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Firms' adoption of international standards: One size fits all?☆

John Hudson [a,*], Marta Orviska [b]

[a] *Department of Economics, University of Bath, Bath, BA2 7AY, United Kingdom*
[b] *Faculty of Economics, Matej Bel University, Tajovskeho 10, 975 90 Banska Bystrica, Slovak Republic*

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Abstract

We analyse the take-up by firms of internationally recognized standards such as ISO 9000 and ISO 14000. Based on an analysis of 11,668 firms in countries in Asia and Eastern Europe, we conclude that the probability of standard certification increases with firm size, is greatest in large cities and in manufacturing industries. There are other differences, including between countries. Given these differences, we argue that single generic standards for all firms may not be optimal and that there is a case for the simultaneous publication of differentiated standards targeted at different user characteristics.

JEL classification: L15; L25; O19

Keywords: ISO 9000; ISO 14000; Firms; Standards; Product quality

1. Introduction

Standards are an important feature of modern life. They have been fundamental both in the development of the European Union and in the development of complex modern technologies such as the mobile phone. There are many examples of standards. Two of the better known are the ISO 9000 and ISO 14000 families of standards which are examples of internationally recognized quality standards pertaining to management. Standards tend to be arrived at by 'consensus' and

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* Corresponding author.
E-mail addresses: J.R.Hudson@bath.ac.uk (J. Hudson), marta.orviska@umb.sk (M. Orviska).

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it is a general rule that a single, generic standard emerges which all firms are then able to benefit from. However, standards are often, if not always, the result of a compromise between various interested parties. But being they are the result of compromise, are they equally suited to all firms, large as well as small, service firms as well as manufacturing ones and firms in different countries? Is the single, generic standard designed for all users appropriate, or would a differentiated standard targeted at different types of firms be better? This is the key issue we are seeking to analyse.

There are examples of differentiated standards, for instance standards specifically developed for small firms which are different to those used by large firms. But these are often developed several years after the core standard has appeared and then not been taken up by small firms. An example is ISO/IEC 29110 This relies on existing standards, such as ISO/IEC 12207 (software engineering life cycle standard). The motivation for this was that small firms were not willing to use large standards, such as 12207, due to their complexity and lack of support (Varkoi, 2010). Varkoi also notes that several countries translate the standards and supporting material to better serve their local industry. Standards often require skilled workers to implement and many countries have a shortage of skilled workers and again this may dictate the need for differentiated standards.

The issue is important, as all standards, including quality ones, offer benefits to firms, regions and countries. This can happen in a number of ways. Firstly, quality standards may actually improve efficiency, leading to cost savings and potential quality enhancements Whether or not standards such as ISO 9000 actually do lead to such efficiency gains is the subject of some dispute in the literature. But even if they do not, there are still potential gains to the firm in signalling quality. This is consistent with a literature, e.g. on advertising, that the mere expenditure of a substantial amount of money on signalling quality is something only a high quality firm would do (Milgrom & Roberts, 1986). Thirdly, the adoption of a standard may be necessary to gain entry to certain markets. Finally the adoption of certain types of standards may be useful in improving relationships with the local community, shareholders, workers (if linked with safety) and other stakeholders. Hence differential access to standards may disadvantage some firms.

Our analysis will be based on firms in both manufacturing and services, as well as other sectors such as construction which do not fit neatly in either category. As far as we are aware, our study is the only large scale analysis of firms' use of standards across a substantial number of countries. Previously too, most studies have focused on manufacturing (Pekovic, 2010). The countries we have chosen are 'transition ones' in Europe and Asia. Some are well advanced in the transition process and indeed are members of the EU, others are less well advanced. The regression results will show systematic differences in standard certification by characteristics such as firm size, location and ownership, as well as between sectors and countries. This suggests the need for greater efforts by ISO and individual countries in facilitating standard certification amongst certain types of firms. In addition, the fact that take up is substantially less amongst some firms than others suggests there is a case for differentiated standards. Thus it may not be optimal to develop single homogenous, generic standards for all firms, i.e. one size may not fit all.

The paper proceeds as follows. In Section 2, we discuss the ISO 9000 and ISO 14000 families of standards. There then follows a discussion of the factors which both theory and the literature suggest impact on the firm's standard certification decision. Section 4 presents the data and Section 5 the regression results. Finally we conclude the paper.

2. The ISO family of standards

The International Organization for Standardization (ISO) was established in 1947, at a time when several worldwide organisations were being established including the IMF and the World