Corporate Governance

The relationship between corporate social responsibility and corporate reputation in a turbulent environment: Spanish evidence of the Ibex35 firms

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Abstract

Purpose – *The purpose of this study is to provide more knowledge about the model to generate reputation and its relationship in the long term with companies' strategy of social responsibility. Particularly, research is done to test whether there is a positive effect of firms' social behaviour (corporate social responsibility [CSR]), analysing differences of intensity and consistency, on their corporate reputation (CR) and whether the current financial crisis is a factor that has changed the relationship between both variables (moderator factor).*

Design/methodology/approach – *This study uses a sample of 26 Spanish large firms of the Ibex35 index and covers an eight-year period from 2004 to 2011. To test the hypotheses of this research, a fixed-effects model was estimated using moderating regression analysis.*

Findings – *The results obtained show that, for the Spanish Ibex35 companies, CSR practices according to their consistency have a significant positive effect on CR and in turbulent environments, as in the current financial crisis, it has had a significant positive influence on the CSR-CR relationship.*

Originality/value – *Although a substantial number of empirical studies have examined the relationship between firms' strategy and their performance, only a few of them have analysed the impact of the external environment on this relationship, whereby there is a need for longitudinal studies with different economic scenarios to achieve better knowledge of the CSR–CR relationship.*

Keywords *Company performance, Corporate reputation, Business environment, Corporate social responsibility, Corporate strategy, Panel data*

Paper type *Research paper*

1. Introduction

There is general agreement that corporate reputation (CR) is an intangible asset of considerable interest and importance in its own right because it contributes significantly to the long-run competitive advantages of organisations (Dowling, 2004; Fombrun, 1996; Rose and Thomsen, 2004). Building and maintaining a positive reputation ensures the continuing participation of stakeholders in corporate activities (Brammer and Pavelin, 2006; Gallego-Álvarez *et al.*, 2010; Neville *et al.*, 2005) and can better integrate the company into its environment, which is basic to "the survival and continuing profitability of the corporation" (Clarkson, 1995, p. 110). Due to these advantages, CR has been seen by some managers as an important element of business strategy, being its management of critical importance for business success (Carlisle and Faulkner, 2005; Fombrun and Shanley, 1990; Roberts and Dowling, 2002).

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The study of how strategy can affect organisations' performance has been analysed traditionally within the Strategy–Structure–Performance paradigm. In the last years, a stream of this paradigm has studied the role of corporate social responsibility (CSR) in influencing perceptions of organisations in the eyes of their stakeholders to generate social performance. So far, however, there has been very little empirical research of potential links between the two concepts (CSR and CR), mainly short-term studies based on cross-section data of US and UK firms (Brammer and Pavelin, 2004, 2006; Dowling, 2004; Fombrun and Shanley, 1990; Gallego-Álvarez *et al.*, 2010; Melo and Garrido-Morgado, 2012; Toms, 2002; Williams and Barrett, 2000), or of its role in negative scenarios (Bebbington *et al.*, 2008; Jacob, 2012).

On the other hand, the current worldwide financial crisis raises doubts about the future of CSR and its effect on CR. According to Giannarakis and Sariannidis (2012, p. 580), "the insecure business environment prompts companies to move away from CSR as the cost of initiatives is unaffordable" what might erode stakeholders' trust and goodwill and, consequently, organisations' reputation. Although a substantial number of empirical studies have examined the relationship between firms' strategy and their performance, only a few of them have analysed the impact of the external environment on this relationship (Goll and Rasheed, 1997, 2004; Goll *et al.*, 2007; Kotha and Nair, 1995; Prescott, 1986) whereby there is a need for longitudinal studies with different economic scenarios to achieve better knowledge of the CSR–CR relationship.

The main purpose of this study is to provide empirical evidence about the CSR-CR relationship in the long run. Particularly, research is done to evaluate whether there is a positive effect of CSR on CR for a sample of large and listed Spanish firms in an eight-year period from 2004 to 2011. Furthermore, the impact of CSR on CR is explored by comparing the relationship before (period 2004-2007) and during the current financial crisis (period 2008-2011) to test whether the firms' external economic environment is a contingent factor that has changed the relationship between both variables (moderator factor).

2. The CSR-CR relationship: model and hypotheses development

2.1 CSR to obtain CR

CR is an attribute that describes a firm's overall appeal reflecting the feelings and perceptions about an organisation held over time by a host of individuals or stakeholders (Fombrun, 1996; Fombrun and Shanley, 1990; Gotsi and Wilson, 2001). This evaluation that individuals or stakeholders form about a firm is made up through accumulated impressions resulting from their interactions with any communications they receive about that organisation in comparison with its major competitors (Fombrun and Shanley, 1990; Gotsi and Wilson, 2001). Hence, a positive reputation indicates that a firm is highly esteemed or well regarded by society in general, or by some groups of stakeholders in particular (Galbreath, 2010).

CR depends on the firm's success to fulfil with congruent actions or behaviour the expectations, preferences or demands of the different stakeholders groups (Brammer and Pavelin, 2004, 2006). Satisfying stakeholders' demands is of interest for companies because stakeholders will evaluate firms more positively, which would increase their reputation, and will become likely more confident, which could increase stakeholders' willingness to exchange valuable resources with firms as loyalty from customers or commitment from employees (Basdeo *et al.*, 2006; Brammer and Pavelin, 2006; Clarkson, 1995; Hillman and Keim, 2001; Mitchell *et al.*, 1997; Rindova and Fombrun, 1999). Therefore, reputation is a key strategic asset that helps firms build and sustain a competitive advantage to yield financial value but, at the same time, it is also an indicator or measure of organisational success (social performance). Although traditionally many researchers have paid more attention in analysing the creation of financial value with reputation, a few of them have also been interested in studying reputation-building activities (Brammer and Pavelin, 2004, 2006; Fombrun and Shanley, 1990; Moura-Leite and Padgett, 2014; Surroca *et al.*, 2010; Williams and Barrett, 2000).

An underlying theory suggests that reputation formation can be broadly understood as a signalling process in which firms' strategic choices and activities send signals to stakeholders (Weigelt and Camerer, 1988), whereas stakeholders, in turn, use these signals to form impressions or associations of these firms (Galbreath, 2010). CR is determined, therefore, by a complex of signals that multiple stakeholders receive, directly from the firm or via other information channels such as the media or the stock market, concerning the firms' activities or behaviour. Thus, the more information stakeholders have, the easier it is for them to form impressions about a firm and better able they are to understand the firm's strategy or behaviour (Basdeo *et al.*, 2006).

CSR is one of these signals, as demonstrating a high degree of CSR, firms will behave in accordance with stakeholders' expectations that will strongly affect individuals' judgements on them (Brammer and Pavelin, 2006; Fombrun, 1996; Fombrun and Shanley, 1990; Halter and Coutinho de Arruda, 2009). Thereby, companies are increasing continuously providing information to stakeholders about their social and/or environmental goals, policies, actions and outcomes to achieve good reputation (Graafland and Smid, 2004). Moreover, CR would not be related only to the firms' level of CSR (CSR intensity) but also to the consistency of firms' social behaviour (Mahon, 2002). In this way, there is empirical evidence that the quality of CSR disclosure is consistently associated with high corporate environmental reputation (Toms, 2002). Hence, CSR can be seen as a strategic tool for reputational risk management, as CSR efforts can be targeted towards particular audiences with capacity to impact corporate operations (Jacob, 2012). Bebbington *et al.* (2008), for example, present support as to organisations' attempts to manage their reputation risks by means of their CSR reports.

To address stakeholder expectations, firms convert CSR into policies, programmes and behaviour as demanded by certain audiences (social strategy) so that CSR is increasingly relevant to strategic choices or activities, being part of firms' signalling processes (Brammer and Pavelin, 2004, 2006; Galbreath, 2010; Porter and Kramer, 2002; Saiia *et al.*, 2003). CSR practices can be an ideal tool to create and accumulate intangible assets such as reputation, as it transmits a positive image of seriousness, responsibility and commitment to stakeholders (Vanhamme and Grobben, 2009). Managers can signal their firms' social concern to get reputation in different ways, such as by contributing to charitable causes, developing non-polluting products, achieving equal opportunity employment, creating foundations, placing women and minority members on boards and so on. Different authors such as Brammer and Pavelin (2004, 2006), Brammer *et al.* (2009), Fombrun and Shanley (1990), Melo and Garrido-Morgado (2012), Toms (2002) or Williams and Barrett (2000) have provided empirical evidence of the positive relationship between CSR and CR.

Therefore, according to the theory and the evidence obtained in former studies, a positive relationship between firms' CSR intensity and their reputation is expected (i.e. a greater intensity in the social strategy of a company will provide a greater social performance for it) so that the following hypothesis is proposed to be tested:

H1. CSR intensity has a positive effect on CR.

Moreover, the pattern of CSR actions, in terms of how consistent they have been over time, can also affect firms' reputation (Basdeo *et al.*, 2006; Mahon, 2002), as this behaviour reflects a firm's social commitment for sustainability that improves the credibility of its policies or strategies. Social commitment stimulates the formation of trust between stakeholders and the firm and it will generate closer relationships and greater stakeholder satisfaction (Surroca *et al.*, 2010). Consequently, the following hypothesis will be tested as well:

H2. CSR consistency has a positive effect on CR.

2.2 The moderating effect of the environment on the CSR-CR relationship

This section examines the role of environment in moderating the relationship between firms' social strategy (CSR) and social performance (CR). Much of the strategic management literature has focused on the relationship between strategy and performance and considered environments as moderators of that relationship, as environmental characteristics or properties have major implications for all aspects of management including strategy, structures, process and outcomes (Goll and Rasheed, 1997; Mintzberg, 1979).

One of the basic assumptions underlying much of the strategic management literature is that successful firms change their strategies to attain better fit with the environment (Goll *et al.*, 2007). Organisations face significant constraints and contingencies from their external environments and their competitiveness depends on their ability to monitor the environments and adapt their strategies accordingly (Nandakumar *et al.*, 2010). Thus, contingency theorists emphasise the "fit" or "match" between the organisation and the environment to get organisational performance. The type of fit between strategy and environment can be analysed according to six different perspectives being "fit as moderation", one of the most widely used by strategic management researchers (Goll and Rasheed, 1997, 2004; Nandakumar *et al.*, 2010; Venkatraman and Camillus, 1984).

Contingency theory expresses that an organisation can have better performance as long as it adapts itself to the environmental contingencies whereby the alignment between its strategy and external environment has significant positive implications for its performance (Mintzberg, 1979; Prescott, 1986). Husted (2000), for example, proposed a contingency model of corporate social performance in which strategies and structures that are properly aligned with social issues will lead to greater social performance. Social issues are socially constructed and context-bound, meaning that a particular question would not necessarily turn into an issue in a specific environment, whereas, in other environment, it will (Lotila, 2010). Thus, social issues vary considerably over time (Mahon and Waddock, 1992) inasmuch as stakeholders' expectations change depending on organisations' external environment. In this case, therefore, firms' social strategy or priorities (CSR) might be reformed or changed regarding the new business environment (Giannarakis and Sariannidis, 2012) to fit new stakeholders' demands and, thereby, to get social performance (CR).

Adopting the strategic legitimacy theory, Goll and Rasheed (2004) also consider that the performance consequences of CSR behaviour are likely to vary significantly across environments. For these two authors, socially responsible behaviour helps the organisation to gain support from various external stakeholder groups in changing and unpredictable environments as in a financial crisis. In such environments, firms more proactively seek social legitimacy mainly because such legitimacy provides them with some protection from the unpredictability they face (Goll and Rasheed, 2004). In unstable business periods, consumers and society will have higher expectations for the organisation to act appropriately to discharge its social responsibility and, in addition, their sensitivity is much more likely to break out (Selvi *et al.*, 2010; Souto, 2009). CSR can ensure social harmony and stability (Giannarakis and Sariannidis, 2012) what would improve the social performance of the most responsible firms. Hence, strategic changes that are accorded to stakeholders' expectations are likely to add most value when the environment is experiencing a rapid change (Goll *et al.*, 2007). However, in stable environments, Goll and Rasheed (2004) point out that organisations are in a better position to identify and co-opt critical external constituencies, ensuring their support.

After the creation of the Economic and Monetary Union, significant amounts of capital started to flow from the core to peripheral countries (Greece, Ireland, Italy, Portugal and Spain) which brought to these countries a long period of economic stability and growth. After the outbreak of the global financial crisis, flows of private capital suddenly stopped, forcing these countries to undergo an abrupt adjustment in their external position and public sector balance (Gros and Alcidi, 2015). As a consequence of this adjustment, credit becomes hard to obtain, economic activity contracts and debt burdens are heavier against declining available resources what has generated a new period of economic and social turbulence in Europe with high levels of unemployment, low economic activity, business losses, increase of bankruptcies and so on.

This period of instability has once again ignited in some countries the debate surrounding the true role of business and the CSR. Thus, the current crisis has increased the concern of the Spanish society, which is considerably suffering its negative effects, with regard to the behaviour of Spanish firms. The communitarian's model of corporate governance followed in many European countries (included Spain) believes that corporations have a responsibility beyond that owed to their shareholders and, accordingly, corporate managers should consider the interests of a broad range of stakeholders in their decision-making (Callahan *et al.*, 2002). So, CSR has an important role in these countries as a means of firms' solidarity with society and commitment to comply with general interests. In the case of Spain, CSR came into later than in other countries (at the end of the 1990s) due to different causes (Celma *et al.*, 2014). However, nowadays, there are an increasing number of Spanish companies that believe they should contribute to sustainable development through social responsibility (Prado-Lorenzo *et al.*, 2008), which, according to the strategic legitimacy theory, would increase firms' legitimation and reputation inside the Spanish society.

Therefore, the relationship between firms' social strategy and corporate social performance is expected to be moderated by the external economic environment that managers face. Furthermore, in some environments, especially those that are unstable and/or unpredictable (turbulent environment), it is expected that the CSR-CR relationship to be stronger. To test this idea, the following hypothesis is postulated:

> *H3*. The relationship between CSR and CR is moderated by the firm's external economic environment being this relationship stronger when the environment is more unstable and/or unpredictable (turbulent environment).

Figure 1 presents the theoretical model used to test the hypotheses of this research (Goll and Rasheed, 2004; Nandakumar *et al.*, 2010).

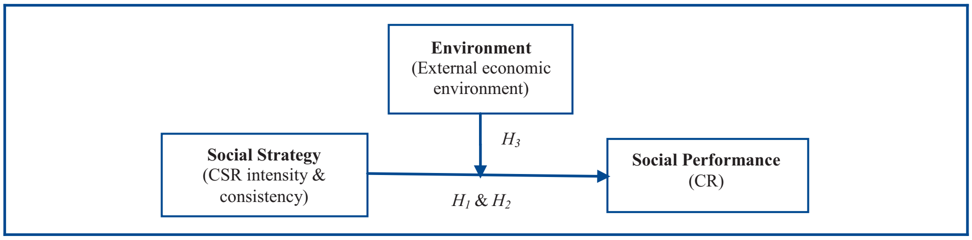
2.3 Control variables

Previous research (Berman *et al.*, 1999; Brammer and Pavelin, 2004, 2006; Fombrun and Shanley, 1990; Gallego-Álvarez *et al.*, 2010; Melo and Garrido-Morgado, 2012; Miles, 1987; Moura-Leite and Padgett, 2014; Roberts, 1992; Rowley and Berman, 2000; Toms, 2002; Williams and Barrett, 2000) has identified several factors such as size, type of activity or financial situation that could play an important role in the assessment of the CSR-CR relationship.

These are some arguments to justify why these variables have to be introduced into a building reputation model:

- *Size*: This variable is directly related to reputation because larger firms enjoy greater name recognition than smaller firms because they are highly more visible companies than small and medium ones.
- *Type of activity (sector)*: The existence of a close relationship between some economic activities and certain important social or environmental externalities causes that some business activities may predispose a firm to a better reputation than other activities.

Figure 1 Theoretical model



- *Financial performance (FP)*: To get positive financial results is one of the main objectives to be achieved by companies and an indicator of the quality of their managers so that it may have a major impact on its image and reputation.

3. Data and method

This study uses a sample of 26 Spanish firms of the *Ibex35* index (Table I), an official index of the Spanish Stock Exchange's Market composed each year of the main 35 companies by capitalisation. Although this sample comprised a relatively small number of firms, these stocks represent over the 80 per cent of the Spanish Stock Exchange Market value at the end of 2010. The analysis covers an eight-year period from 2004 to 2011. Hence, a balanced panel of data with 208 observations is used in this research. Unlike cross-sectional analysis, panel data allow to control every firm and have their own specificity that generates a particular behaviour closely linked to the company's strategy (Bouquet and Deustsch, 2008; Moura-Leite and Padgett, 2014).

The following analytical model is proposed to test the hypotheses of this research:

$$REP_{it} = f(SIZE_{it}, FP_{it}, CSR1_{it}, CSR2_{it}, PER_t \times CSR1_{it}, PER_t \times CSR2_{it})$$

where REP_{it} represents the corporate reputation of company I at year t, being $t = 2004$, 2005 [. . .], 2011, measured by the *Merco* reputation index (www.merco.info/es). *Merco* is the only Spanish ranking that evaluates annually since 2001 the reputation of the companies that operate in Spain as do those published by *Fortune* and *The Financial Times* for the USA and the UK, respectively. This index, which has been used in other published studies (Alvarez Dominguez, 2011; Delgado-García *et al.*, 2013), is drawn up using a survey with the opinions of different Spanish managers to evaluate and rank companies according to six dimensions (financial performance, quality, culture, ethics and innovation and visibility). Finally, each company is then evaluated directly by different collectives (financial analysts, non-governmental organisations, unions and consumers' associations) and scored between 0 and 10,000 points.

As it was discussed in the previous section, $SIZE_{it}$ and FP_{it} are two variables included in the model to control, respectively, the effect of size and financial performance of each company on reputation. $SIZE_{it}$ has been measured by the firm's annual total assets and FP_{it} by the firm's annual return on equity. All these variables have been taken from the Bureau Van Dijk's *Amadeus* and *Bankscope* databases (other measures of size, such as operating income or number of employees, and financial performance, such as the return on assets or ROA, were also used getting similar results in the analysis).

$CSR1_{it}$ and $CSR2_{it}$ are the CSR intensity and consistency, respectively, of company i at year t. *CSR1* was measured with the annual CSR global index elaborated by *Observatorio de Responsabilidad Social Corporativa* (Spanish CSR Observatory, www.observatoriorsc.org). This index, which ranges from 0 to 4, is both a quantitative and a qualitative measure of the *Ibex35* firms' CSR obtained through the analysis of relevant information on different environmental and social aspects such as Human Rights, UN *Global Compact*, GRI indicators, AA1000 principles and requisites and so on, provided by companies and their stakeholders. To measure *CSR2*, the standard deviation of the annual

Table I Sample of firms used in this research by sector

Sector	*Firm*
Energy and oil	Enagas, Endesa, Gas Natural, Iberdrola, Red Eléctrica, Repsol
Building and industrial goods and services	Acciona, Acerinox, ACS, Ferrovial, FCC, Gamesa, Indra, Sacyr-Vallehermoso
Consuming goods and services	Abertis, Iberia, Inditex, Mediaset España, Telefónica
Banking and insurance	Banco Popular, Banco Sabadell, Banesto, Bankinter, BBVA, Mapfre, Santander

CSR global index was calculated for each firm and period (2004-2007 and 2008-2011). Positive coefficients are expected to be estimated for both variables in line with the expectations of the signal theory. Finally, interaction variables were also included in the model to examine the moderating effect of the external economic environment on the CSR-CR relationship where PER_t is a dichotomous variable to control the external economic environment, being 0 whether the year is before 2008 (munificent environment) and 1 otherwise (turbulent environment). According to the strategic legitimacy theory, positive coefficients are expected to be obtained for this variable.

4. Results

The main descriptive statistics (mean, median, standard deviation, etc.) as well as Pearson's correlation coefficients among the variables included in the model for the whole period 2004-2011 are presented in Table II. The figures of this table show that the average value of corporate reputation (*CR*) is 4,486.73 points, whereas the average CSR intensity (*CSR1*) is 1.39, with a minimum value of 0.17 and a maximum of 2.18, and the average CSR consistency (*CSR2*) is 0.10, with a minimum value of 0.01 and a maximum of 0.29. In the case of size and financial performance, the average of total assets in the whole period was €89,231.63 million and the average return on equity was 17.72 per cent. All variables present short intervals of variation except for the size variable, which coefficient of variation is 2.31. As for the relationship among variables, figures in Table II show that all independent variables, excluding CSR consistency (*CSR2*), are positively correlated with the dependent variable of corporate reputation (*CR*) being the strongest correlation, $r = 58.1$ per cent, with CSR intensity (*CSR1*). Besides, *CSR1* is also correlated positively with size ($r = 15.2$ per cent), whereas *CSR2* is correlated negatively with it ($r = -16.5$ per cent). *CSR1* and *CSR2*, which are correlated negatively between themselves, are both related positively with financial performance (*FP*) although only in the second case the relationship is significant.

To analyse the pattern of behaviour followed by the variables of this research, the mean values of each variable used in the analysis segregated by sector and period of time are presented in Table III. Centring the analysis in the main variables, consuming goods and services was, on average, the most reputed sector in the period before the crisis (2004-2007), followed very close by the banking and insurance sector (5,185.90 and 4,618.18 points, respectively), whereas the building and industrial goods and services was the sector with the worst reputation (2,966.97 points). In the next period of crisis (2008-2011), the first two positions changed being banking and insurance the sector with the highest reputation (5,624.79 points) and energy and oil the sector with the largest increase in its reputation (1,697.83 points more). The differences in the average reputation among sectors are statistically significant in both periods, although these differences are less significant in the period of crisis.

Table II Main descriptive statistics and correlation coefficients (2004-2011)

Variable	*1*	*2*	*3*	*4*	*5*
1. CR	1				
2. SIZE	**0.415**	1			
3. FP	**0.128**	−0.051	1		
4. CSR1	**0.581**	**0.152**	0.107	1	
5. CSR2	**−0.163**	**−0.165**	**0.117**	**−0.250**	1
Number of observations	208	207	207	203	208
Mean	4,486.73	89,231.63	17.72	1.39	0.10
Median	4,235.00	25,182.70	16.91	1.45	0.09
Standard deviation	2,633.99	206,307.95	15.90	0.41	0.07
Variation coefficient	0.59	2.31	0.90	0.30	0.73
Minimum value	0	733.20	−81.94	0.17	0.01
Maximum value	10,000	1,251,526.00	75.06	2.18	0.29

Note: Significant values below 10% are in bold

Table III Mean values by sector and period of time

Period	Variable	Sector: Energy and oil	Building and industrial goods and services	Consuming goods and services	Banking and insurance	Kruskal-Wallis test
2004-2007	*CR*	3,726.54	2,966.97	5,185.90	4,618.18	11.12**
	SIZE	26,541.21	12,717.97	22,868.26	224,896.69	47.48***
	FP	22.47	18.81	35.49	16.95	18.23***
	CSR1	1.55	0.98	1.48	1.26	27.38***
	CSR2	0.10	0.15	0.14	0.14	4.77
2008-2011	*CR*	5,424.38	3,635.09	5,591.55	5,624.79	6.77*
	SIZE	44,216.42	18,976.82	31,343.22	307,217.54	50.16***
	FP	19.57	5.34	20.52	11.02	20.79***
	CSR1	1.73	1.25	1.63	1.43	27.51***
	CSR2	0.06	0.05	0.11	0.05	13.34***
Difference between periods (Mann-Whitney test)	*CR*	1,697.83*	668.13**	405.65	1,006.61*	
	SIZE	17,675.21**	6,258.85*	8,474.96	82,320.86	
	FP	−2.90	−13.47***	−14.97*	−5.94***	
	CSR1	0.18*	0.28**	0.15	0.17*	
	CSR2	−0.04***	−0.10***	−0.02	−0.09***	

Notes: *Significant at 10% level; **significant at 5% level; ***significant at 1% level

As for social strategy, energy and oil is one of the sectors with the highest CSR intensity (1.55 and 1.73 points, respectively), what can be explained by the need of these firms to reduce the negative environmental impact of their activity. Thus, firms of this sector would try to compensate the negative effects of their activity on reputation increasing their level of social responsibility. All sectors increased, on average, their CSR indexes during the period of financial crisis, being the building and industrial goods and services (0.28 points) with the largest increase. In the case of CSR consistency, all sectors, except consuming goods and services, reduced significantly, the variation of their social strategies during the 2008-2011 period being the largest reduction, first, in the building and industrial goods and services sector and, second, in the banking and insurance sector.

The results of the regression analysis are presented in Table IV. A fixed-effects model has been used to test the hypotheses of this research, as unobserved firm-specific factors may contribute in the determination of firms' reputation (unobserved heterogeneity) that can

Table IV Results obtained of the moderated regression analysis (fixed-effects model)

Explicative variable	Model 1	Model 2	Model 3
CONSTANT	−689.391	−385.051	219.590
Control variables			
YEAR & SECTOR	0.764***	0.671***	0.550***
SIZE	0.005***	0.005***	0.004***
FP	11.482**	13.802**	9.407
Social strategy			
CSR1		296.191	127.025
CSR2		−2,305.049*	400.723
Moderating effects			
PER × CSR1			574.692***
PER × CSR2			−6,741.172**
Number of observations	202	202	202
R^2	0.919	0.923	0.927
F-test	70.51***	68.20***	66.97***
Change in F		3.81**	4.67**

Notes: The number of observations used in the regression analysis is lower than 208 due to missing values in some variables; figures of the table are estimates of beta coefficients; *significant at 10% level; **significant at 5% level; ***significant at 1% level generate biased estimates of the model parameters. In this type of models, time-invariant variables are eliminated so that it cannot be used sector dummies given that firms do not change sector over time. To solve this problem, Surroca *et al.* (2010) point out two different approaches using in this research the procedure that consists of introducing the averaged dependent variable (excluding the focal firm) as an explanatory variable in the model.

The first analysis was to perform the Hausman specification test to determine if it would be better to use fixed-effects instead of a random-effects model. The results of this test indicated that the fixed-effects model was the appropriate choice in this analysis (χ^2 = 38.77, $p < 0.01$). A Wald test of significance was performed to assert the joint significance of the control variables, and the result indicated that firm dummies contribute to the model's overall significance ($F = 37.75$, $p < 0.01$).

The results of the model estimation are presented in a hierarchical fashion to better depict the variance explained by the different sets of predictor variables (*moderate regression analysis*). Model 1 contains only the control variables of size, financial performance, sector and year, as well as the dummy variables for firm (coefficients not shown). In Model 1, the coefficients for size and financial performance are both statistically significant and have the expected positive direction. In Model 2, the CSR intensity (*CSR1*) and consistency (*CSR2*) variables were added in the model to test *H1* and *H2*. As shown, both variables have the correct direction although only the beta coefficient of *CSR2* is statistically significant ($\beta = -2{,}305.049$, $p < 0.10$). Further, both variables explain significantly the increase of the CR variance (change in $F = 3.81$, $p < 0.05$). In Model 3, two interaction variables were added to test *H3*. These two variables accounts for slope differences caused by environmental changes. As shown, both variables have a significant relationship with CR in the direction predicted ($\beta_{CSR1} = 574.692$, $p < 0.01$; $\beta_{CSR2} = -6{,}741.172$, $p < 0.05$). Besides, the change in F for the model is statistically significant (change in $F = 4.67$, $p < 0.05$).

5. Discussion

This study aims to analyse, first, whether there is a positive relationship between firms' CSR strategy (measured by firms' CSR intensity and consistency) and CR and, second, whether the external economic environment of firms is a contingent (moderator) factor in the CSR–CR relationship.

One limitation of this research is that the results cannot be generalised to other companies (small and medium firms) or to other countries, as the sample comprises a relatively small number of Spanish large and listed firms, although these stocks represent over the 80 per cent of the Spanish Stock Exchange Market value at the end of 2010.

However, this research presents some strength points. First, all data sources are public and everyone can have access to them, whereby the results of this study can be replicated by other researches. Second, the use of panel data provides a powerful research instrument providing unbiased results that could not be estimated with cross-section data, as it allows controlling important firms' specific factors that could not be observed or measured such as differences in firms' culture and values, managers' skills and attitudes and so on. Third, the results obtained are consistent with the postulates of different theories used to support this research.

One of the findings of this study is that firms of some specific sectors have high or low average levels of CR and CSR motivated by their type of activity, as happens with those firms with a negative impact in the environment (energy and oil sector), or their size, as the case of large firms (banking and insurance sector). This result has also been obtained in former studies conducted by Brammer and Pavelin (2004, 2006) or Melo and Garrido-Morgado (2012). It is interesting to note that, in all sectors, the average reputation level has increased during the period of crisis compared with the previous period. This fact is very relevant in the case of the financial sector (banking and insurance firms), as all companies of this sector are affected by the financial crisis and a reputation gap between firms of the sector and their stakeholders would be expected. The explanation to this puzzling result would be that, in Spain, the banks which have lost reputation during the period of crisis have been savings banks (some of them have been nationalised) instead of private banks that are included in the *Ibex35* index. In addition, in the first three years of crisis, the Spanish financial sector suffered less than the rest of banks in other countries (e.g. US and UK banks).

Other interesting finding is that, despite the financial crisis, all sectors have increased their average intensity level of CSR what means that social issues are important for, at least, Spanish large companies (Prado-Lorenzo *et al.*, 2008). This result is contrary to the idea that that financial crisis is affecting negatively on social activities and their communication to stakeholders and society. This increase in CSR intensity levels can be related to a rise in social and political pressures regarding a more responsible way of conducting business which has forced companies to somehow integrate these new values emerging in society, which, in the case of Spain, is in concordance with the communitarian model of governance. However, managers do not always show the same interest to either fit or match stakeholder expectations, as this decision would be moderated by the external environment. Besides, in the period of crisis (turbulent environment), all sectors have a more consistent level of CSR than in the former period (munificent environment). It can be inferred that Spanish large firms are considering CSR strategically to reduce or avoid legitimacy problems and reputational risks presenting small differences of CSR behaviour from year to year what supports the arguments of Goll and Rasheed (2004) and provides evidence to corroborate the strategic legitimation theory.

The findings obtained also show that, for the Spanish *Ibex35* companies, CSR practices have a positive effect on CR independently of firms' type of activity, size or financial performance that agrees with the signalling theory postulate that CSR has a positive impact on reputation. Nevertheless, the effect obtained is only significant for CSR consistency, whereby only *H2* cannot be rejected. Thus, CSR consistency would be more important to get reputation than the intensity of CSR. Therefore, the results of this research suggest that CSR signals provided by firms to their stakeholders can be used to generate reputation, as other authors showed in former studies (Brammer and Pavelin, 2004, 2006; Brammer *et al.*, 2009; Fombrun and Shanley, 1990; Melo and Garrido-Morgado, 2012; Toms, 2002; Williams and Barrett, 2000), whereas a new evidence supported by this research is that this effect can be stronger when firms' signals are consistent along the time.

Moreover, it can also be concluded that the current financial crisis has not negatively affected the CSR–CR relationship. On the contrary, during the current financial crisis, the effect of the CSR intensity and consistency on CR has increased significantly, demonstrating that the firms' external economic environment is a moderator factor in the relationship between CSR and CR, supporting the arguments of the strategic legitimacy and contingent theories. Consequently, *H3* cannot be rejected so that, in turbulent environments, CSR can help companies to boost their CR.

A future analysis should include in the model different specific social or environmental policies that are targeted to different stakeholders' groups to assess the effect on CR and how it works in different environments. Other further step for future research would be to analyse the whole model of Corporate Social Strategy–Corporate Social Performance–Corporate Financial Performance to test, at the same time, different hypotheses related to the reputation-building and financial-value models.

6. Conclusion

This section summarises the main conclusions obtained in the analysis section. The purpose of this study has been to provide more knowledge about the model to generate reputation and its relationship in the long term with firms' strategy related to social and environmental issues. Particularly, whether there is a positive relation between CSR and CR has been tested for a sample of large and listed Spanish firms, as well as whether the current financial crisis is a factor that, in the past years, has changed the relationship between both variables.

The results obtained in this study are consistent with those of other similar studies and corroborates the theoretical arguments underpinning this research. They are particularly interesting because they show that CSR activities and their communication might be used strategically by firms to create and accumulate intangible assets such as reputation. Thus, social strategy is necessary for organisations' success. Further, social strategy has not always the same effect on CR because it has to fit or match with firms' external environment to get social performance so that social strategy can be very important to manage reputational risks.

As a final conclusion, managers' decisions taken to reduce the implementation of responsible strategies can be an error in the long-term perspective and especially in turbulent moments, whereby some companies have the opportunity to strengthen their competitive advantages against other firms which do not have real confidence in CSR and have decided to reduce their CSR activities motivated by the current financial crisis.

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