THE INVERTED U-SHAPED HYPOTHESIS AND FIRM ENVIRONMENTAL RESPONSIVENESS: THE MODERATING ROLE OF INSTITUTIONAL ALIGNMENT

Short running title:
Regulatory coercion and responsiveness

Abstract

The impact of regulatory coercion on firm environmental responsiveness is well discussed by institutional theorists. The intuitive nature of the relationship is positive and monotonic, i.e., the continuous strengthening of regulatory coercion prompts top management to be more environmentally responsive. This paper shows that (1) overall, there is an inverted U-shaped relationship between regulatory coercion and firm environmental responsiveness, that is, the continuous strengthening of regulatory coercion induces top management to bring their firms' environmental responsiveness up to a certain optimum level beyond which its ability to trigger more proactive and substantive environmental responsiveness begins to decelerate, while reactive and symbolic strategic conformity accelerates; (2) perceived institutional (mis)alignment moderates the Inverted U-shaped relationship between regulatory coercion and firm environmental responsiveness. Finally, results show that the Moderated Inverted U-shaped Hypothesis advances the long-standing and contentious debate about the relationship between regulatory coercion and firm environmental responsiveness.

Introduction: on regulatory coercion and firm environmental responsiveness

Institutional regulation in the environmental sphere has been growing in complexity, stringency, and extensiveness over the last few decades, not only in industrialized countries, but also in developing nations (Kraft and Vig, 2006). It typically takes two forms: Command-and-Control and economic instruments. Command-and-Control form of regulatory coercion typically takes pride of place among policymakers and environmentalists as the most powerful source affecting firm environmental responsiveness (Hoffman, 2001). Economists, on the other hand, advocate an economic style of regulatory coercion such as emission charges, production charges, subsidies, and tradable permits (Pearce et al., 1989).

For the purpose of this study, regulatory coercion is defined as pressures exerted on a firm from the government or related agencies, with the intent of requiring firms to adopt specific green behaviour (Fineman, 1997). It is also depicted as being either "light" (i.e. coercive demands are interpreted by top management as inappropriately designed, weakly enforced, and as such placing no significant burden on firms); "moderate" (i.e. coercive demands are interpreted by top management as appropriately designed, strongly enforced, and not placing unfair burdens on firms as such); or "stringent" (i.e. coercive demands are interpreted by top management as excessive, and as such sufficiently radical to affect the entire organizational structures and routines and render firms' existing environmental knowledge base obsolete).

As with institutional regulation, firm environmental responsiveness takes two general forms: environmental reactiveness and proactiveness. On the one hand, environmental reactiveness is usually associated with so-called "end-of-pipe" environmental responsiveness – that is, the addition of filtering devices to a firm's existing portfolio of environmental practices, which

typically symbolizes conformity (Jamali, 2010) but without the need for the development of new skills or expertise (Russo and Fouts, 1997). On the other hand, proactive environmental responses are intangible managerial innovations and routines (Hart, 2005) that can increase organizations' external legitimacy and survival (Suchman, 1995). It is frequently associated with voluntary firm environmental responsiveness, which very often exceeds minimum regulatory standards and substantially reduces energy and material use at source (Aragón-Correa et al., 2008). Examples include the development of environmental plans (Henriques and Sadorsky, 1996), environmental performance goals (Hart, 2005), and environmental audits (Welford, 1998).

Literally, thousands of institutional studies have cited the importance of regulatory coercion for firm environmental responsiveness (cf. Oliver, 1991) and emphasized the role of regulative, normative, and cognitive legitimacies (cf. Suchman, 1995) as the central guarantor of survival (Shah, 2011; Child and Tsai, 2005). However, the phenomenon of proactive environmental responsiveness has been of low key interest to institutional research. Oliver (1991), for example, identified five possible institutionally driven managerial responses to regulatory coercion: manipulation, defiance, avoidance, compromise, and acquiescence. Although this has dominated institutional ideas of firm environmental responsiveness for decades, Oliver's (1991) model tends to focus solely on reactive firm environmental responsiveness as being manipulative, imitative, and defensive, and discounts the possibility that top management can be strategically proactive (Child, 1972), as in going beyond the requirements of coercive regulatory demands voluntarily. By focusing only on environmental reactiveness as a condition of organizational legitimacy (Suchman, 1995) and survival (Child and Tsai, 2005), Oliver's (1991) model reflects an institutional view that top management only plays a passive role, a

conception that has remained dominant in institutional theorizing (e.g., Lounsbury, 2007, p. 289; Strang and Macy, 2001).

Equally important is an emerging shift in institutional theory towards a more complex and misaligned institutional environment (Greenwood et al., 2011) – an emerging shift that Oliver's (1991) model is not able to explain. Indeed, firms often struggle to deal with "(in)compatible prescriptions from multiple institutional logics" (Greenwood et al., 2011: 317) as they wrestle with simultaneous conflicting demands trying to "resolve tensions as they appeal to different bases of legitimacy in different situation" (Bertels and Lawrence, 2016: 339).

We use institutional misalignment to reflect a more contested, nonmonolithic (Scott, 2004), and mutually incompatible (Kostova and Zaheer, 1999) institutional forces while institutional alignment to reflect the mutual reinforcement among institutional forces (Lu and Xu, 2006). Empirical research has demonstrated that when faced with institutional misalignment, top management usually exercise some discretion in compliance, focus more on solving immediate problems (McPherson and Sauder, 2013; Smets et al., 2012), delay the adoption of new innovations (Raaijmakers et al., 2015), reinterpret normative forces in line with their identity (Dhalla and Oliver, 2013), and where regulatory pressures are weak or institutional fields are fragmented or contested (Durand and Jourdan, 2012), they could easily make a virtue out of deviating from institutional regulations (Quirke, 2013).

In this paper, we seek to contribute to the institutional research on environmental responsiveness by looking further into the relationship between regulatory coercion and environmental responsiveness. More specifically, we ask the question: how does perceived continuous strengthening of regulatory coercion affect firm environmental responsiveness?

And, perhaps more importantly, under what institutional alignment conditions should top management pursue environmental proactive strategies?

We build on three key ideas to answer the above research question. First, instead of limiting the discussion to the frequent use of linear modelling, we propose an inverted U-shaped relationship between regulatory coercion and environmental responsiveness. There is a growing body of research that very often ignores the potential nonlinearity in that relationship without providing compelling rationales for that (c.f. Bansal and Roth, 2000; Clemens and Douglas, 2005; Colwell and Joshi, 2013; Delmas and Toffel, 2008; Sharma, 2000). Our position is that the continuous strengthening of regulatory coercion may not be associated with concomitant increases or decreases in firm environmental responsiveness, at least not along the entire relevant continuum. More specifically, there is more 'proactiveness' in the middle of the spectrum of perceived regulatory coercion, thus proposing an inverted-U-shaped hypothesis between perceived regulatory coercion and firm environmental responsiveness. Therefore, the nonlinearity assumption, we argue, allows a comprehensive examination of the set of environmental responses, be they reactive or proactive, and thus better captures the complexity of environmental responsiveness to institutional regulatory coercion. To our knowledge, such nonlinearity has not been tested before.

Second, we recognize that, within a given perceived level of institutional alignment, firms' environmental responses may range from being substantially proactive to minimally reactive. More specifically, because it reflects complexity (Greenwood et al., 2011), institutional misalignment may trigger firms to adopt reactive and ceremonial environmental practices. Those reactive and ceremonial responses could easily have been ignored by firms due to perceived lack of strong regulatory enforcement, but are usually adopted because such

responses are expected by normative and cognitive forces. Conversely, because it emphasizes the mutual reinforcement among institutional forces, institutional alignment may provoke firms to adopt proactive environmental practices although not necessarily required or set out by regulations.

Finally, we recognize that institutional (mis)alignment should be viewed not only as an independent variable (i.e. as a source of pressure) but also as a moderator (i.e. (dis)incentive for environmental proactiveness, thus proposing a moderated inverted U-shaped hypothesis). As we will discuss further later on in this paper, the moderated inverted U-shaped hypothesis recognizes that a moderately articulated regulatory call for more environmentally proactive firms will be heard much louder when it's echoed across all institutional forces in the institutional field. Here and in what follows, we use institutional theory to conceptualize the theoretical rationale for the moderated inverted U-shaped hypothesis.

The rest of the article is organized as follows. The next section conceptualizes the theoretical rationale for the moderated inverted U-shaped hypothesis. Information on methods and data collection is provided in the section after that. The subsequent section explains our empirical analysis. Results are then provided. Finally, we offer our conclusions, contributions and explain the limitations of our analysis.

Theoretical Background: the Moderated Inverted U-shaped Hypothesis

Regulatory coercion perceived as light and firm environmental responsiveness

Since firm environmental responsiveness to perceived regulatory coercion is "not automated" (Bundy et al., 2013) but, rather, driven by perceptions (Liang et al., 2007), let's suppose that regulatory coercion is perceived to lack strong enforcement (Fikru, 2014) or political will (Behram, 2015), demand few regulatory restrictions, and pose no serious threat to regulative legitimacy for noncompliance (Raaijmakers et al., 2015). In this context, firms are highly unlikely to categorize regulatory coercion perceived as light as a strategic priority that would require serious response. Indeed, "to be labelled a strategic issue, something must be noticed and interpreted as potentially relevant to the organization's status or performance" (Ashforth and Mael, 1996, p.46).Thus, firms may believe that they need not, or perhaps should not, be responsive to regulatory coercion perceived as light. If they decide to respond, however, they should have much more discretion as to how and when they respond (McPherson and Sauder, 2013). Therefore, it could always be tempting for top management to act opportunistically toward light regulatory coercion (Williamson, 1985), or do whatever it takes to achieve quick financial gains – perhaps even if that includes noncompliance or some other minimal and passive levels of firm environmental responsiveness such as avoidance, defiance, and manipulation (Oliver, 1991).

Hence, in the absence of perceived influential coercive regulatory forces, normative and cognitive forces may help shape "conformity not through force (as in coercive isomorphism) but by altering the organizational and individual mind-set such that these entities believe and champion the institutionally preferred approaches" (Colwell and Joshi, 2013, p. 75). This situation could easily lead to institutional misalignment. For instance, although passive and minimal responses may be perceived as good options available in the face of regulatory coercion perceived as light, they will certainly create vulnerability to loss of both normative and cognitive legitimacy at the very least, for two reasons. First, there is uncertainty about how

normative and cognitive forces will react to firms' potential exploitation of regulatory coercion perceived as light. Due to the fact that regulatory exploitation involves high social cost (Nordhaus, 2015), it is highly likely to be intolerable and particularly reprehensible to normative and cognitive forces, leading them to boycott (David et al., 2007), lobby (Soule and Olzak, 2004), and maybe change conceptions of firms with poor environmental performance in the public eye (Burstein and Linton, 2002). Second, there is uncertainty about how regulatory agencies will respond to firms' opportunistic exploitation of regulatory coercion perceived as light (Williamson, 1985). For example, the passive and minimal environmental responses might make regulators aware of the emerging problem with the institutionally misaligned regulatory coercion perceived as light and thus exert more pressures by exposing firms to closer monitoring, more stringent regulations, and maybe tighter enforcement (David et al., 2007; Reid and Toffel, 2009).

Thus, at heart, top management is usually torn between the incentive to exploit regulatory coercion perceived as light and the quest for normative and cognitive legitimacy-building in their environment (Kostova and Zaheer, 1999). Normative and cognitive legitimacy- building, we argue, may trigger top management to move slightly away from the opportunistic exploitation of regulatory coercion perceived as light towards more symbolic conformity, and thus moderates the negative impact of exploiting regulatory coercion perceived as light on firm environmental responsiveness. On the one hand, symbolic conformity to institutionally misaligned regulatory coercion perceived as light can signal one's trustworthiness (DiMaggio and Powell, 1983; Meyer and Rowan, 1977), strengthen exchange relationships with business partners (Oliver, 1991), and ultimately lead to normative and cognitive legitimacy (Deephouse, 1999). On the other hand, it is usually inexpensive, does not challenge the status quo (Porter and van der Linde, 1995), and shelters firms from threats to regulatory legitimacy (Oliver,

1991). Indeed, People for Ethical Treatment of Animals (PETA), for example, found Starbucks´s use of a product derived from "crushed insects" as a colouring additive in some of their products intolerable and particularly reprehensible and, thus, launched a campaign against Starbucks. Although using the additive was not illegal, Starbucks switched to a product derived from tomatoes, a move which is largely viewed as deceptive (Mestel, 2012) and largely symbolic (Bundy et al., 2013).

Regulatory coercion perceived as stringent and firm environmental responsiveness

It is argued that stringent regulatory coercion is typically geared towards environmental proactiveness (Hart, 1995; Porter and van der Linde, 1995; Russo and Fouts, 1977). It does that, the argument goes, by helping firms overcome organizational inertia to accept new ideas and stimulate creative thinking (Porter and van der Linde, 1995; Russo and Fouts, 1997). This is what Porter and van der Linde (1995) call 'innovation offsets' of stringent regulatory coercion, which can lower the net cost of complying with stringent environmental regulation and lead to an absolute competitive advantage for the firm. Other scholars, however, reject such a thesis (Christiansen and Tietenberg, 1985; Palmer et al., 1995; Walley and Whitehead, 1994). Instead, they argue that stringent regulatory coercion could lead to higher costs, unproductive investments (Walley and Whitehead, 1994), and limit managerial discretion (Finkelstein and Boyd, 1998). Hence, firm environmental proactiveness to stringent regulatory coercion comes at the expense of financial performance (Palmer et al., 1995)

Most of the empirical evidence suggests that stringent regulatory coercion fails to generate firm environmental proactiveness. For example, empirical analysis by van Leeuwen and Mohnen (2013) reveals that stringent regulatory coercion fails to stimulate environmental proactiveness.

Instead, it causes the reallocation of R&D to pollution control (Lanoie et al., 2011). Furthermore, while Palmer et al. (1995) present a neoclassical model in which stringent regulatory coercion makes the polluting firm worse off, Simpson and Bradford (1996) use a model in which regulatory coercion is carried out through effluent taxes. They conclude that it is difficult to construct an example in which stringent regulatory coercion could be enacted as a trigger for firm environmental proactiveness that in the end increase the profits of regulated firms. Thus, stringent regulatory coercion to induce advantage may be extremely dubious as practical policy advice. In line with Simpson and Bradford (1996), Brunnermeier and Cohen (2003) found that increased monitoring and enforcement activities related to existing regulatory coercion did not provide any additional incentive for innovation. Finally, Puller (2006) found that firms have incentives to suppress environmental proactiveness to induce regulators to ratchet down the standard, an argument that is in line with McCain (1978).

Therefore, we argue that while stringent regulatory coercion pushes too hard for firm environmental proactiveness by conferring regulative legitimacy, normative and cognitive forces will be quite content to encourage firms to "carefully strategize" their responses, focus more on reactive responses to dealing with immediate problems (McPherson and Sauder, 2013; Smets et al., 2012), and "not hasten" to undertake proactive responses to prevent disadvantages (Luan et al., 2013), leading to institutional misalignment. This institutional misalignment, we argue, will contribute to the failure of stringent regulatory coercion to stimulate firm environmental proactiveness for three reasons. First, due to the looming danger of stringent regulatory coercion cannibalizing companies' existing structures (DiMaggio and Powell, 1983), disrupting internal management team members' familiar routines, generating insecurity, and/or violating internal norms and traditions, especially those that are taken for granted and no longer even questioned (Oliver, 1997; Powell, 1991), it is conceivable that normative forces

will make biased rather than accurate judgments of stringent regulatory coercion considering this to be unfair, illegitimate, or stigmatizing, resulting in a tolerance for firms' defensive (Bundy et al., 2013), and decoupled responses (Scott, 2008) to maintain the status quo (Reid and Toffel, 2009).

Second, as it tends to "insult", "de-motivate" (Ayres and Braithwaite, 1992, pp. 24-25) , and convey negative images of suspicion, distrust, and disobedience" (Sewell, 1998, p. 397), stringent regulatory coercion may compromise the moral or ethical justification (Tenbrunsel and Messick, 1999) for firm environmental proactiveness (Prakash and Potoski, 2006a, 2006b). Gneezy and Rustichini (2000), for example, studied the impact of imposing a hefty fine on parents' late pick-ups of their children from day care centres. Surprisingly, the hefty fine led to an increase rather than a decrease in the late pick up practices. Their interpretation was that the hefty fine reframed the debate on the importance of doing "the right thing" from a moral issue to an economic one focused more on parents' propensity to pay for "after-hours" childcare services.

Third, if normative and cognitive forces do not tolerate firms' attempt to defend their current normative and cognitive status quo against stringent regulatory coercion, they may then become a popular target for regulatory agencies dictating all types of norms and traditions (Rehbein et al., 2013). Thus, due to such a status quo bias (Kahneman et al., 1991), normative and cognitive forces are expected to "soften the impact of new laws by inducing regulators to set relatively weak standards" (Lyon and Maxwell, 1999) and encourage top management to be on the defensive in order to maintain the status quo while simultaneously decoupling these responses from core organizational activities (MacLean and Benham, 2010; Meyer and Rowan, 1977; Okhmatovskiy and David, 2012). For example, Google's expansion into China clashed with

the Chinese government's excessive terms and the westerns' generally accepted norm of free expression and open access to information. In response to such institutional misalignment, Google announced that it was "no longer willing to continue censoring our results on Google.cn, and so over the next few weeks we will be discussing with the Chinese government the basis on which we could operate an unfiltered search engine within the law, if at all. We recognize that this may well mean having to shut down Google.cn, and potentially our offices in China" (Drummond, 2010).

Regulatory coercion perceived as moderate and firm environmental responsiveness

With perceived moderate regulatory coercion, top management would appear to have little choice but to conform (Oliver, 1991) quickly (Lawrence et al., 2001). Of course moderate regulatory coercion would simply imply better monitoring processes, far more scrutiny of outcomes (Stevens et al., 2005) and moderate challenge to the status quo. In this context, a conformity strategy would definitely help top management avoid being perceived as less responsive or less environmentally advanced (Teo et al., 2003), and ultimately gains regulative legitimacy (Suchman, 1995). However, regulative legitimacy based conformity, we argue, could only generate a competitive parity rather than advantage. When a conformity strategy achieves a 'high density' (Scott, 2001, p. 119), is isomorphically adopted in an organizational field (Deephouse, 1996; DiMaggio and Powell, 1983), and acquires a rule-like status as legitimate (Westphal et al., 1997), it may only become a source of competitive parity.

Alternatively, institutionally aligned regulatory coercion perceived as moderate, we argue, may prompt top management to move beyond conforming responses and competitive parity towards more environmental proactiveness for competitive advantage. Indeed, institutionally aligned

regulatory coercion perceived as moderate can actively encourage top management to stand out from the crowd, think beyond the status quo, generate disruptive ideas (Hart and Sharma, 2004), generate internal struggles (King, 2008), and set their proactive environmental responses as a benchmark for others to follow (Porter and van der Linde, 1995), thus, creating a fertile internal environment for more sustainable competitive advantage (Hart, 1995). Furthermore, sources of sustained competitive advantage such as regulative and normative legitimacy (Child and Tsai, 2005), reputation (Campbell, 2007), and the ability to have a relative influence over the future environmental agenda of regulators (Miles and Covin, 2000) are far more likely to be enhanced by adopting firm environmental proactiveness (Walker and Wan, 2012).

Indeed, empirical research has demonstrated that institutionally aligned regulative coercion encouraged the implementation of environmental innovative practices in general (Ferreira et al., 2010; Phan and Baird, 2015; Zhu and Geng, 2013) and in China in particular (Zhang et al., 2008), exerted pressure on Canadian firms to adopt environmental plans (Henriques and Sadorsky, 1996), and pushed firms beyond minimum regulatory standards (Berrone et al., 2013). Furthermore, Wal-Mart, for example, announced proactive environmental initiatives voluntarily because environmental proactiveness would "help Wal-Mart differentiate itself from its competition, maintain a license to grow, and make its supply chain dramatically more efficient. In other words, a good business sustainability plan would help Wal-Mart get even better at what it does best: drive down costs to generate profits" (Plambeck and Denend, 2008, p. 54).

Figure 1. The Moderated Inverted U-Shaped Hypothesis

In summary, the moderated inverted U-shaped hypothesis suggests that beyond the institutionally aligned regulatory coercion perceived as moderate, institutionally misaligned lighter or more stringent levels of regulatory coercion may not be better. Thus, we hypothesize:

Hypothesis 1. There is an inverted U-shaped relationship between perceived regulatory coercion and firm environmental responsiveness with perceived moderate regulatory coercion triggering firm environmental proactiveness while firm environmental reactiveness increases on either side of the curve.

Hypothesis 2. Institutional (mis)alignment moderates the inverted U-shaped relationship between perceived regulatory coercion and firm environmental responsiveness.

Data and Methods

Survey

The moderated inverted U-shaped hypothesis was tested on data collected in the Kingdom of Jordan. Jordan is an upper middle-income developing country in the Middle East, with a population of 7.6 million and a GDP of US\$ 37.52 billion (World Bank, 2017). In 2016, the Environmental Performance Index report elaborated by Yale and Columbia universities ranked Jordan 74th out of 18 countries, with overall score of 72.24 (EPI, 2016).

Data on regulatory coercion, institutional (mis)alignment, and firm environmental responsiveness are not available from published sources in Jordan. To date, very few studies have been conducted in the area of institutional theory and firm environmental responsiveness

in Middle Eastern contexts. Therefore, few reliable and validated measures are available. To overcome this difficulty, a questionnaire was used to collect data for this study. We drew our sample from the Member Industrial Directory in Jordan, which is the most extensive and up-to date database of its kind in Jordan. The focal site chosen for this study is the chemical sector in Jordan. The chemical sector was selected because it is a resource-intensive sector that can potentially involve relatively large negative externalities and is likely to face high coercive institutional demands (Hoffman, 2001); this reduced the population to 597 firms.

Following previous research in this area, the unit of analysis was managers in charge of environmental issues in organizations (e.g., Aragón-Correa et al., 2008; Cordano and Frieze, 2000). Managers' interpretations, values, and perceptions of the intensity of regulatory coercion are important because "external forces, no matter how strong (or weak) they are, will have no effect on the behaviour of individual firms without first affecting the behaviour of human agents within the organization" (Liang et al., 2007, p. 61). It has also been argued that top management's interpretations make sense since only factors that they perceive as important can enter into their environmental responsiveness strategy formulation (Michael et al., 2010; Pfeffer and Salancik, 1978). Empirical research has demonstrated the importance of top management's environmental support (Tung et al., 2014), values, attitudes, perceptions (Cordano and Frieze, 2000; Papagiannakis and Lioukas, 2012; Vázquez Brust and Liston-Heyes, 2010) and high risk taking ability (Bhupendra and Sangle, 2015) on firm environmental responsiveness.

All companies within the sampling frame were contacted via mail to the CEO of each company. The letter described the purpose of the study and asked for the CEO's participation. In the same letter, CEOs were also asked to select another key informant knowledgeable about the operational side of the firm's environmental strategy. In almost all cases this second key

informant was the environmental manager. A first survey on regulatory coercion and institutional (mis)alignment was then mailed to CEOs. A second survey on firm environmental responsiveness was mailed to the second informants in the 597 firms. The two key informants from each company including the CEO were assured that any information they provided would be considered as strictly confidential (Collins and Cordon, 1997; Sharma, 2000) and instructed to consult with other functional executives as appropriate when answering questions. Using two key informants increases the validity and reliability of research results (Homburg et al., 2012; Van Bruggen et al., 2002) because it mitigates the risk of systematic measurement errors resulting from social desirability effects (Podsakoff and Organ, 1986).

Following Jarvis et al. (2003), regulatory coercion, institutional (mis)alignment, and firm environmental responsiveness were operationalized as latent variables. Some items used in the questionnaire were newly constructed in an academic setting. More specifically, all new items were generated by five experienced academics including the leading author of this research who is familiar with institutional profiles and environmental practices in the Middle East. Kostova (1997) emphasized the importance of such familiarity with a particular country's or region's institutional profiles and argued that all items used to measure a particular construct must be country-specific and relevant to the particular phenomenon under study. The other items were adaptation of established measures from Christmann (2000), Cordano and Frieze (2000), Darnall and Edwards (2006), Ramus and Steger (2000), and Sharma (2000), to reflect the precise meaning of the constructs as conceptualized in this study.

In addition, five experts from the industry were asked to review the questionnaire and provide feedback on the face validity of indicators – that is, its clarity, readability, and representation of constructs. The result of this exercise was a rewording of some of the statements to improve

clarity and brevity. We then administered the new version to four managers in the same position as the target respondents – that is, two CEOs and two environmental managers who were not part of the sampling frame – to obtain their feedback on the indicators and the structure of the survey before the development of the final questionnaire.

The questionnaire was administered in both English and Arabic. The Arabic version was validated for accuracy using an extensive translation/back translation procedure (Collins and Cordon, 1997). In order to maximize response rate (Dillman, 2000), we provided stamped return envelops, offered access to a summary report of the study findings, and about four weeks after the initial mailing, we sent non-respondents a second letter with a new questionnaire.Of the 597 mailed companies, 119 firms responded with a 20% response rate. As Table 1 shows, the insignificant chi-square (χ2) differences in size, ownership, and market orientation between early and late respondents suggest a minimal chance of a non-response bias in this survey finding.   `

<div align="center">TABLE 1</div>

Table 2 describes the demographic profile of our sample. Results indicate broad representation in terms of gender, age, education, size, and market orientation

<div align="center">TABLE 2</div>

Measures

Perceived regulatory coercion. This variable consists of four items (α = .91) adapted from Cordano and Frieze (2000) and is measured using a five-point Likert scale. Sample items are: pollution laws have become too strict in recent years (R); the government has overstepped its

authority in its efforts to protect the environment (R); environmental regulation has placed unfair burdens on industry; and current environmental standards are being enforced more strongly. A higher score on this scale indicates a high level of coercion.

We used an aggregate score in the data to calculate a percentile value of regulatory coercion for each company. The percentile value lies on a scale between 0 and 100. A perfect score (100) would indicate that perceived regulatory coercion is stringent in every one of the four indicators that make up the value. An 80th percentile, for example, implies that a company's score is 20 percentage points away from perceived stringent regulatory coercion [(80/100) * 5 = 4 on the five point scale, i.e. perceived stringent regulation]. On the other hand, a 40th percentile implies that a company's score is 60 percentage points away from perceived stringent regulatory coercion [(40/100) * 5 = 2 on the five point scale, i.e. perceived lenient regulatory coercion]. Finally, a score greater than the 40th percentile and less than or equal to the 60th percentile implies that perceived regulatory coercion is moderate. For example, [(55/100) * 5 = 2.7 on the five point scale, i.e. moderate regulatory coercion].

Environmental responsiveness strategy. This variable was measured with four items ($\alpha = .86$) adapted from Sharma (2000). The survey asked respondents to estimate the extent (1, little or no extent, to 5, very great extent) to which their companies have undertaken specific actions in response to regulatory coercion to reduce their negative environmental impacts. Actions include investment in pollution/emission control equipment; better housekeeping/maintenance procedures; introducing chemicals with lower environmental impact; adopting comprehensive product life cycle analysis. A higher score on this scale indicates a high level of firm environmental responsiveness.

Institutional (mis)alignment. This variable consists of four items ($\alpha = .89$) and is measured using a five-point Likert-format anchored by 'always' and 'never'. We used terms such as conflict, positive, and negative feedback to assess perceived institutional alignment. Sample items are: our domestic external communities' (such as industry association, media, NGOs) environmental demands conflict with the requirements of government regulations; our internal communities' (such as environmental managers, mid-managers, top management team members) environmental concerns conflict with the requirements of government regulations; the extent to which feedback from external communities regarding our organization's environmental strategy has been negative (reverse coding); the extent to which feedback from internal communities regarding our organization's environmental strategy has been positive. A higher score on this scale indicates a high level of institutional alignment.

We also used an aggregate score in the data to calculate a percentile value of perceived institutional alignment for each company. The percentile value lies on a scale between 0 and 100. A perfect score (100) would indicate institutional alignment in every one of the four indicators that make up the value. An 80th percentile, for example, implies that a company's score is only 20 percentage points away from perceived institutional alignment [(80/100) * 5 = 4 on the five point scale]. On the other hand, a 40th percentile implies that a company's score is 60 percentage points away from perceived institutional alignment [(40/100) * 5 = 2 on the five point scale, i.e. perceived institutional misalignment].

Quadratic and moderation terms. Following Ping (1995), we measure the quadratic term ($\alpha = .80$) by a single item that is the square of the sum of perceived regulatory coercion items. Similarly, moderation ($\alpha = .79$) is measured with a product of two sums, namely, the sum of the perceived regulatory coercion items and the sum of perceived institutional (mis)alignment

items. We derive the error variance and loading of the items reflecting the moderation and the quadratic items based on the formulae provided by Ping (1995).

Control variable (size). Following previous research (see, e.g., Aragón-Correa, 1998; Aragón-Correa et al., 2008; González-Benito and González-Benito, 2006), we controlled for firm size. Large organizations are highly visible (Bowen, 2000) and attract much attention from coercive, normative and cognitive constituencies, which in turn influence their environmental responsiveness (González-Benito and González-Benito, 2010). Given the evident positive skewness, we used the natural logarithm of the total number of employees.

Empirical Analysis

Common Method Variance

Although our model's variables were generated from two-informant firms (i.e, two informants including the CEO), we still had two concerns to address prior to hypothesis testing: common method variance and discriminant validity. To control for common method variance, first, we placed the items measuring the dependent variable – firm environmental responsiveness – after the items measuring the independent variable – regulatory coercion – in the questionnaire (Salancik and Pfeffer, 1977). Second, we estimated the common variance by adding a common latent method factor to the measurement model (Podsakoff et al., 2003). Paths from the common latent method factor to all the observed items in the model were constrained to be equal. We found that the measurement model's statistical fit was held after controlling for the common method factor. As reported in Table 3, the common method factor diminished variance by only

0.017, which is far below the 0.5 cut-off point that Hair et al. (1999) suggested. Thus we conclude that our four factor model's results were free of common method bias.

TABLE 3

Third, we followed Lindell and Whitney's (2001) recommendation to include a construct (e.g., distributive justice) that is theoretically unrelated to study constructs. Distributive justice was assessed with four items from Moorman's (1991) measure of distributive justice. In accordance with the work of Lindell and Whitney (2001), the loadings of the four items were constrained to be equal across all indicators. Results in Table 8 confirm that the theoretically irrelevant distributive justice marker variable is not statistically significant, providing further support that our model was free of common method variance.

Validity

Convergent and discriminant validity were examined using "Composite Reliability" (CR), "Average Variance Extracted" (AVE), "Average Shared Squared Variance" (ASV), and the "Maximum Shared Squared Variance" (MSV) respectively. Table 4 indicates that each construct exhibits satisfactory reliability and validity.

TABLE 4

Analytic Approach

To test the hypotheses, we use the following equation (n 1) as a simplified mathematical representation of the main variables included in the inverted u-shaped hypothesis:

(1) $(environmental\ responsiveness\ strategy) = \gamma_{11}\ (Coercive) + \gamma_{12}\ (Coercive)^2 +$

$\gamma_{13}\ (Alignment) + \gamma_{14}(Coercive^2 \times Alignment) + \zeta$

where λ refers to endogenous variable, ζ represents disturbance terms, and γ indicates coefficients for the influence of exogenous variables.

Because our analysis involved a quadratic and moderation, a note on how we modeled the moderation and quadratic terms is in order. Here, we used Ping's (1995, 1996) techniques, in which single indicants are used. For example, let's suppose that regulatory coercion (x) and institutional alignment (y), with indicators x_1, x_2 and y_1, y_2, are hypothesized to interact in their effect on environmental responsiveness (z). The computed variable $x{:}y\ (= [x_1 + x_2][y_1 + y_2])$ will be used as the indicator for the interaction term. Following the same procedures, the quadratic term is computed as follows: $x{:}x(= [x_1 + x_2][x_1 + x_2])$.

Ping proposed that the loadings and errors for the quadratic and moderation terms be given respectively by:

(2) $x{:}x = (\lambda x_1 + \lambda x_2)^2$.

where $\lambda x{:}x$ represents the calculated loading for the quadratic latent variable, and λx_1 and λx_2 represent the calculated loadings for the indicators of the quadratic latent variable.

(3) $\theta_{\varepsilon x{:}x} = 4(\lambda x_1 + \lambda x_2)^2\ var(x)\ (\theta_{\varepsilon x_1} + \theta_{\varepsilon x_2}) + 2(\theta_{\varepsilon x_1} + \theta_{\varepsilon x_2})^2$.

where $\theta_{\varepsilon x{:}x}$ represents the calculated error term for the quadratic latent variable, and $\theta_{\varepsilon x_1}$ and $\theta_{\varepsilon x_2}$ represent the calculated error terms for the indicators of the quadratic latent variable.

(4) $x{:}y = (\lambda x_1 + \lambda x_2)(\lambda y_1 + \lambda y_2)$.

where $\lambda x{:}y$ represents calculated the loading for the interaction latent variable, and λx_1, λx_2, λy_1, and λy_2 represent the calculated loadings for the indicators of the interaction latent variable.

$$(5)\ \theta_{\varepsilon x{:}y} = 4(\lambda x_1 + \lambda x_2)^2\, var(x)\left(\theta_{\varepsilon x_1} + \theta_{\varepsilon x_2}\right) + (\lambda y_1 + \lambda y_2)^2 var(y)\left(\theta_{\varepsilon x_1} + \theta_{\varepsilon x_2}\right) +$$

$$\left(\theta_{\varepsilon x_1} + \theta_{\varepsilon x_2}\right)\left(\theta_{\varepsilon y_1} + \theta_{\varepsilon y_2}\right).$$

where $\theta_{\varepsilon x{:}y}$ represents the calculated error term for the interaction latent variable, and $\theta_{\varepsilon x_1}$, $\theta_{\varepsilon x_2}$, $\theta_{\varepsilon y_1}$ and $\theta_{\varepsilon y_2}$ represent the calculated the error terms for the indicators of the interaction latent variable.

Results

Table 5 lists descriptive statistics and correlations for all the items included in our model.

TABLE 5

We used Amos 20.0 (IBM SPSS statistics) for model estimation. Since the values on the right-hand side of equations 2, 3, 4, and 5 are available from the measurement model, we first estimated the measurement model with the three main latent constructs (i.e., perceived regulatory coercion, firm environmental responsiveness, perceived institutional (mis)alignment). This model fits the data well (χ^2 = 221.8, df = 122; χ^2/df = 1.8; CFI = 0.94; TLI = 0.91; IFI = 0.94; RMSEA = 0.06; Pclose = 0.05). We then used the measurement model to estimate the loadings and errors for the quadratic and moderation terms as in equations 2, 3, 4, and 5.

We then estimated a structural model, Model 1, with five latent constructs (i.e., perceived regulatory coercion, firm environmental responsiveness, perceived institutional (mis)alignment, quadratic, and moderator and a control variable (size). Our results indicate that our model fits the data very well (χ^2 = 266.9, df = 142; χ^2/df = 1.9; CFI = 0.93; TLI = 0.90; IFI = 0.93; RMSEA = 0.06; Pclose = 0.02).

To further verify the importance of the quadratic, moderation, and common method terms, we tested a series of nested models against the structural model, Model 1, through Chi-squared tests with the paths of interests restricted one at a time to zero. The restriction to zero reflects the effect of removing a path and thus is a test of its significance to the model. Table 6 shows the results of the chi-squared test between the structural model, Model 1, and each of the nested models. In Model 2, the path related to the quadratic effect was constrained to zero: that is, the link involving the quadratic term and firm environmental responsiveness was removed from the model. A significant chi-square difference suggests the quadratic term was important and thus provided support for its inclusion in the structural model. In Model 3, the path related to the moderating effect of institutional alignment was constrained to zero. A significant chi-square difference provided support for the inclusion of the moderating effect of institutional alignment. We similarly constrained the relevant path of common method variance to zero in Model 4. As expected, the resulting change in chi-square was only 0.03 for a change of 1 degree of freedom. This change in chi-square was insignificant at the P = 0.05 level, providing further assurance that the observed findings are not common method artifacts.

TABLE 6

Table 7 indicates that perceived regulatory coercion has a significant negative quadratic effect on firm environmental responsiveness strategy (β = -0.166, P < 0.001). Hence, we accept

hypothesis H_1. The interpretation of the quadratic term depends on whether the linear term is positive or negative. In our case, the linear and quadratic terms compete with one another. This means that the increase in firm environmental responsiveness levels is less in the linear because the quadratic term exerts a downward force on the equation. Eventually, firm environmental responsiveness will level off and head downward. In some situations, the point where the equation levels off is beyond the maximum of the data. Our results also show that the moderation effect of institutional alignment is significant ($\beta = 0.096$, $P < 0.05$). Hence, we accept hypothesis H_2.

TABLE 7

Conclusions

In response to recent discussions about regulatory coercion, institutional (mis)alignment, and firm environmental responsiveness (Raaijmakers et al., 2015; Greenwood et al., 2014), we aimed to establish a new empirical research agenda for firm environmental proactiveness to regulatory coercion. In contrast to previous institutional research in this area (cf. Bansal and Roth, 2000; Clemens and Douglas, 2005; Colwell and Joshi, 2013; Delmas and Toffel, 2008; Sharma, 2000), this article did not assume linearity between regulatory coercion and firm environmental responsiveness. Instead, it empirically tested the assertion that the relationship between perceived regulatory coercion and firm environmental responsiveness is best described by a moderated inverted U-shaped curve. Indeed, the moderated inverted U-shaped hypothesis is the first empirical attempt to empirically integrate institutional alignment into the relationship between regulatory coercion and firm environmental proactiveness. The significance of the moderation effect of institutional alignment indicates the extent to which, on balance, the perceived regulatory coercion contributes to firm environmental responsiveness depends on the

perceived degree of institutional alignment. This intricate effect of regulatory coercion reflects the fact that regulatory coercion could promote both reactive and proactive firm environmental responsiveness, with regulatory coercion perceived as light fostering opportunist behaviour on the one hand and regulatory coercion perceived as stringent lessening the perceived normative and cognitive need for proactiveness on the other. When institutional forces are misaligned, regulatory coercion perceived as either light or stringent may prove counterproductive for firm environmental proactiveness. Institutional misalignment drives a wedge between the perception of regulatory demands and the reality of organizational practices, making symbolic conformity essential. Institutional alignment, however, may encourage efforts to be proactive before the window of opportunity to go beyond the current status quo and create competitive advantage closes. Indeed, the empirical vindication of the moderated inverted U-shaped hypothesis leads us to believe that without explicitly modelling a curvilinear relationship (e.g., inverted U-shaped relationship), institutional theorists risk inferring spurious and mixed conclusions and therefore, foreclose the opportunity to systematically examine the relationship between regulatory coercion and firm environmental responsiveness.

Additionally, our results indicate that firm size does play an important positive role too. This may be so because large firms are more visible (Etzion, 2007; Jiang and Bansal, 2003) and usually under intense scrutiny by regulators and the media (González-Benito and González-Benito, 2010). Decision makers of smaller firms, by contrast, could face higher costs of innovation as they lack the scale or the financial capacity to install adequate clean technology.

Contributions and Future Research

We aim to make three contributions in this study. First, the moderated inverted U-shaped hypothesis contributes to the literature and advances discussion on the Porter Hypothesis (Porter and van der Linde, 1996). Previous research on the Porter hypothesis has typically mapped the effectiveness of regulatory coercion as either stringent or non-existent – that is, in no way do firms adopt proactive environmental responses in the absence of perceived stringent regulatory coercion. Many scholars have rejected the Porter hypothesis (Christiansen and Tietenberg, 1985; Palmer et al., 1995; Walley and Whitehead, 1994). Their rejection dovetails with the thesis put forward by Oates et al. (1993) that regulatory coercion, itself a constraint, is less likely to set in motion proactive responsiveness that would, in the end, increase the efficiency of profit maximizing polluting firms.

The moderated inverted U-shaped hypothesis asserts that both the Porter hypothesis and the thesis proposed by Oates et al. (1993) can peacefully coexist and may not be at odds. For example, the upward-sloping half of the moderated inverted U-shaped hypothesis indicates that firms respond positively to the continuous strengthening of regulatory coercion. By contrast, the downward-sloping half of the curve suggests that opportunities for painless environmental strategies are rapidly being exhausted (Walley and Whitehead, 1994) and the win-win solution will become increasingly scarce (Palmer et al., 1995). Of course, the moderated inverted U-shaped hypothesis accepts that the porter hypothesis calls for government intervention but not through stringent regulatory coercion. Instead, the moderated inverted U-shaped hypothesis calls for moderation in the regulatory approach to firm environmental responsiveness in a way that will not make managers pull away or push against proactive environmental responses. It also accepts, to some extent, Oates et al.'s (1993) thesis that it is less likely that a constraint like regulatory coercion by itself could trigger firm environmental proactiveness. We differ, however, in our emphasis on the importance of institutional alignment as a moderator, which

can strengthen the effect of regulatory coercion perceived as moderate on firm environmental proactiveness.

Second, we direct policy makers' attention to the importance of slowing down or holding back the pace of regulatory coercion beyond what is likely to be perceived as moderate levels of coercion. The process of slowing down or speeding up the pace of regulatory coercion before or beyond that level could create misalignment among institutional forces which, we argue, emerge as the prime disincentive factor for firm environmental proactiveness. This is where environmental policy makers can make their biggest mistake – falling into the regulatory trap. The potential for possible environmental gains blinds the regulatory authority to the downside risks of compromising institutional alignment, which would drive firms toward more passive and reactive approaches to regulatory coercion.

Third, we contribute to the empirical research on this topic by modelling an inverted U-shaped relationship between firm environmental responsiveness and perceived regulatory coercion. This particular contribution opens doors for future research. One, future work on institutional theory should move beyond linear models and consider the possibility of curvilinear models such as the inverted U-shaped hypothesis more systematically, as relevant associations between key constructs may otherwise remain unnoticed. More specifically, it would be interesting to investigate the moderated inverted U-shaped pattern of responses to other institutional forces such as customers, buyers, suppliers, and institutional investors. It is possible that customers, for example, would team up with regulatory agencies to lobby for tighter regulatory coercion than those supported by firms up to a point. Past a certain level, customers might switch allegiance and team up with firms to lobby for lower levels of regulatory coercion if they view regulatory costs as raising prices too much. As Clarke et al. (1994) note, the cost of change

must eventually be reflected in the price the consumer will pay. We believe it will be interesting to investigate whether such pressure sources are driven by the same inverted U-shaped phenomena or not. Two, since institutional infrastructure in developing countries is usually not sufficiently developed to efficiently channel institutional demands to organizations, decision makers of organizations there might perceive the same levels of institutional coercion as much more either trivial or dangerous compared to decision makers of organizations in the developed world. It would be very interesting to investigate such a theory in the future. Three, the international business literature provides compelling evidence that market orientation through the cross-border diffusion of organizational practices can help companies from developing countries in particular become more socially responsible (Özen and Küskü, 2009). Due to the lack of a parsimonious measure of market orientation in our dataset, we were unable to control for its effect on environmental responsiveness. We hope other researchers will investigate such effect in the future. Four, this research, we hope, will encourage other researchers to conduct further studies on how to apply institutional theory to managing the natural environment in the Middle East.

Limitations

This study has three limitations that provide opportunities for future research.

First, the pattern of firm environmental responses suggested by the moderated inverted U-shaped Hypothesis is limited to one industry, the chemical industry, which results in limited generalizability beyond the chemical industry. However, many industries increasingly face strategic challenges and institutional misalignment as a result of strengthening regulatory

coercion. Future research should investigate whether the moderated inverted U-shaped hypothesis we uncovered exists in other industries and in other contexts.

Second, because this research was cross-sectional, we were unable to examine how the moderated inverted U-shaped hypothesis changes over time. Such a line of inquiry could provide insights into the dynamic forces that shape firm environmental responsiveness to institutional forces.

Third, our study used one independent factor – that is, regulatory coercion – to understand firm environmental responsiveness. We recognize that institutional regulation is not the only means we have as a society for influencing firm environmental responsiveness. However, our reason for focusing only on regulatory coercion or the threat of legal sanctions is its ability to lead to rapid institutionalization (Lawrence et al., 2001), fast conformity (Oliver, 1991), and encourage the implementation of proactive environmental strategies (Hoffman, 2001), all of which makes regulatory coercion the main driving force for firms environmental responsiveness (Fraj-Andrés et al., 2009). Nevertheless, other sources of pressure such as customer, shareholder pressure, suppliers, etc., play a significant role in the literature on firm environmental responsiveness (Buysse and Verbeke, 2003; Schot and Fischer, 1993). Therefore, we leave it to others to consider the determinants of firm environmental responsiveness that may be operating inside and/or outside the firm (cf. Carballo-Penela and Castromán-Diz, 2015). A systematic treatment of these determinants is beyond the scope of this paper. Hence, we are not making the overly deterministic claim that regulatory coercion is solely responsible for firm environmental responsiveness.

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Table 1: Test of Significance for Non-response Bias

Variables	χ2 Value	df	Significance
Size	4.07	2	0.131
Ownership	0.210	2	0.900
Market orientation	0.418	2	0.811

Table 2: Sample Characteristic

Characteristics	Frequency	%
Gender		
• Male	81	68%
• Female	38	32%
Age		
• 20s	1	1%
• 30s	26	22%
• 40s	54	45%
• 50s	15	13%
• 60s	23	19%
Education		
• Bachelor degree	83	70%
• Graduate degree	36	30%
Size of organization		
• Small (<50 employees)	48	40%
• Medium (between 50 and 250 employees)	50	42%
• Large (>250 employees)	21	17%
Market Orientation		
• International market	34	29%
• Regional market	48	40%
• Home market	37	31%

Table 3: Common Method Variance

Construct	Indicator	SRC	$(SRC)^2$	LMV Loading (LMVL)	$(LMVL)^2$
Quadratic term	QUD 1	0.846	0.715	0.203	0.041
Interaction term	INT 1	0.935	0.874	0.298	0.088
Institutional	IA1	0.879	0.113	0.064	0.012
	IA2	0.762	0.132	0.058	0.017
Alignment	IA3	0.841	0.115	0.072	0.013
	IA4	0.802	0.162	0.64	0.026
Responsiveness	RES1	0.864	0.111	0.065	0.012
	RES2	0.758	0.150	0.061	0.022
	RES3	0.773	0.170	0.064	0.028
	RES4	0.675	0.134	0.064	0.017
Coercive pressure	COE1	0.842	0.112	0.070	0.012
	COE2	0.893	0.085	0.064	0.007
	COE3	0.898	0.087	0.064	0.007
	COE4	0.875	0.010	0.059	0.000
Average		0.646	0.541	0.104	0.017

Table 4. Reliability and Validity

	CR	AVE	MSV	ASV	Interaction	Distributive	Responsiveness	Coercive	Quadratic	Alignment
Interaction	0.790	0.790	0.776	0.372	0.889					
Distributive Justice	0.872	0.635	0.019	0.007	-0.039	0.797				
Responsiveness	0.866	0.619	0.228	0.101	-0.008	0.137	0.787			
Coercive	0.918	0.737	0.726	0.186	0.852	-0.071	-0.358	0.859		
Quadratic	0.805	0.805	0.776	0.197	0.881	-0.101	-0.363	0.245	0.897	
Alignment	0.899	0.690	0.354	0.120	0.595	0.038	0.477	-0.099	-0.084	0.831

Table 5: Descriptive Statistics and Correlations among items

	Mean	S.D.	RES1	RES2	RES3	RES4	COE1	COE2	COE3	COE4	IA1	IA2	IA3	IA4
RES1	3.29	0.69	1.00											
RES2	3.28	0.60	0.68	1.00										
RES3	3.48	0.81	0.69	0.65	1.00									
RES4	3.21	0.66	0.63	0.49	0.47	1.00								
COE1	3.64	1.13	-0.25	-0.09	-0.29	0.03	1.00							
COE2	3.22	1.08	-0.21	-0.11	-0.32	-0.14	0.65	1.00						
COE3	3.45	0.91	-0.27	-0.18	-0.29	-0.14	0.61	0.57	1.00					
COE4	3.49	0.97	-0.19	-0.20	-0.21	0.00	0.48	0.52	0.60	1.00				
IA1	3.34	0.87	0.46	0.36	0.43	0.37	-0.01	-0.05	-0.08	0.09	1.00			
IA2	3.26	0.77	0.41	0.43	0.43	0.31	0.05	-0.02	-0.07	0.03	0.82	1.00		
IA3	3.29	0.82	0.37	0.49	0.40	0.36	0.14	0.02	-0.03	-0.02	0.68	0.69	1.00	
IA4	3.17	0.90	0.38	0.36	0.39	0.33	0.04	-0.06	-0.02	-0.05	0.70	0.59	0.71	1.00

Table 6: Nested Model Comparisons

Model	$x2$	*df*	$x^2/$	Δ $x2$	TLI	CFI	IFI	RMSEA	Pclose	p
Measurement	221.8	122	1.8	-	0.91	0.94	0.94	0.06	0.05	-
Model 1	266.9	142	1.9	-	0.90	0.93	0.93	0.06	0.02	-
Model 2	276	143	1.9	10	0.90	0.92	0.93	0.06	0.011	0.002
Model 3	269.5	143	1.9	3.8	0.90	0.92	0.93	0.06	0.020	0.05
Model 4	266.3	143	1.9	0.03	0.90	0.92	0.93	0.06	0.025	0.65

Table 7: Parameter Estimates

Construct				
Dependent	Independent	Unstand. β	t	Stand. β
Innovation strategy	Institutional alignment	0.274	4.2	0.375
	Coercive regulation	0.095	2.7	0.146
	Coercive^2	-0.166	-3.2	-0.16
	(Coercive^2 * Alignment)	0.096	1.9	0.055
	Common method	0.036	0.51	0.046
	Size	0.186	3.5	0.305