

DISAGGREGATE THEORIES AND FIRM COMPLIANCE BEHAVIOR

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Introduction

An understanding of the factors influencing the behavior of firms allows for the creation of environmental regulations that generate greater compliance. More specifically, an examination of the drivers of firm behavior beyond the basic cost/benefit analysis of rational choice models generates more effective enforcement policies and regulations. The analysis of a firm as comprised of sub-units and distinct components that do not necessarily act as one unitary entity allows for a more detailed examination of the potential determinants of behavior at the firm level.

Depending on the field of study, literature based upon the disaggregation of firms in determining compliance behavior views the distinct components of a firm from different perspectives. Literature from the fields of business management and strategy tends to focus on the structural and organizational components of a firm in determining the behavior of managers and decision-makers, which is often translated into the actions taken by the firm as a unit. In contrast, literature from the fields of behavioral science, psychology, and sociology emphasizes the internal drivers of human behavior and socially-determined factors in a normative analysis of compliance behavior. Although a combination of these two broad categories of perspectives provides great insight into effective policy-making, the difficulty lies in bridging the gap between the understanding of individual behavior within groups from a normative perspective and the understanding of the organizational and structural factors that influence decision-makers' behavior within firms and firm-level action.

This paper presents an examination of the factors influencing compliance behavior within firms and synthesizes the literature across various fields to create a more comprehensive understanding of the determinants of corporate response to environmental regulations. An examination of the determinants of firm compliance behavior from the management sciences,

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business, and economics perspectives is followed by an analysis of normative theories that address the drivers of human behavior. Upon further research, these theories may be applicable to the understanding of compliance behavior specifically within firms. Likewise, the gaps in data collected from empirical studies drawn upon to substantiate these theories may serve to provide guidance for the direction of future research efforts. The paper concludes with a discussion of the factors of a model that would more comprehensively address the drivers of firm compliance, combining management and normative perspectives, as well as the need to examine the interaction of laws and norms in formulating effective environmental policies.

Structural/Organizational Components of Firms and their Influence on Compliance Behavior

1. Firm Size

When discussing the impact of firm size on likely compliance behavior, the literature from business and strategic management journals tends to highlight the weaknesses within smaller firms that would inhibit compliance. In contrast, the literature emphasizes the characteristics of larger firms that both promote and impede compliance behavior.

Small Firms

As asserted by Malloy in *Regulation, Compliance and the Firm*, the allocation of resources within a firm to addressing environmental issues and to ensuring awareness of environmental requirements is a critical component of compliance.² Similarly, Henriques and Sadorsky finds that smaller firms are more restricted in their level of financial capital and resources and thus less likely to implement an environmental plan.³ Henriques and Sadorsky based their findings on data from a survey of 750 of the largest firms in Canada, 400 of which responded and 41% of these which had no formal environmental plan.⁴ In addition, Silberman finds that a lack of capital may result in limited abilities for smaller firms to pay the penalties

² See Timothy F. Malloy, *Regulation, Compliance and the Firm*, 76 TEMP. L. REV. 451, 457 (2003).

³ Irene Henriques & Perry Sadorsky, *The Determinants of an Environmentally Responsive Firm: An Empirical Approach*, 30 J. ENVTL. ECON. & MGMT. 381, 384 (1996).

⁴ *Id.*

imposed by regulating bodies.⁵ In specific, Silberman asserts that current research suggests “internal corporate structure and penalty/reward systems play a significant role in how corporations address compliance internally or react to external enforcement stimuli.”⁶

The inequality of power between firms of different sizes in a particular industry or market may also encourage smaller firms to cut corners and neglect environmental issues in their allocation of resources in order to stay competitive.⁷ In relation to awareness of environmental regulatory requirements, Solomon and Mihelcic refer to a survey taken of small and medium-sized chemical facilities that showed a significant correlation between the size of a firm and its awareness of compliance requirements, with smaller firms less likely to be aware of environmental regulations.⁸ In addition to size, the complexity of chemical industry regulations may also have contributed to the large disparity between awareness of requirements in different-sized firms.⁹

The results of a study conducted in 1999 on small and medium-sized enterprises in England showed that actual corporate responses to environmental issues reflected a conflict between a positive culture of compliance among individuals in business and the operational climate of feasibility to act upon these attitudes.¹⁰ More recently, the SME-nvironment Survey conducted in 2003 on small and medium-sized enterprises in the UK reinforced the earlier study when finding generally that the smaller the business, the less the availability of resources and time available to address environmental issues.¹¹ In addition, smaller businesses tend to be less aware of their potential to damage the environment as well as the environmental regulations applicable to their companies. In fact, a mere 6% of the businesses surveyed thought that their actions could damage the environment and only 18% could name a piece of environmental legislation unprompted.¹² Furthermore, only 20% of micro businesses (consisting of less than

⁵ John D. Silberman, *Does Environmental Deterrence Work? Evidence and Experience Say Yes, But We Need to Understand How and Why*, 30 ENVTL. L. REP. 10523 (2000).

⁶ *Id.*

⁷ Neal Shover and Aaron S. Routhe, *Environmental Crime*, 32 CRIME & JUST. 321, 334 (2005).

⁸ Barry D. Solomon and James R. Mihelcic, *Environmental Management Codes and Continuous Environmental Improvements: Insights from the Chemical Industry*, 10 BUS. STRAT. & ENV'T 215 (2001).

⁹ *Id.* at 222.

¹⁰ Petts et al., *The Climate and Culture of Environmental Compliance within SMEs*, 8 BUS. STRAT. & ENV'T 14 (1999).

¹¹ SME-nvironment Survey 2003, http://www.environment-agency.gov.uk/commondata/acrobat/smenvironment_uk_2003.pdf.

¹² *Id.*

ten employees) operate with an environmental policy and only 3% of all the businesses surveyed had adopted a formal environmental management system.¹³

Large Firms

In relation to larger firms, business and management journals address various aspects of these firms that either promote or inhibit compliance behavior. The tension between these aspects are not necessarily contradictory but lead to difficulties in drawing distinct characterizations of compliance at the firm level as related to firm size. Both Shover and Malloy use the size of a firm as a proxy for complexity and coordination difficulties and conclude that larger firms are more likely to be non-compliant. Reasons for non-compliance in more complex firms include the obscuring of oversight through the diffusion of responsibility and the greater likelihood of cultivating sub-cultures of non-compliance.¹⁴ Henriques and Sadorsky recognize that larger firms will be subject to greater coordination costs but simultaneously find that larger firms may also be more likely to adopt environmental management plans in order to reduce monitoring costs.¹⁵

Several other characteristics of larger firms that may encourage greater compliance are addressed by studies from the management and organizational studies fields. The results from Solomon's study indicate that larger firms are more likely to implement voluntary compliance programs due to their greater level of resources and the perceived benefits of positive press coverage.¹⁶ Henriques applies this greater visibility to showing that larger firms are more often expected to be industry leaders and at the forefront of implementing environmental management strategies.¹⁷ Examining the data collected from a study within Canadian firms in the oil and gas industry, Sharma finds that managers in larger firms are more predisposed to viewing environmental issues as opportunities rather than threats.¹⁸ Sharma attributes this finding to either the greater capacity of larger firms to handle environmental issues or the amount of slack

¹³ *Id.*

¹⁴ Shover, *supra* note 4, at 339; Malloy, *supra* note 1, at 506.

¹⁵ Henriques & Sadorsky, *supra* note 2, at 385.

¹⁶ Solomon & Mihelcic, *supra* note 5, at 217.

¹⁷ Henriques & Sadorsky, *supra* note 2, at 385.

¹⁸ Sanjay Sharma, *Managerial Interpretations and Organizational Context as Predictors of Corporate Choice of Environmental Strategy*, 43 ACAD. MGMT. J. 681, 682 (2000).

in these companies that can absorb the risks implicit in adopting voluntary environmental strategies.¹⁹

Conclusions

In summary, the literature and studies conducted that incorporate firm size and environmental compliance behavior support the hypothesis that larger firms are more likely to adopt voluntary management systems, but that coordination problems and a greater opportunity for the diffusion of responsibility within the sub-units of larger firms may inhibit greater compliance behavior at the firm level. Larger firms need to be aware of the potential coordination difficulties created by more complex corporate structures and the greater opportunities to foster sub-cultures of non-compliance. Therefore, even after accounting for their greater likelihood of implementing strategies to address environmental issues, larger firms in general do not necessarily exhibit greater compliance behavior.

Various characteristics of small firms in general appear to inhibit the promotion of compliance behavior as well as the effectiveness of typical deterrence mechanisms, such as large monetary penalties.²⁰ The interaction between attitudes of individuals within smaller firms and the firms' actual organizational or structural limitations presents insight into the need to translate general sentiments about appropriate behavior (as will be addressed further in this paper in the section on norms) into concrete activities considered feasible within the limitations characteristic of smaller firms. As discussed, these limitations include less financial capital and resources, less awareness of environmental regulations and their potential to damage the environment, and less likelihood to adopt a formal environmental strategy.

2. Information Flow and Organizational Context

Information Flow

The relationship between the flow of information and its effects on firm compliance behavior operates at the intra-firm and inter-firm levels. Within an organization, Malloy asserts

¹⁹ *Id.* at 692.

²⁰ *See* Silberman, *supra* note 3.

that problems in the proper transmission of information often lead to managerial problems and non-compliance.²¹ In contrast, Silberman finds that a larger number of violation detections results in information being sent up the management chain within a firm and greater compliance behavior.²² At the inter-firm level, several theories assert that the information flow regarding compliance behavior of other firms may alter a particular firm's behavior. Drawing an analogy to tax compliance behavior, Vandenberg's typology of the social norms that influence compliance behavior combines the effects of information flow with the norm of conformity to hold that social validation and the compliance of other firms will encourage individual firms to comply.²³ Based on tax compliance studies, intentions to evade taxes may be influenced by present widespread non-compliance or by a perceived reduction in the risk of formal or informal sanctions.²⁴ Although the relationship of causation between these factors and non-compliance is not exactly clear, tax compliance literature also finds that social validation provides a standard of comparison for individuals to compare their own beliefs, attitudes, and actions.²⁵

Organizational Context

In addition to the flow of information as a factor, several theories incorporate decision-makers' subjective interpretations of environmental issues into the organizational context of a firm to calculate compliance behavior. Paternoster's rational choice model joins the organizational context of a firm with individual perceptions of costs and benefits to derive a theory of compliance behavior.²⁶ This model also recognizes the influence of norms upon an individual's moral code, which in turn shapes personalized calculations of costs and benefits.²⁷ Therefore individual decisions to violate the law in an employment context depend on three main factors: 1) the risks and benefits they perceive for themselves, 2) the risks and benefits they perceive for the company, and 3) the presence or absence of offending inducements or restrictions within the specific context of the organization.²⁸ In an analysis addressing similar

²¹ Malloy, *supra* note 1, at 487.

²² Silberman, *supra* note 3.

²³ Michael P. Vandenberg, *Beyond Elegance: A Testable Typology of Social Norms in Corporate Environmental Compliance*, 22 STAN. ENVTL. L.J. 55, 112 (2003).

²⁴ *Id.* at 113.

²⁵ *Id.* at 114.

²⁶ Raymond Paternoster & Sally Simpson, *Sanction Threats and Appeals to Morality: Testing a Rational Choice Model of Corporate Crime*, 30 LAW & SOC'Y REV. 549, 553 (1996).

²⁷ *Id.*

²⁸ *Id.*

factors, Ocasio posits that organizational context, more than individual preferences, molds decision-makers' behavior through attentional processes.²⁹ In specific, Ocasio states that the "firm's rules, resources, and relationships distribute various issues, answers, and decision-makers into specific communications and procedures" that in turn receive the focus of attention.³⁰ Attentional processing functions at multiple levels and is shaped by individuals, organizations, and the environment.³¹

Silberman presents a complementary view that focuses on the role of upper management in the allocation of resources to address environmental enforcement actions.³² Upper management may need to address problems such as staff discipline, public stigma, and negative market impacts.³³ In relation to non-management employees, programs implemented by individuals that are "well-integrated" into the structure of an organization, such that they influence firm-level decision-making, have led to greater compliance.³⁴ In addition, Malloy attributes the weakening of norms of compliance to deficient routines within a firm's organizational and operational structure, resulting from a problem of management.³⁵ For example, a lack of coordination between sub-units may result in conflicting goals of managers and employees in each sub-division undermining a firm-level goal to comply with environmental regulations.³⁶ This analysis is based upon a principle-agent model of the firm, wherein "the principle (such as the shareholders, the firm, or senior managers) has expressed a preference for complying with the law, which the agent (i.e., a subordinate manager or employee) ignores."³⁷

Conclusions

As these various theories indicate, the interplay between organizational routines, management structures, attention-focusing processes, and the flow of information interact with the influence of norms of compliance to shape behavior within the sub-units of a firm. The focus of the research has been on potential influences on decision-makers' behavior as shaped by these

²⁹ William Ocasio, *Towards an Attention-Based View of the Firm*, 18 STRAT. MGMT. J. 187, 190 (1997).

³⁰ *Id.* at 187.

³¹ *Id.* at 188.

³² Silberman, *supra* note 3.

³³ *Id.*

³⁴ *Id.*

³⁵ Malloy, *supra* note 1, at 497.

³⁶ *See id.* at 478-79.

³⁷ *Id.* at 463.

factors, although often the process of reaching decisions at the firm level involve a composite of interactions between managerial and non-managerial staff. Thus, further examination of the role of norms and their influence on individual behavior within a group serves to provide greater insight into the factors that may determine compliance behavior at the firm level.

Further Integration of Norms into Compliance Behavior Models

1. The Role of Social Norms

The incorporation of an understanding of norms and their influence on human behavior facilitates a deeper analysis of the behavior within firms leading to compliance at the firm level. Sunstein defines norms as “social attitudes of approval and disapproval, specifying what ought to be done and what ought not to be done.”³⁸ Sunstein asserts that there are three factors that influence a choice among options: the intrinsic value of the option; the reputational benefits or costs of the choice; and the effects of the choice on one’s self conception.³⁹ If we apply these aspects of decision-making from Sunstein’s model of social norms to environmental compliance, then behavior, at least at the individual level, departs from purely rational cost/benefit analysis to incorporate less easily quantifiable influences on decision processes. Alternatively, Sunstein solves these “puzzles of rationality” by holding that irrationally economic behavior could be rational from a perspective that incorporates the influence of social norms and moral judgments that shape such norms.⁴⁰

Although Sunstein does not directly apply his analysis of social norms upon behavior at the firm level, awareness of the influence of norms upon individuals within a firm (especially upon those of managers and decision-makers whose decisions may be most likely translated into firm-level actions) serves to build a more valuable model of firm compliance behavior. For example, the reputational benefits of a particular choice to comply with an environmental regulation and the affect of this choice on one’s considerations of self-identity are not traditionally factored into a rational cost/benefit analysis of compliance. However, if these social and internal normative factors play into the decision-making processes of managers that translate into actions at the firm level, a model of the drivers of firm compliance must incorporate these

³⁸ Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 914 (1996).

³⁹ *Id.* at 916.

⁴⁰ *Id.* at 945.

factors alongside organizational and market-driven influences on firm behavior. In their article *A Socio-Economic Theory of Regulatory Compliance*, Sutinen and Kuperan create a theoretical model along these lines by finding that the literature across the fields of economics, psychology, and sociology identify a range of factors that shape compliance behavior.⁴¹ These factors include: potential illegal gain, severity and certainty of sanctions, standards of personal morality, perceptions of justice regarding the enforcement of rules, and social environmental influences.⁴² The first two factors stem from economic perspectives of deterrence models based on rational behavior and the remaining factors emerge from sociological and psychological perspectives. Although compliance behavior from sociology literature diverges into two basic perspectives, instrumental and normative, Sutinen and Kuperan focus on two specific normative motivations for individual compliance behavior: individuals' perceptions of the fairness and appropriateness of the law and its institutions.⁴³

2. Internal Norms and Behavior in Groups

The analysis of norms upon individual employees within a firm is important given that management actions, which may translate into firm-level behavior, incorporate the influence of constant interactions and decisions made by both management and non-management employees. In *Cooperation in Groups*, Tyler and Blader examine the concepts of procedural justice and social identity from a social psychological perspective to articulate a normative theory of the influences on individual behavior that affect cooperation in the workplace.⁴⁴ They test their hypothesis on individual behavior within a group through a survey of 404 employees and their judgments about their work organizations.⁴⁵ The study focused on individual behavior as well as subjective feelings and thoughts in order to examine the influence of attitudes, values, incentives, and sanctions on cooperative behavior.⁴⁶ Although the median size of the work organizations of

⁴¹ Jon G. Sutinen & K. Kuperan, *A Socio-economic Theory of Regulatory Compliance*, 26 INT'L J. SOC. ECON. 174 (1999).

⁴² *Id.*

⁴³ *Id.*

⁴⁴ TOM R. TYLER & STEVEN L. BLADER, *COOPERATION IN GROUPS: PROCEDURAL JUSTICE, SOCIAL IDENTITY, AND BEHAVIORAL ENGAGEMENT* (Mahzarin Banaji & Miles Hewstone, eds., Taylor & Francis, 2000).

⁴⁵ *Id.* at 17.

⁴⁶ *Id.* at 9.

the employees surveyed was 250, there was a wide range of organization size included, as well as a mix of full-time, higher-income, and part-time, low-income employees.⁴⁷

Tyler and Blader focus upon the concept of procedural justice as a critical determinant of internally-driven motivation for cooperative group behavior.⁴⁸ In our analysis of firm-level compliance behavior, the concept of procedural justice may play a pivotal role in guiding firm-wide policies attempting to promote compliance behavior at the individual employee level, leading to firm-level compliance. Procedural justice encompasses the fairness of procedures as defined through elements that communicate process-based information, and serves as a departure from outcome-based models of behavior that view people as self-interested resource seekers.⁴⁹ The four-part model of procedural justice focuses on two pairs of variables.⁵⁰ The first pair of components includes the quality of decision-making processes and the quality of the treatment that people receive from the group.⁵¹ The second pair incorporates both the formal rules of the group and the informal actions by authorities or supervisors into a model of procedural justice.⁵² Moreover, the authors find that internally-driven behavior appears to be a greater influence on individual cooperation within a group than instrumental reasons.⁵³ In contrast to normative motivations, instrumental reasons arise from a rational-model desire to maximize gains and minimize losses in interactions with others.⁵⁴ Relating these findings to behavior within a firm, legitimacy in decision-making processes appears to be a logical focus and pivotal component of promoting compliance behavior that takes into account the strong influence of individual employees' subjective attitudes regarding their work organization on their behavior.⁵⁵

3. The Interaction of Internal and External Norms

Although a distinction can be drawn between Sunstein's explanation of the effects of external, social norms and Tyler and Blader's work integrating individualized perceptions of justice into internal norms, the literature on the effects of norms on behavior also recognizes their

⁴⁷ *Id.* at 19.

⁴⁸ *Id.* at 69.

⁴⁹ *Id.* at 77.

⁵⁰ *Id.* at 125.

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *See id.* at 54.

⁵⁵ *See* Tyler & Blader, *supra* note 43.

reciprocal influence.⁵⁶ Schwartz addresses the influence of social norms and sanctions on individual, personalized norms when stating that “internal norms are learned from shared expectations in social interactions and modified within each person to become standards that are self-reinforcing.”⁵⁷ Addressing the same issue, McAdams develops an esteem theory of norms that finds that individuals’ desire for esteem within a group can create a norm under certain conditions.⁵⁸ These conditions include: a consensus about the positive or negative esteem-worthiness of engaging in a specific behavior; some risk that others will detect when one engages in behavior; and the existence of the first two factors is well-known within the relevant population.⁵⁹ Furthermore, esteem theory explains norms that arise without consensus because the desire for esteem generates a norm that is then reinforced through internalization.⁶⁰ Another variation of the interaction between social norms, social movements, and internal norms takes shape in Stern’s value-belief-norm theory, wherein individuals that accept a movement’s basic values sense an obligation to restore the values of a movement when they are threatened.⁶¹ This obligation functions as a personal norm internalized as a result of external factors incorporated into personal beliefs.⁶²

Towards Understanding Norms and Firm-Level Behavior

By considering the impact of internal and external norms as additional costs, Vandenberg builds upon a rational choice model to more accurately predict the decision-making of corporate managers regarding environmental compliance.⁶³ This model incorporates an earlier, sociological theory outlined in 1961 by Dennis Wrong and highlights three main factors that promote compliance: 1) fear of formal legal sanctions; 2) fear of informal sanctions; and 3) the internalization of legal norms or a moral commitment to comply with the law.⁶⁴

⁵⁶ See Sunstein, *supra* note 26; Tyler & Blader, *supra* note 31.

⁵⁷ Shalom H. Schwartz, *Normative Influences on Altruism*, in 10 *ADVANCES IN EXPERIMENTAL SOCIAL PSYCHOLOGY* 221, 241 (L. Berkowitz ed., 1977).

⁵⁸ Richard H. McAdams, *The Origins, Development, and Regulation of Norms*, 96 *MICH. L. REV.* 338 (1997).

⁵⁹ *Id.* at 358.

⁶⁰ *Id.*

⁶¹ Paul C. Stern et al., *A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism*, 6:2 *HUM. ECOLOGY REV.* 81 (1999).

⁶² See *id.*

⁶³ See Vandenberg, *supra* note 19.

⁶⁴ *Id.* at 68.

Vandenbergh creates a typology of eight norms that influence individual corporate managers' behavior as decision-makers and categorizes these norms into substantive norms, procedural norms, and the norm of conformity.⁶⁵ The substantive norms of law compliance, human health protection, environmental protection, and autonomy have been found to affect individual behavior.⁶⁶ Likewise, the procedural norms of fair process, good faith, and reciprocity address individual managers' perceptions of the fairness of their interactions with enforcement agencies.⁶⁷ In this sense, Vandenbergh's analysis of procedural norms echoes Tyler and Blader's findings that procedural justice promotes cooperative behavior, wherein the goals of the 'group' of regulators and regulated entities would be compliance with environmental regulations and enforcement agencies.⁶⁸ Nevertheless, the lack of studies and data collected confirming a positive relationship between the influence of norms at the individual level and individual, facility, or firm-level compliance behavior highlights the need to substantiate the assumption that individual decision-maker's behavior, as shaped by norms, can be translated into the actions of firms within a regulatory system.

The norm of conformity in Vandenbergh's typology (also discussed in relation to the flow of information between firms) takes into account the effects of other firms' non-compliance and social validation upon the compliance rates of individual firms.⁶⁹ Lai, Yang, and Chang examine this same relationship in a model that addresses the relationship between the internal environmental norm of a firm and the general level of compliance within an industry.⁷⁰ According to their findings from a study on the impact of a higher pollution tax rate, a firm is more likely to be compliant when aware of a significant level of compliance within the industry, such that a firm's internal environmental norm generally depends on "conditional cooperation" among firms.⁷¹ Thus, although the literature on norms and compliance behavior addresses both an individual and firm-wide level, there still exists a gap in establishing the actual relationship between individual normative motivations and a firm-wide attitude and response to environmental issues.

Conclusion

⁶⁵ See Vandenbergh, *supra* note 19.

⁶⁶ See *id.* at 80.

⁶⁷ See *id.* at 102-03.

⁶⁸ See *id.*; see generally Tyler & Blader, *supra* note 31.

⁶⁹ See Vandenbergh, *supra* note 19, at 112.

⁷⁰ Ching-Chong Lai et al., *Environmental Regulations and Social Norms*, 10 INT'L TAX & PUB. FIN. 63 (2003).

⁷¹ *Id.* at 72.

The combination of elements from management theories with normative theories from the behavioral sciences appears to be the most accurate method of constructing a comprehensive model of compliance behavior with predictive ability at the firm level. For example, Delmas and Toffel develop a model based on an institutional theory that combines elements from varied disciplines to explain why organizations react differently to the same institutional pressures.⁷² They find that the influence of stakeholders translates into pressures as perceived by managers and interpreted through the organizational process.⁷³ In turn, stakeholders impose normative pressures on firms such that organizational practices and structures are shaped by social and cultural pressures imposed on organizations.⁷⁴ Although traditional institutional theory holds that institutional mechanisms “create and diffuse a common set of values, norms and rules to produce similar practices and structures across organizations in the same field,” Delmas and Toffel hypothesize that organizational structure, strategic positioning, and performance impact how firms perceive and may respond differently to similar institutional pressures.⁷⁵ This view of firms as composed of disaggregate sub-units and decision-makers allows for considerations of cognitive and cultural framing that mold varying perceptions of and reactions to similar institutional pressures.⁷⁶ Similar to the gap identified by Vandenberg and the literature surveyed here, Delmas and Toffel also recognize a lack of existing empirical studies focused on the role of normative pressures on firm strategies.⁷⁷

Examining the variable of firm size in relation to firm compliance behavior, the combination of findings across disciplines presents implications that have yet to be empirically tested. Based on the findings from data collected on small and medium-sized enterprises in England, smaller firms may be less likely to align the concerns of individual employees regarding environmental issues and responses at the firm level.⁷⁸ Incorporating the effect of social norms on managerial decision-making, as discussed by Vandenberg, may provide insight for both firms and regulators into achieving the alignment of management and non-management

⁷² Magali Delmas and Michael W. Toffel, *Stakeholders and Environment Management Practices: An Institutional Framework*, 13:4 BUS. STRAT. & ENV'T 209 (2004).

⁷³ *Id.* at 210.

⁷⁴ *Id.*

⁷⁵ *Id.* at 215.

⁷⁶ *Id.* at 212.

⁷⁷ *Id.* at 219.

⁷⁸ Petts, *supra* note 14.

interests necessary to act upon individual environmental attitudes of employees.⁷⁹ In addition, Tyler's assertion of the role of procedural justice in facilitating cooperative group behavior may become less influential in smaller firms due to the greater constraints of resources and feasibility to act in comparison to larger companies.⁸⁰

Focusing the implications of our survey of firm compliance behavior literature on the role of environmental regulators and public policy-makers, awareness of the interaction between law and norms is crucial to the enforcement and efficacy of environmental regulations. From the behavioral law and economics field, Sunstein proposes that laws can manipulate social norms through the shaping of constructed preferences and the overcoming of biases due to bounded rationality.⁸¹ In essence, legal institutions are not necessarily subject to the biases and bounded rationality of individual actors that may inhibit compliance behavior.⁸² Similarly, McAdams delineates the positive interaction of laws and norms when asserting that laws may serve as the expressive function of norms through publicizing social consensus, as well as a method of undermining inefficient norms.⁸³ In contrast, Pildes highlights the possible counterproductive interaction between the law and social norms, specifically when the law interferes with norms of cooperation, norms of reciprocity, and the flexibility of socially enforced norms.⁸⁴ From a socio-economic perspective, Sutinen asserts the need for regulatory bodies to establish legitimacy, beyond their creation from legislation, as a critical implication of the elements that influence compliance with environmental laws.⁸⁵ Malloy posits that command-and-control regulations may serve to undermine norms of compliance, especially when regulatory legitimacy is in question, instead of optimizing the influence of both regulations and norms by aligning their effects on behavior.⁸⁶ The various theories on the interaction between laws and norms indicate that there is potential for policy-makers and regulatory bodies to benefit from an understanding of the influence of norms on firm compliance behavior. For example, they may achieve greater levels of compliance through encouraging the implementation of environmental management

⁷⁹ See Vandenberg, *supra* note 19.

⁸⁰ See generally Tyler & Blader, *supra* note 31.

⁸¹ See Cass R. Sunstein, *Behavioral Law and Economics: A Progress Report*, 1:1 AM. L. & ECON. REV. 115 (1999).

⁸² *Id.*

⁸³ McAdams, *supra* note 41, at 406, 424.

⁸⁴ Richard H. Pildes, *Law Economics, & Norms: The Destruction of Social Capital through Law*, 144 U. PA. L. REV. 2055, 2077 (1996).

⁸⁵ Sutinen, *supra* note 29.

⁸⁶ See Malloy, *supra* note 1, at 469.

systems or addressing the provision of public goods through the manipulation of norms impacting collective action problems.⁸⁷ However, as Pildes suggests, the potential for laws and norms to undermine their mutual effects on promoting compliance behavior should also be accounted for in a comprehensive model of the determinants of firm compliance behavior.⁸⁸

⁸⁷ Sunstein, *supra* note 26, at 958.

⁸⁸ See Pildes, *supra* note 62.