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Effects of regulatory uncertainty on corporate strategy—an analysis of firms' responses to uncertainty about post-Kyoto policy

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ABSTRACT

A better understanding of corporate strategy under regulatory uncertainty enables policy makers to improve policy making efficiency and enhance regulations' effectiveness. Based on a review of the literature on policy formulation, we propose that regulatory uncertainty is characterized by a dependence on political negotiation, a discrete scenario structure, and a discontinuous resolution. Data from a worldwide survey show that firms pursue response strategies to regulatory uncertainty that address these characteristics by participating in policy making and increasing strategic flexibility. Surprisingly, the results also show that regulatory uncertainty only partly causes firms to postpone strategic decisions. We find that existing regulation and a need to act quickly despite regulatory uncertainty are opposed to the pursuit of a postponement strategy. We conclude that improving the mechanisms by which firms participate in early stages of the policy making process could enable them to operate in a more target-oriented manner, allow for more efficient policy implementation, and increase a regulation's effectiveness.

1. Introduction

Political scientists have extensively studied impediments within the political arena which reduce the efficiency of the policy making process (e.g., Besley and Coate, 1998; deLeon, 1992; Sabatier, 1991; Schulz and König, 2000) and lead to ineffective regulations (e.g., Fort and Rosenman, 1993; Mazmanian and Sabatier, 1981, 1983; Scharpf et al., 1978). Although the literature predominantly focuses on intragovernmental obstacles, aspects outside of the political arena also affect regulations' effectiveness (Ringquist, 1995). Firms' strategic responses toward a regulation constitute such an external influence (Rugman and Verbeke, 1998a) which may or may not be in accordance with the intentions and procedures of policy makers. Among other issues, firms concerned by a new regulation are typically exposed to regulatory uncertainty that is intrinsic to policy formulation (Birnbaum, 1984; Hoffmann et al., 2008). As a consequence, these firms often pursue specific strategies that enable them to cope with this uncertainty (Delmas and Tokat, 2005; Smith and Grimm, 1987). However, insufficient knowledge about the impact of regulatory uncertainty on firms' strategies can affect the efficiency of the policy making process and makes it difficult for policy makers to design effective regulations (Arentsen et al., 2000; Scharpf, 1988). For example, uncertainty associated with a specific regulation can impede firms' compliance with this regulation (Hoffmann, 2007; Levy, 1997; Paulsson and von Malmborg, 2004), thereby thwarting the regulation's objectives. Therefore, it is important for policy makers to develop a detailed understanding of firms' responses to regulatory uncertainty. However, this research area has not systematically been explored. This paper contributes to closing this gap by investigating which strategies firms pursue in response to regulatory uncertainty.

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Multilateral environmental regulations are particularly difficult to design and anticipate because they often only specify environmental goals and require individual governments to pass national regulations to achieve these goals (Christmann, 2004; Levy, 1997). Accordingly, the growing number of environmental regulations implemented and enforced at an international level increasingly exposes firms to regulatory uncertainty (Hoffmann and Trautmann, 2008; Kolk and Pinkse, 2004; Rugman and Verbeke, 1998b). Long periods of regulatory uncertainty are not only challenging for business, they are furthermore particularly critical from a societal perspective. This is due to the fact that the resulting ineffective environmental regulations and firms' possibly unwitting contravention of regulatory objectives might have severe and potentially irreversible consequences for the natural environment (Faucheux and Froger, 1995).

To address the effect of regulatory uncertainty on corporate strategy, we review the literature on policy formulation and identify three characteristics of regulatory uncertainty that distinguish this type of uncertainty from other uncertainties in firms' business environment. From these characteristics we derive hypotheses on strategies firms are likely to pursue when facing regulatory uncertainty. Focusing on environmental regulation, we then test our hypotheses with data from a worldwide survey of corporate response strategies to uncertainty associated with post-Kyoto regulation on climate change. Our results show that lobbying is strong and widespread across industries and regions. Similarly, firms across all industries and regions prepare for a range of different outcomes of the post-Kyoto policy process, indicating an inefficient use of resources due to regulatory uncertainty. At the same time, however, only a minority of firms actually postpone investment decisions, contrary to the frequent threats of firms not to invest if governments do not provide predictable investment conditions.

2. Theoretical background and hypotheses

2.1. *Uncertainty associated with governmental regulation*

Regulatory research has at length studied the policy formulation process that leads to the enactment of new or the adaptation of existing regulations (Gerber and Teske, 2000; Keim and Zeithaml, 1986; Rajagopalan and Rasheed, 1995; Stigler, 1971; Ullmann, 1985). Regulatory rules are laid out and enacted in a formal procedure and are typically designed for the public benefit (Selznick, 1985). Firms affected by the regulation are exposed to high uncertainty during this formulation process (Farnham, 2004; McCaffrey, 1982; Morana and Sawkins, 2000; Robinson and Taylor, 1998; Tarui and Polasky, 2005; Ullmann, 1985). In general, uncertainty refers to the unpredictability of variables internal or external to the firm (Miles and Snow, 1978; Pfeffer and Salancik, 1978) or the inadequacy of information about these variables (Duncan, 1972; Galbraith, 1977). In contrast to risk situations in which each outcome of events has a known probability, no probabilities can be assigned to uncertain future events (Knight, 1921). In line with Birnbaum (1984), we use the term 'regulatory uncertainty' to refer to the unpredictability of the actions of governmental agencies which create and enforce regulations. Environmental regulation is a particular source of regulatory uncertainty (Hempel, 1996; McCaffrey, 1982; Tarui and Polasky, 2005) because it is typically based on very long-term considerations, with science playing an important role in agenda setting, policy making, and evaluation (e.g., Arentsen et al., 2000; Den Elzen et al., 2005; Hulme and Dessai, 2008; Van den Hove, 2000).

2.2. *Policy making and characteristics of regulatory uncertainty*

In the following sections we identify three special characteristics of regulatory uncertainty and develop hypotheses on strategies firms are likely to pursue in response to this uncertainty.

2.2.1. *Dependence on political negotiation*

Participants in the policy making process typically pursue different and often contradictory interests (Aplin and Hegarty, 1980), trying to use their political influence to induce an outcome that is advantageous for them (Art, 1973). Consensus can only be reached by negotiating long-term bargaining arrangements and compromises (Fiorino, 1988; Héritier, 2003). Thus, political negotiations are often incomprehensible from the outside and thus constitute high uncertainty regarding the final policy characteristics (Allison, 1971; Pettigrew, 1973). Even in an advanced stage of the policy making process the final outcome often remains uncertain (Farnham, 1990), being "the unintended resultant of bargaining, pulling, and hauling among the principal participants" (Art, 1973, p. 474).

Political negotiations on the design of a new regulation are not limited to the interaction among political actors. Governmental agencies also seek the participation of various non-political groups, such as those firms concerned by the regulation (Meidinger, 1987). Participating in these negotiations allows firms to obtain inside information with regards to the final outcome, and thus reduces regulatory uncertainty (Little and Li, 1995; Pfeffer, 1977). Furthermore, actively participating in the political debate to exert influence on the circumstances or political players determining the uncertainty can steer inconclusive negotiations toward the firms' preferred outcome (Henisz and Delios, 2004b). Consequently, if there is regulatory uncertainty, especially during the early stages of a policy making process when its outcome is largely unclear, firms have an incentive to participate in this process. The formulation of environmental regulation is particularly appropriate for such participation because of its openness to external inputs (Fineman, 2000; Jänicke, 1996), e.g., from scientific experts (Arentsen et al., 2000) or environmental interest groups (Weber and Khademian, 1997) as well as from firms to be regulated (Tarui and Polasky, 2005). This leads to our first hypothesis:

Hypothesis 1. Firms that perceive high uncertainty regarding a specific regulation participate in the respective policy making process to a greater extent than firms that perceive low uncertainty regarding this regulation.

2.2.2. *Discrete scenario structure*

Policy makers' divergent initial positions and the unpredictability of political negotiations entail a broad range of