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## Linking social and economic responsibilities with financial performance: The role of innovation

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### ABSTRACT

The research conducted in this study focuses on the role of a company's innovation culture in linking economic and social responsibilities with financial performance. Specifically, our study addresses the following two questions: Does innovation trigger the simultaneous development of both economic and social dimensions of corporate social responsibility? Does the simultaneous pursuit of economic and social responsibilities result in a higher financial performance? These questions are examined through an empirical investigation of 133 companies, belonging to the Spanish Social Environmental Agreement, using structural equation modelling validated by factor analysis. The results indicate that, although companies are using innovation outcomes to support both economic and social achievements, they are only taking advantage effectively of economic achievements to obtain a higher financial performance.

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### 1. Introduction

Innovation is increasingly considered to be one of the key drivers of the long-term success of a company in today's competitive environment (Bruni & Verona, 2009; García-Morales, Lloréns-Montes, & Verdú-Jover, 2008). Companies with the capacity to innovate are able to respond to environmental challenges faster and better than companies that are not able to innovate (Brown & Eisenhard, 1995). This paper points out that innovation is one way to transfer learned knowledge to offer better solutions that meet new requirements, unarticulated needs (Maranville, 1992; Powell, 1998), or existing social needs, and implementing innovative ideas and decisions.

Organizations and management researchers have also increasingly focused on the importance of corporate social responsibility (CSR) both in terms of the concept itself and the outcomes that flow from an adoption of CSR. In this context, CSR refers to situations where companies integrate social, economic and environmental concerns in their business operations and in their interaction with

their stakeholders on a voluntary basis (European Commission, 2001; Perrini, 2005). Thus, embracing CSR requires that companies engage in voluntary activities that “need to be undertaken to operate in an economic, social and environmentally sustainable manner” (Foreign Affairs, Trade and Development Canada, 2015). We would also note that improvements in the processes involved in implementing CSR may also involve what has been referred to as ‘social innovation’ (Rexhepi, Kurtishi, & Bexheti, 2013).

Companies are engaged in a wide variety of different types of social activities, such as actions taken to address the concerns of environmental interest groups and the communities within which they operate (Perrini, 2005), actions ensuring that employees are treated fairly (Weber, 2008), or providing support for arts and cultural programs (Blakely & Aparicio, 1990). This paper analyzes two important aspects of CSR; one concerning what may be considered to relate to achieving economic objectives and the other relating to achieving social objectives. Although it seems intuitively clear that a firm pursues both economic and social objectives (Elkington, 2004) it is also clear that these are fundamentally different types of objectives that potentially require the design and implementation of very different structures for their achievement (Cegarra & Martinez, 2009). For example, while the social dimension of sustainable development deals with the impact that the organization may have on social systems in which it operates, the

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economic dimension of sustainable development refers to impacts that the organization may have on the economic conditions of its stakeholders and on economic systems at local, national, and global level (GRI, 2011).

The differences between economic and social objectives are especially important in small and medium sized enterprises (SMEs) which often have to face resource constraints in funding, technology and materials (Lewis, Massey, Ashby, Coetzer, & Harris, 2007). In this context, it may be argued that SMEs are more likely to initially address concerns that are obviously related to economic objectives and hence the adoption of social and environmental initiatives is slower (Walker & Preuss, 2008), which in turn is likely to result in tensions between them that are difficult to reconcile (Carroll & Shabana, 2010). For example, while achieving economic objectives and taking responsibility for them involves ensuring the company's own profitability, achieving social objectives may well involve donating services to community organizations, engaging in projects to aid the environment or donating money to charitable causes, namely actions that may compromise the achievement of economic objectives.

The research conducted in this study focuses on a company's capacity to innovate and examines how that capacity can result in the maintenance of an appropriate balance between economic and social objectives which we propose results in the improvement of organizational performance. In conducting this research we have addressed the following questions: Does innovation trigger the development of objectives related to both economic and social dimensions of corporate social responsibility at the same time? Does the simultaneous pursuit of economic and social objectives and recognizing the associated responsibilities result in improved financial performance?

By addressing the above questions this study seeks to clarify the difference between a company's innovation outcomes in general and its social innovations in particular. In spite of the fact that innovation has been viewed as a means of understanding the impact of CSR on organizational outcomes (Lockett, Moon, & Wayne, 2006), the existing research literature does not provide any empirical evidence, particularly in relation to SMEs, investigating the balance between economic and social objectives or how they relate to financial performance. The rest of the paper is organized as follows. First, the conceptual framework is discussed and presented in Section 2, while the methodology of the study is presented in Section 3. The results of data analysis are then presented in Section 4 with the discussion in Section 5 concluding the paper.

## 2. Conceptual framework

### 2.1. CSR and innovation relationship

The concept of innovation has been invoked to characterize the way in which organisations are potentially able to create a path for the creation and implementation of positive changes that fuel organisational growth (Gaynor, 2002). In this context, once an innovation is implemented, it provides an organisation with benefits that have the potential of sustaining its viability in a global economy. Gaynor (2002) refers to innovation as a cultural element of an organisation that should be adopted and embraced by managers in order to communicate to employees a critical feature of the organisation's strategic direction and hence encourage employees to search for better solutions through the development and implementation of information and communication technology systems, marketing methods or processes. These 'better solutions' to change can be related to an innovative environment which includes employees as key actors in the identification and

implementation of new opportunities that result in the more efficient utilization of resources (Gaynor, 2002).

In this paper, the authors adopt the approach proposed by Gaynor (2002) and hence adopt an approach that views innovation as the capacity to prepare the ground for promoting and pursuing better solutions (Martins & Terblanche, 2003). As Abraham and Knight (2001) noted, innovation involves making knowledge creation and innovative action a way of life evidenced by, for example, seeking to create and expand markets rather than just reacting to customer demand. Thus, at its heart, a successful innovation process can be viewed as the application of better solutions that meet new requirements, unarticulated needs, or existing market needs (Maranville, 1992; Martins & Terblanche, 2003).

It should be noted, however, that developing measures for innovation can be a tricky business. Prior research has developed measures of innovation related to its outputs and the mechanisms that cause it to occur (Leenders & Wierema, 2002). For example, some previous studies have developed measures relating to the extent to which an organization possesses an innovative culture by utilizing measures that explicitly relate to the existence of certain behaviours (e.g. Brettel & Cleven, 2011; Martín de Castro, Delgado-Verde, Navas-López, & Cruz-González, 2013), while others have suggested that measuring the outputs of innovation helps organizational employees focus in actual innovation rather than simply pay lip service to potentially innovative behaviours (e.g. Baruk, 1997; Michalisin, 2001). The present study focuses on outcome indicators which represent the realized, long-term outputs of an innovative culture, e.g. improved products and services, improvements in processes or marketing methods shaped by an innovative culture (OECD, 2005).

From the point of view of a company, social innovations are innovations that are both good for society and enhance the company's capacity to act in achieving its goals for economic development (Rexhepi et al., 2013). In this regard, Doane (2005) defines CSR as the efforts corporations make above and beyond those that arise as a result of regulations to balance the needs of stakeholders with the need to make a profit. Hopkins (1998) asserts that CSR involves interacting with the external and internal stakeholders of the firm in an ethical or in a socially responsible way. This insight corroborates the notions of Du, Bhattacharya, and Sen (2011) that, by engaging in CSR activities, companies can not only generate favourable stakeholder attitudes and better support behaviours (e.g. purchase, seeking employment, or investing in the company), but also, over the long run, build corporate image, strengthen stakeholder–company relationships, and enhance stakeholders' advocacy behaviours. Furthermore, Rasoulzadeh, Hosseinipour, Yusof, Ashikin, and Soltani (2013) think of CSR as a means of increasing operational efficiency and reducing costs, and Dahlsrud (2006) suggests that, from an economic point of view, CSR may be considered to relate to how resources for the production of goods and services are distributed within the social system.

Although some see CSR as a source of competitive advantage by enhancing corporate image and reputation (Knox & Maklan, 2004), it also can be a source of conflicts if is not properly administered (Doane, 2005). As Blakely and Aparicio (1990) point out, economic and social objectives are likely to be increasingly in conflict as organizational resources shrink and managerial support for social programs dwindles. In this regard, it is important to realize that the empirical studies of the relationship between CSR and financial performance have been inconclusive, reporting positive (e.g. Waddock & Graves, 1997; Johnson & Greening, 1999), negative (Bromiley & Markus, 1989; Davidson & Worrell, 1988), and even neutral results (McWilliams & Siegel, 2000). As McWilliams and Siegel (2000) and Surroca, Tribó, and Waddock (2010) argue, this lack of consensus might reflect model specification problems, such

as the omission of variables related to innovation.

The potential implications of the above considerations for organizations is that they can fall into a 'competence trap' when they increasingly focus on the short-term economic performances, or falling into a 'failure trap', where a failure while implementing long-term strategies may lead to uncertainty with respect to ensuring the continuation of social returns (Blakely & Aparicio, 1990). A possible explanation for these competence traps could relate to the existence of multiple stakeholder groups (e.g. Dahlsrud, 2006; Rasoulzadeh et al., 2013). Each group (insiders or internal stakeholders and outsiders or external stakeholders) has their own objectives and will stick together and oppose other stakeholder groups if the achievement of their objectives are in conflict. Although it seems intuitively clear that both economic and social objectives of the organization are related to the objectives and goals of internal stakeholders, there are clear differences in their repercussions associated with their achievement (Elkington, 2004; Lozano, 2012; Lozano & Huisinigh, 2011). While the social dimension of CSR is related to the integration of external social concerns into the company's business operations (e.g. sponsorships or charities), the economic dimension of CSR describes CSR in terms of the relationship between insiders and business operations (e.g. preserving the profitability and contributing to economic development).

The considerations above also imply that social innovations and innovation are closely related constructs, but there are clear differences in their definitions and measurement. While innovation encourages better solutions and accepts experimentation, critical inquiry and critical debate as a necessary part of a learning process (Gaynor, 2002), social innovations such as getting things done faster, cleaner and cheaper are the result of new devices, processes or structures that enable social innovation to happen (Maranville, 1992). Put another way, while innovation is the capacity for better solutions in information and communication technology systems, marketing methods or processes, social innovations are the effective social actions in the business (Van Oosterhout, Waarts, & Van Hillegersberg, 2006).

A central question is whether new devices, processes or structures have a direct effect on the achievement of social and economic objectives or, alternatively, whether the achievement of CSR objectives leads to new devices, processes or structures (i.e. innovation). In order to answer this question, this study adopts two perspectives.

One stream of research that addresses the CSR-innovation relationship considers that the effective balance between social and economic achievements may require innovative approaches to create consistency and unity of purpose, along with an environment where both economic and social goals can be achieved (Gaynor, 2002). From this perspective, the company's capacity to innovate will allow managers to share the organisation's mission with the rest of company members. This could drive internal stakeholders (e.g. managers and employees) to search for unique opportunities and relate them to the organisation's strategic direction. Among the advantages of using this innovative capacity are gaining control over the measures needed to evaluate those opportunities, and improving the ability of stakeholders to learn new skills that will be relevant to future innovations (Gaynor, 2002). For example, a prior step to transforming companies into greener and more sustainable entities demands innovation in technology development, employee training and redesigning the organisational structure (Lee, 2009), and such innovations will fuel the company's CSR efforts by providing the short-term investments necessary to increase the chances of creating a win-win situation (Rasoulzadeh et al., 2013).

It should be noted, however, that CSR requires the involvement

of multiple stakeholders to develop and implement appropriate integrated programs (Gaynor, 2002). To achieve this, new processes or technologies may help to build trust and support with organizational members by permitting them to understand and adjust new social or economic achievements (Blakely & Aparicio, 1990). In addition, new innovations help organizational members to be flexible in negotiating goals and objectives in a way that is appropriate to balance the conflicting demands of stakeholder groups (Bocquet, LeBas, Mothe, & Poussing, 2013; Rasoulzadeh et al., 2013).

Taking into account the above discussion of the potential tensions between the social and economic dimensions of CSR, this study proposes a model of the relationships between the previous dimensions of CSR that is presented in Fig. 1 (labelled the Theoretical Model). This framework suggests that the existence of innovation provides a framework for the necessary exchange of views between all stakeholders and provides for the balancing of the interests of the stakeholder groups against each other and against the economic welfare of the company. From this perspective, the balance between the economic and social dimensions of CSR may be facilitated by the creation of awareness among relevant stakeholders (e.g. managers and customers) of the importance of social impact. In order to create this awareness, organisations should build innovative tools and channels of communication with interested groups in order to encourage their feedback (Clark, 2000; Rasoulzadeh et al., 2013).

This study proposes the following hypotheses:

- H1.** The extent to which innovation exists will determine the extent to which the company achieves the social dimension of CSR.
- H2.** The extent to which innovation exists will determine the extent to which the company achieves the economic dimension of CSR.

## 2.2. CSR (social and economic dimension) on economic performance

This study also draws on prior theories about the beneficial impact of CSR on financial performance (e.g. Amit & Schoemaker, 1993; Branco & Rodrigues, 2006). In this regard, Branco and Rodrigues (2006) propose that CSR provides internal or external benefits, or both. Investments in socially responsible activities may have internal benefits by helping a firm to develop new resources and capabilities which are related namely to know-how and corporate culture. It would seem, therefore, that CSR not only brings direct benefits to a firm by increased morale and productivity while reducing absenteeism and staff turnover, but also it increases benefits while saving on costs for recruitment and training of new employees (Branco & Rodrigues, 2006).

The role of innovative activities in achieving social goals and providing explanations as to why these goals are important is reflected in other works, such as Clark (2000), Turock (2001), Martins and Terblanche (2003), Angel (2006) and Rasoulzadeh et al. (2013). These studies assert that CSR achievements can increase the efficiency of organizations by aligning the business to meet the objectives of stakeholders. As Orlitzky, Schmidt, and Rynes (2003) indicate, CSR programs potentially increase stakeholder satisfaction and, ultimately, financial performance. Luo and Bhattacharya (2006) document that CSR contributes to a increasing market value that can help managers to achieve a competitive advantage and greater financial benefits. Bhattacharya and Sen (2004) indicate that there is a positive link between CSR and consumer patronage spurring companies to devote greater resources to CSR activities while Smith (2005) argues that CSR activities in the form of equal employment opportunity (EEO) policies and practices and environmentally

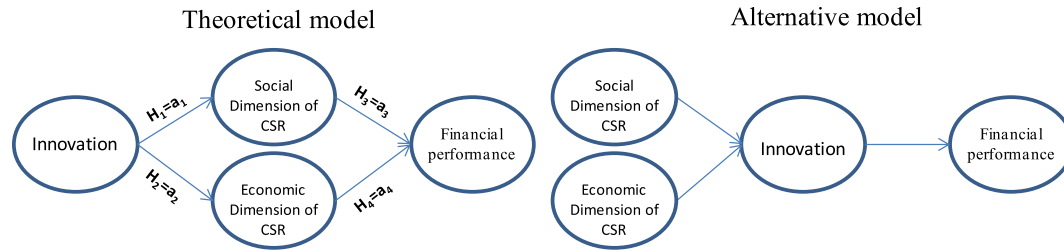


Fig. 1. Competitive models of CSR.

responsible commitments enhance long-term shareholder value by reducing costs and risks. Studies by Johnson and Greening (1999) and Waddock and Graves (1997) also reveal a positive relationship between CSR and financial performance. Taking into account prior research the following hypotheses are proposed:

**H3.** The achievement of the social dimension of CSR will determine the extent to which the company achieves improved financial performance.

**H4.** The achievement of the economic dimension of CSR will determine the extent to which the company achieves improved financial performance.

Despite recognising the importance of innovation as a means of understanding the impact of CSR, a second stream of research relates to innovation itself as being an important beneficial outcome of CSR (Hull & Rothenberg, 2008; Little, 2006; McWilliams & Siegel, 2000; Padgett & Galan, 2009). These studies report that CSR initiatives can lead to innovation through the use of 'social, environmental or sustainability drivers to create new ways of working, new products, services, processes and new market space' (Little, 2006). This has led many companies to redefining their business models. Many companies view CSR initiatives as providing opportunities for the more efficient management of their human resources and supply chain(s) to achieve improved competitive advantage. According to the European Competitiveness Report (2008), there are three main approaches by which CSR can contribute to innovation capacity and performance, namely: a) through engagement with a variety of stakeholders; b) through the creation of solutions that help address societal challenges and c) through the creation of workplaces that are more conducive to innovation. The development of low-carbon technologies is an obvious example of how addressing societal challenges can be a catalyst for innovation. The 'Lead Markets Initiative for Europe' (LMI) has identified six such lead markets, all of which are related to societal benefit: eHealth, protective textiles, sustainable construction, recycling, bio-based products and markets for renewable energies.

In this vein, several studies argue that activities relating to CSR are positively correlated with innovation (e.g. McWilliams & Siegel, 2000; Hull & Rothenberg, 2008; Padgett & Galan, 2009). Furthermore, Surroca et al. (2010) demonstrate that intangible resources, including those relating to innovation, might be a missing link to explain relationships between CSR and financial performance.

Taking into account the above discussion, this study proposes an Alternative Model based on the idea that CSR initiatives can lead to innovation through the use of social and sustainability drivers to create new ways of doing things (Little, 2006). From this perspective, CSR approaches help achieve efficiency and effectiveness and are positively correlated with innovation (Hull & Rothenberg, 2008; McWilliams & Siegel, 2000; Padgett & Galan, 2009).

Fig. 1 provides a synopsis of the above models. While in the first model (Theoretical Model) the impact of innovation on financial performance is potentially mitigated by the extent to which the

economic and social dimensions of CSR exist, in the case of the second model (Alternative Model), the impact of the two dimensions of CSR is mediated through innovation.

### 3. Research method

#### 3.1. Context of the study

The initial sample consists of those companies belonging to the Murcia Region (Spain) that adhere to the Social Environmental Agreement ('Pacto Social por el Medio Ambiente'). The Social Environmental Agreement (2006) is a non-profit consortium of an inter-sectoral nature associated with the 'Consejería de Agricultura y Agua' representing the Murcia Region. This agreement commits firms to adopting policies and practices related to sustainable development. Hence, the companies are referred to as 'Eco-Responsible companies'. According to the Social Environmental Agreement (2006), economic responsibility means ensuring that there is an economic benefit both to Murcia Region and to the region in which services or products are marketed (Social Environmental Agreement, 2006). The Murcia Region is facing an extremely difficult economic situation and thousands of jobs have been lost (Cegarra, Sánchez, & Cegarra, 2016). As a result, the ability for organisations to maintain a balance between social and economic dimensions is fundamental to achieving a competitive advantage or, indeed, survival. These considerations lead us to argue that companies belonging to Social Environmental Agreement (2006) are an appropriate setting for an investigation into economic and social responsibilities and their impacts on financial performance because these companies are required a deep change in the means of production and consumption (Social Environmental Agreement, 2006).

#### 3.2. Data collection

Potential participants were informed of the objectives of the research and reassured as to its strictly scientific and confidential nature, as well as the global and anonymous treatment to be given to any data collected. Of the 627 companies belonging to the Social Environmental Agreement, 133 completed the questionnaire. Therefore, the data analysis is based on 133 valid responses (a response rate of 21.21% with a factor of error of 7.53% for  $p = q = 50\%$  and a reliability level of 95% per cent).

According to Cohen (1988), as this study has two performance predictors, the minimum sample size required for a medium size effect, a power of 0.8 and a significance level ( $\alpha = 0.05$ ) is 66. Thus, the sample size is larger than the minimum size required. The independent sample *t*-test reveals no significant differences between early and late respondents regarding economic and social dimensions of CSR ( $p$ -value = 0.08 and 0.25, respectively). Therefore, non-response bias may not be a problem in this study (Armstrong & Overton, 1977). Table 1 provides the descriptive statistics for the 133 companies participating in the study.



### 3.3. Measures

The unit of analysis for this study is the company based on the assumption that CSR initiatives affect the entire organization. Data is collected through an on-line questionnaire designed to elicit managers' perceptions concerning each construct. The responses ranged from "0: totally in disagreement" to "5: totally in agreement" for the CSR and innovation items, and from "0: far below the competition" to "5: far above the competition" for the items corresponding to financial performance.

Churchill's (1979) approach to questionnaire development was used. Scales were combined from several other relevant empirical studies along with new items to make an initial list of 31 items distributed as follows: 10 that focused on measuring the social dimension of CSR, 10 focused on measuring the economic dimension of CSR, 5 focused on measuring innovation and, finally, 6 items focused on measuring financial performance (see Appendix for a list of items). The final measures relating to the existence of social and economic responsibilities and objectives consisted of 20 items adapted from a scale designed by Gallardo-Vázquez and Sánchez-Hernández (2014) to measure the social and economic dimensions of social responsibility at a regional level.

Consistent with the approach of Lozano and Huisinigh (2011) and Lozano (2012), items that addressed economic responsibility are interwoven with issues related to the existence of effective procedures for handling customers' complaints and the existence of a formal procedure for the interaction and dialogue with customers, suppliers and other stakeholders. Four items make up the revised scale of the economic responsibility. Also consistent with Lozano's (2012) approach, items that addressed social responsibility are interwoven with issues related to the development of policies aimed at facilitating employees' work-life balance, the existence of equal opportunities without any type of discrimination and the commitment of the company to job creation and improvement of the quality of life of its employees. Three items make up the revised scale social responsibility scale.

Innovation has been measured in a variety of ways in previous research. In this paper, innovation is measured using a scale of 5 items taken from the categories of innovation of the Oslo manual (OECD, 2005), i.e. product innovation, process innovation, marketing innovation, innovations in labour management and organizational innovation.

As the use of objective measures may pose some challenges to researchers while making causal inference from the historical data (March & Sutton, 1997), this study adopts subjective measures in

order to achieve a more comprehensive evaluation of the performance of the firm. With this in mind, this study uses several measures of business performance commonly employed in the literature (i.e., before-tax income, ROE, sales growth, ROA and market share) and request that managers rate their company's relative performance with respect to each of these measures compared to competitors in the same industry (Gallardo-Vázquez & Sánchez-Hernández, 2014). Five items make up the revised scale of financial performance.

Several redundant items were eliminated through an analysis of the scale items. Based on recommendations proposed by Carmines and Zeller (1979) and Chin (1998), those indicators for reflective constructs that exceeded the accepted threshold of 0.70 for their factor loadings were retained while the rest were deleted.

### 3.4. Data analysis

This study uses PLS-Graph software version 03.00 Build 1058 to analyze the data collected. PLS is selected due to the characteristics of the model and sample. PLS is generally more suited to predictive applications and theory building (exploratory analysis), which is the purpose of this study (Hair, Ringle, & Sarstedt, 2011, 2012). Also, because the phenomenon this study is researching is relatively new and the theoretical model and measures are not well formed, the PLS approach is more suitable (Chin & Newsted, 1999). In addition, PLS should be the method of choice for all situations in which the number of observations is lower than 250 (400 observations in the case of less reliable measurement models (Reinartz, Haenlein, & Henseler, 2009; Polites, Roberts, & Thatcher, 2012; Hair, Hult, Ringle, & Sarstedt, 2013; Hair, Ringle, & Sarstedt, 2013).

Using PLS involves a two-stage approach (Barclay, Higgins, & Thompson, 1995). The first step requires the assessment of the measurement model. This allows the relationships between the observable or manifest variables and theoretical concepts or latent variables to be specified. This analysis is performed in relation to the attributes of individual item reliability, construct reliability, average variance extracted (AVE), and discriminant validity of the indicators of latent variables. In the second step, the causal-predictive analysis is performed. The objective of this analysis is to test the extent to which the causal relationships specified by the proposed models are consistent with the available data.

In order to analyse the relationships between the different constructs and their indicators, the latent model perspective is adopted, in which the latent variable is understood to be the cause of the indicators. This study therefore refers to reflective indicators for first-order constructs or dimensions. Four constructs in the model are operationalized as first-order reflective constructs (i.e. social dimension of CSR, economic dimension of CSR, innovation output and financial performance). This study begins by assessing the individual item reliability for the measurement model (Table 2). The indicators exceed the accepted threshold of 0.7 for each factor loading (Carmines & Zeller, 1979).

From an examination of the results in Table 3, it can be argued that all of the constructs are reliable. The values for both Cronbach's alpha coefficient and composite reliability are greater than the 0.7 required in the early stages of research and than the stricter value of 0.8 for basic research (Nunnally, 1978). The AVE should be greater than 0.5, meaning that at least 50% variance of the indicators should be accounted for (Fornell & Larcker, 1981). All the constructs of the model exceeded this condition (Table 3). A comparison of the square root of the AVE (i.e., Table 3 diagonals) with the correlations among constructs (i.e., the lower triangle of the matrix in Table 3) determines discriminant validity. On average, each construct has a stronger relationship with its own measures than with others' (Fornell & Larcker, 1981). The construct's correlation matrix means and standard deviations appear in Table 3.

**Table 1**  
Characteristics of the sample.

	Number	Percentage
a) <i>Number of employees</i>		
* Between 1 and 10 employees	18	13.53%
* Between 11 and 50 employees	53	39.85%
* Between 51 and 250 employees	45	33.83%
* More than 250 employees	17	12.79%
b) <i>Sector</i>		
* Manufacturing	78	58.65%
* Non-manufacturing	55	41.35%
c) <i>Age</i>		
* < 10 years of existence	8	6.02%
* Between 10 and 20 years of existence	31	23.31%
* Between 20 and 30 years of existence	35	26.32%
* More than 30 years of existence	59	44.35%
d) <i>Annual turnover</i>		
* Less than 2 million euros	26	19.55%
* Between 2 and 10 million euros	51	38.35%
* Between 10 and 50 million euros	40	30.07%
* More than 50 million euros	16	12.03%

**Table 2**  
Factor Loadings of reflective constructs.

	Economic dimension	Social dimension	Innovation	Financial performance
EC2	<b>0.708</b>	0.193	0.330	0.319
EC8	<b>0.872</b>	0.388	0.566	0.296
EC9	<b>0.789</b>	0.296	0.518	0.355
EC10	<b>0.817</b>	0.391	0.487	0.322
SOC6	0.317	<b>0.868</b>	0.552	0.260
SOC7	0.434	<b>0.901</b>	0.583	0.195
SOC8	0.278	<b>0.799</b>	0.399	0.219
IN1	0.552	0.435	<b>0.792</b>	0.251
IN2	0.637	0.417	<b>0.835</b>	0.255
IN3	0.236	0.413	<b>0.706</b>	0.096
IN4	0.465	0.621	<b>0.826</b>	0.297
IN5	0.447	0.514	<b>0.818</b>	0.212
PERF1	0.393	0.180	0.280	<b>0.876</b>
PERF2	0.405	0.261	0.254	<b>0.873</b>
PERF3	0.235	0.331	0.283	<b>0.724</b>
PERF4	0.345	0.184	0.222	<b>0.891</b>
PERF5	0.223	0.104	0.131	<b>0.741</b>

**Table 3**  
Descriptive statistics and correlation matrix.

	Mean <sup>a</sup>	SD	CA	CR	AVE	1	2	3	4
1. Economic Dimension	4.40	0.722	0.809	0.875	0.638	<b>0.798</b>			
2. Social Dimension	4.10	0.867	0.820	0.892	0.734	0.400	<b>0.856</b>		
3. Innovation	3.92	0.927	0.856	0.896	0.635	0.581	0.592	<b>0.796</b>	
4. Financial Performance	3.34	0.542	0.882	0.913	0.679	0.388	0.257	0.269	<b>0.824</b>

Notes.

S.D. = Standard Deviation; CA = Cronbach's Alpha; CR = Composite Reliability; AVE = Average Variance Extracted. The bold numbers on the diagonal are the square root of the Average Variance Extracted. Off-diagonal elements are correlations among constructs.

<sup>a</sup> Mean = the average score for all of the items included in the respective measure.

#### 4. Results

Having checked the psychometric properties of the measures, the next step is to evaluate the competing models that we have identified from a review of the relevant literature (see Fig. 1). In doing so, we examine the fit of the two models (Anderson & Gerbing, 1988). Table 4 summarizes the structural models resulting from the EQS 6.1 robust maximum likelihood analysis using the covariance matrix as input via (Bentler, 1988). Although the Alternative Model (AM) results in an acceptable fit, the goodness of fit indices shows that the Theoretical Model (TM) has more adequate fit indices ( $\chi^2/df$ , CFI, IFI and RMSEA) than the alternative model, indicating that one model represents a significant parsimony gain over another (Hair, Anderson, Tatham, & Black, 1998).

Fig. 2 summarizes the structural models resulting from the PLS analysis and shows the explained variance of endogenous variables ( $R^2$ ), the  $Q^2$  test for predictive relevance, and the standardized path coefficients. Chin (1998) recommends using the Chin's  $F^2$  ratio to test a more restricted model. Consistent with Hair, Hult, et al. (2013); Hair, Ringle, et al. (2013), bootstrapping (500 resamples) is used to generate standard errors,  $t$ -statistics, and confidence intervals.

Although the Alternative Model results in an acceptable fit, Chin's  $F^2$  ratio (1998) indicates a significant improvement of the Theoretical

Model over the Alternative Model ( $\Delta R^2 = 0.084$ ;  $F^2 = 0.101$ ). Such an improvement is significant in those cases where  $F^2$  is greater than 0.02. In addition, the explained variance ( $R^2$ ) and the  $Q^2$  test of financial performance show that the Theoretical Model has more adequate fit indices than the Alternative Model, indicating that one model represents a significant parsimony gain over another (Hair, Hult, et al., 2013; Hair, Ringle, et al., 2013). These findings support the Theoretical Model, which considers innovation as a prior step to social and economic responsibilities.

Once the competing models have been compared with respect to overall fit, the next step is the evaluation of the hypothesized relationships developed from consideration of the Theoretical Model, identified in the above text as H1, H2, H3 and H4. For the purposes of hypothesis testing, this study used the bootstrapping procedure recommended by Chin (1998). Fig. 2 summarizes the results obtained of the two competing models. Results of the Theoretical Model indicate that positive relationships exist between innovation and social responsibility ( $a_1 = 0.606$ ;  $p < 0.01$ ) and between innovation and economic responsibility ( $a_2 = 0.605$ ;  $p < 0.01$ ). There is also a positive relationship between 'economic responsibility' and 'financial performance' ( $a_4 = 0.355$ ;  $p < 0.01$ ). However, there is a positive but insignificant relationship between 'social responsibility' and 'financial performance' ( $a_3 = 0.117$ ;  $ns$ ). These results do not support the proposed relationship between social responsibility and financial performance.

Following the recommendations of Preacher and Hayes (2008), a post-hoc indirect effect analysis is performed to test the indirect effect of the independent variable on the dependent variable by way of the mediators (see Table 5). In doing so, a two-step procedure for testing mediation in PLS is followed: (1) the specific model is analysed with both direct and indirect paths included and 500 bootstrap re-samplings are performed and then the product of the direct paths that form the indirect path are calculated. (2) Significance was determined using percentile bootstrap. This generated

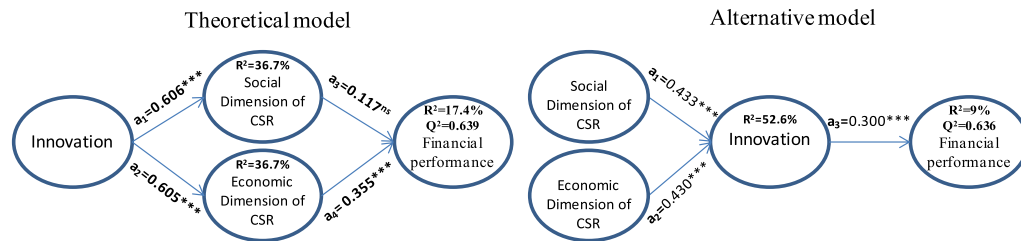
**Table 4**  
Model statistics.

Model	$\chi^2$	df	$\chi^2/df$	CFI	IFI	RMSEA
Theoretical model	182.63	115.00	1.59	0.92	0.92	0.067
Alternative model	189.95	115.00	1.65	0.91	0.91	0.070

Notes.

Fit indices produced by EQS 6.1.

CFI → Comparative fit index; IFI → Incremental-fit Index; RMSEA → Root mean square error of approximation.



Notes:

\*\*\*p <.01, ns=not significant (based on a Student t (499) distribution with two tails). t(.01,499)=2.585711627

Fig. 2. Effects on endogenous constructs.

95% confidence intervals (CI) for the indirect relationships under study. As Table 5 shows, results of the alternative model indicate that innovative outputs do not mediate the relationship between social achievements and financial performance. However, in the case of the theoretical model, although the indirect effect of innovative outputs on financial performance via the social dimension of CSR is statistically insignificant, the indirect effect of innovation on financial performance via the economic dimension of CSR is 0.214 (i.e. 0.605\*0.355), which is statistically significant as the interval determined through bootstrapping does not contain the zero value.

Together, the above results provide evidence that the Theoretical Model fits the data well and it also has a better fit than a likely Alternative Model with innovation as a prior step to the development of CSR policies. Consequently, the findings provide full support for H1, H2 and H4 but they do not support H3.

5. Discussion

This research's first contribution is to shed some light on the relationship between the existence of innovation and the dimensions of CSR. Past research has documented that the relationship between CSR and innovation is bidirectional in the sense that, on the one hand, the existence of an innovation within an organization triggers the development of CSR initiatives and, on the other hand, CSR initiatives can lead to the creation of innovations through the use of social and sustainability drivers to create new ways of doing things. In order to disentangle which of the different conceptions is more relevant, this paper estimates two structural models. In the first model (the Theoretical Model), the impact of the existence of innovation on financial performance is potentially mitigated by the extent to which the economic and social dimensions of CSR exist, while in the case of the Alternative Model, the impact of the two dimensions of CSR is mediated through the existence of innovation outputs.

A comparison between the two models shows that the proposed Theoretical Model provides a superior fit to the observable data

Table 5 Indirect effects.

Indirect effects on	Point estimate	Percentile bootstrap 95% confidence interval		
		Lower	Upper	p-value
<i>Financial performance (Theoretical model)</i>				
IN → SOC → FP = a <sub>1</sub> × a <sub>3</sub>	0.071	-0.036	0.174	0.238
IN → EC → FP = a <sub>2</sub> × a <sub>4</sub>	0.214	0.105	0.322	0.002
<i>Financial performance (Alternative model)</i>				
SOC → IN → FP = a <sub>1</sub> × a <sub>3</sub>	0.129	-0.022	0.214	0.091
EC → IN → FP = a <sub>2</sub> × a <sub>3</sub>	0.129	-0.083	0.132	0.507

Notes.

IN = Innovation. SOC = Social Dimension. EC = Social Dimension. FP = Financial performances.

when compared to the proposed Alternative Model. The results provide evidence that, if the organization considers the achievement of innovation outputs as a prior step to the development of CSR policies, then while economic policies will have a significant influence on financial performance, the effects of social policies on financial performance are insignificant. The less well-supported Alternative Model implies that, although both economic and social dimensions of CSR directly influence the existence of innovation outputs, they are not indirectly related to financial performance.

A possible explanation for the different performance of the two models may relate to the advantages of achieving innovation outputs as a prior step to the enhancement of CSR dimensions. On the one hand, organizations which achieve higher innovation outputs can see value through new devices, processes or structures that enable the exchange of information, learn from each other and develop strategic recommendations to meet the conflicting demands of stakeholder groups (Rasoulzadeh et al., 2013). On the other hand, by working together to achieve innovative outputs, all stakeholders have to support each other and share resources (Abraham & Knight, 2001; Maranville, 1992; Gaynor, 2002).

This research's second contribution derives from the results of the empirical test of the hypotheses. With respect to H1 and H2, the findings demonstrate that the achievement of innovative outputs has a positive effect on the economic and social achievements of CSR. Based on these results, innovation is an important trigger of social activities and, as a part of the innovative capacity, companies may attempt to redesign the on-going social targets while also paying attention to other economic goals (Bocquet et al., 2013; Clark, 2000; Rasoulzadeh et al., 2013). Transforming companies into greener entities for instance, demands innovation in technology development, employee training and also the redesign of organisational structure (Lee, 2009). Such innovations will fuel the company's CSR efforts by providing the short-term investments necessary to increase the chances of creating a win-win situation (Rasoulzadeh et al., 2013). These considerations also imply that innovative outputs could reduce the effect of company inertia and pressure groups (stakeholders) resulting in the balanced development of new economic and social goals and addressing other stakeholders' expectations. This could result in new or more affordable ways of achieving CSR objectives and obtaining stakeholders' trust, solving a problem or satisfying a need that was, at best, insufficiently satisfied in the past (Angel, 2006; Clark, 2000; Martins & Terblanche, 2003; Turock, 2001).

With regard to H3, analysis of the data does not support this hypothesis, suggesting that social achievements do not guarantee their practical use to improve business performance. It is also important to note that the indirect effect of the existence of an innovation on financial performance via the social dimension of CSR is also statistically insignificant. A plausible explanation for this is that companies need time in order to take advantage and reap the

potential benefits of actions relating to social responsibility. For example, actions such as donating funds, goods, or services to another organization or cause may take time to be understood and transformed into value by insiders across the company (Martinez, Cegarra, & Garcia, 2015). In other words, the economic dimension of CSR has an impact on the achievement of financial advantages in the short term while, in the case of the achievement of social objectives and goals, does not have an immediate impact on financial performance. Taking into account these findings, it may be interesting to observe the change in the financial performance of companies after adopting economic and social responsibilities, through the gathering and analysis of longitudinal data sets.

With respect to the test of hypothesis H4, the results support the position that, in order to obtain higher levels of financial performance, companies need to pursue the economic dimension of CSR, which is simultaneously based on both the production of goods/services that society desires (Carroll, 1979) and on the integration in current business to achieve these objectives (Du et al., 2011). It is also important to note that the indirect effect of the existence of innovation on financial performance via the economic dimension of CSR receives full verification. A possible explanation for these findings may be that a positive stakeholder perception of the fact that the organization attends to balance being a good corporate citizen with making a profit potentially leads to increased sales and the enhancement of company and product images (Smith & Alcron, 1991), which in turn, may have a positive effect on firm's financial performance (Orlitzky et al., 2003).

This research's third contribution is to question the importance of environment on the relationship between innovation and CSR. In contrast to previous studies (Little, 2006), the above findings provide an illustration that, in a regional turbulent environment such as the Region of Murcia during the period examined, the achievement of higher levels of performance requires the existence of innovative outputs as a prior step to the development of the economic dimension of CSR. A possible explanation for this cause-and-effect relationship may relate to the fact that the Spanish financial crisis that started in 2008 has put local companies under pressure and its effects on the economic dimension of CSR have become less apparent (Alegre & Sard, 2015). In other words, it seems very plausible that this cause-and-effect relationship could be different in more stable periods in which stakeholders can rely more on the social dimension of CSR to result in the enhancement of company and product images. Since this study has only provided a snapshot of on-going processes and not measures of these processes over time, it will prove interesting to observe the use of additional information about these variables over time in order to capture the richness of these relations.

The study has some limitations. Firstly, this research may suffer from endogeneity problems that arise as a result of autoregression with autocorrelated errors, simultaneity or omitted variables. In order to study the fact that some of the regressors can be considered endogenous in the model we perform the Durbin–Watson's test to test the null hypothesis of no autocorrelation. Using the response date we created a time variable and the Stata 13 software was used to test the null hypothesis of no autocorrelation. The Durbin–Watson statistic is always between 0 and 4, while a value near 2 means that there is no autocorrelation in the sample, values approaching 0 indicate positive autocorrelation and values toward 4 indicate negative autocorrelation. In this study, the Durbin–Watson statistic is  $(4, 133) = 2.11$ , thus there is no sign of autocorrelation or model specification error. However, since this approach cannot adjust for endogeneity stemming from omitted variables or selection bias, we would consider a further research into how other organizational factors (e.g. organizations' size and agility) which have not been included in this study are likely to

affect the financial performance of the firm, and thus counteract the bias created by endogeneity. Therefore, future studies which could use panel data to address endogeneity bias may help improve the rigour of the results of this research.

Secondly, the survey was completed through an online platform, thus the research team did not have personal contact with managers and only subjective information relating to the measurement of constructs was solicited. This means that additional objective measures could be used to supplement the subjective information (e.g. sales, profits or return on total assets). Thirdly, the survey was only aimed at managers thus excluding other potential stakeholders who likely can benefit from CSR policies (e.g. customers, suppliers or public sector actors). Therefore, future research might profitably sample multiple holders of knowledge within a company, and will be helpful in testing for inter-rater reliability and improving the internal validity of other CSR policies. Finally, the specific regional nature of the study limits the extrapolation of the results to a national or even international level. Overall, and despite the previous limitations, the results add to previous evidence on other Spanish regions (Gallardo-Vázquez & Sánchez-Hernández, 2014) pointing to the usefulness of CSR policies for achieving higher levels of performance.

## 6. Conclusions

There is a dearth of empirical studies of the relationship between the support for innovation in SMEs, the balancing of economic and social objectives and financial performance. This study highlights the importance of the company's capacity to innovate as a prior step to the implementation of CSR policies for achieving a higher financial performance in a regional turbulent context. Results indicate that the balance between the economic and social dimensions of CSR may be facilitated by innovative outputs. For instance, innovative tools and channels of communication allow stakeholders (e.g. managers and customers) to share resources with each other and facilitate the gathering of feedback. Such feedback will result in fine tuning of activities and policies relating to CSR that will likely result in improved financial performance. Our results support the proposition that most of the companies analyzed in this study are using innovations outcomes to support both the economic and social dimensions of CSR but they only take advantage effectively of the economic dimension of CSR. This finding is important in the on-going debate of the importance of innovation to the achievement of CSR goals and objectives.

The implication of above results for management practice is that the achievement of innovative outputs is a key factor when considering the achievement of social and economic objectives. The existence of innovative outputs allows internal stakeholders to hear what other people say, act on, and profit from opportunities to improve their relationships with external stakeholders through the design and adoption of new devices, processes or structures that enable social innovation to happen. In addition, these results highlight a new and interesting direction for future research, as they are supportive of that the company's capacity to innovate may help to balance the conflicting demands of stakeholder groups. This is an important finding, as most prior studies addressing the importance of innovation have established innovation as an important beneficial outcome rather than as a precondition for the successful achievement of CSR goals and objectives (Little, 2006). It is also important to note that the indirect effect of the existence of innovation on financial performance via the social dimension of CSR is statistically insignificant. This means that the availability of an innovation at a given time necessarily does not mean that the organization will take full advantage of social benefits that may be derived from its use.



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## Appendix 1. Questionnaire items

### Social Dimension of CSR

- SOC1. We support the employment of disabled people and people at risk of social exclusion  
 SOC2. We foster training and professional development of our employees  
 SOC3. We comply with standards related to labour risks, health, safety and hygiene programmes  
 SOC4. We are committed to job creation  
 SOC5. We have human resource policies aimed at facilitating the conciliation of employees' professional and personal lives  
 SOC6. We consider employees' initiatives and proposals in management decisions  
 SOC7. We are committed to the improvement of the quality of life of our employees  
 SOC8. Equal opportunities exist for all employees without any type of discrimination  
 SOC9. We participate in social projects to the community (sponsorships, charities, etc.)  
 SOC10. We are aware of the importance of making pension plans for our employees

(Source: Lozano, 2012)

### Economic Dimension of CSR

- EC1. We are particularly concerned to offer high quality products and/or services to our customers  
 EC2. Our products and/or services satisfy national and international quality standards (i.e., ISO standards)  
 EC3. We are characterized as having the best quality-to-price ratio for our products and/or services  
 EC4. The guarantee of our products and/or services is broader than the market average  
 EC5. We provide our customers with accurate and complete information about our products and/or services  
 EC6. Respect for consumer rights is a management priority for our company  
 EC7. We foster business relationships with suppliers of our same region  
 EC8. We have effective procedures for handling complaints by our customers  
 EC9. We offer clear and precise information in the labelling of our products related to our warranty obligations.  
 EC10. We have a formal procedure for the interaction and dialogue with our customers, suppliers and the other stakeholders of our company

(Source: Lozano, 2012)

### Innovation

- IN1. Our company has introduced new or substantially improved products/services in the last two years  
 IN2. Our company has introduced innovations and improvements in production processes, logistics or distribution in the last two years  
 IN3. Our company has introduced innovations in information and communication technology systems by intensifying the company's presence on the Internet and social networks  
 IN4. Our company has introduced innovations in labour management and organizational structure in the last two years (i.e., knowledge management, supply chain management, quality management systems, business process re-engineering, etc.)  
 IN5. Our company has introduced innovation in marketing methods in the last two years (i.e., product design, distribution, promotion policies, etc.)

(Source: OECD, 2005)

### Financial performance

- PERF1. Level of before-tax income  
 PERF2. Level of ROE  
 PERF3. Level of sales growth  
 PERF4. Level of ROA  
 PERF5. Market share  
 PERF6. Level of productivity

(Source: Gallardo-Vázquez & Sánchez-Hernández, 2014)

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