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Exploring the impact of stakeholder pressure on environmental management strategies at the plant level: what does industry have to do with it?

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ABSTRACT

Stakeholder theory and empirical evidence confirm the positive relationship between stakeholder pressure and the implementation of environmental practices and strategies. However, the specific mechanisms and impact of selected stakeholder groups on environmental management strategies are relatively underexplored. In this paper, this shortcoming is addressed by exploring the impact of selected stakeholder groups on environmental management strategies taking the contingency factor industry into consideration (i.e., dynamic vs. static industries). Basing the arguments primarily on stakeholder theory, it is suggested that stakeholder pressures are perceived differently in plants in dynamic versus static industries. Similarly, it is suggested that the influence of stakeholder pressures on the implementation of environmental strategies is influenced by industry type. To test the proposed research model, primary survey data from 502 plants collected in the United States across multiple industries is used. Thus, this paper contributes to the sustainability operations management literature through exploring the relationship between stakeholder pressure, environmental strategy implementation and contextual factors (i.e., industry type) through hypotheses testing. Results indicate that industry type does indeed affect stakeholder pressure, and the relationship between stakeholder pressure and environmental strategy implementation. Plants situated in dynamic industries experience a significantly higher level of stakeholder pressures as opposed to plants situated in static industries across an array of environmental strategies.

1. Introduction

The pressure for companies to implement environmental practices has been apparent and increasing in recent years. Initially, many companies were willing to adopt environmental management practices that were both good for the environment and immediately good for the bottom line. However, discussion and debate continue among practitioners and researchers regarding what pressures and secondary benefits motivate companies to adopt more complex environmental strategies which consist of environmental practices that may not have an immediate direct impact on the bottom line. Research identifies various drivers that pressure companies to adopt sustainable practices, such as changes in customer preferences and demand, governmental regulation, ethical motivations, and performance considerations (Zhu and Sarkis, 2004; González-Benito and González-Benito, 2005; Montabon et al., 2007; Zhu and Sarkis, 2007). Some researchers have studied these drivers of sustainable practices through the lens of stakeholder theory (Sarkis et al., 2010) and what external factors influence stakeholder pressure (Rueda-Manzanares et al., 2008; Plaza-Ubeda et al., 2009). These studies have not converged on any specific set of contingencies that best explain the influence of stakeholder pressures on the adoption of environmental practices.

Many of the studies, which have been undertaken to provide insight into how different stakeholders influence the adoption of environmental strategies, focus on a single industry. For example, Pereira-Moliner et al. (2012) focus on the hotel industry; Massoud et al. (2010) focus on the food industry; Moors et al. (2005) focus on the metals producing industry; and Gonzalez-Benito (2008) focuses on the automobile industry. Practitioners and researchers

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recognize that industry is an important contextual factor as related to perceived stakeholder pressures and selection of environmental strategies (Zhu and Sarkis, 2006) and that further research is needed to discover which variables better explain the influence of stakeholder pressures on environmental strategy adoption (González-Benito and González-Benito, 2010). Contingency theory suggests that organizational effectiveness results from fitting the characteristics of the firm, such as structure, to contingencies that reflect the environment of the firm (Donaldson, 1987). From a contingency theory perspective and in this research, industry is the contingent variable determining the structure of organization. Industry is introduced through the concept of industry clockspeed, which describes the rate of change within an industry sector (Fine, 1998). Dynamic industries have a high rate of change and viewed through the lens of contingency theory would be expected to have an organic (participatory) structure and be more open to perceived stakeholder pressures while static industries have a lower rate of change and viewed through the lens of contingency theory would be expected to have a more mechanistic (formal) structure and be less open to perceived stakeholder pressures.

Thus, this research is set out to explore the following two interrelated research questions: (1) How does industry type affect perceived stakeholder pressures and environmental strategy implementation? And (2), how does industry type *affect the influence of perceived stakeholder pressures on environmental strategy implementation?* Through exploring these interrelated research questions, this study attempts to make the following contributions: First, it addresses calls in the literature to further explore how external contingencies may impact the deployment of specific capabilities (Barney et al., 2001; Priem and Butler, 2001a, 2001b; Aragon-Correa and Sharma, 2003). Second, it attempts to identify alternate sources of benchmarking and best practices for practitioners. Third, it responds to the need to further explore the relationship among stakeholders and environmental strategy implementation within a specific context (Buysse and Verbeke, 2003; Sanders et al., 2013).

The present study aims to empirically investigate the research questions above utilizing primary survey data from 502 plants collected within the United States across multiple industries. Multivariate analysis of covariance and ordinary least squares regression are utilized to answer the proposed research questions. Mixed results are found for specific types of stakeholder pressures impacting environmental management strategies. However, results indicate that plants situated in dynamic industries experience a significantly higher level of stakeholder pressures as opposed to plants situated in static industries across an array of environmental strategies.

The paper proceeds as follows: In the following section, the literature review is extended and sets of hypotheses regarding the identified research questions are developed. In the third section, the background regarding the survey development, sample selected, measures utilized, and the supporting statistical information is presented. In the fourth section, the results obtained in the empirical analysis are presented. The fifth section contains discussion surrounding the theoretical and managerial implications from this research. Finally, in the sixth section, the main conclusions and limitations of this research are summarized as well as opportunities for future research.

2. Literature review and hypotheses development

The main arguments in this research derive their theoretical base from the stakeholder perspective. From a conceptual perspective, stakeholder theory posits that various internal and external stakeholders put implicit and explicit pressure on organizations to act in certain expected ways. These groups of internal and external stakeholders pressurize companies to reduce negative externalities and to increase positive ones (Sarkis et al., 2010).

Previous researchers indicate that identifying and defining who stakeholders are is a substantive weakness of stakeholder theory (Lepineux, 2005; Orts and Strudler, 2009). Orts and Strudler (2009) indicate that previous literature identifies a “narrow” and “broad” definition of stakeholders. A “narrow” version defining stakeholders encompasses specifically what groups of people are within the boundaries of the business. The “broad” version defining stakeholders is used when researchers are invoking stakeholder theory for a strategic purpose (Orts and Strudler, 2009) and that is the focus that this research utilizes. Freeman (1984) broadly defined the concept of stakeholders as *“any individual or group who can affect the firm's performance or who is affected by the achievements of the organization's objective”*. When utilizing stakeholder theory from a strategic management perspective, stakeholders are conceptualized as those that have relevant interests and should be considered in business decisions. Scholars have made it clear that when stakeholders are defined broadly for strategic stakeholder analysis, stakeholder theory cannot address the full array of questions that arise without reference to any other theory (Freeman et al., 2010; Orts and Strudler, 2009). To overcome these inherent weaknesses, stakeholder theory is combined with a contingency perspective in an attempt to provide a richer explanation of the role of stakeholders and their relationship to environmental strategy selection.

2.1. Contingency theory, industry and stakeholder pressures

Contingency theory (Lawrence and Lorsch, 1967; Thompson, 1967) contends that no method or theory can be applied in all circumstances. Two prongs of contingency theory have developed which address contingencies at different organizational levels. Bureaucracy theory focuses on the macro level of organizations and posits that both specialization-formalization and decentralization increase with size. While organic theory focuses on a more micro level of the organization and posits that both specialization-formalization and centralization decrease with increasing task uncertainty (Donaldson, 2001). The current research focuses on the manufacturing plant, a more micro level perspective and the hypotheses will be developed from the organic theory of contingencies. According to Donaldson (2001), in organic theory of organizational structure a mechanistic structure (one based more on hierarchy) is more effective for tasks with low uncertainty while an organic structure (one based more on participation) is more effective for tasks with higher degrees of uncertainty. Innovation is a major source of task uncertainty and much of this uncertainty comes from technological and market changes in the environment (Donaldson, 2001).

The contingency, according to Lawrence and Lorsch (1967) is the level of innovation from the environment that the organizational structure needs to fit. For low innovation environments, the optimal structure has been shown to be centralized using planning and formal controls (Brech, 1957). For high innovation environments, the optimal structure has been shown to be decentralized using participation (Likert, 1961). Previous research has utilized environmental dynamism as an important contingency variable to reflect the degree of innovativeness within an environment (Lawrence and Lorsch, 1967; Hofer, 1975; Bensaou and Venkatraman, 1995; Teece et al., 1997). There are many ways to classify industries when examining dynamic versus static industry environments, e.g., competitive intensity, concentration, barriers to entry and exit, industry clockspeed, or environmental impact