An empirical analysis of the integration of internal and external management system audits

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ABSTRACT

This paper presents the results of a research study whose main objectives were to analyze and compare internal and external management system audits regarding their implementation and integration in Spanish companies. Nine variables were investigated, namely the audit team, schedule, strategy, plan, report, methodology, guidelines, frequency and outputs. The results show that there are some significant differences regarding the audit team formation, the auditing guidelines used and the frequency of conducting the audits. The rest of the variables did not exhibit significant differences between internal and external audits. In addition, the integration level of both these categories of audits is very high for all the audit elements analyzed.

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1. Introduction

One of the most-used management practice is the implementation of management system standards (MSSs), such as ISO 9001 and ISO 14001 (Casadesus et al., 2009), with over one million certificates to the former and over 260,000 to the latter (ISO, 2012). The appearance of new MSSs, for example ISO 50001 for energy management and ISO 28000 for supply chains, gives organizations the possibility to manage them jointly in order to benefit from the existing synergies among MSSs (Karapetrovic and Willborn, 1998; Douglas and Glen, 2000; Zutshi and Sohal, 2005; Casadesus et al., 2009). Implementing several MSSs demands many duplicate activities (Simon et al., 2011). For example, management systems (MSs) require all working procedures to be traceable and auditable (Zeng et al., 2005). Therefore, "several separate documentation systems are needed to meet their requirements which involve a lot of documentation, written procedures, checking, control forms, and other paper work" (Zeng et al., 2005). In practice, it has been proved difficult to deal with separate MSs, as well as ensuring that they align with the organization's strategy (Zeng et al., 2005). Hence, integrated management systems (IMSs) have drawn the attention of both academics and practitioners.

Because the implementation of multiple MSs gives organizations the possibility to unify them into a single IMS, their audits can also be integrated (Karapetrovic and Willborn, 2001). It is expected that organizations that have integrated their MSs to a certain degree will also conduct integrated internal audits to some degree, as internal audits are a subsystem of the overall MS (Bernardo et al., 2010). Moreover, it is expected that, if the level of integration of MSs is high, so will be that of the external audits (Kraus and Grosskopf, 2008).

There are many studies about MS audits (e.g., Karapetrovic and Willborn, 2001; De Moor and De Beelde, 2005; Kraus and Grosskopf, 2008; Bernardo et al., 2011; Simon et al., 2011). However, studies about their integration and the differences between external and internal audits are much sparser and contributions in this direction are very much needed, as suggested by Bernardo et al. (2010). For example, the results of Bernardo et al. (2010) show that there are significant parallels between internal and external audits, although they found that some components of the audit system, for

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instance the internal audit teams, are integrated at a much higher level than the other components. However, Karapetrovic et al. (2006) found that some audit components were more integrated in external than in internal audits. For their part, Salomone (2008) found that 78% of the studied companies integrated their internal audits, while this fraction was 65% in the case of external audits. Therefore, internal audits usually have a lead in most of the integration aspects studied, which could be related to the level of integration of the overall MSs. Thus, according to the findings of these studies, there is need for more literature studying the difference between the internal and external audits in terms of the integration of audit elements.

Our first objective is to study to which extent firms with more than one standardized MS integrate their internal MS audits. The second objective is to compare the integration of the internal and external MS audit elements. In the next section, we provide a review of the existing literature on the integration of quality, environmental and other standardized MS audits. Subsequently, we present the methodology and the empirical results of the investigation. Finally, conclusions obtained from the study are discussed.

2. Literature review

2.1. Integration of the audits of MSs

Efforts to facilitate the joint auditing of different MSs have been done by the International Organization for Standardization (ISO), who first revised the standards for auditing quality (ISO 10011: 1990) and environmental (ISO 14010/11/12: 1996) MSs to publish ISO 19011: 2002, which harmonized the individual audit guidelines (Karapetrovic and Willborn, 2001), and then, in 2012, revised it in order to provide more generic guidance (ISO, 2008). ISO 19011: 2012 allows the auditing of any type of a MS (ISO, 2008).

Looking at ISO 19011: 2012 (clause 3.1), an 'audit' is defined as a *"systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled"*. According to this standard (clause 3.1, Note 3), when *"two or more management systems of different disciplines (e.g., quality, environmental, occupational health and safety) are audited together"*, this is termed a 'combined audit'.

According to Karapetrovic and Willborn (2000), integrated MS audits mean that specific audits lose their separate identities and would be conducted as a single audit, from planning and design, through execution, to reporting and completion. The level of integration of MS audits is discussed in Karapetrovic and Willborn (1998), Karapetrovic (2002, 2003), Beckermagen et al. (2003), Zeng et al. (2005) and Zutshi and Sohal (2005). These authors conclude that a high level of integration of MS audits, like in the case of MSs (Karapetrovic and Jonker, 2003), can lead to more synergies and effectiveness in the audits.

2.2. Integration of the components of MS audits

It is possible to analyze the integration of MS audits in the same manner as for the MSs themselves, namely based on the levels of integration of the main system components, i.e., audit goals, resources, and processes (Bernardo et al., 2011). In fact, the auditing processes and required resources are fairly generic across quality, environmental, organizational health and safety (OH&S) and other types of MSs (Willborn, 1993). Therefore, integrated audits involve, for instance, a single audit team for all MSs, which performs the audit in the company at the same time according to the same schedule (Karapetrovic and Willborn, 2001). Audit integration is only feasible when the audit team has the right mix of skills and competences to perform audits of IMSs (Karapetrovic and Willborn,

2000, 2001; De Moor and De Beelde, 2005). A single audit plan, which includes the audit objectives, scope, audit timing and the available physical and human resources for the audit, as well as their management, should also be dispensed (Bafna, 1997; Mills, 1995). The final outcome of the audit is a report (Mills, 2003). As outlined in international standards and guides, the audit report includes audit findings and conclusions (positive and negative) regarding the effectiveness of the MSs with the requirements of the standards which may be classified as nonconformities and/or opportunities for improvement (Djekic and Smigic, 2013). Therefore, the report for an IMS can include nonconformities and improvement opportunities for each MSS and for the IMS as a whole (Simon et al., 2011). To effectively audit the IMS, firms will need to establish a frequency to carry out the audits (Mills, 1995), as well as a methodology indicating whether the organization chooses a "process" or a "requirement" approach (Mills, 1995; Karapetrovic and Willborn, 1998; Karapetrovic, 2002).

Firms will also need a guideline to audit IMSs (Beckmerhagen et al., 2003), for example ISO 19011. This standard explains the principles of MS auditing and offers advice on evaluating auditors and assessing their competence, guidance on managing audit programs, as well as guidance on conducting internal and external audits (Kraus and Grosskopf, 2008). However, the audits can also be conducted according to the companies' internal audit guidelines or other methodologies (Simon et al., 2011).

2.3. Integration of internal and external MS audits

Most businesses are subject to an ever-increasing number of audits, both internal and external (Kraus and Grosskopf, 2008). Researchers have suggested that "organizations which rely on both internal and external audits may receive the maximum benefit from the auditing process" (Stanwick and Stanwick, 2001).

Regarding the integration of internal audits, Kraus and Grosskopf (2008) state that they can be much more efficient than separate audits, as the process under review, along with all its controls (environmental, health, safety, and quality) has to be evaluated only once. Moreover, there is less duplication of effort during the planning, execution, and even follow-up phases of the audit (Kraus and Grosskopf, 2008). In addition, the requirements for conducting internal audits are substantially similar under ISO 9001, ISO 14001, OHSAS 18001 and other MSSs (Kraus and Grosskopf, 2008). So too are requirements for using corrective and preventive actions to address audit findings (Kraus and Grosskopf, 2008). The integration of external audits is also found to be more efficient because organizations prefer to have integrated external audits to benefit from synergies that this implies (Bernardo et al., 2011).

According to ISO 19011:2012, an 'internal' or 'first-party' audit is *"conducted by, or on behalf of, the organization itself for management review and other internal purposes, and may form the basis for an organization's declaration of conformity"* (clause 3.1, Note 1). 'External' audits (clause 3.1, Note 2) encompass the so-called 'second-party' (*"conducted by parties having an interest in the organization, such as customers, or by other persons on their behalf"*) and 'third-party' (*"conducted by external, independent auditing organizations, such as those providing certification/registration of conformity"*) audits (clause 3.1, Note 2).

Internal audits generally use existing resources and are conducted by an employee or a team of employees who typically have extensive tacit knowledge about the organization and its internal processes (Darnall et al., 2009). By contrast, external audits are executed by independent outside assessors who provide assurances to the organization and its external stakeholders about the business's quality, environmental or other MS practices (Darnall