

The Signaling Effect of Corporate Social Responsibility in Emerging Economies

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Abstract What signals do firms in emerging economies send to stakeholders when they adopt corporate social responsibility (CSR) practices? We argue that in emerging economies, firms that adopt CSR practices positively signal investors that their firms have superior capabilities for filling institutional voids. From an institution-based view, we hypothesize that the institutional environment moderates the signaling effect of CSR on a firm's financial performance. Based on a sample of firms from ten Asian emerging economies, we find a positive relationship between CSR practices and financial performance. This positive relationship is stronger in the less developed capital market than in the more developed one. The financial benefits of CSR practices are also more salient in the low information diffusion market than in the high one. We emphasize that signaling theory and the institution-based view can jointly contribute to the CSR literature.

Keywords Signaling theory · Corporate social responsibility · Institutional voids · Institutional environments

Introduction

How do firms signal stakeholders? This has been one of the central issues in the management literature (see Connelly et al. 2011 for a review). Recent studies show that firms adopting socially responsible practices can decrease information asymmetries between focal firms and relevant stakeholders (King et al. 2005; Montiel et al. 2012) and improve financial performance (Doh et al. 2010; Ramchander et al. 2012). These studies imply that corporate social responsibility (CSR) practices, defined as voluntary actions taken by firms that go beyond the narrow economic, technical and legal requirements of a firm may signal unobserved attributes by stakeholders, such as suppliers, employees and customers (Fombrun et al. 2000; Carroll 1979). More importantly, these stakeholders value the unobserved attributes that CSR practices embody (Barnett and Salomon 2012; Bhattacharya et al. 2008; de Luque et al. 2008; Surroca et al. 2010).

However, this line of research implicitly assumes that CSR has a similar signaling effect across different institutional environments. Given the tremendous diversity of institutional environments around the world (Chacar et al. 2010; Dixit 2009; Ioannou and Serafeim 2012), the effectiveness of CSR as a mechanism for mitigating information asymmetries may be altered when transmitted to different institutional environments. Signaling theory suggests that the strength of a signal may change for different institutional environments (Connelly et al. 2011; Sanders and Boivie 2004). When institutional environments lack high-

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quality information needed to differentiate one firm from another, relevant stakeholders must search for additional information to assess firm capabilities. For example, based on a sample of 433 automotive plants in Mexico, Montiel et al. (2012) find that high-capability firms are more likely to adopt private management standard certification in a more corrupt environment than in a less corrupt one. Their findings imply that institutional conditions do have an influence on how firms respond to socially oriented activities.

Institutional voids are a prevailing condition permeating emerging economies (Khanna and Palepu 1997; Khanna and Rivkin 2000; Miller et al. 2009; Peng 2003; Tan and Meyer 2011). Lacking quality information in capital, labor and product markets, firms in emerging economies tend to form extensive networks such as business groups or family businesses in order to better control information (Khanna and Palepu 2006; Miller et al. 2009). Furthermore, weaknesses in institutional infrastructure cause firms in emerging economies to carry out certain practices in order to convey their higher capabilities to stakeholders (Montiel et al. 2012). Drawing on signaling theory, we argue that adopting CSR practices is one way for firms to convey information about their capabilities. Specifically, we address the question: What signals do firms in emerging economies send to investors when they adopt CSR practices?

Overall, we argue that a signaling perspective (Spence 1973) enables us to extend and advance two theoretical views on CSR research. First, most prior literature has adopted a resource-based view when probing into the relationship between CSR and financial performance (Orlitzky et al. 2003; McWilliams and Siegel 2011; Surroca et al. 2010). We complement the resource-based view by arguing that firms with more CSR practices have better capabilities than those with fewer such practices. Investors may appreciate firms with more CSR practices. This argument may be particularly salient in emerging economies because firms with CSR practices, such as equal employment and environmental pollution control, signal that they have superior capabilities for filling institutional voids (Khanna and Palepu 1997).

Second, this study invokes a relatively underexplored theoretical view in CSR research, the institution-based view (Ahuja and Yayavaram 2011; Ioannou and Serafeim 2012; Peng et al. 2009). By extending single country-based research to a cross-country setting, we advance the institution-based view by examining how the positive effect of CSR as a signal of a firm's financial performance varies in different emerging economies. Previous research has typically taken place in a single country such as the USA (Dowell et al. 2000; Hillman and Keim 2001; Waddock and Graves 1997), China (Cheung et al. 2012) and Mexico

(Muller and Kolk 2010). Few studies have paid attention to exploring cross-country differences (Chapple and Moon 2005; Maignan and Ralston 2002). In this study, we examine how the strength of signal may vary across different institutional environments. Specifically, how do different levels of market development and market information diffusion moderate the positive signal effect of CSR on financial performance? We argue that firms can distinguish themselves in emerging economies by adopting CSR practices because high-capability firms are able to engage in CSR in a less costly way than low-capability firms. CSR practices that firms adopt may become signals to investors to differentiating firm quality in emerging economies. In a market where there is more information, firms may not be able to “fake” or “muddle through” CSR practices and earn a high premium from investors (Crilly et al. 2012).

For example, because there is more available information in more developed capital markets, investors can assess the capabilities of firms from various reliable sources other than the signaling effect from CSR. The positive signal effect of CSR on a firm's financial performance is not as strong in more developed capital markets as it is in less developed capital markets. Likewise, information diffusion also facilitates stakeholder access to information that can evaluate the quality of the firm. Therefore, the positive relationship between CSR practices and a firm financial performance is weakened in a market that has more information circulation. Based on a sampling of firms from ten Asian emerging economies, we find supportive evidence for the above arguments.

Theory and Hypotheses

Signaling Theory

Signaling theory addresses information asymmetries between two parties where the sources of asymmetric information are mainly concerned with information about quality or information about intent (Stiglitz 2000). Quality concerns how one party shows its unobservable attributes in exchange for a premium from the other party (King et al. 2005; Spence 1973). Intent concerns how to reduce the potential moral hazards that result from the behavior of the exchange parties (Holmstrom 1979; Sanders and Boivie 2004).

In his seminal paper, Spence (1973) argues that one party can use observable mechanisms (such as college diplomas) to demonstrate its unobservable characteristics (such as productivity). Inspired by these insights, management scholars have used signaling theory to explain the potential benefits for firms of adopting socially responsible practices (Montiel et al. 2012; Ramchander et al. 2012;

Turban and Greening 1996). For example, King et al. (2005) find that private management standard certification, such as the ISO 14001 environmental management system certification, sends a signal conveying a firm's unobservable characteristics (such as a commitment to overcome opportunism) to suppliers. Specifically, when firms obtain private management certification, information asymmetries between potential exchange parties decrease because private management certification may offer additional credible information to buyers and lower potential opportunism from suppliers (King et al. 2005).

In this study we argue that, like private management certification, CSR practices may be a signal that reveals additional information to relevant stakeholders, especially in emerging economies. Adopting CSR practices meets two conditions for a quality signal (Spence 1973). First, it takes more costs and effort to adopt CSR practices for low-capability firms than for high-capability firms. Second, the premium for firms to engage in CSR is only sufficient to compensate the costs for high-capability firms. Barnett (2007) argues that firms accumulating their capabilities from socially responsible activities also incur explicit monetary costs and implicit management costs. However, those costs will eventually pay off when firms gain "stakeholder influence capacity," the ability of firms to identify, act on and profit from opportunities for improving stakeholder relationships through CSR practices (Barnett 2007). This capacity is path-dependent and costly to imitate for low-capability competitors, because such capabilities must be built over time through a series of investments (Barnett and Salomon 2012; Dierickx and Cool 1989; McWilliams and Siegel 2011).

CSR and Financial Performance

The relationship between CSR and financial performance has been controversial, arousing serious debate (Devinney 2009; Karnani 2011; Margolis and Walsh 2003; Rivoli and Waddock 2011). Although Margolis et al. (2009) document a small but positive relationship between CSR and financial performance, Orlitzky (2011) finds that mixed results are derived from the distinct training of different disciplines. Specifically, scholars with a management background usually find positive evidence, while scholars from an economics and finance background often find negative or non-significant outcomes. Opponents of CSR usually claim that CSR practices detract from a firm's main goal of profit maximization and are a waste of firm resources (Friedman 1970; Karnani 2011). CSR practices may also be considered agency costs because the link between CSR and corporate financial performance is so socially complex that managers may pursue CSR in order to enhance their personal image at the expense of shareholders (Cennamo et al.

2009; Jensen 2002). However, the purpose of this study is not to join the debate over the legitimacy of CSR. Instead, our objective is to explore what signals firms adopting CSR practices send to investors. Do investors value CSR in capital markets?

A firm that engages in CSR signals to stakeholders the unobservable attributes that make the firm capable of filling institutional voids and considering society at large (Miller et al. 2009; Porter and Kramer 2006, 2011; Rivoli and Waddock 2011). If stakeholders value these unobservable attributes, then relevant stakeholders may provide premiums to firms that adopt CSR practices (Ramchander et al. 2012; Spence 1973). Prior studies have documented that by engaging in CSR, firms may elicit positive responses from employees (Edmans 2011; Greening and Turban 2000), customers (Lev et al. 2010; Walker and Kent 2009) and suppliers (King et al. 2005; Montiel et al. 2012). Nowadays, investors and financial analysts also pay attention to corporate social behavior (Doh et al. 2010; Luo et al. 2014).

For example, Godfrey et al. (2009) argue that CSR practices create positive moral capital that provides shareholders with insurance-like protection based on a firm's relationship-based intangible assets. In addition, Barnett (2007) argues that engaging in CSR shows that a firm is willing to allocate reasonable resources to maintain a sustainable relationship with stakeholders. This endeavor is important for a firm because it helps strengthen its access to critical stakeholder resources, which is especially crucial for firms in business environments that require sociopolitical legitimacy (Wang and Qian 2011). In addition, the intangible assets resulting from CSR not only mitigate a firm's financial loss when it suffers unintended negative events, but also helps firms create more opportunities with customers and business partners (Godfrey et al. 2009; McWilliams and Siegel 2011; Porter and Kramer 2006; Surroca et al. 2010).

Khanna and Palepu (1997) argue that in emerging economies, it is difficult to communicate with stakeholders about the quality of a firm when the local institutional infrastructure is poor. They also argue that such institutional voids in capital, labor and product markets result in information problems, such as a lack of quality information. To control and assimilate information, firms in emerging economies tend to form closed networks such as business groups and family businesses (Khanna and Palepu 2006; Miller et al. 2009). Lacking quality information because of weaknesses in institutional infrastructure, firms in emerging economies may endeavor to go the extra mile, such as adopting standard certifications to show their capabilities (Montiel et al. 2012). Prior research has suggested that in emerging economies, CSR practices may be seen as a mechanism for firms to fill the institutional voids

caused by lax state regulation over corruption, legal enforcement and social services (Benabou and Tirole 2010; Levy and Kaplan 2009; Matten and Moon 2008; Visser 2009). Firms with the capability of engaging in CSR convey signals to investors that distinguish their capabilities from their numerous competitors. Thus, investors may place more value on firms with CSR practices (Cheung et al. 2010; Doh et al. 2010; Shen and Chang 2009). Specifically:

Hypothesis 1 CSR practices are positively related to firm financial performance in emerging economies.

The Moderating Effect of Capital Market Development

Although CSR sends a positive signal to stakeholders for the evaluation a firm's potential value, the strength of such a signal may vary in different institutional environments (King et al. 2005; Montiel et al. 2012). Extending previous research, we argue that in emerging economies, the signaling effect of CSR on firm financial performance may be stronger in *less*-developed capital markets than in *more*-developed capital markets. In more-developed capital markets, stakeholders can easily access various sources of information, such as analyst stock recommendations, to evaluate the quality of a firm's CSR practices. Relevant stakeholders have a greater ability for the detection of CSR practices, which are only symbolic and just attempting to respond to stakeholder pressure (Crilly et al. 2012). Also, firms that muddle through CSR practices may be punished by customers (Wagner et al. 2009) and investors (Godfrey et al. 2009).

Stakeholders in more developed capital markets may assume that firms are aware of social issues. There is considerable non-CSR-related information available for stakeholders to evaluate a firm's quality in the more developed capital markets (Andrade and Chhaochharia 2010). In these markets, it is relatively easy for investors to access information through public disclosure or media reports, and assess a firm's business models and its relationships with its stakeholders. The signaling effect of CSR as a capability differentiator becomes diluted in a market with an abundance of high-quality information (Sanders and Boivie 2004).

In less developed capital markets, because there is less accessible information for stakeholders, information concerning a firm's CSR practices may become more useful for stakeholders in evaluating a firm's potential quality and value (Montiel et al. 2012; Sanders and Boivie 2004). In less developed capital markets, stakeholders may not be able to access various information sources and rather have to rely on a firm's social awareness as embodied in CSR practices to evaluate a firm's potential quality and value.

Overall, in less developed capital markets where CSR is less predominant, social awareness, as evidenced by CSR practices, may become a valuable tool for increasing a firm's financial performance. In contrast, in more developed capital markets there is information from various signals other than CSR. Stakeholders, therefore, may not necessarily rely on signals sent from CSR practices to assess a firm's quality. In other words, firm financial performance returns to its potential value over traditional (non-CSR-related) business models. Thus:

Hypothesis 2 The positive relationship between CSR practices and firm financial performance is more salient in less developed capital markets than in more developed capital markets.

The Moderating Effect of Information Diffusion

Institutional voids in capital, labor and product markets also highlight the relevance of circulating information. The media plays an important role in circulating information in external environments (Deephouse 2000; Kennedy 2008; Petkova et al. 2012; Zavyalova et al. 2012). Through its own bandwidth and outlets, media can create dynamic communication with stakeholders in terms of disclosure or surveillance (Barry and Fulmer 2004). Therefore, mass communication is considered a valuable approach to circulating information among the various stakeholders (Deephouse 2000). Since the concept of CSR is not as popular in emerging economies as it is in the Western countries, firms that adopt CSR practices may easily set themselves apart from others and thus attract media attention. Journalists willingly cover corporate social practices since such activities are relatively rare in emerging economies.

If firms have several CSR practices, media coverage will facilitate the circulation of the information to the relevant stakeholders. However, information is not just limited to good news. When information travels freely in the market, stakeholders may also access coverage of negative corporate behavior such as product recalls (Rhee and Haunschild 2006; Zavyalova et al. 2012) or inhumane working conditions (Smith et al. 2011). The media can also reveal the merely symbolic gestures of window-dressing CSR practices. For example, Dickson and Eckman (2008) examine how the media portrayed the public reporting of five publicly traded apparel and footwear firms regarding their labor standards and working conditions. They find that the media assumes responsibility for reporting objective facts and monitoring corporate social behavior. In other words, news coverage includes not only the positive activities claimed by corporate spokespersons but also extensive details on labor violations found by nonprofit

organizations. Zavyalova et al. (2012) trace activities in the toy industry in the USA from 1998 to 2007 and find that the greater the magnitude of a firm's wrongdoing, the less positive media coverage the firm will receive. Furthermore, they also find that a firm's ceremonial actions, such as charitable donations, amplify the negative tenor of media coverage of the firm.

In emerging economies where institutional voids are prevalent, the media may serve as an alternative institutional intermediary and circulate information in capital, labor and product markets. In a market where information diffusion is low, stakeholders have difficulty in evaluating a firm's quality through media coverage. Due to a lack of media surveillance, stakeholders cannot judge whether or not firms have exaggerated their social awareness. In this vein, there is a chance that the positive relationship between CSR and financial performance may be magnified. In contrast, in a market where information diffusion is high, firms may not easily fake or muddle through CSR practices and earn excessive market premiums. Therefore, the financial benefits of CSR practices become less salient in a high information diffusion market. Thus:

Hypothesis 3 The positive relationship between CSR practices and firm financial performance is more salient in a lower information diffusion market than in a higher information diffusion market.

Methods

Sample and Data Sources

We collected data from multiple sources in order to investigate whether the signaling effect would change with differences in institutional environments. Our sample firms are from Credit Lyonnais Securities Asia (CLSA) corporate governance reports. Headquartered in Hong Kong, CLSA is the leading and longest running independent brokerage and investment group in the Asia-Pacific markets. In 2001, CLSA issued its first report on the corporate governance practices of ten Asian emerging economies (China, Hong Kong, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand). CLSA chose large firms and firms with high investor interest as its targets. CLSA had financial analysts evaluate firm behavior for different categories of social awareness based on objective information such as financial reports and gave a score to each item of interest. Our sample is from the first three reports on firms from these ten Asian countries. The reports were conducted in 2001, 2002 and 2004 (no investigation was conducted in 2003). The CLSA data have been previously used by studies such as Chan and Cheung (2012), Durnev

and Kim (2005) and Doidge et al. (2007). Prior scholars have also verified the sample selection procedures and reliability of the CLSA data (see Khanna et al. 2006 for details). Corporate financial data for this study were collected from the Thomson Reuters Datastream. Institutional data were collected from The World Bank's World Development Indicators database. Table 1 provides the sample distribution by countries and by industries for each sampling year.

Dependent Variable

This study examines whether or not CSR practices can send a positive signal to stakeholders and influence firm financial performance. We used Tobin's q as a proxy for financial performance because accounting-based measures (such as return on assets) usually reflect a firm's efficiency of operation, indicating prior utilization of firm resources. Thus, they are not in line with our theoretical arguments. Tobin's q was calculated by the sum of the market value of equity plus short-term debt plus long-term debt divided by total assets (Chung and Pruitt 1994). Because Tobin's q emphasizes the potential total value of a firm, it enables us to capture whether or not stakeholders value the intangible assets derived from a firm's social awareness (Hillman and Keim 2001; King and Lenox 2002; Surroca et al. 2010).

Explanatory Variables

The dependent variable in this study is CSR, measured by the CSR score in the CLSA reports. For each sample firm, CLSA had financial analysts evaluate whether or not the focal firm: (1) has the existence of explicit policy emphasizing strict ethical behavior; (2) does not employ underaged workers; (3) has an explicit equal employment policy; (4) adheres to specific industry guidelines on sourcing of materials; (5) has an explicit policy on environmental responsibility; (6) abstains from doing business with countries whose leaders lack political legitimacy. If a firm achieves all of these requirements, it obtains 100 points. If a firm achieves half of them, it obtains 50 points, and so forth. These dimensions meet the spirit of CSR because they are largely comparable to the Ten Principles initiated by the United Nations Global Compact (UNGC) for firms committed to the sustainability and responsible business practices needed to participate. The Ten Principles include four main areas: human rights, labor, environment and anti-corruption. The CSR evaluation conducted by CLSA largely covers the above four areas. Although the items CLSA investigated are relatively simple, the advantage is that the criteria are applicable to firms across different industries. Therefore, the CSR scores issued by CLSA are in line with

Table 1 Sample distribution

Country/region	2001			2002			2004			Full sample		
	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD
Panel A: Summary statistics of corporate social responsibility scores by country												
China	11	57.58	11.46	32	57.29	20.26	48	78.46	26.62	91	68.49	25.26
Hong Kong	18	75.01	20.80	28	70.82	20.60	38	85.08	14.38	84	78.17	19.00
India	35	84.76	19.54	45	85.92	13.73	38	95.17	10.18	118	88.56	15.36
Indonesia	13	30.76	14.97	14	39.27	16.80	20	73.34	25.01	47	51.41	27.76
Korea	9	66.66	20.41	13	82.05	15.89	39	96.58	8.70	61	89.07	16.64
Malaysia	22	59.09	14.29	29	70.70	13.09	26	65.40	11.46	77	65.59	13.60
Philippines	9	81.48	17.56	9	85.19	19.44	7	83.30	0.00	25	83.32	15.21
Singapore	23	55.07	14.60	27	59.26	19.80	19	62.28	27.12	69	58.69	20.53
Taiwan	24	79.17	17.19	32	77.60	11.66	33	90.39	12.52	89	82.77	14.74
Thailand	11	63.65	12.52	14	64.96	15.34	17	72.56	8.18	42	67.69	12.48
Total	175	67.71	22.47	243	70.41	20.68	285	82.57	20.37	703	74.67	22.00
Panel B: Summary statistics of corporate social responsibility scores by industry												
Industry	2001			2002			2004			Full sample		
	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD
Basic materials	11	68.19	20.35	14	73.80	19.29	19	90.35	13.95	44	79.55	19.64
Consumer goods	30	66.66	28.36	39	65.81	22.59	49	76.53	26.11	118	70.48	25.91
Consumer services	26	57.05	18.97	32	60.93	19.22	38	75.00	21.13	96	65.45	21.26
Financials	12	59.72	18.06	26	68.58	19.62	27	80.24	19.63	65	71.79	20.60
Health care	11	81.82	30.23	11	89.39	21.44	7	66.67	41.93	29	81.03	30.77
Industrials	33	62.13	17.82	43	65.73	17.82	65	83.84	17.91	141	73.24	20.32
Oil and gas	4	66.65	19.23	10	73.32	21.07	8	85.40	10.68	22	76.50	18.29
Technology	27	79.63	18.68	36	81.94	12.82	39	92.73	12.56	102	85.45	15.49
Telecommunications	12	72.22	19.24	15	64.43	28.07	17	86.26	10.60	44	74.99	22.00
Utilities	9	74.08	18.83	17	77.45	16.59	16	85.42	15.94	42	79.77	17.07
Total	175	67.71	22.47	243	70.41	20.68	285	82.57	20.37	703	74.67	22.00

mainstream business practices and societal expectations for CSR. Prior research has also used these scores as a measure of CSR (e.g., Cheung et al. 2010).

This study also examines whether capital market development and newspaper circulation in a market may moderate the relationship between CSR and financial performance. Prior studies have suggested that a country's market capitalization is positively related to capital market development (Beck et al. 2010) and financial market openness (Chinn and Ito 2006). We therefore measured *market development* by total market capitalization (calculated by the share price times the number of shares outstanding). We also scaled it by each country's gross domestic product (GDP) in order to adjust the effect for size. Lastly, Dyck and Zingales (2004) suggest that the circulation of daily newspapers can represent diffusion of the press in a country. We therefore measured *information diffusion* by the circulation figures of daily newspapers scaled by the country's population.

Control Variables

Control variables are classified into two groups. The first group consists of two institutional controls. *GDP per capita* controls for the national wealth that reflects a national economic development. Net foreign direct investment (FDI) as a percentage of GDP controls for influence from foreign multinational enterprises (MNEs). These two variables largely account for formal institutional and information mobility at the country level (Andrade and Chhaochharia 2010; Beck et al. 2010; North 1990). The second group consists of four firm-level variables. To control for firm capabilities, we included *firm size* (measured by log-transformed total assets) and *slack* (measured by current assets divided by current liability). Prior research has suggested that because of ownership structure in emerging economies, family businesses are substantially different from non-family businesses (Peng and Jiang 2010). Miller et al. (2009) find that family businesses can

receive and control information better than non-family businesses in emerging economies because they have cohesive internal and extensive external connections. Family businesses have better capabilities for controlling relevant information. Therefore, we included *family business*, a dummy variable controlling for family ownership, and *cross-listing*, a dummy variable controlling for overseas public listing. We did this because firms from emerging economies that are listed in foreign markets may have a higher propensity for adopting new practices such as CSR, and investors are better able to acquire abundant and high-quality information on cross-listed firms (Bell et al. 2011; Peng and Su 2014). In addition, we added *year dummies* and *industry dummies* to control for unobserved heterogeneity. Lastly, we lagged all explanatory variables by 1 year in order to minimize concerns stemming from reverse causality.

Method of Analysis

We used multilevel regressions to examine the effect of CSR practices on subsequent financial performance in ten emerging economies. A multilevel technique was chosen for two reasons. First, firms in different countries may be more strongly associated with the home countries where they are located rather than with other countries, since firms are nested within specific countries (Hitt et al. 2007; Kozlowski and Klein 2000; Rabe-Hesketh and Skrondal 2008). For example, Chinese firms may be systematically influenced by Chinese culture when their managers make decisions on CSR practices. Second, in dealing with embedded structural data, conventional ordinary least squares (OLS) may underestimate standard errors and thus overestimate the estimated coefficients. OLS fails to consider that observations within the same cluster may share some similarity (Kozlowski and Klein 2000). Multilevel methods can address this possible bias by including random components of clusters in the statistical model (Rabe-Hesketh and Skrondal 2008). We calculate the intraclass correlation (IC) in order to further verify the degree of homogeneity of firms within different emerging economies. The IC value represents how much the total variance is attributed to the cluster level. In our case, we have a 28 % variance of CSR practices in emerging economies that can be attributed to the country level. Although there is no agreement on the acceptable IC value, prior literature suggests that a reasonable IC value ranges from 0 to 0.50 (James 1982; Ostroff and Sckmitt 1993).

Results

Table 1 reports the descriptive statistics from CSR scores by country (panel A) and by industry (panel B). Generally

speaking, we observed an increasing trend toward CSR scores. For example, the mean CSR scores increase from 67.71 in 2001 to 70.41 in 2002 and to 82.57 in 2004, but the standard deviations of the CSR scores do not show any patterns. This implies that although firms gain social awareness gradually in emerging economies, variations exist among different countries and industries. Table 2 provides descriptive statistics and correlations for all variables in this study. We observed that CSR scores range from 0 to 100 with a mean of 74.67 and a standard deviation of 22, implying that not every firm in emerging economies can easily meet the basic dimensions of CSR. In addition, we observed correlations among institutional variables such as market development, information diffusion, GDP per capita and FDI. These results provided no surprises since a better institutional development usually attracts more FDI and causes more information to be circulated in the market. However, we examined the variance inflation factors (VIFs) in order to lower the concern of multicollinearity. We found a range from 1.16 (family business) to 9.85 (GDP per capita) with an average of 3.54, which is below the critical value of 10 (Kennedy 2003).

Table 3 provides the results of the multilevel regressions. Model 1 shows the effects of control variables on a firm's Tobin's q . In line with prior literature (Peng and Jiang 2010), family businesses and firms that have more resources have better financial performance. Model 2 in Table 3 shows that CSR practices are positively related to the subsequent Tobin's q ($\beta = 0.006$, $p < 0.01$), supporting Hypothesis 1 that CSR practices contribute to subsequent firm financial performance. In Model 3, we find that the coefficient of the interaction of CSR and capital market development is significant ($\beta = -0.051$, $p < 0.05$). Following Aiken and West (1991), we plotted the interaction effect of CSR practices and market development. Figure 1 depicts a positive relationship between CSR practices and firm financial performance generally, but the positive relationship is more salient in less developed capital markets than in the more developed capital markets. Hypothesis 2 is therefore supported, suggesting that CSR practices have a higher signal effect in less developed capital markets than in the more developed ones.

Hypothesis 3 suggests that information diffusion influences the extent to which stakeholders' access information and moderates the signal effect of CSR practices in emerging economies. In Model 4, we find that the coefficient of the interaction of CSR and information diffusion is significant ($\beta = -0.006$, $p < 0.05$). Figure 2 shows the moderating effect between CSR and information diffusion on Tobin's q . We can observe that firms in lower information diffusion markets enjoy more financial benefits from CSR practices than those in higher information diffusion markets. Hypothesis 3 is therefore supported.

Table 2 Descriptive statistics and correlations

Variables	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Tobin's q	1.72	1.68									
2. CSR	75.22	21.91	0.16								
3. Market development	110.51	103.64	-0.04	-0.03							
4. Information diffusion	4.81	0.82	-0.07	0.13	0.45						
5. GDP per capita	8.23	1.48	-0.13	-0.03	0.71	0.86					
6. FDI	0.05	0.07	-0.05	-0.15	0.69	0.37	0.53				
7. Firm size	17.31	2.68	-0.23	0.10	-0.30	-0.07	-0.10	-0.31			
8. Slack	0.16	0.15	0.26	-0.06	0.06	0.07	0.13	0.02	-0.18		
9. Family business	0.31	0.46	0.12	0.06	0.16	0.08	0.09	0.05	-0.05	0.00	
10. Cross-listing	0.14	0.35	-0.04	-0.03	0.43	0.15	0.26	0.40	-0.09	-0.04	0.05

$n = 703$ firm-years; correlations larger than $|0.13|$ are significant at $p < 0.01$

Table 3 Results of multilevel regressions on Tobin's q

	Model 1	Model 2	Model 3	Model 4
GDP per capita	-0.931 (0.774)	-0.965 (0.629)	-1.326 (0.863)	-0.374 (1.107)
FDI	0.293 (1.169)	0.198 (0.993)	-0.412 (1.101)	-0.164 (1.120)
Firm size	-0.154*** (0.028)	-0.152*** (0.025)	-0.128*** (0.032)	-0.144*** (0.033)
Slack	1.473*** (0.343)	1.504*** (0.287)	1.514*** (0.339)	1.541*** (0.343)
Family business	0.154 (0.136)	0.156 ⁺ (0.089)	0.151 (0.132)	0.166 (0.134)
Cross-listing	0.084 (0.125)	0.082 (0.124)	0.078 (0.122)	0.071 (0.121)
CSR		0.006** (0.002)	0.011* (0.005)	0.033* (0.015)
Market development ^a			4.958* (2.275)	
CSR \times market development ^a			-0.051* (0.024)	
Information diffusion				0.299 (0.299)
CSR \times information diffusion				-0.006* (0.002)
Constant	-0.931 (0.774)	-0.965 (0.629)	-1.326 (0.863)	-0.374 (1.107)
Industry-fixed effect	Yes	Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes	Yes
Log likelihood	-1,008.23	-1,004.16	-1,000.89	-1,000.69
N	703	703	703	703

Standard errors are in parentheses

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Market development is measured by market capitalization divided by 1,000

Robustness Tests

We have undertaken additional tests to ensure the robustness of our findings. First, we used another measure as a proxy for market development. We argue that the more developed a capital market is, the more firms may be attracted to list. Therefore, we consider the number of firms listed in stock markets as reflecting market development in a country. Table 4 shows the results of using listed firms for measuring market development. Hypothesis 2 remains supported.

Second, some may be concerned that there is an issue of endogeneity in our main relationship between CSR practices and firm financial performance (Garcia-Castro et al.

2010). Therefore, we used instrumental variables to lower the concern of endogeneity. Specifically, we had to find a set of instrumental variables related to CSR practices but unrelated to firm financial performance. We found that *national culture* serves as a good instrument in our case because managerial decisions on adopting CSR practices may be influenced by the national cultures to which they belong (Ioannou and Serafeim 2012). However, national cultures are only remotely related to firm financial performance. We used Hofstede's national cultures (i.e., power distance, uncertainty avoidance, individualism and masculinity) as our instruments. After regressing for cultures on CSR practices, we obtained an estimated value for CSR scores. We then examined whether this estimated CSR still

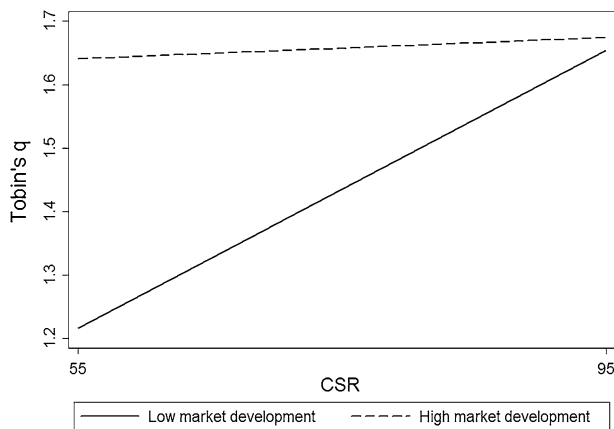


Fig. 1 Interaction between CSR practices and market development

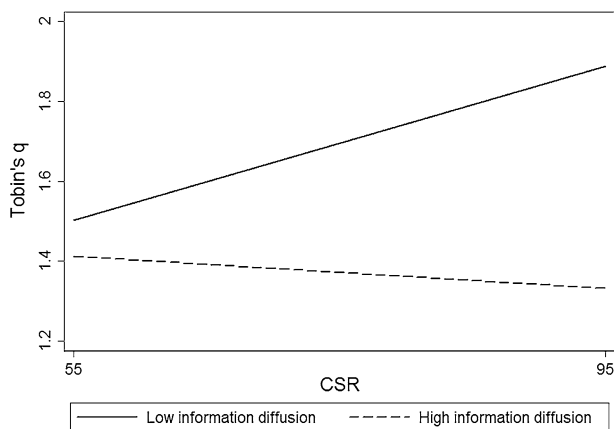


Fig. 2 Interaction between CSR practices and information diffusion

positively relates to firm financial performance. Table 5 shows the results of the two-stage least squares (2SLS) regression on Tobin's q . In Model 1 of Table 5, we show that national cultures are generally related to CSR practices. Power distance and uncertainty avoidance are positively related to CSR, while individualism and masculinity are negatively related to CSR. These results suggest that national cultures serve as good instruments. More importantly, in Model 2 of Table 5 we find that the estimated CSR is still positively related to Tobin's q . The concern over endogeneity is, therefore, lowered in our study.

Discussion

We draw on signaling theory and institutional voids literature to argue that the signaling effect of CSR on firm value may vary because of differences in institutional environments. We argue that using CSR as a mechanism to mitigate information asymmetries may change its effectiveness when it is transmitted to different institutional environments. This

Table 4 Results of multilevel regressions on Tobin's q

	Model 1
GDP per capita	-1.159 (0.933)
FDI	-0.206 (1.065)
Firm size	-0.140*** (0.026)
Slack	1.519*** (0.286)
Family business	0.155+ (0.089)
Cross-listing	0.076 (0.124)
CSR	0.010*** (0.003)
Market development ^a	8.249 (5.620)
CSR × market development ^a	-0.095* (0.044)
Information diffusion	
CSR × information diffusion	
Constant	5.269** (1.848)
Industry-fixed effect	Yes
Year-fixed effect	Yes
Log likelihood	-1,001.87
<i>N</i>	703

Standard errors are in parentheses

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Market development is measured by the number of listed firms divided by 100

is because institutional environments influence the quality and availability of information circulated in the market. Therefore, a positive relationship between CSR practices and corporate financial performance will be contingent upon institutional environments such as market development and information diffusion. Using a sample from ten Asian economies, we find that the positive effect of CSR on corporate financial performance is more salient in a market environment where the market development and information diffusion are lower. Our findings generate theoretical contributions and managerial implications.

Contributions

First, this study contributes to the CSR literature by introducing signaling theory. We suggest that signaling theory is an alternative theoretical lens that can reveal how CSR contributes to corporate financial performance. We argue that CSR practices per se may signal the unobserved qualities of firms to relevant stakeholders in a market lacking well-developed institutions. We argue that in emerging economies, firms can fill institutional voids by adopting CSR practices. These CSR practices may send a positive signal for market evaluation. Although some prior studies have suggested a positive relationship between CSR and financial performance from the resource-based view (McWilliams and Siegel 2011; Orlitzky et al. 2003; Surroca et al. 2010), they have paid less attention to the macro-institutional environment. Drawing on signaling

Table 5 Results of 2SLS regressions

	Model 1 CSR	Model 2 Tobin's <i>q</i>
GDP per capita	250.192*** (92.735)	-0.844* (0.295)
FDI	2.754 (19.905)	0.061 (0.850)
Firm size	0.395 (0.540)	-0.080*** (0.016)
Slack	-1.819 (4.760)	1.625*** (0.320)
Family business	-0.724 (1.500)	0.266** (0.093)
Cross-listing	0.296 (2.387)	0.092 (0.113)
Power distance	13.720* (0.5.892)	
Uncertainty avoidance	3.055** (1.128)	
Individualism	-18.228* (8.375)	
Masculinity	-3.072* (1.519)	
CSR		0.011*** (0.003)
Constant	-1,057.284* (416.313)	3.329*** (0.532)
Industry-fixed effect	Yes	Yes
Year-fixed effect	Yes	Yes
R ²	0.4067	0.2810
N	703	703

Standard errors are in parentheses

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

theory, we argue that in emerging economies, engaging in CSR signals a firm's unobserved characteristics (i.e., superior resources and capabilities). Our argument is in line with, but different from, earlier resource-based studies on CSR. Most previous studies document that the premium for CSR practices for firms comes from intangible assets such as organizational culture, reputation and innovation (McWilliams and Siegel 2011; Orlitzky et al. 2003; Surroca et al. 2010). We complement this line of research by considering CSR practices per se (in and of themselves) as valuable resources for firms to adopt. However, not every firm in emerging economies can efficiently adopt CSR practices. The premium derived from CSR is only sufficient to compensate for the costs for high-capability firms. It is insufficient to offset the costs for low-capability firms that adopt CSR practices (King et al. 2005). In other words, like the college diploma famously studied by Spence (1973), CSR practices as a signal of quality can create a premium for firms, regardless of whether or not the practices lead to intangible assets such as innovation or organizational culture (Surroca et al. 2010).

Second, we invoke an institution-based view to investigate under what institutional conditions CSR is more valuable (Ahuja and Yayavaram 2011; Peng et al. 2009). In emerging economies, firms adopting CSR practices can serve as mechanisms for filling institutional voids. However, we further find that the positive signal effect of CSR on financial performance is contingent upon macro-institutional

environments (i.e., capital market development and market information diffusion). When capital market development is low and conveys less high-quality information for assessing a firm's capabilities, the positive signal effect of CSR becomes pronounced. Likewise, when the market information diffusion is high, more (CSR-related or -unrelated) information becomes accessible. Stakeholders can then easily evaluate the quality of a firm. The signal effect of CSR practices becomes weak in a high information diffusion market. In summary, institutional environments matter, and CSR is a crucial dimension of how institutions matter. However, our study is different from prior studies that suggest institutions constitute different patterns of corporate social behavior in different countries (Chapple and Moon 2005; Ioannou and Serafeim 2012; Maignan and Ralston 2002). Our study further examines to what extent the value of CSR may vary because of the moderation of external environments.

Third, this study provides new perspectives on the traditional debate over the relationship between CSR and financial performance by pointing out the moderating role played by institutional environments (King et al. 2005; Sanders and Boivie 2004; Montiel et al. 2012). Our findings resonate with the argument that CSR has a neutral impact on financial performance (McWilliams and Siegel 2000). We suggest that the effect of CSR and firm financial performance may be magnified in a market that is low in capital development or low in information diffusion. This distortion occurs because institutional environments make it difficult for stakeholders to access information and discern the quality of CSR practices. However, as institutions become more developed and more information is available in the market, CSR practices gradually lose their value as a signal for a firm's high capability status. Determining the value of the firm reverts back to fundamental business models. CSR then has a neutral impact on financial performance (McWilliams and Siegel 2000). Our study contributes to the literature regarding the relationship between CSR and financial performance by introducing a new perspective based on market information availability (Sanders and Boivie 2004).

Managerial Implications

Our findings also provide important managerial implications for practices. In an environment where institutions are not well developed, it is a challenge for managers to convey the potential quality of the firm to relevant stakeholders. We suggest that firms adopt CSR practice to send a signal to latent stakeholders and elicit positive responses. For example, firms may voluntarily disclose their financial and non-financial reports. Also, firms may go the extra mile and take care of their employees in such areas as promotion for women and minorities and the embracing of diversity and inclusiveness. Firms may also fully disclose their production

processes and materials to show that they are doing business in a transparent manner. By so doing, firms may not only fill the institutional voids in capital, labor and product markets, but also demonstrate their capabilities to go beyond narrow economic and legal requirements.

However, our study also provides the caveat that simply adopting various CSR practices may not be a panacea for enhancing corporate financial performance. As Margolis et al. (2009) well argue, we may expect that engaging in socially oriented activities has a positive influence on firm performance, but there is no reason to expect a large effect because the main driver of economic performance should be core business functions. Our findings echo the arguments of Margolis et al. (2009). We find that the positive signaling effect of CSR on firm performance dwindles with market development and information diffusion. Overall, managers should still pay attention to their business models and their core competency in order to maintain a sustainable competitive advantage.

Limitations and Future Research Directions

Our study's limitations suggest a number of future research directions. First, we follow Cheung et al. (2010) and Peng and Jiang (2010) and limit our empirical investigation to ten emerging economies in Asia, which helps us control for region-specific heterogeneity. It would be interesting to see future research on whether our findings hold for different regions. Second, we neither know what extent firms actually implement CSR practices (Westphal and Zajac 1994), nor can we ascertain whether firms adopt CSR practices because of proactive efforts or isomorphic pressures (Guler et al. 2002). However, we do not argue that each firm can effectively duplicate and internalize CSR as a strategy to increase firm value (Szulanski and Winter 2002). Instead, we argue that there is a signaling effect for firms that adopt CSR. Such a signaling effect may contribute to a firm's financial performance in emerging economies, just as college degrees add value for candidates in labor markets. Future research can improve our study and determine whether there are problems with adverse selection (i.e., hidden information) or moral hazards (i.e., hidden actions) behind CSR practices. Lastly, our data do not allow us to test for the types of institutional voids firms fill by using CSR practices. Future research may collect more detailed information in order to offer more nuanced views.

Conclusion

What kind of signals do firms in emerging economies that adopt CSR practices send to investors? Our answer is (1) that CSR is a signal of high capabilities that may create

value for firms and (2) that this effect is moderated by the development of institutions that facilitate the availability of high-quality information. In conclusion, if this article contains only one message, we would like it to be a sense of not only the strong explanatory and predictive power of CSR as a signal for a particular firm's high quality, but also of the significant increase of our understanding of how CSR impacts financial performance when the signaling perspective is integrated with an institution-based view.

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