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Are Members of Business for Social Responsibility More Socially Responsible?[1]

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This study examines the association between corporate social performance (CSP) practices and membership in Business for Social Responsibility (BSR) between 1992 and 2006. BSR is a business association that seeks to help its members adopt enhanced CSP practices. While there is an emerging literature examining voluntary initiatives as alternative policy mechanisms to regulations, most research is focused on initiatives that emphasize environmental protection. Further, studies suggest that membership in strictly voluntary initiatives tends to be associated with lower environmental performance because of "free-riding" behavior by participants. BSR differs along two dimensions when compared with other voluntary initiatives examined in the literature. First, it is a comprehensive voluntary social initiative that helps firms from diverse industries address multiple CSP issues simultaneously. Second, it might limit opportunism by not offering blanket certification to its participants. Our results indicate that BSR members exhibit greater levels of positive social impacts without demonstrating significantly different levels of negative social impacts. This suggests that participation in voluntary initiatives that avoid granting blanket certifications may be associated with the adoption of new corporate social responsibility practices but not linked to the shedding of entrenched routines that produce negative externalities.

KEY WORDS: social and environmental protection policies, corporate social performance, voluntary programs, self-regulation, business associations, Business for Social Responsibility

Introduction

Voluntary initiatives seeking to promote business practices that improve corporate social performance (CSP) have become popular policy alternatives around the world. According to their supporters, when compared with command-and-control regulations, they may be more effective, cost-efficient, and likely to generate innovative practices aimed at promoting positive social impacts. Unlike command-and-control regulations, which often mandate a "one-size-fits-all" approach to regulating CSP issues, they provide firms the flexibility to customize the form of their social actions, so long as they meet the initiative's goal in achieving desirable levels of corporate social impacts (Darnall & Carmin, 2005; Gunningham & Rees, 1997). On the other hand, several scholars have argued that unless there are effective regulations to complement the initiatives, they are unlikely to be

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effective (Khanna & Damon, 1999; King & Lenox, 2000). Thus, there is ongoing debate over the effectiveness of these voluntary initiatives. The emerging empirical literature in this area has focused on evaluating the outcomes of voluntary environmental protection programs (Darnall & Sides, 2008; Delmas & Toffel, 2008; Koehler, 2007). However, scholars have paid little attention to examining quantitatively the effectiveness of self-regulation initiatives promoting different areas of CSP, such as community relations, corporate governance, workplace diversity, and human rights.

This study seeks to address this gap by comparing the CSP of businesses that were members of *Business for Social Responsibility* (BSR) with nonmembers between 1992 and 1996. BSR helps firms from many industries and sectors address many areas of CSP. Further, it does not offer its members any sort of certification. In studying BSR, we attempt to answer the following general research questions: Is participation in voluntary social initiatives associated with higher CSP? We analyze CSP along 14 dimensions (seven strengths and seven concerns). Strengths correspond with corporate actions associated with positive social impacts, while concerns correspond to corporate actions associated with negative social impacts (Mattingly & Berman, 2006). The rest of the paper is organized as follows: The next section reviews research on the effectiveness of voluntary initiatives. In the third section, we describe BSR in more detail. In the fourth section, we develop theoretical arguments and present our hypotheses. Fifth, we describe our methodology. Sixth, we present the results of our analysis. Finally, we discuss our findings and draw conclusions.

Effectiveness of Voluntary Initiatives

Existing research evaluating the effectiveness of self-regulation initiatives is limited to a small number of studies involving voluntary environmental programs (VEPs) (Koehler, 2007). Nonetheless, researchers have produced a series of consistent findings. For example, in their seminal assessment of the U.S. Environmental Protection Agency's 33/50 Program designed to reduce toxic emissions among American manufacturing industries, Khanna and Damon (1999) concluded that the success of the program depended in part on the presence of an effective government regulatory mechanism in the background. In a study of the Chemical Industry Association's Responsible Care program, which was designed to reduce toxic emissions in that industrial sector, King and Lenox (2000) found it was at the time unsuccessful, concluding that lack of third-party oversight, performance standards, and sanctions can facilitate "free riding" by participant firms.[2] McDermott, Noah, and Cashore (2008), in a study of forest certification accreditation programs, also found that effective programs tend to have third-party oversight, performance standards, and credible sanctions for firms that do not meet program objectives.

More recently, Nicole Darnall and Stephen Sides (2008) conducted the first meta-analysis of studies evaluating the environmental performance impact of business participation in different VEPs implemented in the United States. Their analysis

is particularly valuable for two reasons: First, it included studies that analyzed VEPs with both third-party and non-third party oversight of firm performance; and second, their assessment involved only those studies that corrected for the potential of self-selection bias by participating firms. Their findings suggest strong caution about the early enthusiasm for *strictly* VEPs as alternative policy instruments to traditional command-and-control regulations. Strictly VEPs refer to those initiatives lacking critical attributes needed to reduce "free-riding" behavior by participant businesses. The most important of these conditions are (i) specific performance-based standards of environmental protection adopted by participant companies; (ii) periodic third-party audits of individual companies that verify the adoption of these standards; and (iii) rewards (third-party certification of individual firms) that publicly recognize the performance obtained by each VEP participant (Darnall & Sides, 2008; Rivera, de Leon, & Koerber, 2006).[3]

According to this meta-analysis, business members of strictly VEPs implemented in the United States not only failed to demonstrate superior environmental performance improvement but actually were associated with lower rates of improvement when compared with nonparticipants. In addition, it finds that *effective* VEPs have in common the three attributes above because they seem to discourage opportunistic behavior by participants. The logic behind these findings suggests that strictly voluntary initiatives with indiscriminate blanket certification and/or label provide their participants the benefits of membership (enhanced social responsibility reputation that results from certification) without inducing better performance from them with credible independent performance oversight and rewards/sanctions for lower performance.

Business for Social Responsibility

Established in 1992, BSR is a nonprofit business association with a stated mission of promoting enhanced ethical, social, and environmental protection practices among its corporate membership.[4] As of April 2007, it had 238 member companies including large and recognizable corporations such as Microsoft, Intel, Exxon-Mobil, McDonalds, and Monsanto. BSR is one of several prominent business associations that seek to help their members address CSP issues. Others include the World Business Council for Sustainable Development,[5] the Caux Business Roundtable,[6] and the Coalition for Environmentally Responsible Economies.[7] Collectively, these business associations comprise thousands of businesses globally, including many of the largest multinational enterprises.

Like other business associations, BSR seeks to wield influence on its members in several ways. First, its staff researches the latest trends and innovations in CSP practices and disseminates this research to members via regular e-mailed and printed reports. BSR also hosts an annual conference that provides a forum for the exchange of the latest ideas and practices for improving CSP. Conference speakers include influential business and non-governmental organization (NGO) executives and academics.[8] Second, it has constituted an interorganizational network from its membership where it occupies a de facto central position. Using this position, it

acts as a facilitator of collaboration, dialogue, and strategic alliances among its members. The network structure itself is a platform for mimetic behavior where CSP laggards can learn from leaders (Doner & Schneider, 2000; Procassini, 1995).[9] Finally, BSR provides customized consulting services to a few individual firms. These paid consulting activities may address issues surrounding reporting, implementation, engaging stakeholders, supply chain activities, business strategy, organizational structure, and policy.[10]

As a business association, BSR distinguishes itself from most government- and trade association-sponsored voluntary initiatives in several notable ways. First, it works with firms in multiple industries. Its members come from eight broad industrial categories: consumer goods, energy and extractive sectors, finance, information and communication technology, manufacturing, pharmaceuticals and biotechnologies, food and agriculture, and transportation. Second, BSR attempts to help firms address many areas of CSP. Specifically, it assists its members in addressing challenges that they might face on issues related to community development, corporate governance and accountability, environmental protection, and human rights.[11] Thus, BSR is a comprehensive voluntary social initiative that attempts to assist its diverse membership to better manage many areas of CSP simultaneously. In contrast, other government- and industry association-sponsored voluntary initiatives that have received attention in the literature often focus mostly on promoting better corporate environmental protection.

Third, BSR attempts to approach the "free-rider" problem in a different manner. As mentioned above, strictly voluntary initiatives that provide their members with common benefits such as blanket certification may be at risk of attracting free riders when the initiative does not contain third-party oversight mechanisms and credible sanctions. In BSR, free riding may be reduced because it does not offer certification of any kind to its members; nor does it confer public sector legitimacy implicit in government-sponsored voluntary initiatives. Thus, it lacks the typical inducement for free riders to join. In addition, over the timeframe of this study between 1992 and 2006, BSR did not publicize its full membership, instead only providing an illustrative list on its Web site.[12] As a result, a firm's nonmarket stakeholders had difficulty identifying a business as a BSR member unless it was part of this illustrative list or the firm marketed its membership. Participating firms are in fact free to do the latter, but they do not receive any type of endorsement from BSR itself. As a result, would-be free riders will not find an obvious mechanism in BSR to signal to their stakeholders that they are committed to improving CSP. In addition, BSR refrains from making any public statements on behalf of its members and their policies, practices, performance, or image. It also refrains from adopting positions on public policy issues and government lobbying.[13] Finally, BSR may actually proactively deter free riders from joining because it requires membership fees. Firms pay annual dues based on gross revenues,[14] beginning at $1,000 for companies with less than $10 million/year in gross income to $30,000 for those grossing more than $50 billion/year. While some successful voluntary initiatives become expensive for members as they implement changes to conform to performance standards, BSR has real up-front costs.

Hypotheses and Theory

Our hypotheses suggest that other things being equal,

Hypothesis 1: BSR member companies are more likely to be associated with higher levels of CSP strengths than nonmembers.
Hypothesis 2: BSR member companies are more likely to be associated with lower levels of CSP concerns than nonmembers.

In order to make explicit the specific logic underlying these hypotheses we draw insights from sociology's social network and neo-institutional theories (DiMaggio & Powell, 1983; Granovetter, 1983; Meyer & Rowan, 1977). Social network theory helps to explain how firms might learn capabilities associated with effective CSP practices from interorganizational connections facilitated and established by BSR. Neo-institutional theory's concept of isomorphic pressures may also contribute toward explaining how this new organizational knowledge would translate into corporate behaviors causing improved social performance.

Social Network Theory and Business for Social Responsibility

A core argument of social network theory is that the diffusion of knowledge occurs more readily through interorganizational networks as they provide their members with preexisting modes of communication, enhancing the potential for collaboration, information exchange, and mutual observation (Kraatz, 1998; Powell, Poput, & Smith-Doerr, 1996). Together, BSR and its members meet these criteria because of the array of ties connecting them. As described above, BSR contains several mechanisms that allow it to interact with its members, share knowledge with them, and facilitate communication and collaboration among them. Further, as the central actor in this network, BSR may exert significant influence over its members with regard to the management of CSP. Central network actors tend to have a relatively large number of ties with other network members. As a result, they are focal points of both knowledge and influence (Granovetter, 1983; Rowley, 1997; Tiwana, 2008). It should be noted that each BSR member is likely a part of other interorganizational networks unrelated to BSR (Hoffman, 1997). Each of these other networks is likely organized around unique focal issues and has distinct sets of organizations and patterns of influence among them. Nonetheless, in the focal network of this study, BSR is by definition central in matters relating to the management of CSP and therefore should have commensurate influence over these matters. It is important to note that CSP management expertise need not originate from BSR itself. The organization can also learn from its members, incorporate this expertise into its own knowledge base, and then retransmit it to other members who do not yet possess it (Eccles & Nohria, 1992; Procassini, 1995).

Finally, organizational heterogeneity within an interorganizational network may enhance the scope of the network's knowledge and the propensity for its members to share that knowledge. First, heterogeneity increases the scope of information

available to the network because it broadens its institutional reach (Kraatz, 1998). As described above, BSR's members operate in numerous industries and represent a broad sample of global business activity. Second, heterogeneity reduces the incidence of direct market competition and/or distrust among member organizations, fostering a greater willingness for members to collaborate and share information (Erickson & Jacoby, 2003).

Neo-Institutional Theory and Isomorphic Pressures Generated by Business for Social Responsibility

While social network theory helps to explains how CSP knowledge and expertise diffuse through the BSR network, we draw on arguments from neo-institutional theory to develop an explanation of why these practices might become institutionalized among its members. Neo-institutional theory stresses that not all business choices are the result of managers' rational economic decisions. Rather, it suggests that managerial discretion is constrained by the need to possess social legitimacy, a key condition for organizational survival in the long term (DiMaggio & Powell, 1983; Hoffman, 1997). Suchman (1995, p. 574) defines the construct as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions." In short, legitimacy is a reflection of the degree to which the actions of a social entity are socially acceptable. It follows that corporate legitimacy is a function of how well a firm can demonstrate to relevant social actors that confer legitimacy that it conforms to institutionalized rules, norms, values, and traditions (Meyer & Rowan, 1977). For business organizations, legitimacy is often *field* specific. According to Hoffman (1999), organizational fields comprise all organizational and social actors that have a stake in an issue or industry. The field in this conceptualization provides the domain of institutional rules that establish legitimate corporate behaviors. According to DiMaggio and Powell, because organizations within a field face common institutional pressures to engage in legitimate corporate behaviors, their adaptations to these pressures for legitimacy are likely to become more similar over time. They term this phenomenon *isomorphism*. Isomorphic influences are classified as coercive, normative, and mimetic to, respectively, emphasize the role of pressures exerted by government agencies, professions and other types of associations, and social expectations (DiMaggio & Powell).

Here we contend that BSR and its members constitute an organizational field that has formed around the issue of improving CSP and that isomorphic pressure within the field should cause BSR members to more uniformly pursue the initiative's goals. Further, we assert that two types of isomorphic pressure may be associated with the CSP of BSR members: mimetic and normative.

Mimetic Isomorphism. This concept is akin to mimicry, where organizations copy the behaviors of other organizations. It occurs when firms within an institutional field such as the one created by the BSR network face uncertainty with respect to their

own technical and/or administrative conduct, and bounded rationality constrains the ability of decision makers to mitigate this uncertainty. Thus, they look to field-level "standards" or "best practices" used by other firms within their business environments that are widely perceived as legitimate. As the adoption of these standards and best practices increases, they become predominant, thereby reinforcing their legitimacy (DiMaggio & Powell, 1983; Hoffman, 1997; Scott, 1991). We suggest that this phenomenon manifests itself with respect to the adoption of enhanced CSP practices in the BSR network.

Normative Isomorphism. This concept can be described as social pressure exerted on firms to adopt accepted norms of behavior from their business environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). This can occur because of the existence of normative logics that promulgate through professions, associations, and industries (DiMaggio & Powell; Scott, 2008). These logics promote the standardization of scripts and routines for the purpose of providing a common means for social interaction as well as for the purpose of self-perpetuation (Scott, 1991). Norms for developing better CSP, such as respecting local community cultures, the environment, human rights, or the importance of social reporting and transparency, exist within the BSR network, championed both by a highly central actor (BSR) and sought after by members. Thus, we suggest that normative pressures should contribute to the adoption of enhanced CSP practices among BSR members.

Methods

Sample and Data

Our initial sample consists of firms who were members of the Standard and Poor's 500 (S&P 500) Index between 1992 and 2006. We chose this sampling history because BSR began its operations in 1992 and, based on a confidentiality agreement, provided us with its full list of members in the years between this time and 2007.[15] We restricted the sample to firms in the S&P 500 Index for two main reasons. First, besides financial information, annual independent assessment of different CSP dimensions for S&P 500 firms is readily available from the Kinder, Lydenberg and Domani (KLD) Socrates database beginning in 1991. Second, between 1991 and 2002, KLD rated only S&P 500 firms (KLD Research and Analytics, Inc., 2007), limiting the availability of data to S&P 500 firms for 9 of the 15 years in our sampling history. Thus, to ensure a consistent sampling method across the history of this study, we constrained the sample to S&P 500 firms. For more than half a century the S&P 500 Index has been widely recognized for including the 500 firms that represent the population of large publicly traded firms in the main industrial sectors of the U.S. economy (Wilson & Jones, 2002). We obtained firm-level financial and industry-related data from the Compustat database. After merging the KLD and Compustat databases, restricting the sample to S&P 500 firms, and eliminating observations with missing data, we retained 811 firms,

resulting in an unbalanced panel[16] of 6,743 pooled observations. Seventy-four of these firms were members of BSR, accounting for 458 of the total pooled observations. It should be noted that the sampling restriction omits 168 BSR members during the time frame of the study because they were not in the S&P 500. Thus, our sample excludes smaller, private, and/or nonlisted firms on U.S. stock exchanges, implying that our sampling constraints have introduced biases along these three attributes.

Corporate Social Performace and Kinder, Lydenberg and Domani Database. Initially launched in 1991, KLD's categorical ratings comprise the largest and most comprehensive multidimensional database of firm-specific CSP ratings. As such, KLD ratings are used widely by academics and investors (Berman, Wicks, Kotha, & Jones, 1999; Shropshire & Hillman, 2007; Waddock & Graves, 1997). Each KLD rating is categorized into one of seven areas of CSP: community relations, corporate governance, diversity, employee relations, environment, human rights, and product quality and safety. In addition, each category is subcategorized into *strengths* and *concerns*. Strengths typically represent positive social externalities while concerns address a firm's negative social impacts. (See Appendix A for a detailed description of the criteria used by KLD to rate strengths and concerns for each of the seven categories of CSP.) For example, in the category of *community relations strengths*, KLD measures a firm's commitment to philanthropy, support for housing, support for education, and commitment to volunteer programs (KLD Research and Analytics, Inc., 2007). Likewise, in the category of *corporate governance concerns*, KLD measures whether a firm has issues with high executive compensation, ownership, political accountability, transparency, or its accounting practices (KLD Research and Analytics, Inc.).

Each KLD strength rating can receive a dichotomous score of 1 or 0. A score of 1 indicates that the firm has been rated strong on a specific criterion while a 0 indicates lack of strength. Thus for strengths 1 is preferable to 0. Likewise each KLD concern rating can also receive a score of either 1 or 0. However, a firm receiving a concern rating of 1 indicates the presence of issues in that area while a 0 indicates a lack of concern. Accordingly, in the case of concerns 0 is preferable to 1. KLD ratings are formulated annually from data collected from multiple sources: (i) interviews with company officers; (ii) a wide variety of daily media reports (over 10 thousand); (iii) public documents including 10-K annual reports and other SEC filings; (iv) information from government agencies; and (v) corporate environmental and social impact data compiled by non-profit organizations such as the Carbon Disclosure Project.[17] Currently, there are over 280 distinct data types that KLD incorporates into its ratings. Data sources are updated daily and periodically, as research analysts gather information from media, government, NGO, and company sources. A fiscal year-end review of the ratings occurs annually as the rated firms file company reports and end-of-the-year statements. In addition, senior analysts review the methodology and information sources for each company on an annual basis to ensure consistency and quality (KLD Research and Analytics, Inc., 2007).

Measures

Dependent Variables (Corporate Social Performance Dimensions)

To calculate the annual CSP for each of 14 subcategories of social performance *strengths* and *concerns* rated by KLD, we sum the individual ratings within each subcategory to obtain 14 aggregate count scores. The count scores measure each firm's performance in each KLD subcategory by year. Because the total possible count in each subcategory can vary from year to year (KLD has on different occasions added or eliminated criteria), we normalized the counts across years to z-scores using the annual mean and standard errors of each subcategory.[18] This method has been suggested for addressing this issue with the KLD ratings by other scholars using these data (Mattingly & Berman, 2006).

Independent Variable (Predicted Probability of Participation in Business for Social Responsibility)

The focal independent variable is a dummy variable indicating whether or not a firm participated in BSR in a given year. Thus, BSR membership is the treatment effect in this study.

Control Variables

Previous studies indicate that firm size, profitability, capital intensity, firm leverage, advertising intensity, and research and development intensity are correlated with CSP (Mattingly & Berman, 2006; McWilliams & Siegel, 2000, 2001; Russo & Fouts, 1997). Therefore, we included them as control variables in our analysis. We used the *log of firm sales* as a proxy for firm size and *return on assets* as a measure of profitability. We calculated *capital intensity* as the ratio of assets to sales, *leverage* as the ratio of debt to sales, and *research and development intensity* as the ratio of research and development dollars to sales. *Advertising intensity* was dropped as a control variable because of missing values across over 90 percent of the sample. In addition, other studies have shown that industry-level factors may affect CSP (Griffin & Koerber, 2006; Hull & Rothenberg, 2008; Waddock & Graves, 1997). To control for industry effects we classified each firm by its two-digit North American Industry Classification System code and matched it to its corresponding industry sector addressed by BSR. This resulted in eight *BSR Industry Classifications* in the database, which we coded in seven dummy variables. These industry sector categories include Consumer Goods, Energy and Extractive, Financial, Food and Agriculture, Information and Communications, Manufacturing, Pharmaceutical and Biotechnology, and Transportation. The Pharmaceutical and Biotechnology is the reference industry sector. To mitigate the potential for reverse-causality we lagged all independent variables by one year with the exception of the time invariant *Industry Classifications*. Finally, we include dummy variables for each year represented in our sample (1992 being the reference year).

Analytical Methodology[19]

To evaluate how participation in BSR is associated with different areas of CSP, it is necessary to determine what would have been the firms' CSP without participation in BSR. Then, the actual levels of CSP can be compared with the estimated counterfactual levels of CSP. If participation in BSR were random across all firms, then a simple comparison with the average level of CSP for non-participants would provide a satisfactory indication of the "effect" of BSR membership. Yet firm participation is not random. Firms tend to self-select into voluntary business associations like BSR. Propensity score matching, a methodology proposed by Rosenbaum and Rubin (1983), helps to correct for self-selection bias by comparing firms participating in BSR with a control group of similar firms that are not members of BSR. This control group of firms has background covariate characteristics that, on average, match those of the firms participating in BSR—the treated group (Dehejia & Wahba, 1999; Hill, Waldfogel, & Brooks-Gunn, 2002).

Thus, we base our statistical analysis on the assumption that each subcategory of CSP strengths and concerns for a firm is concurrently associated with the firm's decision to participate in BSR, the vector of the previous year's firm-level characteristics represented by our control variables, time, and industry dummies. The functional form of this relationship can be expressed as

$$Y_{it} = \alpha + AX_{it-1} + BZ_{ik} + CD_{it} + EW_t + \varepsilon_{it} \quad (1)$$

where

Y_{it} = normalized CSP subcategory score for firm i, time-period t,
α = the regression constant term,
X_{it-1} = the vector of firm-level control variables, firm i, time-period t–1,
Z_{ik} = the vector of industry classification dummies,
D_{it} = participation in BSR for firm i, time-period t,
W_t = the vector of year dummies,
A = the regression coefficients for the control variables,
B = the regression coefficients for the industry dummies,
C = the regression coefficient for D_{it-1},
E = the regression coefficient for W_t, and
ε_{it} = error term for firm i, time-period t.

In addition, we also assume that a firm's decision to participate in BSR (D_{it}) is also based on the unobserved perceived net benefit (E_{it}) of participation for each firm-year observation expressed as

$$D_{it} = 1 \text{ if } E_{it} > 0 \text{ and } D_{it} = 0 \text{ if } E_{it} \leq 0. \quad (2)$$

As discussed earlier, the decision to participate in BSR (D_{it}) is endogenous to some of the same observable (X_{it-1}) and unobservable factors that affect Y_{it} in equation (1)

above. It is thus necessary to isolate the association that BSR membership has with Y_{it} by controlling for potential self-selection bias of participating firms. We implement propensity score matching to control for this self-selection bias as follows: First we use a probit model with year fixed-effects to estimate D_{it} because it is a dichotomous variable (with values of either 0 or 1). This probit regression model is subsequently used to estimate the propensity score (probability of participation in BSR, P_{it}) for BSR member and nonmember firms.[20]

$$D_{it} = F(aX_{it-1}, bZ_{ik}) + cW_t + \delta_{it} \tag{3}$$

where

X_{it-1} = vector independent variables, firm i, time-period t–1,
Z_{ik} = vector k of industry classification dummies,
W_t = year fixed-effects,
a = the regression coefficients for the control variables,
b = the regression coefficients for the industry dummies,
c = the regression coefficients for the year dummies,
δ_{it} = error term for firm i, time-period t.

Second, we build the control group by matching BSR participants with non-participant firms with equal or almost equal probability of participation in BSR (Dehejia & Wahba, 1999). We use a nearest-neighborhood method with a caliper tolerance range restriction of 0.001 to identify for each BSR firm up to four non-BSR firms with the closest probability of participation (Cochrane & Rubin, 1973). The caliper tolerance restriction of 0.001 ensures that the probability of participation for each BSR firm observation cannot differ more than 0.001 from its matching control group observations.[21] Our approach produced a matched sample of 1,592 observations containing 414 BSR-participant observations and a control group of 1,178.[22] Third, we assess the similarity of the BSR participant observations with their matched control group by using *t*-tests that compare the mean of each covariate variable (X_{it-1}) for both treatment and control group to verify that no significant differences exist between the characteristics of the two groups.

Finally, using the matched sample, we estimate equation (1) above employing weighted regressions with year fixed-effects to assess how participation in BSR (D_{it}) is associated with the different dimensions of CSP (14 regression models in total, one for each of the subcategories of CSP). Non-BSR observations that constitute the control group are weighted based on the number of times they are included as matches to calculate robust regression standard errors (Abadie & Imbens, 2006). For both probit and weighted regressions, we do not use company fixed-effects specification because this would have omitted from our models time invariant variables (e.g., *Industry Classifications*). Industry membership is known to influence both the decision to participate in voluntary programs and CSP outcomes (Griffin & Koerber, 2006; Koehler, 2007).

Table 1. Descriptive Statistics

		N	Mean	Standard Deviation	Min	Max
1	Membership in BSR	6,743	0.068	0.252	0.000	1.000
2	Community Strength	6,743	–0.001	0.994	–0.523	6.396
3	Community Concern	6,743	–0.001	0.994	–0.523	6.396
4	Governance Strength	6,743	0.012	1.048	–0.467	8.948
5	Governance Concern	6,743	0.015	1.024	–1.455	5.704
6	Diversity Strength	6,743	0.004	1.007	–1.067	4.867
7	Diversity Concern	6,743	–0.010	0.973	–0.639	4.726
8	Employee Strength	6,743	0.005	1.000	–0.799	5.362
9	Employee Concern	6,743	0.002	0.998	–0.930	6.303
10	Environment Strength	6,743	0.000	0.998	–0.575	6.322
11	Environment Concern	6,743	0.002	1.003	–0.623	5.821
12	Human Rights Strength[a]	5,952	–0.002	0.991	–0.211	20.640
13	Human Rights Concern	6,743	–0.002	0.992	–0.521	7.314
14	Product Strength	6,743	0.014	1.014	–0.448	7.721
15	Product Concern	6,743	0.000	1.008	–0.792	6.497
16	Log of Sales	6,743	8.545	1.167	4.621	12.701
17	Return on Assets	6,743	0.048	0.110	–4.583	1.152
18	Capital Intensity	6,743	2.504	3.501	0.180	37.662
19	Leverage	6,743	0.189	0.142	0.000	1.264
20	Research and Development Intensity	6,743	0.034	0.190	0.000	10.170

[a]Because KLD began rating firms on Human Rights Strength in 1994, the sample size in this category does not contain observations in 1992 and 1993.
BSR, Business for Social Responsibility; KLD, Kinder, Lydenberg and Domani.

Results

Descriptive Statistics

Table 1 contains descriptive statistics for each of the variables in the analysis. Table 2 presents the correlation matrix. The correlation matrix indicates that *BSR membership* is significantly ($p < 0.05$) and positively correlated with each of the CSP variables. In addition, it is significantly correlated to each of the control variables except *Research and Development Intensity*. BSR members appear to be larger (higher *Log of Sales*, $\rho = 0.24$), more profitable (higher *Return on Assets*, $\rho = 0.05$), less capital intensive ($\rho = -0.05$), and less indebted in relation to capitalization (lower *Leverage*, $\rho = -0.03$) than nonmembers. The descriptive statistics in these tables are based on the entire sample of BSR members and nonmembers, not the matched sample developed through propensity matching.

Stage One: Probability of Participation in Business for Social Responsibility

Table 3 presents the results of the year fixed-effects probit regression model for participation in BSR, which is implemented to estimate propensity scores for each firm-year observation. The likelihood ratio χ^2 test for the joint significance of the independent variables ($\chi^2 = 668.14$) is significant and therefore indicates a good model fit. Consistent with our descriptive statistics, the *Log of Sales* ($\beta = 0.39$) and

Table 2. Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Membership in BSR	1.00																			
2	Community Strength	0.21*	1.00																		
3	Community Concern	0.05*	0.10*	1.00																	
4	Governance Strength	0.04*	0.01	−0.01	1.00																
5	Governance Concern	0.09*	0.12*	0.08*	−0.01	1.00															
6	Diversity Strength	0.27*	0.40*	0.09*	0.04*	0.19*	1.00														
7	Diversity Concern	0.04*	−0.05*	0.04*	0.03*	0.06*	−0.08*	1.00													
8	Employee Strength	0.05*	0.15*	0.08*	0.07*	0.10*	0.19*	−0.04*	1.00												
9	Employee Concern	0.07*	0.01	0.09*	0.01	0.09*	0.02	0.09*	0.00	1.00											
10	Environment Strength	0.07*	0.15*	0.11*	0.06*	0.06*	0.16*	−0.06*	0.20*	0.05*	1.00										
11	Environment Concern	0.04*	0.04*	0.29*	0.03*	0.11*	0.03*	−0.03*	0.18*	0.21*	0.33*	1.00									
12	Human Rights Strength	0.16*	0.16*	0.06*	0.05*	0.08*	0.15*	−0.02	0.06*	0.01	0.04*	0.02	1.00								
13	Human Rights Concern	0.24*	0.13*	0.13*	0.04*	0.13*	0.13*	0.03*	0.06*	0.10*	0.10*	0.24*	0.11*	1.00							
14	Product Strength	0.03*	0.11*	0.02	0.10*	0.05*	0.17*	−0.01	0.23*	0.03*	0.13*	−0.02	0.01	0.03*	1.00						
15	Product Concern	0.11*	0.18*	0.14*	−0.01	0.21*	0.20*	0.04*	0.03*	0.12*	0.08*	0.23*	0.03*	0.16*	0.04*	1.00					
16	Log of Sales	0.24*	0.33*	0.21*	−0.01	0.27*	0.35*	0.00	0.14*	0.16*	0.20*	0.33*	0.10*	0.28*	0.12*	0.40*	1.00				
17	Return on Assets	0.05*	0.00	−0.05*	0.00	−0.02	0.01	−0.07*	0.04*	−0.11*	−0.03*	−0.04*	0.03	0.00	0.03*	−0.01	−0.01	1.00			
18	Capital Intensity	−0.05*	0.21*	0.10*	−0.01	0.03*	0.10*	0.02	−0.04*	−0.12*	−0.13*	−0.14*	0.01	−0.06*	−0.02	0.03*	0.02	−0.16*	1.00		
19	Leverage	−0.03*	−0.05*	0.09*	−0.10*	0.00	−0.03*	0.00	−0.08*	0.10*	0.10*	0.17*	−0.02	0.00	−0.07*	0.02	0.07*	−0.14*	−0.04*	1.00	
20	Research and Development Intensity	0.00	−0.02	−0.02	0.00	0.05*	0.00	0.00	0.07*	0.02	−0.01	0.01	−0.01	−0.01	0.03*	−0.01	−0.06*	0.09*	−0.03*	−0.10*	1.00

*$p < 0.05$. †$p < 0.10$.

Table 3. Fixed Effects Probit Model of Probability of Participation in BSR

Independent Variable	BSR Membership	z-score
Log of Sales (lag-1)	0.39	16.09*
Return on Assets (lag-1)	1.30	3.28*
Capital Intensity (lag-1)	0.04	2.68*
Leverage (lag-1)	–0.97	–4.05*
Research and Development Intensity (lag-1)	–0.43	–0.75
Industry Dummies		
Consumer Products	0.04	0.26
Energy and Extractive	–0.26	–1.51
Financial	–1.27	–5.47*
Information and Communications	–0.08	–0.54
Manufacturing	–0.13	–0.92
Pharmaceutical and Biotechnology	–0.48	–2.85*
Transportation	–0.78	–2.90*
Year Dummies		
1993	0.13	0.39
1994	0.40	1.32
1995	0.46	1.56
1996	0.73	2.58*
1997	0.80	2.89*
1998	0.89	3.22*
1999	0.95	3.45*
2000	0.97	3.55*
2001	1.01	3.73*
2002	1.15	4.27*
2003	1.22	4.55*
2004	1.30	4.86*
2005	1.26	4.72*
2006	1.23	4.59*
Intercept	–5.70	–15.04*
N	6,743	
Log-likelihood	–1,339.75	
Likelihood ratio × square	668.14	*
Pseudo *R*-squared	0.20	

*p-value < 0.05; ˚p-value < 0.10.
BSR, Business for Social Responsibility.

Return on Assets ($\beta = 1.30$) remain positively and significantly associated with *BSR membership* while *Leverage* remains negatively and significantly associated with *BSR Membership* after controlling for other factors. *Capital Intensity* becomes positively associated with *BSR Membership* ($\beta = 0.04$) when its partial correlation is determined, indicating that controls are confounding this relationship. *Research and Development Intensity* remains unassociated with BSR Membership. Industry sector and time also appear to affect the propensity to participate in BSR. The *Financial* ($\beta = -1.27$), *Food and Agriculture* ($\beta = -0.48$), and *Transportation* ($\beta = -0.78$) sectors each demonstrate negative and significant associations with BSR membership. As time goes on, the coefficients on the *Year Dummies* tend to increase at a diminishing rate. This suggests that membership in BSR is growing over time but that the growth rate is decaying.

Matching Samples of Business for Social Responsibility Members and Nonmembers

Once propensities of participation for each firm-year are estimated, it is possible to develop a matched subsample from our merged database, where BSR members and nonmembers do not significantly differ in attributes measured by the vector of control variables. The propensity matching procedure used to build the matched subsample is described in the *Analytical Methodology* section above. Table 4 shows these results; the matched sample *T*-tests indicate that BSR members and nonmembers do not, in fact, differ significantly ($p < 0.05$) along any of these measures. The mean *t*-test value in the matched sample is 0.47, substantially below the threshold of 1.96 required for a two-tailed 95 percent significance level. Thus, we can conclude that after the propensity matching procedure there are no significant differences among BSR members and nonmembers in our vector of covariates that could indicate

Table 4. Control Variable Balance[a] across Member and Nonmembers for Matched and Unmatched Samples

Independent Variable	Unmatched	Matched
Log of Sales (lag-1)	20.67*	–0.80
Return on Assets (lag-1)	4.39*	0.43
Capital Intensity (lag-1)	–4.38*	0.24
Leverage (lag-1)	–2.55*	0.65
Research and Development Intensity (lag-1)	–0.16	0.98
Industry Dummies		
Consumer Products	8.21*	0.02
Energy and Extractive	–2.84*	0.28
Financial	–6.14*	–0.14
Information and Communications	1.83$^{\tau}$	1.29
Manufacturing	1.83$^{\tau}$	–1.13
Pharmaceutical and Biotechnology	–2.73*	–0.45
Transportation	–2.23*	0.36
Year Dummies		
1993	–4.93*	–0.32
1994	–4.37*	–0.87
1995	–4.06*	–0.73
1996	–2.53*	–0.30
1997	–1.87$^{\tau}$	–0.32
1998	–0.97	–0.46
1999	–0.34	0.65
2000	0.24	0.32
2001	0.95	0.30
2002	2.04*	–0.32
2003	2.90*	0.12
2004	4.94*	0.33
2005	5.55	0.22
2006	5.73	0.26
N	6,743	1,592
Mean of t-score	3.82	0.47
Standard deviation of t-scores	3.99	0.32

[a]Control Variable Balance is the degree to which members and nonmembers differ statistically across control variables.
*$p < 0.05$; $^{\tau}p < 0.10$.

Table 5. Associations between BSR Membership and CSP for Unmatched and Matched Samples

Dependent Variable	Unmatched		Matched		Matched	
	N = 6,743		*N* = 1,592		*N* = 1,592	
	Difference in Means		Difference in Means		Regression Coefficients	
Community Strength	0.826	0.047*	0.572	0.072*	0.607	0.067*
Governance Strength	0.176	0.051*	0.162	0.065*	0.169	0.063*
Diversity Strength	1.087	0.047*	0.805	0.067*	0.808	0.057*
Employee Strength	0.185	0.048*	–0.083	0.066	–0.076	0.057
Environment Strength	0.264	0.048*	–0.019	0.071	0.000	0.065
Human Rights Strength[a]	0.582	0.048*	0.518	0.112*	0.520	0.111*
Product Strength	0.112	0.049*	–0.051	0.064	–0.056	0.061
Community Concern	0.185	0.048*	–0.111	0.064$^{\tau}$	–0.085	0.062
Governance Concern	0.355	0.049*	0.071	0.065	0.083	0.060
Diversity Concern	0.150	0.047*	–0.036	0.059	–0.029	0.063
Employee Concern	0.283	0.048*	0.020	0.063	0.037	0.061
Environment Concern	0.151	0.049*	–0.322	0.067*	–0.280	0.053*
Human Rights Concern	0.953	0.047*	0.685	0.082*	0.719	0.080*
Product Concern	0.454	0.048*	–0.050	0.073	–0.019	0.062

[a]Because KLD began rating Human Right Strengths in 1994, the sample size in this category does not contain observations in 1992 and 1993 (N = 1,528).

*$p < 0.05$; $^{\tau}p < 0.10$.

BSR, Business for Social Responsibility; CSP, corporate social performance; KLD, Kinder, Lydenberg and Domani.

self-selection into BSR. In addition, these results suggest that there was self-selection into BSR that required an adjustment for the bias that results from it. In the unmatched sample, the *t*-tests of each firm-level control except for *Research and Development Intensity* and each of the *Industry Dummies* are significant, meaning that BSR members do significantly differ from nonmembers across the unmatched sample. Further, the mean *t*-test value in the unmatched sample is 3.82, substantially beyond the threshold of 1.96 required for significance at the 95 percent level. Such differences in the covariates of members and nonmembers are generally considered sources of self-selection bias (Heckman, 1979).

The Relationship between Business for Social Responsibility Membership and Corporate Social Performance

Findings about the association between BSR membership and CSP strengths and concerns on the unmatched and matched samples are summarized in Table 5. Tables 6 and 7 contain complete sets of statistics for the matched sample analyses on each CSP strength and concern, respectively, including the effect of control variables on CSP, model fit statistics, sample size, and *R*-squared statistics. For each of these analyses, the global *F*-test is significant, indicating the set of independent variables did explain variance in each of CSP strengths and concerns over time.

Returning to Table 5, the matched sample regression coefficients provide partial support for Hypothesis 1. On four of the seven categories of CSP strengths, BSR members perform significantly ($p < 0.05$) better than nonmembers (Community

Table 6. Fixed Effects of BSR Membership on KLD Strengths

Independent Variable	Community	SE	Corporate Governance	SE	Diversity	SE	Employee Relations	SE	Environment	SE	Human[a] Rights	SE	Product	SE
BSR Membership	0.61	0.07*	0.17	0.06*	0.81	0.06*	–0.08	0.06	0.00	0.07	0.52	0.11*	–0.06	0.06
Log of Sales (lag-1)	0.26	0.04*	0.09	0.03*	0.38	0.03*	0.38	0.03*	0.42	0.04*	–0.02	0.06	0.22	0.03*
Return on Assets (lag-1)	0.21	0.42	–0.97	0.66	0.92	0.43*	0.71	0.33*	–0.16	0.33	1.88	0.69*	–0.29	0.33
Capital Intensity (lag-1)	0.10	0.02*	–0.05	0.03	0.01	0.01	0.03	0.01†	0.02	0.01	0.01	0.02	–0.07	0.02*
Leverage (lag-1)	–0.51	0.30†	–0.64	0.30*	1.38	0.28*	–0.14	0.26	0.86	0.34*	–1.11	0.45*	0.52	0.26*
R&D Intensity (lag-1)	2.11	0.76*	0.59	1.02	3.88	0.73*	9.21	0.81*	4.04	0.83*	–2.18	0.81*	4.39	0.94*
Industry Dummies														
Consumer Products	–0.57	0.20*	–0.06	0.17	–0.48	0.15*	0.46	0.15*	–0.64	0.18*	–0.17	0.30	0.04	0.22
Energy and Extractive	–0.67	0.21*	0.12	0.18	–0.65	0.16*	1.06	0.16*	0.21	0.21	–0.40	0.26	0.04	0.22
Financial	–0.55	0.33	0.85	0.53	0.59	0.22*	0.61	0.22*	–0.78	0.22*	–0.09	0.36	1.20	0.35*
Information/Communications	–0.91	0.17*	0.14	0.12	0.11	0.12	0.72	0.15*	–0.15	0.17	–0.49	0.25†	0.42	0.21*
Manufacturing	–0.34	0.18†	0.07	0.15	–0.13	0.14	1.02	0.14*	0.24	0.18	0.27	0.27	0.09	0.21
Food and Agriculture	–0.41	0.23†	0.13	0.21	0.05	0.18	1.04	0.19*	0.04	0.22	–0.18	0.28	0.22	0.23
Transportation	–0.98	0.24*	0.18	0.25	–0.23	0.21	1.34	0.42*	–0.31	0.25	–0.58	0.28*	0.01	0.27
Year Dummies														
1993	–0.43	0.43	–0.28	0.44	0.48	0.33	–0.71	0.36*	0.41	0.25†		N/A	–0.23	0.22
1994	–0.16	0.43	–0.29	0.42	0.88	0.29*	–0.22	0.40	0.27	0.20		N/A	0.01	0.30
1995	–0.30	0.42	–0.25	0.42	0.66	0.27*	–0.34	0.38	0.40	0.21†	1.18	0.55*	0.02	0.26
1996	–0.73	0.40†	–0.28	0.43	0.63	0.30*	–0.47	0.37	0.31	0.17†	1.10	0.39*	–0.05	0.24
1997	–0.89	0.39*	–0.44	0.41	0.75	0.28*	–0.54	0.36	0.19	0.15	0.61	0.34†	0.05	0.24
1998	–0.79	0.39*	–0.43	0.42	0.42	0.26	–0.62	0.35†	0.20	0.16	0.57	0.32†	–0.02	0.24
1999	–0.70	0.39†	–0.31	0.42	0.60	0.26*	–0.62	0.35†	0.22	0.15	0.65	0.32*	–0.01	0.24
2000	–0.79	0.40*	–0.34	0.42	0.38	0.26	–0.72	0.35*	0.06	0.16	0.72	0.28*	–0.05	0.23
2001	–0.72	0.39†	–0.35	0.42	0.48	0.25†	–0.66	0.35†	0.16	0.17	0.78	0.23*	–0.22	0.22
2002	–0.85	0.39*	–0.33	0.42	0.40	0.25	–0.74	0.35*	0.07	0.14	0.13	0.14	–0.20	0.22
2003	–0.91	0.38*	–0.44	0.42	0.36	0.26	–0.70	0.35*	0.11	0.14	0.26	0.21	–0.24	0.21
2004	–0.90	0.38*	–0.30	0.42	0.31	0.25	–0.58	0.35†	0.18	0.14	0.38	0.21†	–0.13	0.22
2005	–0.92	0.39*	0.15	0.43	0.29	0.26	–0.59	0.35†	0.11	0.14	0.27	0.20	–0.11	0.22
2006	–0.95	0.38*	–0.11	0.42	0.27	0.25	–0.70	0.35*	0.15	0.13	0.27	0.19	–0.13	0.21
Intercept	–1.15	0.54*	–0.46	0.58*	–4.13	0.38*	–3.88	0.49*	–4.11	0.43*	0.06	0.61	–2.07	0.40*
N	1,592		1,592		1,592		1,592		1,592		1,528		1,592	
F (27,156)	11.73	*	2.15	*	29.30	*	13.50	*	11.92	*	2.77	*F*(25,151)*	5.22	*
R-squared	22.27%		6.94%		36.11%		27.71%		23.92%		10.86%		11.31%	

[a]Because KLD began rating Human Rights Strengths in 1994, the sample size in this category does not contain observations in 1992 and 1993.
*$p < 0.05$; †$p < 0.10$.
BSR, Business for Social Responsibility; KLD, Kinder, Lydenberg and Domani.

Table 7. Fixed Effects of BSR Membership on KLD Concerns

Independent Variable	Community	SE	Corporate Governance	SE	Diversity	SE	Employee Relations	SE	Environment	SE	Human Rights	SE	Product	SE
BSR Membership	–0.08	0.06	0.08	0.06	–0.03	0.06	0.04	0.06	–0.28	0.05*	0.72	0.08*	–0.02	0.06
Log of Sales (lag-1)	0.27	0.04*	0.34	0.03*	0.19	0.04	0.15	0.03*	0.46	0.03*	0.21	0.04*	0.41	0.04*
Return on Assets (lag-1)	–0.62	0.30*	–0.26	0.53	–0.30	0.34	–2.49	0.54*	–0.96	0.37*	0.23	0.50	–1.91	0.46*
Capital Intensity (lag-1)	0.11	0.02*	0.01	0.01	0.02	0.02	–0.01	0.02	0.07	0.01*	0.05	0.02*	0.07	0.02*
Leverage (lag-1)	–0.25	0.26	0.31	0.33	0.21	0.33	0.33	0.30	–0.15	0.22	–0.31	0.36	0.05	0.31
R&D Intensity (lag-1)	1.17	0.66$^{\tau}$	1.68	0.72*	–1.60	0.69	–2.24	0.68*	1.93	0.67*	–1.45	0.81$^{\tau}$	–1.41	0.73$^{\tau}$
Industry Dummies														
Consumer Products	0.20	0.14	–0.94	0.18*	0.05	0.16	–0.19	0.15	–0.87	0.14*	0.87	0.19*	–2.85	0.17*
Energy and Extractive	0.76	0.17*	–0.87	0.19*	–0.29	0.16	–0.01	0.17	1.05	0.17*	0.71	0.24*	–2.75	0.19*
Financial	–0.48	0.21*	–0.35	0.24	–0.16	0.27	–0.39	0.31	–1.70	0.21*	–0.64	0.28*	–3.26	0.26*
Information/Communications	0.00	0.09	–0.05	0.15	0.03	0.13	0.15	0.12	–0.75	0.12*	0.09	0.13	–2.73	0.15*
Manufacturing	0.59	0.11*	–0.40	0.16*	–0.04	0.14	0.25	0.13$^{\tau}$	0.27	0.14$^{\tau}$	0.76	0.16*	–2.54	0.16*
Food and Agriculture	0.33	0.13*	–0.13	0.20	0.13	0.20	0.22	0.17	–0.34	0.16*	0.44	0.18*	–2.77	0.18*
Transportation	1.08	0.33*	–0.27	0.36	0.98	0.19	0.42	0.28	–0.49	0.26$^{\tau}$	–0.43	0.23*	–3.19	0.28*
Year Dummies														
1993	0.21	0.19	–0.25	0.66	–0.14	0.15	0.05	0.22	0.14	0.30	–0.32	0.55	–0.22	0.38
1994	0.36	0.23	–0.81	0.61	–0.03	0.16	0.27	0.24	0.18	0.25	0.29	0.51	0.04	0.39
1995	0.36	0.22$^{\tau}$	–0.63	0.61	–0.11	0.14	0.28	0.23	0.28	0.25	–0.36	0.47	–0.11	0.40
1996	0.31	0.23	–0.82	0.59	0.16	0.17	0.11	0.19	0.16	0.24	–0.11	0.47	–0.28	0.37
1997	0.48	0.23*	–0.79	0.59	0.00	0.15	0.22	0.19	0.18	0.23	0.14	0.48	–0.36	0.36
1998	0.29	0.21	–0.95	0.59	0.27	0.18	0.40	0.20*	0.26	0.25	0.18	0.48	–0.36	0.36
1999	0.18	0.19	–1.00	0.58$^{\tau}$	–0.09	0.14	0.42	0.19*	0.11	0.24	0.18	0.47	–0.27	0.36
2000	0.27	0.21	–0.81	0.59	0.34	0.20	0.37	0.19$^{\tau}$	0.15	0.24	0.14	0.48	–0.36	0.37
2001	0.28	0.19	–0.97	0.58	0.31	0.20	0.50	0.19*	0.23	0.23	0.29	0.46	–0.29	0.38
2002	0.13	0.19	–1.05	0.58$^{\tau}$	0.14	0.15	0.37	0.18*	0.05	0.23	0.17	0.45	–0.41	0.35
2003	0.22	0.19	–0.99	0.58$^{\tau}$	0.23	0.15	0.32	0.18*	0.05	0.23	–0.10	0.45	–0.37	0.35
2004	0.23	0.19	–1.05	0.58$^{\tau}$	0.19	0.14	0.26	0.18$^{\tau}$	0.18	0.23	–0.11	0.45	–0.43	0.35
2005	0.20	0.18	–1.04	0.58$^{\tau}$	0.21	0.14	0.42	0.18$^{\tau}$	0.19	0.23	–0.05	0.45	–0.47	0.35
2006	0.18	0.18	–1.03	0.58$^{\tau}$	0.17	0.14	0.52	0.17*	0.19	0.23	0.00	0.45	–0.44	0.35
Intercept	–3.11	0.43*	–1.72	0.69*	–1.84	0.40	–1.56	0.36*	–4.05	0.38*	–2.36	0.63	–0.55	0.51
N	1,592		1,592		1,592		1,592		1,592		1,592		1,592	
F (27,156)	5.68	*	12.54	*	7.83	*	6.62	*	30.88	*	9.19	*	30.54	*
R-squared	15.42%		23.32%		10.01%		13.26%		44.61%		17.82%		38.96%	

*$p < 0.05$; $^{\tau}p < 0.10$.

BSR, Business for Social Responsibility; KLD, Kinder, Lydenberg and Domani.

Relations Strengths [= 0.607], Corporate Governance Strengths [$\beta = 0.169$], Diversity Strengths [$\beta = 0.808$], and Human Rights Strengths [$\beta = 0.520$]). Because the dependent variables have been standardized to z-scores across years in the sampling history, the coefficients should be interpreted as follows: BSR members on average perform 0.607 standard deviations better in Community Relations Strengths management, 0.169 standard deviations better in Corporate Governance Strengths, 0.808 standard deviations better in Diversity of Workforce Strengths management, and 0.520 standard deviations better in Human Rights Strengths management in comparison with nonmembers. On the other hand, BSR members do not appear to perform differently in a statistically significant way in the management of Employee Strengths, Environment Strengths, or Product Strengths. These results are consistent with the matched sample difference in means between BSR members and nonmembers in these categories. Thus, we can conclude that BSR is associated with better CSP strengths over time for the majority of areas, but not all.

Our findings, on the other hand, do not provide support for Hypothesis 2. In all, BSR members only appear to perform better than nonmembers in terms of addressing negative social impacts in the area of Environment Concerns management ($\beta = -0.280$, $p < 0.05$). The negative coefficient on this measure of CSP indicates that BSR members on average are associated with 0.280 standard deviations fewer Environment Concerns than nonmembers. Further, in one area, Human Rights Concerns, BSR members appear to perform worse than nonmembers ($\beta = 0.719$, $p < 0.05$). BSR members on average are correlated to 0.719 standard deviations more Human Rights Concerns than nonmembers. Thus, we conclude that our analyses do not find sufficient evidence to support the hypothesis that BSR members are linked to lower negative social impacts. To verify the robustness of our findings, we also lagged BSR membership one year and then re-estimated mean comparisons and regression models. These alternative specifications (not shown) yielded similar results.

Finally, it is important to highlight how the propensity matching procedure did change the findings (see Table 5). In each area of CSP, the difference in means for the unmatched sample produced positive and significant *t*-tests. Thus, limiting our analysis to simple means comparisons without propensity score matching would have suggested that for CSP strength areas, BSR members would have performed uniformly better, while in CSP concerns area, they would have performed uniformly worse.

Discussion and Conclusions

Despite the increasing popularity of voluntary social initiatives as alternatives to social protection regulations, we currently know little about their effectiveness in addressing issues beyond environmental protection. Our study helps to uncover some early evidence in this area. Overall, our findings provide initial evidence to suggest that participation in BSR is correlated with higher CSP strengths in the following areas: Community Relations, Corporate Governance, Diversity, and Human Rights. We also found that BSR members show a significant association with lower levels of Environmental Protection concerns. On the other hand, our results

also indicate that BSR membership is not significantly linked to lower levels of CSP concerns in any of the other six areas rated by KLD: Community Relations, Corporate Governance, Diversity, Employee Relations, Human Rights, and Product. In fact, in the case of Human Rights our findings actually suggest that BSR members tend to have lower performance than nonmembers. We believe that insights from neo-institutional and social networks theories may shed light on why BSR members appear to be associated with higher levels of strengths for most subcategories of CSP. First, BSR uses its central position within its own network to establish normative and mimetic pressures aimed at promoting new capabilities, routines, and management approaches linked to CSP strengths. It regularly provides its members the most up-to-date information and expertise on CSP practices, holds an annual conference attended by influential individuals and organizations, facilitates collaborations and dialogue among members, and in a small number of cases offers focused expert help in the form of consulting. Second, BSR does not grant its members with indiscriminate blanket certification of higher CSP. Through this approach, BSR avoids providing opportunistic member firms a "CSP branding" advantage. Blanket CSP certification CSP could be used by low-performing members to mislead their stakeholders about their actual social responsibility practices.

However, the results of our study do not lend support to our second hypothesis, that normative and mimetic pressures created by BSR and diffused through its network of members are associated with a reduction in negative social impacts measured by CSP concerns. To be sure, with the exception of Human Rights and Environmental Protection, our results indicate non-statistically significant relationships for all other areas of CSP concerns. We draw from neo-institutional theory to explain these results. CSP concerns likely result from "sticky" corporate routines that have evolved over time and become institutionalized corporate behaviors. Firms might overlook some of these concerns as they become routines because the practices associated with them are seen as not only legitimate but also as "best" management practices. In addition, they could have been once seen as legitimate by civil society prior to the evolving social movements that are demanding that firms address their CSP concerns (Margolis & Walsh, 2003). These routines had a chance to survive, endure, and become sedimented into corporate culture and cognition while society at large has slowly changed its expectations of how firms should address CSP concerns. Therefore, we suggest that addressing CSP concerns may require modifying, transforming, or shedding taken-for-granted corporate behaviors and ingrained habits rooted in institutionalized managerial beliefs and biases about corporate social responsibility.

Multiple cognitive simplification processes contribute to make business managers highly resistant to abdicating institutionalized CSP concerns practices. These heuristics arise from extensive internalization of assumptions that (i) establish profit making as the primordial social responsibility of business and (ii) portray environmental and social protection as costly endeavors with little to no competitive benefits (Rivera, Oetzel, de Leon, & Starik, 2009). They are also reinforced by a lack of market prices for environmental and social protection goods that are generally assumed to be of little short-term value (Berchicci & King, 2007).

For instance, when considering CSP concerns managers are more likely to exhibit prior hypothesis and anchoring biases that favor initial judgments and previous experience, making them pay selective attention to information and groups that validate their initial perceptions and assumptions (Schwenk, 1984; Tversky & Kahneman, 1974). Thus, they show an inclination to perceive new environmental and social responsibility demands as costly, too difficult to abandon, and/or not important to the mission of their firms even in the face of increasing evidence to the contrary (Bazerman, Messick, Tenbrunsel, & Wade-Benzoni, 1997). Business managers also tend to have a skewed idea of the legitimacy of nonprofit organizations, often considering only a small number of major environmental and social responsibility groups as politically influential and/or legitimate stakeholders (Fligstein & McAdam, 1993). Thus, demands from most activist groups to abandon practices associated with CSP concerns are likely to be seen by firm managers as inscrutable or fringe claims that illegitimately challenge legitimate practices and standards that are part of the institutionalized order (Rivera et al., 2009). Business managers may also show illusion of control biases that result in a tendency to consider their firms to be "incumbent"[23] organizations with relatively higher power and resources to avoid or delay the need to drop practices and routines producing higher levels of CSP concerns (Fligstein & McAdam, 1993; Rivera et al., 2009). Business managers' tendency to over-discount the future may also prevent them from identifying favorable environmental and social protection alternatives with large long-term benefits (Bazerman & Hoffman, 1999).

In sum, the deinstitutionalizing of CSP concerns practices may require stronger and more enduring institutional pressures than those commonly used by voluntary initiatives such as BSR (Tolbert & Zucker, 1996). Some of the most important pressure-enhancing mechanisms to be incorporated by effective voluntary initiatives include (King & Lenox, 2000; Rivera & de Leon, 2008): first, establishing specific CSP standards to be adopted by participants in voluntary programs; second, periodic independent third-party audits that verify the adoption of these standards; and third, rewards and sanctions that publicly certify the different levels of audited performance obtained by participant firms. These mechanisms are not, of course, sufficient to preempt opportunistic behavior by some firms that participate in third-party, performance-based voluntary certification initiatives. Mandatory social and environmental protection regulations are still vital for establishing minimum baselines of legal CSP practices and to promote high levels of business participation in complementary third-party, performance-based initiatives.

Two results warrant additional interpretation. First, BSR members appeared to perform simultaneously better in *Human Rights Strengths* and worse in areas of *Human Rights Concerns*. One possible explanation for these apparently contradictory findings is the potential for measurement error in the concerns subcategory. More than any other category in the KLD database, *Human Rights Concerns* has been composed of different measures from year to year. *South Africa Concerns* and *Northern Ireland Concerns* were included in the subcategory until 1994 and then removed, *Mexico Concerns* were included in the subcategory from 1995 through 2002, and *Burma Concerns* was added to the subcategory in 1995. Thus, it seems unlikely that

this subcategory can be considered internally consistent across the sampling history. As a result, it might lack construct validity.

Second, our findings indicate that BSR members perform no better in *Environment Strengths* than nonmembers but significantly better in *Environment Concerns*. We believe that a rationale for these results lies in the unique characteristics of environmental issues when compared with other social issues. Compared with other areas of CSP, environmental protection has had a more lengthy regulatory history in the United States (Hoffman, 1999). Further, environmental regulations have been one of the fastest growing in complexity and cost of compliance in the United States in the last decade (Kraft & Vig, 2006). Because of this extensive framework of regulations aimed at mitigating the negative environmental impacts of corporate activities, it is not surprising to see BSR companies focusing their efforts on minimizing environmental concerns. This focus on regulated practices associated with environmental concerns may leave BSR firms with limited time and resources to pursue the win–win opportunities measured by the environmental strengths ratings.

Limitations, Future Research, and Implications

There are several limitations to our study that temper our conclusions. First, while we argue that social networks and institutional forces, along with the absence of certification, make BSR effective at promoting better CSP Strengths among its members, we do not actually directly test these relationships. Like many of the empirical studies evaluating the effectiveness of VEPs (e.g., Khanna & Damon, 1999; King & Lenox, 2000; Rivera & de Leon, 2008), we use participation in BSR as a proxy for the various mechanisms that result in differential levels of CSP. As a result, it is important to note that the explanation we develop linking BSR to CSP, while theoretically plausible and consistent with existing literature, is not the only possible explanation. Second, while KLD provides the generally accepted database of measures for scholars conducting CSP research (Waddock, 2003), they are dichotomous and are therefore likely a coarse instrument for rating CSP. Using dichotomous ratings to measure a multifaceted, multidimensional construct like CSP fails to capture the construct's nuances (Rowley & Berman, 2000). Third, individual ratings within KLD categories sometimes change from year to year. While this does not prevent us from comparing the CSP across firms in any given category, it does prevent valid comparisons of CSP categories across years. Our fourth limitation is related to the second. Our CSP measures constructed for each category-year are summed count scores of KLD subcategories rather than construct scores computed via factor analysis. Since the measures comprising the counts can change across years, we could not conduct the latter procedure. That technique requires a consistent instrument over time to ensure the internal consistency of the factors. Because of the constraints of our data, we used a less robust method of using count scores and converted them into z-scores as suggested by Mattingly and Berman (2006). Finally, because the availability of CSP in the KLD database was limited to S&P 500 firms for 9 of the 15 years in our sampling history, we included only 74 of the 238 BSR firms in our analysis (the rest were not members of the S&P 500). This introduces a

sampling bias toward large firms listed on U.S. stock exchanges. Firm size is known to be positively associated with CSP (McWilliams & Siegel, 2001).

We believe that fruitful future research in this area could examine qualitatively the impact that comprehensive voluntary social initiatives have on CSP. Qualitative methods could provide missing detail in the current account of what induces members of comprehensive voluntary initiatives to improve their CSP.

Finally, this study offers preliminary evidence to suggest to policymakers that members of business associations like BSR may be associated with the adoption of innovative corporate social practices such as those measured by the CSP strength dimensions of our study. To do this, our findings suggest that business associations' voluntary social initiatives need to avoid offering blanket certifications to all their participants so that opportunistic participation by free-riding companies is reduced. Additionally, the case of BSR also stresses the importance of relying on network mechanisms that facilitate the diffusion of practices and routines via normative and mimetic pressures.

On the other hand, with the exception of environmental concerns practices, an area of CSP that is heavily regulated, our results also indicate that members of BSR are not significantly associated with lower CSP concerns. This suggests that mandatory regulations may be necessary to induce members of voluntary initiatives such as BSR to reduce CSP concerns to a minimum legal baseline. Of course, given the limited nature of our research, we cannot generalize to other business associations' voluntary social responsibility programs.

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Notes

1. Best Paper Award finalist at the 2008 Academy of Management Conference in the Social Issues in Management division.
2. In 2002, the Responsible Care Program established independent third-party certification requirements. The Chemical Industry Association is now called the Chemistry Council.
3. By third-party certification, we refer to those granted by agents who have no affiliation with the focal firm or its industry. Third-party certification implies that evaluation of firm performance with respect to a VEP's standards is conducted similarly by agents, with no such affiliations.
4. *Source:* http://www.bsr.org (June 1, 2008).
5. *Source:* http://www.wbcsd.org (June 1, 2008).
6. *Source:* http://www.cauxroundtable.org (June 1, 2008).
7. *Source:* http://www.ceres.org (June 1, 2008).
8. *Source:* http://www.bsr.org/bsrconferences/index.cfm (June 5, 2008).
9. *Source:* http://www.bsr.org/membership/benefits.cfm (June 5, 2008).

10. *Source:* http://www.bsr.org/membership/benefits.cfm (June 5, 2008).
11. These areas were noted as core BSR issue areas in communications with BSR's Director of Environmental Research and Development Department.
12. *Source:* http://www.bsr.org/membership/index.cfm (December 12, 2007). In 2008, BSR begun publicizing its full membership list on its Web site.
13. *Source:* http://www.bsr.org/membership/faq.cfm (December 12, 2007).
14. Gross revenues are defined by BSR as "a company's gross monies collected for goods and services, prior to deductions of taxes, expenses or other overhead, for the most recent year filed." Source http://www.bsr.org (December 12, 2007).
15. In mid-2008, BSR began making available on its Web site the full list of its members.
16. An unbalanced panel refers to data sets where there are varying numbers of observations for each cross-section in the panel (Greene, 2000).
17. *Source:* http://www.kld.com/research/socrates/index.html (July 16, 2010).
18. To calculate the z-score measure for each of the 14 dependent variables, we subtracted the mean count score of a given subcategory-year from the actual count scores provided by KLD for each firm in that subcategory-year and divided the result by the standard deviation of that subcategory-year's count score.
19. All analyses were conducted using the statistical software *Intercooled STATA 9.1*.
20. It is important to stress that propensity score matching is not a panacea and its effectiveness for controlling for self-selection bias is based on a strong conditional independence assumption. This identifying assumption implies that no unobservable variables drive adoption of BSR and the outcome of participation in it (Rosenbaum & Rubin, 1983).
21. To verify the robustness of our selected matching procedure, we also used different caliper tolerances and alternative nonparametric matching methods—Local Linear and Kernel matching (Heckman, Ichimura, & Todd, 1997). Our chosen method provided the best matching group.
22. Forty-four BSR-participant observations were dropped because no adequate matching observations were found for them based on the caliper tolerance range restriction of 0.001.
23. Here, we follow Neil Fligstein—and the social movements literature—in using the term *incumbents* to refer to "powerful organizations or groups which have the necessary political or material resources to enforce an advantageous view of appropriate field behavior and definition of field membership on other groups" (Fligstein, 1996, p. 663; Fligstein & McAdam, 1993, p. 8). Inside an organization, incumbents "are those who have vested interests in and thus pursue the maintenance of an existing institutional model" (Kim, Shin, Oh, & Jeong, 2007, p. 290).
24. *Source:* http://www.kld.com/research/socrates/index.html (December 5, 2007).

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Appendix A

KLD Socrates Ratings in 2006[24]

Category	Strengths	Concerns
Community	1. Charitable giving 2. Innovative giving 3. Non-US charitable giving 4. Support for housing 5. Support for education 6. Volunteer programs 7. Other strengths	1. Investment controversies 2. Negative economic impacts 3. Tax disputes 4. Other concerns
Corporate Governance	1. Limited executive compensation 2. Ownership strengths 3. Political accountability strengths 4. Transparency strengths 5. Other strengths	1. High executive compensation 2. Ownership concerns 3. Political accountability concerns 4. Transparency concerns 5. Accounting concerns 6. Other concerns
Diversity	1. Minority/women CEO 2. Minority/women promotions 3. Minority/women representation on the board of directors 4. Work/life benefits 5. Minority/woman contracting 6. Employment of disabled 7. Progressive gay/lesbian policies 8. Other strengths	1. Diversity controversies 2. Non-representation 3. Other concerns
Employee Relations	1. Union relations 2. No layoff policy 3. Profit sharing 4. Employee involvement 5. Strong retirement benefits 6. Health and safety 7. Other strengths	1. Union relations 2. Health and safety 3. Workforce reductions 4. Retirement benefits 5. Other concerns
Environment	1. Beneficial products and services 2. Pollution prevention 3. Recycling 4. Clean energy 5. Communications 6. Other strengths	1. Hazardous waste 2. Regulatory problem 3. Ozone depleting chemicals 4. Substantial emissions 5. Agricultural chemicals 6. Climate change 7. Other concerns
Human Rights	1. Indigenous peoples relations 2. Labor rights strengths 3. Other strengths	1. South Africa concerns 2. Northern Ireland concerns 3. Burma concerns 4. Mexico concerns 5. International labor concerns 6. Indigenous peoples concerns 7. Other concerns
Product	1. Product quality 2. Research and development/ innovative products 3. Benefits to the economically disadvantaged 4. Other strengths	1. Product safety 2. Marketing/contracting controversy 3. Antitrust 4. Other concerns