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Demand for ISO 14001 adoption in the global supply chain: An empirical analysis focusing on environmentally conscious markets

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ABSTRACT

This paper analyzes the environmental preferences and pressures of customers in environmentally conscious markets influencing the number of adoptions of ISO 14001—the international standard certified by the International Organization for Standardization (ISO) concerning an Environmental Management System (EMS)—in a country. Customers in different countries have different priorities and ideas with regard to the environment and its management, and therefore it is possible that environmental preferences and pressures of customers in environmentally conscious markets are greater, although many earlier studies suggest that foreign customers generally form a significant stakeholder group encouraging the adoption of ISO 14001. A random-effects Tobit estimation using a sample of 155 countries over eight years supports the view that the environmental preferences and pressures of customers in environmentally conscious markets (including Finland, Japan, Germany and Denmark) are more likely to encourage domestic along with foreign suppliers to adopt ISO 14001. As it is easier for firms in environmentally conscious markets to adopt ISO 14001 because of their better economic performance, they have already adopted certification and consequently require their domestic and foreign suppliers to do likewise in the global supply chain. For this reason, suppliers wishing to access environmentally conscious markets can obtain an advantage with ISO 14001 certification.

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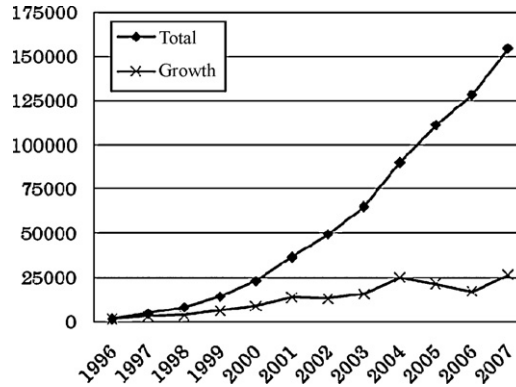


Fig. 1. Number of ISO 14001 adoptions worldwide, 1996–2007.

1. Introduction

Recently, environmental management has become a key corporate priority for many firms, implying that firms cannot survive without consideration of the environment because of growing public concern about the environment. In light of this, the adoption of ISO 14001—the international standard primarily concerned with an Environmental Management System (EMS) as certified by the International Organization for Standardization (ISO)—is attractive to many firms. Since its release in 1996, the global number of ISO 14001 adoptions has steadily increased, totaling 154,572 in 2007 (Fig. 1). While any organization, including local governments, can decide to adopt ISO 14001, the majority of adoptions are by firms.

A trigger for the increased number of ISO 14001 adoptions is the environmental preferences and pressures of stakeholders, especially on the demand side, as they influence firm profits. Firms therefore attempt to satisfy their stakeholders with ISO 14001 adoption, as this indicates their commitment to environmental management. Indeed, many previous studies that have analyzed the determinants of ISO 14001 adoption have found that environmental preferences and pressures of stakeholders influence the firm's decision. In particular, Christmann and Taylor (2001), Nakamura et al. (2001), Welch et al. (2002), Bansal and Hunter (2003), Hibiki et al. (2004), Neumayer and Perkins (2004), Wu et al. (2007), Arimura et al. (2008) and Nishitani (2009) suggest that foreign customers form a significant stakeholder group encouraging the adoption of ISO 14001. This implies that foreign customers are more likely to consider that the quality of the supplier's EMS will influence the quality of their EMS in the global supply chain.

However, customers in different markets have different priorities and ideas with regard to the environment and its management, and this suggests that it may be somewhat incorrect to argue that all foreign customers are more environmentally conscious (Neumayer and Perkins, 2004). Accordingly, we need to focus on the relationship between the environmental preferences and pressures of customers in environmentally conscious markets and ISO 14001 adoptions. This is because environmentally conscious markets are comprised of a higher proportion of environmentally conscious customers, and it is possible that they are more likely to require not only their domestic but also their foreign suppliers to adopt ISO 14001.

Therefore, the objective of this paper is to analyze whether the environmental preferences and pressures of customers in environmentally conscious markets influence suppliers' decisions to adopt ISO 14001. According to the World Economic Forum (2003) Survey on Private Sector Environmental Innovation¹, the private sector in Finland, Japan, Germany, Sweden, Denmark, and the United Kingdom (UK) are more environmentally proactive, and therefore regarded as environmentally

¹ The World Economic Forum (2003) Survey on Private Sector Environmental Innovation is included in the World Economic Forum Environmental Sustainability Index (Esty et al., 2005).

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