

Chapter 6

Does Innovation Flourish With the Implementation of Certified Management Systems? A Study in the European Context

Vasileios Mavroeidis

Hellenic Open University, Greece

Petros E. Maravelakis

Department of Business Administration, University of Piraeus, Greece

Katarzyna Tarnawska

European Commission, Belgium

ABSTRACT

Existing literature states that standardization and certification are not only crucial for enterprises, but they have a positive impact on productivity, international trade, innovation, and competition as well. This research employs data derived by the European Innovation Union Scoreboard and the International Standardization Organization from 2005 to 2014 to investigate the relation between innovation and certified quality management systems according to ISO 9001. Using suitable panel data analysis, the authors analyse the data gathered from a panel accounting for the different countries and different years. The main result of this study is that we are able to provide evidence to policymakers, academics, and entrepreneurs that there is a statistically significant relationship between innovation and certified quality management systems. The originality of this chapter stems from the fact that up to now, to the authors' knowledge, the impact of ISO 9001 on innovation has not been examined in the European context.

DOI: 10.4018/978-1-7998-2181-6.ch006

1. INTRODUCTION

Quality may be considered as a systemic way to express customer expectations in a changing environment. Quality Management Systems (QMS), derived by the scientific field of Quality, emphasize to organisational systems rather than to product or services specifications. ISO 9001 (International Organisation for Standardization) is one of the most popular standards addressing QMS leading to Certified Quality Management Systems. It should be noted that certification of QMS (i.e. ISO 9001) is part of the National Quality Infrastructures (NQI) which all together form the competitive advantage of an economy.

Research on the impact assessment of QMS as part of NQI is carried out on macroeconomic, sector and firm levels. Comprehensive studies of the whole NQI system are rare. Concerning methodology, scholars employ pure descriptive methods in the form of case studies based on reports and interviews. Statistical and econometric analyses are also performed on the grounds of correlation, regression and growth models.

There exist analyses on impact of standardisation on various macro microeconomic variables like business performance, also on different phases of innovation process and development. There are in particular studies investigating linkages between standardisation and intellectual property rights, especially patents (see for example Blind et al. 2018) and connection between standardisation and socioeconomic development (see for example Fura and Wang 2017). Research on relationships between certified QMS and innovation are rare. Numerous theoretical and empirical studies illustrate how certification may influence macroeconomic performance. Most of these studies focus on impact of certification on business performance and some on innovation as case study analysis (see for example Mir et al. 2016 and references therein) rather than evaluating public data provided by the databases like the Innovation Union Scoreboard and ISO databases. Moreover empirical studies focus very often on a limited number of objects (countries) and variables.

This research paper contributes to filling this gap through development of a statistical model to investigate relationship between standardisation and innovation in the area of QMS. In Sections 2 and 3, the authors present a review of existing literature in the field describing linkages between quality and innovation, standardisation and innovation and quality management systems and innovation. In Section 4, the authors give the research hypotheses and the methodology used for the analysis. The results and their discussion is given in Section 5. Finally, in Section 6 some conclusions, recommendations and limitations are given.

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/does-innovation-flourish-with-the-implementation-of-certified-management-systems/247400

Related Content

Are Asian Countries Ready to Lead a Global ICT Standardization?

DongBack Seo and Jan Willem Koek (2012). *International Journal of IT Standards and Standardization Research* (pp. 29-44).

www.irma-international.org/article/asian-countries-ready-lead-global/69809

Linguistic Qualities of International Standards

Hans Teichmann, Henk J. de Vries and Albert J. Feilzer (2006). *International Journal of IT Standards and Standardization Research* (pp. 70-88).

www.irma-international.org/article/linguistic-qualities-international-standards/2579

Identity-Based Cryptography: Applications, Vulnerabilities, and Future Directions

Jenny Torres, Michele Nogueira and Guy Pujolle (2013). *IT Policy and Ethics: Concepts, Methodologies, Tools, and Applications* (pp. 430-450).

www.irma-international.org/chapter/identity-based-cryptography/75041

Network Effects and Diffusion Theory: Network Analysis in Economics

Tim Weitzel, Oliver Wendt, Falk G. von Westarp and Wolfgang König (2003). *International Journal of IT Standards and Standardization Research* (pp. 1-21).

www.irma-international.org/article/network-effects-diffusion-theory/2551

Brain-Like System for Audiovisual Person Authentication Based on Time-to-First Spike Coding

Simej Gomes Wysoski, Lubica Benuskova and Nikola K. Kasabov (2013). *IT Policy and Ethics: Concepts, Methodologies, Tools, and Applications* (pp. 662-689).

www.irma-international.org/chapter/brain-like-system-audiovisual-person/75051