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# Stakeholders and environmental management systems: a synergistic influence on environmental imbalance

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#### ABSTRACT

This article analyzes the combined effects of stakeholder pressure and the implementation of environmental management systems on organizations' environmental behaviors. Beyond their individual effects, the implementation of an environmental management system should enhance the effect of stakeholder pressure on environmental imbalance, defined as the divergence between what the organization does and what it should do. Information collected from 3748 industrial plants in seven countries provides empirical evidence that supports the study propositions. Therefore, this study contributes to both the debate about the effectiveness of environmental management systems and the effort to explain the complex relationship between organizations and their stakeholders in environmental matters.

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#### 1. Introduction

It has been more than two decades since authors first predicted a strategic role for the environmental position of firms (e.g., Hunt and Auster, 1990; Winsemius and Guntram, 1992); studies in the meantime have attempted to identify both contextual and organizational circumstances that might prompt some firms to commit to protecting the natural environment while others ignore it altogether (e.g., Aragón-Correa, 1998; Arora and Cason, 1996; Bansal and Roth, 2000; González-Benito and González-Benito, 2008). Academic scholarship often focuses on pressures exerted by organizational stakeholders (Buysse and Verbeke, 2003; Darnall et al., 2010; Henriques and Sadorsky, 1999) or implementations of environmental management systems (EMS) by organizations (Kim and Darnall, in press; Nawrocka and Parker, 2009; Sroufe, 2003). To the best of our knowledge though, only Darnall et al. (2008) link these two variables by analyzing the influence of stakeholder pressures on the comprehensiveness of an EMS. No research has considered their synergistic or complementary effects with regard to the environmental commitment of organizations.

This study aims to help explain the environmental proactivity of organizations by analyzing the combined effect of stakeholder pressure and EMS implementation. According to previous research, both variables contribute separately to the organization's decision to take environmental actions; as our main contribution, we extend

this analysis to argue that the presence of an EMS intensifies the effect of stakeholder pressure. Our study adds to the debate about the usefulness of EMS by elucidating the direct and indirect benefits of such a system. We also extend previous studies (e.g., Darnall et al., 2010; Delmas and Toffel, 2008; Kassinis and Vafeas, 2006; Sharma and Henriques, 2005) by identifying further elements that influence the relationship between organizations and stakeholders in the context of environmental issues.

We also achieve several methodological advances that enhance the validity of our study results. Most prior research measures environmental proactivity as the extent to which a firm implements a series of practices. In contrast, we consider this concept in relation to environmental imbalance. Environmental imbalance provides a measure of the limitations that the organization faces in its efforts to address environmental problems, such that its environmental behavior is a relative attribute that we can assess as a function of the firm's polluting potential. By adopting this relative approach, we acknowledge that proactivity that might be considered sufficient in one organization could be intolerable for others.

Our results have implications for not only business firms that must design strategies to deal with stakeholder pressure but also public administrations and regulating agencies. These latter groups play roles as both stakeholders and promoters of policies that influence the behavior of other stakeholders and that condition or encourage the implementation of EMS.

As empirical support for our proposals, we rely on data provided by the Organization for Economic Co-operation and Development (OECD). This database has supported vast environmental

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management research (e.g., Arimura et al., 2008, 2011; Darnall et al., 2008, 2009, 2010; Johnstone and Labonne, 2009; Kim and Darnall, in press; Testa and Iraldo, 2010) that helps elucidate the effects of environmental stakeholder pressures and the implementation of EMS. We apply the database to the next step, that is, to consider the interaction between these two variables as a means to explain the environmental proactivity of organizations, according to the concept of environmental imbalance.

We structure the remainder of this article in four sections. In Section 2, we introduce the main concepts, review relevant literature, and pose our working hypotheses. We describe the methodology we used to test the hypotheses in Section 3, then present the results in Section 4, along with their main implications and the research opportunities they offer. We conclude in Section 5.

## 2. Environmental imbalance, stakeholders, and EMS: research hypotheses

#### 2.1. Environmental imbalance

An organization's attitude toward the natural environment constitutes a competitive dimension with clear strategic interest. Many organizations voluntarily undertake initiatives, programs, and practices to reduce their negative impact on the environment, as summarized by the terms "proactive" or "committed" environmental behaviors (Berry and Rondinelli, 1998; Hunt and Auster, 1990). Existing measures of environmental proactivity, raised awareness, commitment, and involvement mainly reflect the degree to which a firm implements a series of predetermined practices (e.g., Alvarez Gil et al., 2001; Aragón-Correa, 1998; Christmann, 2000; Darnall et al., 2010; González-Benito and González-Benito, 2005a; Henriques and Sadorsky, 1999; Sharma and Vredenburg, 1998), which assumes the same practices are useful and necessary for all organizations. Such measures thereby prevent effective overall assessments of the environmental commitment of a heterogeneous sample of firms.

In particular, this approach cannot account for a firm's pollution potential, which refers to the potential impact that the organization's products, services, and processes could have on the environment. Failing to implement a certain environmental practice may denote a lack of environmental awareness if the organization's actions are very damaging to its natural environment, but it could be considered appropriate and acceptable for an organization that commits no such negative acts. Likewise, a particular environmental behavior may be acceptable and sufficient in organizations with a certain pollution potential but insufficient in others with greater environmental impacts. Therefore, a more effective measure should determine not the absolute volume and variety of environmental initiatives by an organization but rather the extent to which its initiatives are reasonable and sufficient as a function of the specific characteristics of that organization. It is thus a matter of the balance or imbalance between what the organization does and what it should do, according to its characteristics.

In line with these observations, we define *environmental imbalance* as the divergence between the environmental actions an organization conducts and the initiatives it still needs to take to address its environmental damages. Greater environmental imbalance implies less interest or an inability by an organization to broach environmental issues; lesser imbalance indicates the organization has an effective commitment to the environment. We use the term "effective" in this context to mean that the firm does not undertake superfluous or unnecessary initiatives that do not really address environmental problems.

#### 2.2. Stakeholder pressure and environmental imbalance

The stakeholders of an organization (e.g., public authorities, consumers, suppliers, employees, financial entities, social groups, shareholders) can affect its performance or be affected by its actions (Freeman, 1984). Strategic management theory suggests that the success of an organization depends on its management of its stakeholders, achieved by creating value and satisfying their needs and expectations (Berman et al., 1999; Donaldson and Preston, 1995; Freeman, 1984; Hill and Jones, 1992; Jones, 1995).

The pressure that these stakeholders exert also constitutes a fundamental explanation of firms' environmental behaviors and strategies. Research has established differences across various classifications of stakeholders, in which each segment influences the implementation of certain environmental practices differently (Buysse and Verbeke, 2003; Clarkson, 1995; Harvey and Schaefer, 2001; Henriques and Sadorsky, 1999). Other studies emphasize the importance of the internal heterogeneity (Kassinis and Vafeas, 2006) and influence strategies (Sharma and Henriques, 2005) of each stakeholder group, as well as the perceptions and beliefs of managers (Fineman and Clarke, 1996; Murillo-Luna et al., 2008), the economic environment surrounding the firm (Rueda-Manzanares et al., 2008), the internal dynamics of different functional units in the organization (Delmas and Toffel, 2008), and the organizational size (Darnall et al., 2010). These studies note the contingent role of other variables but also recognize, whether implicitly or explicitly, that greater environmental pressure or stakeholder influence increases the organization's interest in adopting practices and developing initiatives that will enable it to address environmental issues. We therefore propose:

Hypothesis 1: The more environmental pressure from stakeholders that an organization perceives, the lower its environmental imbalance.

#### 2.3. Implementation of EMS and environmental imbalance

An environmental management system (EMS) is part of an organization's management system, used to develop and implement its environmental policy and manage its environmental effects, including the activities, products, or services that interact with the environment (ISO 14001, 2004). To develop an EMS, a firm must establish mechanisms to identify, measure, and control its environmental effects; define an environmental policy and objectives; raise the environmental awareness of employees; document procedures and operations related to environmental management; determine responsibilities in all these areas; and establish mechanisms for coordinating and controlling environmental initiatives within the organization (Annandale et al., 2004; Anton et al., 2004; Melnyk et al., 2003; Morrow and Rondinelli, 2002). In short, it must develop an infrastructure to manage the organization's interaction with the environment.

More and more firms have implemented EMS, largely in response to standards such as ISO 14001 or the European Eco-Management and Audit Scheme (EMAS) (Casadesús et al., 2008; Giménez et al., 2003; Morrow and Rondinelli, 2002). Organizations often use these standards as a guide for developing their EMS, which makes them candidates for certification (ISO 14001) or registration (EMAS). That is, the standards were conceived as tools to improve organizations' environmental performance, but they also support external recognition and legitimization of the firms' environmental responsibility, an issue of increasing interest to society (Johnstone and Labonne, 2009; King et al., 2005). Thus institutional theory often serves as an explanation for a firm's adoption of international standards (e.g., Darnall et al., 2008), and

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