



The influence of motivations for seeking ISO 14001 certification: an empirical study of ISO 14001 certified facilities in Hong Kong

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This study proposes a model linking firm motivations for seeking ISO 14001 certification to the effectiveness of three major components of an environmental management system (EMS) – environmental policy, the assessment of environmental aspect and impacts, and management review. The relationship of these EMS components with a self-reported measure of environmental performance is also examined. From a sample of 29 ISO 14001 certified facilities in Hong Kong (of 71 total certifications at the time the data was collected), it was found that motivations to enhance firm reputation are positively related to perceptions of the effectiveness of the policy statement. Motivations for reputation enhancement and cost reduction were positively related to perceptions of EMS effectiveness in assessing environmental aspects and impacts. The effectiveness of the methodology for identifying environmental aspects and impacts was also found to be positively related to improved environmental performance.

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Over the past three decades, organizations have come under growing pressure to manage and improve their environmental performance (e.g. Hart, 1997; Gladwin, 1999; Starkey and Welford, 2001). Recently, this shift has been gaining momentum due to a number of interrelated and reinforcing factors. Among the most important of these are:

(1) The relentless deterioration of the environment accompanied by ever clearer and more compelling scientific evidence of dire consequences.¹ In response, most countries have adopted new regulations, although significant differences exist in the quantity and rigor of these measures and in enforcement effectiveness (WRI, 2001). Many other countries have

also implemented various economic instruments, such as environmental taxes, rebate schemes and tradable pollution permits;

- (2) Firms are becoming increasingly aware of their own negative impact on the environment. This is the result of such policy initiatives as Toxic Release Inventory (TRI).² Certifications to international standards, such as ISO 14001, also require some investigation into such effects that is often revealing when undertaken. These values also serve as useful benchmarks for improvement in line with the management adage, 'What gets measured, gets done';
- (3) An increased incidence of lawsuits, criminal penalties, and jail sentences has also greatly elevated anxiety among top management in many industries about the consequences of violations or industrial accidents;

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¹ This is reminiscent of what Hardin (1968:1244) referred to as a 'remorseless working of things' leading to a 'tragedy of the commons'.

² The TRI is a key feature of the Emergency Planning and Community Right to Know Act (EPCRA) enacted in 1986 in the United States. As of 1996, the TRI covers releases of 643 chemicals.

- (4) General acceptance among executives that environmental performance need *not* be costly to the firm and, in some cases, may yield handsome returns (Hart, 1999; Reinhardt, 1999; Hawken, Lovins and Lovins, 2000). This potential has been underscored by numerous anecdotal accounts, case studies, and a growing number of empirical studies;
- (5) A growing consensus among key stakeholders (e.g. customers, employees, community organizations, green groups) for greater environmental responsiveness. Importantly, the internet and other modern communication technologies have greatly empowered these stakeholders to obtain more information about firms activities, to publicize it, and to mobilize action campaigns.

Given all these developments, it should not be surprising that many firms have responded. Such a generalized shift from relatively reactive postures to more proactive environmental management strategies has been widely noted (Welford, 1996; Berry and Rondinelli, 1998; Brown and Karagozoglu, 1998). At the same time, there remains marked variation both within and between industries—and also within and between countries—in the genuineness of firms' commitment to environmental performance and in the specific approaches taken.

In the '90s, efforts were made to create generalized statements of good environmental practice, the most well-known being the 'Eco-Management and Audit Scheme' of the EU and the ISO 14000 series of documents of the International Organization for Standardization (Geneva).³ As with other Voluntary Consensus Standards (VCSs), the response to ISO 14001 certification has also been highly variable.⁴ In Dec. 1999, only three years after publication as an international standard, there were already 14106 certified facilities world-wide (<http://www.iso.ch/presse/survey9.pdf>). These certifications have been highly concentrated in Europe (52%) and Japan (22%).⁵

³ Because this study is conducted in a region where all firms seek ISO 14001 certification, the remainder of this study will focus only on that standard.

⁴ Technically, any organization can be certified to the ISO 14001 standard. This can include an entire corporation, a business unit, or a facility. As most certifications are at the facility level, we will use the term 'facility' to refer to a particular certification and 'firm' when referring to the decision to seek certification.

⁵ Many organizations in Germany have been certified to the Eco-Management and Audit Scheme (EMAS) as well as to ISO 14001. Germany leads in combined EMAS and ISO 14001 certifications.

This pattern of variation is especially pronounced in Asia. Japanese firms have clearly embraced ISO 14001, due in large part to the fact that it was perceived as a 'second license to export' *and* because so many government agencies and industry associations promoted it (e.g. the electronic industry). There has also been substantial interest in ISO 14001 certifications in Taiwan, Korea, Malaysia and Thailand (each having over 200 certifications). Elsewhere, however, there has been relatively less interest. Singapore and Hong Kong each have about 100 certifications, while in countries such as the Philippines and Vietnam ISO 14001 certification would be much less relevant for most local manufacturers as exports are low, enforcement of regulations is a problem, and stakeholders pressures are weak. In mainland China, although interest in the standard is rapidly growing, the response has been more sectorial, with managers of state-owned firms and joint ventures being more sensitive to government interests in the standard (Cheng, 1999; Chen and Wong, 2000).

Interestingly, these examples also serve to suggest that relatively few firms seek ISO 14001 certification *primarily* to improve their environmental performance. Instead, the majority of firms in Asia seek EMS certifications primarily for economic reasons, such as to ensure compliance with existing regulations, to curry favor with major customers or officials, or more generally to enhance their reputation. Should a firm's environmental performance also improve, of course that's a welcome, albeit secondary, outcome from the firm's perspective.⁶ Of course, such priorities are not unique to Asian firms and would be expected from all economic organizations (Reinhardt, 1999). Indeed, it would be naïve to think otherwise and it is this secondary environmental effect that is the main selling point of such standards to government policy makers and other stakeholder groups.

Assuming that ISO 14001 actually provides a useful framework for an effective EMS, even a relatively widespread disinterest in the environment by the business community should not *in theory* undermine its potential contribution to the environment. In granting ISO 14001 certification, a registrar is attesting that all the basic

⁶ Here it should be noted that the 'success' of ISO 14001 would depend very much on who is asked. Here we will define success for the firm according to whether ISO 14001 delivers in terms of why the firm adopted it. We assume these are mostly economic. From an industry point of view it could be defined in terms of image or regulations not passed. From a societal point of view, success should be defined in terms of whether or not it helps solve the 'commons problem' by mitigating the exploitation of natural capital.

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