Occupational risk-prevention diagnosis: A study of construction SMEs in Spain

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A B S T R A C T
Occupational risk-prevention implementation and its integration in the management systems of Small and Medium Enterprises (SMEs) are studied in the Spanish Construction Sector, through a prospective analysis of data collected from a sample of 106 firms (SMEs) in the Autonomous Community of Castile-La Mancha (Spain). The selected sample is well suited to the economic reality of that Autonomous Community, considering the size of the population and the chosen confidence intervals and probabilities. The following data-collection techniques were used: surveys, open questions, closed questions, and dichotomous questions. Qualitative Focus-Group techniques were chosen, to contrast the information and to validate its reliability, in view of the training criteria and the hierarchical position of the interviewees working for firms with experience in the Construction Sector. Participants included risk-prevention experts from the public administrations. The results point to difficulties with the integration of Occupational Risk Prevention (ORP) in the Management Systems of SMEs in the Spanish construction sector, outside the corporate structure of the firm.

1. Introduction

Most commercial activities within the operations of Spanish business are concentrated in Small and Medium Enterprises (SMEs); essential components in the smooth running of Spanish business operations (Ministerio de Industria y Energía, 2016; Fariñas and Huergo, 2015; Círculo de Empresarios, 2014). In 2015, SMEs represented 99.68% of all firms with salaried employees registered with the Social Security (Table 1); a very similar proportion to figures from other countries, such as Portugal where they represented 99.5% of national activity (Santos et al., 2013).

Self-employed workers, present in this study as firms with no salaried employees and with no other workers, constitute an important group, participating directly in productive activities. At present, they represent 54.46% of Spanish businesses. These workers, in compliance with the legal regulations in force in Spain, have no statutory duty to perform any risk-prevention tasks, unless they work with other firms or are subcontracted for specific tasks.

Nowadays, SMEs (firms with and without salaried employees) represent 45.40% of all firms, while large firms represent 0.14%.

They both have a statutory duty to implement risk-prevention activities in the course of their work. Nevertheless, risk-prevention requirements are lower in SMEs than in large firms, due to their larger corporate structure.

For example, the restrictive application of certain risk-prevention instruments, such as the Safety and Health Committees that are convoked in Spain whenever there are 50 or more workers; while other countries, such as Denmark, have more demanding regulatory requirements for SMEs than for large firms. There, companies with 20 or more employees are required to have an occupational safety and health (OSH) organization (Ozmc et al., 2015).

The Construction Sector represents an important part of the Spanish business environment (Camino et al., 2008). SMEs take charge of most large-scale jobs and minor activities that are outsourced in civil works and building rehabilitation and reform (Paramio, 2009; Biggs et al., 2005; REA, 2015), so better corporate safety management would lead to improved incidence rates (Bottani et al., 2009; Suraji et al., 2001).

Despite normative developments and the efforts of the public Administrations to integrate industrial safety in firms and to run risk-prevention training programs for their workers, construction remains an especially critical sector due to its high incidence rates.
especially in SMEs, where weak commitment to management can compromise safety (Häkkinen, 1995). The integration of safety in the corporate management systems of SMEs would minimize the risk of accidents, giving greater control over the productive processes and direct communication with the workers involved in them (Fernández-Muñiz et al., 2009).

If we study our nearest neighbors, Spain presents a high incidence rate (López et al., 2012) in comparison with other European Union countries (European Union, 2016). In fact, if we take the population of Spain (46,438,864 inhabitants) as a reference with regard to other similar countries in terms of population, such as Poland (38,005,614 inhabitants) and Italy (60,795,612 inhabitants) (Eurostat, 2016) (Fig. 1), then the number of occupational accidents in SMEs is seen to be higher in all NACE (Nomenclature of Economic Activities) sectors (Eurostat, 2008), reaching a maximum in the last year of the study in comparison with those other countries. The same strikingly different levels are observed between the three countries when we analyze the number of accidents at work (Table 2) and the incidence rate data (Fig. 2) (Eurostat, 2013) from the Construction Sector within the period between 2008 and 2013.

The incidence rate is defined as the number of accidents at work per 100,000 persons in employment, by applying the following expression (Eurostat, 2013):

\[
\text{Incidence rate} = \frac{\text{Number of accidents}}{\text{Number of employed persons in the population under study}} \times 100,000
\]

where Number of accidents: The sum of fatal accidents and those causing the loss of more than 3 days (4 or more days absence from work).

Nevertheless, as from 2008, a significant slow down in incidence rates has been observed. It may be explained by three remarkable reasons:

On the one hand, accidents dropped following the publication of normative regulations as a consequence of the legal framework established in Law 31/1995, of 8 November, on Risk Prevention in the Workplace [Ley de Prevención de Riesgos Laborales (LPRL)] (BOE, 1995), in Royal Decree (RD) 39/1997, of 17 January, in approval of the Regulation on Prevention Services (BOE, 1997a) and RD 1627/97, of 24 October, establishing minimum regulations on safety and health in construction works (BOE, 1997b), especially
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