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Mercedes Palacios-Manzano, Ester Gras-Gil & Jose Manuel Santos-Jaen

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REVIEW

Corporate social responsibility and its effect on earnings management: an empirical research on Spanish firms

Mercedes Palacios-Manzano*, Ester Gras-Gil and Jose Manuel Santos-Jaen 💿

Department of Finance and Accounting, Faculty of Economics and Business, University of Murcia, Murcia, Spain

The ethics of financial reporting assumes a centre stage in the corporate world in the background of an emerging understanding of Corporate Social Responsibility (CSR). The purpose of this paper is to investigate whether the CSR orientation of a firm affects its reporting incentives, in terms of the accrual-based earnings management. The main argument is that CSR induces transparency and reduces the propensity towards the number of opportunities for earnings management. Using archival data from a panel sample of 100 most reputable Spanish firms between 2011 and 2015, we find a negative impact of CSR practices on earnings management. The findings demonstrate the socially responsible firms are inclined to foster long-term relationships with stakeholders rather than maximise their short-term profit. In this regard, providing quality earnings is closely connected to CSR activities, especially in that both aim to meet the needs of the stakeholders. Our findings have important implications for shareholders, investors and analysts who may consider CSR as an expression of 'ethical' investing and a possible reflection of the quality of financial reporting. These groups should be very cautious in relying on CSR information for Spanish firm's analysis, since CSR is found to have significant impact on earnings management.

Keywords: earnings management; corporate social responsibility; Spanish firms

1. Introduction

The flexibility of the Generally Accepted Accounting Principles allows managers to use some discretion to estimate reported earnings that might not accurately reflect the company's underlying economic conditions (Prior, Surroca, & Tribo, 2008). This opportunist behaviour of using manager's discretion is known as earnings management (EM). EM is the process of taking deliberate steps within the constraints of Generally Accepted Accounting Principles (GAAP) to bring about a desired level of reported earnings (Davidson & Stickney, 1987). According to Healy and Wahlen (1999, p. 368), earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence the contractual outcomes that depend on reported accounting practices.

EM is broadly interpreted as a latent threat and an undesired practice, which could potentially result in devastating effects in the long-run if relevant suspicions, signalled and inflamed by various sources and events, go public (Dechow & Skinner, 2000). EM is an agency cost because managers pursue their own interest to the detriment of

^{*}Corresponding author. Email: palacios@um.es

stakeholders (Baiman, 1990; Mouck, 2004; Koch & Schmidt, 2010). However, it also is unethical and therefore irresponsible behaviour (Scholtens & Kang, 2013).

Being aware of the existence of opportunistic earnings management activities, there is a general interest in factors that may constrain these actions. After several recent financial scandals, there has been an international trend towards developing and implementing corporate governance mechanisms to fight against the opportunistic behaviours that have undermined investors' credibility in financial information. Corporate governance attributes help investors by aligning the interests of managers with the interests of shareholders and by enhancing the reliability of financial information and the integrity of the financial reporting process (Watts & Zimmerman, 1986).

In identifying the drivers of financial reporting quality, proxied by earnings management, prior literature has drawn attention to the association between corporate earnings management practices and commitment to Corporate Social Responsibility (CSR) (Calegari, Chotigeat, & Harjoto, 2010; Hong & Andersen, 2011; Kim, Park, & Wier, 2012; Scholtens & Kang, 2013; Grougiou, Leventis, Dedoulis, & Owusu-Ansah, 2014; Bozzolan, Fabrizi, Mallin, & Michelon, 2015; Choi, Choi, & Byun, 2018). Engagement in CSR activities, which represent a well-established system of socially endorsed behaviour (Jahdi & Acikdilli, 2009; Jones, 2011; Vanhamme & Grobben, 2009), constitute effective tactics deployed by managers to confer legitimacy upon their organisations (Hahn & Kuhnen, 2013; Mahjoub & Khamoussi, 2013; Pellegrino & Lodhia, 2012).

The stakeholder framework sheds light on the CSR–EM connection. Stakeholder theory is concerned with how an organisation manages its stakeholders (i.e. all groups or parties who are influenced by and or who influence the organisation) (Freeman, 1984; Mitchell, Agle, & Wood, 1997). Managers make decisions taking into account the interests of all the firm's stakeholders (Jensen, 2001) and identify the priorities of the stakeholders and the information that should be disclosed to each one (Gray, Dey, Owen, Evans, & Zadek, 1997). Within the context of stakeholder theory, CSR practices are seen as part of the 'dialogue between the company and its stakeholders' and a very 'successful means of negotiating these relationships' (Gray, Kouhy, & Lavers, 1995, p. 53).

While previous studies have substantiated that CSR is associated with the quality of financial reporting, as proxied by the intensity of earnings management practices (e.g. Chih, Shen, & Kang, 2008; Prior et al., 2008), empirical findings remain inconclusive with regard to whether commitment to CSR has a positive or negative impact on the quality of financial reporting (see e.g. Chih et al., 2008; Grougiou et al., 2014) and vice versa. Empirical evidence provides inconclusive results regarding the direction of this association. Previous research reveals that there are two contradictory perspectives. One perspective assumes that EM is negatively associated to CSR, while the other argues that EM and CSR are positively related.

CSR-oriented firms are less likely to manipulate earnings because they are intrinsically more committed to their institutional role (to create value for shareholders) and to transparent disclosure policies. The main argument is that CSR induces transparency and reduces the propensity towards the number of opportunities for earnings management (Bozzolan et al., 2015). However, there is an argument that CSR can be used as an entrenchment mechanism to achieve managers' self-interest objectives by distorting earnings information; managers may use CSR for their self- interest to advance their careers and reputation or to cover up unethical practices such as earnings management. The assumption here is that these managers may want to perform CSR activities in order to avoid the scrutiny from third parties (Prior et al., 2008). Given the diversity of findings and the importance of this relationship for academics and market participants, more research is needed (Kim et al., 2012).

This paper revisits the association between CSR and earnings quality and discusses possible explanations for the conflicting results of previous research. We are interested in investigating the possibility that CSR will inhibit EM. This study examines whether a company's CSR practices help mitigate managers' willingness to manage earnings and explores a potential mechanism through which CSR may influence earnings management. The purpose is to explore the relationship between CSR and earnings management by focusing on Spanish firms. We employ a sample of 100 Spanish firms during a five-year period (2011–2015) to examine whether commitment to CSR activities has any relationship to the quality of financial reporting.

Our findings have important implications for shareholders, investors and analysts who may consider CSR as an expression of 'ethical' investing and a possible reflection of the quality of financial reporting. These groups should be very cautious in relying on CSR information for Spanish firm's analysis, since CSR is found to have significant impact on EM.

The rest of the paper is organised as follows: We review the relevant literature and explore the relationship between EM and CSR in Section 2. In Section 3, we describe our research design and the sample selection procedure. In Section 4, we report the empirical findings and detail our robustness checks. Finally, in the last section, we present the conclusions drawn from our analysis.

2. Literature review and hypothesis development

Theoretically, EM and CSR are linked through two perspectives. First, it has been argued that firms with strong commitments to CSR are less likely to manage earnings since they do not hide unfavourable earnings realizations and, therefore, conduct no EM (Chih et al., 2008). Since EM is perceived as an irresponsible act with CSR principles, Choi, Lee, and Park (2013) argue that firms with strong commitment to CSR are more prone to act in a responsible way when reporting their financial statements. The paper of Choi et al. (2013) focuses on how CSR ratings are associated with earnings quality for firms with different ownership structures. They use a sample of Korean firms from 2002 to 2008. They find that CSR ratings are negatively correlated with the level of earnings management when all firms are considered. However, the relationship is weaker for chaebol firms and firms with highly concentrated ownership, which suggests that CSR practices can be abusively used by those firms to conceal their poor earnings quality.

In line with this argument, Gelb and Strawser (2001), Chih et al. (2008) and Choi and Pae (2011) argue that socially responsible firms are focused not only on increasing current profits but also on fostering future relationships with stakeholders (the long-term perspective hypothesis). From this perspective, socially responsible firms are inclined to foster long-term relationships with stakeholders rather than maximise their short-term profit (Choi et al., 2013). In support of this perspective, Chih et al. (2008) investigate CSR-related features firms in 46 countries and find that a firm with CSR in mind tends to smooth earnings less. Furthermore, it also displays less interest in avoiding earnings losses and decreases, but it still is prone to earnings aggressiveness. Likewise, Hong and Andersen (2011) and Kim et al. (2012) point out that companies that expend their efforts and resources in designing CSR programmes and implement these programmes to address the ethical interests of stakeholders follow more transparent and reliable financial reporting and less likely to manage earnings. Calegari et al. (2010), using a sample of

US firms from 1991 to 2008, show that CSR induces better earnings reporting quality and, therefore, has an indirect but positive effect on firm value.

Inversely, the second perspective suggests that managers who manage earnings may strategically use CSR information to disguise their opportunistic behaviour (the managerial opportunism hypothesis). CSR policies can be used by mangers as their entrenchment strategy. Using a sample of 593 industrial firms listed in the Sustainable Investment Research International (SiRi) database over the period 2002–2004, Prior et al. (2008) showed a positive association between EM and CSR. Managers use CSR to reduce the likelihood of being scrutinised by satisfied stakeholders. According to this view, CSR is the result of a principleagent problem where the manager is an agent who utilises CSR as a tool to maximise their own private benefits. They also suggest that executives with incentives to manage earnings will be very proactive in boosting their public exposure through CSR activities, particularly in firms with high visibility. Alternatively, firms with low levels of earnings management have fewer incentives to seek public exposure by promoting socially responsible activities.

Similarly, Choi et al. (2018), using a sample of Korean listed companies between 2002 and 2010, find that CSR companies engage in less earnings management through both accruals and real activities manipulations in comparison with non-CSR companies. Before correcting for endogeneity, the results apparently suggest that the CSR engagement is negatively related to both discretionary accruals and real activities manipulation. However, once this study corrects for endogeneity of CSR commitment, the relation between CSR commitment and discretionary accruals becomes insignificant, while the negative relation between CSR commitment and real activities manipulation remains significant even after controlling for the endogeneity. These results imply that proactive CSR engagement leads managers to behave in a more strategic manner and restrict real activities manipulation rather than constrain accruals manipulation.

Therefore, the main idea is that CSR can mitigate agency problems, especially the agency conflicts between controlling shareholders and minority shareholders. We expect a company's level of commitment to social responsibility to influence managers' earnings management decisions (Kim et al., 2012). A demonstrated corporate commitment to social responsibility will reduce managers' attempts to engage in earnings management. As a consequence, CSR may reduce the incentives to manage earnings. These arguments lead to the following hypothesis:

H1: There is a negative relationship between the corporate social responsibility practices and the level of earnings management.

3. Research design

3.1. Measuring corporate social responsibility

To test our hypotheses on the relationship between CSR and EM, we use information from the Corporate Reputation Business Monitor (MERCO) database. MERCO is the most widespread renowned monitor in Spain. This is supported by its 15 years of operation and the fact of being the first monitor in the world whose processes are audited by an external organisation, KPMG Consulting, and according to ISAE 3000 guidelines. We use the MERCO database because it includes ranking and evaluation of corporate reputation and employer brand of firms in Spain, and so it has become a benchmark tool for large companies in the assessment and management of their reputation. This database has been used by many researchers such as Khosropur (2017), García-Meca and Palacio (2018) and Benitez, Chen, Teo, and Ajamieh (2018) as a measuring tool of the firm reputation. MERCO uses a process based on a variety of steps that are aimed at collecting data from different sources of information. The processes used by MERCO to obtain the information required are:

- (1) Interviews with directors. The aim of this interview is to ascertain the opinion held by directors of the most important companies in Spain about the corporate reputation of firms operating in our country.
- (2) Assessment by experts. This seeks to incorporate in the corporate reputation rating the views of several outside agents. In this stage, the 90 firms selected in the previous process are rated by 5 groups of experts: Financial Analysts; Consumer Associations; NGOs; Trade Unions; and Economic Journalists.
- (3) Direct Assessment. The aim is to have a rating by qualified specialists in Analysis and Research of the relative merits and corporate reputation presented by the 90 firms selected from the provisional ranking. This rating will require firms to accredit their reputational values via a questionnaire and documents that back up the information in the same.
- (4) MERCO Tracking. This phase seeks to obtain a rating from the population as a whole for the reputation of the firms selected and to detect any possible evolution of the ranking.

The final ranking is calculated at the close of each phases outlined as the weighted sum of the scores obtained in those phases. Thus, after totalling all the MERCO components and correcting the possible undesired effects, it obtains a score index over 10,000 and the ranking derived from it, which is published annually.

3.2. Measuring accruals quality

Prior research has measured EM in several ways (see Dechow, Ge, & Schrand, 2010). The most frequently used model is the modified Jones model, first introduced by Dechow, Sloan, and Sweeney (1995) as a modification of the original Jones model. This model measures the unexpected accruals. At first, the total accruals are calculated as either the difference between net income and cash flow from operations or working capital accruals minus depreciation. The total accruals are then regressed on variables that are proxies for normal accruals (e.g. revenue/receivables) to allow for typical working capital needs and regressed on gross fixed assets to allow for normal depreciation. The proxies are obtained through the use of a so called 'estimation period'. This is a period in which no systemic use of earnings management is predicted. The proxies are obtained from the estimation period sample and thereafter used to estimate normal (or expected) accruals in the sample that needs to be investigated. The unexpected accruals are then calculated as the difference between the total accruals and estimated normal accruals. Unexpected accruals are thus the unexplained component of total accruals (Healy & Wahlen, 1999).

Since earnings management can involve either income-increasing accruals or incomedecreasing accruals to meet earnings targets, consistent with prior studies (Warfield, Wild, & Wild, 1995; Reynolds & Francis, 2000; Klein, 2002; Van Tendeloo & Vanstraelen, 2005; Bowen, Rajgopal, & Venkatachalam, 2008), the magnitude of absolute discretionary accruals is used in this study to assess the extent of earnings management. A higher magnitude of absolute discretionary accruals corresponds to a greater level of earnings management, or lower accounting quality, and vice versa. The estimation process of the accruals reads as follows (Dechow et al., 1995):

Total Accruals_{it} =
$$(\Delta CA_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta STD_{it}) - Dep_{it}$$
 (1)

where ΔCA_{it} = change in total current assets; $\Delta Cash_{it}$ = change in cash and cash equivalents; ΔCL_{it} = change in total current liabilities; ΔSTD_{it} = change in long-term debt included in current liabilities; Dep_{it} = depreciation and amortisation expenses.

We use the cross-sectional version of the modified Jones (1991) model to estimate the non-discretionary component of total accruals (TAC) (DeFond & Jiambalvo, 1994; Larcker & Richardson, 2004).

$$\frac{\text{TAC}_{it}}{A_{i,t-1}} = \beta_0 + \beta_1 \frac{\Delta \text{REV}_{it}}{A_{i,t-1}} + \beta_2 \frac{\text{PPE}_{it}}{A_{i,t-1}} + \varepsilon_{it}$$
(2)

For each year and industry, we regress total accruals (TAC) on the change in revenues (Δ REV) and the level of gross property, plant and equipment (PPE), scaled by lagged total assets (A_{t-1}) in order to avoid problems of heteroskedasticity. The industry classification is based on the Spanish National Classification of Economic Activities (CNAE) made by the National Institute of Statistics (INE). The estimation of the regression coefficients is carried out using all Spanish firms available in the SABI (Spanish Balance Sheets Analysis System) database. Industry-years with fewer than six observations are excluded from the analysis (DeFond & Jiambalvo, 1994; Park & Shin, 2004).

Using the estimates for the regression parameters $(\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2)$ we estimate each sample firm's non-discretionary accruals (NDCA) by adjusting the change in sales for the change in accounts receivable (Δ AR) to allow for the possibility that firms could have manipulated sales by changing credit terms (Dechow et al., 1995).

$$NDCA_{it} = \hat{\beta}_0 + \hat{\beta}_1 \frac{\Delta REV_{it} - \Delta AR_{it}}{A_{i,t-1}} + \hat{\beta}_2 \frac{PPE_{it}}{A_{i,t-1}}$$
(3)

And we define discretionary accruals $(DACC_{it})$ for firm *i* in year *t* as the remaining portion of Total accruals:

$$DACC_{it} = \frac{TAC_{it}}{A_{i,t-1}} - NDCA_{it}$$
(4)

Following previous studies (Warfield et al., 1995; Gabrielsen, Gramlich, & Plenborg, 2002) we employ the absolute value of discretionary accruals [Abs(DACC)] as our measure of earnings management. Table 1 shows the descriptive statistics of estimated discretionary accruals, and t-test to examine if the mean discretionary accruals are different from zero did not find evidence of income increasing or decreasing manipulation in our sample, except for the year 2013.

3.3. Model and methodology

Following previous studies (Warfield et al., 1995; Gabrielsen et al., 2002) we employ the absolute value of discretionary accruals [Abs (DACC)] as our measure of earnings management. We estimate a simultaneous equations system by employing a two-stage least squares (2SLS) regression method to control for any endogeneity problems. We measure a firm's

	Mean	Median	SD	Т	Sign
DACC-2011	-0.002	-0.012	0.123	-0.09	0.92
DACC-2012	-0.003	0.003	0.104	-0.14	0.88
DACC-2013	-0.030	-0.021	0.067	-1.84	0.08*
DACC-2014	-0.009	0.001	0.088	-0.50	0.62
DACC-2015	-0.008	-0.006	0.105	-0.52	0.60
DACC-Total	0.005	-0.002	0.123	0.68	0.49

Table 1. Descriptive statistics of estimated discretionary accruals.

* Significantly different from zero at the 0.10 level.

DAC: Discretionary accruals using the modified Jones model.

CSR commitment by externally determined ratings provided by the Corporate Reputation Business Monitor (MERCO) database which has been extensively used in CSR research (see e.g. Benitez et al., 2018; Ramos-Gonzalez et al., 2017). MERCO includes ranking and evaluation of corporate reputation and employer brand of firms in Spain and Latin America. By using MERCO ratings we avoid any possible self-imposed bias in defining and measuring a firm's CSR commitment.

As we want to find out what drives earnings management, we depart from the model by Chih et al. (2008). We investigate the following aspects: CSR, leverage, firm size, financial performance as firm-specific variables. We use multiple regression analysis to find out whether there is a significant relationship between CSR and EM. Our general model is (Model 1):

$$Abs(DACC)_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 LEV_{it} + \beta_3 SIZE_{it} + \beta_4 ROA_{it} + \beta_5 LIST_{it} + \beta_6 BI + \varepsilon_{it}(Model 1)$$

where Abs (DACC)_{*it*} is the absolute value of discretionary accruals in year t, scaled by lagged total assets; CSR is a is the natural logarithm of MERCO index in year t; LEV as end-of-year total liabilities divided by end-of-year total equity; $SIZE_{it}$ is the natural logarithm of total assets in year t; ROA_{*it*} as net income by end-of-year total assets; LIST is a dummy variable (company listed = 1, else = 0); BI is a vector of industry dummies (Manufacturing industry, Construction industry, Commercial industry, Services).

Thus, to control for differences in earnings management incentives, we include in Eq. (5) the following variables based on prior research (Ashbaugh, 2001; Pagano, Röell, & Zechner, 2002; Tarca, 2004; Barth, Landsman, Lang, & Williams, 2006 and Lang, Smith Raedy, & Wilson, 2006). First, we include the natural logarithm of total assets (SIZE) to proxy for the size of a company. The relationship between firm size and earnings management is not clear beforehand. Dichev and Skinner (2002) show that larger firms tend to have more stable and predictable operations and hence report smaller amounts of discretionary accruals (Kim & Yi, 2006). Thus, larger firms appear to have an incentive to engage in more earnings management. However, at the same time, larger firms usually also are prone to closer scrutiny by outsiders and are required to disclose their information more often (Scholtens & Kang, 2013). Hence, it is more difficult for large firms to manage earnings (Chih et al., 2008). Given these conflicting a priori perspectives about the role of firm size in connection with earnings management, their ultimate relationship will have to be decided on the basis of the data. Second, the variable leverage (LEV) controls for the likelihood of bankruptcy. A higher total debt to asset ratio indicates a higher possibility of debt covenant violation, which creates an

incentive to increase reported earnings thorough accruals-based earnings management. Third, the return on assets (ROA) is included as a proxy for the profitability of a firm. Dechow et al. (1995) and McNichols (2000) report that firms with abnormally high (low) earnings have positive (negative) shocks to earnings that include an accrual component and thus, firms with high (low) earnings tend to have high (low) accruals. Finally, Lang, Lins, and Miller (2003) find that cross-listed firms appear to be less aggressive in terms of earnings management and report accounting data that are more conservative. Firms with a foreign exchange listing are presumed to have greater incentives to report transparently because they are subject to restrictions imposed by different countries and are exposed to a higher litigation risk. Therefore, we include a dummy variable to control if is a cross-listed firm or not. We also include industry dummies to control for industry effects on earnings management.

Following Petersen (2009), we use t-statistics based on standard errors clustered at the firm and the year level, which are robust both to heteroskedasticity and within- firm serial correlation.¹

3.4. Data collection procedure

Our sample consists of 100 most reputable Spanish companies according to the MERCO index for the period 2011–2015. Following prior studies, we exclude financial firms from our sample because their earnings are of a different nature than non-financial firms. Our sample comprises 452 firm-year observations.

We collect accounting data for each sample firm from the SABI database and merge this data set with the CSR data from the MERCO database. The final sample is an incomplete panel data of 452 firm-year observations. Panel A of Table 2 shows the distribution of the sample by year. Panel B of Table 2 provides industry breakdown.

4. Results

4.1. Descriptive statistics

The descriptive statistics of the variables are shown in Table 3. The mean value of absolute earnings management moves around 0.085. This value is higher in our sample in

	Number of firm-year observations	Percentage of firm-year observations
	452	
2011	87	19.25
2012	86	19.02
2013	93	20.58
2014	94	20.80
2015	92	20.35
Panel B: Compos	ition by Industry	
	Number of firm-year observations	Percentage of firm-year observations
Manufacturing	82	18.14
Construction	161	35.62
Commercial	55	12.17
Service	154	34.07
Total	452	100

Table 2. Sample characteristics.

Variable	Mean	Median	STD	Min	Max
Abs (DACC)	0.085	0.057	0.112	0.000	0.914
CSR	8.603	8.622	0.269	5.968	9.210
LEV	0.601	0.639	0.244	0.000	0.993
SIZE	14.245	14.401	2.840	7.673	21.583
ROA	0.059	0.041	0.162	-0.732	0.222
Yes (%)	No (%)				
LIST	66.1	33.9			

Table 3. Descriptive statistics.

Where Abs(DACC) is the absolute value of discretionary accruals using Jones modified model; CSR: natural logarithm of MERCO index in year t: LEV: as end-of-year total liabilities divided by end-of-year total assets: SIZE: natural logarithm of total assets in year t; ROA: as net income divided by end-of-year total assets; LIST: Dummy variable (company listed = 1, else = 0).

comparison to that of Choi et al. (2013) and Prior et al. (2008). The descriptive analysis shows that the CSR variable (natural logarithm of MERCO index) shows a mean value of 8.603.

In Table 4 the absolute value of discretionary accruals is displayed by CSR intervals, suggesting a negative relation between CSR and discretionary accruals.

The analysis of the correlation matrix (see Table 5) shows that CSR shows a negative correlation with the absolute value of discretionary accruals (r = -0.049, p < .01). This correlation conforms to Hypothesis 1. Also in Table 5, we observe that the correlation coeffi-

c 0.088 10-25% 0.107 25-50% 0.074 50-75% 0.091 75-90 0.077	Table 4. Discretion	able 4. Discretionary accruals by CSR.		
10-25% 0.107 25-50% 0.074 50-75% 0.091 75-90 0.077	Range of CSR	Mean Abs(DACC)		
>90% 0.059	10-25% 25-50% 50-75%	0.107 0.074 0.091		

Abs(DACC): Absolute value of discretionay accruals using the modified Jones model.

Table 5	Correl	ation	matrix.

Abs(DACC)	CSR	LEV	SIZE	ROA	LIST
1					
-0.049**	1				
0.173*	-0.117*	1			
-0.053**	0.140**	-0.180**	1		
0.012*	-0.115*	-0.227 **	0.119**	1	
0.095	-0.395	0.074	-0.332**	-0.046	1
	1 -0.049** 0.173* -0.053** 0.012*	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

**, * Significantly different from zero at the 0.01 and 0.05 levels, respectively where Abs(DACC) is the absolute value of discretionary accruals using Jones modified model; CSR: natural logarithm of MERCO in year t; LEV: as end-of-year total liabilities divided by end-of-year total assets; SIZE: natural logarithm of total assets in year t; ROA: as net income divided by end-of-year total assets; LIST: as a dummy variable taking the value 1 if it is a listing firm and 0 if it is a no-listing firm.

cient of CSR with size is significantly positive, and significantly negative with leverage and profitability. The correlation coefficient of EM with leverage and profitability is significantly positive, and significantly negative with size.

4.2. Multivariate analysis

The results of Model 1 are presented in Table 6. We use *t*-statistics based on standard errors clustered at the firm and the year level (Petersen, 2009), which are robust both to heteroscedasticity and within-firm serial correlation. The results show a consistently significant negative relationship between CSR practices and absolute discretionary accruals. The discretionary accruals are substantially lower to more socially responsible firms, and this difference is statistically significant at the 0.01 level. These results provide strong evidence for the effect of CSR practices in reducing earnings management by Spanish firms. Our findings provide support for Hypothesis 1.

These results are consistent with the findings of Chih et al. (2008), who argue that companies with greater CSR conduct less earning smoothing. However, these results are in contrast with the findings of Prior et al. (2008), who found a positive impact of earnings management practices on CSR. They explain such a result by the fact that managers who indulge in earnings management practices have two reasons to satisfy stakeholders' interest. First, there is a pre-emptive reason-managers anticipate that stakeholder activism, as a result of earnings manipulation, may damage their position in the firm. A good way of avoiding such activism is to satisfy stakeholders' interests. Second, an entrenchment

 Table 6.
 Regressions of absolute discretionary accruals on independent variables and control variables.

Dechow codel				
Variables	Estimated coefficient	t-statistic		
Intercept	0.276	2.58**		
CSR	-0.026	-2.89***		
LEV	-0.039	-1.08		
SIZE	-0.002	-0.58		
ROA	0.273	3.63***		
LIST	0.002	0.12		
Industry Dummies	Yes			
Year Dummies	Yes			
Ν	452			
R2 (adjusted)	0.114			
F	2.13***			

Model: Abs $(DACC)_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 LEV_t + \beta_3 SIZE_{it} + \beta_2 LEV_t + \beta_3 SIZE_{it} + \beta_3 $	$-\beta_4 \text{ROA}_{it}+$
$\beta_5 \text{LIST}_{it} + \varepsilon_{it}$	

*, **, *** Significantly different from zero at the 0.10, 0.05 and 0.01 levels, respectively, (two-tailed) where Abs(DACC) is the absolute value of discretionary accruals using Jones modified model; CSR: natural logarithm of MERCO index in year t; LEV: as end-of-year total liabilities divided by end-of-year total assets; SIZE: natural logarithm of total assets in year t; ROA: as net income divided by end-of-year total assets; LIST: Dummy variable (company listed = 1, else = 0). Models include industry and year dummies. Regressions are run using two-way cluster standard errors (Petersen, 2009) at the time and firm level which are robust to both heteroscedasticity and within-firm serial correlation.

$\beta_5 \text{LIST}_{it} + \varepsilon_{it}$				
	Kasnik model	Kothari model		
Intercept	0.242	0.274		
•	(1.41)	(2.42)		
CSR	-0.020***	-0.017***		
	(-3.30)	(-2.32)		
LEV	-0.081***	-0.090**		
	(-4.38)	(-5.87)		
SIZE	-0.004	-0.005		
	(-0.64)	(-0.87)		
ROA	0.188	0.027		
	(1.20)	(0.19)		
LIST	0.014	0.015		
	(0.54)	(0.63)		
Industry Dummies	Yes	Yes		
Year Dummies	Yes	Yes		
Ν	452	452		
R2 (adjusted)	0.052	0.040		
F	0.88***	1.00***		

 Table 7.
 Regressions of absolute discretionary accruals on independent variables and control variables.

Model: Abs $(DACC)_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 LEV_t + \beta_3 SIZE_{it} + \beta_4 ROA_{it} + \beta_4$

, * Significantly different from zero at the 0.05 and 0.01 levels, respectively, (two-tailed) where Abs(DACC) is the absolute value of discretionary accruals using Kasnik model or Kotari model; CSR: natural logarithm of MERCO index in year t; LEV: as end-of-year total liabilities divided by end-of- year total assets; SIZE: natural logarithm of total assets in year t; ROA: as net income divided by end-of- year total assets; LIST: Dummy variable (company listed = 1, else = 0). Models include industry and year dummies. Regressions are run using two-way cluster standard errors (Petersen, 2009) at the time and firm level which are robust to both heteroscedasticity and within-firm serial correlation. t-statistic in brackets.

reason-manager tends to collude with other stakeholders as a hedging strategy against disciplinary initiatives from shareholders affected detrimentally by these earnings management practices.

In terms of the control variables, we find that absolute discretionary accruals are increasing in profitability. These results are consistent with the findings of Dechow et al. (1995) and McNichols (2000), who argue that firms with abnormally high (low) earnings have positive (negative) shocks to earnings that include an accrual component and thus, firms with high (low) earnings tend to have high (low) accruals. As a consequence, one is more likely to find a positive relationship for the most profitable firms.

4.3. Robustness test

Previous studies note that the discretionary accruals from the modified Jones model exhibit a mechanically high relationship with the financial performance of a firm. To control for the impact of firm performance on the earnings quality metrics, two alternative earnings quality measures proposed by Kasznik (1999) and Kothari et al. (2005) are used for robustness tests.

Kasznik model extend the models used by Jones (1991) and Dechow et al. (1995). The modified Jones cash flow model, Kasznik model (1999) includes another independent

 Table 8.
 Regressions of absolute discretionary accruals on independent variables and control variables using instrumental variable.

Dechow model				
Variables	Estimated coefficient	z-statistic		
Intercept	0.269	0.80		
CSR	-0.451	-1.77*		
LEV	-0.034	-0.27		
SIZE	-0.018	-1.03		
ROA	0.886	4.53***		
LIST	0.016	0.68		
Industry Dummies	Yes			
Year Dummies	Yes			
Ν	452			
R2 (adjusted)	0.187			
F	3,15***			

Model: Abs $(DACC)_{ii} = \beta_0 + \beta_1 CSR_{it} + \beta_2 LEV_t + \beta_3 SIZE_{it} + \beta_4 ROA_{it} + \beta_5 LIST_{it} + \varepsilon_{it}$

*, **, *** Significantly different from zero at the 0.10, 0.05 and 0.01 levels, respectively, (two-tailed) where Abs(DACC) is the absolute value of discretionary accruals using Jones modified model; CSR: natural logarithm of MERCO index in year t; LEV: as end-of-year total liabilities divided by end-of-year total assets; SIZE: natural logarithm of total assets in year t; ROA: as net income divided by end-of-year total assets; LIST: Dummy variable (company listed = 1, else = 0). Models include industry and year dumnies. The estimation method is instrumental variable, employing the lagged CSR variable (one period) as instrument.

variable that tracks changes in net cash flow from operating activities of the company i in the current year t compared with the previous year t-1. The following equation is the Kasznik model:

$$\frac{\text{TAC}_{i,i}}{A_{i,i-1}} = k_1 \frac{1}{A_{i,i-1}} + k_2 \frac{(\Delta \text{REV}_{i,i} - \Delta \text{AR}_{i,i})}{A_{i,i-1}} + k_3 \frac{\text{PPE}_{i,i}}{A_{i,i-1}} + k_4 \frac{\Delta \text{CFO}_{i,i}}{A_{i,i-1}} + \varepsilon_{i,i}$$
(5)

Kothari et al. (2005) argue that tests related to accounting discretion that do not control for performance are often misspecified. To control for the effect of performance on accounting discretion, they introduce return on total assets (ROA) in the model. ROA is computed as income before extraordinary items scaled by lagged total assets. The following equation is the Kothari model:

$$\frac{\text{TAC}_{i,t}}{A_{i,t-1}} = k_0 + k_1 \frac{1}{A_{i,t-1}} + k_2 \frac{(\Delta \text{REV}it - \Delta \text{AR}it)}{Ai, t-1} + k_3 \frac{\text{PPE}it}{Ai, t-1} + k_4 \text{ROA}_{i,t} + \varepsilon_{i,t} \quad (6)$$

The absolute value of discretionary accruals [Abs(DACC)] is used for earnings quality measure, consistent with the previous test. We ran several specifications of the model. Table 7 shows that the coefficients for CSR are significantly positive. This suggests that when firms show better CSR practices, they are less likely to engage in earnings management. The robustness tests yield results very similar to the previous results and support

hypothesis 1. In terms of the control variables, we find that absolute discretionary accruals are decreasing in leverage and size.

Finally, we employ instrumental variables estimation to control for any endogeneity problems that may arise, considering CSR variable as endogenous and employing the lagged CSR variable (one period) as instrument. Table 8 shows the results which are consistent with the results in Table 6.

5. Conclusions

In recent years, there has been growing consensus on the importance of CSR for the sustainable development of companies, given the competitive advantages resulting from its actions (Weber, 2008; Balmer, 2009; Junquera, del Brío, & Fernández, 2012). CSR has gained much attention from researchers over the past several decades, with most questions focusing on whether a company that is socially responsible is more likely to be financially successful (Foote, Gaffney, & Evans, 2010). Previous literature suggests that ethical managers adopt CSR as a powerful tool to improve operational efficiency and financial performance (Arendt & Brettel, 2010; Hsu & Chen, 2015).

The motivation for firms to engage in CSR has been an unresolved issue for which previous research has yielded mixed results. While some researchers suggest that CSR engagement is induced by the long-term perspectives for sustainable operations of a business, others argue that CSR is a practice used by managers who are involved in opportunistic behaviours (Hemingway & Maclagan, 2004). It could be argued that the motivation of managers for engaging in CSR is always driven by some kind of self- interest, such as hiding earnings management or advancing their careers or other personal agendas (Martínez-Ferrero, Banerjee, & García-Sánchez, 2016; Prior et al., 2008). Under this situation, CSR becomes a form of a window-dressing mechanism.

Previous literature highlights two contradicting views on the relation between CSR and earnings management. Several researchers argue that CSR mitigates agency problems by reducing incentives to engage in earnings management, and enhances transparency in financial reporting (Huang, Louwers, Moffitt, & Zhang, 2008; Wang, Cao, & Ye, 2018). Ethical, political, and integrative theories of CSR suggest that managers in CSR firms are subject to a moral imperative and CSR firms have an incentive to be honest, trustworthy, and ethical in their business process. Such firms, therefore, are more likely to constrain earnings management and maintain transparency in financial reporting (Chen, Gotti, Kang, & Wolfe, 2018; Kim et al., 2012). Inversely, the second perspective suggests that managers who engage in EM may resort to CSR to deal with their stakeholders' activism and vigilance (Prior et al., 2008). In line with this argument, Choi et al. (2013) argue that managers who act in pursuit of private benefits by distorting earnings information are able to entrench themselves through engaging in CSR activities.

This study examines whether a company's CSR practices help mitigate managers' willingness to manage earnings and explores a potential mechanism through which CSR may influence earnings management. Specifically, we examine the relationship between CSR and earnings quality by using Spanish firms from 2011 to 2015. For the analysis, the MERCO index is employed as a proxy for the CSR ratings of Spanish firms. A firm with CSR in mind tends not to manipulate earnings because it is not a responsible practice. And such firms, therefore, should act in a responsible manner when reporting accounting information.

The empirical results conform to our theoretical contention. In particular, we find a negative impact of CSR practices on earnings management, so firms that are more

committed to CSR engage less in earnings management. Socially responsible firms are inclined to foster long-term relationships with stakeholders rather than maximise their short-term profit. In this regard, providing quality earnings is closely connected to CSR activities, especially in that both aim to meet the needs of the stakeholders. These results are consistent with Chih et al. (2008). They find that companies with higher social responsibility engage in less earnings smoothing and less earnings decrease/loss avoidance. Similarly, Shleifer (2004) interprets that earnings manipulation, which many people find ethically objectionable, occurs less often in corporations with a strong commitment to social responsibility. As suggested by Hong and Andersen (2011), more socially responsible firms have higher quality accruals and less activity-based earnings management, both of which impact financial reporting quality.

Analysis of the determinants of accounting quality has important policy implications. Since all EU countries will have consistent financial reporting rules, future improvements in accounting quality will be largely dependent on changes in a country's legal and political system and financial reporting incentives. Changing a country's overall institutional infrastructure is difficult, so addressing financial reporting incentives will perhaps be the least costly means of achieving any further improvements in accounting quality. This study offers insights for policy makers and managers interested in enhancing CSR.

These results must be interpreted with some limitations in mind. As discussed before, we use MERCO index scores to proxy for CSR ratings. MERCO is limited to the 100 leading companies with the best reputation in Spain; hence, our sample excludes a substantial proportion of firms. This data limitation could be avoided in future works by using alternative methodologies to measure CSR, such as the Reputation Quotient (Fombrun, Gardberg, & Sever, 2000). Finally, this study acknowledges the limitation of making generalisation for other countries based on the results from Spanish companies and the MERCO index. Differences in legal, institutional, accounting system, and CSR measurement could lead to differences in the relationship between CSR and earnings management. This study leaves these important questions for future researchers.

Disclosure statement

No potential conflict of interest was reported by the authors.

Note

1. The results are similar if we cluster by firm and include dummy variables for each time period.

ORCID

Jose Manuel Santos-Jaen D http://orcid.org/0000-0003-2832-8158

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