Are firms really socially responsible like what they say? Evidence from Chinese listed firms

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Abstract

Using the sample of 3,890 firms listed in the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) from 2010 to 2020, this paper examines the relationship between CSR spending and CSR disclosure and provides insights on whether firms only use CSR disclosure as a symbolic management tool. It is found that there is a positive association between substantive CSR (CSR spending) and symbolic CSR (CSR disclosure), and this relationship is enhanced by both the adoption of GRI standards and third-party assurance for CSR reports. Further analysis reveals that the positive association between substantive CSR and symbolic CSR is mainly driven by firms' CSR spending committed to primary and definitive stakeholder groups such as shareholders, staff and government, but not for general public stakeholders such as social and environment advocators.

Keywords: Substantive CSR, Symbolic CSR, GRI standards, External assurance, Signaling, Green-washing

1 Introduction

As public companies are facing increasing demands from stakeholders to undertake more corporate social responsibility (CSR), there have been growing concerns and critics of whether firms only make symbolic efforts to improve their CSR images via issuing CSR reports. Because of such concerns, stakeholders would like to understand more about actual CSR engagement of a firm. This study aims to address this issue by examining whether firms' substantive CSR engagement is aligned with their symbolic CSR effort in Chinese listed firms, and identifying the main factors affecting such relationship.

There are three research objectives of our study. First, existing literature typically uses CSR disclosure or CSR rating to examine firms' CSR performance. The relationship between what firms talk about and what they actually do in CSR has not been fully investigated. Therefore, the first goal of this research is to test the relationship between firms' symbolic CSR behavior (e.g. CSR disclosure) and substantive CSR engagement (e.g. CSR spending). Second, the research examines whether the relationship between CSR disclosure and CSR spending is strengthened by the adoption of Global Reporting Initiative (GRI) guideline in CSR reports[1] or by the seeking of external assurance for CSR reports. Third, the research investigates whether the above relationship varies when different stakeholders are concerned.

We use a firm's CSR related payment to specific stakeholder groups (CSR spending) to measure the firm's substantive CSR engagement, including dividend paid to shareholders, interest paid to creditors, investment on environment protection, social donations and tax paid to government. In order to estimate a firm's CSR spending more precisely, we use fitted value from regression analysis as the proxy measure for the firm's CSR spending. Justified by CSR ratings, the fitted values of CSR spending enable us to better estimate a firm's real monetary commitment to CSR even when it is often hard to observe the exact CSR spending for each stakeholder group.

[1]The Global Reporting Initiative (GRI) is an international organization that provides guidelines for businesses, governments, and non-governmental organizations when preparing sustainability reports.

Our paper makes the following contributions to the literature. (1) This is the first research that inventively uses fitted values of firms' CSR spending (justified by CSR ratings) as proxies for firms' substantive CSR engagement and investigates the relationship between firms' CSR spending and CSR disclosure in the Chinese market. (2) We find that the adoption of GRI guideline and external assurance for CSR reports enhance the positive relationship between CSR spending and CSR disclosure. (3) CSR component analysis suggests that the relationship between CSR spending and CSR disclosure is only significant when primary stakeholders such as shareholders, staff and government are concerned. The findings shed light on which stakeholders truly benefit from firms' CSR activities.

The structure of the paper is organized as follows. Section 2 presents the literature review and hypothesis development. Section 3 describes samle, variable and methods. The findings are presented in section 4. Section 5 draws conclusions.

2 Literature review and hypothesis development

The CSR literature suggests that a firm's CSR actions can be explained through three interconnected theories: stakeholder theory (Carroll, 1979), legitimacy theory (Patten, 1992; Lindblom, 1994), and signaling theory (Akerlof, 1970). According to the stakeholder theory, firms are facing growing demands and expectations from different stakeholders to actively engage in CSR activities. Legitimacy theory suggests that bad CSR performers would face the risk of losing legitimacy among stakeholders, which means they may lose customers, suppliers, creditors and investors (Lindblom, 1994). In line with signaling theory, firms with superior CSR commitment are more likely to voluntarily issue CSR reports, adopt GRI and seek external assurance for their CSR reports (Tashman et al., 2019). Signaling theory posits that voluntary disclosures can serve as signals or cues to convey valuable information about the organization's performance, prospects, and commitment to various stakeholders. Healy et al. (2022) emphasize how superior performers strategically convey their advantages through the dissemination of objective indicators that are challenging for inferior performers to replicate, thereby differentiating themselves from others.

In the context of CSR, the signaling theory generally predicts a positive relationship between what firms talk (e.g, CSR disclosure) and what firms actually do (e.g., CSR spending), because companies with higher CSR performance have incentives to proactively inform investors and other stakeholders about their CSR activities (Clarkson et al., 2008; Karaman et al., 2021; Mahoney et al., 2013; Uyar et al., 2020). Clarkson et al. (2008) find a positive association between environmental performance and environment disclosures among firms operating in polluting industries. Similarly, Karaman et al. (2021) find that firms that issue standalone CSR reports have stronger CSR performance than firms that do not issue standalone CSR reports.

On the other hand, two socio-political theories, legitimacy theory and stakeholder theory, state that firms use disclosure to enhance their legitimacy and satisfy shareholders' demands. According to legitimacy theory, CSR disclosure sometimes has been used for altering how people perceive their performance, diverting attention from problems, or trying to create more positive expectations. For example, Lindblom (1994) argues that companies facing threats to their legitimacy are motivated to increase their disclosure practices in order to maintain trust and credibility with stakeholders. Holder-Webb et al. (2009) observe that the content of CSR disclosure is predominantly optimistic and self-laudatory and is simply for enhancing images. Therefore, we propose the following two alternative hypotheses:

H1a: Ceteris paribus, there is a positive relationship between CSR spending and CSR disclosure.
H1b: Ceteris paribus, there is a negative relationship (or no relationship) between CSR spending and CSR disclosure.

3 Methodology

3.1 Sample and data

The initial sample included in this research consists of all the firms listed on the SSE and SZSE from 2010 to 2020. The following process for data screening is carried out to remove: (i) special treatment firms (ST); (ii) firms in the finance and real estate industries (CSRC code=J and K according to China Securities Regulatory Commission (CSRC) classification); (iii) firms with missing data.

The CSR spending data are collected from firms' financial statements and standalone CSR reports. The CSR disclosure data, such as the content of CSR reports, whether the CSR reports follow GRI guidelines and whether the CSR reports are certified by a third party institution, are obtained from the CSMAR database. The CSR ratings data are provided by the third-party agent HeXun database. Other data for control variables are from the CSMAR and WIND databases. To eliminate outliers, the data for all continuous variables are winsorized at the top and bottom 1% of their distributions.

3.2 Key variables

The main explanatory variable in our study is CSR disclosure level (*Disclosure*). CSR disclosure data related to six stakeholders for whom the corresponding CSR spending can be easily found from firms' financial statements are included in our study. The CSR disclosure related to the six stakeholders are measured by six dummy variables, which are assigned the value of 1 or 0 depending on whether a firm discloses i) protection of shareholder interests or not ($ShareholderD$=1 or 0), ii) protection of creditor interests or not ($CreditorD$=1 or 0), iii) protection of employee interests or not ($StaffD$=1 or 0), iv) annual tax of the company or not ($GovernmentD$=1 or 0), v) environment and sustainability or not ($EnvironmentD$=1 or 0), vi) public relations and social & public welfare or not ($SociteyD$=1 or 0). The overall CSR disclosure level is calculated by Equation (1) and each CSR component is treated with equal weight.

$$Disclosure_{i,t} = (ShareholderD_{i,t} + CreditorD_{i,t} + StaffD_{i,t} + GovernmentD_{i,t} + EnvironmentD_{i,t} + SocietyD_{i,t})/6 \quad (1)$$

The dependent variable is CSR spending, which shows a firm's real monetary commitment to CSR. We inventively use fitted values of CSR spending in this study. Specifically, the first step of constructing CSR spending measurement is collecting raw data of CSR related payment to each of the six stakeholders, including dividend paid to shareholders ($ShareholderS$), interest paid to creditors ($CreditorS$), salaries paid to employees ($StaffS$), tax paid to government ($GovernmentS$), investment made on environment protection ($EnvironmentS$) and social donations ($SocialS$). The raw CSR payment data are divided by the firm's total assets ($Asset$) for normalization. Equation (2) is used to calculate CSR spending:

$$Spending_{it} = (ShareholderS_{it} + CreditorS_{it} + StaffS_{it} + GovernmentS_{it} + EnvironmentS_{it} + SocialS_{it})/Asset_{it} \quad (2)$$

The second step is to regress raw CSR spending on CSR ratings and obtain the fitted value of CSR spending in Equation (3). The fitted value can better represent a firm's CSR spending on its stakeholders as the fitted value is justified by CSR rating, a measure of CSR performance, of the firm provided by the third-party agent, HeXun database.

$$Spending_{i,t} = \beta_0 + \beta_1 Rating_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where Spending is the raw CSR spending measurement calculated in Equation (2), and Rating is the measurement of a firm's CSR performance obtained from HeXun database. We do not include control variables in Equation (3) as at the current stage we only want to extract that part of CSR related payment to stakeholders that is justified by the CSR performance of the company.

3.3 Model specification

After obtaining the fitted value of CSR spending from Equation (3), we use it as the dependent variable in Equation (4). Equation (4) is applied to test whether firms' CSR spending is consistent with firms' CSR disclosure. The independent variable *Disclosure* is lagged because CSR spending is made after CSR strategies and CSR budgeting plan are decided and disclosed by companies [2].

$$\widehat{Spending}_{i,t} = \beta_0 + \beta_1 Disclosure_{i,t-1} + \sum_{j=1}^{8} \lambda_j Control_{i,t} + \sum_{k=1}^{12} \gamma_k Years_t + \sum_{m=1}^{17} \delta_m Industries_i + \varepsilon_{i,t} \tag{4}$$

Where $\widehat{Spending}$ is the fitted value estimated from Equation (3), and *Disclosure* is CSR disclosure level calculated in Equation (1). The control variables *Control* include Size, Leverage, ROA, Growth, Independence, SOE, Cash flow, Financial constraints (FC). Definitions are provided in Appendix.

Equation (5) and Equation (6) are used to examine whether the adoption of GRI guideline and external assurance for CSR reports would affect the relationship between CSR spending and CSR disclosure.

$$\begin{aligned}\widehat{Spending}_{i,t} = {} & \beta_0 + \beta_1 Disclosure_{i,t-1} + \beta_2 GRI_{i,t-1} + \beta_3 Disclosure_{i,t-1} \times GRI_{i,t-1} \\ & + \sum_{j=1}^{8} \lambda_j Control_{i,t} + \sum_{k=1}^{12} \gamma_k Years_t + \sum_{m=1}^{17} \delta_m Industries_i + \varepsilon_{i,t}\end{aligned} \tag{5}$$

$$\begin{aligned}\widehat{Spending}_{i,t} = {} & \beta_0 + \beta_1 Disclosure_{i,t-1} + \beta_2 Assurance_{i,t-1} + \beta_3 Disclosure_{i,t-1} \times Assurance_{i,t-1} \\ & + \sum_{j=1}^{8} \lambda_j Control_{i,t} + \sum_{k=1}^{12} \gamma_k Years_t + \sum_{m=1}^{17} \delta_m Industries_i + \varepsilon_{i,t}\end{aligned} \tag{6}$$

The moderating variable *GRI* in Equation (5) is a dummy variable equal to 1 if a company adopts the GRI guideline in CSR reports and 0 if not. The moderating variable *Assurane* in Equation (6)

[2] The main results are robust to modifying the model specification by using contemporaneous CSR disclosure and CSR spending data.

is a dummy variable that equals 1 if a company's CSR reports are verified by an external assurance agent, and 0 if not.

4 Empirical analysis

4.1 Descriptive statistics

The descriptive statistics is presented in Table 1. The mean of *Spending* is 0.190, meaning that the sample firms on average spend 19% of their total asset value on CSR activities. The spending level is relatively high because our measurement of CSR spending contains economic responsibility, such as cash dividend paid to shareholders and salaries paid to employees. The average value for *Disclosure* is 0.524, indicating that in terms of CSR information related to the six stakeholders considered in this study, only half of the relevant CSR information is disclosed by the sample firms.

[Insert Table 1 here]

4.2 The relationship between substantive CSR and symbolic CSR

4.2.1 Results at aggregate CSR level

Table 2 presents the regression results for Equations (4). In Column (1), we regress raw CSR spending on CSR rating to get the fitted value of CSR spending ($\widehat{Spending}_{i,t}$). In Column (2), we evaluate whether CSR spending (fitted value) is consistent with CSR disclosure. The coefficient of *Disclosure* in Column (2) is 0.012, which is positive and statistically significant at 1% level, indicating that the CSR spending is consistent with the CSR disclosure. Our result is consistent with the prediction of the signaling theory.

[Insert Table 2 here]

4.2.2 The moderating effect of GRI and external assurance

Table 3 shows the results for Equations (5) and (6). In Column (1), the coefficient of *Disclosure* $\times$ *GRI* is positive and significant (β=0.007, p<10%), which shows the relationship between CSR spending and CSR disclosure is strengthened by the adoption of GRI guideline. In Column (2), the coefficient of *Disclosure*$\times$*Assurance* is positive and significant (β=0.003, p<1%), indicating that external CSR assurance also enhances the relationship between CSR spending and CSR disclosure. The findings suggest that the credibility of firms' CSR reports can be enhanced by adopting GRI guideline and seeking external assurance for their reports.

[Insert Table 3 here]

4.2.3 Results at CSR component level

To gain more insights into the main driving factors of the relationship between symbolic CSR and substantive CSR, we further analyse such relationship at the CSR component level. The findings regarding the relationship between CSR disclosure and CSR spending for each component are presented in Table 4. The results show that only the coefficients of $ShareholderD$, $StaffD$ and $GovernmentD$ are positive and significant, indicating that the positive relation between spending and disclosure only holds for the three stakeholders but not for the others. These can be explained as follows. First, shareholders and staff are primary stakeholders, who can exert direct influence on CSR strategies and actions (Zhou et al., 2021). As a result, shareholders and staff would be the first targeting stakeholders when firms make CSR commitment. Besides, government is a regulatory stakeholder, making rules and regulations, and overseeing the compliance of companies. Establishing a good relationship with the government through paying taxes is an important CSR commitment, especially for companies operated in China where government has significant power to exert influence on companies (Kong et al., 2022; Wang and Yang, 2023).

[Insert Table 4 here]

4.3 Robustness check

We use propensity score matching (PSM) method to solve the endogenous problem caused by self election bias. The regression results are shown in Table 5 and the coefficient of *Disclosure* is still positive and significant, suggesting that the results are robust after controlling self selection bias.

[Insert Table 5 here]

5 Conclusion

This research uses the fitted value of CSR spending (justified by CSR rating) as a measure for substantive CSR engagement and examine the relationship between substantive CSR and symbolic CSR. We find that while at the aggregate level, there is a positive and significant association between CSR spending and CSR disclosure, further analysis at CSR component level reveals that the relationship is mainly driven by firms' real CSR commitment to primary stakeholders such as shareholders, staff and government. Therefore, it seems firms' CSR strategies can be explained by both signaling purpose (for internal and primary stakeholders) and green-washing purpose (for other external stakeholders). We also find that adopting GRI guideline and seeking external assurance for CSR reports enhance the positive association between CSR disclosure and CSR spending, implying that firms are willing to put more effort in CSR reports to further enhance the credibility of CSR disclosure.

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Table 1: Descriptive statistics

Variable	Mean	SD	Median	Min	Max	Obs
Disclosure	0.524	0.347	0.667	0.001	1.000	29363
Spending	0.190	0.109	0.163	0.046	0.639	29363
Rating	23.214	15.170	21.430	-18.450	90.870	29280
$\widehat{Spending}$	0.190	0.189	0.011	0.160	0.239	29280
GRI	0.053	0.224	0.001	0.001	1.000	29318
Assurance	0.005	0.072	0.001	0.001	1.000	29363
Size	22.054	1.258	21.882	19.671	25.950	29363
Leverage	0.414	0.207	0.404	0.049	0.900	29363
ROA	0.044	0.065	0.042	-0.238	0.226	29363
Growth	0.173	0.419	0.107	-0.561	2.744	29363
Independence	0.375	0.056	0.333	0.001	1.000	29360
SOE	0.338	0.473	0.001	0.001	1.000	29363
Cashflow	0.046	0.083	0.046	-4.270	2.222	29363
FC	1.322	0.068	1.325	0.001	1.469	29363

Table 2: The impact of CSR disclosure on CSR spending

	(1) Spending	(2) $\widehat{Spending}$
Disclosure		0.012***
		(40.84)
Size		-0.015***
		(-157.72)
Leverage		0.072***
		(119.75)
ROA		0.391***
		(220.40)
Growth		-0.001**
		(-1.98)
Independence		-0.071***
		(-42.44)
SOE		0.002***
		(7.42)
Cashflow		0.015***
		(11.15)
FC		0.030***
		(18.85)
Rating	0.001***	
	(17.35)	
constant	0.173***	0.463***
	(150.05)	(146.68)
Years	YES	YES
Industries	YES	YES
Number	29280	25305
F-statistics	301.003	8547.987
R-squared	0.100	0.772
Adjusted R-squared	0.100	0.772

Note: This table presents the regression results of H1 regarding the impact of CSR disclosure on CSR spending at the aggregate level. T-statistics are presented in parentheses. Statistical significance is denoted by *, **, and *** at the 10%, 5%, and 1% levels, respectively.

Table 3: The moderating effect of GRI standards and external assurance

	(1) $\widehat{Spending}$	(2) $\widehat{Spending}$
GRI	-0.003	
	(-0.96)	
Disclosure	0.012***	0.010***
	(39.78)	(29.98)
Disclosure×GRI	0.007*	
	(1.93)	
Assurance		0.001
		(0.97)
Disclosure×Assurance		0.003***
		(2.65)
constant	0.464***	0.470***
	(146.77)	(146.61)
Years	YES	YES
Industries	YES	YES
Number	25271	25305
F-statistics	7001.476	7050.371
R-squared	0.772	0.773
Adjusted R-squared	0.772	0.773

Note: This table presents the regression results regarding the moderating effect of GRI standards and external assurance. T-statistics are presented in parentheses. Statistical significance is denoted by *, **, and *** at the 10%, 5%, and 1% levels, respectively.

Table 4: The impact of CSR disclosure on CSR spending: component analysis

	(1) ShareholderS	(2) CreditorS	(3) StaffS	(4) GovernmentS	(5) SocialS	(6) EnvironmentS
ShareholderD	0.001***					
	(9.80)					
CreditorD		-0.001				
		(-1.15)				
StaffD			0.001***			
			(25.76)			
GovernmentD				0.003***		
				(7.51)		
SociteyD					-0.001	
					(-0.86)	
EnvironmentD						0.933
						(0.88)
constant	0.007***	-0.001	0.317***	0.035***	0.001	20.368
	(10.51)	(-0.70)	(439.71)	(5.94)	(0.95)	(1.21)
Controls	YES	YES	YES	YES	YES	YES
Years	YES	YES	YES	YES	YES	YES
Industries	YES	YES	YES	YES	YES	YES
Number	25239	25271	25239	25271	3905	1155
F statistics	7385.171	2.868	51701.611	514.124	0.854	0.430
R squared	0.731	0.012	0.992	0.247	0.009	0.018

Note: This table presents the regression results regarding the impact of CSR disclosure on CSR spending at the component level. We control for year and industry fixed effects. T-statistics are presented in parentheses. Statistical significance is denoted by *, **, and *** at the 10%, 5%, and 1% levels, respectively.

Table 5: The impact of CSR disclosure on CSR spending: propensity score matching

	(1) $\widehat{Spending}$	(2) $\widehat{Spending}$	(3) $\widehat{Spending}$
Disclosure	0.009***	0.012***	0.012***
	(29.10)	(38.55)	(38.55)
constant	0.502***	0.459***	0.459***
	(158.65)	(136.27)	(136.27)
Controls	YES	YES	YES
Years	NO	YES	YES
Industries	NO	NO	YES
Number	22364	22364	22364
F statistics	7250.632	7359.096	7359.096
R squared	0.745	0.766	0.766
Adjusted R squared	0.745	0.766	0.766

Note: This table presents the results using propensity score matching to solve sample selection bias. We control for year and industry fixed effects. T-statistics are presented in parentheses. Statistical significance is denoted by *, **, and *** at the 10%, 5%, and 1% levels, respectively.

Appendix

Variables	Definitions
Spending	Spending is measured as CSR spending/Assets, which is used to measure substantive CSR activities.
Disclosure	Disclosure level in CSMAR
Rating	Weighted CSR score in HeXun
Assurance	Assurance is measured using a dummy variable equal to 1 if CSR disclosure is externally assured, and 0 otherwise.
GRI	GRI standards are measured using a dummy variable equal to 1 if the CSR report follows GRI standards and 0 otherwise.
ROA	Net income divided by total assets in year t
Size	Natural logarithm of firm's total assets
Leverage	Debt divided by assets
Growth	The growth rate of sales revenue
Independence	The number of independent board members divided by total board members
SOE	It is coded as 1 if the firm is controlled by the government, and 0 otherwise.
Cashflow	Cashflow from operating activities divided by assets
FC	FC is measured by the KZ-Index (Kaplan-Zingales Index), an alternative measurement of reliance on external finance.