

## The Impact Of Environmental Management System ISO 14001 Adoption on Firm Performance

**Authors :** Raymond Treacy, Paul Humphreys, Ronan McIvor, Trevor Cadden, Alan McKittrick

**Abstract :** This study employed event study methodology to examine the role of institutions, resources and dynamic capabilities in the relationship between the Environmental Management System ISO 14001 adoption and firm performance. Utilising financial data from 140 ISO 14001 certified firms and 320 non-certified firms, the results of the study suggested that the UK and Irish manufacturers were not implementing ISO 14001 solely to gain legitimacy. In contrast, the results demonstrated that firms were fully integrating the ISO 14001 standard within their operations as certified firms were able to improve both financial and operating performance when compared to non-certified firms. However, while there were significant and long lasting improvements for employee productivity, manufacturing cost efficiency, return on assets and sales turnover, the sample firms operating cycle and fixed asset efficiency displayed evidence of diminishing returns in the long-run, underlying the observation that no operating advantage based on incremental improvements can be everlasting. Hence, there is an argument for investing in dynamic capabilities which help renew and refresh the resource base and help the firm adapt to changing environments. Indeed, the results of the regression analysis suggest that dynamic capabilities for innovation acted as a moderator in the relationship between ISO 14001 certification and firm performance. This, in turn, will have a significant and symbiotic influence on sustainability practices within the participating organisations. The study not only provides new and original insights, but demonstrates pragmatically how firms can take advantage of environmental management systems as a moderator to significantly enhance firm performance. However, while it was shown that firm innovation aided both short term and long term ROA performance, adaptive market capabilities only aided firms in the short-term at the marketing strategy deployment stage. Finally, the results have important implications for firms operating in an economic recession as the results suggest that firms should scale back investment in R&D while operating in an economic downturn. Conversely, under normal trading conditions, consistent and long term investments in R&D was found to moderate the relationship between ISO 14001 certification and firm performance. Hence, the results of the study have important implications for academics and management alike.

**Keywords :** supply chain management, environmental management systems, quality management, sustainability, firm performance

**Conference Title :** ICSCLE 2016 : International Conference on Supply Chain and Logistics Engineering

**Conference Location :** Paris, France

**Conference Dates :** May 16-17, 2016