

# 10. Institutional pressure and environmental management practices

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## INTRODUCTION

Why do some firms adopt environmental management practices that go beyond regulatory compliance? Is the adoption of these practices driven by potential performance outcomes or by institutional pressures? Several articles have reported the findings of surveys that have asked firm managers what motivated them to adopt environmental practices (e.g., Florida and Davison 2001; Lawrence and Morell 1995). For example, Lawrence and Morell found that environmentally proactive firms were motivated by regulations, reducing costs, avoiding being targeted by environmental non-governmental organizations, and critical events. Florida and Davison showed that facilities that have adopted environmental management systems (EMSs) are motivated by the bottom-line quest to increase productivity as well as by government regulation. However, these articles did not provide a clear understanding of the conditions under which these various pressures impact firm behavior. As others recently pointed out, 'our understanding of factors that foster strong environmental management practices within a firm, particularly with operations at the plant level, still remains limited' (Klassen 2001, p. 257).

Some research has analyzed specific factors driving the adoption of environmental strategies such as competitive forces (Aragón-Correa 1998; Christmann 2000; Dean and Brown 1995; Hart 1995; Nehrt 1996; Nehrt 1998; Russo and Fouts 1997; Sharma and Vredenburg 1998), the influence of organizational context and design (Ramus and Steger 2000; Sharma 2000; Sharma, Pablo and Vredenburg 1999) and organizational learning (Marcus and Nichols 1999). Other analyses have focused on the individual or managerial level, examining the role of leadership values (Egri and Herman 2000), environmental champions (Andersson and Bateman 2000), managerial attitudes (Cordano and Frieze 2000), management

interpreting environmental issues as threats or opportunities (Sharma 2000; Sharma et al. 1999) and managerial risk propensity (Sharma and Nguan 1999). While each has provided a piece of the puzzle, this chapter offers a more comprehensive perspective that not only evaluates the relative influences of external stakeholders exerting institutional pressures on firms but also depicts how firm and industry effects moderate these pressures.

Two theories provide insight on why firms adopt environmental management practices. The economic approach suggests that firms adopt management practices based on their anticipated performance outcome. Assuming that managers exhibit rational behavior when they adopt 'beyond compliance' practices, this line of research seeks to identify the circumstances when it pays to be 'green' (King and Lenox 2001; Konar and Cohen 1997; Russo and Fouts 1997). A second line of research, rooted in institutional sociology, proposes that firms respond to institutional pressures. The institutional sociology framework emphasizes the importance of regulatory, normative and cognitive factors that affect firms' decisions to adopt a specific organizational practice, above and beyond the practice's technical efficiency. Institutional theory emphasizes legitimation processes and the tendency for institutionalized organizational structures and procedures to be taken for granted, regardless of their efficiency implications (Hoffman and Ventresca 2002).

Building on the institutional framework, this chapter argues that firms adopt heterogeneous sets of environmental management practices for two main reasons. First, because they face varying levels of institutional pressures exerted by external stakeholders. Second, because they interpret these pressures differently due to plant and parent company characteristics. In the authors' model, managers of different plants are subject to the same level of institutional pressures but they are expected to perceive these pressures differently due to disparities in their parent companies' organizational structure, strategic position and financial and environmental performance. This difference between 'objective' and 'perceived' pressure leads to different calculations and responses. The adoption of environmental management practices by firms varies therefore not only due to different levels of institutional pressures but also because of the process that transforms objective pressures into perceived pressures.

## INSTITUTIONAL THEORY

Institutional theory emphasizes the role of social and cultural pressures imposed on organizations that influence organizational practices and



structures (Scott 1992). DiMaggio and Powell (1983) argue that managerial decisions are strongly influenced by three institutional mechanisms – coercive, mimetic and normative isomorphism – that create and diffuse a common set of values, norms and rules to produce similar practices and structures across organizations that share a common organizational field (DiMaggio and Powell 1983).<sup>1</sup>

Jennings and Zandbergen (1995) were amongst the first to apply institutional theory to explain firms' adoption of environmental management practices. They argue that because coercive forces – primarily in the form of regulations and regulatory enforcement – have been the main impetus of environmental management practices, firms throughout each industry have implemented similar practices (Jennings and Zandbergen 1995). Consistent with most institutional theorists, Jennings and Zandbergen claim that firms that share the same organizational field are affected in similar ways by institutional forces that emanate from them. They cite the examples of how the Three Mile Island crisis undermined the legitimacy of all firms in the US nuclear power industry, and how the discovery that chlorofluorocarbons (CFCs) depleted stratospheric ozone undermined the legitimacy of manufacturing and using those products and soon led to institutional coercive forces via the establishment of the Montreal Protocol to phase out the manufacture of CFCs.

Delmas (2002) proposed an institutional perspective to analyze the drivers of the adoption of the international environmental management system standard ISO 14001 in Europe and in the United States. She describes how the regulatory, normative and cognitive aspects of the institutional environment within a specific country affect the costs and potential benefits of ISO 14001 adoption, and therefore explain differences in adoption rates across countries.

Other researchers have explored how companies operating in different organizational fields are subject to different institutional pressures. As a result, different practices become commonplace. For example, distinct levels of coercive pressures are exerted upon different industries, which may lead to different environmental strategies (Milstein, Hart and York 2002). Oliver notes that institutionalized norms and practices can erode 'when organizational constituents become more geographically dispersed, non-interacting, or autonomous' (1991, p. 577), such as when firms enter new markets or diversify into new products.

While such studies examine dynamic and cross-industry institutional forces, they avoid the question more fundamental to strategic management: why do organizations within the same organizational field pursue different strategies, despite experiencing isomorphic institutional pressures? In other words, how might institutional forces lead to heterogeneity, rather than



homogeneity, within an industry? Hoffman (2001) argues that while organizations do not simply react to the pressures dictated by the organizational field, they also do not act completely autonomously without the influence of external bounds. Institutional and organizational dynamics are tightly linked. A few researchers have begun to investigate this question empirically (D'Aunno, Succi and Alexander 2000; Levy and Rothenberg 2002).

Levy and Rothenberg describe several mechanisms by which institutionalism can encourage heterogeneity. First, they argue that institutional forces are transformed as they permeate an organization's boundaries because they are filtered and interpreted by managers according to the firm's unique history and culture. Second, they describe how an institutional field may contain conflicting institutional pressures that require prioritization by managers. Third, they describe how multinational and diversified organizations operate within several institutional fields – both at the societal and organizational levels – which expose them to different sets of institutionalized practices and norms.

D'Aunno et al. explore the circumstances under which organizations are more likely to abandon institutionalized structures or practices in favor of new ones, such as by diversifying into new services. They find that market forces (proximity to competitors), institutional forces (poor compliance with government regulations, being a member of a multidivisional firm), and mimicry of changes observed in other organizational fields each encourage strategic change that diverges from institutional norms.

It is hypothesized here that organizational structure, strategic positioning and performance will affect how firms perceive institutional pressures and how they decide to respond. Individuals in organizations focus on different aspects of the firm's external and internal environments, depending on the cognitive frame through which they look at the world (Hoffman 2001). Cognitive frames are mental representations of a particular aspect of the world that are used by individuals to interpret and make sense of their world. Frames can come to be collectively held within organizations, especially through the influence of the organizational leader (Barr, Stimpert and Huff 1992; Weick and Roberts 1993).

## INSTITUTIONAL PRESSURES

This section describes a model that links institutional pressures to organizational characteristics to explain the adoption of environmental management practices at the plant level. Figure 10.1 illustrates the model.

This figure shows that plant-level managers' perceptions of institutional pressures are a function of stakeholders' actions but are moderated by the

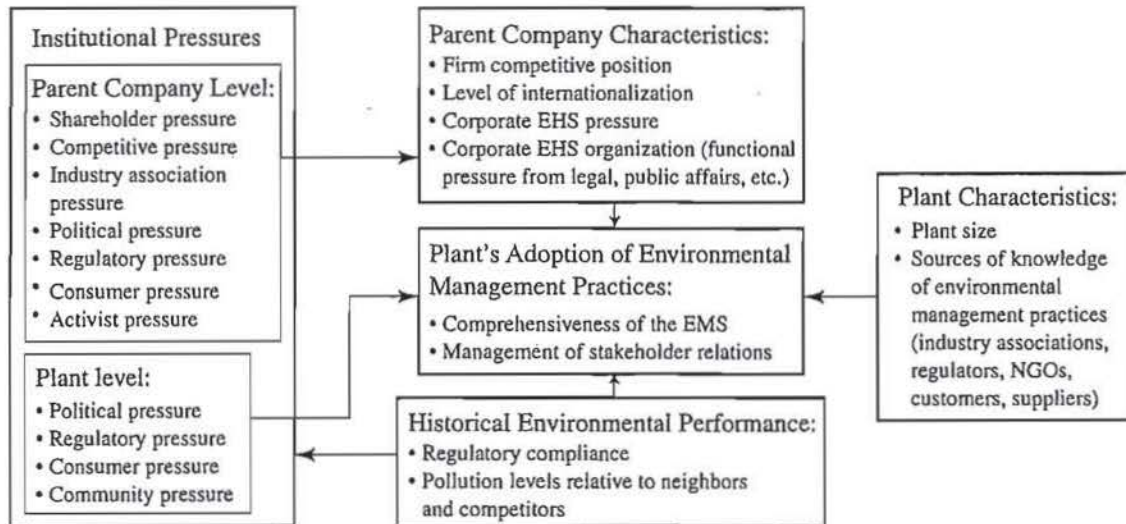


Figure 10.1 A model of institutional pressures moderated by parent company and plant characteristics

organizational characteristics of the plant and the parent company as well as the strategic positioning of the parent company. This approach complements institutional theory as it encompasses the diversity of both external and internal institutions exerting environmental pressures on the organization and the corresponding organizational responses developed within each company. The authors describe how these coercive and normative pressures can affect the adoption of environmental management practices by plants, and focus on a subset of the institutional actors identified by Hoffman (2001) who they believe are most likely to directly influence environmental practices at the plant level: politicians, regulators, customers, competitors and local communities. The actors focused upon are important to consider when assessing a firm's environmental performance (Lober 1996).

### Political and Regulatory Pressures

Perhaps the most obvious stakeholders that influence firms' adoption of environmental practices are various government bodies. Legislation authorizes agencies to promulgate and enforce regulations, a form of coercive power. Many researchers have focused on the influence of enforced legislation and regulations on firms' environmental practices (Carraro, Katsoulacos and Xepapadeas 1996; Delmas 2002; Majumdar and Marcus 2001; Rugman and Verbeke 1998). In particular, Delmas (2002) found that governments play an important role in firms' decision to adopt the international EMS standard ISO 14001. First, governments can act as a coercive force by sending a clear signal of their endorsement of ISO 14001 by, for example,



enhancing the reputation of adopters. Second, government can help reduce information and search costs linked to the adoption of the standard by providing technical assistance to potential adopters. In this chapter, political pressure is referred to as the level of political support for broader or more stringent regulations. Regulatory pressure represents the extent to which regulators threaten to or actually impede a company's operations.

### **Customer and Competitive Pressures**

In addition to government actors, firms may facilitate coercive and mimetic isomorphism. For example, multinationals are widely recognized as key agents in the diffusion of practices across national borders by transmitting organizational techniques to subsidiaries and other organizations in the host country (Arias and Guillen 1998). Firms may also mimic the practices that successful leading firms have adopted. In addition, firms respond to customer requirements. The customer-supplier relationship is perhaps the primary mechanism through which quality management standards have diffused (Anderson, Daly and Johnson 1999). Several studies have found that firms that have adopted environmental management practices are motivated by customer concerns. A survey of the largest Canadian firms showed that customer pressure was the most cited source of pressure to adopt an environmental management plan just after government pressure (Henriques and Sadorsky 1996). Khanna and Anton (2002) found that US companies that sell final goods adopt more comprehensive EMSs than companies that sell intermediate goods. This suggests that retail consumers exert more pressure on companies to adopt environmental management practices than commercial and industrial customers. Christmann and Taylor (2001) showed that customers in developed countries have influenced companies in China to improve their environmental compliance and adopt the ISO 14001 Environmental Management System (EMS) standard.

### **Community and Environmental Interest Group Pressures**

Local communities can also impose coercive pressure on companies through their vote in local and national elections, through their environmental activism within environmental non-government organizations (NGOs), and through citizen lawsuits. Several studies have found that company decisions to adopt environmental management practices are influenced by the desire to improve or maintain relations with their communities. The majority of 200 corporate general counsels surveyed in 1993 indicated that 'pressure from community activists had affected their companies' conduct – sometimes forcing a reduction in pollution' (Lavelle 1993).



Another study found that community group pressure influenced companies to adopt an environmental plan (Henriques and Sadosky 1996).<sup>2</sup> Florida and Davison (2001) investigated why facilities had adopted EMSs and instituted pollution prevention programs. They found that the adoption of EMSs and pollution prevention programs was positively correlated with firms' active engagement with community stakeholders. Another study based on a survey of ISO 14001 certified companies across 15 countries found that one of the strongest motivating factors to pursue certification was the desire to be a good neighbor (Raines 2002).

Some communities may be better able than others to encourage facilities to adopt environmental practices. Communities with larger minority populations, lower incomes and less education have greater exposure to both criteria pollutants<sup>3</sup> and toxic emissions (Arora and Cason 1999; Brooks and Sethi 1997; Khanna and Vidovic 2001).<sup>4</sup> Greater declines in toxic emissions have been observed among facilities located in communities with higher voting rates (Hamilton 1999) and in states with higher membership in environmental interest groups (Maxwell, Lyon and Hackett 2000). Hamilton asserts that voting rates are a proxy for the propensity of residents to pursue collective action. Toxic emission exposures declined in communities with falling proportions of minorities and growing proportions of voter turnout (Brooks and Sethi 1997).

Maxwell et al. (2000) assert that higher environmental interest group membership levels indicate a community's pro-environmental stance and greater propensity to use these organizations to lobby for more stringent regulation. As such, the authors conclude that higher membership rates provide a credible threat of increased regulation, which in turn drives firms to self-regulate. Some researchers have begun examining whether socioeconomic community characteristics are associated with facilities' decision to adopt environmental management practices. One study examined facility-level adoption of a United States Environmental Protection Agency (US EPA) voluntary program, and found that adoption was more likely in communities with higher median household income (Khanna and Vidovic 2001).

Many of the firms studied by Lawrence and Morell (1995), especially the larger ones, were motivated to improve their environmental performance by their concern over 'environmental organizations that had aggressively publicized firms' lapses in environmental responsibility' (p. 111). There are many examples where companies have amended their environmental practices in response to environmental group pressures. For instance, after Mitsubishi Corporation was subject to a protracted consumer boycott led by Rainforest Action Network (RAN), Mitsubishi announced it would no longer use old-growth forest products (World Rainforest Movement 1998). After a grassroots campaign that included hundreds of demonstrations,



thousands of postcards and phone calls to Staples corporate headquarters and regional offices, local and national media attention, and a shareholder's resolution, a coalition of environmental groups persuaded the company to cease buying paper products made from wood harvested from endangered forests and to increase sales of recycled products (Lazaroff 2002).

### **Industry Pressure**

Market concentration within an industry may also affect the rate of diffusion of environmental management practices. If an industry is dominated by a few big players that require their suppliers to adopt particular environmental management practices, this is likely to lead to a greater diffusion of these practices than if the industry were more fragmented. This partially explains the particularly high adoption of common quality and environmental practices among automotive suppliers in the United States.

Institutional researchers have also argued that organizations are more likely to mimic the behavior of other organizations that are tied to them through networks (Guler, Guillen and MacPherson 2002). Several studies have found that industry associations have motivated firms to adopt environmental management practices. Kollman and Prakash (2002) examined why the United Kingdom, Germany and the United States have such different rates of EMS certification. They found that the decision of whether to pursue certification, and which standard to certify against (ISO 14001 or the European Union's Eco-Audit and Management Scheme) was strongly influenced by stakeholder pressures from industry associations in addition to regional chambers of commerce, suppliers and regulators.

### **The Moderating Effects of Firm Characteristics**

Within the same industry, firms may be subjected to different levels of institutional pressures. For example, multinational corporations are often held to higher standards for social and environmental responsibility than national companies because they are subject to the additional pressure of stakeholders from foreign countries (Zyglidopoulos 2002). Furthermore, the visibility of leading firms often subjects them to more pressure. For example, Nike, McDonald's, Starbucks and Home Depot have been targeted by social and environmental activists partially because of their market leadership position. Furthermore, firms with historically poor environmental records are often subjected to more scrutiny by their local communities and regulators. Thus, multinational companies, market leaders and firms with poor environmental records may have more to gain by developing sophisticated



mechanisms to anticipate and manage external pressures. Firms that operate many facilities have more to gain by maintaining a reputation for good relations with governments and communities, since such reputations may spill over to affect these relations in other locales (Delmas 2002; DiMaggio and Powell 1983).

### **Interactions**

The interaction between these institutional pressures is likely to moderate their individual influence on company practices. For example, the pressure from environmental groups may encourage the formulation of more stringent regulations. This, in turn, can induce industry leaders to encourage laggard firms to adopt environmental practices. Following the 1984 Bhopal chemical accident and facing mounting pressures to create more stringent safety and environmental regulations, the chemical industry developed the Responsible Care program. Following the Three Mile Island accident, the nuclear power industry created the Institute of Nuclear Power Operations (INPO) to develop standards, conduct inspections and investigate accidents. INPO was created to prevent laggards from endangering the legitimacy of the entire US nuclear power industry (Gunningham and Sinclair 2002) and has subsequently played a significant role in improving the safety of nuclear power plant operations (Rees 1994).

## **PERCEPTION OF PRESSURE**

Firm and plant characteristics can affect not only the level of institutional pressure exerted on a plant but also how plant managers perceive institutional pressures. This is important because, even if institutional pressures were exerted at the same level on two facilities, these two plants may well perceive and respond differently.

First, institutional pressures are exerted at various levels of a firm. For example, community pressures are often directly targeted at a particular plant, while shareholder pressures target the corporate level. Second, organizations channel these institutional pressures to different subunits, each of which frames these pressures according to their typical functional routines (Hoffman 2001). For example, legal departments interpret pressures in terms of risk and liability, public affairs does so in terms of company reputation, environmental affairs in terms of ecosystem damage and regulatory compliance, and sales departments in terms of potential lost revenues. Consequently, the pressure is managed according to the cultural frame of the unit that receives it: either as an issue of regulatory



compliance, human resource management, operational efficiency, risk management, market demand, or social responsibility (Hoffman 2001). One implication of this process is that the internal organization of the firm matters because it influences how institutional pressures are perceived. Plant managers may perceive these external pressures more intensively (and respond to them accordingly) in firms where they have more open channels of communications with the immediate receptor of pressures (corporate functional areas responsible for finance, law, strategy, communication and the environment).

Information sources may also play a role in cultural framing. Environmental managers may learn about management practices from a variety of sources. For example, a plant may learn in an industry association meeting about a pending boycott of a competitor because of its environmental performance. The source from which managers get their information on environmental management practices can also influence their decision to adopt environmental management practices.

A firm's historical environmental performance may also influence both how it perceives stakeholder pressures and how it responds to them. Firms whose reputations have suffered from pollution accidents may be more sensitive to environmental issues than other companies (Prakash 2000). After major accidents, firms may rearrange their organizational structure to prevent recurrences and to facilitate more rapid responses. Such reorganizations may also begin actively engaging with those stakeholders from whom the firm expects more scrutiny (e.g., regulators, environmental activities). These reorganizations may also occur within competing firms if heightened institutional pressures spill beyond the firm that experienced the accident. For example, the disclosure of environmental information in the annual reports of oil companies increased significantly in the years following the Exxon Valdez oil spill (Patten 1992). Similarly, following its chemical disaster in Bhopal, Union Carbide along with other large chemical companies developed and promoted the Responsible Care program to chemical industry associations in Canada and the United States. This set of environment, health and safety (EHS) management practices was meant to relieve pressure for more stringent regulations that could adversely affect the entire chemical industry (Prakash 2000). Industry associations across Europe and Asia have subsequently adopted the program.

## FIRM RESPONSES TO INSTITUTIONAL PRESSURES

Firms can adopt various types of environmental management practices in response to institutional pressures. Sharma (2000) distinguished between



environmental strategies of conformance and voluntary environmental strategies. Conformance strategies involve complying with regulations and adopting standard industry practices, while voluntary environmental strategies seek to reduce the environmental impacts of operations beyond regulatory requirements (Sharma 2000). Several examples are presented in Appendix 10.1.

Voluntary strategies involve creative problem-solving and collaborative interactions with stakeholders (Sharma and Vredenburg 1998). For example, firms adopting voluntary approaches can implement EMS elements by creating an environmental policy, developing a formal training program, or instigating routine environmental auditing. In addition, management can choose to have the comprehensiveness of their EMS validated by a third party by pursuing ISO 14001 certification. Management can also convey the importance of environmental management by including it as a criterion in employee performance evaluations (Nelson 2002).

Companies can also seek to improve relations with regulators and signal a proactive environmental stance by participating in government or industry sponsored voluntary programs. Indeed, the US EPA, some industry associations and several non-governmental organizations (NGOs) have recently created voluntary standards to provide incentives for firms to go beyond minimal regulatory requirements. For example, the US EPA has developed several voluntary agreements between governmental agencies and firms to encourage technological innovation or reduce pollution while providing relief from particular procedural requirements (Delmas and Terlaak 2001, p. 44). Industry programs include Responsible Care and Sustainable Slopes, while NGO programs include the Natural Step and the Global Reporting Initiative Guidelines.

Companies can also work directly with customers and suppliers to improve their environmental performance. Furthermore, they may engage in 'systematic communication, consultation and collaboration with their key stakeholders . . . (and) host stakeholder forums and establish permanent stakeholder advisory panels at either the corporate level, the plant level, or to address a specific issue. BT, Unilever, DuPont, Dow and the Suez Group all offer examples of such advisory structures' (Nelson 2002, p. 18).

## CONCLUSION

This chapter provides a model that describes how stakeholders including regulators, customers, activists, local communities and industry associations impose institutional pressures on plants and their parent companies. It also



suggests how a variety of plant and parent company factors moderate how managers perceive and act upon these pressures. Moderating factors include historical environmental performance, the competitive position of the parent company and the organizational structure of the plant.

The approach in this chapter complements institutional theory as it suggests that both institutional pressures and organizational characteristics influence organizations to adopt environmental management practices. Firm and plant characteristics are viewed as moderating factors, as they are expected to magnify or diminish the influence of institutional pressures. Testing the model in both the American and international contexts presents an opportunity for future research. In the American context, information about compliance strategies is readily available at the plant level. Data on voluntary strategies, however, would have to be gathered directly from companies. Although there are empirical studies analyzing the impact of coercive pressures (such as government pressure) on firm strategies, the field is open to empirical studies investigating the role of normative pressures on firm strategies.

## APPENDIX 10.1 EXAMPLES OF ENVIRONMENTAL MANAGEMENT PRACTICES

- *Environmental communication.* Includes incorporation of the environmental policy into an annual report, publication of an environmental report that may adhere to the Global Reporting Initiative guidelines and that may be verified by a third-party organization.
- *EMS comprehensiveness.* Includes a written environmental policy, internal environmental audits, third-party environmental audits, various levels of formality and comprehensiveness of environmental training programs, ISO 14001 certification.
- *Employees evaluation.* Includes environmental management as an element of performance evaluation criteria.
- *Product design.* Includes consideration of energy efficiency, recyclability and toxicity as product design attributes.
- *Stakeholder engagement.* Includes extent to which concerns of various stakeholders (e.g., customers, community, activists) are addressed via ad hoc ongoing meetings, development of effective processes to receive and respond to stakeholder concerns about environmental issues, procedures to identify key issues of concern to stakeholders. Also includes participation in US EPA voluntary programs such as Green Lights, Climate Wise, Waste Wise, Energy Star, Environmental Leadership Program, Green Buildings, Design for Environment,



Project XL, Commonsense Initiative. Also includes extent to which environmental management is viewed as an important criterion for selecting suppliers.

- *Green accounting.* Includes extent to which regulatory compliance costs and potential liability (e.g. fines, clean-up costs) are included in managerial decision-making.

## NOTES

1. An organizational field is defined as 'those organizations that . . . constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products. The virtue of this unit of analysis is that it directs our attention. . . to the totality of relevant actors' DiMaggio and Powell (1983).
2. On the other hand, another study failed to find any relationship between community pressure and the likelihood that a firm would be the target of an environmental lawsuit brought by US EPA or the Department of Justice (Kassinis and Vafeas 2002).
3. Criteria pollutants are regulated by the US Clean Air Act and include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter and lead.
4. Whether this correlation is better explained by moral hazard, where companies pollute more in communities that are less able to respond by exerting institutional pressures, or adverse selection, where disproportionate numbers of wealthier and white households flee from these communities once facilities locate there, is a subject of debate.

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