

Firm Internationalization and Corporate Social Responsibility

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Abstract Using a large sample of 3,040 U.S. firms and 16,606 firm-year observations over the 1991–2010 period, we find strong evidence that firm internationalization is positively related to the firm’s corporate social responsibility (CSR) rating. This finding persists when we use alternative estimation methods, samples, and proxies for internationalization and when we address endogeneity concerns. We also provide evidence that the positive relation between internationalization and CSR rating holds for a large sample of firms from 44 countries. Finally, we offer novel evidence that firms with extensive foreign subsidiaries in countries with well-functioning political and legal institutions have better CSR ratings. Our findings shed light on the role of internationalization in influencing multinational firms’ CSR activities in the U.S. and around the world.

Keywords Corporate international diversification · Corporate social performance · Institutional environments

Introduction

Reporting on a firm’s corporate social responsibility (CSR) activities has become a mainstream business practice, as indicated by KPMG’s (2013) survey finding that 51 % of reporting companies worldwide include information on corporate responsibility and sustainability in their annual financial reports (compared to 20 % in 2011 and 9 % in 2008). As socially responsible investment has gained prominence, an increasing number of investors factor firms’ CSR activity into their investment decisions (e.g., Scholtens and Sievänen 2013; Sievänen et al. 2013, and references therein). Motivated by the growing attention paid to CSR, which according to McWilliams and Siegel (2001, p. 117) reflects firm actions that “further some social good, beyond the interests of the firm and that which is required by law”, we investigate the extent to which firms’ CSR activities are influenced by corporate internationalization.

In this paper we adopt the strategic view of CSR (Orlitzky et al. 2011), which holds that voluntary CSR actions positively affect primary stakeholders’ interests and the firm’s reputation. While this view suggests that socially responsible behavior is an aspect of firm strategy (Amato and Amato 2012) and an indicator of “long-term firm performance and viability” (Kang 2013, p. 94), it is difficult to measure directly (Carroll 1991). Using Kinder Lydenburg Domini (KLD) data, which are drawn from MSCI ESG Research and are widely used in studies of corporate social performance,¹ we construct a proxy for CSR activity based on a firm’s engagement in social, ethical,

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¹ See Kang (2013) and the references therein. In addition, Waddock (2003, p. 369) notes that the use of KLD data in measuring CSR activity is “the de facto research standard at the moment”.

governance, and legal practices (Kang 2013). As a multi-dimensional construct that captures a firm's response to various social issues and stakeholder interests (Kang 2013; Kacperczyk 2009), our CSR score is a relevant measure for the purpose of this study for at least two reasons. First, stakeholders' perception of a firm's social responsibility draws on all relevant information pertaining to the firm's social initiatives (Godfrey 2005; Jones 1995, as cited in Brammer et al. 2009).² Second, as we discuss next, firm internationalization also reflects a variety of considerations and stakeholder demands (e.g., Kang 2013).

Firm internationalization is the process "through which a firm expands the sales of its goods or services across the borders of global regions and countries into different geographic locations or markets" (Hitt et al. 2007, p. 251). On a prima facie basis, firm internationalization can be viewed as a strategy to increase a firm's competitive advantage (e.g., Nachum and Zaheer 2005) and in turn value, through enhanced economies of scale and scope (Kogut 1985), growth opportunities (Porter 1990), and diversification benefits (e.g., Geringer et al. 1989), as well as access to new resources, production capabilities, and knowledge (Hitt et al. 1997). However, firms expanding internationally also face not only the liability of foreignness (Zaheer 1995) and a potentially hostile international environment (Zahra and Garvis 2000), but also increased pressure from an expanded set of stakeholders.

The intensified pressures arising from a larger and culturally, politically, institutionally, and economically more diverse stakeholder environment are likely to induce multinational firms to increase their CSR activities to "demonstrate their responsiveness to a wide range of stakeholders" (Brammer et al. 2009, p. 575, and references therein) and "pursue safe strategic decisions" (Kang 2013, p. 97). Increased visibility through expanded media and analyst coverage might further lead multinational firms to increase their CSR activities to protect the firm's reputation. Relative to focused firms, multinational firms may also increase their CSR activities to realize greater economies of scope from CSR investment (Kang 2013). Taken together, these arguments suggest that internationalization of corporate activities is positively related to CSR activities. On the other hand, one might argue that the increased diversity and range of stakeholder demands could lead internationally diversified firms to locate in countries with lower CSR standards.³

² Thus, weakness on one dimension may be offset by strength in another dimension (Janney and Gove 2011).

³ Research that investigates the extent to which firms locate their business activities in countries or regions with lax corporate social standards, and in particular environmental standards, finds support for the pollution haven hypothesis, suggesting that firms tend to transfer

Extant research on firm internationalization has had little to say about the impact of internationalization on a firm's CSR activities, focusing instead on financial performance effects. This is striking since multinational corporations have often come under attack for being socially irresponsible, as demonstrated, for instance, by protests during the WTO meetings or revelations in the *New York Times* about Nike's labor practices in Indonesia. Prior studies that do link firm internationalization and CSR provide mixed evidence. Brammer et al. (2006, 2009), Strike et al. (2006), and Kang (2013) document a positive relationship between internationalization and CSR for samples of U.K. and U.S. firms, while Simerly (1997) and Simerly and Li (2000) do not find a significant link between CSR and firm internationalization for their sample of U.S. firms.

Our study contributes to the above research by using the largest sample to date. For instance, while Brammer et al. (2006, 2009) study a sample of large U.K. firms in 2002, Strike et al. (2006) examine a sample of 222 publicly traded U.S. firms over the 1993–2003 period, and Kang (2013) studies a panel of 511 large U.S. firms over the 1993–2006 period, we examine 3,040 U.S. firms representing 16,606 firm-year observations over the 1991–2010 period. In doing so, we answer Brammer et al.'s (2009, p. 593) call for more research on the link between CSR and internationalization using longitudinal data. In addition, by focusing on firm CSR as a dependent variable, our study contributes to the sparse CSR literature on the determinants of corporate social performance.

To shed light on the effect of firm internationalization on CSR activities, we conduct four sets of tests. *First*, we examine the association between internationalization and a firm's aggregate CSR rating. We find that internationalization is significantly positively related to a firm's CSR rating, consistent with Brammer et al. (2006, 2009) and Kang (2013). In additional analysis we employ alternative measures of internationalization, different subsample periods, and different estimation methods and find that our result is robust. Moreover, our result holds when we use Thomson Reuters ASSET4 and Governance Metrics International (GMI) as alternative sources of CSR data for U.S. firms and when we use a large panel of firms representing 11,077 firm-year observations from 44 countries over the 2002–2010 period. This latter test provides the *first* multinational evidence on the relation between internationalization and CSR. To address potential endogeneity resulting from the direction of causality between internationalization and its outcomes, we use instrumental

Footnote 3 continued
their "dirty operations to countries with weak environmental regulation" (Dam and Scholtens 2008, p. 55).

variables estimation, propensity score matching, and Heckman sample selection.

Second, delving deeper into the association between internationalization and CSR, we separately investigate the effect of internationalization on the components of firms' CSR score. When we examine CSR strengths versus concerns, we find that a firm's internationalization loads significantly (positively) only on CSR strengths. When we examine the impact of internationalization on the individual CSR dimensions, we find that while internationalization loads significantly positively on the Community, Diversity, and Environment dimensions, it loads significantly negatively on the Human Rights dimension. It thus appears that the CSR activities that matter most for multinational firms are those that relate to a firm's primary stakeholders. However, as suggested by Brammer et al. (2009, p. 579), information regarding an individual CSR dimension "does not enable stakeholders to concretely evaluate the degree to which a firm is socially responsible or irresponsible".

Third, we investigate whether different institutions across host countries of firm subsidiaries have different effects on multinationals' CSR activities. We find that multinationals with extensive subsidiaries in countries with strong political and legal institutions have higher CSR ratings. This result goes beyond evidence in earlier studies that diversification is positively related to CSR, and underscores the conditioning role of the institutional environments in which a firm's subsidiaries operate.

The rest of the article proceeds as follows. In Sect. 2, we review related literature and elaborate on our main hypotheses. In Sect. 3 we describe our data and summarize our research design. We present results in Sect. 4. Finally, we conclude in Sect. 5.

Related Literature and Hypotheses

Given the strategic view of CSR we employ in this study, we expect multinational firms to address increased pressures arising from a larger and culturally, politically, institutionally, and economically more diverse stakeholder environment by integrating them into their CSR activities. Sanders and Carpenter (1998, p. 158) note that as internationalization increases, firm survival increasingly depends on the "ability to cope with the high levels of complexity that derive from heterogeneous cultural, institutional, and competitive environments and the need to coordinate and integrate their geographically dispersed resources". In particular, firms that expand internationally need to take into consideration the interests and expectations of a wider set of communities, customers, investors, creditors, employees, regulators, and non-government organizations, among other parties

(Detomasi 2007).⁴ As a strategic response to the expectations of this more diverse stakeholder base, multinational firms can increase investment in CSR activities to, for instance, reduce the negative environmental impact of their operations and increase employee satisfaction. Thus, from this perspective, one can think of a firm's CSR score as an indicator of the degree to which a firm responds to its various stakeholder demands (Kacperczyk 2009).

We argue that internationalization drives firms to respond to stakeholder demands through increased CSR activity for several reasons. *First*, as noted in Kang (2013), internationalization lowers managerial employment risk since multinational firms depend more on manager-specific skills and experience, making it more costly to replace the current management. As a result, managers of such firms are likely to allocate more firm resources to address stakeholder demands (Kacperczyk 2009).

Second, as they enter foreign markets, firms face increased litigation risk from violating (unfamiliar) societal and/or regulatory requirements. Firms can reduce the perceived risk⁵ associated with expanding into foreign markets, and strengthen their reputation as socially responsible actors, by increasing their CSR activities. For instance, Feldman et al. (1997) show that firms that adopt an environmentally proactive posture significantly reduce their perceived risk, and Brammer et al. (2009) argue that the extent to which stakeholders believe that the firm is socially responsible affects stakeholders' continued involvement with the firm.⁶ In addition, multinational firms can signal their commitment to a foreign market by increasing their CSR activities in the market, which can alleviate communication problems (Zahra et al. 2000) and the adverse effects of psychic distance (Johanson and Vahlne 1977).⁷

⁴ A higher degree of internationalization exposes the firm to a proportionally wider range of demands/constraints stemming from a diversified pool of stakeholders that includes foreign customers (interested in products and services' characteristics), governments and regulators (via taxation and regulatory compliance), foreign suppliers, employees (concerned about work ethics, work conditions, recognition and retention), environmentalists, communities, etc.

⁵ Consistent with lower perceived risk, El Ghouli et al. (2011) and Attig et al. (2013b) find, respectively, that high CSR firms enjoy lower financing costs and improved credit ratings. CSR can also reduce the risk of costly sanctions by stakeholders.

⁶ Using survey data from 172 ISO-certified firms in China, Christmann and Taylor (2001) show that the implementation of environmental standards by foreign firms depends not only on the degree of internationalization, but also on customer monitoring and sanctions (e.g., termination of the relationship).

⁷ Psychic distance refers to the uncertainty associated with factors such as "differences in language, culture, political systems, level of education, or level of industrial development" that adversely affect the flow of information between a firm and the market (Johanson and Vahlne 1977, p. 24).

Third, internationalization intensifies managerial risk aversion. In seeking to reduce firm risk, managers are likely to avoid “costly problems with regulations, activists and consumers” (Kang 2013, p. 97) by increasing their CSR activities. In addition, because multinational firms are associated with increased analyst coverage and media attention (e.g., Hong and Kacperczyk 2009; El Ghouli et al. 2011), managers are more likely to respond to stakeholder demands to protect the firm’s reputation globally.

While the above arguments favor a positive association between firm internationalization and CSR, alternative arguments suggest that there may exist mitigating factors. For instance, expanding on the pollution haven hypothesis (e.g., Dam and Scholtens 2008), one could argue that multinational firms may locate their production activities in countries or regions with low CSR standards. In this case, one would not expect a relation between CSR and internationalization. Also, as pointed out by Kang (2013), a strong focus on short-term profit maximization rather than long-term performance might crowd out the benefits of investing in CSR, which accrue over the long run, and lead to a weaker relation between CSR and internationalization.

Accordingly, our first and main hypothesis is as follows:

H₁ Internationalization is positively related to a firm’s aggregate CSR score.

Next, we separately examine the extent to which internationalization influences CSR concerns and strengths. This test is useful because aggregating CSR strengths and concerns may overlook cross-sectional variation in CSR behavior (Chatterji et al. 2009).⁸ Strike et al. (2006), for instance, provide evidence that multinational firms are likely to be operating both responsibly and irresponsibly, and thus argue that CSR should be decomposed into its negative and positive aspects (concerns and strengths, respectively). Under the strategic view of internationalization, we expect a positive link between CSR strengths and internationalization. Using the argument of Hart (1995), Attig (2011) stresses that while CSR strengths are proactive in nature and more costly to implement, they are more beneficial than avoiding CSR concerns. This is likely the case because CSR concerns tend to relate to industry standards, or minimum performance levels expected by the public (Block et al. 2013, and references therein). Servaes and Tamayo (2013, p. 1054) similarly hold that CSR strengths should matter more than concerns when capturing firms’ CSR activities, arguing that CSR concerns are likely the outcome of decisions other than a firm’s specific CSR efforts. Supportive evidence is provided by Kim et al.

(2012), who show that CSR strengths (concerns) are associated with more conservative (aggressive) financial reporting. Based on these arguments, our second hypothesis is as follows:

H_{2a} Internationalization is positively related to a firm’s CSR strengths

H_{2b} Internationalization is negatively or not related to a firm’s CSR concerns.

Following similar arguments as above, using an aggregate CSR score might also mask variation in the relevance of its component dimensions (Griffin and Mahon 1997; Attig 2011; Galema et al. 2008). Hillman and Keim (2001) distinguish two main groups of CSR components: those related to a firm’s primary stakeholders (e.g., Employee Relations, Diversity, Product Characteristics, Community, and Environment) and those that reflect participation in social issues and are not directly related to a firm’s primary stakeholders (e.g., Human Rights). Given the importance of investing in relationships with primary stakeholders to maintain their involvement in the company’s business activities and thus increase the firm’s competitive advantage (Hillman and Keim 2001), we expect internationalization to have a greater effect on the CSR dimensions related to the firm’s primary stakeholders. In contrast, internationalization may have little or no impact on the aspects of social performance that reflect participation in social issues, because, all else being equal, they are less likely to influence stakeholders’ involvement in the firm’s activities. Our third hypothesis is thus as follows:

H₃ Internationalization is positively related to the CSR dimensions related to the interests of the firm’s primary stakeholders.

To shed further light on the relevance of internationalization in shaping multinational firms’ CSR activities, we investigate the extent to which host-country institutions affect the CSR activity of multinational firms. Murtha and Lenway (1994) suggest that national institutional factors exert great influence on a firm’s non-market behavior and strategies. While empirical research offering convincing support for the impact of institutional and legal factors on corporate outcomes (e.g., La Porta et al. 1998) is abundant, in work more closely related to this study Ioannou and Serafeim (2012) find that country (e.g., political and legal) institutions are important determinants of social and environmental performance. In addition, Dam and Scholtens (2007) conclude that cultural values are an important determinant of international differences in ethical policies. Building on this stream of research, we posit that multinational firms’ CSR activities vary across institutional environments. To test this prediction, we examine whether

⁸ As Kim et al. (2012, p. 784) state, “a firm with five strengths and five concerns is surely different from a firm with one strength and one concern”.

variation in political risk, government stability, investment profile, control of corruption, law-and-order rating, democratic accountability, and quality of bureaucracy across a firm's foreign subsidiaries affects the firm's CSR score. Accordingly, our fourth hypothesis is as follows:

H₄ The institutional environment of a multinational firm's host countries conditions the link between firm internationalization and its CSR score.

Data and Research Design

Sample Selection

Our sample of U.S. firms comes from two databases: *Compustat*, which we use to obtain financial information and construct our internationalization variables, and *MSCI ESG STATS*, which we use to obtain CSR scores.⁹ *MSCI ESG STATS*, together with its predecessor *KLD Stats*, is widely used in CSR studies (e.g., Hillman and Keim 2001; Chatterji et al. 2009; Servaes and Tamayo 2013; Kang 2013).

To construct our sample, we begin with all firms from *Compustat* over the 1991–2010 period with non-missing financial information. We then eliminate financial firms (SIC codes between 6000 and 6999) because they are regulated entities and firm-years for which the sum of geographic segment sales is not within 1 % of total reported firm sales. Next, we match our *Compustat* sample with *MSCI ESG STATS*, which evaluates each firm along 13 CSR dimensions using surveys, financial statement information, media reports, government documents, regulatory filings, proxy statements, and peer-reviewed legal journals. These 13 CSR dimensions are grouped into two major categories: qualitative issue areas and controversial business issues. Qualitative issue areas are Community, Corporate Governance, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics. For each area, we calculate a score equal to the number of strengths minus the number of concerns. We then sum the scores to obtain an overall CSR score (*CSR_S*).¹⁰ This

⁹ An advantage of the U.S. setting relative to the international setting is the availability of sophisticated measures of international diversification such as the Herfindahl and entropy indexes. Using these variables as alternatives to our primary measure of firm internationalization, the foreign sales ratio, allows us to verify the robustness of our finding on the link between CSR and internationalization. Notwithstanding, we complement our results based on a U.S. sample with the first multinational evidence on the relation between international diversification and CSR using a large panel of non-U.S. firms from 43 different countries. Using non-U.S. firms thus provides out-of-sample evidence on the impact of international diversification on CSR around the world.

¹⁰ Similar to Kim et al. (2014) and Krüger (2014), among others, we view corporate governance as a different construct than CSR. For

approach, which is commonly used in the CSR literature (e.g., El Ghouli et al. 2011; Goss and Roberts 2011; Kim et al. 2012), is relevant for this study because, as a multi-dimensional construct, *CSR_S* may capture multinational firms' strategic response to stakeholder demands and social issues (Kang 2013).

After applying the above screens, our final sample contains 3,040 U.S. firms and 16,606 firm-year observations over the 1991–2010 period. Appendix 1 provides details on the construction of the CSR variables. Table 1 presents descriptive statistics for the CSR data by year. As can be seen from Panel A, the number of firms per year is fairly evenly distributed around the 300 range over the 1991–2000 period, increasing to the 500 range in 2001 and 2002 before rising dramatically to between 1,300 and 1,800 firms per year over the 2003–2010 period. The increase in the number of firms per year is largely due to increased sample coverage. In particular, firm coverage in *MSCI ESG STATS* has increased steadily over time. In 1991–2000, coverage consisted of the S&P 500 and the Domini Social Index. The Russell 1000 Index was added in 2001, the Large Cap Social Index in 2002, and both the Russell 2000 Index and the Broad Market Social Index in 2003. Panel A of Table 1 also reports summary statistics for our aggregate CSR measure by year. The mean CSR score declines to become negative in 2004, and remains negative until the end of our sample. The sharp decline corresponds to the number of observations more than doubling in 2003 due to the inclusion of a broader sample of firms in the database.¹¹ The median also becomes negative in 2005 and remains so until 2010. Panel B of Table 1 shows that in the 2004–2010 period, the average number of strengths (*CSR_STR*) increased at a slower rate than the average number of concerns (*CSR_CON*). As a result of these two trends, the overall mean CSR score declined during this period.

Regression Models and Variables

To analyze the impact of firm internationalization on CSR, we run variations of the following model (Strike et al. 2006; Brammer et al. 2006; Barnea and Rubin 2010; Kang 2013):

Footnote 10 continued

instance, a well-governed firm could have a bad CSR record by maximizing shareholders' wealth at the expense of its stakeholders (e.g., employees, environment, community) in the sense of Friedman (1970). Nonetheless, in unreported tests we find similar results irrespective of whether corporate governance is included in or excluded from our CSR score.

¹¹ To assess the impact of the increased sample coverage, we identify 20 firms that were in the sample for the entire period. In untabulated results, we find that the CSR score for these firms did not change dramatically after 2003. Indeed, the average *CSR_S* went from 1.7 in 2003 to 1.6 in 2003 and steadily increased thereafter.

Table 1 Descriptive statistics for corporate social responsibility data by year

Panel A: Descriptive statistics for CSR score by year								
Year	<i>N</i>	Mean	Min	Q1	Median	Q3	Max	SD
1991	325	0.35	-8	0	0	1	5	1.93
1992	334	0.34	-7	-1	0	2	7	2.15
1993	326	0.25	-7	-1	0	2	7	2.44
1994	322	0.39	-7	-1	0	2	8	2.56
1995	317	0.81	-7	-1	1	2	11	2.58
1996	328	0.84	-6	-1	0.5	2	9	2.37
1997	327	0.82	-7	-1	0	2	10	2.48
1998	278	0.87	-7	-1	1	2	9	2.41
1999	277	0.90	-7	-1	1	2	11	2.66
2000	323	0.86	-6	-1	1	2	11	2.57
2001	504	0.41	-9	-1	0	2	9	2.28
2002	522	0.42	-9	-1	0	2	9	2.42
2003	1,370	-0.24	-9	-1	0	0	8	1.76
2004	1,467	-0.44	-8	-1	-1	0	10	1.83
2005	1,468	-0.41	-8	-1	-1	0	11	1.98
2006	1,506	-0.39	-7	-2	-1	0	15	2.18
2007	1,519	-0.41	-8	-2	-1	1	14	2.24
2008	1,571	-0.43	-9	-2	-1	1	13	2.22
2009	1,679	-0.46	-9	-2	-1	1	13	2.25
2010	1,843	-0.52	-7	-2	-1	0	14	2.68
All years	16,606	-0.17	-9	-2	0	1	15	2.29

Panel B: Mean total number of strengths, total number concerns, and individual components of CSR score by year								
Year	<i>CSR_STR</i>	<i>CSR_CON</i>	<i>CSR_COM_S</i>	<i>CSR_DIV_S</i>	<i>CSR_EMP_S</i>	<i>CSR_ENV_S</i>	<i>CSR_HUM_S</i>	<i>CSR_PRO_S</i>
1991	1.24	0.90	0.26	0.23	0.14	-0.11	-	-0.01
1992	1.46	1.12	0.29	0.29	0.10	-0.17	-	0.00
1993	1.67	1.42	0.33	0.09	0.14	-0.16	-	0.04
1994	2.02	1.62	0.41	0.14	0.13	-0.23	-	0.03
1995	2.24	1.43	0.44	0.35	0.21	-0.14	-0.03	-0.02
1996	2.12	1.28	0.41	0.39	0.18	-0.08	-0.01	-0.06
1997	2.10	1.29	0.34	0.44	0.21	-0.07	-0.04	-0.06
1998	2.12	1.25	0.22	0.51	0.31	-0.03	-0.06	-0.08
1999	2.38	1.48	0.19	0.67	0.40	-0.20	-0.08	-0.08
2000	2.42	1.56	0.20	0.67	0.44	-0.18	-0.09	-0.19
2001	1.79	1.38	0.11	0.60	0.18	-0.20	-0.09	-0.18
2002	1.90	1.48	0.12	0.60	0.16	-0.16	-0.09	-0.21
2003	0.89	1.13	0.03	0.21	-0.19	-0.09	-0.07	-0.13
2004	0.90	1.34	0.03	0.14	-0.25	-0.13	-0.11	-0.12
2005	1.04	1.45	0.02	0.17	-0.31	-0.10	-0.04	-0.14
2006	1.17	1.56	0.04	0.18	-0.32	-0.09	-0.04	-0.16
2007	1.27	1.68	0.01	0.19	-0.30	-0.09	-0.04	-0.18
2008	1.30	1.73	-0.01	0.16	-0.30	-0.06	-0.04	-0.18
2009	1.29	1.75	-0.02	0.16	-0.31	-0.08	-0.05	-0.18
2010	1.50	2.02	0.14	-0.77	-0.08	0.33	0.00	-0.13
All years	1.37	1.54	0.09	0.13	-0.14	-0.06	-0.05	-0.13

This table presents descriptive statistics for the CSR data for the 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. Panel A provides the mean, minimum, first quartile, median, third quartile, maximum, and standard deviation of the overall CSR score (*CSR_S*) by year. Panel B shows the mean of the total number of strengths (*CSR_STR*), the total number of concerns (*CSR_CON*), and the individual components of *CSR_S*, namely, Community Relations score (*CSR_COM_S*), Diversity score (*CSR_DIV_S*), Employee Relations score (*CSR_EMP_S*), Environmental Performance score (*CSR_ENV_S*), Human Rights score (*CSR_HUM_S*), and Product Characteristics score (*CSR_PRO_S*). Appendix 1 provides details on the construction of the CSR variables

$$CSR_S = \alpha + \beta_1 \cdot INTERNATIONALIZATION + \beta_2 \cdot Z + FIXED\ EFFECTS + \varepsilon, \quad (1)$$

where CSR_S is the firm's aggregate CSR score.

INTERNATIONALIZATION is one of several proxies for firm internationalization. Our main proxy is the ratio of foreign sales to total sales (FS/S), where foreign sales is the sum of sales of all foreign segments (e.g., Li et al. 2011). Sullivan (1994) observes that FS/S is the most commonly used measure of internationalization, consistent with the idea that "a company's foreign sales are a meaningful first-order indicator of its involvement in international business" (p. 331). Financial information on U.S. firms' geographic segments is available in the Compustat Segments file. Purely domestic firms report one segment, while multinational firms report one domestic segment and at least one foreign segment corresponding to a foreign country or region. We use Compustat variable Geographic Segment Type (GEOTP) to identify domestic (GEOTP = 2) and foreign (GEOTP = 3) segments.

As alternative measures of firm internationalization, we first use foreign assets to total assets (FA/A). In comparing FS/S and FA/A , Sanders and Carpenter (1998) explain that the foreign sales ratio reflects a firm's sales to foreign markets while the foreign assets ratio reflects a firm's foreign stock holdings. According to the authors (p. 166), the sales and asset dimensions capture the overall dependence of a firm on foreign consumer markets and foreign resources, respectively. We also use the sales Herfindahl index (Black et al. 2014) and entropy index (Hitt et al. 1997). Specifically, for a firm with N geographic segments,

$$HERFINDAHL_S = \sum_{i=1}^N \left(s_i / \sum_{i=1}^N s_i \right)^2, \text{ and} \quad (2)$$

$$ENTROPY_S = - \sum_{i=1}^N \left(s_i / \sum_{i=1}^N s_i \right) \cdot \ln \left(s_i / \sum_{i=1}^N s_i \right), \quad (3)$$

where s_i is the sales of geographic segment i .¹² Finally, we construct asset-based Herfindahl ($HERFINDAHL_A$) and entropy ($ENTROPY_A$) indexes. We note that we have fewer observations on the three asset-based measures of internationalization because some firms do not report information on their foreign segments' assets.

FIXEDEFFECTS comprises time and industry fixed effects. Z is a vector of control variables. We lag the right-hand-side variables by one period to attenuate endogeneity (i.e., simultaneity between CSR and the right-hand-side variables). We control for the logarithm of total sales

(*SIZE*) and the logarithm of firm age (*LOG_AGE*) because large and older firms are more visible, and thus face more pressures from their stakeholders to behave in a socially responsible way (Brammer et al. 2009). Firm age is the number of months since the firm first appeared in the CRSP database. We also include profitability, measured as the ratio of earnings before interest, taxes, depreciation, and amortization (*EBITDA*) to total assets (*ROA*), and leverage, measured as the ratio of total debt to total assets (*LEV*), to capture slack resources because Waddock and Graves (1997) predict that firms with more slack resources invest more in CSR (i.e., slack resources hypothesis). We further follow Kang (2013) and include the market-to-book ratio (*MTB*) because intangible assets may affect CSR. The market-to-book ratio is the ratio of the market value of assets to the book value of assets, where the market value of assets is given by market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets. In addition, McWilliams and Siegel (2001) argue that firms with differentiated products need to invest more in CSR, and thus we include research and development intensity measured as the ratio of research and development expenses to total sales ($R\&D/S$) to capture product differentiation.¹³ McWilliams and Siegel (2001) also argue that the need to make consumers aware of CSR attributes creates a positive relationship between advertising, which is measured using the ratio of advertising expenses to total sales (ADV/S), and CSR.¹⁴ Finally, Brammer et al. (2009) argue that CSR activities might reflect agency costs. Following their approach, we include long-term institutional ownership (*LTIO*) because previous research shows that long-term institutional investors play a role in corporate governance (e.g., Attig et al. 2013a). More detailed variable definitions are provided in Appendix 2.

Panel A of Table 2 provides summary statistics for the key variables used in our regression analysis. Panel B presents a correlation matrix for these variables. Of particular relevance to our study is the positive and significant (at the 1 % level) correlation between CSR (CSR_S) and internationalization (FS/S). Generally, the pairwise correlation coefficients among the control variables are low, suggesting that multicollinearity is not of concern in our analysis.

¹² The Herfindahl index equals one and the entropy index equals zero for purely domestic (i.e., single-segment) firms.

¹³ This ratio is set to zero when research and development expenses are missing. In a robustness test, we find that excluding firms with missing research and development expenses does not affect our core inferences.

¹⁴ This ratio is set to zero when advertising expenses are missing. Our main results are robust to excluding firms with missing information on advertising expenses.

Table 2 Descriptive statistics and correlation matrix for regression variables

Panel A: Descriptive statistics												
	Mean	Min	Q1	Median	Q3	Max	SD					
<i>FS/S</i>	0.25	0.00	0.00	0.16	0.43	1.00	0.27					
<i>SIZE</i>	7.01	-4.02	5.89	7.01	8.16	12.14	1.73					
<i>LOG_AGE</i>	5.19	0.00	4.64	5.28	5.98	6.93	1.04					
<i>ROA</i>	0.12	-12.41	0.08	0.13	0.18	1.39	0.17					
<i>MTB</i>	2.01	0.77	1.23	1.59	2.32	7.70	1.25					
<i>LEV</i>	0.22	0.00	0.04	0.20	0.34	0.88	0.19					
<i>R&D/S</i>	0.07	0.00	0.00	0.00	0.06	1.76	0.21					
<i>ADV/S</i>	0.01	0.00	0.00	0.00	0.01	0.16	0.03					
<i>LTIO</i>	0.17	0.00	0.11	0.16	0.22	0.84	0.09					

Panel B: Correlation matrix																			
	<i>CSR_S</i>	<i>CSR_COM_S</i>	<i>CSR_DIV_S</i>	<i>CSR_EMP_S</i>	<i>CSR_ENV_S</i>	<i>CSR_HUM_S</i>	<i>CSR_PRO_S</i>	<i>CSR_A4</i>	<i>CSR_GMI</i>	<i>FS/S</i>	<i>SIZE</i>	<i>LOG_AGE</i>	<i>ROA</i>	<i>MTB</i>	<i>LEV</i>	<i>R&D/S</i>	<i>ADV/S</i>	<i>LTIO</i>	
<i>CSR_S</i>	1.00																		
<i>CSR_COM_S</i>	0.52	1.00																	
<i>CSR_DIV_S</i>	0.67	0.28	1.00																
<i>CSR_EMP_S</i>	0.56	0.16	0.15	1.00															
<i>CSR_ENV_S</i>	0.53	0.20	0.09	0.07	1.00														
<i>CSR_HUM_S</i>	0.13	-0.01	-0.13	0.02	0.14	1.00													
<i>CSR_PRO_S</i>	0.30	0.01	-0.14	0.10	0.16	0.14	1.00												
<i>CSR_A4</i>	0.33	0.26	0.47	0.10	0.18	-0.19	-0.19	1.00											
<i>CSR_GMI</i>	0.27	0.20	0.38	0.08	0.13	-0.15	-0.18	0.70	1.00										
<i>FS/S</i>	0.09	0.07	0.05	0.05	0.08	-0.07	0.02	0.21	0.24	1.00									
<i>SIZE</i>	0.14	0.18	0.37	0.06	-0.10	-0.20	-0.26	0.55	0.48	0.05	1.00								
<i>LOG_AGE</i>	0.09	0.11	0.20	0.08	-0.09	-0.11	-0.11	0.32	0.32	0.03	0.40	1.00							
<i>ROA</i>	0.08	0.06	0.07	0.07	0.02	-0.04	-0.01	-0.02	0.01	-0.02	0.30	0.08	1.00						
<i>MTB</i>	0.12	0.07	0.04	0.09	0.08	0.02	0.05	-0.10	-0.09	0.06	-0.22	-0.18	0.08	1.00					
<i>LEV</i>	-0.06	-0.01	0.03	-0.04	-0.08	-0.01	-0.11	0.03	0.11	-0.15	0.23	0.08	-0.04	-0.24	1.00				
<i>R&D/S</i>	0.02	-0.01	-0.03	0.01	0.04	0.04	0.04	-0.01	-0.06	0.07	-0.44	-0.14	-0.48	0.26	-0.10	1.00			
<i>ADV/S</i>	0.13	0.13	0.15	0.02	0.07	-0.05	-0.04	0.05	0.00	-0.03	0.03	-0.03	0.03	0.13	-0.01	-0.02	1.00		
<i>LTIO</i>	0.04	0.01	0.09	-0.01	0.00	-0.02	-0.04	0.01	0.01	-0.02	0.19	0.23	0.09	-0.12	0.03	-0.10	0.00	1.00	

This table reports descriptive statistics and the correlation matrix for the regression variables. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. *FS/S* is the ratio of foreign sales to total sales; *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding × share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADV/S* is the ratio of advertising expenses to total sales; *LTIO* is long-term institutional ownership; *CSR_COM_S* is the number of strengths minus the number of concerns in the Community qualitative issue area; *CSR_DIV_S* is the number of strengths minus the number of concerns in the Diversity qualitative issue area; *CSR_EMP_S* is the number of strengths minus the number of concerns in the Employee Relations qualitative issue area; *CSR_ENV_S* is the number of strengths minus the number of concerns in the Environment qualitative issue area; *CSR_HUM_S* is the number of strengths minus the number of concerns in the Human Rights qualitative issue area; *CSR_PRO_S* is the number of strengths minus the number of concerns in the Product Characteristics qualitative issue area; *CSR_A4* is the CSR score obtained from ASSET4; and *CSR_GMI* is the CSR score obtained from GMI Ratings. Correlation coefficients that are significant at the 5 % level are reported in boldface

Empirical Evidence

Effects of Internationalization on a Firm's CSR Score

Main Evidence

Table 3 reports the results of estimating Eq. (1) using ordinary least squares (OLS), with standard errors corrected for heteroskedasticity and clustering by firm to account for the lack of independence of observations within a given firm over time. In Model 1 we regress the aggregate CSR score (CSR_S) on the ratio of foreign sales to total sales (FS/S)—our main proxy for firm internationalization—and a set of controls. We find support for our hypothesis on the internationalization-CSR link: the estimated coefficient on FS/S is positive and statistically significant (at the 1 % level). This result is consistent with Strike et al. (2006) and Kang (2013), and suggests that CSR activities can help firms mitigate market imperfections and asymmetric information problems as well as manage complexities stemming from an expanded set of stakeholders.

Next, we assess whether the importance of internationalization to CSR activities varies systematically with firm size. All else being equal, large firms are better able to cope with the increased complexity and uncertainty of internationally diversified operations than small firms because their more diverse activities and more abundant resources help them exploit economies of scale (e.g., Fatemi 1984; Gaba et al. 2002). Kirca et al. (2012, p. 509) argue that the benefits of scale are more pronounced for larger firms because they have access “to privileged learning channels, they can reduce risk through wider portfolios, and they have stronger bargaining power to gain concessions from host country institutions and governments”. Not surprisingly, therefore, in Model 2 of Table 3 we find that the positive impact of internationalization on CSR is more pronounced for large firms: the estimated coefficient on the interaction between FS/S and $SIZE$ is positive and significant at the 1 % level.¹⁵ Thus, the societal implications of internationalization appear to concentrate among large firms.

¹⁵ From Model 2 in Table 3, we obtain $(\partial CSR_S)/(\partial FS/S) = -3.567 + 0.626 \times SIZE$. Therefore, the marginal impact of internationalization on CSR is increasing with firm size. Nonetheless, this expression also suggests that the marginal impact of internationalization on CSR is negative for some firms. The size threshold below which this is the case is $3.567/0.626 \approx 5.7$, which is lower than the first quartile (5.89 from Table 2). To be more precise, 5.7 corresponds to the 22nd percentile of $SIZE$. As such, for firms in the bottom 22 % (top 78 %) of the distribution of $SIZE$, the marginal impact of internationalization on CSR is negative (positive). We thank an anonymous reviewer for this insight.

To provide further support to our main result on the impact of internationalization on CSR, we conduct a series of additional tests. We first replace FS/S with alternative measures of firm internationalization. In particular, we use the ratio of foreign assets to total assets (FA/A) in Model 3, the sales- and assets-based Herfindahl index measures of geographical diversification ($HERFINDAHL_S$ and $HERFINDAHL_A$) in Models 4 and 5, and the sales- and assets-based entropy index measures of geographical diversification ($ENTROPY_S$ and $ENTROPY_A$) in Models 6 and 7, respectively. In line with our finding in Model 1, the results consistently imply that firm internationalization is significantly positively related to CSR_S , providing further support for the prediction of our first hypothesis (H_1) that firm internationalization increases CSR engagement.

Next, we employ alternative proxies for CSR.¹⁶ Recall that a composite proxy for CSR is suitable for the purpose of our study given that firm internationalization leads to a larger and more diverse set of stakeholders. Following the mainstream approach in the literature (e.g., El Ghouli et al. 2011; Attig et al. 2013a, b; Attig et al. 2014; and Kim et al. 2012, 2014), we construct our composite CSR score by subtracting the number of concerns from the number of strengths across all qualitative issue areas. However, this approach could be challenged on the grounds that it assigns subjective (equal) weighting to the various components of the CSR measure. To address this concern, we perform principal component analysis on the qualitative issue area scores and retain the first principal component (PFC_CSR_S). This alternative approach of aggregating the qualitative issue area scores has the advantage of letting the data determine the appropriate weights on the CSR dimensions. The results reported in Model 8 of Table 3 further support our main finding that internationalization (FS/S) is associated with an increase in socially responsible initiatives (PFC_CSR_S).

We also consider two alternative proxies for CSR that are robust to methodological changes adopted by *MSCI ESG STATS* (such as covering different sets of strengths and concerns over time; see Kim et al. 2014). The first proxy, CSR_SI , is given by $(CSR_S \text{ for firm } i \text{ in year } t - \text{Min } CSR_S \text{ in year } t)/(\text{Max } CSR_S \text{ in year } t - \text{Min } CSR_S \text{ in year } t)$. This proxy ranges from zero to one and therefore is comparable over time. The second proxy, CSR_S2 , is given by $(CSR_S \text{ for firm } i \text{ in year } t - \text{Min } CSR_S \text{ in firm's } i \text{ industry in year } t)/(\text{Max } CSR_S \text{ in firm's } i \text{ industry in year } t - \text{Min } CSR_S \text{ in firm's } i \text{ industry in year } t)$. This proxy also ranges from zero to one but has the additional advantage of adjusting the CSR score by industry. We re-estimate our baseline regression after replacing CSR_S

¹⁶ We report descriptive statistics for the alternative CSR proxies in Appendix 3.

Table 3 The relationship between corporate social responsibility and internationalization

	Alternative proxies for internationalization			Alternative proxies for CSR								
	<i>F&S</i>	<i>SIZE</i> interaction	<i>FAA</i>	<i>HERFINDAHL_S</i>	<i>HERFINDAHL_A</i>	<i>ENTROPY_S</i>	<i>ENTROPY_A</i>	<i>PFC_CSR_S</i>	<i>CSR_S1</i>	<i>CSR_S2</i>	<i>CSR_A4</i>	<i>CSR_GMI</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>F&S</i>	0.561*** (3.72)	-3.567*** (-4.91)						0.271*** (4.24)	0.029*** (3.62)	0.057*** (3.51)	13.937*** (3.89)	9.193*** (4.52)
<i>Alternative Proxy</i>			0.422* (1.79)	-0.477*** (-2.84)	-0.482** (-2.11)	0.216** (2.41)	0.323** (2.20)					
<i>SIZE</i>	0.191*** (4.69)	0.017 (0.43)	0.044 (1.04)	0.189*** (4.51)	0.049 (1.18)	0.192*** (4.54)	0.045 (1.06)	0.121*** (6.47)	0.009*** (4.01)	0.016*** (4.21)	13.884*** (22.49)	6.604*** (16.14)
<i>LOG_AGE</i>	0.063 (1.64)	0.043 (1.14)	0.068* (1.67)	0.059 (1.55)	0.065 (1.58)	0.061 (1.58)	0.062 (1.52)	0.029* (1.81)	0.003 (1.28)	0.003 (0.67)	2.397*** (2.63)	2.443*** (4.32)
<i>ROA</i>	0.542** (2.41)	0.393 (1.34)	0.251 (1.22)	0.525** (2.25)	0.228 (1.13)	0.523** (2.26)	0.224 (1.12)	0.179** (2.09)	0.030** (2.43)	0.062** (2.27)	-0.003 (-0.00)	-1.516 (-0.46)
<i>MTB</i>	0.150*** (5.63)	0.142*** (5.17)	0.086*** (2.92)	0.149*** (5.59)	0.087*** (3.03)	0.150*** (5.61)	0.086*** (2.98)	0.065*** (5.65)	0.008*** (5.65)	0.017*** (5.54)	1.156 (1.63)	0.368 (1.07)
<i>LEV</i>	-0.435** (-2.25)	-0.423** (-2.18)	-0.479** (-2.21)	-0.447** (-2.31)	-0.506** (-2.36)	-0.449** (-2.32)	-0.500** (-2.32)	-0.175** (-2.19)	-0.021** (-2.06)	-0.042** (-2.02)	-2.924 (-0.78)	-0.072 (-0.03)
<i>R&D/S</i>	0.714*** (3.80)	0.538*** (2.69)	0.339* (1.69)	0.719*** (3.78)	0.317 (1.60)	0.723*** (3.80)	0.323 (1.62)	0.312*** (4.05)	0.034*** (3.36)	0.032* (1.67)	23.944*** (3.02)	10.935*** (3.71)
<i>ADVS</i>	5.179*** (3.62)	4.378*** (3.17)	4.115*** (2.74)	5.208*** (3.63)	4.152*** (2.77)	5.295*** (3.69)	4.130*** (2.75)	2.693*** (4.12)	0.270*** (3.54)	0.525*** (3.32)	67.696** (2.15)	46.695** (2.55)
<i>LTIIO</i>	0.962*** (2.69)	1.147*** (3.19)	0.160 (0.36)	0.860** (2.40)	0.110 (0.24)	0.873** (2.43)	0.116 (0.26)	0.346** (2.30)	0.052*** (2.77)	0.102*** (2.69)	-5.045 (-0.83)	1.509 (0.44)
<i>F&S × SIZE</i>		0.626*** (5.28)										
Intercept	-3.762*** (-7.20)	-2.605*** (-5.27)	-2.882*** (-5.44)	-3.220*** (-5.82)	-2.419*** (-4.14)	-3.707*** (-7.07)	-2.871*** (-5.47)	-1.753*** (-7.08)	0.150*** (5.31)	0.187*** (3.09)	-85.863*** (-9.37)	-33.604*** (-6.66)
<i>N</i>	16,606	16,606	8,316	16,606	8,234	16,606	8,234	16,606	16,606	16,515	3,039	6,281
Adj- <i>R</i> ²	0.154	0.170	0.169	0.153	0.171	0.153	0.172	0.182	0.391	0.163	0.494	0.431

This table reports results from regressing CSR scores on proxies of internationalization and controls. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. In Model 1 through Model 7, the dependent variable is *CSR_S*, which equals the sum of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issues area scores. In Model 8, the dependent variable is *PFC_CSR_S*, which is the first principal component of *CSR_COM_S*, *CSR_DIV_S*, *CSR_EMP_S*, *CSR_ENV_S*, *CSR_FUM_S*, and *CSR_PRO_S*. In Model 9, the dependent variable is *CSR_S1* defined as (*CSR_S* for firm *i* in year *t* - Min *CSR_S* in year *t* - Min *CSR_S* in year *t* - Max *CSR_S* in year *t* - Min *CSR_S* in year *t* - Max *CSR_S* in year *t*) / (Max *CSR_S* in year *t* - Min *CSR_S* in year *t*). In Model 10, the dependent variable is *CSR_S2* defined as (*CSR_S* for firm *i* in year *t* - Min *CSR_S* in year *t* - Min *CSR_S* in year *t* - Max *CSR_S* in year *t*) / (Max *CSR_S* in year *t* - Min *CSR_S* in year *t*). In Model 11, the dependent variable is *CSR_A4*, which is the CSR score obtained from Thomson Reuters ASSET4. In Model 12, the dependent variable is *CSR_GMI*, which is the CSR score obtained from GMI Ratings. *F&S* is the ratio of foreign sales to total sales; *FAA* is the ratio of foreign assets to total assets. For a firm with *N* geographic segments, *HERFINDAHL_S* is defined as $\sum_{i=1}^N (s_i / \sum_{j=1}^N s_j)^2$, where s_i stands for geographic segment *i* sales; *ENTROPY_S* is defined as $-\sum_{i=1}^N (s_i / \sum_{j=1}^N s_j) \cdot \ln(s_i / \sum_{j=1}^N s_j)$; *ENTROPY_A* is defined as $-\sum_{i=1}^N (a_i / \sum_{j=1}^N a_j) \cdot \ln(a_i / \sum_{j=1}^N a_j)$, where a_i stands for geographic segment *i* assets; *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding × share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADVS* is the ratio of advertising expenses to total sales; and *LTIIO* is long-term institutional ownership. Industry fixed effects based on the Fama and French (1997) industry classification and year effects are not reported to save space. Beneath each coefficient estimate is reported the *t*-statistic based on robust standard errors adjusted for clustering by firm. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively.

with *CSR_S1* and *CSR_S2* in Models 9 and 10, respectively. The results show that internationalization is positively and significantly related to these alternative CSR proxies. Therefore, we rule out the possibility that *MSCI ESG STATS*'s changing methodology over time affects our results.

In a final set of additional tests, we employ CSR scores obtained from Thomson Reuters, namely, ASSET4 (*CSR_A4*) and GMI Ratings (*CSR_GMI*). The results are reported in Models 11 and 12 of Table 3. Despite the sharp drop in the number of observations in this analysis (3,039 observations for *CSR_A4* and 6,281 observations for *CSR_GMI*), we find that the estimated coefficient on *FS/S* bears significantly positively on CSR activity. Overall, the results in Table 3 lend support to H_1 , which predicts that internationalization is positively related to firms' CSR activities.

Turning to the control variables, several significant relations emerge from Table 3. The estimated coefficients on size (*SIZE*), profitability (*ROA*), market-to-book (*MTB*), R&D intensity (*RD/S*), advertising expenses (*ADV/S*), and long-term institutional ownership (*LTIO*) are generally positive and statistically significant, suggesting that they increase CSR ratings.¹⁷ Firm leverage (*LEV*), however, loads significantly negatively on *CSR_S*, suggesting that an increase in leverage leads to a lower CSR rating. All these relations are consistent with expectations.

In Table 4, we examine the stability of the internationalization-CSR relation over time. To do so we re-estimate Eq. (1) over four consecutive five-year subsample periods: 1991–1995 (Model 1), 1996–2000 (Model 2), 2001–2005 (Model 3), and 2006–2010 (Model 4). During the 1991–1995 period, the coefficient on *FS/S* is positive but statistically insignificant at conventional levels. In contrast, the coefficient on *FS/S* in the three other subsample periods loads significantly positively. While it is possible that the internationalization-CSR link can be time-dependent, the data in Table 4 support our prediction on the role of internationalization in influencing firms' CSR activities.

Recall that KLD, the predecessor of MSCI ESG, dramatically increased its coverage in 2003, with the number of observations jumping from 522 in 2002 to 1,370 in 2003 and increasing steadily thereafter. To assess the impact of the increased coverage on our results, we split the sample period into two subperiods: 1991–2002 and 2003–2010.

¹⁷ In this paper we employ the log of sales as our proxy for firm size. Other commonly used proxies for firm size include the log of assets and the log of market capitalization. We find that the three proxies are highly correlated (for instance, the correlation between the log of assets and the log of sales is 0.9). When we replace the log of sales with the log of assets or the log of market capitalization in our baseline model, we find that our evidence is not sensitive to the choice of proxy for size.

We present regression results for these two subperiods in Models 5 and 6 of Table 4. We find that the coefficient on *FS/S* is positive and statistically significant over both subperiods.¹⁸ However, the coefficient on *FS/S* is more statistically significant for the 2003–2010 period (1 %) than the 1991–2002 period (10 %).¹⁹ This might be due to statistical power, as the 2003–2010 period has approximately three times the observations of the 1991–2002 period.

In Table 5 we use two alternative estimation methods. First, we exploit the panel nature of our data by estimating fixed and random effects models. In results reported in Models 1 and 2, we continue to find that internationalization is significantly positively related to a firm's CSR score. These regressions help dispel concerns that omitted variables and unobserved heterogeneity drive our main finding. Second, following Petersen (2009) and Gow et al. (2010), we use different estimation methods to control for cross-sectional and serial dependence, namely, Newey–West in Model 3, Fama–MacBeth in Model 4, Prais–Winsten in Model 5, and two-way clustering by firm and year in Model 6 of Table 5. Importantly, the estimated coefficient on *FS/S* loads significantly positively on CSR in each of these regressions, indicating that our main evidence on the positive association between CSR and internationalization is unaffected by the use of different estimation methods.

To reinforce the validity of our findings, in Table 6 we provide out-of-sample evidence on the relationship between CSR and internationalization. Specifically, we use Thomson Reuters ASSET4 as an alternative source of CSR data to extend our sample to firms from 44 countries over the 2002–2010 period. Panel A of Table 6 presents the distribution of the sample by country and year. The U.S., Japan, and the U.K. are the most represented countries with 37, 13, and 12 % of the sample observations, respectively, and the number of observations increases steadily over the sample period, from 519 in 2002 to 1,869 in 2010. Regression results are reported in Panel B of Table 6, with country effects reported in Appendix 4. We find that the estimated coefficient on *FS/S* bears significantly positively on the ASSET4 measure of CSR activity.²⁰ The results in Table 6 therefore reinforce our main evidence in Table 4

¹⁸ We also isolate the financial crisis period (i.e., 2007–2008). Interestingly, we continue to find that internationalization exhibits a positive relationship with CSR over this period.

¹⁹ We consider a balanced sample of 3,984 observations over the 2003–2010 period and find that the coefficient on *FS/S* is positive and significant.

²⁰ Note that *CSR_A4* has a different scale compared to *CSR_S*, the dependent variable used in Table 3. In particular, *CSR_A4* has a mean of 55.44 and ranges from 6.65 to 97.85, while *CSR_S* has a mean of –0.17 and ranges from –9 to 15. This explains why the coefficient on *FS/S* is higher in Table 6, where the dependent variable is *CSR_A4*, than in Table 3, where the dependent variable is *CSR_S*.

Table 4 The relationship between corporate social responsibility and internationalization over time

	1991–1995 (1)	1996–2000 (2)	2001–2005 (3)	2006–2010 (4)	1991–2002 (5)	2003–2010 (6)
<i>FS/S</i>	0.964 (1.57)	1.096** (1.98)	0.350** (1.98)	0.659*** (3.94)	0.746* (1.78)	0.571*** (3.91)
<i>SIZE</i>	−0.134 (−1.36)	−0.064 (−0.67)	0.126*** (2.81)	0.336*** (7.79)	−0.094 (−1.26)	0.288*** (7.24)
<i>LOG_AGE</i>	−0.223 (−1.49)	−0.272** (−2.32)	0.074* (1.72)	0.151*** (3.41)	−0.106 (−1.23)	0.117*** (3.12)
<i>ROA</i>	1.936 (1.29)	3.418*** (2.77)	1.337*** (4.23)	0.140 (1.26)	2.603*** (3.13)	0.300** (1.97)
<i>MTB</i>	0.070 (0.66)	0.082 (1.00)	0.115*** (4.06)	0.173*** (5.18)	0.104* (1.76)	0.160*** (5.93)
<i>LEV</i>	0.808 (1.14)	0.266 (0.29)	−0.643*** (−2.89)	−0.451** (−2.18)	0.147 (0.27)	−0.555*** (−3.09)
<i>R&D/S</i>	4.802 (1.35)	−0.848 (−0.47)	0.763*** (3.84)	0.860*** (4.52)	0.225 (0.29)	0.816*** (4.87)
<i>ADV/S</i>	1.481 (0.47)	4.051 (1.16)	7.172*** (4.11)	6.275*** (3.49)	4.618* (1.84)	6.006*** (3.77)
<i>LTIO</i>	1.043 (1.10)	−0.360 (−0.34)	1.361*** (2.73)	0.958** (2.31)	0.737 (0.99)	0.939** (2.50)
Intercept	0.972 (1.00)	0.380 (0.22)	−2.588*** (−4.24)	−5.304*** (−8.89)	0.053 (0.05)	−4.685*** (−8.95)
<i>N</i>	1,624	1,533	5,331	8,118	4,183	12,423
Adj- <i>R</i> ²	0.231	0.164	0.145	0.151	0.171	0.140

This table reports results from regressing the CSR score (*CSR_S*) on internationalization (*FS/S*) and controls. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. *CSR_S* equals the sum of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issues area scores. *FS/S* is the ratio of foreign sales to total sales. *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADV/S* is the ratio of advertising expenses to total sales; and *LTIO* is long-term institutional ownership. Industry fixed effects based on the Fama and French (1997) industry classification and year effects are not reported to save space. Beneath each coefficient estimate is reported the *t*-statistic based on robust standard errors adjusted for clustering by firm. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

on the positive relation between internationalization and firms' CSR activities.

Endogeneity

Although our results on the internationalization-CSR relationship are insightful, they should be interpreted with caution because we cannot rule out alternative explanations. For instance, reverse causality might be an issue since CSR as an organizational resource may help firms expand internationally. In addition, self-selection into socially responsible behavior might arise as the firm's stance on such behavior is not a random decision. To mitigate concerns of endogeneity we use three approaches, reported in Table 7.

First, in Panel A we implement an instrumental variable (IV) estimation procedure where we use three instruments

to extract the exogenous component of *FS/S*, following Li et al. (2011). The first instrument is *MID*, a dummy variable set to one if the firm reports minority interest on its balance sheet. A firm carries minority interest on its balance sheet if it acquired majority stakes in other firms. To the extent that firms internationalize using foreign acquisitions, *MID* should be correlated with international diversification. However, since minority interest reflects past acquisitions, *MID* is unlikely to be directly related to contemporaneous CSR. The second instrument is *PNFOR*, the fraction of firms with foreign sales in the firm's industry in a given year. A higher fraction of internationally diversified firms in the same industry indicates significant demand for the industry's products abroad. This should encourage firms in the same industry to internationalize. However, it is not clear why a higher fraction of

Table 5 The relationship between corporate social responsibility and internationalization: alternative estimations and standard errors

	Firm fixed effects (1)	Firm random effects (2)	Newey–West (3)	Fama–MacBeth (4)	Prais–Winsten (5)	Clustering by firm and year (6)
<i>FS/S</i>	1.072*** (3.02)	0.551*** (3.74)	0.561*** (5.63)	0.772*** (7.62)	0.727*** (3.72)	0.403*** (2.62)
<i>SIZE</i>	−0.039 (−0.49)	0.160*** (5.12)	0.191*** (7.92)	0.056 (1.06)	0.449*** (10.70)	0.246*** (3.17)
<i>LOG_AGE</i>	−0.078 (−1.14)	0.076*** (2.68)	0.063** (2.55)	−0.073 (−1.36)	−0.132* (−1.95)	0.127*** (3.37)
<i>ROA</i>	0.367** (2.04)	0.227** (2.07)	0.542*** (2.59)	2.163*** (4.19)	−0.274** (−2.19)	0.601** (2.05)
<i>MTB</i>	−0.032 (−1.24)	0.030 (1.46)	0.150*** (7.64)	0.096*** (3.33)	0.011 (0.66)	0.171*** (6.21)
<i>LEV</i>	0.048 (0.21)	−0.154 (−0.96)	−0.435*** (−3.44)	0.011 (0.06)	−0.098 (−0.66)	−0.412** (−2.21)
<i>R&D/S</i>	0.136 (0.69)	0.450*** (3.73)	0.714*** (5.36)	1.662* (2.08)	0.558*** (3.21)	0.752*** (3.22)
<i>ADV/S</i>	0.305 (0.16)	2.313** (2.20)	5.179*** (5.60)	4.865*** (5.10)	1.358 (1.10)	5.254*** (3.76)
<i>LTIO</i>	−0.681** (−2.28)	−0.112 (−0.44)	0.962*** (3.71)	0.688** (2.55)	0.161 (0.91)	−0.010 (−0.02)
Intercept	0.497 (0.76)	−2.893*** (−7.65)	−3.762*** (−11.70)	−1.908*** (−3.17)	−5.452*** (−5.55)	−4.039*** (−5.64)
Industry effects	No	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	No	Yes	No
<i>N</i>	16,606	16,606	16,606	16,606	12,431	16,606
Adj- R^2/R^2	0.000	0.135	0.154	0.223	0.024	0.132

This table reports results from regressing the CSR score (*CSR_S*) on internationalization (*FS/S*) and controls. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. *CSR_S* equals the sum of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issues area scores. *FS/S* is the ratio of foreign sales to total sales. *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADV/S* is the ratio of advertising expenses to total sales; and *LTIO* is long-term institutional ownership. Industry fixed effects based on the Fama and French (1997) industry classification and year effects are not reported to save space. Beneath each coefficient estimate is reported the *t*-statistic. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

internationally diversified firms would be directly related to a particular firm's CSR activities. The third instrument is *STATE_FS/S*, the ratio of foreign sales of all firms headquartered in the state to foreign sales of all sample firms in a given year. A firm might benefit from the international experiences of neighboring firms. Therefore, higher foreign sales by firms in the same state should be correlated with firm internationalization, but there are no theoretical reasons to believe that it should also be correlated with CSR. We regress *FS/S* on the three instruments and all the controls in Eq. (1). Results of this first-step regression are reported in Model 1. We then retain the predicted value of

FS/S and use it instead of *FS/S* in the regressions examining the effect of internationalization on CSR. We use two-stage least-squares (2SLS), limited information maximum likelihood (LIML), and generalized method of moments (GMM) estimations, respectively, in Models 2, 3, and 4. The results reported in Model 1 suggest that the three instrumental variables are significantly positively related to our internationalization proxy (*FS/S*). Importantly, the second-stage regressions results in Models 2 through 4 consistently show that the impact of the predicted value of *FS/S* is positive and statistically significant at the 5 % level, reinforcing our OLS findings in Table 4.

Table 6 The relationship between corporate social responsibility and internationalization: out-of-sample evidence

Panel A: Sample distribution by country and year					
Country	<i>N</i>	%	Country	<i>N</i>	%
Australia	417	3.76	Peru	2	0.02
Austria	87	0.79	Poland	11	0.1
Belgium	80	0.72	Portugal	43	0.39
Brazil	54	0.49	Russian Federation	43	0.39
Canada	396	3.57	Singapore	133	1.2
Chile	12	0.11	South Africa	43	0.39
China	24	0.22	South Korea	61	0.55
Czech Republic	4	0.04	Spain	201	1.81
Denmark	112	1.01	Sweden	241	2.18
Finland	167	1.51	Switzerland	264	2.38
France	487	4.4	Taiwan	57	0.51
Germany	384	3.47	Thailand	5	0.05
Greece	50	0.45	Turkey	16	0.14
Hong Kong	104	0.94	United Kingdom	1,307	11.8
Hungary	6	0.05	United States	4,079	36.82
India	67	0.6	Total	11,077	100
Indonesia	11	0.1			
Ireland	70	0.63	Year	<i>N</i>	%
Israel	14	0.13	2002	519	4.69
Italy	138	1.25	2003	521	4.70
Japan	1,490	13.45	2004	936	8.45
Luxembourg	18	0.16	2005	1,196	10.80
Malaysia	34	0.31	2006	1,224	11.05
Mexico	38	0.34	2007	1,348	12.17
Morocco	2	0.02	2008	1,602	14.46
Netherlands	170	1.53	2009	1,862	16.81
New Zealand	34	0.31	2010	1,869	16.87
Norway	101	0.91	Total	11,077	100.00
Panel B: Regression results					
<i>FS/S</i>					6.556*** (4.05)
<i>SIZE</i>					11.264*** (33.09)
<i>ROA</i>					-3.751 (-0.87)
<i>MTB</i>					0.907** (2.07)
<i>LEV</i>					-0.169 (-0.06)
<i>R&D/S</i>					55.454*** (6.15)
Intercept					-135.552*** (-23.54)
Country fixed effects					Yes
<i>N</i>					11,077
Adj- <i>R</i> ²					0.442

This table reports results from regressing an alternative CSR score on internationalization (*FS/S*) and controls. The full sample is composed of 7,012 firm-year observations from 43 countries over the period 2002–2010. The alternative CSR score is the average of social performance rating and the environmental performance rating obtained from the ASSET4 database. *FS/S* is the ratio of foreign sales to total sales. *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding × share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; and *R&D/S* is the ratio of research and development expenses to total sales. Country, industry and year effects are not reported to save space. Beneath each coefficient estimate is reported the *t*-statistic based on robust standard errors adjusted for clustering by firm. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

Table 7 The relationship between corporate social responsibility and internationalization: addressing endogeneity

Panel A: Instrumental variable regressions

	First-stage regression		Second-stage regression	
	(1)	(2)	(3)	(4)
<i>FS/S</i>		0.657** (1.96)	0.657* (1.94)	0.688** (2.07)
<i>SIZE</i>	0.025*** (19.73)	0.184*** (4.77)	0.184*** (4.77)	0.159*** (4.19)
<i>LOG_AGE</i>	0.005*** (2.88)	0.048 (1.20)	0.048 (1.20)	0.054 (1.34)
<i>ROA</i>	-0.030*** (-2.65)	0.616** (2.52)	0.616** (2.52)	0.618** (2.52)
<i>MTB</i>	0.002 (1.22)	0.182*** (6.47)	0.182*** (6.47)	0.175*** (6.24)
<i>LEV</i>	-0.084*** (-9.00)	-0.721*** (-3.68)	-0.721*** (-3.68)	-0.596*** (-3.12)
<i>R&D/S</i>	0.059*** (5.90)	0.925*** (5.52)	0.925*** (5.53)	0.825*** (5.02)
<i>ADV/S</i>	-0.203*** (-3.26)	9.493*** (6.62)	9.493*** (6.61)	9.302*** (6.48)
<i>LTIO</i>	-0.106*** (-5.25)	1.026*** (2.68)	1.026*** (2.68)	1.021*** (2.67)
<i>MID</i>	0.070*** (15.58)			
<i>PNFOR</i>	0.462*** (74.92)			
<i>STATE_FS/S</i>	0.533*** (18.93)			
Intercept	-0.235*** (-17.90)	-2.809*** (-7.98)	-2.809*** (-7.97)	-2.682*** (-7.65)
<i>N</i>	16,409	16,409	16,409	16,409
Adj- <i>R</i> ²	0.327	0.101	0.101	0.100

Panel B: Propensity score matching

Matching method	Outcome = <i>CSR_S</i>
One-to-one	
Without replacement	0.136*** (3.62)
With replacement	0.345*** (2.66)
Caliper (3 %)	0.345*** (2.66)
k-Nearest neighbors	
Nearest neighbors (<i>n</i> = 10)	0.487*** (4.73)
Nearest neighbors (<i>n</i> = 50)	0.574*** (7.18)
Kernel	
Gaussian kernel	0.509*** (8.84)
Epanechnikov kernel	0.531*** (7.70)

Table 7 continued

Panel C: Heckman self-selection

	Selection equation (1)	Outcome equation (2)
<i>FS/S</i>		0.690*** (3.493)
<i>SIZE</i>	0.278*** (26.645)	0.194*** (4.759)
<i>LOG_AGE</i>	0.040*** (2.836)	0.062 (1.591)
<i>ROA</i>	-0.336*** (-3.440)	0.516** (2.424)
<i>MTB</i>	0.062*** (5.312)	0.149*** (5.545)
<i>LEV</i>	-0.325*** (-4.634)	-0.467** (-2.402)
<i>R&D/S</i>	0.009 (0.113)	0.701*** (3.733)
<i>ADV/S</i>	2.433*** (4.797)	5.060*** (3.433)
<i>LTIO</i>	0.149 (1.014)	0.697* (1.951)
<i>MID</i>	0.372*** (9.959)	
<i>PNFOR</i>	3.506*** (21.407)	
<i>STATE_FS/S</i>	2.254*** (10.219)	
<i>INV_MILLS</i>		-0.002 (-0.024)
Intercept	-4.147*** (-22.649)	-3.671*** (-6.905)
<i>N</i>	16,272	16,272
Pseudo- R^2 /Adj- R^2	0.375	0.157

Panel A reports the results of instrumental variable (IV) regressions. We employ three IVs for *FS/S*: (1) a firm-level IV, *MID* (Dummy variable set to 1 if the firm reports minority interest on its balance sheet, and 0 otherwise); (2) an industry-level IV, *PNFOR* (the fraction of firms with positive *FS/S* in the firm's industry in a given year); and (3) a geographic IV, *STATE_FS/S* (the ratio of foreign sales of all firms headquartered in the state to foreign sales of all sample firms in a given year). Panel B reports the difference in the CSR score (*CSR_S*) between multinational and domestic firms in propensity score matched samples obtained according to three different matching methods. The propensity scores are obtained from a probit model that regresses a multinational dummy (dummy variable set to 1 if *FS/S* > 0, and 0 otherwise) on firm characteristics (*SIZE*, *LOG_AGE*, *ROA*, *MTB*, *LEV*, *R&D/S*, and *ADV/S*) and industry and year effects. Panel C reports the results of Heckman's two-step treatment effect model used to correct for self-selection. The selection equation uses a multinational dummy (dummy variable set to 1 if *FS/S* > 0, and 0 otherwise) as the dependent variable. The independent variables in the selection equation are firm characteristics (*SIZE*, *LOG_AGE*, *ROA*, *MTB*, *LEV*, *R&D/S*, and *ADV/S*) and the three instruments (*MID*, *STATE_FS/S*, and *PnFor*). The outcome equation controls the inverse Mills ratio (*INV_MILLS*) estimated from the selection equation. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991-2010. *CSR_S* equals the sum of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issues area scores. *FS/S* is the ratio of foreign sales to total sales. *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADV/S* is the ratio of advertising expenses to total sales; and *LTIO* is long-term institutional ownership. Industry fixed effects based on the Fama and French (1997) industry classification and year effects are not reported to save space. Beneath each coefficient estimate is reported the *t*-statistic. In Panels B and C, the *t*-statistics are based on robust standard errors adjusted for clustering by firm. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

Second, in Panel B of Table 7 we employ the propensity score matching (PSM) procedure proposed by Rosenbaum and Rubin (1983). To implement PSM we start by constructing a multinational dummy variable that takes the

value of one if *FS/S* > 0, and zero otherwise. We then estimate a probit model where we regress the multinational dummy on all controls, and we use the scores to match (using different approaches) each observation with

multinational dummy = 1 to an observation with multinational dummy = 0. We use the resulting sample in our regression. Interestingly, our key variable (multinational dummy) loads significantly positively on CSR independent of the matching method used, lending further support to our main finding that internationalization is associated with a higher CSR score. As such, CSR seems to play a non-negligible strategic role in reducing market imperfections and managing the complexity arising from expanding into new international markets.

Third, in Panel C of Table 7 we employ the Heckman self-selection (two-step) model. In the first step, we use a probit model to regress the multinational dummy on all control variables from our main specification (Column 1 in Table 4) and the instrumental variables used in Panel A of Table 7 (*MID*, *PNFOR*, and *STATE_FS/S*). In the second stage, the firm's overall CSR score (*CSR_S*) is the dependent variable, and we include the self-selection parameter (inverse Mills' ratio) estimated from the first stage. The results of the two-step estimation model continue to suggest that internationalization is positively associated with a higher CSR score.

Effects of Internationalization on the Components of a Firm's CSR Score

To test our second and third hypotheses, we examine the link between internationalization and different dimensions of the overall CSR score. In Models 1 and 2 of Table 8, we test the effect of internationalization on CSR strengths (*CSR_STR*) and concerns (*CSR_CON*), respectively. In line with our second hypothesis (H_2), we find that the estimated coefficient on *FS/S* loads significantly positively on CSR strengths (*CSR_STR*), while it does not have a significant effect on CSR concerns (*CSR_CON*).²¹ This evidence suggests that internationalization increases CSR strengths, but has no effect on CSR concerns. This result provides only partial support for Strike et al. (2006), who find a positive relationship between firm internationalization and both responsible and irresponsible corporate behavior. A potential explanation for the different results is that as firms expand the geographical scope of their operations, they invest proactively in CSR strengths, as doing so enhances the firm's reputation and in turn its competitive advantage. In contrast, firms are unlikely to devote effort to avoiding CSR concerns (Servaes and Tamayo 2013), as doing so is usually achieved by complying with minimum industry standards.

²¹ Alternatively, we also isolate observations with positive *CSR_S* and negative *CSR_S*. In unreported regressions on these subsamples, we find that *FS/S* loads positively only in the subsample with positive *CSR_S*.

Next, we examine the effects of internationalization on the individual CSR dimensions. Specifically, we look at the following six attributes included in the CSR score: Community (*CSR_COM_S*) in Model 3, Diversity (*CSR_DIV_S*) in Model 4, Employee Relations (*CSR_EMP_S*) in Model 5, Environment (*CSR_ENV_S*) in Model 6, Human Rights (*CSR_HUM_S*) in Model 7, and Product Characteristics (*CSR_PRO_S*) in Model 8. The results suggest that the effects of internationalization vary across the six CSR dimensions. Internationalization loads significantly negatively on the dimension Human Rights (*CSR_HUM_S*). In contrast, internationalization loads significantly positively on the CSR dimensions related to the firm's primary stakeholders, that is, Community (*CSR_COM_S*), Diversity (*CSR_DIV_S*), and Environment (*CSR_ENV_S*). Firm internationalization does not have a significant effect on the dimensions Employee Relations (*CSR_EMP_S*) and Product Characteristics (*CSR_PRO_S*). Overall, these findings provide some support to the evidence in Brammer et al. (2006) that, for a sample of U.K. firms in 2002, geographical diversification has a positive relationship with the CSR dimensions Community and Environment but no relationship with the Employee Relations dimension.

Taken together, the findings in Table 8 are largely consistent with our third hypothesis (H_3). The positive and significant links between internationalization and the dimensions Community, Diversity, and Environment lend weight to the finding of Hillman and Keim (2001) that the relevant CSR dimensions are those directly related to firms' primary stakeholders. Stated differently, our evidence suggests that to address the complexities of internationalization, multinational firms try to meet their various primary stakeholders' expectations in regard to corporate social performance. In contrast, the significant negative link between internationalization and a dimension that reflects the firm's participation in social issues (i.e., Human Rights) suggests that firms entering foreign markets do not invest in social issues, perhaps because multinational firms do not realize competitive advantage benefits from doing so.²² Similarly, internationalization does not appear to bear on the product and employee CSR dimensions, which are determined to a large extent by competitive pressures and legal, regulatory, and/or industry standards and have a more direct impact on multinational firms' financial performance. For instance, employee relations, as revealed by organizational practices designed to

²² One could expand on the pollution haven hypothesis (e.g., Dam and Scholtens 2008) to provide an interpretation of the negative link between internationalization and Human Rights score: firms may locate subsidiaries in countries or regions with lax standards on Human Rights. Providing direct evidence on this conjecture is beyond the scope of the current study.

Table 8 The relationship between corporate social responsibility components and internationalization

	<i>CSR_STR_S</i> (1)	<i>CSR_CON_S</i> (2)	<i>CSR_COM_S</i> (3)	<i>CSR_DIV_S</i> (4)	<i>CSR_EMP_S</i> (5)	<i>CSR_ENV_S</i> (6)	<i>CSR_HUM_S</i> (7)	<i>CSR_PRO_S</i> (8)
<i>FS/S</i>	0.586*** (4.58)	0.025 (0.28)	0.092*** (2.71)	0.325*** (4.16)	-0.018 (-0.30)	0.208*** (4.41)	-0.050*** (-3.22)	0.016 (0.40)
<i>SIZE</i>	0.665*** (16.62)	0.475*** (18.46)	0.056*** (5.75)	0.318*** (16.30)	0.017 (1.24)	-0.041*** (-3.15)	-0.034*** (-8.53)	-0.120*** (-12.11)
<i>LOG_AGE</i>	0.171*** (5.39)	0.108*** (4.31)	0.010 (1.23)	0.088*** (4.60)	0.017 (1.33)	-0.026** (-2.11)	-0.015*** (-4.08)	-0.013 (-1.29)
<i>ROA</i>	-0.221* (-1.74)	-0.763*** (-2.76)	-0.001 (-0.04)	-0.071 (-0.95)	0.284** (2.07)	0.152** (2.48)	0.024* (1.86)	0.146*** (3.14)
<i>MTB</i>	0.144*** (6.17)	-0.006 (-0.37)	0.022*** (3.32)	0.051*** (3.43)	0.048*** (4.47)	0.017*** (2.60)	-0.002 (-0.74)	0.014* (1.78)
<i>LEV</i>	-0.565*** (-3.50)	-0.131 (-1.07)	-0.032 (-0.83)	-0.327*** (-3.20)	-0.145** (-2.01)	0.026 (0.47)	0.027 (1.44)	0.013 (0.27)
<i>R&D/S</i>	1.349*** (8.63)	0.636*** (4.40)	0.105*** (2.95)	0.640*** (6.62)	0.092 (1.13)	-0.038 (-0.81)	-0.085*** (-6.24)	0.001 (0.02)
<i>ADV/S</i>	4.720*** (3.72)	-0.459 (-0.59)	1.100*** (2.58)	3.944*** (5.14)	0.764 (1.38)	0.571 (1.52)	-0.223* (-1.77)	-0.810* (-1.77)
<i>LTIO</i>	-0.401 (-1.51)	-1.362*** (-5.69)	0.067 (0.85)	0.222 (1.31)	0.230* (1.71)	0.192* (1.76)	0.069** (2.11)	0.212** (2.11)
Intercept	-4.341*** (-9.46)	-0.579 (-1.55)	-0.583*** (-4.51)	-3.858*** (-16.67)	-0.473*** (-2.94)	0.251 (1.46)	0.258*** (4.79)	0.588*** (5.32)
<i>N</i>	16,606	16,606	16,606	16,606	16,606	16,606	15,299	16,606
Adj- <i>R</i> ²	0.318	0.322	0.133	0.296	0.100	0.150	0.116	0.179

This table reports results from regressing CSR components on internationalization (*FS/S*) and controls. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. *CSR_COM_S* equals the number of strengths minus the number of concerns in the Community qualitative issue area; *CSR_DIV_S* equals the number of strengths minus the number of concerns in the Diversity qualitative issue area; *CSR_EMP_S* equals to the number of strengths minus the number of concerns in the Employee Relations qualitative issue area; *CSR_ENV_S* equals the number of strengths minus the number of concerns in the Environment qualitative issue area; *CSR_HUM_S* equals the number of strengths minus the number of concerns in the Human Rights qualitative issue area; *CSR_PRO_S* equals the number of strengths minus the number of concerns in the Product qualitative issue area; *PFC_CSR_S* is the principal factor component of *CSR_COM_S*, *CSR_DIV_S*, *CSR_EMP_S*, *CSR_ENV_S*, *CSR_HUM_S* and *CSR_PRO_S*; and *CSR_STR_S* (*CSR_CON_S*) equals the total number of strengths (concerns) of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issue areas. *FS/S* is the ratio of foreign sales to total sales. *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADV/S* is the ratio of advertising expenses to total sales; and *LTIO* is long-term institutional ownership. Industry fixed effects based on the Fama and French (1997) industry classification and year effects are not reported to save space. Beneath each coefficient estimate is reported the *t*-statistic based on robust standard errors adjusted for clustering by firm. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

enhance employee skills and involvement (e.g., profit-sharing program, employee stock option plans, safety programs, promotions, training, and succession planning), likely lead to a more competitive and productive workforce and thus more productivity gains and better performance (e.g., Whitener 2001; Collins and Smith 2006). Similarly, product characteristics, which tend to reflect, among other things, a firm's long-term investment in quality, R&D/innovation, and product safety are typically determined by

the industry-competitive pressures and standards (e.g., product technology and social benefits).

It is worth reiterating, however, that the evidence for the relationship between internationalization and the individual dimensions of CSR should be interpreted with caution because, as suggested by Brammer et al. (2009, p. 579), information regarding an individual component of CSR “does not enable stakeholders to concretely evaluate the degree to which a firm is socially responsible or irresponsible”.

Impact of the Institutional Environment on a Firm's CSR Score

To test our fourth hypothesis (H_4), we analyze the extent to which a U.S. multinational firm's CSR score is affected by the institutional environment of its foreign subsidiaries' host countries. To do so we analyze the subsample of U.S. firms that disclose subsidiaries in Exhibit 21 of Form 10-K and control for a set of institutional variables obtained from International Country Risk Guide. For each institutional variable, we follow Dyreng et al. (2012) and compute the weighted average institutional rating of countries in which the firm discloses subsidiaries.²³ The results are reported in Table 9.

In Model 1 we examine whether variation in the local political risk rating that applies to foreign subsidiaries affects the U.S. parent. The estimated coefficient on *POLIT_RISK* is positive and significant at the 1 % level, suggesting that, all else being equal, diversification into countries with more political stability is associated with a higher CSR score. The estimated coefficient on the weighted average government stability rating of countries in which the firm discloses subsidiaries (*GOVT_STAB*), as shown in Model 2, is also positive and significant, indicating that diversification into countries with more stable governments is associated with more socially responsible behavior by U.S. firms and thus a higher CSR score. In Models 3–7 of Table 9 we compute the weighted average of, respectively, the government's investment profile rating, control of corruption rating, law-and-order rating, democratic accountability rating, and quality of bureaucracy rating. Interestingly, the estimated coefficient on each of these factors loads significantly positively on the CSR score, providing evidence that multinational firms with subsidiaries in countries with strong legal and political institutions are associated with a higher CSR score. Moreover, the effect on CSR of our key variable (*FS/S*) continues to hold, lending further weight to our main finding on the societal implications of firm internationalization.²⁴

In sum, the evidence reported in Table 9 supports our fourth hypothesis (H_4). Taken together, our novel evidence

on the firm-level CSR implications of the institutional environments in which a firm's subsidiaries are located complements Ioannou and Serafeim's (2012) findings that country institutions are important determinants of firms' social and environmental performance. Similarly, the evidence of Table 9 lends support to the pollution haven hypothesis, which holds that firms that pollute more locate in countries with lax environmental regulations (e.g., Dam and Scholtens 2008).

Conclusion

In this paper, we shed new light on the determinants of corporate social performance by investigating the extent to which CSR activities are affected by the degree of internationalization of firms.

Using a sample of 3,040 U.S. firms representing 16,606 firm-year observations over the 1991–2010 period, we find that internationalization exerts a significant and positive effect on CSR activity. We also find that internationalization loads significantly (positively) on CSR strengths but not on CSR concerns, and that internationalization bears significantly only on those CSR dimensions that are discretionary in nature and less likely to be determined by societal and legal requirements. We further find that only large multinational firms with more abundant resources increase their CSR investments in response to their internationalization. Finally, we provide new evidence that multinational firms with subsidiaries in countries with strong institutional environments and strong legal and political institutions are associated with higher CSR ratings. In sum, our findings support the view that firm internationalization is associated with increased CSR activity, suggesting that the importance of responding to stakeholder demands increases with the degree of internationalization.

In additional analysis based on a sample of representing 11,077 firm-year observations from 44 countries over the 2002–2010 period, we go beyond Brammer et al. (2009) and more recently Kang (2013) by providing evidence on the link between internationalization and CSR in an international context. Furthermore, we expand previous literature by relating internationalization to the different components of CSR, rather than examining the outcomes of these components on firm performance, financing costs, and credit ratings. Moreover, we fill a gap in extant literature by showing how different institutional and legal environments affect the relation between internationalization and CSR.

Two caveats are in order. First, our main proxy for a firm's CSR activities comes from KLD's binary ratings of corporate social activity. These ratings do not distinguish

²³ Weights are equal to the number of subsidiaries in each country. Data on subsidiaries come from Dyreng and Lindsey (2009).

²⁴ We also decompose the overall CSR score into strengths (*CSR_STR_S*) and concerns (*CSR_CON_S*) and re-run the regressions of Table 9. In unreported results, we find that the weighted average institutional ratings of countries in which the firm discloses subsidiaries are all significantly negatively related to *CSR_CON_S*. However, the weighted average of two institutional ratings out of seven is significantly positively related to *CSR_STR_S*. This suggests there is stronger evidence that international diversification to countries with better institutional environments is associated with fewer CSR concerns.

Table 9 The relationship between corporate social responsibility and internationalization: the role of the institutional environments of countries in which the firm discloses subsidiaries

	<i>POLIT_RISK</i> (1)	<i>GOVT_STAB</i> (2)	<i>INV_PROFILE</i> (3)	<i>CORRUPT</i> (4)	<i>LAW_ORDER</i> (5)	<i>DEMOC</i> (6)	<i>BUREAUCR</i> (7)
<i>FS/S</i>	0.647*** (3.25)	0.598*** (3.01)	0.660*** (3.31)	0.686*** (3.42)	0.663*** (3.32)	0.689*** (3.42)	0.690*** (3.45)
<i>SIZE</i>	0.252*** (4.18)	0.251*** (4.16)	0.253*** (4.20)	0.250*** (4.14)	0.250*** (4.14)	0.248*** (4.11)	0.252*** (4.18)
<i>LOG_AGE</i>	0.065 (1.14)	0.063 (1.10)	0.065 (1.13)	0.062 (1.08)	0.064 (1.11)	0.064 (1.11)	0.066 (1.15)
<i>ROA</i>	0.407* (1.91)	0.396* (1.79)	0.412* (1.94)	0.419* (1.87)	0.416* (1.90)	0.415* (1.91)	0.415* (1.94)
<i>MTB</i>	0.166*** (4.77)	0.167*** (4.80)	0.166*** (4.79)	0.168*** (4.83)	0.167*** (4.80)	0.167*** (4.81)	0.166*** (4.79)
<i>LEV</i>	-0.322 (-1.12)	-0.307 (-1.07)	-0.324 (-1.13)	-0.354 (-1.23)	-0.339 (-1.18)	-0.362 (-1.26)	-0.343 (-1.19)
<i>R&D/S</i>	1.031*** (3.24)	1.036*** (3.28)	1.027*** (3.22)	1.018*** (3.19)	1.011*** (3.16)	1.036*** (3.22)	1.001*** (3.13)
<i>ADV/S</i>	5.245*** (2.70)	5.326*** (2.75)	5.222*** (2.69)	5.200*** (2.67)	5.099*** (2.62)	5.274*** (2.70)	5.209*** (2.68)
<i>LTIO</i>	1.889*** (3.48)	1.893*** (3.48)	1.890*** (3.47)	1.883*** (3.43)	1.880*** (3.43)	1.889*** (3.44)	1.867*** (3.42)
<i>VAR</i>	0.013*** (3.89)	0.115*** (4.17)	0.086*** (3.72)	0.118** (2.30)	0.121*** (2.70)	0.109*** (2.59)	0.210*** (3.13)
Intercept	-5.809*** (-6.16)	-5.658*** (-6.02)	-5.719*** (-6.04)	-5.365*** (-5.68)	-5.444*** (-5.79)	-5.450*** (-5.71)	-5.593*** (-5.98)
<i>N</i>	7,159	7,159	7,159	7,159	7,159	7,159	7,159
Adj- <i>R</i> ²	0.205	0.205	0.204	0.202	0.203	0.202	0.204

This table reports results from regressing the CSR score (*CSR_S*) on internationalization (*FS/S*) and controls. The sample is composed of 16,606 firm-year observations representing 3,040 unique firms over the period 1991–2010. *CSR_S* equals the sum of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issues area scores. *FS/S* is the ratio of foreign sales to total sales. *SIZE* is the logarithm of total sales; *LOG_AGE* is the logarithm of firm age defined as the number of months since the firm first appeared in the *CRSP* database; *ROA* is the ratio of EBITDA to total assets; *MTB* is the market-to-book ratio of assets defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets; *LEV* is the leverage ratio defined as the ratio of total debt to total assets; *R&D/S* is the ratio of research and development expenses to total sales; *ADV/S* is the ratio of advertising expenses to total sales; and *LTIO* is long-term institutional ownership. *POLIT_RISK* is the weighted average political risk rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K; *GOVT_STAB* is the weighted average government stability rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K; *INV_PROFILE* is the weighted average government investment profile of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K; *CORRUPT* is the weighted average corruption control rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K; *LAW_ORDER* is the weighted average law-and-order rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K; *DEMOC* is the weighted average democratic accountability rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K; *BUREAUCR* is the weighted average quality of bureaucracy rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country. All Institutional variables are obtained from the International Country Risk Guide. Data on subsidiaries come from Dyreng and Lindsey (2009). Industry fixed effects based on the Fama and French (1997) industry classification and year effects are not reported to save space. Beneath each coefficient estimate is reported the t-statistic based on robust standard errors adjusted for clustering by firm. The superscript asterisks ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

the extent of CSR activity within each component area (Barnea and Rubin 2010). Our proxies for a firm's corporate social performance are thus noisy indicators of a firm's actual CSR behavior (Ioannou and Serafeim 2012). Second, although we employ commonly used measures of internationalization, we acknowledge that these unidimensional measures may not be ideal as suggested by Sullivan (1994).

The findings of this study invite researchers to explore the implications of the internationalization-CSR link on other corporate outcomes, while taking into account the institutional and political environments in which subsidiaries of multinational firms operate. Future research may also seek to improve our understanding of how social responsibility standards of host countries affect the CSR behavior of multinational firms. In addition, it would be interesting to test the possibility that firms could expand

internationally to integrate a larger set of stakeholders' interests, suggesting that firms that want to behave responsibly will likely aim for cross-border growth and diversification. Finally, following Sullivan's suggestion (1994), future research should work toward identifying a broad construct that reflects the multiple dimensions of internationalization.

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Appendix 1

See Table 10.

Table 10 Qualitative issue area definitions

	Concerns	Strengths
Community	Investment Controversies Negative Economic Impact Indigenous Peoples Relations Tax Disputes Other Concern	Charitable Giving Innovative Giving Non-U.S. Charitable Giving Support for Housing Support for Education Indigenous Peoples Relations Volunteer Programs Other Strength
Diversity	Controversies Non-representation Other concern	CEO Promotion Board of Directors Work/Life Benefits Women and Minority Contracting Employment of the Disabled Gay and Lesbian Policies Other Strength
Employee Relations	Union Relations Health and Safety Concern Workforce Reductions Retirement Benefits Concern Other Concern	Union Relations No-Layoff Policy Cash Profit Sharing Employee Involvement Retirement Benefits Strength Health and Safety Strength Other Strength
Environment	Hazardous Waste Regulatory Problems Ozone Depleting Chemicals Substantial Emissions Agricultural Chemicals Climate Change Other Concern	Beneficial Products and Services Pollution Prevention Recycling Clean Energy Communications Property, Plant, and Equipment Other Strength

Table 10 continued

	Concerns	Strengths
Human rights	South Africa	Positive Record in South Africa
	Northern Ireland	Indigenous Peoples Relations Strength
	Burma Concern	Labor Rights Strength
	Mexico	Other Strength
	Labor Rights Concern	
	Indigenous Peoples Relations Concern	
	Other Concern	
Product characteristics	Product Safety	Quality
	Marketing/Contracting Concern	R&D/Innovation
	Antitrust	Benefits to Economically Disadvantaged
	Other Concern	Other Strength

We consider six qualitative issue areas: Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics. Each area has a set of strengths and concerns as illustrated below. We calculate a score for each area equal to the number of strengths minus the number of concerns. We also calculate an overall CSR score equal to the sum of all areas' scores

Definitions of the Qualitative Issue Area Scores and the Overall CSR Score

$CSR_{COM_S} = (\text{Charitable Giving} + \text{Innovative Giving} + \text{Non-U.S. Charitable Giving} + \text{Support for Housing} + \text{Support for Education} + \text{Indigenous Peoples Relations} + \text{Volunteer Programs} + \text{Other Strength}) - (\text{Investment Controversies} + \text{Negative Economic Impact} + \text{Indigenous Peoples Relations} + \text{Tax Disputes} + \text{Other Concern})$.

$CSR_{DIV_S} = (\text{CEO} + \text{Promotion} + \text{Board of Directors} + \text{Work/Life Benefits} + \text{Women \& Minority Contracting} + \text{Employment of the Disabled} + \text{Gay \& Lesbian Policies} + \text{Other Strength}) - (\text{Controversies} + \text{Non-Representation} + \text{Other Concern})$.

$CSR_{EMP_S} = (\text{Union Relations} + \text{No-Layoff Policy} + \text{Cash Profit Sharing} + \text{Employee Involvement} + \text{Retirement Benefits Strength} + \text{Health and Safety Strength} + \text{Other Strength}) - (\text{Union Relations} + \text{Health and Safety Concern} + \text{Workforce Reductions} + \text{Retirement Benefits Concern} + \text{Other Concern})$.

$CSR_{ENV_S} = (\text{Beneficial Products and Services} + \text{Pollution Prevention} + \text{Recycling} + \text{Clean Energy} +$

$\text{Communications} + \text{Property, Plant, and Equipment} + \text{Other Strength}) - (\text{Hazardous Waste} + \text{Regulatory Problems} + \text{Ozone Depleting Chemicals} + \text{Substantial Emissions} + \text{Agricultural Chemicals} + \text{Climate Change} + \text{Other Concern})$.

$CSR_{HUM_S} = (\text{Positive Record in South Africa} + \text{Indigenous Peoples Relations Strength} + \text{Labor Rights Strength} + \text{Other Strength}) - (\text{South Africa} + \text{Northern Ireland} + \text{Burma Concern} + \text{Mexico} + \text{Labor Rights Concern} + \text{Indigenous Peoples Relations Concern} + \text{Other Concern})$.

$CSR_{PRO_S} = (\text{Quality} + \text{R\&D/Innovation} + \text{Benefits to Economically Disadvantaged} + \text{Other Strength}) - (\text{Product Safety} + \text{Marketing/Contracting Concern} + \text{Antitrust} + \text{Other Concern})$.

$CSR_S = CSR_{COM_S} + CSR_{DIV_S} + CSR_{EMP_S} + CSR_{ENV_S} + CSR_{HUM_S} + CSR_{PRO_S}$.

Appendix 2

See Table 11.

Table 11 Variable definitions and data sources

Variable	Definition	Source
Panel A: Corporate social responsibility variables		
<i>CSR_COM_S</i>	The community score equals the number of strengths minus the number of concerns in the Community qualitative issue area	Authors' calculations based on <i>MSCI ESG STATS</i> data
<i>CSR_DIV_S</i>	The Diversity score equals the number of strengths minus the number of concerns in the Diversity qualitative issue area	As above
<i>CSR_EMP_S</i>	The Employee Relations score equals to the number of strengths minus the number of concerns in the Employee Relations qualitative issue area	As above
<i>CSR_ENV_S</i>	The Environment score equals the number of strengths minus the number of concerns in the Environment qualitative issue area	As above
<i>CSR_HUM_S</i>	The Human Rights score equals the number of strengths minus the number of concerns in the Human Rights qualitative issue area	As above
<i>CSR_PRO_S</i>	The Product score equals the number of strengths minus the number of concerns in the Product qualitative issue area	As above
<i>CSR_S</i>	The CSR score equals the sum of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issue areas scores	As above
<i>PFC_CSR_S</i>	First principal component of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issue areas scores	As above
<i>CSR_A4</i>	CSR score from Thomson Reuters ASSET4	Thomson Reuters ASSET4
<i>CSR_GMI</i>	CSR score from GMI Ratings	GMI Ratings
<i>CSR_STR</i>	The total number of strengths of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issue areas	Authors' calculations based on <i>MSCI ESG STATS</i> data
<i>CSR_CON</i>	The total number of concerns of the Community, Diversity, Employee Relations, Environment, Human Rights, and Product Characteristics qualitative issue areas	As above
Panel B: Control variables		
<i>FS/S</i>	Ratio of foreign sales to total sales, where foreign sales is defined as the sum of sales of all foreign segments	<i>Compustat</i>
<i>FA/A</i>	Ratio of foreign assets to total assets, where foreign assets is defined as the sum of assets of all foreign segments	As above
<i>HERFINDAHL_S</i>	For a firm with N geographic segments, the sales Herfindahl index is defined as $\sum_{i=1}^N (s_i / \sum_{i=1}^N s_i)^2$, where s_i stands for geographic segment's i sales	As above
<i>HERFINDAHL_A</i>	For a firm with N geographic segments, the assets Herfindahl index is defined as $\sum_{i=1}^N (a_i / \sum_{i=1}^N a_i)^2$, where a_i stands for geographic segment's i assets	As above
<i>ENTROPY_S</i>	For a firm with N geographic segments, the sales entropy index is defined as $-\sum_{i=1}^N (s_i / \sum_{i=1}^N s_i) \cdot \ln(s_i / \sum_{i=1}^N s_i)$, where s_i stands for geographic segment's i sales	As above
<i>ENTROPY_A</i>	For a firm with N geographic segments, the assets entropy index is defined as $-\sum_{i=1}^N (a_i / \sum_{i=1}^N a_i) \cdot \ln(a_i / \sum_{i=1}^N a_i)$, where a_i stands for geographic segment's i assets	As above
<i>SIZE</i>	Firm size measured as the logarithm of total sales	As above
<i>LOG_AGE</i>	Logarithm of firm age defined as the number of months since the firm first appeared in the <i>CRSP</i> database	<i>CRSP</i>
<i>ROA</i>	Return on assets defined as the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) to total assets	<i>Compustat</i>
<i>MTB</i>	The market-to-book ratio of assets is defined as the ratio of the market value of assets to the book value of assets, where the market value of assets is measured as market capitalization (number of shares outstanding \times share price) minus the book value of equity plus the book value of assets	As above
<i>LEV</i>	Leverage ratio defined as the ratio of total debt to total assets	As above
<i>R&D/S</i>	Ratio of research and development expenses to total sales. This ratio is set to zero when research and development expenses are missing	As above
<i>ADV/S</i>	Ratio of advertising expenses to total sales. This ratio is set to zero when advertising expenses are missing	As above
<i>LTIO</i>	Long-term institutional ownership	Attig et al. (2013a)
Panel C: Instrumental variables		
<i>MID</i>	Dummy variable set to 1 if the firm reports minority interest on its balance sheet, and 0 otherwise	As above

Table 11 continued

Variable	Definition	Source
<i>PNFOR</i>	The fraction of firms with positive <i>FS/S</i> in the firm's industry in a given year	As above
<i>STATE_FS/S</i>	The ratio of foreign sales of all firms headquartered in the state to foreign sales of all sample firms in a given year	As above
Panel D: Institutional environment variables		
<i>POLIT_RISK</i>	Weighted average political risk rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	Authors' calculations based on International Country Risk Guide data and Dyreng and Lindsey's (2009) data
<i>GOVT_STAB</i>	Weighted average government stability rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	As above
<i>INV_PROFILE</i>	Weighted average government investment profile of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	As above
<i>CORRUPT</i>	Weighted average corruption control rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	As above
<i>LAW_ORDER</i>	Weighted average law-and-order rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	As above
<i>DEMOC</i>	Weighted average democratic accountability rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	As above
<i>BUREAUCR</i>	Weighted average quality of bureaucracy rating of countries in which the firm discloses subsidiaries in Exhibit 21 of Form 10-K. Weights are equal to the number of subsidiaries in each country	As above

Appendix 3

See Table 12.

Table 12 Descriptive statistics for the alternative CSR measures obtained from ASSET4 and GMI ratings

Year	<i>PFC_CSR_S</i>		<i>CSR_SI</i>		<i>CSR_S2</i>		<i>CSR_A4</i>		<i>CSR_GMI</i>	
	<i>N</i>	Mean	<i>N</i>	Mean	<i>N</i>	Mean	<i>N</i>	Mean	<i>N</i>	Mean
1991	325	0.30	325	0.64	316	0.50	–	–	–	–
1992	334	0.30	334	0.52	323	0.49	–	–	–	–
1993	326	0.31	326	0.52	318	0.49	–	–	–	–
1994	322	0.36	322	0.49	316	0.49	–	–	–	–
1995	317	0.51	317	0.43	311	0.46	–	–	–	–
1996	328	0.51	328	0.46	322	0.46	–	–	–	–
1997	327	0.47	327	0.46	321	0.45	–	–	–	–
1998	278	0.44	278	0.49	269	0.45	–	–	–	–
1999	277	0.42	277	0.44	271	0.47	–	–	–	–
2000	323	0.44	323	0.40	318	0.45	–	–	–	–
2001	504	0.21	504	0.52	501	0.46	–	–	–	–
2002	522	0.24	522	0.52	520	0.47	180	39.48	–	–
2003	1,370	–0.06	1,370	0.52	1,369	0.44	185	38.28	373	24.63
2004	1,467	–0.14	1,467	0.42	1,465	0.42	243	39.83	447	28.73
2005	1,468	–0.14	1,468	0.40	1,463	0.42	282	42.28	709	28.04
2006	1,506	–0.12	1,506	0.30	1,503	0.40	306	43.80	781	29.81
2007	1,519	–0.14	1,519	0.35	1,517	0.42	334	47.97	873	29.93

Table 12 continued

Panel A: Descriptive statistics by year

Year	<i>PFC_CSR_S</i>		<i>CSR_S1</i>		<i>CSR_S2</i>		<i>CSR_A4</i>		<i>CSR_GMI</i>	
	<i>N</i>	Mean	<i>N</i>	Mean	<i>N</i>	Mean	<i>N</i>	Mean	<i>N</i>	Mean
2008	1,571	-0.16	1,571	0.39	1,571	0.42	416	47.12	930	29.95
2009	1,679	-0.17	1,679	0.39	1,679	0.43	531	46.55	1,036	30.09
2010	1,843	-0.04	1,843	0.31	1,842	0.30	562	49.12	1,132	32.17
All years	16,606	0.00	16,606	0.41	16,515	0.42	3,039	45.13	6,281	29.73

Panel B: Descriptive statistics for the full sample

	<i>N</i>	Mean	Min	Q1	Median	Q3	Max	SD
<i>PFC_CSR_S</i>	16,606	0.00	-4.33	-0.50	-0.10	0.30	7.95	1.00
<i>CSR_S1</i>	16,606	0.41	0.00	0.32	0.39	0.50	1.00	0.14
<i>CSR_S2</i>	16,515	0.42	0.00	0.22	0.38	0.57	1.00	0.26
<i>CSR_A4</i>	3,039	45.13	7.20	19.50	36.80	71.50	97.85	28.23
<i>CSR_GMI</i>	6,281	29.73	0.00	14.29	21.43	35.71	100.00	19.37

Appendix 4

See Table 13.

Table 13 Country effects based on Panel B of Table 6

Australia	21.452*** (9.12)
Austria	29.147*** (6.83)
Belgium	15.043*** (3.96)
Brazil	24.456*** (4.64)
Canada	15.954*** (6.36)
Chile	6.379 (0.49)
China	-15.644*** (-2.70)
Czech Republic	31.417*** (15.14)
Denmark	16.460*** (2.80)
Finland	30.972*** (9.96)
France	28.578*** (12.59)
Germany	18.217*** (6.37)
Greece	24.559** (2.42)

Table 13 continued

Hong Kong	12.711* (1.88)
Hungary	35.558*** (3.74)
India	28.563*** (6.80)
Indonesia	27.172*** (3.49)
Ireland	2.417 (0.61)
Israel	-5.345 (-0.52)
Italy	17.338*** (4.42)
Japan	18.101*** (8.43)
Luxembourg	15.504*** (4.70)
Malaysia	3.318 (0.77)
Mexico	10.875 (0.99)
Morocco	13.973*** (6.66)
Netherlands	23.642*** (7.81)

Table 13 continued

New Zealand	32.562*** (3.33)
Peru	28.508*** (8.33)
Poland	-3.204 (-0.32)
Portugal	32.909*** (7.44)
Russian Federation	6.124 (1.34)
Singapore	10.167** (2.07)
South Africa	27.160*** (6.68)
South Korea	11.145** (2.10)
Spain	41.105*** (11.50)
Sweden	27.912*** (9.47)
Switzerland	21.028*** (5.48)
Taiwan	1.169 (0.21)
Thailand	11.396*** (3.49)
Turkey	3.092 (0.27)
United Kingdom	32.909*** (17.48)
United States	5.667*** (3.19)

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