

Empirical assessment of ISO 9000 related management practices and performance relationships

Prakash J. Singh*

Department of Management and Marketing, The University of Melbourne, VIC 3010, Australia

Accepted 20 February 2007

Available online 13 November 2007

Abstract

Unlike the experience in the broader quality management (QM) area, for ISO 9000, the relationships between management practices associated with the standard and performance is relatively under-researched. This has contributed to a general lack of clarity on how the standard works and how effective it is in generating the espoused benefits. In this paper, an attempt is made to fill this gap. Through a review of the standard and associated literature, a set of six management practice constructs (management policies, plans and actions, focus on customers, capable employees, reliable suppliers, sound communication system and steady processes) were identified. Further, three performance constructs (consistent quality outputs, satisfied customers and business performance) were developed based on the espoused outcomes of the standard. Relationships between these constructs were hypothesized, with the relationship between management policies, plans and actions and steady processes constructs being partially mediated by the other four management practice constructs, and the consistent quality outputs and business performance constructs being fully mediated by satisfied customers construct. These relationships were consolidated into a model and empirically tested with data from 418 Australian ISO 9000 registered manufacturing plants using the structural equation modeling technique. Results showed that only two out of the 12 hypothesized relationships were not supported, with management policies, plans and actions being negatively related to steady processes, and focus on customers and steady processes relationship being statistically insignificant. This result supports the assertion that the top management team plays a ubiquitous role, albeit an indirect one in creating steady processes. Also, strong focus on customers could be of little value in creating steady processes. Overall, this study defines the role of stakeholders and shows how they interact with the salient aspects of the ISO 9000 standard. Through this, insights into how the standard works have been developed. Further, a validated framework for effective implementation of ISO 9000 has been produced.

© 2007 Elsevier B.V. All rights reserved.

Keywords: ISO 9000; Quality management; Theory; Empirical research methods; Structural equation modeling

1. Introduction

Over the last 15 years, a notable growth of organizations registering to the ISO 9000 standard

has been recorded. Over 500,125 certificates have been issued in 149 countries ([International Organization for Standardization, 2004](#)). While initial growth was in the UK, more recent interest being shown by organizations in the US, the Asian region and other European countries means that the spread of ISO 9000 registration is likely to continue.

*Tel.: +61 3 8344 4713; fax: +61 3 9349 4293.

E-mail address: pjsingh@unimelb.edu.au

Whilst popular, ISO 9000 is not beyond reproach. There is no clear-cut evidence of its effectiveness. Studies that have evaluated whether ISO 9000 registration makes a difference to organizations' performance show mixed results. Some studies show that there is little difference in operational and financial performance between registered and non-registered organizations (Simmons and White, 1999; Terziovski et al., 1997; Rahman, 2001; Lima et al., 2000), whilst others show that ISO 9000 registered organizations perform better than non-registered organizations (Corbett et al., 2002; Terziovski et al., 2003; Carr et al., 1997). In some cases, ISO 9000 appears to selectively affect certain types of performance. For instance, Naveh and Marcus (2005, p. 1) found that "implementing the ISO 9000 standard led to improved operating performance, but that this outcome did not necessarily or automatically yield better business performance".

One approach to making sense of this confusing situation would be to carefully evaluate the key prescriptions of the standard and assess their ability to generate the espoused benefits. This, in essence, would require an understanding of the relationships of various management and organizational practices that are integral part of the standard, with the set of performance expectations associated with the standard.

Such a line of inquiry has been a popular research theme in the broader quality management (QM) area, with many studies devoted to explicating the management practice–performance nexus (see Sousa and Voss (2002) and Nair (2006) for summaries of these studies). As a result of these studies, there is momentum developing towards consensus on issues such as what these QM practices are, how they are inter-related, the effect they have on performance, and the effect of moderating and contextual factors on these relationships. These are dove-tailing towards the eventual emergence of an underlying theory upon which QM is based (Nair, 2006). All of these are contributing towards a more nuanced understanding of QM, which is further resulting in its improved credibility amongst researchers and practitioners.

Accepting that ISO 9000 is different from (but not inconsistent with) the broader QM concept (Corbett et al., 2005), a review of the extant literature showed that, surprisingly, there is a paucity of research that has focused on how ISO 9000 related management practices impact upon performance. A number of researchers have

commented on this state of knowledge. For example, Corbett and Kirsch (2001, p. 328) state that "[t]here is little evidence on how ISO 9000 certification affects quality or business performance". Similarly, Naveh and Marcus (2005, pp. 4–5) comment that "[i]mplementation of ISO 9000 should make an organization's operating performance go up, but consistent results that could verify this proposition are not found in the literature". Likewise, Simmons and White (1999, p. 340) observe that the "relationships between ISO 9000 and business performance are complex and our understanding of these relationships is underdeveloped". Further, they claim that "while there has been much published work on various issues associated with ISO 9000, research in this area has lacked systematic measurement and multi-organization comparisons" (Simmons and White, 1999, p. 331).

A consequence of this is that it is difficult to resolve the quandary related to effectiveness of ISO 9000 expressed earlier. Further, the knowledge base associated with ISO 9000 has remained relatively underdeveloped as a result of the relative lack of the high-quality research of the type that is associated with QM. Therefore, this is the gap in knowledge relating to the standard that is the focus of this paper. The question investigated is: *Is ISO 9000, through the management practices associated with the standard, able to produce the espoused benefits?*

In this paper, applying methods similar to that used in other QM studies, a theoretical model that encapsulates the relationships between key constructs of ISO 9000 is presented. This model was then empirically tested with data from a study of 418 manufacturing organizations. Structural equation modeling procedure was used to analyze the data. The results provide several useful insights into the standard. Firstly, insofar as a hypothesized model is presumed to be an accurate representation of how the standard is meant to operate, the empirical test results provide evidence for the extent of support for this model. Secondly, the results could contribute to the articulation of a theory that explains the operation and effectiveness of the standard. Finally, these all contribute to a more nuanced understanding of how the standard operates and its ability to influence performance of firms.

In the next section, the key management practice and performance constructs associated with ISO 9000 are identified, along with the hypothesizing of the inter-relationship between these constructs.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات