



## Do firms get what they want from ISO 14001 adoption?: an Australian perspective

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### ABSTRACT

There is an increasing growth of customers and regulators requesting enterprises to adopt the ISO 14001 environmental management standard over the last 15 years. Yet, any evidence for consistent environmental, market, and social benefits has been widely debated, which in turn, might be partly linked to the underlying organizational motives for environmental management system adoption. Based on the *Institutional Theory* and the *Natural Resource-based view*, this study examines the relationship of two different organizational adoption motives (i.e., internal and external) with triple bottom line perceived benefits (i.e., environmental, social, and market) on the adoption of ISO 14001. Using empirical data collected from a large-scale survey of Australian firms, we found that the motivation for environmental management system adoption was aligned closely with the types of benefits that accrued. The results indicate that external motives enhance social and market positioning, whereas internal motives better serve environmental benefits. Thus, managers may be seeking only a narrowly bounded set of outcomes from ISO 14001, rather than broader strategic improvement. The results also show the environmental benefits of adopting ISO 14001 to improve both the social and market benefits of the adopter enterprises. Practically, *environmental benefits should be realized before firms can expect to reap social and market benefits from the environmental management system adoption*. Our investigation on multiple motivations for organizational adoption of a voluntary standard provides important theoretical and practical insights on which organizational environmental management system adoption motives are conducive to fostering a broader set of strategic benefits.

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### 1. Introduction

Sustainability of the environment has become a critical focus in industrial activities. Environmental management system (EMS) has recently emerged as an important topic which involves the integration between business and the environment, with weighing of environmental factors in each business decision, process and product development activity, and strategic planning (Sarkis, 2003). The growing importance of EMS is driven mainly by the escalating deterioration of the environment, for example, diminishing raw material resources, overflowing waste sites, increasing levels of pollution, and global warming (King and Lenox, 2001; Lai et al., 2010). This trend has significantly aroused attention on environmental preservation by enterprises as voluntary actions to showcase their corporate social responsibility regardless of the

resultant bottom line benefits. The need for enterprises to balance and improve their triple bottom line reporting (3BL) with respect to the benefits for profit, people, and the planet has received massive managerial attention (Kleindorfer et al., 2005; Skouloudis et al., 2010; Zhu et al., 2007).

Meeting customer demands, complying with regulatory requirements, seeking cost reduction and efficiency improvement, searching for competitive advantages, are identified as important organizational motives for organizational adoption of EMS (Banerjee et al., 2003; Delmas, 2001; González-Benito and González-Benito, 2006; Turk, 2009; Welch et al., 2002). There also exists a rich body of environmental literature investigating different performance implications such as eco-performance (Iraldo et al., 2009; Pujari et al., 2003), market and sales (Iraldo et al., 2009; Menguc and Ozanne, 2005), and financial consequences (Kassinis and Vafeas, 2009); yet, the results are not always evident. Some studies even find no relationship between improvements in environmental performance and EMS adoption (Fryxell and Szeto, 2002; Yüksel, 2008) and that ISO 14001 certification brings no environmental improvement benefit (Barla,

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2007; Gomez and Rodriguez, 2011). As indicated by Margolis and Walsh (2003), for studies examining the relationship between corporate social performance and financial performance, the majority of the results pointed to a positive relationship between corporate social performance and financial performance. A few of them found a negative relationship, non-significant relationship, or mixed set of findings. With various underlying organizational motives for adoption identified and inconsistent performance outcomes, this raises the research question whether the 3BL benefits are linked to the underlying organizational motives for EMS adoption (Gavronski et al., 2008). On the other hand, most environmental studies focused on the linkage between economic and environmental performance (Chan, 2005; Henri and Journeault, 2010; King and Lenox, 2002; Nishitani et al., in press; Zhu et al., 2005) without due regard to the inter-relationship among the 3BL performance measures (environmental, social, and market benefits). Scholars have been long advocating that social and market benefits are not incompatible (Boiral, 2007); yet, the mechanism as to how social, environmental, and market benefits are correlated is still an inchoate problem for investigation. This study aims to empirically examine the links of different organizational motives of adopting ISO 14001 as an EMS with the 3BL benefits. Specifically, in response to the quest for integrating the examination of technical (internal) and institutional (external) pressure encountered by enterprises on EMS (Rothenberg, 2007), we propose and test an integrative model of the internal and external organizational motives of adopting ISO 14001 with the 3BL benefits based on Institutional Theory and the Natural Resource-based view (NRBV) theoretical lens.

EMS practices are likely to bring significant organizational impacts in terms of the strategic directions, operations, and performance outcomes. Currently, environmental management and sustainability are among the most topical issues in developed countries. Australia is one of the highest carbon emitters per capita in the world, and in particular, the manufacturing industry in Australia makes a considerable contribution to carbon emissions. The current Australian government has begun to show its commitment and devote serious attention on the issue of climate change, beginning with the signing of the Kyoto Protocol in December 2007. The government has already committed to an unconditional target of a 5% reduction in emissions below 2000 levels by 2020. Toward this goal, the government is obliged to develop a set of policies and regulations which aim to enforce the reduction of emissions and energy uses. Specifically, Australian government has set a plan for a fixed carbon price to operate from July 1, 2012, until about 2015–16 when the regime will move to an emissions trading scheme (ETS).

This development raises a question on the readiness of Australian industry for coping with the new “rule of the game” on the global initiative for environmental protection. A recent industry report (AiG, 2007) produced by Australian Industry Group (AIG) and Sustainability Victoria suggests that Australian industry is at the early stage of the adoption of EMS as part of a long journey toward environmental sustainability. In this regard, enterprises either consider EMS as a business burden which would undermine their profitability or take it as an opportunity to improve their competitiveness. The latter view holds that it is not just about being environmentally friendly; rather, it is concerned with corporate responsibility and potential to strive for higher cost and service performance. In other words, it is a business value driver but not a cost center. Therefore, how to respond this challenge and leverage it as a management approach for enhancing their ability to compete is a critical and timely issue for many Australian enterprises. Failure to address environmental issues urged by the international community will lead enterprises, particularly those export-

oriented, to suffer from increased costs for compliance and hence undermined competitiveness (Lopez-Gamero et al., 2010).

Despite that the importance of managing the environmental system is emphasized, only a few studies (see for example: Khan, 2008; McDonald and Lane, 2002; Zutshi and Sohal, 2004) have investigated the adoption and implementation of ISO 14001 by Australian enterprises. Our study aims to fill this gap by conducting a comprehensive survey targeted at various industrial sectors to validate a theoretical model which explains the relationship between motives and benefits of ISO 14001 adoption.

## 2. Theoretical background and hypotheses

ISO standards were developed by a non-governmental International Organization for Standardization (ISO), located in Geneva, Switzerland. The goal of the ISO is to develop standards on a worldwide basis to allow commerce to transcend national boundaries without creating trade barriers. Dealing with the fundamentals of quality management system, latest revision of ISO 9000 has been published in 2008. This revision specifies requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements. Another aim of this standard is to enhance customer satisfaction through the effective application of the system including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements (ISO, 2008). ISO 9001 becomes an indication of the possible path of growth for ISO 14000 (Quazi et al., 2001). The ISO 14000 standards were developed with aims to provide guidance for developing a comprehensive approach to environmental management and for standardizing some key environmental tools of analysis such as labeling and life-cycle assessment. Up to 2010, there are 1,109,905 organizations that are certified in 178 countries to ISO 9001 while 250,972 organizations are certified in 155 countries to ISO 14001 worldwide (ISO, 2010). As reflected in a study by Zeng et al. (2005), while ISO 9001 is customer driven, ISO 14001 is more driven by stakeholders, the community or regulators. Under the contexts of stricter environmental regulations and growing interest for companies to demonstrate that their products are “green”, the use of ISO 14000 is enforced. In most cases regarding the adoption of new innovations or practices, such as ISO 9001 quality management systems, Total Quality Management (TQM), including ISO 14001 EMS, there is a combination of external and internal organizational motives driving the innovation adoption (Anderson et al., 1999; Zhu et al., 2007). External pressures mainly come from customers or other regulatory parties who have a bargaining power to exert pressures on firms to adopt the innovation (Delmas and Montiel, 2009; Qi et al., 2011; Zhu and Sarkis, 2007). For example, certain customers have demanded that their suppliers be qualified to certain environmental standard before they can be considered as potential suppliers (Jørgensen, 2008). Internal factors, on the other hand, mainly arise from the firms' understanding of the potential strategic benefits that could be derived from the EMS, including firm's image and reputation in the context of Corporate Social Responsibility (CSR), quality, cost, and delivery.

We suggest Institutional Theory (INT) and NRBV as complementary theoretical lenses for a more comprehensive explanation on the motives and benefit implications of environmental practice adoption with the former considering the adoption of certain technology, practices, or management structures among organizations in seeking their legitimacy as a result of the influence of social and environmental factors (DiMaggio and Powell, 1983), while the latter views such adoption as organizational strategic actions to

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