

Socioemotional Wealth and Corporate Responses to Institutional Pressures: Do Family-Controlled Firms Pollute Less?

Pascual Berrone

IESE Business School

Cristina Cruz

Instituto de Empresa

Business School

Luis R. Gomez-Mejia

Texas A&M University

Martin Larrazakintana

Universidad Pública

de Navarra

This paper compares the environmental performance of family and nonfamily public corporations between 1998 and 2002, using a sample of 194 U.S. firms required to report their emissions. We found that family-controlled public firms protect their socioemotional wealth by having a better environmental performance than their nonfamily counterparts, particularly at the local level, and that for the nonfamily firms, stock ownership by the chief executive officer (CEO) has a negative environmental impact. We also found that the positive effect of family ownership on environmental performance persists independently of whether the CEO is a family member or serves both as CEO and board chair. ●

An impressive volume of research in recent years has documented the role of sociopolitical factors in how firms respond to institutional pressures. Much of this work focuses on self-serving activities aimed at promoting agendas beneficial to particular parties or stakeholders rather than the firm as a whole. These behaviors may allow players greater access to the firm's material resources or residual claims and/or prevent aversive outcomes such as termination, exclusion from elite groups, loss of influence, and reduced bargaining power relative to other stakeholders with conflicting interests (Westphal and Bednar, 2008). Scholars have examined how these players—usually the chief executive officer (CEO) but sometimes other parties as well, such as the top management team and board members—successfully use a variety of ceremonial approaches to pursue their private interests through symbolism, impression management, press releases, ingratiation, persuasion, hiring of consultants, overt public actions, and the like to influence key constituencies such as institutional investors, financial analysts, government agencies, board of directors, and major shareholders (e.g., Tosi and Gomez-Mejia, 1989; Elsbach, 1994; Westphal and Zajac, 1998; Porac, Wade, and Pollock, 1999; Siegel and Brockner, 2005; Westphal and Stern, 2006).

At the core of this stream of research is the notion that powerful parties within the firm strive to give the appearance of acquiescence to institutional pressures for personal gains—greater compensation, access to important networks, entrenchment, neutralization of internal and external control mechanisms, and such—without having to substantially implement formal policies to address constituents' demands—what Westphal and his colleagues referred to as “decoupling” (see Westphal and Zajac, 1994; Zajac and Westphal, 1995; Westphal and Zajac, 1998; Westphal and Fredrickson, 2001; Westphal and Graebner, 2010). Contrary to this sociopolitical perspective, in which parties with a contractual relationship to the firm rely on subtle and sometimes overt manipulations to gain personal advantages, family owners are likely to be guided by a very different set of motives, namely, the preservation of socioemotional wealth, or the stock of affect-related value that the family has invested in the firm. Hence, when a firm is under the control of a family, it is more likely to respond to institutional pressures in a more substantive manner than is its nonfamily counterpart, particularly when the firm concentrates its operations in a local area and the institutional

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pressures involve environmental actions, which have great impact on the local area.

Most environmental research in the organizational sciences has been conducted under the rubric of institutional theory, according to which institutional demands induce firms to adopt environment-friendly policies, partly because of coercive pressures—for instance, the threat of government sanctions or fear of stricter regulations—but also because social expectations or norms define appropriate practices or behaviors. Thus organizational decisions such as investments in pollution prevention may be driven “not by processes of interest mobilization but by preconscious acceptance of institutionalized values or practices” (DiMaggio, 1988: 17). Oliver (1991: 146) called “economic instrumentality” an “afterthought” in such decisions, but she also noted that not all organizations respond equally to the isomorphic pressures of coercion (the ability of external forces to inflict pain on the organization for noncompliance), normatization (societal values impinging on the firm), and mimetism (the tendency to imitate the practices of other firms operating within a given institutional field). It is not clear, however, what makes some firms more eager to comply in a substantive way than others.

Notably lacking from the institutional literature in general and the environmental literature in particular is explicit attention to the role of diverse principals in enacting varying responses to institutional pressures. Consistent with the sociopolitical perspective noted above, classical writings by managerialists such as Berle and Means (1932), Baumol (1959), Marris (1964); subsequent theoretical developments by agency writers such as Jensen and Meckling (1976), Holmstrom (1979), Fama and Jensen (1983); and empirical studies by McEachern (1975, 1976), Gomez-Mejia, Tosi, and Hinkin (1987), Dyl (1988, 1989), Tosi and Gomez-Mejia (1989), Kroll, Wright, and Theerathorn (1993), and Werner, Tosi, and Gomez-Mejia (2005), among many others, have highlighted the internal struggle among corporate actors who often scramble to pursue their own goals—personal prestige, the pursuit of “pet projects,” the satisfaction of narcissistic needs, increased influence through greater firm size, and risk minimization—perhaps at the expense of other stakeholders. While classical institutional theorists have emphasized external pressures and constraints on the firm and the advisability of adhering to societal rules and norms (Meyer and Rowan, 1977; DiMaggio and Powell, 1983), more recent work emphasizes “the extent to which [institutional] requirements are subject to interpretation, manipulation, revision, and elaboration by those subject to them” (Scott, 2008: 434). This raises the question of what happens when different actors within the firm have various degrees of discretion and divergent motives for handling institutional demands. Do some actors value “social worthiness” (legitimacy derived from conformity to environmental expectations) more than others do—or, to use Thornton and Ocasio’s (1999) terminology, do some actors respond to societal demands in a unique manner by applying their own “institutional logic”—and does the firm’s substantive conformity depend on who holds a controlling interest within it?

We address the questions posed above in the context of firms operating in a polluting industry, representing a homogeneous and strong institutional field (Berrone and Gomez-Mejia, 2009). Though strong institutional fields tend to engender pressures that are perceived as homogenous, firms will still exhibit a range of responses to environmental concerns (Murrillo-Luna, Garcés-Ayerbe, and Rivera-Torres, 2008). This variation in responses is likely to be a function of who controls the organization and how much the controlling party values achieving social worthiness apart from any economic gains. From a socioemotional perspective, how far a given firm responds or fails to respond in a substantive way to institutional demands for a cleaner environment is determined fundamentally by whose interest is most likely to prevail. When family owners are in control of the corporation, the firm is more likely to bow to these environmental pressures because there is a socioemotional reward for the family, even if there is no evidence that substantive compliance serves its economic interests. Though Oliver (1991) suggested that defiance of institutional pressures increases as economic gains from conformity decrease, family owners should feel more vulnerable to negative assessments by outsiders and pay greater attention to what others think of them. Because family owners tend to place greater value on social legitimacy for its own sake independent of financial considerations, they are more likely to voluntarily drive the firm into unilateral conformity to environmental demands, that is, higher than that of competitors; hence, when they control the firm, observed environmental performance should be better than when nonfamily interests are dominant.

FAMILY CONTROL AND ENVIRONMENTAL PERFORMANCE

One of the main reasons why institutional theory has been extensively used in studies of environmental management (e.g., Jennings and Zandbergen, 1995; Hoffman, 1997, 1999, 2000; Delmas, 2002; Bansal and Clelland, 2004; Bansal, 2005) is that it explains the implementation of practices without obvious economic value (Meyer and Rowan, 1977; DiMaggio and Powell, 1983), such as environment-preserving initiatives. Although some scholars have adduced evidence for a positive association between good environmental performance and profitability (Klassen and McLaughlin, 1996; Dowell, Hart, and Yeung, 2000; King and Lenox, 2002), others have claimed a negative association (Jaffe et al., 1995; Hart and Ahuja, 1996; Sarkis and Cordeiro, 2001). The latter generally argue that if investors cared enough about pollution, firms would have a market-based incentive to reduce toxic emissions and therefore little contamination would exist. In a review of empirical studies on the association between social initiatives and firm performance conducted over the last thirty years, Margolis and Walsh (2003) found that fewer than half of the papers reviewed exhibited a positive relationship, with the majority showing a neutral or negative link. This review, together with other research (Jaffe et al., 1995; Hart and Ahuja, 1996; Sarkis and Cordeiro, 2001), suggests that the link between a firm's environmental

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performance and financial results is uncertain at best. Hence, firms that voluntarily adopt environment-friendly policies, beyond compliance with regulations or more stringent than those of their peers, assume a significant economic risk that may not be justified by potentially higher returns. In other words, noneconomic utilities are likely to play a major role in these policy decisions.

Unfortunately, “despite burgeoning research on companies’ environmental strategies and environmental management practices, it remains unclear why some firms adopt environmental management practices beyond regulatory compliance” (Delmas and Toffel, 2004: 210). One likely reason, however, is the divergent utilities of owners. The notion that public corporations represent a set of forces and contested objectives has a long history in the organizational sciences; “publicly held corporations are beset by perennial conflict as to who should participate and who benefits” (Schneper and Guillén, 2004: 264). If this is so, which actors have the discretion to impose their own objectives ahead of others when responding to institutional pressures? While Hambrick, Finkelstein, and colleagues have related managerial discretion primarily to the industry environment (Haleblian and Finkelstein, 1993; Hambrick and Abrahamson, 1995; Finkelstein and Boyd, 1998), in the corporate governance literature, discretion is related to the distribution of equity holdings. A common distinction made in this literature is among owner-controlled, management-controlled, and owner-managed firms, each with its own distinct capability to pursue the interest of the controlling party (McEachern, 1975, 1976; Gomez-Mejia, Tosi, and Hinkin, 1987; Coffee, 1988; Dyl, 1988, 1989; Tosi and Gomez-Mejia, 1989; Kroll, Wright, and Theerathorn, 1993; Werner, Tosi, and Gomez-Mejia, 2005). When some parties enjoy substantial discretion, it may lead to organizational decisions that do not benefit all shareholders, particularly dispersed investors or those in a weak ownership position. Thus, for instance, when managers are in control of the firm (see Tosi et al., 1999, for a review of this literature), the relationship between a CEO’s pay and performance and risk taking are weaker, while the pursuit of firm size takes precedence, because these policies benefit managers rather than atomistic owners.

In recent years, this line of research has been refined to focus on the ability and motives of specific types of equity holders to use their ownership position to pursue their particularistic agendas (Thomsen and Pedersen, 2000; Ryan and Schneider, 2002). Much of this work during the past decade revolves around family ownership. The general thrust of this literature is that families have preferences or tastes for noneconomically motivated objectives (Sharma, Chrisman, and Chua, 1997; Anderson and Reeb, 2003a): though all actors within the firm are guided by self-interest, the self-interest of family owners is not necessarily financial, and hence their goals may diverge from those of anonymous investors seeking high returns (LaPorta, Lopez-de-Silanes, and Shleifer, 1999; Miller and Le Breton-Miller, 2006). In a set of confirming empirical studies, Gomez-Mejia and colleagues hypothesized that strong family ownership leads to the placement and entrenchment of relatives and the scapegoating of nonfamily

managers for disappointing performance (Gomez-Mejia, Nuñez-Nickel, and Gutierrez, 2001), removal of compensation risk for family managers (Gomez-Mejia, Larraza-Kintana, and Makri, 2003), a preference for family control at the expense of higher returns (Gomez-Mejia et al., 2007), appointment of affiliate directors with relational and economic ties to the family (Jones, Makri, and Gomez-Mejia, 2008), suboptimal international diversification because this strategy makes it more difficult to place trusted family members in key positions (Gomez-Mejia, Makri, and Larraza Kintana, 2010), and greater distrust of nonfamily executives in the top management team (Cruz, Gomez-Mejia, and Becerra, 2010). Similarly, Schulze and colleagues reported that family owners often engage in altruistic activities to bolster their ego (Schulze, Lubatkin, and Dino, 2003b) and that concentrated family equity often makes firms unwilling to borrow enough to capitalize on investment opportunities that nonfamily owners would find attractive (Schulze, Lubatkin, and Dino, 2003a). Several authors have added that family ownership provides relatives with secure employment as well as perquisites they would not otherwise receive (Ward, 1987; Gersick et al., 1997).

In short, the research summarized above indicates that a principal's self-interest is not a homogeneous economic construct and that its meaning and strategic implications are strongly influenced by the ownership configuration of the firm. This suggests that ownership structure would be a natural bridge between institutional pressures on behalf of the environment and the internal response of the firm, with legitimacy in the institutional field through substantive compliance more valuable when it helps the controlling owners achieve an idiosyncratic set of "socially worthy" noneconomic preferences. This is more likely to happen when families control the firm.

Family Control, Institutional Forces, and Environmental Policy

Family business research has long stressed the unique characteristics and peculiarities of family ownership. Family owners, much more than other equity holders, display a strong preference for a broad spectrum of noneconomic utilities. This includes deriving a sense of self and identity from the firm (Kepner, 1983), projecting and perpetuating a positive family image and reputation (Westhead, Cowling, and Howorth, 2001; Sharma and Manikuti, 2005), receiving recognition for generous actions (Schulze, Lubatkin, and Dino, 2003b), enjoying personal prestige in the community and having social support among friends and acquaintances (Lee and Rogoff, 1996; Taguiri and Davis, 1996; Stafford et al., 1999; Corbetta and Salvato, 2004), maintenance of group integrity (Habbershon and Pistrui, 2002), and "accumulation of social capital" (Arregle et al., 2007), among others. Gomez-Mejia et al. (2007) collectively labeled these noneconomic utilities "socioemotional wealth" or "affective endowments." Unlike the set of utilities emphasized in the sociopolitical literature discussed earlier—jockeying for position, ego building, access to elite networks, the exercise of power, and such by individuals who largely remain unknown to external

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constituencies and who hold a contractual relationship to the firm that is subject to rescission—the value of socioemotional wealth to the family is more intrinsic, its preservation becomes an end in itself, and it is anchored at a deep psychological level among family owners whose identity is inextricably tied to the organization. Furthermore, the instrumental tactics discussed in the sociopolitical literature, such as ingratiation and impression management, tend to be explicitly or implicitly tied to financial gains, such as getting a better job or ensuring employment security, while this is not the case for the preservation of socioemotional wealth. In fact, preserving socioemotional wealth often occurs at the expense of financial gains (Gomez-Mejia et al., 2007, 2010).

There is compelling evidence of socioemotional wealth's importance in family-controlled organizations. Psychiatrist Kets de Vries (1993) held in-depth interviews with family owners of more than 300 firms and found that they placed a high priority on the satisfaction of the family's affective needs through the business (e.g., a sense of pride and "the preservation of the family's good name for future generations") apart from the achievement of financial objectives. This finding was corroborated by Gomez-Mejia et al. (2007) in a large-scale comparative study of 1,237 family-controlled and 549 nonfamily-controlled Spanish olive oil mills during a 54-year span. The family-controlled mills were three times as likely to avoid joining a cooperative (a rather lucrative option) as the nonfamily-controlled ones because doing so implied the loss of the family's socioemotional wealth, such as a distinct family image in the community, the perpetuation of the family's name, and a self-concept tied to the family and the business as an extension of the family. Consistent with these findings, Lubatkin, Schulze, and Ling (2005) argued that for family owners, the firm becomes an integral and inescapable part of their lives, whereas for nonfamily shareholders or professional managers, the relationship to the firm is more distant, transitory, individualistic, and utilitarian.

Because of the high importance of socioemotional wealth to family owners as a whole, they should be more inclined to pursue environmental strategies to avoid being stigmatized as irresponsible corporate citizens. Public condemnation could be emotionally devastating for family members because it tarnishes the family's name (Ward, 1987; Kets de Vries, 1993; Post, 1993; Adams, Taschian, and Shore, 1996; Dyer and Whetten, 2006). The family is not a faceless owner; in fact, the face of the family mirrors that of the firm (Reiss, 1981), and any overt, easily observable actions that make the family look bad diminish the egos of owners who carry the family's name (Gersick et al., 1997; Westhead, Cowling, and Howorth, 2001). A lengthy and common socialization experience tends to engender a strong sense of shared in-group identity (Gomez-Mejia, 1983, 1984), and this family-group identity is closely tied to the family-controlled firm (Cruz, Gomez-Mejia, and Becerra, 2010). Thus a negative image of the firm as a result of poor environmental performance is privatized and personalized, directly implying a loss of the family's socioemotional wealth. In most social science research, within-group variance on any dimension tends to be large (Hannan

and Burstein, 1974; Cronbach and Webb, 1975), and family-controlled firms are probably no exception. Nevertheless, the simplifying assumption that socioemotional concerns are important for family owners is well supported in the numerous empirical studies cited above, which use a wide variety of methodologies, samples, and time frames. It follows that family owners should place a greater value on the legitimacy afforded by environmental initiatives because doing so would safeguard their socioemotional wealth even if it is economically risky.

Moreover, when family ownership elevates the rights of these equity holders while demoting those of others, the firm can more easily implement strategies that enhance environmental strategies, for four interrelated reasons. First, the family, by virtue of its strong ownership position, can exercise more unrestricted control or discretion (Anderson and Reeb, 2003b). Even in publicly traded firms with greater ownership dispersion, the views of family members as a group are likely to demand a great deal of attention compared with those of nonfamily shareholders (Chrisman, Chua, and Steier, 2003).

Second, attending to the environmental demands of society requires long-term vision and uninterrupted commitment (Hart, 1995; Aragon-Correa and Sharma, 2003). These requirements are likely to be met by family owners, whose concern for perpetuating the business and willingness to make decisions to benefit future descendants may generate a "generational investment strategy that creates patient capital" (Sirmon and Hitt, 2003: 343). This is buttressed by the fact that top executives in family-controlled firms on average enjoy much longer tenure (see Schulze et al., 2001; Cruz, Gomez-Mejia, and Becerra, 2010) and are less worried about employment risk and short-term financial results (Ward, 1987; Gomez-Mejia, Nuñez-Nickel, and Gutierrez, 2001). Because any legitimacy gained from being responsive to environmental demands is likely to take an extended time to materialize (Russo and Harrison, 2005), the long-term perspective attached to family ownership should foster environment-friendly policies. Unlike the players normally discussed in the sociopolitical corporate governance literature (CEO, top management team, board members, transient investors, and such, who can enter or leave the firm depending on the attractiveness of available opportunities), a family owner does not choose the family, as it is a given from birth, and will always remain as a member of the family, subject to what Gomez-Mejia, Larraza-Kintana, and Makri (2003) called "the family handcuff."

Third, as institutional theory predicts, within a given institutional field, the risk of investing in expensive pollution prevention beyond compliance with regulations may not be compensated by financial gains, or the firm may never get a reliable cost-benefit estimate of such actions (see also Margolis and Walsh, 2003). Gomez-Mejia, Makri, and Larraza-Kintana (2010), applying insights from the behavioral agency model (Wiseman and Gomez-Mejia, 1998; Gomez-Mejia, Welbourne, and Wiseman, 2000; Larraza-Kintana et al., 2007) argued that the amount of financial risk that family owners are willing to bear is greater when alternative, more conservative

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business actions, such as joining a coop or diversifying the firm, may result in diminished socioemotional wealth, such as a loss in family visibility or weaker external family presence. It follows that family owners will be more willing to invest in prime environmental actions, and accept the threat this poses to their financial well-being, when resisting institutional pressures may lead to loss of family status, a tarnished identity, poor reputation, shame directed at family members, and the like.

Lastly, in a public corporation, the family bears only a fraction of the risk attached to an environmental investment that goes beyond regulatory compliance but enjoys a disproportionate share of the noneconomic utilities associated with that action, namely, in the form of enhanced family socioemotional wealth. Compared with family owners, anonymous investors and atomistic equity holders are less likely to perceive—or for that matter to actually receive—institutional credit for the firm's environmental policies. And by virtue of the longer tenure that we noted earlier, executives in family-controlled firms are more likely to draw continued socioemotional benefits centered on their public persona for years to come.

The foregoing discussion is not meant to imply that family firms are self-sacrificial, pay exclusive attention to socioemotional wealth, and/or ignore financial issues. Our key point is that when family interests predominate, firms are more likely to bear the cost and uncertainty involved in pursuing environment-friendly policies, driven by a belief that such a risk is counterbalanced by noneconomic utilities rather than the potential for current or future financial gains. In sum,

Hypothesis 1 (H1): Family-controlled firms will exhibit better environmental performance than nonfamily-controlled firms.

Family Control, Local Roots, and Environmental Performance

Corporations should be more vulnerable to institutional pressures on behalf of the environment at the community level, for several reasons. First, legitimacy regarding social action is embedded within the most immediate context. There is very little buffering to shelter the firm should the community decide that it is a bad corporate citizen (Marquis, Glynn, and Davis, 2007). Second, local communities define appropriate corporate social practices by granting legitimacy when their demands are met and by sanctioning when firms fail to comply (Baker, 1990). Third, local communities can more easily exercise institutional pressure by organizing environmental groups and filing citizens' lawsuits (Henriques and Sadorsky, 1996; Florida and Davison, 2001; Raines, 2002). As Delmas and Toffel (2004) noted, at the local level, community pressures are beamed at specific plants, making these pressures more salient and concrete than at the national level, where environmental demands are aimed at a more abstract entity, the corporate umbrella. Fourth, defenses such as impression management (Elsbach and Sutton, 1992) or avoidance (Oliver, 1991) are less effective at the local level. Delmas and Toffel (2004) persuasively argued that in the immediate vicinity, it is much harder to gain traction for

defenses of innocence—the offensive event did not occur or the firm is not responsible—and justification—the event is not bad, wrong, inappropriate, or unwelcomed—because bad firm behaviors are more easily observed and divulged through local press, radio stations, and television news (Henriques and Sadorsky, 1996). Lastly, because key corporate executives usually reside near the local community, they are more likely to feel institutional pressures individually.

Empirical research strongly suggests that the more deeply a firm is embedded in its community, the more likely it is to respond to normative institutional pressures. Guthrie (2003) estimated that approximately 80 percent of corporate giving programs occur within the metropolitan area in which firms' headquarters are located. Henriques and Sadorsky (1996, 1999) documented that a firm's formulation of an environmental plan is positively influenced by neighborhood and community group pressure and that environmentally proactive firms perceive the local community as the main vehicle of influence. Kassinis and Vafeas (2006) reported a positive relationship between community stakeholder pressures and environmental performance at the plant level. Along similar lines, Alvarez-Gil et al. (2007) found that communities influence the adoption of recycling and other reverse-logistics programs.

We expect the effect of local roots on environmental performance to be stronger under family ownership. First, at the local level, the distinction among family, society, and business becomes rather blurred. As a result, social monitoring of family owners is strengthened, and the likelihood of enforcing social sanctions increases. This in turn restrains family owners from actions that could be regarded as socially irresponsible and hence could reduce their socioemotional wealth. Second, family owners become well known to individuals in their communities. Family executives actively participate in promoting social initiatives, volunteer efforts, and other types of civic leadership (Post, 1993). Important community players may see environmental transgression as a personal betrayal and not just an unsavory business decision, and this stigma may be felt firsthand by family members in school, at church, in social gatherings, and so on. Third, because the family is usually part of the social network at the local level, or at least much more so than hired executives recruited from a national labor market or anonymous investors, community pressures on family owners should be more intense and difficult to deflect. Relationships with vendors and suppliers are long established, and these individuals may be viewed as, or may actually be, members of the family (Uhlener, vanGoor-Balk, and Masurel, 2004). Firms may sponsor associations and activities that are valued in the community, such as United Way, YMCA, special events, charities, and local sports teams (Uhlener, 2006). As Brickson argued (2005, 2007), given these reciprocal bonds, one would expect the family-controlled firm to pursue the welfare of those who surround it even if there were no obvious transactional economic gains in doing so. In our case, this translates into lower environmental contamination.

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It seems reasonable that when a firm's operations are concentrated in a given geographic area, family owners are far more exposed to losses of socioemotional wealth as a result of environmental transgressions (e.g., negative community reactions or personal shame as a result of local contamination) than are other equity holders or anonymous investors with weak or nonexistent ties to the firm's close neighbors. As we noted above, the behavioral agency model predicts that decision makers will prefer to avoid a loss of important utilities even if this means accepting a higher financial risk (Wiseman and Gomez-Mejia, 1998; Gomez-Mejia, Welbourne, and Wiseman, 2000). Thus, to protect their socioemotional wealth, family owners should be more amenable to accepting the financial risks of an aggressive environmental policy as the corporation's plants are congregated in a particular region. Hence,

Hypothesis 2 (H2): The positive effect of local roots on environmental performance will be higher for family-controlled than for nonfamily-controlled firms.

Family Status of the CEO and Environmental Performance

Equity holders with a controlling interest should be able to exercise their influence on a firm's decisions more effectively if the CEO shares similar objectives (Tosi et al., 1999), particularly if the incumbent CEO is also the board chair (Boyd, 1995; Conyon and Peck, 1998). A family CEO is more likely to attend to the preferences of the controlling family toward the natural environment as a means of enhancing the family's noneconomic utilities and/or preventing losses of socioemotional wealth, and this effect is especially strong when the family controls large stakes in the firm and the CEO has employment security. In the words of Schulze, Lubatkin, and Dino (2003a: 182), "This [CEO] power stems from familial protection [of the family CEO] and freedom from the oversight and discipline provided by the market for corporate control." Obviously, also serving as board chair gives the family CEO greater influence over the board and a better position from which to pursue the family's interests (Gomez-Mejia, Larraza-Kintana, and Makri, 2003). Thus,

Hypothesis 3a (H3a): Firms managed by CEOs who are members of the controlling family will exhibit better environmental performance than those managed by nonfamily CEOs.

Hypothesis 3b (H3b): Firms managed by CEOs who are members of the controlling family and also serve as board chair will exhibit better environmental performance.

The Impact of CEO Stock Ownership on Environmental Performance

CEOs' incentives play a central position in the corporate governance literature because they may exert an important influence on the firm's strategic choices (Gomez-Mejia, 1992; Devers et al., 2007; Gomez-Mejia, Berrone, and Franco-Santos, 2010). They can affect the way firms and managers respond to institutional forces in general (Deckop, Merriman, and Gupta, 2006) and environmental pressures in particular (Berrone and Gomez-Mejia, 2009).

Because of the potential for the interests of managers and owners to diverge, the practitioner and the academic literature often prescribe awarding stock to CEOs to align the fates of agents and principals (Devers et al., 2007). Yet this compensation practice may have unintended consequences. Drawing on the behavioral agency model, Sanders (2001) showed that stock ownership leads to conservative decisions as executives try to shield their equity from financial risk. This suggests that stock ownership may deter CEOs from launching environmental initiatives that offer some legitimacy benefits but uncertain economic returns. Little is known, however, about whether the desires of controlling equity holders will moderate the influence of CEO stock ownership on firms' responses to institutional demands. We expect the discouraging effect of CEO stock ownership on environmental investments to be greater among nonfamily- than among family-controlled firms. For the latter, the potential economic risk to the CEO entailed by environmental investments is more than compensated for the long-term gains in socioemotional wealth for dominant family owners—such as a positive family image, greater respect, and organizational legitimacy—which the family may reciprocate through favorable performance assessments, more stock awards, and lower employment risk. Because the CEO in a family-controlled firm is more likely to be rewarded for enhancing the socioemotional wealth of the dominant owners, the stock-owning CEO may have more to lose by cutting back on environmental investments and allowing greater pollution, which jeopardizes the family's socioemotional endowment. In contrast, nonfamily investors are less likely to recognize and reward the CEO for potentially expensive environmental gestures; hence the stock-owning CEO would be left bearing the risk of pollution reduction efforts without counterbalancing personal benefits. Furthermore, stock ownership provides the CEO in nonfamily firms with greater discretion to pursue those policies (read lower environmental investments) that mitigate personal risk (Tosi et al., 1999). This means that from a sociopolitical perspective, a CEO's stock ownership should have a dampening effect on a firm's substantive response to environmental demands, but from a socioemotional perspective, this is less likely to occur in family-controlled firms because preserving socioemotional wealth is a high priority. Thus,

Hypothesis 4 (H4): The negative effect of the CEO's stock ownership on environmental performance will be higher for nonfamily- than for family-controlled firms.

METHODS

Sample and Data Collection

To test our hypotheses, we focused our analysis on firms that belong to industrial sectors that are required to report their toxic emissions in the Toxic Release Inventory (TRI) program of the Environmental Protection Agency (EPA). Only firms that belong to certain industries and manufacture or process more than 25,000 pounds, and use at least 10,000 pounds, of any

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of the EPA's listed chemicals are required to report their emissions to the TRI program (see <http://www.epa.gov/tri/report/siccode.htm>). The total sample comprised 194 firms, of which 101 were identified as family firms.

Following standard criteria used in previous studies on publicly traded American family companies, we classified an organization as a family firm if family members owned or controlled at least 5 percent of the voting stock (Allen and Panian, 1982; Villalonga and Amit, 2006). The 5-percent benchmark is consistent with the governance research on ownership structure reviewed earlier (e.g., McEachern, 1975, 1976; Salancik and Pfeffer, 1974; Dyl, 1988, 1989; Tosi and Gomez-Mejia, 1989; Werner, Tosi, and Gomez-Mejia, 2005) and has been widely used in the family business literature (see review by Miller et al., 2007). Though other studies may use additional indicators of family control—such as the CEO being a member of the controlling family, the presence of family members on the board of directors, or the ratio of board seats held by family members to board seats held by independent directors—these are usually highly correlated with the percentage of equity ownership held by family or with a binary family control variable. Using this 5-percent convention splits our sample into family-controlled and nonfamily-controlled groups that are roughly equal in size. We reran the analysis using thresholds of 10 percent and 15 percent and found no changes in the hypothesized effects. In a separate study on firm diversification by family firm status (Gomez-Mejia, Makri, and Larraza-Kintana, 2010), results were very resilient to an ownership cutoff greater than 5 percent or to the inclusion of other highly correlated indicators of family control, such as the presence of family members on the board.

To assure that family and nonfamily subsamples were comparable, we performed t-tests to determine whether there were significant differences between subsamples (results of these tests are available from the authors upon request). The most significant difference was in size (approximated by the firm's sales). This result is consistent with evidence indicating that family businesses tend to be smaller than their nonfamily counterparts (Daily and Dollinger, 1993; Galve-Górriz and Salas-Fumas, 1996). Other control variables, like board size and economic performance (both return on assets, or ROA and price-to-book ratio), were not significantly different. More importantly, industry pollution intensity showed no significant difference between family and nonfamily groups. These results give us confidence that the subsamples are comparable.

We collected archival data from five different sources for each firm covering the five-year period, 1998–2002. COMPUSTAT provided financial measures; proxy statements reported to the Securities and Exchange Commission contained ownership and governance information; and the EPA offered environmental performance data. To estimate our proxy of local roots, we collected data from the LexisNexis Corporate Affiliations' database and the U.S. Census Bureau.

Dependent Variable

Environmental performance. To gauge environmental performance, we followed Berrone and Gomez-Mejia (2009) and weighted on-site emissions using the Human Toxicity Potential (HTP) factor developed by Hertwich and colleagues (2001), which measures toxicity in terms of benzene equivalence (for carcinogens) or toluene equivalence (for noncarcinogens). This method has been shown to be more precise than, and highly correlated with, alternative weighting methods (Toffel and Marshall, 2004). A key feature of the HTP factor is that it assigns each chemical separate values for different media of release, which provides greater accuracy than other measures used in the past. After weighting each chemical by its corresponding HTP value, we aggregated the results across chemicals, first at the facility level and then by parent company. Because the HTP method offers cancer and noncancer values, we calculated two different variables using these values separately. As these variables were highly skewed, we log-transformed them to achieve normality (after adding 1). For the sake of clarity, we reversed these measures by multiplying them by -1 . As a result, bigger values are associated with better environmental performance. Later, we calculated their reliability (Cronbach's alpha), and given the high value ($\alpha = 0.91$), we standardized and averaged both measures to create our final environmental performance measure. This value was averaged for the period 1999–2002.

Independent Variables

Family firm. Firm type was a dummy variable that assumed the value 1 if the family owned at least 5 percent of the company's stock, and 0 otherwise. To gauge *local roots*, we first considered the average distance of the firm's subsidiaries from its headquarters. Arguably, companies with subsidiaries closer to their main office would be more deeply embedded in the immediate community than those with remote subsidiaries. High geographic concentration should make the local community more relevant to the firm, and vice versa, increasing the ties between the two, but the average distance of the firm's subsidiaries may only partially tap the firm's local roots. A subsidiary that employs a significant portion of the local population is likely to be more deeply anchored in the community than one that employs a low percentage of local residents. Therefore we weighted distances by the relative importance in terms of employment that each subsidiary had in the geographical zone where it was located, to create a single composite measure. We also calculated our models using distances without weighting them by economic importance. Results from these estimations were fully consistent with those presented in this article. Formally, our measure is given by the following formula:

$$LR_i = \frac{\sum_{j=1}^n \frac{1}{|HQ_i - P_{ij}|} * \frac{e_{ij}}{l_{ij}}}{n} \quad (1)$$

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where $|HQ_i - P_{ij}|$ is the absolute value of the distance (measured in miles) between the headquarters of firm i (HQ_i) and the subsidiary j (P_{ij}); e_{ij} is the number of employees of subsidiary j ; and l_{ij} is the economically active population (i.e., the population 16 years and over in the labor force) of the zip code area of subsidiary j of firm i . To calculate the distance between headquarters and subsidiaries, we used the Spheresoft Zip Code Tools for Microsoft Excel developed by Sphere Software Engineering, Inc. This routine calculates the distance in miles between two zip codes as the straight-line distance across the globe. Because the median geographical size of each zip code is 37 square miles, the firm's visibility in the community should be relatively high, as it recruits a substantial percentage of employees from what most people would consider a driving range. Finally, n is the total number of subsidiaries of firm i .

CEO Variables

The family CEO status measure was a dummy variable that assumed the value of 1 if the CEO belonged to the family that controlled the firm, and 0 otherwise. The situation in which the same individual was both CEO and board chair was a dummy variable, *CEO duality*, coded 1 if the CEO held both positions, and 0 otherwise. The *CEO stock ownership* variable measured the CEO's percentage of ownership in the firm. To disentangle the unique effect of CEO stock ownership from the CEO's stock options, we also calculated the latter and entered both measures in the OLS equations. Following Sanders (2001), we measured CEO stock options as the ratio between the CEO's stock options and cash compensation (CEO's salary and annual bonuses). As in previous studies of executive compensation (Finkelstein and Boyd, 1998; Balkin, Markman, and Gomez-Mejia, 2000; Henderson and Fredrickson, 2001; Gomez-Mejia, Larraza-Kintana, and Makri, 2003), we valued stock options at 25 percent of their exercise value.

Control Variables

Control variables included firm size and financial performance, two common predictors of environmental performance (Sarkis and Cordeiro, 2001; Grant, Jones, and Bergesen, 2002; King and Lenox, 2002). We approximated firm size with the logarithm of the firm's total sales. We measured financial performance as the firm's annual ROA. We also controlled for market-based performance using the price-to-book ratio.

We included two variables to account for governance structures, as they have been shown to be related to environmental performance (Johnson and Greening, 1999; Kassinis and Vafeas, 2002). First, we controlled for board size, measured as the total number of board members. Second, we controlled for institutional ownership, measured as the percentage of ownership in the hands of institutional investors.

We also controlled for environmental regulatory stringency. Following Kassinis and Vafeas (2002), we approximated this variable as the total emissions of the state in which the firm had its headquarters, deflated by total employment in each state, log-transformed and inverted. Thus higher values of this

variable indicate higher regulatory stringency, which is expected to improve environmental performance. Employment figures were obtained from the U.S. Census Bureau. Following Berrone and Gomez-Mejia (2009), we also controlled for industry polluting intensity, ranking industries as categorized by the Standard Industrial Classification (SIC) two-digit code according to their total amount of toxic emissions, from the most to the least polluting sector. The way this variable was constructed allowed us to control not only for industry but also for the pollution intensity of the sector. Finally, we also controlled for age of the firm, measured as the difference between 2000 and the firm's founding year, because older firms may have sunk costs that induce them to keep using equipment and factories that are more primitive and contaminating. As this variable was skewed, we log-transformed it to achieve normality.

Estimation Methods

To test our hypotheses, we performed ordinary least squares (OLS) regression analysis with White's (1980) correction, which solves some heteroskedasticity problems. For each equation, the independent variables lag behind the dependent variables by one year. That is, our dependent variable (environmental performance) was averaged for the 1999–2002 period, while our independent variables were averaged over 1998–2001. Such averages provide a robust view that avoids spurious effects and data fluctuations commonly observed in cross-sectional or lag studies (Tabachnick and Fidell, 1996; Balkin, Markman, and Gomez-Mejia, 2000). To test hypotheses 2 and 4, we performed separate regression analyses on the family and nonfamily samples. This split-sample method is appropriate when the sample is easily divided into subsamples (Sharma, Durand, and an Gur-Arie, 1981) and when theory predicts differences in independent-dependent variable relations by subgroup (in our case family-controlled or nonfamily-controlled firms (Chow, 1960). This method is typical in strategic management studies (e.g., Madhavan and Prescott, 1995; Ketchen, Thomas, and McDaniel, 1996) and has been applied previously in family business research (Gomez-Mejia, Larraza-Kintana, and Makri, 2003) and in corporate governance studies examining the influence of ownership structure (McEachern, 1975, 1976; Dyl, 1988, 1989; Werner, Tosi, and Gomez-Mejia, 2005). We also performed regressions using the pooled sample (i.e., considering both subsamples in one) and including moderators, but the variance inflation factor analysis indicated multicollinearity of the interaction terms, suggesting that using separate regressions was safer and more conservative. In addition, we also calculated the variance inflation factor after each regression to see whether results were subject to the threat of multicollinearity. Values were within acceptable limits, indicating that estimations were free of any significant multicollinearity bias.

RESULTS

The descriptive statistics and correlations for the variables used in this study are reported in table 1.

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Table 1

Descriptive Statistics and Correlations (N = 194)*									
Variable	Mean	S.D.	1	2	3	4	5	6	7
1. Firm size (log sales)	7.30	1.60							
2. ROA	5.54	6.84	.15						
3. Price-to-book	2.61	8.48	.11	.04					
4. Board size	9.62	2.60	.58	.01	.12				
5. Institutional ownership	13.43	13.96	-.03	-.10	.05	-.23			
6. Regulatory stringency	.67	.67	-.15	.08	.06	-.25	-.01		
7. Industry pollution intensity	16.43	6.28	.02	-.04	.16	.27	.02	-.07	
8. Age	62.35	38.83	.44	.04	.02	.53	-.09	-.22	.07
9. Environmental performance	.16	.89	-.42	-.05	.07	-.40	.12	.21	-.15
10. Family firm status	.69	.46	.03	-.17	-.04	.24	-.35	-.26	.05
11. Local roots	.05	.20	.18	.13	.18	.19	.14	-.08	.10
12. CEO stock options	.53	.90	.10	.05	.10	.07	.12	.09	.08
13. CEO ownership	3.72	8.46	-.31	.00	.00	-.22	-.06	.34	-.13
14. CEO family [†]	.33	.47	-.17	-.17	-.03	-.06	-.22	-.12	.00
15. CEO duality	.69	.46	.09	.01	.00	.01	.17	-.02	.03

Variable	8	9	10	11	12	13	14
9. Environmental performance	-.42						
10. Family firm status	.10	-.12					
11. Local roots	.15	.06	.02				
12. CEO stock options	.06	.06	-.22	.01			
13. CEO ownership	-.20	.02	-.05	-.08	-.14		
14. CEO family [†]	-.17	.07	.47	-.08	-.08	.15	
15. CEO duality	.13	-.19	-.10	-.10	.03	.13	-.02

* Correlations above .14 or below -.14 are significant at the 5% level or better.
[†] Data available only for family firms.

Table 2 reports the results of the regression model used to test hypothesis 1, which predicted that family-controlled firms would exhibit better environmental performance than nonfamily-controlled ones. Model B in table 2 shows the impact of family firms on environmental performance after partialling out the control variables (shown in model A). The family variable coefficient had a positive and significant effect on environmental performance, providing support for hypothesis 1. Results of F-tests (not reported) indicated that the increment in variance explained between the control model and the full model was significant at $p < .001$. We also conducted some follow-up analysis (available upon request) to shed further light on this relationship. In that analysis, we tested for a nonlinear relationship between family ownership and environmental performance, applying the procedure recommended by Aiken and West (1991), namely, entering the raw family ownership variable before squaring the term and entering it into a regression equation. The results were fully consistent with our story, showing that the impact of family ownership on environmental performance is greater at higher rather than lower levels of family ownership (squared term $p < .05$); a plot showed that environmental performance rises rapidly once family ownership reaches 33 percent. Consistent with the logic of hypothesis 1, this suggests that as family ownership

Table 2

OLS Analysis of Effect of Family Firm Status on Environmental Performance (N = 194)*

Variable	Model A	Model B
<i>Controls</i>		
Firm size (log sales)	-.167*** (.042)	-.140*** (.043)
ROA	.007 (.011)	.007 (.011)
Price-to-book ratio	.017** (.005)	.017*** (.005)
Board size	-.068** (.026)	-.075** (.027)
Institutional ownership	.002 (.005)	.004 (.005)
Regulatory stringency	.097 (.073)	.132 (.075)
Industry pollution intensity	-.020 (.010)	-.019 (.010)
Age	-.005 (.055)	-.006 (.053)
<i>Main effect</i>		
Family firm status		.282* (.140)
F-value	6.17***	6.17***
R ²	.252	.268
ΔR ²		.016*

* $p < .05$; ** $p < .01$; *** $p < .001$; significance levels are based on two-tailed tests for all tests and coefficients.

* Standard errors are in parentheses.

expands, the family now has a stronger motive, as well as more discretion, to unilaterally enforce environment-friendly policies on other equity holders.

Table 3 summarizes our analyses to test hypothesis 2, on how family-firm status affects the influence of local roots on environmental performance. The results indicate that local roots have a positive and highly significant impact on environmental performance for family-controlled firms (see model A) but were not significant in nonfamily-controlled firms (see model C). These findings offer strong support for hypothesis 2. We also ran this model including a control dummy variable denoting firms that had only one establishment. Results remained unchanged.

To facilitate interpretation, we plotted the relationship between local roots and environmental performance in figure 1. This figure clearly shows much greater elasticity of local-roots–environmental-performance relations for family than nonfamily firms, consistent with the predicted effect.

Model C in table 4 summarizes our analyses within the family-controlled subsample to test the environmental effect of CEO family status (hypothesis 3a) and of a family CEO also serving as board chair (hypothesis 3b). Neither of these hypotheses found empirical support.

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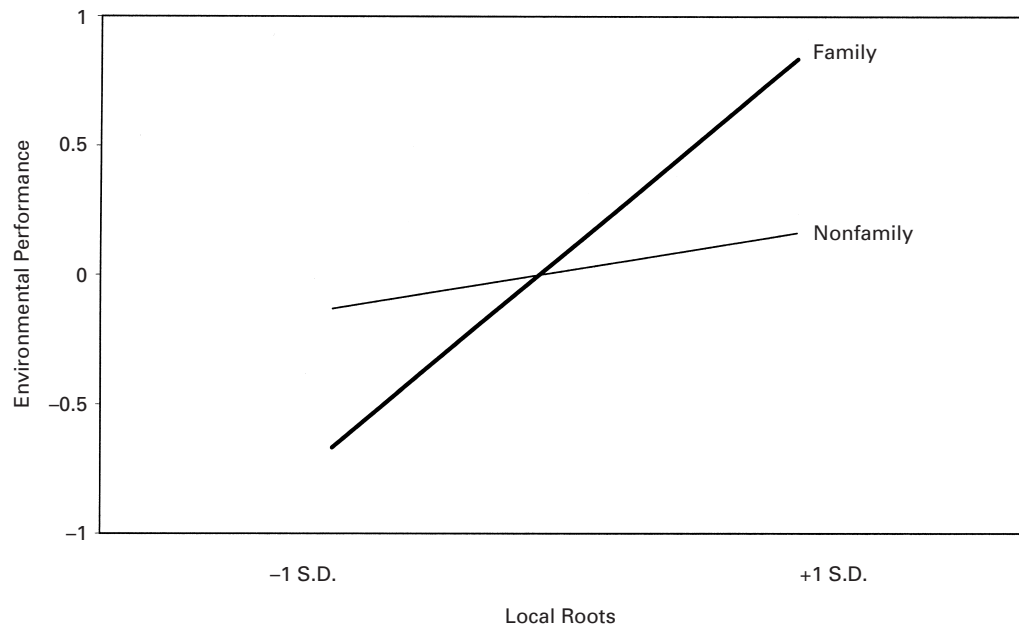
Table 3

Effects of Local Roots, Long-term Incentives, and CEO Ownership on Environmental Performance*

Variable	Family Firms (N = 101)		Nonfamily Firms (N = 93)	
	Model A	Model B	Model C	Model D
<i>Controls</i>				
Firm size (log sales)	-.214** (.074)	-.212** (.078)	-.139** (.060)	-.155** (.059)
ROA	-.010 (.011)	-.011 (.010)	.038 (.027)	.035 (.027)
Price-to-book ratio	.004 (.007)	.003 (.007)	.034** (.013)	.032* (.012)
Board size	-.017 (.048)	-.017 (.049)	-.079** (.041)	-.090* (.040)
Institutional ownership	-.006 (.007)	-.006 (.007)	.006 (.009)	.003 (.009)
CEO stock options	.224 (.452)	.228 (.454)	-.172 (.195)	-.161 (.197)
Regulatory stringency	.042 (.132)	.041 (.132)	.032 (.093)	.085 (.080)
Industry pollution intensity	-.013 (.015)	-.012 (.015)	-.023 (.016)	-.023 (.016)
Age	-.219 (.136)	-.219 (.137)	-.190 (.136)	-.230 (.143)
<i>Main effects</i>				
Local roots	.868*** (.260)	.868*** (.262)	1.611 (2.45)	1.636 (1.44)
CEO ownership		.001 (.010)		-.021*** (.005)
F-value	6.52***	5.83***	13.67***	17.30***
R ²	.330	.330	.432	.464

* $p < .05$; ** $p < .01$; *** $p < .001$; significance levels are based on two-tailed tests for all tests and coefficients.
 * Standard errors are in parentheses.

Figure 1. Effects of local roots on environmental performance.*



* The environmental performance variable takes values in the -2.88–1.36 range, while the local roots variable takes values between 0 and 2.03.

Table 4

**Effects of CEO Status on Environmental Performance in Family Firms
(N = 194)***

Variable	Model A	Model B	Model C
<i>Controls</i>			
Firm size (log sales)	-.213** (.076)	-.213** (.077)	-.211** (.082)
ROA	-.010 (.010)	-.009 (.011)	-.009 (.012)
Price-to-book ratio	.004 (.007)	.004 (.007)	.002 (.007)
Board size	-.017 (.050)	-.016 (.050)	.012 (.055)
Institutional ownership	-.007 (.007)	-.007 (.007)	-.000 (.008)
CEO stock options	.055 (.111)	.052 (.115)	.018 (.115)
Regulatory stringency	.042 (.130)	.046 (.131)	.161 (.158)
Industry pollution intensity	-.012 (.015)	-.012 (.015)	-.014 (.015)
Age	-.217 (.142)	-.215 (.144)	-.261 (.156)
Local roots	.869*** (.260)	.869*** (.262)	.727* (.331)
CEO ownership	.001 (.010)	-.000 (.010)	-.005 (.015)
<i>Main effects</i>			
Family CEO		.032 (.170)	.090 (.195)
CEO duality			-.221 (.234)
<i>Interaction effects</i>			
Family CEO × CEO duality			-.255 (.412)
F-value	5.77***	5.37***	5.96***
R ²	0.32	0.33	0.34

* $p < .05$; ** $p < .01$; *** $p < .001$; significance levels are based on two-tailed tests for all tests and coefficients.

* Standard errors are in parentheses.

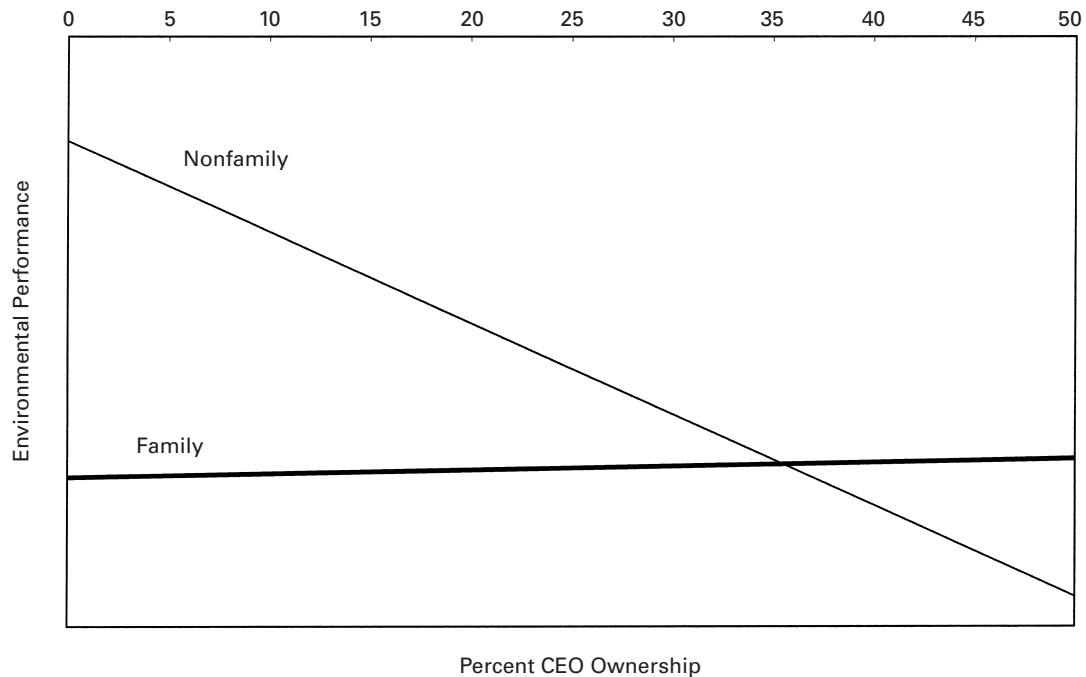
Models B and D in table 3 consider the effect of CEO ownership on environmental performance for family-controlled and nonfamily-controlled firms, respectively. In accord with hypothesis 4, CEO stock ownership was negative and highly significant for nonfamily-controlled firms (model D) but was not significant for the family subsample. We draw this relationship in figure 2 to facilitate interpretation. The negative slope for the CEO stock ownership variable in the case of nonfamily-controlled firms contrasts with the nearly horizontal line plotted for family-controlled firms, confirming the predicted effect.

Robustness Checks

The analyses described above might have suffered from potential self-selection and endogeneity biases, for several reasons. First, we deliberately restricted our sample to industries required to report their emissions in the EPA's TRI program. The specific capital and knowledge requirements necessary to operate in a polluting industry might have

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Figure 2. Effect of CEO ownership on environmental performance.*



*The environmental performance variable takes values in the -2.88 – 1.36 range.

affected the probability of family firms being in our sample and therefore the estimated effect of the family firm dummy on environmental performance. Moreover, there might have been some unobservable elements related to the expectations, preferences, abilities, knowledge, and objectives of decision makers that could have affected both the choice of environment-oriented strategies and family-firm status. We conducted several additional analyses to address these biases. A detailed explanation of the empirical procedure is found in the Appendix. The main conclusion was that family firms still show better environmental performance even if we account for self-selection and endogeneity and that the OLS estimates were not biased.

DISCUSSION AND CONCLUSIONS

Our theoretical and empirical analyses provide new ways of approaching institutional pressures and firms' responses to them. First, we provide a contrasting perspective to the prevailing view that sociopolitical motives of powerful self-serving parties often drive firms into ceremonial compliance with institutional pressures. Apart from any political or economic considerations, when the preservation of socioemotional wealth takes priority, as it does with influential family owners, the firm is more likely to engage in substantive institutional compliance, and this acquiescence becomes stronger as the firm's geographic concentration increases. More broadly, from a corporate governance perspective, we showed that corporate control conditions can reinforce either organizational resistance to or substantive compliance with institutional demands, depending on the goals of the dominant group.

Second, and related to the first point, most of the sociopolitical literature discussed earlier focuses on the behavior of agents (CEO, top management team, board members) rather than principals and their interests, as would be the case of family owners trying to preserve socioemotional wealth. Unlike agents who are subject to forcible termination, and hence have strong motives to engage in political maneuvers such as ingratiation to ensure self-preservation (Westphal and Graebner, 2010), except in the most dire situations, such as a hostile takeover, family owners have an irrevocable tie to the firm. Furthermore, unlike the distant and mostly anonymous pundits of the sociopolitical literature, family owners are an easier target of community anger for bad firm behaviors, especially at the local level. As Hambrick, Werder, and Zajac (2008: 383) noted, "although researchers have long been aware of the different shareholder types, there has been little consideration of the implications of shareholder heterogeneity." Although there is a large body of scholarly work examining the effects of ownership structure on different strategic decisions (see review by Tosi et al., 1999), little is known about how principals' (owners) motives, preferences, and values influence the firm's response to institutional demands and, as argued here, family owners are rather unique in this respect.

Third, we examined the role of the ties of top executives to the dominant control group within the firm and of financial incentives in enacting compliant or resistant environmental policies. We found evidence in support of a socioemotional rather than a sociopolitical explanation for compliant behaviors under various corporate governance conditions when families have a controlling interest. Specifically, a CEO's equity stake in the firm negatively influenced environmental performance of nonfamily-controlled firms but not of family-controlled organizations; furthermore, it made no difference in terms of environmental performance if the CEO was nonfamily and also served as board chair when family owners were in control. Fourth, by studying firms in a homogeneous and strong institutional field (i.e., polluting industries), and therefore holding constant the nature and context of institutional pressures, we could isolate the unique effect of divergent controlling interests (family versus other investors) in how organizations responded to these demands.

Our emphasis on the family as a controlling interest and its role in response to institutional pressures is important for its own sake. If family owners react more positively than other kinds of owners to normative forces in a given institutional field, this discovery has wide social implications, given that family firms are the predominant organizational form around the world (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Oster, 1999), have a substantial influence on the global economy (Morck and Yeung, 2004), and may be found in all industrial sectors (Anderson, Mansi, and Reeb, 2003).

For over 30 years, institutional theorists have emphasized the tendency of organizations to conform to external demands and the advisability of adhering to institutional rules and norms (Meyer and Rowan, 1977; DiMaggio and Powell, 1983), while organizational theorists (e.g., Oliver, 1991) and

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strategic management scholars (e.g., Hambrick and Abrahamson, 1995), though recognizing the isomorphic effect of these institutional pressures, have argued that firms do not always respond passively to these demands. For instance, borrowing from resource dependence theorists, Oliver (1991: 150) noted that a variety of responses may be available "to somehow alter the situation confronting the organization to make compliance less necessary. . . ." She listed several tactics that firms may use to respond to institutional pressures, including acquiescence, compromise, avoidance, defiance, and manipulation. Other authors have added differentiation (Russo and Harrison, 2005), calculated response, based on an analysis of the costs and potential benefits of compliance (e.g., Delmas, 2002), impression management (Elsbach and Sutton, 1992), strategic redeployment of resources (Carpenter and Wade, 2002), and anticipatory or damage control tactics (Jennings and Zandbergen, 1995). Other scholars have argued that institutional pressures are seen through different-colored glasses depending on the firm's unique history and culture (Levy and Rothenberg, 2002) and a host of firm-specific factors, such as firm size, competitive positioning, and parent/plant interdependence (Marcus and Nichols, 1999; Cordano and Frieze, 2000; Ramus and Steger, 2000; Sharma, 2000; Egri and Hernal, 2002).

In reviewing the literature noted above as applied to environmental performance, Delmas and Toffel (2004: 210) concluded that the "environmental management practices of firms vary not only due to different levels of institutional pressures but also because of the organizational processes that transform objective pressures into perceived pressures." Our study has filled an important gap in this line of research, much of which remains on purely conceptual grounds, by bringing to bear insights from several literatures, showing that controlling interests within the firm determine the degree to which it responds positively to institutional pressures. We found strong empirical evidence that responding more substantively than do competitors in the same institutional field depends on who controls the organization.

Specifically, we found that family-controlled firms exhibit better environmental performance than their competitors and that this difference becomes more pronounced when the firm concentrates its operation in a given local area. This effect sustains the notion that a firm's strategy in response to institutional pressures mirrors the preferences of dominant shareholders and is consistent with the growing body of literature on the predilection of family-controlled firms for idiosyncratic strategic options (Thomsen and Pedersen, 2000; Anderson and Reeb, 2003a; Gomez-Mejia, Makri, and Larraza-Kintana, 2010). These strategic choices reflect a set of preferences and characteristics, like the desire to project a positive public image or meet the family's affective needs, which have been cogently described as the pursuit and preservation of socioemotional wealth in the family business literature.

By showing that family-controlled firms are particularly responsive to pressures stemming from a strong organizational field like polluting industries, we broaden institutional

explanations for why heterogeneous responses are observed instead of isomorphic compliance. Who controls the organization and how much value they see in achieving social worthiness play a significant role in variations of environmental responses. A substantive firm response to environmental demands can be better understood through a socioemotional wealth preservation lens than through a sociopolitical lens. For agents in nonfamily firms to engage in substantive institutional compliance, potential problems, such as greater employment risk, are likely to outweigh the intangible personal gains, such as a positive community reaction. This suggests that a socioemotional perspective may offer a more robust analytical framework than a sociopolitical perspective in understanding firms' responses to institutional pressures for the vast majority of organizations around the world, that is, those controlled by families. The sociopolitical perspective may only apply to a narrowly defined set of firms, namely, large corporations with diffused ownership or those in which nonfamily interests are dominant.

In the context of polluting industries, the nature of the institutional pressures plays a significant role in generating different organizational responses relative to the ownership structures of firms. For instance, our study implicitly suggests that family firms may respond with isomorphic and mimetic responses to regulatory bodies that enjoy strong enforcing mechanisms, like economic penalties or even the power to shut down a firm, but may respond with "beyond compliance practices" to normative pressures (even if normative institutions don't have strong coercive mechanisms) because the protection of socioemotional capital may be more closely tied to the normative component of institutional forces. We leave the empirical test of the foregoing statement for future research. Future work also should look at the response of family-controlled firms to more fine-grained institutional pressures, such as those for greater financial transparency, pressures to employ or promote minorities and women, or pressures to expand healthcare benefits for domestic partners. We anticipate that family-controlled firms will be especially sensitive to the pressures that enhance socioemotional wealth. Relatedly, one would expect that many of the findings in the sociopolitical literature documenting the prevalence of symbolic actions or "decoupling" across a variety of policy dimensions, such as compensation structure and board appointments, would be far less prevalent in family-controlled firms, in which socioemotional wealth plays a key role. Another exciting avenue for future research relates to the ownership configurations that constrain or foster socioemotional-wealth-oriented goals; the likelihood for divergence may depend on the type of shareholders (Hoskisson et al., 2002). We presume that the family has more influence to pursue a socioemotional wealth agenda when other major investors are long-term ones, such as pension funds, or when ownership beyond the family is very atomistic.

Our results showing that having a family CEO both at the helm and as board chair do not significantly improve the family firm's advantage in environmental performance suggest that controlling families might effectively monitor the

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decisions of CEOs, whether family or nonfamily, so that the pursuit and preservation of socioemotional wealth is given high priority. This opens an interesting avenue for future research on the real influence of nonfamily CEOs in family firms. Our interpretation of these results is that socioemotional motives are so strong among family owners that it does not matter if the CEO is a family member or if the CEO serves as board chair when it comes to institutional responses. That is, sociopolitical maneuvers by the CEO are largely constrained in these organizations because family owners may be very vigilant and monitor what the CEO does to ensure that the family's socioemotional endowment is not jeopardized. Additionally, by addressing the CEO's equity, our study enhances the recent literature that links long-term incentives and corporate social actions (Coombs and Gilley, 2005; Deckop, Merriman, and Gupta, 2006; Berrone and Gomez-Mejia, 2009). Our finding that CEO stock ownership has a negative influence on the environmental performance of nonfamily-controlled firms implies that awarding stocks to the CEO may be detrimental to the environment under atomistic ownership or when short-term institutional investors are a dominant force. Under some ownership configurations, a CEO compensation strategy that emphasizes stock ownership may exacerbate environmental problems. Consistent with the sociopolitical literature examined earlier (e.g., Westphal and Zajac, 1994, 1998), our findings suggest that CEOs can manipulate the incentive system for personal advantage when it comes to institutional responses, yet this is unlikely to happen when family owners are in control. This is clearly an area that deserves further research and that has significant policy and practical implications from a corporate governance perspective.

Extrapolating our results to privately held family firms, one could speculate that on one hand, these would exhibit even higher average levels of environmental performance than publicly traded family firms. In most cases, controlling families in privately held firms hold more than 5 percent of shares, with a significant number of families controlling almost 100 percent of the stock. Under these circumstances, personal attachment to the firm, as well as discretionary power, will be extremely high. On the other hand, private firms' more limited access to financial markets may force them to use relatively primitive and contaminating equipment and factories. Analyzing the environmental performance of such firms provides an interesting opportunity for future research as well as a challenge, given that it is very difficult to get data from a large sample of these firms.

Our work is not free of limitations. Although we tried to preserve the causal sequence by lagging our independent variables by one year, causal inferences, as is common in management research, are not fully guaranteed. The relatively short time frame considered in the analyses (1998–2002) calls for the use of average values to reduce the confounding influence of short-term fluctuations in the observed variables. Future research should seek to increase both the number of firms and the length of the time period studied. Still, the evidence provided here is novel, conforms to theoretical

predictions, and is consistent with the existing evidence on the strategic behavior of family firms (Dyer and Whetten, 2006). It is worth noting that, though environmental policies and strategies are likely to change with the firm's organization or ownership structure or its local roots, the opposite causation is not as probable. The sale of a family firm may change both its local roots—for example, if some operations are moved—and its environmental policies, but environmental policy is much less likely to force a sale or relocation. And ownership and local roots are relatively stable factors, not likely to change significantly from one year to another, so it is important to understand how they influence environmental strategy.

Firms are confronting great public concern about environmental actions and face the challenge of balancing their response to these institutional pressures with economic, technical, and efficiency issues. Family owners are more likely to value the legitimacy associated with environmental initiatives, even if "social worthiness" is economically risky. When the family firm faces a choice between an action that would reduce economic risk but cause a loss in socioemotional wealth, and an alternative that would protect the family's socioemotional wealth (but with uncertain economic benefits), it will tend to favor the latter. This raises the question of what may be done from a corporate governance or public policy perspective to induce nonfamily-controlled firms to behave in a more socially responsible manner. This is difficult to the extent that these firms can get away with the appearance of institutional compliance through sociopolitical means as demonstrated in much of the research by Westphal and colleagues. Somehow executives, boards, and anonymous investors in these firms must feel that substantive institutional compliance "pays off" and that they don't need to engage in symbolic actions or sociopolitical maneuvers to protect their interests.

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APPENDIX: Empirical Analysis to Address Self-selection and Endogeneity Biases

Selection into specific industries. We started our analyses by looking for evidence of family firms' showing preferences for a particular type of industry, doing an extensive search of the business press and previous family business literature. We found no evidence of such self-selection bias. Empirical evidence seems to suggest that family firms do not decide to self-select out of specific industries but are present in most sectors (Anderson, Mansi, and Reeb, 2003; Miller and Le Breton-Miller, 2005; Villalonga and Amit, 2006; Sraer and Thesmar, 2007). We then completed our sample by including family and nonfamily firms in nonpolluting industries, adding 434 new firms (193 family firms and 241 nonfamily firms). A first descriptive approach to the distribution of family and nonfamily firms confirmed that, indeed, family firms did not seem to show a preference for specific industries. The percentage of family firms in nonpolluting sectors was similar to the percentage among nonfamily firms in our sample.

To complete our analyses, we used this extended sample to estimate a Heckman selection model to account for the potential bias that industry selection decisions might have exerted over our results. This model considers two equations: selection and outcome regression equations. The selection equation considers variables that may determine the probability of being in the final sample (i.e., it is a probit model). In our case, the selection equation modeled the probability of being part of our sample of firms in polluting industries. The outcome regression equation takes into account the potential selection bias to fit an OLS model. For the outcome equation, we considered the same specification as in model B of table 2.

Table A.1

**Effect of Family Firm Status on Environmental Performance:
Robustness Check***

Variable	OLS	Heckman selection	Treatment effect
Firm size (log sales)	-.140*** (.043)	-.073 (.056)	-.084 (.059)
ROA	.007 (.011)	.018 (.013)	.008 (.012)
Price-to-book ratio	.017*** (.005)	.019*** (.005)	.0188** (.006)
Board size	-.074** (.026)	-.062* (.030)	-.091*** (.027)
Institutional ownership	.004 (.005)	.004 (.006)	.010 (.007)
Regulatory stringency	.132 (.075)	.126 (.078)	.130 (.073)
Industry pollution intensity	-.019 (.010)	-.027* (.011)	-.016 (.010)
Age	-.006 (.053)	-.020 (.063)	.001 (.048)
Family firm status	.282* (.140)	.295* (.141)	.903* (.382)
F-value	6.17***		
R ²	.268		
Log pseudolikelihood		-493.261***	-352.862***

* $p < .05$; ** $p < .01$; *** $p < .001$; significance levels are based on two-tailed tests for all tests and coefficients.

* Robust standard errors are in parentheses.

The dependent variable in the selection equation took the value of 1 if the firm belonged to the sample of firms in polluting industries, and 0 otherwise. The explanatory variables in the selection model were intended to capture reasons for risk diversification—the logarithm of the firm's systematic and unsystematic risk, calculated under the capital asset pricing model (CAPM)—and the firm's resource position—firm size measured as the log of sales, a firm's debt relative to its market value of equity, and dividends per share. These variables were intended to proxy the firm's capacity to afford the required investment (Hill and Snell, 1989). Moreover, dividends per share partially captured some industrial effects, given that sectorial underlying factors, such as investment opportunities, affect firms' payout policies (Michael, 1979; Collins et al., 1996). To be consistent with the outcome regression equation, all these variables were averaged over the 1998–2001 period. Table A.1 shows the estimates of the outcome equation jointly with the OLS estimates of table 2 and the estimates of the model that take into account the potentially endogenous character of the family firm dummy. The results of the Heckman selection model indicate first that the probit model proved to be significant, indicating that our specification was meaningful and could reasonably approach the probability of being in the final sample. Second, the family firm dummy was not significant, indicating that family firms did not show a preference for polluting sectors. Third, and more importantly, the OLS estimate for the family firm dummy was still positive and significant, suggesting that our conclusions do not seem to be biased by self-selection.

Endogeneity of the family firm dummy. Following Villalonga and Amit (2006), we addressed the endogeneity concern by estimating a maximum likelihood treatment effect model. The treatment effect model considers the impact of an endogenously chosen binary treatment on another endogenous continuous variable, conditional on two sets of independent variables. In our case, the binary endogenous treatment was the dummy variable that indicated whether the firm was family controlled or not. The continuous endogenous variable was environmental performance. Our tests indicated that the results were robust and therefore free of the endogeneity concern.

Socioemotional Wealth

As in the case of the self-selection analysis, the specification of the variables in the outcome equation mimicked model B in table 2. Following Villalonga and Amit (2006), the independent variables in the selection equation included all of the independent variables in the outcome equation plus the percentage of stock owned by nonfamily members on the board. The latter was correlated with family firm status and uncorrelated with the residuals of the environmental performance equation; that is, it acted as an instrument for family firm status. Further, as the percentage of stock owned by nonfamily members on the board was not present in the outcome equation, it allowed us to meet the exclusion restriction necessary for identification (Wooldridge, 2002).

As can be seen in the third column of table A.1, summarizing the results obtained using the procedure just described, the main conclusion of our study remained unchanged. The results were consistent with those obtained using OLS. In fact, after we controlled for the endogeneity bias, the effect of family status on environmental performance was even stronger ($\beta = .2825$ with OLS; $\beta = .9029$, using the treatment effect regression). Therefore we can conclude that our central results are free of the endogeneity concern.