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Is there a common pattern to integrate multiple management systems? A comparative analysis between organizations in Greece and Spain



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ABSTRACT

The integration of management systems has been mainly studied considering the process within organizations and also comparing the implementation among organizations in the same country. Scarce research has been done comparing the process among organizations in different countries.

Thus, the main aim of this study is to analyze and compare the implementation of the integrated management systems between organizations located in two countries, Greece and Spain, which have different ISO 9001 and ISO 14001 certification rates.

A qualitative method has been applied. Six case studies are presented, three per country, to analyze the aspects of the process and comparing both implementation processes. All organizations have, at least, the ISO 9001 and the ISO 14001 management systems certification. The integration aspects studied are: strategy, methodology, level, audits, benefits and difficulties.

The findings, although exploratory, show that the differing integration aspect among the analyzed organizations is the audits both internal and external. Greek organizations achieve higher levels of internal audits integration rather than external but these levels are lower compared to the audits integration level of the Spanish organizations. The other aspects analyzed followed a similar pattern, i.e., the majority of organizations implement first the quality management system and then the environmental, common elements analysis is the main methodology applied, the level reported show a tendency to full integration and benefits and difficulties highlighted are also similar.

In addition to these results, aspects that could condition the process are proposed for future research, such as: certification rates, top management commitment, internalization of management systems, external auditors' experience, state support and their impact on sustainability. Implications for academia, organizations and certification bodies are also presented.

Although the integration of management systems has been analyzed in the literature, this is one of the first studies comparing organizations in countries with different certification rates and proposing specific factors conditioning the process for future research.

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1. Introduction

The implementation and certification of Management Systems (MSs) has continuously increased in the last twenty years (ISO,

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2015). Specifically, the certification rates of the ISO 9001 standard for Quality Management Systems (QMSs) and the ISO 14001 standard for Environmental Management Systems (EMSs), keep rising at a worldwide level (ISO, 2015).

The majority of studies on Management System Standards (MSSs) rely on the data provided by the International Organization for Standardization (ISO). Two main aspects can be underscored based on these data. The first is that countries with more experience in certification are those reaching a higher level of MSS diffusion and second, cross-country analyses are mainly based also



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on comparing the diffusion of ISO 9001 and ISO 14001 certificates (Llach et al., 2011; Marimon et al., 2011). The studies also conclude that MSSs diffusion is conditioned by geographic location and cultural affinity (Albuquerque et al., 2007).

The proliferation of these and other MSs raises the question of whether organizations could integrate their respective MSs into a single and consolidated MS, i.e., an Integrated Management System (IMS). A whole stream of research has been generated to address this question. Pioneers in the field (Karapetrovic, 2003; Karapetrovic and Willborn, 1998a) stressed that *"integration makes more sense than disintegration"*, and, therefore, they urged organizations to integrate rather than manage their MSs separately. Several empirical studies followed and conceptual integration models were composed to support the spread of IMSs in countries across the globe, including but not limited to Spain, Italy, China and Australia (Bernardo et al., 2009; Salomone, 2008; Zeng et al., 2011; Zutshi and Sohal, 2005).

In this sense, IMS research interest, in analogy to the MS research, gradually shifts from the initial implementation and integration of multiple MSs (e.g., Bernardo et al., 2012a; Karapetrovic and Willborn, 1998a; Zeng et al., 2011), to other aspects more related to the IMS sustainability considering its maintenance (e.g., Almeida et al., 2014; Rebelo et al., 2016a), impact on performance (e.g., Ferrón-Vílchez and Darnall, 2016; González et al., 2014), adding new MSs (e.g., Rocha et al., 2007; Mustapha et al., 2016) and relationship with other managerial practices such as innovation (Hernandez-Vivanco et al., 2016). However, there is a paucity of research on comparative analysis across countries in order to study if the IMS implementation is similar in organizations located in different countries as no international and certifiable MSS has been published. These studies have been done for MSSs individually, but to the best of the authors' knowledge, only one paper comparing the integration process among organizations in two countries with similar ISO 9001 and ISO 14001 certification rates has been published (Simon and Douglas, 2013).

Thus, the aim of this paper is to analyze and compare the implementation of IMS between organizations located in two countries, Greece and Spain, which have different ISO 9001 and ISO 14001 certification rates. The contribution of this paper is twofold. First, to present the comparison itself that will help in detecting an implementation pattern of the process regarding the analyzed organizations and second, to propose different factors that could condition this process to be analyzed in the future.

2. Literature review

Several definitions have been proposed for the integration of MSs. The most cited is the one coined by Karapetrovic and Willborn (1998a) and Karapetrovic (2003), who defined an IMS as a "set of interconnected processes that share a pool of human, information, material, infrastructure, and financial resources in order to achieve a composite of goals related to the satisfaction of a variety of stakeholders". The main aspects identified when considering the integration process are (Bernardo et al., 2012b; Domingues et al., 2015; Nunhes et al., 2017): strategy, methodology, level, and auditing systems. The benefits and difficulties encountered during the process are also analyzed. All them are presented in the following paragraphs.

2.1. Integration strategy

Integration strategy refers to the sequence of the individual MSs adoption. In the existing literature various strategies are proposed (Karapetrovic, 2002; Karapetrovic and Jonker, 2003), but the most followed is the Karapetrovic and Willborn (1998a)'s proposal of

three strategies, i.e., to establish: first the QMS and then the EMS; or first the EMS and then the QMS; or both MSs simultaneously. According to the existing empirical studies, the first strategy is the most followed (e.g., Abad et al., 2014; Bernardo et al., 2012b; Karapetrovic and Casadesús, 2009) and recent research shows that the simultaneous implementation is also possible (Llonch and Bernardo, 2016).

2.2. Integration methodology

Several integration methodologies have been proposed by both academic and standardization bodies. Academics have elaborated their own methodologies based either on the integration of MSs elements, i.e. objectives, resources and processes (Karapetrovic and Jonker, 2003) or on composed models (de Oliveira, 2013; Karapetrovic, 2005; Pal Pandi et al., 2016). Karapetrovic et al. (2006) proposed four different methodologies: process map, PDCA, common elements and organizations' own models.

Certain standardization bodies have launched national integration norms, such as in Denmark (Dansk Standard, 2005), Australia and New Zealand (SAI Global, 1999), Spain (AENOR, 2005), and United Kingdom (BSI, 2012). ISO released a handbook providing recommendations to integrate all the MSs implemented by a single organization (ISO, 2008), and has implemented the High Level Structure (HLS), i.e., a common structure in all the new and updated MSSs published that enhances their integration. Thus, it could be expected that the difficulties encountered during the process for differences in common elements or MSSs structure (Bernardo et al., 2012a; Douglas and Glen, 2000) will not be maintained, improving and increasing the integration of MSs.

In addition, as the models of the updated ISO standards (ISO 9001 and ISO 14001) are explicitly common, the integration process based on common elements analysis will also increase and be easier.

2.3. Integration level

To assess the degree of integration, Sampaio et al. (2012) propose four evolution levels towards complete integration: documentation integration, management tools integration, common policies and goals, and common organizational structure (similar to Bernardo et al., 2009). Integration degree can be measured at strategic, tactical and operational level as full, partial or no integration (Asif et al., 2010).

Three integration levels are normally accepted in the literature (Karapetrovic, 2003): not integrated, when multiple MSs are managed separately; partially integrated, when some MSs components are integrated and the rest are kept separated, and fully integrated, when all MSs components are managed as a single system (Abad et al., 2014; Mezinska et al., 2015; Santos et al., 2011). Bernardo et al. (2012b) stress that the implementation order of MSs may condition the level of integration achieved within an IMS, concluding that those organizations implementing both MSs simultaneously achieve higher levels of integration.

2.4. Integration of audits

This aspect of the process considers the integration of the internal and external audits. Organizations that have integrated their management systems are expected to carry out integrated audits, at least the internal (Karapetrovic and Willborn, 1998b; Kraus and Grosskopf, 2008; Simon et al., 2014; Savino and Batbaatar, 2015).

According to Karapetrovic and Willborn (2001), auditing based on a systemic approach may lead to benefits, such as the "harmonization and integration of different discipline-specific audits and Download English Version:

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