacted any form of anti-SLAPP law. Model 1 focuses

on the overall generation of toxic waste. Models 2, 3, and 4 focus on the end-of-pipe treatment of that waste, focusing on releases into the environment, treatment onsite, and transfers offsite respectively. In hypothesis 1, we posit that following the enactment of anti-SLAPP legislation in a state, facilities located in that state will reduce the generation of toxic waste. We do not find support for this hypothesis, with a negative coefficient that is not found to be significant (-0.029 , $p\text{-value} = 0.205$). This suggests that anti-SLAPP law does not have an impact on the overall generation of toxic waste.

Hypotheses 2, 3, and 4 focus on the impact of anti-SLAPP law on how the waste generated is managed. We posit that following the enactment of the anti-SLAPP law, facilities will reduce the amount of waste released into the environment and the waste treated onsite but increase the amount of waste transferred to offsite locations. These hypotheses are supported by our results in models 2, 3, and 4. In model 2, the coefficient is negative and significant (-0.039 , $p\text{-value} = 0.0929$). This supports hypothesis 2 and indicates that following the enactment of the anti-SLAPP law, facilities reduce their release of toxic waste into the environment by 3.82%. In model 3, the coefficient is negative and significant (-0.07 , $p\text{-value} = 0.0288$). This supports hypothesis 3 and indicates that following the enactment of the anti-SLAPP law, facilities reduce the amount of waste treated onsite by 6.76%. The coefficient in model 4 is positive and significant (0.045 , $p\text{-value} = 0.0997$) and supports hypothesis 4. This indicates that following the enactment of the anti-SLAPP law, facilities increased their transfer of waste to offsite locations by 4.6%.

The interpretation of the results from models 1, 2, 3, and 4 is that when constraints against stakeholder suppression tactics are introduced in a state, facilities do not necessarily change their overall production of negative externalities like toxic waste, but instead shift how

those externalities are managed and treated. This shift reflects the expected costs associated with each type of EOP treatment. The coefficients for these models are graphically represented in Figure 1.2.

Discussion

Prior research has examined lobbying (Lambert, 2019; Hegde & Sampat, 2015), social investments (Brammer & Pavelin, 2005), corporate philanthropy (Luo, Kaul & Seo, 2018), and collaborations with stakeholders (Odziemkowska, 2022) as avenues that firms may pursue to attempt to avoid accountability or bearing full social costs of their activities, we draw attention to an understudied avenue, stakeholder suppression. Using the empirical context of state-level legislation affecting unmeritorious or maliciously filed lawsuits known as SLAPP suits, we examine how constraining a firm's power to suppress stakeholders leads to an abatement of negative externalities. We find that following the enactment of anti-SLAPP laws in a source facility's state, facilities do not significantly shift their generation of toxic waste. Instead, we find that facilities significantly shift how they manage their waste. Specifically, we find that following the enactment of the anti-SLAPP law, facilities significantly reduce their releases into the environment and treatment of waste onsite, while increasing their transfer of waste to offsite locations. The results of this study indicate that the introduction of constraints on the ability to effectively use suppression tactics does not necessarily incentivize facilities to reduce the generation of negative externalities, but rather shifts how those externalities are managed in a way that allows the facility to shift liability and avoid potential costs induced by concerned stakeholders.

This study intends to contribute to the management literature on how firms avoid conceding to stakeholders demands (Odziemkowska, 2022; Brammer & Pavelin, 2005; Luo,

Kaul & Seo, 2018). We do this by introducing stakeholder suppression as an unexplored organizational response to stakeholder demands and as a threat that disincentivizes stakeholder engagement. Prior theoretical work has suggested that firms may adopt antagonistic tactics (Bundy et al, 2018; Oliver, 1991). To our knowledge, this is the first empirical paper that addresses a possible antagonistic tactic that disincentivizes stakeholders from making demands. We demonstrate, in this study, how the introduction of constraints on the ability to suppress incentivizes a shift in how facilities avoid accountability, namely by shifting liability through changes in waste management processes.

Our findings also contribute to the literature on sustainability and environmental performance. Specifically, our findings provide insight into another lens through which stakeholders and organizations evaluate externalities- the organization's choice of waste management. With increased regulation over the past decades and the increased focus on the importance of environmental performance, organizations have adopted processes and technologies that manage their waste. Prior work (e.g., Rothenberg et al., 2001; King & Lenox, 2001; Sharma, 2001; Dutt & King, 2014) has explored how a plant's EOP treatment may affect the plan's toxic waste but has largely ignored the possibility that stakeholder evaluates waste treated through those EOP treatments differently. This study suggests that organizations may respond to potentially unfavorable shifts in their environment with changes in waste management processes determined by the expected stakeholder perception of those processes.

We also contribute to the broader literature on litigation as a strategic tactic. Prior literature focused on this context has focused on litigation as a competitive tactic where litigation is used as a means to influence rivalry (Tan, 2016; Somaya, 2003). Scholars in this area primarily focus on patent litigation (Somaya, 2003) and anti-trust litigation (e.g., Clougherty, 2005;

Thatchenkery & Katila, 2022) as contexts. Only 1.5 lawsuits are filed for every 100 patents issued in the United States (Lanjouw & Schankerman, 2001; Somaya, 2003). Only 340 antitrust cases were filed in 2021 in federal district courts (Asimov et. al., 2022). While litigation, in general, is a rare event, literature has largely been focused on particularly rare types of litigation. The view of litigation as solely a competitive tactic ignores that litigation is not limited to a firm's competitor, nor does it solely affect competition. Our findings indirectly indicate that litigation is also an important stakeholder engagement tactic for the firm, where constraints on a firm's power to use litigation against stakeholders result in significant and observable reductions in externalities.

Additional lines of inquiry include the broader market and non-market impact of stakeholder suppression. For example, follow-up studies could examine how stakeholder suppression changes how firms interact with other market and non-market actors. If litigation is a last resort for firms and is taken up when other stakeholder engagement tactics are no longer an option, then it stands to reason that firms may take up tactics that target other non-market actors. Stakeholder suppression may also affect a firm's ability to access and acquire resources and capabilities like financial or human capital.

Tables & Figures

Table 1.1: Information on State-level Anti-SLAPP laws.

Jurisdiction	State Abbreviation	Year Enacted (First)	Repealed Year
Arizona	AZ	2006	
Arkansas	AR	2005	
California	CA	1992	
Colorado	CO	2019	
Connecticut	CT	2017	
Delaware	DE	1992	
D.C.	DC	2011	
Florida	FL	2000	
Georgia	GA	1996	
Hawaii	HI	2002	
Illinois	IL	2007	
Indiana	IN	1998	
Kansas	KS	2016	
Louisiana	LA	1999	
Maine	ME	1995	
Maryland	MD	2004	
Massachusetts	MA	1994	
Minnesota	MN	1994	2017
Missouri	MO	2004	
Nebraska	NE	1994	
Nevada	NV	1993	
New Mexico	NM	2001	
New York	NY	1992	
Oklahoma	OK	2014	
Oregon	OR	2001	
Pennsylvania	PA	2000	
Rhode Island	RI	1993	
Tennessee	TN	1997	
Texas	TX	2011	
Utah	UT	2001	
Vermont	VT	2005	
Virginia	VA	2007	
Washington	WA	2010	2015

Table 1.2: Descriptive Statistics and Correlations, Facility-Year Level.

Variables	Mean	S.D.	1	2	3	4
Log of total waste generated	8.71	4.52				
Log of total waste released into the environment	5.83	4.59	0.694			
Log of total waste treated onsite	2.86	5.09	0.502	0.348		
Log of total waste transferred to offsite locations	5.94	5.01	0.663	0.220	0.248	
Enactment of Anti-SLAPP law	0.36	0.48	-0.087	-0.144	0.015	-0.027

Table 1.3: Regression Results: Effect of Enactment of anti-SLAPP Law on the Generation of Waste and End-of-Pipe Treatment.

	Model 1	Model 2	Model 3	Model 4
	Log of Total Waste			
Outcome Variable	Generated	Released into the Environment	Treated Onsite	Transferred to Offsite Locations
<i>Independent Variable</i>				
Enactment of Anti-SLAPP Law	-0.029 (0.023)	-0.039 † (0.023)	-0.07 * (0.032)	0.045 † (0.027)
Plant Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
N	639,890	639,890	639,890	639,890
Adjusted R-squared	0.803	0.81	0.755	0.763
F-Test p-value	0.000	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Figure 1.1: Yearly Facility-Level Total Waste and End-of-Pipe Treatment

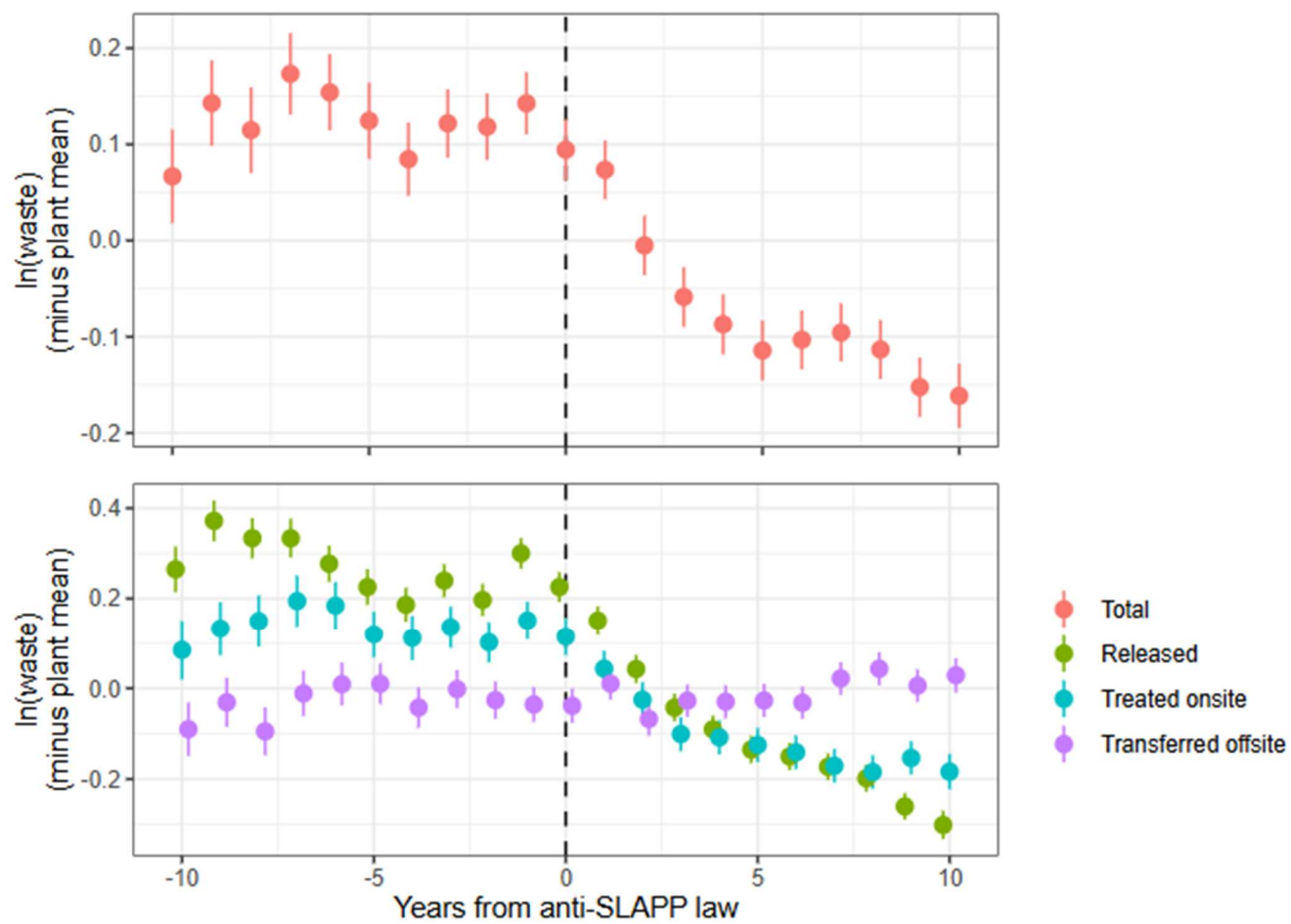
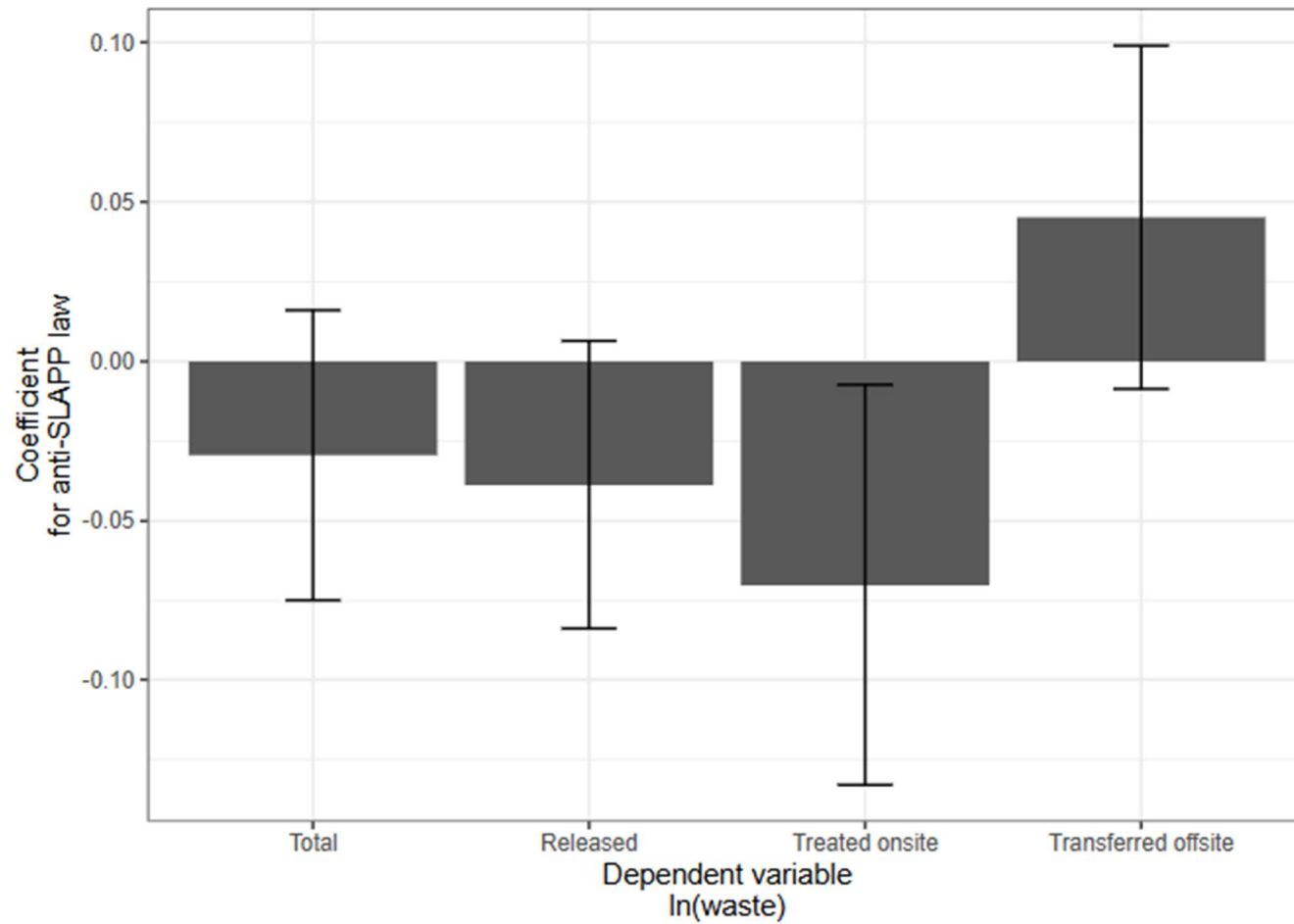


Figure 1.2: Coefficients from Facility-level Regressions: Total Waste Generated, Waste Released into the Environment, Waste Treated Onsite, and Waste Transferred to Offsite Locations



Chapter 2 - Heterogeneous Stakeholder Protection and Regulatory Arbitrage: Evidence from the Interstate Movement of Toxic Waste

Introduction

A core motivation behind numerous streams of research on business-society relations is the problem of negative externalities: firms may profit by externalizing the costs of business activities to other sectors of society. To understand pathways for mitigating this problem, research on social activism and regulation has explored various ways in which non-market actors in society attempt to counteract firms' private gains from negative externalities by raising firms' expected costs of engaging in activities that carry a risk of harm to other sectors of society (e.g., Hiatt, Grandy, & Lee, 2015; King, 2008; Vasi & King, 2012). Firms may concede to stakeholder demands when expected costs of risky activities increase due to stakeholder actions (e.g., Chatterji & Toffel, 2010; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013) or expected gains from conceding to demands exceed the private gains from externalizing the costs of risky activities (e.g., Henisz, Dorobantu & Narthey, 2014). Firms may also attempt to avoid conceding to stakeholder demands by engaging in lobbying (e.g., Lambert, 2019; Hegde & Sampat, 2015) or attempt to avoid accountability by coopting stakeholders (e.g., Odziemkowska, 2022), making social investments (e.g., Brammer & Pavelin, 2005), or engaging in corporate philanthropy (e.g. Luo, Kaul & Seo, 2018).

However, an important aspect of the dynamic between firms and stakeholders that has not received as much attention is the power of firms to engage in stakeholder suppression. We define stakeholder suppression as actions by a firm that are intended to increase stakeholders' expected costs of criticizing or revealing unfavorable information about a firm. Information has long been recognized as an important disciplining mechanism. Besides formal, top-down regulatory

mechanisms, an important way in which information about firm activities can be revealed is through informal, bottom-up mechanisms, such as from whistleblowers, journalists, community groups, nonprofit organizations, or members of the public. Against this wide range of potential informal, bottom-up sources of information, perhaps the most commonly invoked mechanism of suppression by firms is the threat of litigation. For firm employees, the threat of litigation can significantly magnify potential whistleblowers' expected costs beyond the threat of job loss. The threat of litigation can also be invoked against the wide range of non-employee stakeholders who are potential sources of unfavorable information about firms. Importantly, the threat of litigation does not necessarily need to be grounded in legal merit to be effective in suppressing stakeholders. Even the expected legal costs of defending against frivolous litigation by a firm can have a chilling effect on stakeholders and, in turn, weaken the disciplining effect that stakeholders may have on firm activities.

If the use of the threat of litigation is a viable suppression tactic and stakeholder protections are introduced in some jurisdictions and not others, do facilities adopt activities that allow for the continued use of such tactics? Specifically, drawing from literature on regulatory and legal arbitrage (Surroca, Tribó, & Zahra, 2013; Rao, Yue, and Ingram, 2011), do firms choose to move their problematic activities in a manner that allows them to leverage heterogeneity in stakeholder protections? Empirically, answering this question requires solving two methodological challenges. First, it requires being able to measure variation in threats, rather than instances of stakeholder suppression. The methodological challenge with studying threats is that the stronger a threat is, the more likely it is to deter actions that require the threat to be carried out. Therefore, a threat cannot be measured using instances of the threat being carried out. Second, identifying a causal effect requires exogenous variation. Firm decisions that affect

the movement of negative externalities may be determined by the same underlying unobserved factors that also determine decisions to invest in resources or capabilities that increase a firm's threat against stakeholders.

To overcome these two methodological challenges, we take advantage of exogenous shocks in the form of state-level legislation against unmeritorious lawsuits filed primarily to suppress speech, which are colloquially referred to as Strategic Lawsuits Against Public Participation (SLAPP). Firms allegedly use SLAPP lawsuits to silence speech and prevent parties in society from drawing attention to unfavorable information about firms. From 1981 to 2022, 32 states and the District of Columbia passed legislation intended to protect defendants against SLAPP lawsuits. This legislation provides a useful source of exogenous variation in the threat of stakeholder suppression that is not subject to the concerns inherent to attempting to measure threat via instances of threats being carried out.

We estimate the effects of anti-SLAPP legislation on the movement of toxic waste. While SLAPP suits can relate to a variety of matters, one particularly common matter is the environment (Pring & Canan, 1991; Merriam & Benson, 1993). Anecdotally, firms have used SLAPP suits to attempt to suppress speech regarding the environmental impact of firms' activities. By examining whether and how a facility's movement of toxic waste changes in response to anti-SLAPP legislation, we provide a window on whether the introduction of constraints on a firm's power to suppress stakeholder dissent incentivizes facilities to move toxic waste to offsite locations to provide the firm with opportunities to continue using suppression tactics. Our empirical analysis uses facility-level Toxic Release Inventory (TRI) data to examine whether or not the shift in expected payoffs associated with using litigation as a suppression tactic for the firm incentivizes facilities to move their waste to offsite locations outside the

facility's jurisdiction. The data allows us to use facility-level fixed effects and examine within-facility changes over time.

Our results show that following the introduction of stakeholder protection in the form of anti-SLAPP law in a focal state, facilities in the state exhibited a significant increase in the movement of toxic waste to states without said stakeholder protection. This increase in transfers to states without these stakeholder protections is not found to reflect a general increase in offsite processing. While facilities increase their general offsite transfers following the introduction of stakeholder protections, this increase in transfer is found to be driven by a significant increase in transfers to offsite locations outside the state. Transfers to offsite locations within the source state significantly decrease following the introduction of stakeholder protections. Our results also indicate that following the introduction of stakeholder protections, facilities strategically transfer their waste to offsite locations that allow them to avoid the costs associated with those protections. That is, facilities significantly increase their transfers to offsite locations in states without stakeholder protection and significantly decrease their transfers to offsite locations in states with stakeholder protection. This suggests that when stakeholder protections are introduced in the source state, facilities strategically transfer their waste to leverage state-level heterogeneity in stakeholder protections.

Our study contributes to the management literature on how firms avoid conceding to stakeholder demands (Odziemkowska, 2022; Brammer & Pavelin, 2005; Luo, Kaul & Seo, 2018) by introducing stakeholder suppression as an unexplored organizational response to stakeholder demands and further drawing attention to firms' strategic use of regulatory arbitrage to exploit heterogeneity in protections against stakeholder suppression.

Theoretical Development

A core motivation behind numerous streams of research on business-society relations is the problem of negative externalities: firms may profit by externalizing the costs of business activities to other sectors of society. To understand pathways for mitigating this problem, research on social activism and regulation has explored various ways in which non-market actors in society attempt to counteract firms' private gains from negative externalities by raising firms' expected costs of engaging in activities that carry a risk of harm to other sectors of society. In response to such activities, firms may choose to concede when expected gains from conceding to demands exceed the private gains from externalizing costs of activities (Henisz, Dorobantu & Nartey, 2014) or when the expected costs of harm increase as a result of the actions of nonmarket actors (Chatterji & Toffel, 2010; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013). Firms may also adopt tactics that enable them to avoid or mitigate the costs induced by the actions of these actors, such as lobbying (Lambert, 2019; Hegde & Sampat, 2015), collaborations with stakeholders (Odziemkowska, 2022), social investment (Brammer & Pavelin, 2005), corporate philanthropy (Luo, Kaul & Seo, 2018) and voluntary regulation (Aragòn-Correa, Marcus & Vogel, 2020) through disclosure (Reid & Toffel, 2009; Luo, Wang, & Zhang, 2017) or certification (Delmas & Toffel, 2008; Delmas & Montes-Sancho, 2010; Jiang & Bansal, 2003).

However, an important aspect of the dynamic between firms and stakeholders that has not received as much attention is the power of firms to engage in stakeholder suppression. We define stakeholder suppression as actions by a firm that are intended to increase stakeholders' expected costs of criticizing or revealing unfavorable information about a firm. Implicit in this definition of stakeholder suppression is the role of information as a crucial mechanism through which stakeholders can hold firms accountable for engaging in irresponsible or undesirable behavior. Information has long been recognized as an important disciplining mechanism. Existing

literature notes that the access to or availability of information about a firm's activities is necessary for the identification of problematic or undesirable activities and that the dissemination of information about a firm's non-compliance with regulatory standards can "shame" firms into adopting responsible behaviors. For example, Dyck, Morse & Zingales (2010) find that the ability to access information about a firm's potential misconduct or irresponsibility is critical to the discovery of corporate fraud. Scholars have also noted that when information about a firm is disclosed to the public, the targeted firms improve or address the concerns or attributes under scrutiny (Benneer & Olmstead, 2008; Jin & Leslie, 2003; Chatterji & Toffel, 2010). Disclosure of information about a firm's activities has been found to incentivize targeted (Yadin, 2019) and non-targeted firms (Johnson, 2020) to address their socially costly or undesirable activities. This literature has often focused on the role of formal, top-down regulatory mechanisms, where regulatory agencies or the government enact regulations or laws that change how and when information about a firm's activities is accumulated and made available, which in turn incentivizes firms to alter their generation of negative externalities.

However, outside these formal, top-down regulatory mechanisms, an important pathway through which information about firm activities can get revealed or publicized is through informal, bottom-up mechanisms, through actors like whistleblowers, journalists, community groups, nonprofit organizations, or members of the public. These actors play a significant role in the accumulation and dissemination of information about the firm's activities. In some contexts, the information revealed or publicized by these actors could be in the form of private information. In other contexts, the disciplining effect of information can also be facilitated through the targeted dissemination of public information that may be difficult or expensive for the general public to access and evaluate. For example, Johnson (2020) found that publicizing a

facility's OSHA violations led to other facilities improving their compliance. Data on OSHA inspections and violations are publicly available on the agency's website. However, the issuing of press releases disseminating information about these violations shifted the expected costs associated with non-compliance, and facilities chose to improve compliance to avoid similar negative attention. Actors may also reveal private information that changes the interpretation of public information. For example, in the context of the Deepwater Horizon disaster, the public was aware of the oil spill that took place but had little knowledge of what had led to it. Later, those who had worked on the rig spoke up about safety concerns related to the blowout, which began to be circulated by the media (e.g., Cattaneo, 2017; Barstow, Rohde & Saule, 2010). This shifted the public's interpretation of the oil spill from one of an accidental oil spill to one of alleged gross negligence and mismanagement.

Some actors have better access to information than other actors as they are better positioned to access and accumulate information about a firm's activities (Kim, Wan, Wang, & Yang, 2019; Lee & Luo, 2022). As a result, not all actors in a firm's environment may be perfectly informed about the firm's activities. The resulting information asymmetry may buffer firms against disciplining mechanisms that would otherwise incentivize firms to reduce negative externalities. Firms may be able to leverage the imperfect distribution of information by targeting those actors who are easily able to release and publicize information about their activities. A common way that firms can do this is by suppressing those actors who are able to and willing to release and publicize information, which mitigates the firm's expected costs associated with reduced information asymmetry.

Perhaps the most commonly invoked mechanism of suppression by firms is the threat of litigation. For firm employees, the threat of litigation can significantly magnify potential

whistleblowers' expected costs beyond simply the threat of job loss. The threat of litigation can also be invoked against the wide range of non-employee stakeholders who are potential sources of unfavorable information about firms. Anecdotally, the use of litigation can suppress stakeholders who can disseminate information about the firm. Filing a claim at a court is often sufficient to induce reputational, personal, financial, and psychological harm to the defendant as well as allow the filer to reap indirect benefits as these suits disincentivize future parties from bringing public attention to issues out of fear of retaliation (Tu & Stump, 2020). For example, in a lawsuit between Murray Energy and Chagrin Times (Murray v. Chagrin Valley Publ'g Co., 2014), Murray Energy sued Chagrin Valley Times for covering a local protest outside Murray Energy's Ohio headquarters. The company claimed that Chagrin Valley Times and the protesters had defamed Murray Energy. The presiding judge noted that while the defendants had won the case, "The fact that the Chagrin Valley Times website has been scrubbed of all mention of Murray, or this protest is an example of the chilling effects this [lawsuit] has." Overarchingly, the use of litigation or the mere threat of such lawsuits has the potential of increasing a nonmarket actor's expected costs associated with disseminating information, which in turn may weaken the disciplining effect of information.

Importantly, the threat of litigation does not necessarily need to be grounded in legal merit to be effective in suppressing stakeholders. Frivolous litigation where plaintiffs file unmeritorious claims to induce a chilling effect on participation in public debate (Pring, 1989) is colloquially referred to as Strategic Lawsuits Against Public Participation, or SLAPP suits. The intent of plaintiffs of such lawsuits is rarely to win, but instead to cause a "chilling effect" on stakeholders that have made demands and those who may make demands in the future (Tate, 2000). Legal scholars like Glover & Jimison (1995) note that "the detrimental effect of this type

of lawsuit is long term. The folklore and old war stories passing from one community to another which detail the plight of "would-be" activists who were forced to pay thousands of dollars to defend themselves in SLAPP suits will likely prevent others from moving forward on similar development projects in their areas." Specifically, in the context of such lawsuits, the filing of the claim, while unmeritorious, increases the expected costs associated with acting against the plaintiff's interests for both the defendant and potentially future dissenters.

Given that stakeholders play a critical role in disciplining firms through the dissemination of information through informal, bottom-up mechanisms, the threat of litigation in the form of SLAPP suits allows firms to directly target these actors regardless of the absence of meritorious claims. In doing so, firms may be able to limit and control what kind of information about the firm is made available and accordingly mitigate the expected costs associated with the dissemination of information. Additionally, given that some actors are not perfectly informed about the firm's activities, the threat of litigation may also allow firms to directly target interdependencies between the informed actors and the relatively uninformed actors. That is, the latter depends on the former for information that can be used to take action against a firm or hold the firm accountable. In such contexts, the threat of litigation can disincentivize certain actors from disseminating information which may make it more difficult for others to hold the firm accountable in the absence of easily accessible information.

To counteract the effects of such cases, several states have passed laws known as anti-SLAPP laws. An anti-SLAPP law allows the defendant protections against unmeritorious or maliciously filed lawsuits that intend to freeze their ability to exercise their free speech. A central feature of these laws is that they are designed to reduce or eliminate the costs and other burdens that the defendant faces when a SLAPP suit is filed by incorporating mechanisms that allow for

the early dismissal of meritless lawsuits, staying discovery, and the potential recovery of attorney fees and costs if the defendant wins the suit. By eliminating or reducing the costs associated with being a defendant in a SLAPP suit, anti-SLAPP laws directly target a firm's ability to disincentivize actors from releasing or publicizing information about the firm's undesirable activities. Such laws limit the firm's ability to effectively use litigation as a means of mitigating the disciplining effect of information, which in turn increases the expected costs associated with potentially undesirable activities.

However, in certain contexts, instead of abating their negative activities, firms may instead adopt activities or behaviors that allow them to continue to avoid being held accountable. For example, firms may choose to leverage differences across jurisdictions to further their interests through regulatory arbitrage. Specifically, they may leverage heterogeneous implementation in stakeholder protections to persist in the generation of negative externalities. Prior literature has found that when firms face increased scrutiny or pressure, they move their socially costly activities to other geographic locations where they may not face the same scrutiny or pressure (Surroca, Tribó, & Zahra, 2013). Firms may also leverage these differences as a means to disadvantage rivals (Rao, Yue, and Ingram, 2011). In the context of our study, there is jurisdiction-level heterogeneity in the introduction of stakeholder protections. When these protections are put in place, the shift in expected payoffs may incentivize facilities located in that state to adopt activities or processes that allow their parent firm to leverage the heterogeneity in stakeholder protections across states. For example, a facility may choose to transfer its negative externalities to offsite locations in its state or other states to avoid these costs. The transfer of negative externalities from the source facility to the target offsite location may allow the

facility's parent firm to leverage inter-state differences in a way that can buffer the firm from the shift in expected payoffs associated with the enactment of anti-SLAPP law in the source state.

The transfer of negative externalities from the source facility to the target offsite location may protect the facility from the shift in expected costs in two ways. Firstly, it affects the likelihood of being held accountable by the actors in the facility's state. The actors in the source state that were most incentivized to accumulate information about the firm's irresponsible activities may no longer be incentivized to do so. The cost of monitoring the facility may increase with increased distance between the source facility and the offsite location. Actors may also be less likely to monitor the facility as the negative externality generated by the facility may no longer directly affect these actors, making them more willing to free ride.

Secondly, the transfer of negative externalities shifts potential dissent to another state. That is, if facilities transfer their negative externalities away from the source location, the potential dissent and the source of that dissent change to the target offsite location. If these dissenting actors are residents of the target state and given that the dissent took place in the target state, the firm would then be able to leverage state-level differences in legal environments by filing lawsuits targeting said dissent in courts in the target state. When the plaintiff is not a resident of the same state as the potential defendant, or if the claim arose from another state, the plaintiff could choose to file the lawsuit in a court in that jurisdiction (Administrative Office of the United States Courts, 2024). Given that target state law would be applicable, the transfer of negative externalities from the source state to the target state would allow the plaintiff firm to continue using litigation to suppress potential dissent in non-source states regardless of the shift in expected payoffs associated with such tactics in the source state. Consequently, the firm can

maintain the imperfect distribution of information that buffered them from the expected costs associated with being held accountable. Given this, we posit:

Hypothesis 1: Following the enactment of the anti-SLAPP law in the source state, facilities in the affected state will increase the amount of waste moved to out-of-state locations located in states that do not have anti-SLAPP laws enacted.

Research Design

Empirical Context

In this paper, we use the term suppression to refer to those stakeholder engagement tactics that disincentivize stakeholders from making demands of the firm. We specifically focus on litigation as a means by which firms allegedly suppress their stakeholders, where the firm files a claim against a stakeholder who has spoken out about the firm. However, it is difficult to empirically examine the suppression of stakeholders due to issues with the measurement of variation and potential endogeneity concerns. Suppression is a combination of threats that have been made and could be made by the firm. Given that strong threats may deter actions that require the threat to be carried out, we cannot measure the threat of litigation using instances of the threats carried out by the firm. It is also difficult to establish causality as firm decisions that affect the movement of negative externalities may be determined by the same underlying unobserved factors that determine the firm's choice to invest in tactics that suppress its stakeholders.

To overcome these methodological challenges, we take advantage of state-level legislation known as anti-SLAPP law. These laws provide protection against unmeritorious or maliciously filed lawsuits (also known as SLAPP suits) that intend to freeze their ability to exercise their free speech. Being the defendant in a lawsuit may be sufficient to silence the

stakeholder, who may then retract any claims they have made about the firm. Litigation may also disincentivize stakeholders that may not have made demands of the firm due to observed costs incurred by the stakeholders that were sued. The enactment of anti-SLAPP law introduces constraints against a firm's ability to induce costs through litigation. Given that litigation is an inherently costly and lengthy affair for the plaintiff firm, the introduction of constraints on the firm's ability to use litigation as a suppression tactic may shift the expected payoffs associated with such actions so that litigation is no longer deemed a potentially beneficial activity from the firm's perspective.

Empirically examining suppression through the lens of anti-SLAPP law has several benefits. Firstly, it allows us to work around measurement concerns. Lawsuits can only be classified as a SLAPP suit by the court. Limiting our analysis to those lawsuits that are classified as SLAPP suits limits our ability to understand suppression as a phenomenon as it assumes that all litigation filed with the intent to disincentivize dissenters is eventually categorized as a SLAPP suit. Additionally, suppression is not solely driven by being the defendant of such lawsuits. Suppression through litigation is driven by the act of filing a lawsuit and the threat of filing lawsuits in the future. Focusing solely on SLAPP suits would ignore the role that strong threats play in deterring dissent. By focusing on anti-SLAPP laws, we indirectly examine suppression through the response of firms to shifts in expected payoffs associated with the use of suppression tactics, where firms change their behavior as a result of the shift in expected payoffs associated with the threat of litigation.

Secondly, using the enactment of anti-SLAPP law as a context also addresses potential causality concerns. Anti-SLAPP laws are meant to be an intervention by the state government to address the tendency of some actors to file unmeritorious or maliciously filed lawsuits with the

intent of silencing dissent or free speech. A central feature of these laws is that they are designed to reduce or eliminate the costs and other burdens that the defendant faces when a SLAPP suit is filed by incorporating mechanisms that allow for the early dismissal of meritless lawsuits, staying discovery, and the potential recovery of attorney fees and costs if the defendant wins the suit. By design, these laws introduce new costs associated with the filing of SLAPP suits and shift the expected payoffs associated with the firm's filing of such lawsuits. These laws do not, however, directly target the activities that necessitate the use of SLAPP suits by firms. Given this, it is unlikely that the enactment of these laws is driven by the underlying unobservable factors that influence firm choices that determine the movement of negative externalities.

Strategic Lawsuits Against Public Participation (SLAPP) as a Means to Suppress Stakeholders

Strategic lawsuits against public participation (or SLAPP suits) refer to those lawsuits that are filed to induce a chilling effect on participation in public debate (Pring, 1989). These lawsuits are “actions without substantial merit brought against individuals or groups with the intention of “silencing [the] opponents, or at least... diverting their resources” (Tate, 2000:802; Barker, 1993). The motivation behind the filing of these lawsuits includes but is not limited to (1) retaliation for successful opposition on an issue of public interest, (2) preventing expected future, competent opposition, and (3) intimidation of potential opposition (Canan, 1989). The negative effects associated with SLAPP suits arise from the filing of the claim itself, where filing a claim at a court is often sufficient to induce reputational, personal, financial, and psychological harm to the defendant as well as allow the filer to reap indirect benefits as these suits disincentivize future parties from bringing public attention to issues out of fear of retaliation (Tu & Stump, 2020). The intent of plaintiffs of such lawsuits is rarely to win, but instead to cause a “chilling

effect” on stakeholders that have made demands and those who may make demands in the future (Tate, 2000). The implications of such lawsuits are of public concern, as indicated by the *Webb v. Fury* (1981) ruling by the West Virginia Court of Appeals:

“we shudder to think of the chill...on the exercise of the freedom of speech and the right to petition were we to allow this lawsuit to proceed. The cost to society...is beyond calculation. This cost would be especially high were we to prohibit the free exchange of ideas on such pressing social matters...Competing social and economic interests are at stake. To prohibit robust debate on these questions would deprive society of the benefit of its collective thinking and, in the process, destroy the free exchange of ideas which is the adhesive of our democracy.”

While the use of litigation as a suppression tactic may be an inherently costly and lengthy affair for the firm, the expected payoffs associated with chilling effects on dissent may potentially outweigh the legal costs associated with pursuing such a tactic. For example, in a lawsuit between Murray Energy and Chagrin Times (*Murray v. Chagrin Valley Publ’g Co.*, 2014), Murray Energy sued Chagrin Valley Times for statements made in their coverage of a local protest outside Murray Energy’s Ohio headquarters. The company claimed that Chagrin Valley Times and the protesters had defamed Murray Energy. The presiding judge noted that while the defendants had won the case, “The fact that the Chagrin Valley Times website has been scrubbed of all mention of Murray or this protest is an example of the chilling effects this [lawsuit] has.” The chilling effect of lawsuits is not limited to the complete removal of mentions of the firm. Litigation can also alter the kind of information that may be provided about the firm. For example, in 2006, Morton Grove Pharmaceuticals sued the Ecology Center and some members of the Michigan Chapter of the American Academy of Pediatrics due to claims made in a campaign launched to restrict the use of pharmaceutical lindane. After two years of litigation, the Ecology Center agreed to issue clarifications about statements on its website (*Morton Grove Pharmaceuticals, Inc. v. The National Pediculosis Association*, 2007).

While these examples indicate the potential of litigation to silence stakeholders that make claims about the firm, it is difficult to observe the spillover chilling effect of these lawsuits on stakeholders who are not defendants of the lawsuit. These stakeholders may feel threatened regardless of the absence of demands or dissent. However, this dynamic is in line with the opinions of legal scholars like Glover & Jimison (1995) who note:

“The detrimental effect of this type of lawsuit is long-term. The folklore and old war stories passing from one community to another which detail the plight of “would-be” activists who were forced to pay thousands of dollars to defend themselves in SLAPP suits will likely prevent others from moving forward on similar development projects in their areas.”

While SLAPP suits can be focused on a variety of legal topics, one particularly common subject of SLAPP suits is claims made by individuals or collectives about firm activities that pose potential harm to the environment (Pring & Canan, 1991; Merriam & Benson, 1993). This is supported by a study by EarthRights International in 2022, which identified 152 cases filed in the past decade by the fossil fuel industry alone that can be characterized as SLAPP suits. There are also multiple examples of lawsuits either categorized as SLAPP suits or with the characteristics of SLAPP suits that focus on environment-related dissent. For example, in 2000, local farmers in Nebraska were sued by Furnas County Farms for written comments the farmers had submitted to state regulators about environmental concerns (*Sand Livestock Sys. V. Svoboda*, 2008). While the farmers did win the suit in 2005, FCF appealed, and the suit continued for three more years. Another example is *Green Group Holdings v. Schaeffer* (2017), where Green Group Holdings sued resident activists in Uniontown, Alabama for \$30 million for their complaint to the EPA’s Office of Civil Rights. Uniontown, Alabama is “a poor, predominantly Black town with a median per capita income of around \$8,000” (ACLU, 2017). While this case was dismissed in 2017 with a settlement agreement, this lawsuit allegedly

silenced many individuals in the area. As a former Uniontown resident states in a short documentary about the situation (Jones, 2019):

“It has scared a lot of people in this area from speaking up...because those individuals are afraid to [face] the backlash, not knowing that it’s just a scare tactic to get you to leave things alone so they can continue their power and control to do what they want.”

Given that environment-related claims are often the subject of SLAPP suits, we focus on litigation as a means of suppressing dissent related to environment-related negative externalities. While anti-SLAPP laws do not necessarily directly target environmental outcomes, they do indirectly affect the environment by providing protections for activists and advocacy groups that engage in public participation activities related to environmental issues. In *Sand Livestock Sys. V. Svoboda*, the farmers filed a counterclaim under Nebraska’s anti-SLAPP law and won their case. In *Green Group Holdings v. Schaeffer*, the defendants could not make use of anti-SLAPP law as Alabama does not have any form of anti-SLAPP statute. However, legal scholar Rachel Deming points out that the lawsuit “has all three elements of a classic SLAPP: (1) “unrealistically high dollar demands;” (2) unnamed defendants (to chill others); and (3) “naming individuals [as defendants] but not the organizations they represent.” (Deming, 2022: 352).

The enactment of the anti-SLAPP law shifts the expected payoffs associated with the use of stakeholder suppression as a tactic against actors that can or have the potential to dissent or disseminate information about the firm’s activities. Given that these laws are enacted at the state level and fall under the state’s control, the asymmetrical distribution of constraints on a firm’s ability to use frivolous litigation as a means to silence dissent provides a means of exploring how firms leverage the heterogeneous implementation of stakeholder protections to persist in their use of stakeholder suppression tactics.

Data & Methods

For the purpose of our study, we focus on the movement of toxic waste. Following prior work in management, economics, public policy, environmental and public health literature (e.g. Doshi, Dowell & Toffel, 2013; Berrone, Cruz, Gomez-Mejia & Larraza-Kintana, 2010; Bui & Kapon, 2012; Bui & Mayer, 2003; Hamilton, 1995; Konar & Cohen, 1997; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006; King & Lenox, 2000; King & Shaver, 2001; King & Lenox, 2001; Toffel & Marshall, 2004), we collect data on the generation and movement of toxic waste from the EPA's Toxic Release Inventory (TRI) Program. Following concerns triggered by the Union Carbide disaster in Bhopal, India, the Emergency Planning and Community Right-to-Know Act (EPCRA) was passed in 1986. Section 313 of this Act required the EPA to facilitate the reporting of hazardous and toxic chemicals through the Toxic Release Inventory Program. The TRI program mandates disclosure of toxic release information from establishments that (1) process more than 25,000 pounds or otherwise use more than 10,000 pounds of a TRI-listed chemical during the year, (2) fall within an industry sector covered by the TRI, or are federally owned or operated (two-digit SIC codes 20-39), and (3) has ten or more full-time employee equivalents (U.S. Environmental Protection Agency, 2022).

The TRI data includes data on the amount of toxic waste generated by an establishment, the amount of waste that is processed through different EOP treatments, the establishment's location, industry classification, parent company, and data about each qualifying chemical. Data is collected annually from facilities by July 1st and has been published every year since 1987. This data is publicly available on the EPA website (www.epa.gov/tri). While this data is self-reported, evidence suggests that the potential effects of misreporting are marginal (Bui & Mayer, 2003). The EPA conducts audits of the data to check for misreporting, which can lead to criminal or civil penalties (Xu & Kim, 2022).

From this data source, we create facility-level data by calculating the total sum of toxic waste that is generated, released, treated, and transferred by each facility in a given year. We also incorporate data from the TRI database regarding the movement of waste from the source facility to offsite locations. This allows us to construct relevant variables that note the total sum of waste transferred to different offsite locations based on the state and the characteristics of the state the offsite location is located. Following prior research, we set 1991 as the start year for our time period as there was a major shift in TRI reporting guidelines in 1991 (Berchicci, Dutt & Mitchell, 2019; King & Lenox, 2000; Doshi et. Al., 2013).

We collect information about the enactment of anti-SLAPP laws from the Reporters Committee for Freedom of the Press (RCFP, 2025), which is then verified by checking each law via Thomson Reuters Westlaw. The time period of our study ends in 2020 to avoid the potential effect of the Uniform Public Expression Protection Act (“UPEPA”) which was first enacted in Washington state in 2021 (Uniform Public Expression Protection Act, 2021). This was a model law drafted by the Uniform Law Commission to target SLAPP suits with the aim of providing states a clear framework for an Anti-SLAPP law that was broader than prior laws (UPEPA, 2025). Within the time period of 1991 and 2020, 32 states and the District of Colombia had enacted some form of anti-SLAPP law. Our data on anti-SLAPP law enactment also incorporates two instances of repeals. In 2015, Washington State’s Supreme Court struck down the state’s anti-SLAPP law, effectively repealing it. A similar event took place for Minnesota’s anti-SLAPP law in 2017. Information about the enactment and repeal of anti-SLAPP laws is reported in Table 2.1.

To construct our final dataset, we merge the information about the enactment of anti-SLAPP laws with our facility-year data on toxic waste generation by using the facility's state. The resulting dataset consists of 55,976 facilities (639,888 facility-year observations). We use this data to run ordinary least squares (OLS) regression to determine the effect of the anti-SLAPP law on the movement of waste from the source facility to other locations. Our models include plant and year-fixed effects. Standard errors are clustered at the plant level. For our analysis, we use the following key variables.

Toxic waste transfers to offsite locations in states without anti-SLAPP laws. Following prior literature using the Toxic Release Inventory data (Berrone et al., 2010; Doshi et al., 2013; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006), our variables are all logged after adding one. For our primary hypothesis, we construct a variable that indicates the total amount of waste in pounds that is transferred to offsite locations in states without anti-SLAPP laws for the purpose of disposal, recycling, energy recovery, or treatment. Specifically, the *log of total waste transferred to out-of-state offsite locations without anti-SLAPP law* refers to the log of total waste a facility transfers to offsite locations located in a state without anti-SLAPP law.

Enactment of Anti-SLAPP Law. Our independent variable of interest is the enactment of these laws, where the variable takes a value of 1 starting in the year after a facility's state enacts anti-SLAPP legislation and zero otherwise. This is because the TRI program requires facilities to report their activities by July 1st of every year. Regardless of when the law is enacted in a year, the choices associated with this law would likely only be reported in the following reporting year. Two states, Washington and Minnesota, repealed their anti-SLAPP laws in 2015 and 2017, respectively. For facilities in these states, the indicator variable takes a value of zero starting in the year after anti-SLAPP legislation is repealed.

Other Variables. To further explore the movement of waste following the enactment of anti-SLAPP legislation, we also construct additional variables associated with the movement of waste. This would allow us to further understand if the movement of waste is due to general increases in offsite transfers or whether the movement of waste is solely to introduce a distance between the source location and the waste. Similar to our primary dependent variable, waste transferred to offsite locations refers to waste that a facility transfers to offsite locations for disposal, recycling, energy recovery, or treatment. The *log of total waste transferred offsite for further treatment* refers to the log of waste transferred offsite after adding one. The *log of total waste transferred to out-of-state offsite locations* refers to the log of waste transferred to an offsite location outside the source state, after adding one. The *log of total waste transferred to within-state offsite locations* refers to the log of total waste a facility transfers to offsite locations that are located in the same state as the facility after adding one. *Log of total waste transferred to out-of-state offsite locations with anti-SLAPP law* refers to the log of total waste a facility transfers to out-of-state offsite locations where the target state has anti-SLAPP law, after adding one.

Control Variables. Our primary regression models include facility and year-fixed effects to account for potential unobserved facility or year characteristics that could introduce bias to our results. We also created additional control variables based on how the waste produced by a facility is managed. Outside of transferring waste to offsite locations, a facility can also manage the waste it generates through its production process by releasing the waste into the environment or treating waste on-site. Following prior literature, we consider all three forms of ex-post waste management (also known as end-of-pipe treatment) to be empirically and theoretically distinct (Rothenberg, Pil & Maxwell, 2001; Sharma, 2001; Dutt & King, 2014). We construct two control

variables: *log of the toxic chemical waste released into the environment* after adding one and *log of waste treated onsite* after adding one. Waste released into the environment refers to the waste that a plant chooses to release into the air, water, or dump on land. Waste treated onsite refers to waste that a plant chooses to treat within the facility's premises through recycling, energy recovery, or treatment. Including these control variables in our models allows us to account for factors outside the law that may lead to a predisposition for transferring waste offsite. Facilities with a greater amount of waste released into the environment may be under greater oversight or scrutiny, and as a result, may be predisposed to transfer waste to offsite locations to avoid scrutiny. Facilities with effective onsite treatment processes or with experience in onsite waste treatment may be less predisposed to transferring waste to offsite locations. Summary statistics and correlations are reported in Table 2.2.

Results

Table 2.3 reports the results from our ordinary least square regression models examining the effect of the anti-SLAPP law on the transfer of waste to offsite locations. All models include facility and year-fixed effects, and standard errors are clusters at the facility level. The sample for this analysis includes all facilities that produced waste in the time period of our study, regardless of whether the facility's state enacted an anti-SLAPP law or not. All models include controls for the toxic waste released into the environment and the toxic waste treated onsite. Note that with the inclusion of controls for toxic waste released into the environment and toxic waste treated onsite, the effects observed in our model are relative to what would be anticipated considering the waste management practices associated with these facilities.

We first focus on the effect of the enactment of the anti-SLAPP law on the transfer of waste to offsite locations in states without anti-SLAPP law. Based on our hypothesis, we expect

that following the enactment of the law, facilities increase the movement of waste to offsite locations in states without anti-SLAPP laws. In support of this hypothesis, the coefficient in Model 1 is positive and significant (0.175, p-value<0.001). This indicates that when the anti-SLAPP law is enacted in the source state, there is a 19.12% increase in offsite transfers to locations without anti-SLAPP law.

A possible concern in regard to the effect we observe in model 1 is that it is driven by a general increase in offsite processing, as opposed to an attempt to exploit differences in stakeholder protections via regulatory arbitrage. To examine this possibility, we focus on the overall movement of waste to offsite locations and whether this waste was transferred to offsite locations within the source state or outside the source state. If the effect observed in model 1 was driven by general increases in offsite transfers, we would expect to observe increases in offsite transfers overall and an increase in offsite transfers regardless of the location of the offsite facility. To determine if this is the case, we focus on model 2, model 3, and model 4. The dependent variables for these models are *log of total waste transferred to offsite locations*, *log of total waste transferred to out-of-state offsite locations*, and *log of total waste transferred to within-state offsite locations* respectively.

In model 2, we find that the coefficient is positive and significant (0.059, p-value<0.05). That is, we find that following the enactment of the law, facilities significantly increase their overall waste transfers. Specifically, there is a 6.08% increase in the transfer of waste from a source facility to offsite locations following the enactment of the law. In model 3, we find that the coefficient is positive and significant (0.095, p-value<0.001), indicating that following the enactment of anti-SLAPP law in a source state, facilities significantly increase their offsite transfers to locations outside the source state. Specifically, there is a 9.97% increase in offsite

transfers to out-of-state locations following the enactment of the law. In model 4, the coefficient is negative and significant (-0.072 , $p\text{-value} < 0.05$). This indicates that following the enactment of the law, facilities significantly reduce their transfers to offsite locations within the source state. Specifically, facilities decrease their offsite transfers within the source state by 6.95% following the enactment of the law. These results, in combination, suggest that the effects observed in model 1 are unlikely to have been driven by a general increase in offsite transfers following the enactment of the law. The coefficients of models 2, 3, and 4 are graphically represented in Figure 2.1.

Given our explanation of choice is that the movement of waste to offsite locations in states without anti-SLAPP is driven by the intention to leverage heterogeneity in stakeholder protections across states, we also compare the effect of the enactment of anti-SLAPP law in the source state on offsite transfers to states with and without the law. To do this, we contrast model 1 with model 5. The dependent variable of model 5 is log of total waste transferred to out-of-state offsite locations with anti-SLAPP law. If our preferred explanation holds, we expect to find that following the enactment of anti-SLAPP law, facilities increase their transfers to states without anti-SLAPP law and decrease their transfers to states with the law. In model 5, we find that the coefficient is negative and significant (-0.079 , $p\text{-value} < 0.01$). Considering model 1 and 5, we find that following the enactment of anti-SLAPP law in a source state, facilities increase their transfers to offsite locations in states without anti-SLAPP law by 19.12% and decrease their transfers to offsite locations in states with anti-SLAPP law by 7.6%. This suggests that the movement of waste we observe following the enactment of the anti-SLAPP law is driven by our preferred explanation: that facilities strategically move their toxic waste to leverage

heterogeneity in stakeholder protections across jurisdictions. The coefficients for models 1 and 5 are graphically represented in Figure 2.2.

Discussion

A key topic of interest in non-market strategy literature is how firms use a variety of tactics to engage with their stakeholders to mitigate the threat of being held accountable for their negative externalities. Literature on organization-stakeholder dynamics suggests that when faced with the threat of being held accountable, firms will engage in activities and tactics that allow them to minimize the costs associated with being held accountable. Firms may choose to concede to the demands of the stakeholders that are holding them accountable (e.g., Chatterji & Toffel, 2010; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013; Henisz, Dorobantu & Narthey, 2014) or avoid potential demands (e.g., Lambert, 2019; Hegde & Sampat, 2015; Odziemkowska, 2022; Brammer & Pavelin, 2005; Luo, Kaul & Seo, 2018) through activities that directly engage with stakeholders or transform the institutional environment to ensure exclusive benefits for the firm (e.g. Hillman & Hitt, 1999) or benefit all the firms or a subgroup of them (e.g. Jia, 2014). This literature has largely focused on tactics that (1) improve the firm's relationships with its stakeholders or (2) are broadly agnostic as they circumvent direct engagement with the stakeholders and do not affect the firm's relationship with the stakeholders.

In this paper, we draw attention to an important but understudied tactic that firms can utilize to avoid accountability- stakeholder suppression. We suggest that activities that potentially harm or hinder the firm's relationship with stakeholders are potentially viable means to avoid being held accountable. The suppression of dissent is an inherently antagonistic tactic as it involves exercising the power a firm has over stakeholders, where the firm induces costs on a stakeholder to incentivize them to behave in a way they would not otherwise. Such tactics can

potentially deteriorate the relationship between the firm and the stakeholder. We focus specifically on litigation as a means through which firms may suppress dissent. Through the use of a quasi-natural experiment using state-level legislation affecting unmeritorious or maliciously filed lawsuits known as SLAPP suits, we examine how the introduction of constraints on a firm's power to suppress stakeholders leads to facilities transferring their negative externalities to offsite locations without these stakeholder protections.

Drawing on the literature on arbitrage (e.g. Surroca, Tribó, & Zahra, 2013; Rao, Yue, and Ingram, 2011), we posit that the introduction of state-level constraints on a firm's power to suppress stakeholders through litigation incentivizes facilities to transfer waste to offsite locations to allow the parent firm to leverage state-level heterogeneity in stakeholder protections. Specifically, we posit that the enactment of the anti-SLAPP law incentivizes facilities to move their waste to out-of-state offsite locations in states without anti-SLAPP laws. Our results find that the introduction of stakeholder protections in a source state leads to an increase in inter-state transfers to states without anti-SLAPP laws. We find that this increase in transfers does not reflect a general increase in offsite processing. Rather, we find that when stakeholder protections are introduced, facilities transfer their waste to exploit differences in stakeholder protections via regulatory arbitrage.

This study contributes to the management literature on how firms avoid conceding to stakeholder demands (Odziemkowska, 2022; Brammer & Pavelin, 2005; Luo, Kaul & Seo, 2018) by introducing stakeholder suppression as an unexplored organizational response to stakeholder demands and further drawing attention to firms' strategic use of regulatory arbitrage to exploit heterogeneity in protections against stakeholder suppression. While theoretical work has suggested that firms may adopt antagonistic tactics (Bundy et al, 2018; Oliver, 1991), this paper

is, to our knowledge, the first empirical paper that addresses a possible antagonistic tactic that disincentivizes stakeholders from making demands. We also contribute to the broader literature on litigation as a tactic used by the firm. Prior literature has focused on litigation as a competitive tactic where litigation is used as a means to influence rivalry (Tan, 2016; Somaya, 2003). Scholars in this area primarily focus on patent litigation (Somaya, 2003) and anti-trust litigation (e.g., Clougherty, 2005; Thatchenkery & Katila, 2022) as contexts. However, only 1.5 lawsuits are filed for every 100 patents issued in the United States (Lanjouw & Schankerman, 2001; Somaya, 2003) and only 340 antitrust cases were filed in 2021 in federal district courts (Asimov et. al., 2022). While litigation, in general, is a rare event, literature has largely focused on particularly rare types of litigation. The view of litigation as solely a competitive tactic ignores that litigation is not limited to a firm's competitor, nor does it solely affect competition. Our findings indirectly indicate that litigation is also an important stakeholder engagement tactic for the firm, where constraints on a firm's power to use litigation against stakeholders result in significant and observable changes in how a firm externalizes the costs of its business activities.

We indirectly examine the effect of suppression by focusing on how firms change their behavior in response to a shift in the expected payoffs associated with the use of suppression tactics, specifically in the form of maliciously filed litigation. It is possible that the effects observed in this study may not be generalized across all forms of suppression tactics. The constraints introduced by anti-SLAPP laws may also affect the firm's willingness to engage in other forms of civil litigation regardless of the validity of the suit.

Future theoretical or empirical work could explore the antecedents of a firm's willingness to engage in suppression tactics as well as expand on our understanding of other forms of suppression tactics and the effects these tactics may have on both the firm and its stakeholders.

Understanding when and why firms choose to engage in stakeholder suppression tactics could further our understanding of how firms manage their stakeholders. Another potential avenue of interest could be the comparison of different stakeholder engagement tactics. At any given point in time, firms may use both suppression tactics and other engagement tactics that allow them to avoid accountability. This could, theoretically, allow the firm to leverage the potential costs and benefits across different tactics to maximize the benefit to the firm.

Tables & Figures

Table 2.1: Information on State-level Anti-SLAPP laws.

Jurisdiction	State Abbreviation	Year Enacted (First)	Repealed Year
Arizona	AZ	2006	
Arkansas	AR	2005	
California	CA	1992	
Colorado	CO	2019	
Connecticut	CT	2017	
Delaware	DE	1992	
D.C.	DC	2011	
Florida	FL	2000	
Georgia	GA	1996	
Hawaii	HI	2002	
Illinois	IL	2007	
Indiana	IN	1998	
Kansas	KS	2016	
Louisiana	LA	1999	
Maine	ME	1995	
Maryland	MD	2004	
Massachusetts	MA	1994	
Minnesota	MN	1994	2017
Missouri	MO	2004	
Nebraska	NE	1994	
Nevada	NV	1993	
New Mexico	NM	2001	
New York	NY	1992	
Oklahoma	OK	2014	
Oregon	OR	2001	
Pennsylvania	PA	2000	
Rhode Island	RI	1993	
Tennessee	TN	1997	
Texas	TX	2011	
Utah	UT	2001	
Vermont	VT	2005	
Virginia	VA	2007	
Washington	WA	2010	2015

Table 2.2: Descriptive Statistics and Correlations, Facility-Year Level.

Variables	Mean	StDev	1	2	3	4	5	6	7
Log of waste transferred to out-of-state offsite locations	3.01	4.53							
Enactment of Anti-SLAPP law	0.36	0.48	0.017						
Log of waste transferred to within-state offsite locations	3.58	4.7	0.161	-0.019					
Log of waste transferred to offsite locations	5.94	5.01	0.610	-0.027	0.678				
Log of waste released into the environment	5.83	4.59	0.230	-0.144	0.134	0.220			
Log of waste treated on-site	2.86	5.09	0.239	0.015	0.149	0.248	0.348		
Log of waste transferred to out-of-state offsite locations with Anti-SLAPP law	1.24	3.22	0.605	0.097	0.125	0.376	0.079	0.175	
Log of waste transferred to out-of-state offsite locations without Anti-SLAPP law	2.22	4.06	0.836	-0.034	0.142	0.512	0.241	0.213	0.176

Table 2.3: Regression Results: Effect of Enactment of anti-SLAPP Law on the Transfer of Waste from Source Facilities.

	Model 1	Model 2	Model 3	Model 4	Model 5
	Log of Total Waste transferred				
Outcome Variable	To Out-Of-State Offsite Locations Without Anti-SLAPP law	Offsite	To Out-Of-State Offsite Locations	To Within-State Offsite Locations	To Out-Of-State Offsite Locations With Anti-SLAPP law
<i>Independent Variable</i>					
Enactment of Anti-SLAPP Law	0.175*** (0.028)	0.059* (0.027)	0.095*** (0.028)	-0.072* (0.03)	-0.079** (0.026)
<i>Controls</i>					
Log of Waste Released into the Environment	0.155*** (0.004)	0.248 (0.005)	0.188*** (0.004)	0.143*** (0.004)	0.063 *** (0.003)
Log of Waste Treated On-site	0.051 *** (0.003)	0.063*** (0.003)	0.053*** (0.003)	0.043*** (0.003)	0.016*** (0.003)
Plant Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	639888	639888	639888	639888	639888
Adjusted R-squared	0.599	0.775	0.69	0.687	0.521
F-Test p-value	0.000	0.000	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Figure 2.1: Coefficients from Facility-level Regressions: Transfer of Waste to all offsite locations, offsite locations within the same state, and offsite locations out of state.

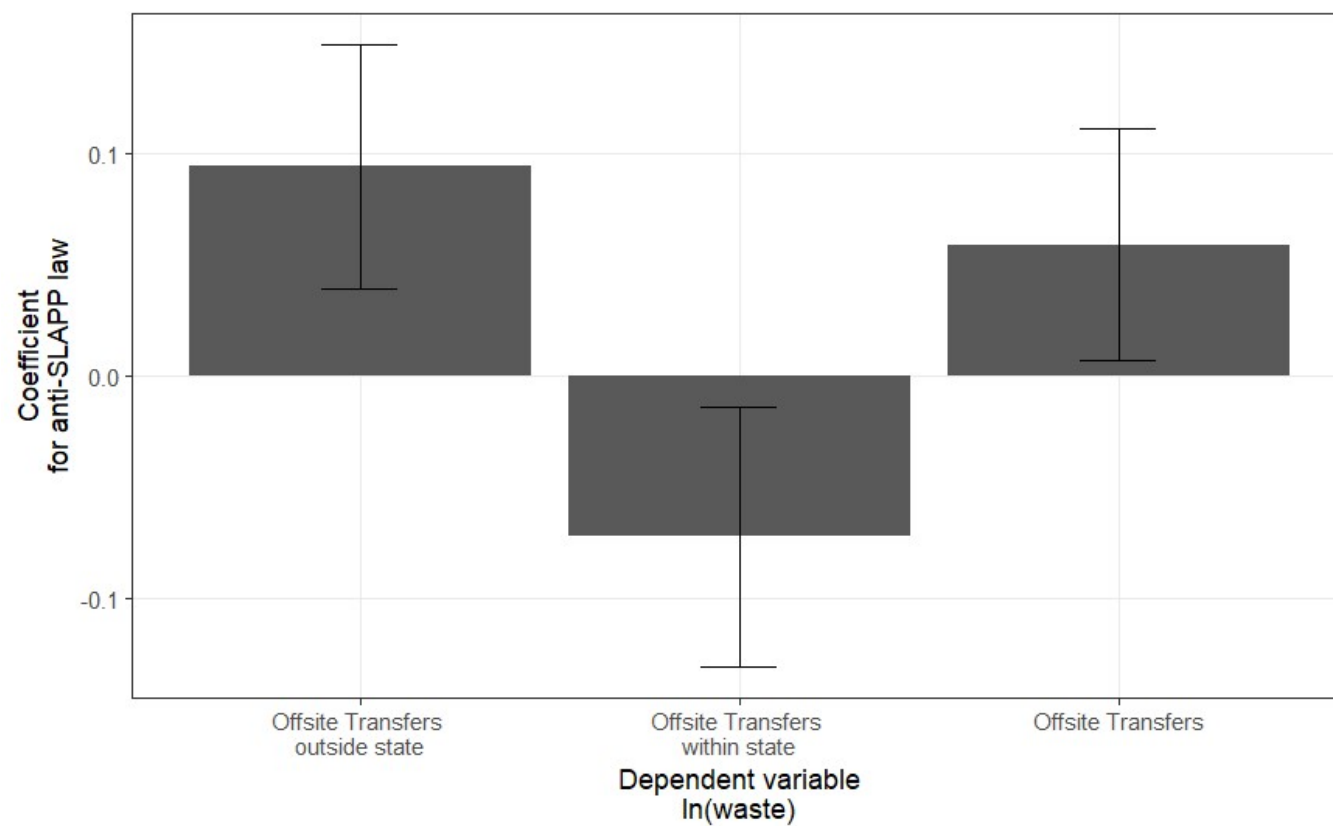
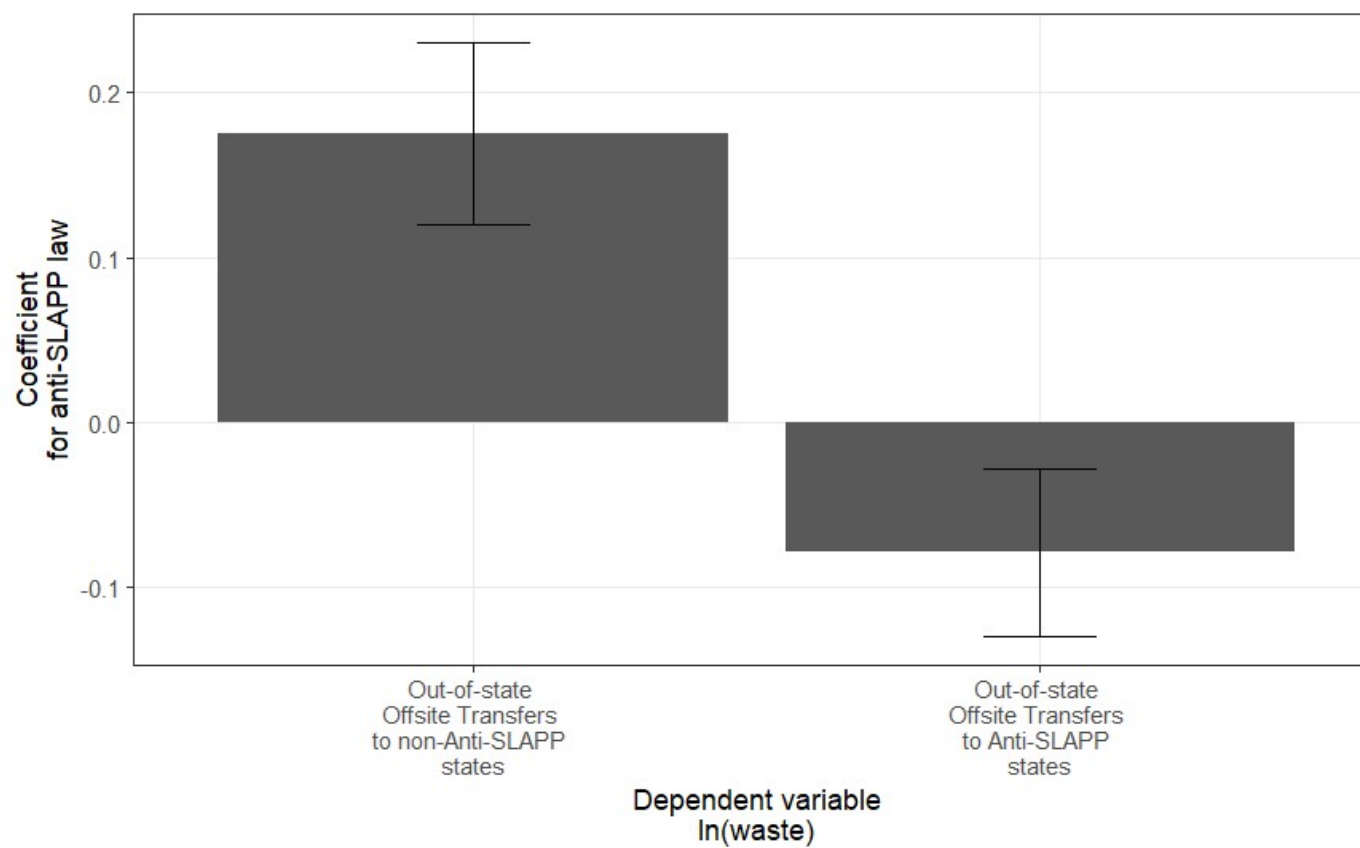


Figure 2.2: Coefficients from Facility-level Regressions: Transfer of Waste to Offsite Locations in anti-SLAPP States versus non-anti-SLAPP States.



Chapter 3 - Asymmetric Regulatory Scrutiny and Parent Firm Litigation Activity: Evidence from Differential Air Pollution

Introduction

A central premise within literature focused on non-market strategy is that firms and actors in the firm's environment engage with one another in a manner that either protects the firm's interests or prioritizes social welfare (Lambert, 2019; Hegde & Sampat, 2015; Aragón-Correa, Marcus & Vogel, 2020; Reid & Toffel, 2009; Luo, Wang, & Zhang, 2017; Brammer & Pavelin, 2005; Delmas & Toffel, 2008; Delmas & Montes-Sancho, 2010; Jiang & Bansal, 2003; Odziemkowska, 2022; Luo, Kaul & Seo, 2018). A particularly well-studied actor is the regulator which is known to influence firm behavior through both pecuniary and non-pecuniary mechanisms that aim to ensure the internalization of environmental and social costs (Christmann, 2004; Darnall et al., 2010; Reid & Toffel, 2009; Weigelt & Shittu, 2016). Yet firms are not passive recipients of these constraints. They actively engage with, attempt to influence, and respond to regulation in ways that reflect both their strategic interests and the institutional context in which they operate (Lambert, 2019; Hegde & Sampat, 2015; Aragón-Correa, Marcus & Vogel, 2020; Delmas & Toffel, 2008).

The firm's approach to engaging with regulatory oversight and action is shaped in part by a fundamental challenge facing regulators: the lack of enforcement capacity. More specifically, regulators are resource-poor actors. Constraints on budget, staffing, and statutory authority make it infeasible for regulators to monitor and regulate all potential violations (Djankov et al., 2003; Shleifer, 2005; Baron & Lyon, 2012). As a result, some harms may be more closely scrutinized while others remain hidden or deprioritized resulting in asymmetric scrutiny. Firms are cognizant of the resource constraints that regulators operate under and may choose to leverage those

constraints by engaging in activities that leverage asymmetries in regulatory oversight or enforcement. More specifically, in situations where regulators focus on non-compliance associated with specific undesirable activities, firms may comply in areas under regulatory scrutiny while intensifying harmful practices in domains perceived to be lower risk, leading to a displacement rather than a reduction of overall harm.

To compensate for the potential harms that may result as a function of the lack of sufficient resources, however, regulators often rely on disclosure from actors like whistleblowers, social activists, and local communities to identify and prioritize enforcement actions. This is particularly critical in situations where non-compliance is either not easily observable or more expensive to monitor. Firms, in response to or as a pre-emptive measure, may employ a range of tactics to engage with or influence these informed actors, including lobbying, stakeholder partnerships, and corporate philanthropy (Brammer & Pavelin, 2005; Luo, Kaul & Seo, 2018; Odziemkowska, 2022). Much of the literature conceptualizes such engagement as a means to shape both its reputation and the broader institutional environment in ways that deflect or prevent scrutiny and reduce the likelihood of being targeted. More specifically, they serve as a buffer against the disciplining effects that arise when external actors gain access to firm-level information, reducing information asymmetry and thereby increasing the potential for regulatory or reputational consequences. However, this may not be the only mechanism through which firms protect themselves from such scrutiny.

Firms may also make use of tactics that aim to disincentivize informed actors from disclosing information unfavorable to the firm, which in turn allows the firm to maintain information asymmetry. These tactics are also referred to in this dissertation as “suppression tactics” and aim to raise the expected costs of speaking out, thereby deterring stakeholders from

disclosing damaging information. In doing so, these tactics allow the firm to disrupt the information flows that regulators depend on, allowing firms to maintain opacity and reduce the likelihood of enforcement even in the presence of wrongdoing.

A common means by which firms may choose to do this is through litigation. The filing of lawsuits against an actor has the potential to harm both the defendant of the lawsuit and disincentivize other actors from publicizing information about the firm (Tu & Stump, 2020). Additionally, litigation may not only silence critics but also cultivate a perception within the firm that it is shielded from scrutiny. Even when litigation is infrequent, a reputation for legal aggressiveness may act as a broader deterrent against future disclosures. While litigation may not be intentionally used as a tactic against regulatory scrutiny, firms may be cognizant of the second-order effect of litigation used in such a manner. In contexts where regulators focus their resources on monitoring specific forms of non-compliance or undesirable activity, suppression tactics may further enable firms to reallocate harmful behavior toward domains they perceive as less visible or less risky. Drawing on this logic, in this chapter, we focus on (1) how firms respond to asymmetric regulatory scrutiny, and (2) how prior litigation filings are perceived as a barrier to regulatory scrutiny and influence the firm's responses to asymmetric scrutiny.

To address these questions, we follow prior work in economics, public policy, and environmental studies (Becker, 2005; Choi, Levine, Park & Xu, 2022; Greenstone, 2002; Walker, 2013; Shapiro & Walker, 2018; Isen, Rossin-Slater, & Walker, 2017; Greenstone, 2003) and take advantage of a key element of the Clean Air Act: the National Ambient Air Quality Standards (NAAQS). The NAAQS sets the maximum allowable concentrations of particulate matter, ground-level ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead in the air for a county (US EPA, 2014). Counties are designated as being in attainment of or nonattainment of

these standards. Counties that are denoted as being in non-attainment of these standards face greater regulatory stringency and mandatory pollution abatement requirements from local and state authorities (Becker, 2005; Choi, Levine, Park & Xu, 2022; Greenstone, 2002). This allows regulatory agencies to determine where to direct their limited attention and resources.

For our empirical analysis, we use facility-level Toxic Release Inventory (TRI) data to examine whether or not the shift in economic payoffs associated with noncompliance following increased scrutiny incentivizes facilities to reduce their non-regulated air pollution. We then incorporate firm-level civil litigation data from the Federal Judicial Center to determine whether previously filed litigation shifts the economic payoffs associated with noncompliance following increased scrutiny such that the scrutiny is no longer evaluated as a threat. We make use of the EPA's Green Book to determine which counties were deemed to be in attainment of or non-attainment of NAAQS thresholds in a given year. For our analysis, we focus specifically on the non-attainment of NAAQS thresholds related to ground ozone.

The results in this chapter indicate that following an increase in regulatory scrutiny associated with ground ozone, facilities exhibit a significant increase in the generation of air pollutants not associated with the creation of ground ozone. However, we do not find that the increased scrutiny influences the generation of ground ozone-related pollutants. Additionally, we do not find that prior litigation filings influence the generation of air pollutants unrelated to ground ozone creation following increased regulatory scrutiny of ground ozone.

In follow-up analyses, we find that the response to this regulation varies based on whether the facility is (or is not) a likely target of regulatory scrutiny. We find that ozone-producing facilities significantly reduce their ozone-related air pollution following increased regulatory scrutiny of ground ozone-related pollutants. However, these facilities do not

significantly shift their generation of non-ozone related pollution. Conversely, facilities that are *not* ozone producers significantly increase their non-ozone-related air pollution following increased scrutiny of ground ozone-related pollutants but do not significantly shift their generation of ozone-related pollutants. Regardless of the type of facility or how litigious behavior is measured, we do not find that facilities facing greater regulatory scrutiny significantly alter their generation of non-ozone-related pollution based on the parent firm's litigious behavior.

Theoretical Development

Regulation & Negative Externalities

A key area in the nonmarket strategy literature examines how firms engage with actors in their nonmarket environment to avoid scrutiny or accountability (Lambert, 2019; Hegde & Sampat, 2015; Aragón-Correa, Marcus & Vogel, 2020; Reid & Toffel, 2009; Luo, Wang, & Zhang, 2017; Brammer & Pavelin, 2005; Delmas & Toffel, 2008; Delmas & Montes-Sancho, 2010; Jiang & Bansal, 2003; Odziemkowska, 2022; Luo, Kaul & Seo, 2018). Among the mechanisms by which firms are held accountable, regulation—particularly environmental regulation—plays a central and well-studied role. Regulation functions as a formal institutional constraint, especially salient in contexts involving negative externalities, where firms may otherwise shift the social costs of production onto broader communities. Empirical research has repeatedly demonstrated the power of environmental regulation to shape firms' environmental performance (Christmann, 2004; Darnall et al., 2010; Kock, Santalo, & Diestre, 2012; Reid & Toffel, 2009; Weigelt & Shittu, 2016).

This regulation can take the form of pecuniary or non-pecuniary mechanisms. Pecuniary mechanisms primarily involve financial penalties, such as fines, which are intended to

incentivize compliance by raising the economic costs of undesirable behavior. By imposing monetary sanctions, regulators aim to internalize the externalities generated by firms, thereby incentivizing adherence to environmental standards. Financial penalties are designed to serve not only as a direct punishment for non-compliance but also as a means of altering firms' cost-benefit calculations regarding future behavior. The threat of fines is meant to encourage firms to invest in preventive measures, improve monitoring systems, and adopt more sustainable practices to avoid future sanctions. Yet in practice, pecuniary penalties often fail to generate substantial behavioral change, especially when the fines are nominal relative to a firm's revenues or market power. A \$1,000 fine, for instance, may be immaterial to a multinational enterprise, making it an ineffective deterrent. Given these concerns, regulatory agencies are increasingly making use of non-pecuniary mechanisms or the second-order non-pecuniary effects of penalties like fines to incentivize compliance.

One such non-pecuniary strategy is shaming, wherein regulatory agencies publicly disclose information about a firm's undesirable or non-compliant activities in a manner that is "designed to convey a normatively negative message to the public" (Yadin, 2019). Shaming can impose significant reputational costs on firms, affecting their relationships with consumers, investors, and other stakeholders. By publicly exposing regulatory violations, agencies can mobilize public scrutiny and stakeholder pressure, thereby creating additional incentives for firms to improve compliance and performance. Empirical evidence supports the effectiveness of such strategies: Johnson (2020), for example, finds that when the Occupational Safety and Health Administration (OSHA) publicly disclosed workplace safety violations without imposing financial penalties, firms subsequently improved their compliance and reduced injuries.

Yet the effectiveness of both pecuniary and non-pecuniary mechanisms is not solely a function of design but also institutional capacity. Regulatory agencies frequently operate under resource constraints such as limited budgets, staff shortages, and statutory caps on enforcement powers which can undercut their capacity to detect, prosecute, or penalize violations effectively (Djankov et al., 2003; Shleifer, 2005). As Baron and Lyon (2012: 129) observe, “regulatory authorities generally lack the resources to ensure that laws are enforced with full compliance.” As a result of this lack of sufficient resources, regulators depend on a degree of private monitoring on the part of actors like whistleblowers, NGOs, and communities for information about firm-level irresponsibility. This decentralized model of enforcement creates information dependencies between regulators and informed stakeholders in the firm’s environment.

When firms recognize that regulators must prioritize certain externalities over others due to limited capacity, they may recalibrate their behavior in ways that exploit asymmetries in regulatory oversight or enforcement. Rather than uniformly improving performance across all domains, firms may strategically aim to comply in areas under heightened scrutiny while redirecting or even intensifying harmful behavior in domains perceived as lower risk. In this way, institutional constraints on regulators may create space for second-order effects that redistribute, rather than reduce, overall harm. This pattern of risk displacement is shaped by both external and internal constraints on the part of the firm. On the external side, firms often interpret heightened scrutiny in one area as a signal that other forms of harm are receiving less attention, given the limited capacity regulators have to oversee multiple domains simultaneously (Djankov et al., 2003; Shleifer, 2005). Internally, firms face constraints in terms of attention, resources, and managerial bandwidth being finite (Ocasio, 1997). Meeting new regulatory expectations often requires investments in process redesign, technology adoption, or material substitution—each of

which may draw resources away from other environmental issues. As firms shift attention toward avoiding penalties in newly scrutinized areas, they may unintentionally deprioritize or even exacerbate negative externalities in domains that are less visible or less regulated.

This reallocation of effort is not just theoretical. Evidence from the European Environment Agency (2011), for example, shows that while carbon capture and storage technologies can reduce greenhouse gas emissions, they may also lead to increased emissions of particulate matter, nitrogen oxide, and ammonia. Likewise, technologies such as selective catalytic reduction (SCR), designed to limit NO_x emissions—a key precursor to ground-level ozone—can produce secondary harms, including ammonia slip and toxic byproducts from spent catalysts (EPA, 2003). These examples underscore the tradeoffs that can emerge when compliance efforts are narrowly targeted, and they highlight how regulatory focus in one area may unintentionally intensify harm elsewhere.

Given this logic, we post:

H1: Facilities faced with increased regulatory scrutiny will decrease their generation of the targeted pollutant, relative to other facilities.

H2: Facilities faced with increased regulatory scrutiny will increase their generation of other non-targeted pollutants, relative to other facilities.

Suppression & Regulatory Scrutiny

Firms are cognizant of the threats that actors in their environment, including regulatory agencies, pose to their operations and profitability. To manage their regulatory exposure and broader reputational risks, firms deploy a range of stakeholder engagement tactics aimed at shaping the information environment and reinforcing their legitimacy among key audiences. One

prominent tactic is lobbying, through which firms attempt to directly influence legislative or regulatory outcomes to serve their interests (Lambert, 2019; Hegde & Sampat, 2015). Lobbying can reduce the costs of compliance or weaken the likelihood of adverse regulatory enforcement. Beyond direct political engagement, firms also cultivate stakeholder collaborations, partnering with social groups, NGOs, and local communities to demonstrate responsiveness to public concerns and to shield themselves from criticism (Odziemkowska, 2022). Such collaborations help to build legitimacy and mitigate reputational risks. Additionally, corporate philanthropy and social investment initiatives allow firms to align themselves with valued social causes, securing favorable perceptions from stakeholders and potentially deflecting negative attention (Brammer & Pavelin, 2005; Luo, Kaul & Seo, 2018). Collectively, these tactics allow firms to actively manage the informational and relational landscape in which regulatory actions are embedded.

Much of the existing literature frames these tactics as reputation-building or legitimacy-enhancing strategies. That is, firms manage stakeholder relationships to mitigate opposition and avoid regulatory intervention. Yet firms may also pursue more antagonistic tactics aimed at constraining stakeholders' ability to reveal harmful information. Rather than diffusing scrutiny through positive (or agnostic) engagement, firms may choose to leverage the dependency between regulators and informed stakeholders to target and deter disclosure itself. Suppression tactics, as defined in previous chapters, raise the expected costs to stakeholders of voicing dissent or publicizing firm misconduct. In doing so, they allow firms to maintain informational asymmetries that may buffer them from both reputational backlash and regulatory attention.

This logic draws on the idea that information is a key disciplining mechanism. Scrutiny triggered by external disclosures can lead to reputational penalties or market sanctions (Rhee & Haunschild, 2006). Firms may preemptively address issues under heightened visibility in

anticipation of these outcomes or react to disclosure by addressing undesirable activities (Benneer & Olmstead, 2008; Jin & Leslie, 2003; Chatterji & Toffel, 2010; Yadin, 2019; Johnson, 2020). Regulators themselves often rely on public-facing strategies—like OSHA’s press and social media disclosures (Yadin, 2019; Johnson, 2020) or the EPA’s Toxic Release Inventory (Doshi, Dowell & Toffel, 2013)—to signal non-compliance and generate stakeholder pressure.

To avoid such visibility, firms may resort to suppressive tactics that actively reshape what information enters the public domain. Suppression, in this context, is not just a reaction to scrutiny. It is a preemptive strategy for avoiding it altogether. While lobbying or partnership-building aims to influence perceptions, suppression targets the flow of information itself. Among the most potent tools in this regard is litigation. Although difficult to observe directly, litigation can serve as a credible threat that discourages stakeholders from speaking out (Tu & Stump, 2020). Whether through lawsuits or the threat of legal action, firms can dissuade actors from publicizing misconduct, thus undermining the external monitoring processes regulators depend on.

It is important to note that litigation does not need to be frequent to be effective. A firm’s history of litigation filing or legal aggressiveness may signal a willingness to litigate against dissent, disincentivizing not only the direct target but others who might otherwise act. The mere expectation of litigation may be sufficient to deter disclosure. In settings with higher information asymmetry, where some stakeholders have information about the firm but lack the power to induce costs, and others have the power to induce costs on the firm but lack information, suppression works by breaking that link. If informed stakeholders are dissuaded from speaking, regulators and the public remain in the dark. In this manner, litigation-based suppression

maintains the existing information asymmetry and potentially shields firms from the scrutiny of both informed and uninformed actors.

Suppression through litigation offers benefits that extend beyond the immediate silencing of dissent. In contexts of heightened regulatory oversight, firms with a history of suppression may interpret their prior litigation as a form of insulation. Even if firms do not intentionally engage in these tactics with the expectation to influence or affect regulators, firms may believe that the deterrent effect of past lawsuits continues to suppress information flows that would otherwise trigger enforcement. Litigation thus serves a dual role—discouraging stakeholder action while also reducing the likelihood of regulatory discovery. This perceived buffer becomes especially salient when regulation targets specific harms while leaving others either unregulated or under less scrutiny. In such cases, firms may respond not by broadly improving environmental performance, but by reallocating harmful behaviors into domains they believe are less likely to be monitored. The informational asymmetries created through suppression enable this strategy. By deterring external disclosures, firms limit the ability of regulators to rely on actors like whistleblowers and communities to detect misconduct. As a result, rather than uniformly reducing environmental harm, firms with a history of suppression may selectively comply with new rules while increasing pollution elsewhere. Litigation-based suppression, therefore, does not merely distort accountability—it creates space for risk-shifting, where compliance in one area enables harmful behavior in another.

Taken together, this logic suggests that suppression tactics—particularly litigation—can alter how firms respond to regulatory scrutiny. While regulation may reduce targeted pollutants, firms shielded by past suppression are especially likely to shift harm elsewhere. Based on this reasoning, we posit the following hypothesis:

H3: The greater the litigation activity of facility parent firms, the greater the increase in non-targeted pollutants under increased regulatory scrutiny compared to other facilities.

Research Design

Empirical Context

In this study, following prior work in economics, public policy, and environmental studies (Becker, 2005; Choi, Levine, Park & Xu, 2022; Greenstone, 2002; Walker, 2013; Shapiro & Walker, 2018; Isen, Rossin-Slater, & Walker, 2017; Greenstone, 2003), we take advantage of a key element of the Clean Air Act: the National Ambient Air Quality Standards (NAAQS). The NAAQS sets the maximum allowable concentrations of particulate matter, ground-level ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead in the air for a county (US EPA, 2014). Counties are designated as being in attainment of or nonattainment of these standards. Facilities in non-attainment counties face greater regulatory stringency and mandatory pollution abatement requirements from local and state authorities (Becker, 2005; Choi, Levine, Park & Xu, 2022; Greenstone, 2002).

For this study, we primarily focus on NAAQS standards associated with ground-level ozone. The first benefit of focusing on ground-level ozone is related to the nature of ozone. Not all pollutants covered by the NAAQS can be definitively categorized as geographically bounded. Some, like sulfur dioxide, have a shorter lifetime and are likely to decay within 1000 km (Cole & Elliott, 2003). Others, like particulate matter, are typically more prominent near the emission source in the form of haze, though wind can carry the particles over a long distance. In such situations, the limited scope or geographical prominence of these pollutants may make it easier for regulatory agencies like the EPA to discern their source location. Ground-level ozone, in

general, can be considered to not be geographically bounded. The compounds or chemicals that facilities generate that react to create ozone like NO_x are known to carry over state lines, necessitating programs like the EPA's Good Neighbor Plan (Palmer & Fleck, 2023). The use of the NAAQS ground ozone standards allows us to focus on a context where regulators may have a greater dependency on private monitoring to identify and monitor source locations.

The second benefit of using NAAQS standards associated with ozone level is related to the potentially endogenous nature of shifts in county-level attainment status. Specifically, facilities may be aware of whether or not the county they operate in is in attainment or nonattainment of the regulatory thresholds. As a result, facilities may proactively invest in pollution abatement to avoid the expected costs of being deemed a “polluter” when the county is categorized as being in non-attainment. By focusing on NAAQS ground ozone standards, we can make use of exogenous shifts in attainment status due to changes in the standards themselves. The Clean Air Act “requires EPA to review the standards – and the science behind them – periodically to determine whether changes are warranted” (US EPA, 2016b). Out of the six forms of pollutants covered by the NAAQS and within the time period of this study, the standards for ozone have been updated three times. These announcements in 1997, 2008, and 2015 became effective in 2004, 2012, and 2018, respectively. Focusing on NAAQS thresholds for ground ozone, we can analyze how (1) the redesignation of a county to non-attainment affects the non-ozone-related air pollution generated by a facility and (2) an unexpected redesignation of a county to non-attainment redesignation affects the non-ozone related air pollution generated by a facility, where the redesignation is a result of changes in the ozone standards.

Sample

For this study, we make use of a widely used source of data on negative externalities: the EPA's Toxic Release Inventory (e.g. Doshi, Dowell & Toffel, 2013; Berrone et al., 2010; Bui & Kapon, 2012; Bui & Mayer, 2003; Hamilton, 1995; Konar & Cohen, 1997; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006; King & Lenox, 2000; King & Shaver, 2001; Toffel & Marshall, 2004). Under the TRI program, the EPA expects yearly reports on toxic releases from establishments that (1) process more than 25,000 pounds or otherwise use more than 10,000 pounds of a TRI-listed chemical during the year, (2) fall within an industry sector covered by the TRI or is federally owned or operated (two-digit SIC codes 20-39), and (3) has ten or more full-time employee equivalents (EPA, n.d.). For this study, we specifically focus on the facility-level ozone and non-ozone-related air pollution reported to the program.

To construct this data, we make use of the EPA's TRI Basic Plus dataset, which provides data on how much waste is generated by facilities in a given reporting year across different chemicals that fall under the purview of the TRI program. For this paper, we are focusing on ground ozone standards. Ground ozone is not directly generated by a facility; rather, facilities generate other chemicals that react when exposed to sunlight to create ozone. The primary contributors to the formation of ground-level ozone are nitrogen oxides (NO_x) and volatile organic compounds (VOCs). The TRI data does not directly identify which chemicals are (are not) VOCs. To identify which chemicals are likely to be VOCs, we make use of the EPA's Substance Registry Services list for the Clean Air Act 112 (B) Hazardous Air Pollutants (EPA, n.d.), which identifies pollutants that are hazardous when emitted into the air. We first create a subset of these chemicals by identifying those that contain carbon, reflecting the basic definition of organic compounds. To refine this list, we exclude carbon-containing compounds that are considered inorganic (e.g., carbon oxides, metal carbides, cyanides). We then further refine the

list by applying the EPA’s regulatory exceptions outlined in 40 CFR § 51.100(s), which exempts certain organic compounds from VOC classification due to low photochemical reactivity. The resulting dataset includes 395 chemicals¹.

For data on litigation filing, we use the Federal Judicial Center’s (FJC) Integrated Civil Litigation Database. The FJC is the research and education agency of the US federal courts. The dataset covers all US federal civil cases, starting with cases active as of July 1969. We limit our analysis to civil litigation as the threat of litigation directed at stakeholders is more likely to be civil cases than criminal cases. The Civil Litigation database includes 111 different suit types and includes case movements within the US judicial system. We focus specifically on the filing of lawsuits as the act of filing a lawsuit in a court is a strategic action on the part of the firm. This filing of lawsuits against an actor has the potential to harm both the defendant of the lawsuit and disincentivize other actors from publicizing information about the firm (Tu & Stump, 2020).

For data on the designation of counties as being in attainment of or non-attainment of NAAQS, we use the EPA’s Green Book. Specifically, we make use of the NAYRO data from the Green Book which “contains nonattainment and maintenance counties for each NAAQS, including revoked area counties” (EPA, n.d.). We use this data to create a county-year level dataset that denotes which counties are in attainment or non-attainment of NAAQS ozone standards active at that time. Counties that are in partial non-attainment are also considered as being in non-attainment.

¹ This list represents an approximation based on available regulatory definitions and chemical information. It is important to note that the EPA itself does not maintain a comprehensive master list of all VOCs, even outside the context of the TRI data, due to the case-by-case nature of VOC regulation. Under EPA regulations (40 CFR § 51.100(s)), compounds are classified as VOCs based on their contribution to ozone formation, and certain compounds are explicitly exempted due to low photochemical reactivity. As a result, VOC status depends both on chemical structure and regulatory determinations, and formal lists can vary slightly across regulatory programs and time periods. This list reflects a reasonable approximation based on currently available regulatory information.

To arrive at our final dataset, we first manually match identifiers from the various datasets used. For the litigation dataset, we match the plaintiff to firm names in Compustat. WRDS does provide a basic crosswalk between Compustat and FCJ datasets, but this is admittedly not a complete crosswalk and requires researchers to add to the existing crosswalk. We match the names via a mix of fuzzy matching using the fuzzy matching add-in on Excel and manual verification. For the TRI data, we match the standardized parent firm names from the TRI dataset to the firm names in Compustat. Similar to the process for matching with the litigation dataset, we match these names using a mix of fuzzy matching and manual verification. These crosswalks allow me to merge the litigation and TRI datasets using the GVKEYs associated with the parent firms. For the NAAQS dataset, the NAYRO data includes the county and state FIPS code associated with the various counties that were, at some point, in non-attainment between 1992 and 2023. We create a base file using Census data on FIPS codes and merge the NAAQS data to the county-state base file to note which counties are in or not in attainment. We also use this Census data to link the TRI data with the FIPS codes.

Using these crosswalks, we merge the litigation, toxic waste, and non-attainment datasets. We then limit this data to the time period of 2000 to 2020. The time period for this study begins in 2000 to avoid the potential effect of the announcement of the update to NAAQS ozone standards in 1997. Details about the updates to the NAAQS ground ozone standards are provided in Table 3.1. The resulting dataset has 162,467 facility-year observations.

Variables

Air Pollution Variables. Following prior literature (Berrone et al., 2010; Doshi et al., 2013; Chatterji & Toffel, 2010; Gamper-Rabindran, 2006), the toxic release variables are logged after adding one. There are two variables of interest, based on our hypothesis. First, we create the

variable *log of ozone-related air pollution after adding one* which denotes the sum of all air emissions associated with chemicals that could create ground ozone. Second, we create the variable *log of non-ozone-related air pollution after adding one* which denotes the sum of all air emissions not associated with chemicals that could create ground ozone.

Redesignation to Non-Attainment. We construct two variables indicating the redesignation of a county as being in non-attainment of NAAQS standards related to ground ozone levels. First, we construct an indicator variable denoting whether a county was designated as a non-attainment county. If a county is redesignated as non-attainment or partial nonattainment in a given year and this designation is different from the county's designation in the prior year, then *redesignation to non-attainment* takes a value of one, and zero otherwise. Second, we account for the potentially endogenous nature of county attainment (non-attainment) status. Specifically, a facility may be aware of whether or not the county in which it operates will be redesignated as being in non-attainment in the coming year. To address this, we incorporate changes to the NAAQS standards related to ground ozone levels. Within the time period of this study, these updates became effective in 2004, 2012, and 2018. *Unexpected redesignation to non-attainment* takes a value of 1 if the county was redesignated as being non-attainment in the year that the changes to the standard became effective, and 0 otherwise.

Prior Filing of Litigation. We first construct two variables indicating how many lawsuits were filed by a facility's parent company in the prior year. First, we construct a *count of relevant lawsuits filed in the prior year*. It is difficult to determine whether or not a lawsuit was filed with the intent to suppress the defendant's ability to participate in public discourse or the defendant's ability to disseminate information in general. However, we do know that certain subjects are unlikely to be related to such lawsuits, namely trademark, copyright, patents, and bankruptcy-

related lawsuits. We incorporate this when constructing the variable *count of relevant lawsuits filed in the prior year* by excluding lawsuits filed by a parent company that are related to trademark law, copyright law, patent law, or bankruptcy law.

Controls. In addition to our primary variables of interest, we also create control variables based on how the facility releases its waste. Specifically, a facility's chemical emissions could be released into the air, water, or onto land. Incorporating the facility's release of chemical waste in the form of water or land pollution allows us to account for unobservable factors related to the facility's tendency to pollute in general. The variable *log of toxic waste released into the water* refers to the total surface water discharge after adding one. This includes the discharge of a facility's waste into streams, lakes, rivers, and other bodies of water. The variable *log of toxic waste released onto land* refers to the total land release, which includes surface impoundments, underground injection wells, RCRA subtitle C landfills, and other landfills. Summary statistics are provided in Table 3.2.

Variables for Follow-up Analysis. For follow-up analyses, we create a few additional variables. Firstly, we create additional litigation-related variables. We initially focused on lawsuits filed in the previous year as it is likely that recency bias affects a stakeholder's perception of threat. Specifically, the expected costs associated with information disclosure for the stakeholder may be deemed greater if the facility's parent firm filed a lawsuit in the previous year. However, stakeholders may have a larger time-based consideration set when it comes to the threat of litigation. That is, stakeholders may have some degree of recency bias when it comes to a parent firm's prior filing of litigation and associate the greatest degree of threat to lawsuits filed in the previous year. However, these stakeholders may also evaluate lawsuits filed before that as some signal of willingness to litigate on the part of the parent firm. To account for this, we also

constructed similar variables considering a time period of two, three, and four years. The *count of relevant lawsuits filed two years prior*, *count of relevant lawsuits three years prior*, and *count of relevant lawsuits filed four years prior* are count variables considering the number of relevant lawsuits filed by a facility's parent firm in the two years, three years and four years prior, respectively. We also construct a set of variables noting the sum of lawsuits filed in a time period of two, three, and four years. The *count of lawsuits filed in the last two years*, *count of lawsuits filed in the last three years*, and *count of lawsuits filed in the last four years* are count variables considering the number of lawsuits filed by a facility's parent firm in the last two years, three years and four years, respectively.

Secondly, we create a variable related to the type of facility involved. The redesignation of a county to non-attainment based on the NAAQS standards related to ground ozone will not affect all counties in the jurisdiction the same way. Specifically, a facility will only face regulatory stringency or regulatory costs if it is a producer of ozone. To account for this differential impact of regulatory scrutiny, we construct the variable *ozone producer* which takes a value of one if the facility produces ozone-related pollutants in any given year, and a value of zero otherwise.

Regression Specification

To test our hypotheses, we use an ordinary least square (OLS) regression model, with state and year-fixed effects and standard errors clustered at the facility level. We specifically use state and year-fixed effects to account for time-invariant differences between states and potential time-specific factors that affect all facilities in that given year. In our model, we exploit variation in the redesignation of counties to nonattainment following changes in NAAQS ozone standards being made effective. In our model, we exploit variation in the redesignation of counties to

nonattainment following changes in NAAQS ozone standards being made effective. To test hypothesis 1, we estimate the following regression:

$$\begin{aligned} & \text{Log of Ozone Related Pollution}_{py} \\ &= \beta_0 + (\beta_1 \times \text{Redesignation to non - attainment}_{cy}) + (\beta_2 \times X_{py}) \\ &+ F.E. + \varepsilon_{py} \end{aligned}$$

In this model, the coefficient of interest is β_1 . If $\beta_1 < 0$ and the effect is significant, then we will have found support for Hypothesis 1. Following an increased regulatory focus on ozone, facilities decrease their generation of the regulated externality. This would provide evidence that the regulation of an externality has the desired impact on the generation of said externality.

To test hypothesis 2, we estimate the following regression:

$$\begin{aligned} & \text{Log of Non - Ozone Related Pollution}_{py} \\ &= \beta_0 + (\beta_1 \times \text{Redesignation to non - attainment}_{cy}) + (\beta_2 \times X_{py}) \\ &+ F.E. + \varepsilon_{py} \end{aligned}$$

In this model, similar to Hypothesis 1, the coefficient of interest is β_1 . We find support for Hypothesis 2 if $\beta_1 > 0$ and the effect is significant.

To test hypothesis 3, we estimate the following regression:

$$\begin{aligned} & \text{Log of Non - Ozone Related Pollution}_{py} \\ &= \beta_0 + (\beta_1 \times \text{Redesignation to non - attainment}_{cy}) \\ &+ (\beta_2 \times \text{Count of relevant litigation}_{fy}) \\ &+ (\beta_3 \times \text{Redesignation to non - attainment}_{cy} \\ &\times \text{Count of relevant litigation}_{fy}) + (\beta_4 \times X_{py}) + F.E. + \varepsilon_{py} \end{aligned}$$

In this model, the coefficient of interest is β_3 . We find support for Hypothesis 3 if $\beta_3 > 0$ and the effect is significant.

Results

Table 3.3 reports the results from our primary ordinary least square (OLS) models examining the effect of increased regulatory scrutiny on ozone-related and non-ozone-related air pollution and the effect of a parent firm's prior litigation filing on this relationship. All models include state and year-fixed effects, and standard errors are clustered at the facility level. All models also include controls for the log of toxic waste released into the water and the log of toxic waste released onto land.

We first focus on Hypothesis 1, where we posit that when a county is redesignated as being in non-attainment of NAAQS ground ozone standards, facilities in those counties will decrease the generation of pollutants associated with ground ozone creation. The related coefficient is reported in model 1, where the dependent variable is the *log of ozone-related air pollution* and the variable of interest is *redesignation to non-attainment*. We find that the redesignation of a county to non-attainment does not lead to a significant decrease in ozone-related air pollution (0.03446, p-value = 0.708). However, as previously noted, this redesignation may be endogenous in nature. To account for this, in model 2, our independent variable is the *unexpected redesignation to non-attainment*. The dependent variable for model 2 remains the *log of ozone-related toxic waste*. We find that the unexpected redesignation of a county to non-attainment does not lead to a significant decrease in ozone-related air pollution (0.04678, p-value = 0.621). Together with the results from model 1, we do not find support for Hypothesis 1.

Next, we focus on hypothesis 2, which posits that following the redesignation of a county as being in non-attainment of NAAQS ground ozone standards, facilities in those counties will

increase their generation of pollutants not associated with ground ozone creation. The coefficients associated with this hypothesis are models 3 and 4, with the dependent variable *log of non-ozone-related air pollution*. In model 3, the independent variable of interest is the *redesignation to non-attainment*. We find that following the redesignation of a county to non-attainment, facilities significantly increase their generation of toxic waste not associated with ground ozone generation (0.25458, p-value = 0.00254). In model 4, we account for the potential endogenous nature of redesignation with the variable *unexpected redesignation to non-attainment*. We find that similar to the findings in model 3, following the unexpected redesignation of a county to being in non-attainment of NAAQS ground ozone standards, facilities significantly increase their generation of toxic waste not associated with ground ozone generation (0.26752, p-value = 0.00195). These results support hypothesis 2.

We next focus on determining the potential moderating effect of prior lawsuits filed by a facility's parent firm on this relationship. Hypothesis 3 posits that greater litigation activity by a facility's parent firm is associated with a larger increase in the facility's generation of non-ozone-related toxic waste following a county's redesignation to non-attainment. To address this hypothesis, we run models 5 and 6, where the dependent variable is the *log of non-ozone-related air pollution*. In model 5, the independent variable of interest is an interaction variable *redesignation to non-attainment x count of relevant litigation*. In model 6, the independent variable of interest is an interaction variable *unexpected redesignation to non-attainment x count of relevant litigation*. We do not find significant results in either model 5 (-0.004070, p-value = 0.50353) or model 6 (-0.005794, p-value = 0.35182). These results do not support hypothesis 3 and suggest that the degree of litigation activity of the facility's parent firm does not moderate

the relationship between the redesignation of a county to non-attainment and the generation of non-ozone-related air pollution.

Follow-up Analysis

Ozone Producers and Non-Ozone Producers

In the primary analysis, we focus on the effect of the shift in regulatory scrutiny associated with redesignation to non-attainment on all facilities, regardless of whether they are producers of ozone-related pollution or not. However, the threat associated with the increased regulatory scrutiny may be largely focused on and felt by facilities that generate air pollutants that are associated with the creation of ground ozone. Given this, we also run models focused specifically on facilities that are “ozone producers”² and “non-ozone producers”. The models associated with these subsets of facilities can be found in Tables 3.4 and 3.5, respectively.

Focusing first on Table 3.4, models 7 and 8 focus on the dependent variable is the *log of ozone-related pollution*. The independent variables of interest for models 7 and 8 are *redesignation to nonattainment* and *unexpected redesignation to nonattainment* respectively. The coefficients in model 7 (-0.21716, p-value = 0.0254) and 8 (-0.21843, p-value = 0.0261) are significant and negative. This suggests that, while the increased scrutiny does not generally incentivize facilities to reduce ozone-related pollution, the facilities that are the targets of this regulation are incentivized to reduce ozone-related pollutants following increased regulatory scrutiny.

² The term “ozone producer” is largely used for simplicity. These are facilities that produce pollutants that, due to their photosensitivity, may react in sunlight to create ground ozone.

Next, we focus on models 9 and 10 which focus on the dependent variable *log of non-ozone-related pollution*. The independent variables of interest, like models 7 and 8, are *redesignation to nonattainment* and *unexpected redesignation to nonattainment*. In both models 9 (0.21959, p-value = 0.129) and 10 (0.23467, p-value = 0.108), the coefficient is not significant. This suggests that following the shift in regulatory scrutiny, facilities that are the targets of this regulation are *not* incentivized to increase non-ozone-related pollutants. This is contrary to our findings regarding the broader population.

In models 11 and 12, the dependent variable is the *log of non-ozone-related pollution*. In model 11, the variable of interest is the interaction term *redesignation to non-attainment x count of relevant litigation*. In model 12, the variable of interest is the interaction term *unexpected redesignation to non-attainment x count of relevant litigation*. The coefficients for model 11 (0.008525, p-value = 0.3469) and model 12 (0.006462, p-value = 0.593) are not significant. This suggests that, contrary to hypothesis 3 and in line with prior results, following a shift in regulatory scrutiny, ozone-producing facilities owned by parent firms that filed lawsuits in the prior year are unlikely to increase their non-ozone pollution.

Moving to the subset of facilities that do not produce ozone-related pollutants, we focus on four models in Table 3.5. In this table, given that these plants do *not* produce ozone-related pollutants, we ignore models related to hypothesis 1. Instead, all models in this table focus on the *log of non-ozone-related air pollution* as the dependent variable. In models 13 and 14, the independent variable of interest is *redesignation to non-attainment* and *unexpected redesignation to non-attainment*, respectively. The coefficients for model 13 (0.21839, p-value = 0.0269) and model 14 (0.22168, p-value = 0.029) are positive and significant, supporting hypothesis 2 and in line with our main results. This suggests that following a shift in regulatory scrutiny, facilities

that are not the target of said scrutiny are likely to increase their generation of pollutants that are not under scrutiny.

In models 15 and 16, the independent variable of interest is the interaction term *redesignation to non-attainment x count of relevant litigation* and *unexpected redesignation to non-attainment x count of relevant litigation*, respectively. Similar to prior models, we do not find significant effects in models 15 (-0.007003, p-value = 0.310278) and 16 (-0.007369, p-value = 0.287127). This, as prior models focused on hypothesis 3, suggests that the parent firm's prior litigation filings may not influence how the facility responds to shifts in regulatory scrutiny.

Comparing the results in Tables 3.4 and 3.5, ozone-producing facilities significantly reduce their ozone-related air pollution following an increased scrutiny towards those pollutants. Non-ozone-producing facilities significantly increase their non-ozone-related air pollution following increased scrutiny towards ozone-related pollution. However, neither type of facility significantly shifts their non-ozone related air pollution based on the degree of litigious behavior in the prior year on the part of the facility's parent firm. The significant results observed in our main analysis in regard to non-ozone-related air pollution appear to be driven by the response of facilities that do not produce ozone-related pollutants following the shift in scrutiny.

The Recency of Litigation vs Cumulative History of Litigation

In our primary analysis, we focus on the count of lawsuits filed by a facility's parent firm in the previous year. This assumes that the actors most likely to disseminate information about the firm's activities have a recency bias, where the threat associated with lawsuits filed in the most recent year is considered to be greater than the threat associated with lawsuits filed in other years in the past. That is, the temporal distance of the filing of litigation influences the expected

costs associated with information disclosure. However, it is also possible that parent firms that have filed multiple lawsuits across a period of time could be deemed to be more threatening than those that do not have such a history.

To further explore the moderating effect of the threat of litigation, we run additional models accounting for the count of relevant lawsuits filed in the last two years, three years, and four years as well as the sum of relevant lawsuits filed in the last two years, three years, and four years. The results for these models can be found in Tables 3.6, 3.7, 3.8, and 3.9. Tables 3.5 and 3.6 focus on the timing of relevant lawsuits. Table 3.6 focuses on the interaction between the various litigation-related count variables and *redesignation to non-attainment*. Table 3.7 focuses on the interaction between the various litigation-related count variables *unexpected redesignation to non-attainment*. Tables 3.8 and 3.9 focus on the sum total of relevant lawsuits. Table 3.8 focuses on the interaction between the various litigation-related count variables and *redesignation to non-attainment*. Table 3.9 focuses on the interaction between the various litigation-related count variables *unexpected redesignation to non-attainment*.

If the threat of litigation was cumulative in nature- that is, driven by the degree of lawsuits filed over a period of time- rather than temporal distance, then we would expect to find two things. First, we would find that the moderating effect of a parent firm's litigation filing would decrease with increased temporal distance. That is, the coefficient for models focused on the litigation filed at t-2 would be less than the coefficient for models focused on the litigation filed at t-1. Second, we would find that the coefficient associated with the sum of the parent firm's litigation filing in t-2 and t-1 would be greater than the coefficient associated with the sum of the parent firm's filing at t-1. However, across the models in Tables 3.6, 3.7, 3.8, and 3.9, we do not find any significant effects.

Discussion

A central premise in the non-market strategy literature is that firms engage with actors in their non-market environment to minimize exposure to accountability and scrutiny (Lambert, 2019; Hegde & Sampat, 2015; Aragòn-Correa, Marcus & Vogel, 2020; Reid & Toffel, 2009; Luo, Wang, & Zhang, 2017; Brammer & Pavelin, 2005; Delmas & Toffel, 2008; Delmas & Montes-Sancho, 2010; Jiang & Bansal, 2003; Odziemkowska, 2022; Luo, Kaul & Seo, 2018). Existing research has primarily focused on two broad categories of non-market tactics: (1) those that improve the firm's relationships with stakeholders, and (2) those that are more agnostic, circumventing direct interaction but still reducing scrutiny. These approaches are typically understood as mechanisms through which firms shape the information environment around them, limiting the flow or visibility of potentially damaging information.

In this chapter, we draw attention to a comparatively understudied set of non-market tactics—referred to here as suppression tactics—that function by actively disincentivizing informed stakeholders from speaking out. Rather than shaping stakeholder perceptions through engagement or symbolic action, suppression tactics seek to raise the expected costs of disclosure, thereby protecting the firm from scrutiny. A salient and widespread form of suppression is the threat of litigation. Litigation, or even the credible threat thereof, can serve as a deterrent to stakeholders who may otherwise publicize unfavorable information about a firm. In doing so, it contributes to maintaining or exacerbating information asymmetries that insulate firms from regulatory or reputational consequences.

This deterrent effect has material implications. In prior chapters, we focused on the idea that when firms face an increase in the costs associated with the use of suppression tactics, facilities may respond by either relocating harmful activities to jurisdictions where such tactics

are less costly to employ or altering how the facilities manage waste. Building on this insight, in this chapter we focus on the idea that the perceived threat of litigation not only shapes stakeholder behavior but also affects how regulators engage with firms. In particular, if regulators rely heavily on information provided by external actors to identify and prioritize enforcement, tactics that silence those actors can disrupt that process. This raises important questions about how litigation history shapes regulatory outcomes and the broader distribution of environmental harms.

To investigate this dynamic, we examine how firms respond to asymmetric regulatory scrutiny as a result of redesignation under the Clean Air Act's National Ambient Air Quality Standards (NAAQS). We first evaluate how facilities located in counties facing increased regulatory scrutiny shift their emissions of pollutants that are subject to and not subject to scrutiny. We then evaluate whether facilities affiliated with parent firms that have a history of litigation respond differently to this shift in regulatory attention. Consistent with expectations, we find that regulated facilities increase emissions of non-targeted air pollutants following a redesignation to non-attainment status. This suggests a displacement effect, where compliance in one domain coincides with heightened harm in another. However, we do not find that facilities shift their non-targeted air pollution based on how litigious the parent firm is.

In follow-up analyses, we find that the response to this regulation varies based on whether the facility is (or is not) a likely target of regulatory scrutiny. We find that ozone-producing facilities significantly reduce their ozone-related air pollution following increased regulatory scrutiny towards ground ozone-related pollutants. However, these facilities do not significantly shift their generation of non-ozone related pollution. Conversely, facilities that are *not* ozone producers significantly increase their non-ozone-related air pollution following

increased scrutiny towards ground ozone-related pollutants but do not significantly shift their generation of ozone-related pollutants. Across the various models, regardless of the type of facility and how we measure litigious behavior, we do not find that facilities significantly alter their generation of non-ozone-related pollution when faced with increased regulatory scrutiny related to ground ozone.

These findings highlight the limits of regulatory capacity and asymmetric scrutiny. That is, the results demonstrate that asymmetric regulatory scrutiny may result in unintended second-order consequences. Namely, asymmetric scrutiny may allow facilities to redistribute the negative externalities generated through the production process. However, unlike prior chapters, we do not find results suggesting that litigation as a suppression tactic influences how facilities respond to shifts in the broader environment. This suggests that while suppression tactics may alter the availability and flow of credible information, these tactics may not necessarily compromise the effectiveness of enforcement mechanisms that rely on third-party disclosures.

Future work could explore how the chilling effect of corporate litigation impacts a broader range of regulators. In this chapter, we focus specifically on the EPA and environmental negative externalities, but the dependency on third-party disclosures may differ based on the regulatory context. Another potential direction is exploring how litigation impacts a broader range of non-market actors, including community organizations, journalists, and advocacy groups. While this study focuses on regulatory enforcement, the deterrent impact of litigation may differ based on the identity or power of the targeted actor. For instance, lawsuits against large media outlets may discourage smaller ones from reporting on the firm, whereas litigation aimed at small grassroots movements may not generate the same ripple effects. Differentiating between these contexts could offer deeper insights into the boundary conditions under which

litigation serves as an effective suppression tactic and the broader implications for accountability in the non-market environment.

Tables

Table 3.1: Information on NAAQS Ozone Standards.

Final Rule Announcement Year	Date of Original Designation	Threshold (ppm)	Form
1997	June 15th, 2004	0.08	Annual fourth-highest daily maximum 8-hr concentration averaged over 3 years.
2008	July 20th, 2012	0.075	Annual fourth-highest daily maximum 8-hr concentration averaged over 3 years.
2015	August 3rd, 2018	0.07	Annual fourth-highest daily maximum 8-hr concentration averaged over 3 years.

Table 3.2: Descriptive Statistics and Correlations, Facility-Year Level.

Variables	Mean	SD	1	2	3	4	5	6
Log of ozone-related air pollution	2.87	4.28						
Log of non-ozone-related air pollution	3.82	4.34	0.288					
Log of toxic waste released onto land	0.87	2.97	0.081	0.380				
Log of toxic waste released into water	1.07	2.78	0.226	0.459	0.410			
Count of relevant lawsuits filed in the prior year	2.13	19.95	0.057	0.051	-0.003	0.034		
Redesignation to non-attainment	0.01	0.12	0.003	0.009	-0.010	-0.002	-0.004	
Unexpected redesignation to non-attainment	0.01	0.12	0.004	0.010	-0.010	-0.001	-0.004	0.987

Table 3.3: Regression Results: Effect of Non-Attainment Redesignation and Prior Litigation Filings on the Generation of Ozone and Non-Ozone Related Air Pollution.

Outcome Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Log of ozone-related air pollution	Log of ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>						
Redesignation to non-attainment	0.034 (0.092)		0.255 ** (0.084)		0.27 ** (0.085)	
Unexpected redesignation to non-attainment		0.047 (0.095)		0.268** (0.086)		0.285 ** (0.087)
Count of relevant lawsuits filed in the prior year					0.008*** (0.002)	0.008*** (0.002)
Redesignation to non-attainment X Count of relevant lawsuits filed in the prior year					-0.004 (0.006)	
Unexpected redesignation to non-attainment X Count of relevant lawsuits filed in the prior year						-0.005 (0.006)
<i>Controls</i>						
Log of toxic waste released onto land	-0.023 (0.016)	-0.023 (0.016)	0.333*** (0.013)	0.333*** (0.013)	0.334*** (0.013)	0.334*** (0.013)
Log of toxic waste released into the water	0.334 *** (0.02)	0.334 *** (0.02)	0.552 *** (0.014)	0.552 *** (0.014)	0.55 *** (0.0143)	0.55 *** (0.0143)
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	162,467	162,467	162,467	162,467	162,232	162,232
Adjusted R-squared	0.075	0.075	0.273	0.273	0.275	0.275
F-Test p-value	0.000	0.000	0.000	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Table 3.4: Regression Results: Effect of Non-Attainment Redesignation and Prior Litigation Filings on the Generation of Ozone and Non-Ozone Related Air Pollution by Ozone Producer Facilities.

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	Ozone Producer Facilities					
Outcome Variable	Log of ozone-related air pollution	Log of ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>						
Redesignation to non-attainment	-0.217 * (0.097)		0.22 (0.145)		0.217 (0.146)	
Unexpected redesignation to non-attainment		-0.218* (0.098)		0.235 (0.146)		0.236 (0.147)
Count of relevant lawsuits filed in the prior year					0.003 † (0.002)	0.003 † (0.002)
Redesignation to non-attainment X Count of relevant lawsuits filed in the prior year					0.009 (0.009)	
Unexpected redesignation to non-attainment X Count of relevant lawsuits filed in the prior year						0.006 (0.012)
<i>Controls</i>						
Log of toxic waste released onto land	0.012 (0.016)	0.012 (0.016)	0.251 *** (0.016)	0.251 *** (0.016)	0.252 *** (0.016)	0.252 *** (0.016)
Log of toxic waste released into the water	0.233 *** (0.013)	0.233 *** (0.013)	0.519 *** (0.015)	0.519 *** (0.015)	0.517 *** (0.015)	0.517 *** (0.015)
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	57,220	57,220	57,220	57,220	57,151	57,151
Adjusted R-squared	0.155	0.155	0.281	0.281	0.282	0.282
F-Test p-value	0.000	0.000	0.000	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Table 3.5: Regression Results: Effect of Non-Attainment Redesignation and Prior Litigation Filings on the Generation of Non-Ozone Related Air Pollution by Non-Ozone Producer Facilities

	Model 13	Model 14	Model 15	Model 16
	Non-Ozone Producers			
Outcome Variable	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>				
Redesignation to non-attainment	0.218 * (0.099)		0.237 * (0.099)	
Unexpected redesignation to non-attainment		0.222 * (0.102)		0.241 * (0.102)
Count of relevant lawsuits filed in the prior year			0.01 *** (0.003)	0.01 *** (0.003)
Redesignation to non-attainment X Count of relevant lawsuits filed in the prior year			-0.007 (0.007)	
Unexpected redesignation to non-attainment X Count of relevant lawsuits filed in the prior year				-0.007 (0.007)
<i>Controls</i>				
Log of toxic waste released onto land	0.393 *** (0.017)	0.393 *** (0.017)	0.393 *** (0.017)	0.393 *** (0.017)
Log of toxic waste released into the water	0.529 *** (0.024)	0.529 *** (0.024)	0.53 *** (0.024)	0.53 *** (0.024)
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
N	105,171	105,171	105,003	105,003
Adjusted R-squared	0.256	0.256	0.258	0.258
F-Test p-value	0.000	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Table 3.6: Regression Results: Effect of Non-Attainment Redesignation and Timing of Prior Litigation Filings (2, 3, and 4 years prior) on the Generation of Non-Ozone Related Air Pollution.

	Model 17	Model 18	Model 19
Outcome Variable	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>			
Redesignation to non-attainment	0.267 ** (0.085)	0.268 ** (0.085)	0.269 ** (0.085)
Count of relevant lawsuits filed two years prior	0.008 *** (0.002)		
Count of relevant lawsuits filed three years prior		0.008 *** (0.002)	
Count of relevant lawsuits filed four years prior			0.008 *** (0.002)
Redesignation to non-attainment X Count of relevant lawsuits filed two years prior	-0.002 (0.006)		
Redesignation to non-attainment X Count of relevant lawsuits filed three years prior		-0.002 (0.006)	
Redesignation to non-attainment X Count of relevant lawsuits filed four years prior			-0.002 (0.006)
<i>Controls</i>			
Log of toxic waste released onto land	0.334 *** (0.013)	0.334 *** (0.013)	0.334 *** (0.013)
Log of toxic waste released into the water	0.55 *** (0.014)	0.55 *** (0.014)	0.55 *** (0.014)
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
N	162,232	162,232	162,232
Adjusted R-squared	0.275	0.275	0.275
F-Test p-value	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Table 3.7: Regression Results: Effect of Unexpected Non-Attainment Redesignation and Timing of Prior Litigation Filings (2, 3, and 4 years prior) on the Generation of Non-Ozone Related Air Pollution.

	Model 20	Model 21	Model 22
Outcome Variable	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>			
Unexpected Redesignation to non-attainment	0.284 ** (0.087)	0.284 ** (0.087)	0.284 ** (0.087)
Count of relevant lawsuits filed two years prior	0.008 *** (0.002)		
Count of relevant lawsuits filed three years prior		0.008 *** (0.002)	
Count of relevant lawsuits filed four years prior			0.008 *** (0.002)
Unexpected Redesignation to non-attainment X Count of relevant lawsuits filed two years prior	-0.004 (0.006)		
Unexpected Redesignation to non-attainment X Count of relevant lawsuits filed three years prior		-0.004 (0.006)	
Unexpected Redesignation to non-attainment X Count of relevant lawsuits filed four years prior			-0.004 (0.006)
<i>Controls</i>			
Log of toxic waste released onto land	0.334 *** (0.013)	0.334 *** (0.013)	0.334 *** (0.013)
Log of toxic waste released into the water	0.55 *** (0.014)	0.55 *** (0.014)	0.55 *** (0.014)
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
N	162,232	162,232	162,232
Adjusted R-squared	0.275	0.275	0.275
F-Test p-value	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Table 3.8: Regression Results: Effect of Non-Attainment Redesignation and Cumulative Prior Litigation Filings (across 2, 3, and 4 years) on the Generation of Non-Ozone Related Air Pollution.

	Model 23	Model 24	Model 25
Outcome Variable	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>			
Redesignation to non-attainment	0.269 ** (0.085)	0.268 ** (0.085)	0.268 ** (0.085)
Count of relevant lawsuits filed in the last two years	0.004 *** (0.001)		
Count of relevant lawsuits filed in the last three years		0.003 *** (0.001)	
Count of relevant lawsuits filed in the last four years			0.002 *** (0.0004)
Redesignation to non-attainment X Count of relevant lawsuits filed in the last two years	-0.001 (0.003)		
Redesignation to non-attainment X Count of relevant lawsuits filed in the last three years		-0.001 (0.002)	
Redesignation to non-attainment X Count of relevant lawsuits filed in the last four years			-0.001 (0.002)
<i>Controls</i>			
Log of toxic waste released onto land	0.334 *** (0.013)	0.334 *** (0.013)	0.334 *** (0.013)
Log of toxic waste released into the water	0.55 *** (0.014)	0.55 *** (0.014)	0.55 *** (0.014)
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
N	162,232	162,232	162,232
Adjusted R-squared	0.275	0.275	0.275
F-Test p-value	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

Table 3.9: Regression Results: Effect of Unexpected Non-Attainment Redesignation and Cumulative Prior Litigation Filings (across 2, 3, and 4 years) on the Generation of Non-Ozone Related Air Pollution.

	Model 26	Model 27	Model 28
Outcome Variable	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution	Log of non-ozone-related air pollution
<i>Independent Variable</i>			
Unexpected Redesignation to non-attainment	0.285 ** (0.087)	0.284 ** (0.087)	0.284** (0.087)
Count of relevant lawsuits filed in the last two years	0.004 *** (0.001)		
Count of relevant lawsuits filed in the last three years		0.003 *** (0.001)	
Count of relevant lawsuits filed in the last four years			0.002 *** (0.0004)
Unexpected Redesignation to non-attainment X Count of relevant lawsuits filed in the last two years	-0.002 (0.003)		
Unexpected Redesignation to non-attainment X Count of relevant lawsuits filed in the last three years		-0.002 (0.002)	
Unexpected Redesignation to non-attainment X Count of relevant lawsuits filed in the last four years			-0.001 (0.002)
<i>Controls</i>			
Log of toxic waste released onto land	0.334*** (0.013)	0.334*** (0.013)	0.334*** (0.013)
Log of toxic waste released into the water	0.55*** (0.014)	0.55*** (0.014)	0.55*** (0.014)
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
N	162,232	162,232	162,232
Adjusted R-squared	0.275	0.275	0.275
F-Test p-value	0.000	0.000	0.000

(† p<0.1, * p<0.05, ** p<0.01, *** p<0.001)

Note: Standard errors are in parentheses. All models are clustered at the facility level.

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