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The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness

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This paper shows that corporate social responsibility (CSR) and firm value are positively related for firms with high customer awareness, as proxied by advertising expenditures. For firms with low customer awareness, the relation is either negative or insignificant. In addition, we find that the effect of awareness on the CSR–value relation is reversed for firms with a poor prior reputation as corporate citizens. This evidence is consistent with the view that CSR activities can add value to the firm but only under certain conditions.

Key words: corporate social responsibiliy; firm value; customer awareness; reputation
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1. Introduction

Corporate social responsibility (CSR) has become an integral part of business practice over the last decade or so. In fact, many corporations dedicate a section of their annual reports and corporate websites to CSR activities, illustrating the importance they attach to such activities. But do such activities create value for the firm's shareholders or do they focus too much on other stakeholders, thereby lowering firm value? Despite much research on the topic (for reviews of the literature, see Griffin and Mahon 1997, Orlitzky 2001, Orlitzky et al. 2003, Margolis and Walsh 2003, Margolis et al. 2009), few firm conclusions can be drawn, except that the literature is divided. Although there appears to be more support for the view that CSR activities are positively related to profitability and firm value, a large number of studies find the opposite relation. As a result, the normative implications of research on corporate social responsibility are still uncertain.

The relation between CSR activities and firm value is unclear partly because of methodological concerns (Margolis and Walsh 2001) and, in particular, model misspecification. Even more important is, perhaps, the lack of understanding about the channels through which CSR affects firm value. Most theoretical models assume a direct link between CSR and firm value. In this paper, we propose an indirect link. In particular, we rely on Barnett's (2007) insight that the impact of CSR on firm value depends on the ability of CSR to influence stakeholders in the firm. We focus on one of the key stakeholders, consumers, and suggest that a necessary condition for CSR to modify consumer behavior and, hence, affect firm value, is consumer awareness of firm CSR activities. Moreover, we argue that consumers are less likely to respond to CSR activities, even if they are aware of them, if the CSR activities are not aligned with the firm's reputation as a responsible citizen (see also Du et al. 2010, Schuler and Cording 2006).

In this paper, we revisit the relation between CSR and firm value, taking into account the concerns mentioned above. Using models with firm fixed effects to address model misspecification problems, we examine whether and under what conditions CSR can add value to the firm. More specifically, we study whether CSR activities are more value enhancing if they are conducted by firms with more consumer awareness. Although the relation between CSR and firm value ought not to be confined to the consumer channel, consumers constitute a natural starting point to uncover such a relation, given that their purchasing behavior clearly affects a company's financial performance and, ultimately, firm value. We also investigate whether the impact of awareness is attenuated for firms with a poor prior reputation for responsible behavior, and contrast the consumer awareness story with an alternative in which CSR is employed by socially conscious entrepreneurs who wish to signal product quality.

In our analyses, we employ the KLD Stats database over the period 1991–2005, which covers CSR activities of a large subset of U.S. companies, and combine it with financial statement data obtained

from Compustat. Our main performance metric is Tobin's q, which is the market value of the firm, divided by the replacement value of the assets. We start by assessing whether firms with high consumer awareness, as proxied by advertising spending, can enhance firm value by increasing CSR, and find this to be the case. CSR activities have a negligible or negative impact on firm value for firms with low advertising intensity, which suggests that for these firms the costs sometimes outweigh the benefits. Conversely, we find a positive impact for firms with high advertising intensity. However, we show that the positive impact of advertising intensity reverses for firms with a poor prior reputation for being responsible citizens, as measured by Fortune's rating on the list of "America's Most Admired Companies." Interestingly, we find no evidence of a *direct* link between CSR and firm value after controlling for unobservable time-invariant firm characteristics (i.e., in models that employ firm fixed effects).

This paper contributes to the debate on the role of CSR in corporate strategy. We show that in certain circumstances CSR enhances the value of the firm, but in others, it could destroy value, suggesting that some firms adhere to the shareholder model, and others may consider broader objectives (see Jensen 2001). Our analyses also illustrate the importance of controlling for omitted variables in this type of study and highlight the complexity of the mechanism through which CSR affects firm value. By empirically establishing one condition under which such a relation can be uncovered, our research validates Schuler and Cording's (2006) and Barnett's (2007) claim that understanding the link between CSR and value requires models of stakeholder behavior that explain how CSR activities enhance/destroy value.

The remainder of this paper is organized as follows. In §2, we define CSR and briefly summarize the literature on the impact of CSR activities on firm value; we also discuss various reasons why advertising spending may enhance/moderate the relation between CSR and firm value. Section 3 describes our data collection procedure and variable construction. Our results are contained in §4. Section 5 concludes the paper, discusses the managerial implications of our findings, and proposes several avenues for further research.

2. CSR, Advertising Intensity, and Firm Value

2.1. Defining CSR

Before discussing ways in which CSR activities can enhance firm value, it is important to discuss those activities that encompass CSR. Notwithstanding the large literature on the topic, a general consensus as to what activities are included under the CSR umbrella has not emerged. In fact, Baron (2001, p. 10) argued that "Corporate social responsibility is an ill- and incompletely defined concept." We rely on the broad definition proposed by the World Business Council for Sustainable Development (WBCSD 2004), which argued that "CSR is the commitment of a business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life."[1]

This definition includes the elements that are generally included in empirical work on CSR, such as the community, the environment, human rights, and the treatment of employees. Whereas some of these elements relate to social dimensions, others focus on stakeholders (e.g., treatment of employees). As such, this definition is consistent with Griffin and Mahon's (1997) multidimensional notion of CSR and with the work of Dahlsrud (2008), who reviewed various definitions of CSR and found that the stakeholder and the social dimensions receive exactly the same attention based on frequency counts in Google searches.

The inclusion of stakeholders within the remit of CSR is, however, not without controversy, especially given that the boundary between stakeholder management and CSR is not clear cut. For example, Jensen (2001) argued that anyone who can potentially benefit from its engagement with the firm is a stakeholder. That would include issues related to human rights, the environment, and the community, elements that others would consider more "social." This definition of stakeholder is similar in spirit to Freeman's (1984, p. 53) definition of a stakeholder as "any group or individual who can affect or is affected by the achievement of an organization's purpose," although Freeman (1984) explicitly considered groups and individuals that can be negatively affected by the firm's actions as well. According to this view, all CSR activities fall under the remit of stakeholder management. On the other hand, Harrison et al. (2010) made a clear distinction between stakeholder orientation versus a focus on social issues and considered only the latter activities as CSR.

In sum, although there are some dissenting opinions, much of the literature includes both the social and stakeholder dimensions in the CSR remit. Thus, consistent with this view and our definition, we consider both facets of CSR in our work.

[1] WBCSD is a CEO-led organization focused on organizing the global business community to create a sustainable future for business, society, and the environment. It has 200 member companies with combined revenues of over $7 trillion and, according to Google Scholar, it has large visibility in academic research (over 45,000 citations).

2.2. Customer Awareness and CSR

There is a substantial theoretical literature suggesting that CSR activities can enhance profitability and, hence, the value of the firm. Berman et al. (1999) provided an excellent overview of the various elements of CSR and the ways in which these activities can increase firm value.[2] The concern, of course, is that CSR activities are costly and that the costs do not (always) outweigh the benefits. In fact, empirical studies on the relation between the value of the firm and CSR activities find mixed results, including an *impressive number* of studies reporting a negative relation (see Griffin and Mahon 1997; for a differing view, see Roman et al. 1999).

Our goal is to examine under which circumstances CSR involvement may be beneficial. We focus on the customer channel and examine the effect of a potential moderating variable, advertising intensity, on the CSR–firm value relation. We posit that through advertising a firm reduces the information gap between itself and its customers, which, in turn, makes it more likely that customers will find out about the firm's CSR involvement, and reward the firm for its CSR efforts.

In developing our prediction that advertising intensity enhances the benefits of CSR, we turn to the literature in strategy, marketing, and business ethics, which has established two facts. First, customers take into consideration firms' CSR activities when making purchase decisions (see, for example, Brown and Dacin 1997, Creyer and Ross 1997, Sen and Bhattacharya 2001, Bhattacharya and Sen 2004, Penn Schoen Berland 2010). Some of this research suggests that consumers are willing to pay a higher price for products of firms with more CSR engagement; other work suggests that, although consumers are not willing to pay a higher price, they will more likely purchase goods from firms that are more socially responsible. These findings support Baron's (2001) original insight that "a practice labelled as socially responsible . . . increases the demand for its (the firm's) product. This strategic CSR is simply a profit-maximizing strategy motivated by self-interest . . ." (p. 9). In this context, CSR is considered a product attribute, and therefore a strategic investment chosen to maximize firm value. The second fact is that consumers are often not aware of a firm's CSR activities (see, for example, Sen and Bhattacharya 2001, Bhattacharya and Sen 2004, Pomering and Dolnicar 2009, Du et al. 2010).

There is a clear disconnect between these two facts. As articulated by Bhattacharya and Sen (2004) and Schuler and Cording (2006), the lack of customers' awareness about CSR initiatives is a major limiting factor in their ability to respond to these initiatives. Similarly, McWilliams and Siegel (2001) argued that potential customers must be fully aware of CSR characteristics for CSR differentiation to be successful; they also predicted a positive correlation between advertising intensity and the provision of CSR.[3] All of these authors recommended that companies work on increasing CSR awareness levels, if CSR is to be a profitable strategic investment.[4] This work also suggests that not all firms fully appreciate the importance of customer awareness when evaluating CSR as a strategic investment.

In this paper, we posit that advertising enhances a firm's information environment, thereby increasing the firm's (potential) customers' awareness about the firm and likely prompting them to become further informed about the firm, its products, and practices, including its corporate social performance. The notion that advertising provides information about the firm goes back at least to Nelson (1974) (see also Bagwell 2007 for a review of the literature). More recently, relating advertising to CSR, McWilliams and Siegel (2000, 2001) suggested that CSR-related advertising and media coverage may increase consumer awareness of CSR. This, in turn, increases the demand for socially responsible behavior and the returns to engaging in such behavior. They did not, however, formally model or test this conjecture.

All these arguments lead to our main prediction that the impact of CSR activities on the value of the firm will be positively related to advertising intensity. We note that this prediction does not imply that firms need to advertise their CSR activities (as suggested by McWilliams and Siegel 2000, 2001); all that is required is that advertising intensity leads to increased awareness of the firm, including its CSR activities.

Our prediction differs from the predictions derived from Schuler and Cording's (2006) model. Schuler and Cording (2006) also argued that information intensity is one of the key elements in the CSR–value relation. Their argument relies on the dissemination of CSR information by the firm or other parties. This could happen through advertising, but it is likely that most advertising does not directly speak to the firm's CSR activities. Moreover, Schuler and Cording's (2006) argument would only apply to firms with particular

[2] See also Bies et al. (2007) and the other papers in the special topic forum on "Corporations as Social Change Agents," published in the *Academy of Management Review*, Volume 32, 2007.

[3] See also Brammer and Millington (2008), who estimated a model of the relation between charitable giving and advertising intensity (and a number of other variables).

[4] As early as 1975, Stone (1975) pointed out more generally that for markets to exhibit some degree of control over corporate social performance, information must be available to stakeholders about the firm's social practices.

CSR strengths; firms with CSR concerns would certainly not include negative information about their CSR performance in their advertising. Our argument, on the other hand, applies to both strengths and concerns—as firms increase advertising and public awareness, customers are more likely to find out about all elements of CSR.

Schuler and Cording (2006) developed some predictions regarding the alignment between a firm's CSR information and its prior reputation, which *are* consistent with our argument. In particular, they argued that the intensity of positive CSR information is stronger for firms with a good prior reputation than for firms with a poor prior reputation; if there is no congruency between a firm's current actions and its past reputation, customers will not respond positively to the CSR information. This required consistency is also explored by Barnett (2007), who argued that the response to CSR activities by customers is path dependent; the same activity may lead to positive returns for one firm, but negative returns for another depending on the customers' priors about the firm's intentions. Du et al. (2010), likewise, conjectured that a good prior reputation amplifies the positive effect of CSR communication. Thus, we also explore in our analyses whether a firm's prior reputation affects the strength of the impact of advertising on the CSR–value relation.

In sum, prior literature suggests that CSR is a product attribute valued by consumers, which they can only appreciate if they are informed about it. Advertising spending increases public awareness about the firm and prompts customers to become more informed about the firm's CSR activities. This increased scrutiny benefits companies with CSR strengths, but harms companies with CSR concerns. In addition, customers attach less value to the CSR attribute if the firm has a poor prior reputation. Next, we consider a different explanation for why advertising may affect the CSR–value relation, and explain how our tests differentiate between the arguments proposed in this section and the next.

2.3. CSR as a Signal of Product Quality

Fisman et al. (2008) suggested that CSR activities are more beneficial in more competitive industries with high advertising intensity. Their implication was derived from a simple model of corporate philanthropy in which firms use CSR activities as a mechanism to signal product quality. In their model, not all the attributes of product quality are observable to the customer. Therefore, firms that are purely profit oriented have an incentive to produce products of lower quality. That is not the case for all firms, however. In their model, some firms also care about product quality externalities (because the owners of the firms care about social welfare). Subject to this (self-imposed) constraint on product quality, these firms also attempt to maximize profits. These firms engage in CSR to signal their orientation toward higher quality products. Consumers realize that only firms that care about product quality are willing to invest in CSR activities because profit-oriented firms find these investments "too expensive." As a result, by engaging in CSR, firms are able to identify themselves as having better quality products.

Fisman et al. (2008) argued that such CSR activities are more beneficial in competitive industries and in industries where there is more opportunity to signal quality. They employed industry advertising intensity, measured as industry-median advertising to sales, as a proxy for the ability to signal quality.

Empirically, a critical distinction between the Fisman et al. (2008) prediction and our prediction rests on the measurement of advertising intensity. According to Fisman et al. (2008), what matters is *industry* advertising intensity, whereas our prediction regarding customer awareness is about *firm* advertising intensity. This distinction is important—industry advertising in the Fisman et al. (2008) model measures signalling ability, not awareness. Another important distinction is that the Fisman et al. (2008) model is about positive CSR efforts, not about weaknesses, whereas our argument applies equally to strengths and weaknesses. Thus, their model predicts a nonlinear relation between performance and the CSR–advertising interaction: positive for CSR strengths, but no relation for CSR weaknesses.

The empirical work of Fisman et al. (2008) supports their "signalling" over the "consumer awareness" argument. They found that CSR activities enhance the value of the firm in industries with high advertising intensity. They also found that the benefits of CSR are more substantial in more competitive industries; when there is more competition, it is more important to signal product quality. Consistent with the Fisman et al. (2008) argument, Fernandez-Kranz and Santaló (2010) showed that firms in more competitive industries are more likely to engage in CSR, and Siegel and Vitaliano (2007) showed that firms selling experience goods (for which determining product quality is more difficult) have higher CSR involvement. However, these authors did not study the relation between CSR and firm value. Moreover, the fact that firms in more competitive industries are more likely to engage in CSR is not inconsistent with the consumer awareness argument—CSR may be a way of product differentiation if CSR itself is considered a product attribute (see also Baron 2001).

One limitation of the Fisman et al. (2008) empirical analysis is that they focused only on two CSR

activities: charitable contributions and housing support. Because CSR is multidimensional, it is important to re-examine the empirical evidence on the "signalling" and the "consumer awareness" arguments using a more comprehensive definition of CSR activities. Furthermore, their empirical analysis does not shed light on the effect of advertising on the relation between performance and CSR *concerns*.

3. Data and Variable Construction

In this study, we combine two databases. To measure CSR activities, we employ the KLD Stats database constructed by KLD Research and Analytics, Inc. (KLD). KLD is a Boston-based investment research firm specializing in tracking firms' CSR activities. Since 1991, this firm has gathered data on various CSR strengths and weaknesses for a large subset of U.S. companies. These data have been employed in a large number of previous studies (see, for example, Waddock and Graves 1997, Berman et al. 1999, Johnson and Greening 1999, Hillman and Keim 2001). We employ the KLD data over the period 1991–2005.

Over time, KLD's coverage has expanded considerably. For the period 1991–2000, the data set covers all firms in the S&P 500 Index and the Domini 400 Social Index. This second index is developed by KLD to capture the performance of firms that have positive social and environmental records, but that also meet certain financial standards.[5] For 2001 and 2002, KLD adds firms from the Russell 1000 Index (approximately the largest 1,000 companies in the United States based on market capitalization) to its coverage, and for 2003 through 2005, firms from the Russell 2000 (the 2,000 companies that follow the Russell 1000 in market capitalization) are also added.

Given that firms in the Domini 400 Social Index have good CSR records and may have also performed better, their inclusion in our sample could lead to a selection bias. Therefore, we remove from our sample those firms that are part of the Domini 400 Social Index but are not included in the S&P 500 (1991–2005) or the Russell 1000 (2001–2005) or the Russell 2000 (2003–2005).

KLD divides CSR activities into 13 categories: community, diversity, employment, environment, human rights, product, alcohol, gaming, firearms, military, nuclear, tobacco, and corporate governance. We do not believe that corporate governance should be considered part of CSR. Generally, corporate governance is about the mechanisms that allow the principals (shareholders) to reward and exert control on the agents (the managers). For example, in their widely cited survey paper on corporate governance, Shleifer and Vishny (1997, p. 737) state, "Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment." CSR, on the other hand, deals with social objectives and stakeholders other than shareholders. Hence, we leave corporate governance out of our CSR measure. In our primary, conservative measure of CSR, we also remove the product and industry categories. The product category focuses on issues such as product quality, safety, and innovation. The inclusion of such a category under the CSR umbrella would indicate that firms with high quality products are firms with good CSR. This may be casting the net too wide. Similarly, industry characteristics are not necessarily elements of CSR. However, because firms can elect not to be involved with certain products, we also present results for a broader measure of CSR that includes both the industry and product elements of KLD.

For each of the categories considered, KLD Stats contains data on the number of strengths and concerns. For example, in 2005, there are seven possible strengths in the community category and four possible concerns. The number of strengths and concerns in each category has evolved over time as KLD refined the database. For instance, in 1990, there were only four possible community strengths as well as four concerns. As a result, it is not possible to directly compare strengths or concerns within a category across years. However, such a comparison is essential for our work because we are interested in both the time-series and the cross-sectional dimensions of CSR activities. We therefore scale the strengths and concerns for each firm year to obtain two indices that range from 0 to 1. To achieve this, we divide the number of strengths (concerns) for each firm year within each CSR category by the maximum possible number of strengths (concerns) in each category year. We then subtract the concerns index from the strengths index to obtain a measure of *net* CSR involvement in each area that ranges from -1 to $+1$ for each year.[6] To construct our narrow, more conservative measure of CSR, we combine community, diversity, employees, environment, and human rights into one overall net CSR measure that ranges from -5 to $+5$.[7] To construct our broader measure, we add the product category,

[5] KLD does not disclose the exact methodology used in the construction of this index.

[6] For example, in 1995, Exxon Mobil has strengths in three areas of the community category out of a maximum of seven, giving it a strengths score of 0.43 (3/7). In the same year, Exxon Mobil has concerns in two out of four areas of the community category, giving it a concerns score of 0.50 (2/4). Thus, Exxon Mobil's net CSR score in 1995 in the community area is -0.07 $(0.43 - 0.50)$.

[7] In robustness tests reported in §4.4, we show that strengths and weaknesses have no differential impact on firm valuation, which justifies the computation of a net score.

and we create a further CSR category called industry, which is the sum of all industry concerns, divided by six, as there are six possible industry concerns. Thus, the maximum of our broader measure is 6, and the minimum is −7 (there are no industry strengths, only concerns).

Accounting data employed to compute performance are obtained from the Compustat database, which contains financial accounting data for all listed U.S. companies. We merge the nonfinancial firms from the Compustat database with the KLD Stats database to obtain the sample employed in this paper. For firms with fiscal year end in December, we merge the KLD Stats data with financial accounting data for the same year, so that CSR activities and performance are measured concurrently. For firms with fiscal year end prior to December, we merge KLD Stats data with Compustat data for the following year to make sure that the CSR data precede the performance data. As such, we are more certain that causality goes from CSR to performance, and not vice versa.

The number of observations in our sample obtained after merging the Compustat and KLD Stats databases, and removing firms only contained in the Domini 400 Social Index (but not S&P 500 or Russell 1000/2000 firms), remains fairly stable around 400 from 1991 until 2000, and grows substantially to more than 2,000 firms in 2005 as KLD Stats coverage expands.

To measure performance, we employ Tobin's q, which is the market value of the firm, divided by the replacement value of its assets. Tobin's q has been used widely in economics, finance, and strategy as a performance measure (see, for example, Morck et al. 1988, Waddock and Graves 1997). It captures how much value the firm creates with its asset base. Because value is based on the present value of future expected cash flows, discounted at the required rate of return, it is already adjusted for risk. We compute Tobin's q as (book value of assets − book value of equity − deferred taxes + market value of equity)/book value of assets. The advantage of using Tobin's q over profitability is that profitability is a short-term measure, whereas Tobin's q is a long-term measure because it is based on the market value of the firm. In fact, it is possible that a firm deliberately sacrifices some current profitability to engage in CSR activities that are in the long-term interest of the firm. However, in our robustness section, we also present results using profitability as a measure of performance. To avoid problems with outliers, we winsorize Tobin's q at the 1st and 99th percentiles.[8]

Panel A of Table 1 contains summary statistics on the measures of CSR employed in our analyses, as well as Tobin's q, and the control variables employed in our regression models (discussed in §4.2). All three measures of CSR actually have a negative score, on average. When all areas of CSR are combined, the lowest score in the sample is −2.33 (Texaco Corp in 1992) and the highest score is 2.14 (Polaroid in 1995). Averaged across years, the lowest score is −1.65 (Unisys) and the highest score is 1.23 (Polaroid) (untabulated). The average firm in our sample has assets of $7.6 billion and spends 1.32% of its sales on advertising.

Panel B of Table 1 contains the correlation matrix of our dependent and explanatory variables. None of the correlations are large, except for the ones between the various CSR measures.

4. Results

4.1. Does Advertising Increase Awareness of CSR Activities?

Our argument that CSR enhances the value of firms with higher customer awareness about the firm relies on advertising being a good proxy for awareness. In this section, we examine whether this assumption is justified. To determine whether advertising is related to firm and CSR information, we select a random subsample of 100 firms from our main sample and search the Factiva database (in particular, major U.S. news and business publications) for general press mentions and for mentions of CSR or related activities. We then estimate the following linear regression model:

$$\text{number of (CSR) press cites} \\ = f(\text{advertising intensity, total assets, year dummies}).$$

We control for firm size because we expect larger firms to receive more press attention. The coefficient on advertising intensity in the model for *all* press cites is 3,596, with a p-value of 0.00. (These results are untabulated for the sake of brevity.) In the model where we employ CSR press cites, the coefficient on advertising intensity is 11.15 with a p-value of 0.05. The effects are even stronger when we lag advertising by one year; the coefficient on *all* press cites increases to 7,095 (p-value of 0.01) and the coefficient on CSR press cites increases to 16.7 (p-value of 0.07). These results indicate that firms that advertise more receive more press coverage, suggesting that advertising enhances awareness about the company.[9]

[8] Removing the outliers instead of winsorizing them does not affect our findings. These results are available from the authors upon request.

[9] We also verify that the increased awareness due to media attention need not be driven by positive CSR information. To do this, we estimate separate regressions of CSR media cites on our measure of

Table 1 Summary Statistics and Correlation Matrix

Panel A. Summary statistics

Variable	Mean	Median	Standard deviation	Min	Max
CSR (*conservative*)	−0.0792	0.00	0.3787	−2.25	1.94
CSR (*with industry*)	−0.0954	−0.05	0.3828	−2.25	1.90
CSR (*with industry and product*)	−0.1394	−0.1071	0.4739	−2.33	2.14
Tobin's q	2.10	1.63	1.42	0.69	12.81
Total assets ($ millions)	7,609	1,922	25,715	10	750,507
Advertising intensity	0.0132	0	0.0307	0	0.2861
R&D intensity	0.0432	0.0187	0.0878	0	0.7821

Panel B. Correlation matrix

Variable	Tobin's q	CSR (conservative)	CSR (with industry)	CSR (with industry and product)	Assets	Advertising/sales
CSR (*conservative*)	0.152					
CSR (*with industry*)	0.160	0.992				
CSR (*with industry and product*)	0.161	0.913	0.927			
Total assets	−0.082	0.044	0.023	−0.098		
Advertising intensity	0.145	0.149	0.143	0.109	0.018	
R&D intensity	0.298	0.041	0.051	0.070	−0.055	−0.0318

Notes. The CSR measure for each element of CSR, except for industry, is computed by taking the number of strengths and dividing it by the possible maximum, and subtracting the number of concerns, divided by the possible maximum, implying that the score on each element ranges from −1 to +1. The total is the sum of all the constituent elements. For industry, we add up the number of industry concerns and divide by its maximum (6). The conservative measure is computed as the sum of five elements: community, diversity, employees, environment, and human rights. To obtain the CSR measure including industry, we subtract the industry score from the conservative measure. To obtain the CSR measure including industry and product, we add the product score to the CSR measure including industry. Tobin's q is computed as (book value of assets − book value of equity − deferred taxes + market value of equity)/book value of assets. Advertising intensity is computed as advertising expenses/sales. When advertising expenses are missing on Compustat, we set it equal to zero. R&D intensity is computed as R&D expenses / sales. When R&D expenses are missing on Compustat, we set it equal to zero.

4.2. Advertising Intensity and the Value of CSR Activities

In this section, we examine our main hypothesis, which is that awareness, as proxied by advertising intensity, enhances the impact of CSR on firm value. As we argued previously, customers of advertising intensive firms are more likely to become aware of the firms' CSR activities and, hence, respond to them. We estimate panel regressions of Tobin's q as a function of CSR involvement and an interaction term between the CSR measure and advertising intensity.

Consistent with the literature (see Morck et al. 1988, McWilliams and Siegel 2000), we also include three control variables: size, advertising intensity, and research and development (R&D) intensity. Larger firms tend to be older and have lower investment opportunities than younger firms, which will translate in lower q ratios. We measure size as the log of the book value of assets. Advertising expenditures may create brand capital, which will be reflected in the market value of the firm, but not in its book value. We compute advertising intensity as advertising expenditures divided by sales. Advertising expenditures are missing for more than 50% of the firms on Compustat. Given that advertising expenditures do not have to be disclosed if they are immaterial, we follow the literature and set it equal to zero when missing (see, for example, Fee et al. 2009, Hale and Santos 2009, Masulis et al. 2009).[10] Research and development expenditures are generally not capitalized on the balance sheet; instead, they are expensed. However, they may create value for the firm, which will be reflected in a higher q ratio. We compute R&D intensity as research and development expenditures divided by sales. To avoid problems with outliers, we winsorize advertising intensity and R&D intensity at the 99th percentile (the first percentile is zero).

We estimate our regression models using ordinary least squares (OLS). However, because the same firm can enter the regression multiple times, we cluster the standard errors by firm to address the lack of independence of the observations (Rogers 1993). All standard errors are also corrected for heteroscedasticity (White 1980) and all models include year dummies.

CSR and CSR media cites on the absolute value of our CSR measure. Although we find no relation between CSR media cites and our measure of CSR, we find a positive and statistically significant coefficient (1.54, with a p-value of 0.03) for the regression using the absolute value of our CSR measure. This evidence indicates firms with more CSR strengths, but also those with more CSR concerns, receive more media attention.

[10] As shown later in the paper, our results are robust to different ways of treating observations with missing advertising expenditures.

Table 2 Panel Regressions of Tobin's q as a Function of CSR Involvement, and the CSR–Advertising Interaction

	CSR measure					
	(i) Conservative	(ii) Include industry concerns	(iii) Include industry and product	(iv) Conservative	(v) Include industry concerns	(vi) Include industry and product
Intercept	4.17 (0.00)***	4.15 (0.00)***	4.02 (0.00)***	6.38 (0.00)***	6.38 (0.00)***	6.37 (0.00)***
Log *assets*	−0.23 (0.00)***	−0.22 (0.00)***	−0.21 (0.00)***	−0.50 (0.00)***	−0.50 (0.00)***	−0.50 (0.00)***
Advertising intensity	5.83 (0.00)***	6.00 (0.00)***	6.59 (0.00)***	−1.25 (0.46)	−1.15 (0.49)	−0.82 (0.59)
R&D intensity	3.76 (0.00)***	3.75 (0.00)***	3.81 (0.00)***	−0.64 (0.34)	−0.62 (0.24)	−0.63 (0.17)
CSR	0.41 (0.00)***	0.39 (0.00)***	0.31 (0.00)***	−0.07 (0.23)	−0.08 (0.24)	−0.01 (0.78)
CSR ∗ *Advertising intensity*	6.19 (0.05)**	6.65 (0.02)**	4.25 (0.08)*	7.70 (0.00)***	7.42 (0.01)***	4.94 (0.00)***
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.19	0.19	0.19	0.74	0.74	0.73
N	10,712	10,712	10,712	10,712	10,712	10,712

Notes. The model is estimated using OLS. The standard errors have been adjusted for heteroscedasticity and for the lack of independence of observations for the same firm (clustered standard errors). The conservative measure of CSR includes the following five KLD categories: community, diversity, employees, environment, and human rights. The *p*-values are reported in parentheses.

***, **, and * indicate significance of the coefficient at the 1%, 5%, and 10% levels, respectively.

We employ three measures of CSR: the conservative measure, which includes five KLD categories (community, diversity, employees, environment, human rights); an expanded measure, which also includes industry concerns; and the broadest measure, which includes industry concerns and the product category. For each measure, we report two specifications: the first specification is estimated without firm fixed effects, as in most of the prior literature on CSR; the second specification is estimated with the inclusion of firm fixed effects, which control for time-invariant unobservable firm characteristics that may drive both valuation and CSR involvement. The omission of such controls may result in spurious findings and may explain why regression models with different sets of explanatory variables have yielded contradictory results in prior work.

Our results are reported in Table 2. Two results stand out. First, in the models estimated without firm fixed effects (models (i)–(iii)), we find a positive relation between the CSR measure and firm value. This finding holds for all measures of CSR and appears to suggest that CSR itself is value creating. However, in models estimated with firm fixed effects (models (iv)–(vi)), evidence of a direct relation between CSR and value disappears, suggesting that this finding is spurious and that controlling for unobservable firm characteristics is important in these specifications. In fact, the coefficient on CSR is negative in all specifications, although not statistically significant. Second, the interaction between advertising intensity and the CSR measure is significantly positive. Thus, firms benefit from CSR if they advertise. Comparing the coefficients on the CSR measure and the interaction indicates that the joint effect becomes positive for firms with advertising to sales above 0.91% (based on model (iv)), a criterion met by 28% of the sample firms.[11] The effect of advertising intensity on the CSR–value relation is also economically significant. For example, based on model (iv), for firms with zero advertising (the median of the distribution), increasing the CSR measure by one standard deviation (0.38) leads to a decrease in Tobin's q of 0.03. For firms with advertising expenditures to sales of 3.07% (one standard deviation above the median), the same increase in the CSR measure leads to an increase in Tobins's q of 0.06. The overall effect implies a difference in Tobins's q of 0.09, which is substantial given the mean Tobins's q ratio of 2.10.[12]

One concern with models that include firm fixed effects is that they may lack power to detect a relation. If most of the variability in the explanatory variables is cross-sectional, and there is little time-series variation, the inclusion of firm fixed effects essentially removes all the interesting variation that needs to be explained. Thus, if company CSR activities vary little over time, it may not be surprising that a firm fixed effects model shows no relation between CSR involvement and value. To address this concern, we first compute how much time-series variation there is in CSR involvement for the average firm. That is, for each firm, we compute the standard deviation of their CSR involvement over time, and we then average this measure across firms. The average of these standard deviations is 0.15 and the median is 0.14. This suggests that there is substantial time-series variability

[11] The coefficient on the CSR score is −0.07, and the coefficient on the interaction between the CSR score and advertising intensity is 7.70. The break-even value of advertising intensity is therefore computed as $0.07/7.70 = 0.91\%$.

[12] Because we employ a firm fixed effects model, the relative magnitude for each firm depends on the firm-specific mean Tobin's q, which ranges from 0.81 to 8.79.

in CSR involvement. The relevant basis for comparison is the cross-sectional variability in CSR involvement, which, when computed on an annual basis, ranges from 0.30 in 2003 to 0.47 in 1993. Obviously, it is higher than the average time-series estimate (i.e., there is more variability in CSR involvement across firms than for a given firm over time), but the relative magnitude suggests that there should be enough power left in the fixed effects model to pick up a relation if it exists. In addition, we find significant explanatory power in the fixed effects models with interactions as discussed above, indicating that fixed effects models have sufficient power to uncover a relation if one exists.

In sum, the findings in this section support our argument that CSR involvement benefits firms with more customer awareness, as proxied by advertising spending. For firms with low advertising intensity, the impact of CSR on value is either insignificant or negative.

4.3. Why Does Advertising Intensity Matter?

Our evidence so far is consistent with our interpretation that advertising creates awareness among buyers about the company and its CSR activities. However, it could also be consistent with the view that CSR activities are employed as a signal of product quality in advertising intensive industries (see Fisman et al. 2008). In this section, we conduct two tests to distinguish between these two explanations.

First, we include industry-median advertising expenditures (industry is defined at the four-digit Standard Industrial Classification (SIC) code level) as well as firm advertising expenditures and their interactions with CSR in our basic regression. Fisman et al. (2008) employed the advertising intensity of an industry as a measure of the ability to signal. Our argument, on the other hand, relies on firm-level advertising as a proxy for customer awareness about the firm. The findings are reported in model (i) of Table 3. The coefficient on the interaction between CSR activities and firm-level advertising expenditures is positive and significant, but that is not the case for the interaction between CSR and industry-level advertising. When we include only the industry-advertising–CSR interaction (unreported in the table), we do find it to be significant, but that can be explained by the omission of the firm-advertising–CSR interaction. Thus, this evidence does not support the product quality signalling story; rather it is consistent with the awareness argument.

Second, we study whether the effect of CSR activities is stronger in more competitive industries. According to the product quality signalling argument, there is more need for signalling when there is more competition. To test this prediction, we compute the sales-based Herfindahl index for *all* firms on Compustat at the four-digit SIC code level, and interact it with the CSR measure in our value regressions. We report the results of this model in column (ii) of Table 3. Although we continue to find that advertising intensity interacts positively with the CSR measure, we do not find that industry concentration affects the benefits of CSR. This evidence does not support the product quality signalling hypothesis.[13]

Table 3 **Testing Explanations for the Impact of Advertising on the Benefits of CSR**

	(i) Controlling for industry advertising intensity	(ii) Controlling for competition
Intercept	6.40 (0.00)***	6.45 (0.00)***
Log *assets*	−0.50 (0.00)***	−0.50 (0.00)***
Advertising intensity	−0.53 (0.80)	−1.33 (0.42)
Industry advertising intensity	−1.87 (0.37)	
Herfindahl index		−0.41 (0.14)
R&D intensity	−0.64 (0.23)	−0.65 (0.22)
CSR	−0.08 (0.13)	−0.03 (0.76)
CSR ∗ *Advertising intensity*	5.81 (0.04)**	7.66 (0.00)***
CSR ∗ *Industry advertising intensity*	3.96 (0.11)	
CSR ∗ *Herfindahl index*		−0.20 (0.44)
Year dummies	Yes	Yes
Firm fixed effects	Yes	Yes
Adjusted R^2	0.74	0.74
N	10,712	10,712

Notes. Model (i) includes median industry advertising to sales and its interaction with the CSR measure, where industry is defined at the four-digit SIC code level. Model (ii) includes the sales-based Herfindahl index and its interaction with the CSR measure. The CSR measure employed in this table is the conservative measure, which includes five KLD categories (community, diversity, employees, environment, and human rights). The models are estimated using OLS. The standard errors have been adjusted for heteroscedasticity and for the lack of independence of observations for the same firm (clustered standard errors). The *p*-values are reported in parentheses.

*** and ** indicate significance of the coefficient at the 1% and 5% levels, respectively.

Overall, the evidence in this section suggests that advertising expenditures enhance the impact of CSR activities on the value of the firm because advertising creates awareness about the company and its activities, which creates more "goodwill" on the part of customers. There is no evidence to suggest that CSR is employed to signal product quality. We do recognize, however, that the product quality signalling argument may hold for a subset of firms; if that is the case, the effect is not strong enough to be detected by our tests.

4.4. Robustness Tests

This section contains the results of a number of additional tests conducted to determine whether our findings are robust.

[13] For sake of brevity, we only employ the conservative measure of CSR in the models reported in Table 3 and in subsequent tests, unless otherwise noted. All our findings go through if we employ the broader measures (including industry and product) instead.

4.4.1. Dependent Variable. In addition to firm value, prior research has also examined the relation between profitability and CSR activities. Although profitability is measured over a short period of time, which implies that there is no one-to-one correspondence between profitability and value, it would be reassuring if our results on profitability were similar in nature.

We compute three profitability measures: return on assets, return on sales, and return on equity. Return on assets and return on sales are computed by dividing operating income by assets and sales, respectively, and return on equity is computed by dividing net income by shareholder's equity. As before, we include firm fixed effects and year dummies in all models. The results of this analysis are presented in models (i)–(iii) of panel A of Table 4. The interaction between the CSR measure and advertising intensity is positive and significant in all three cases, whereas the raw CSR measure is either negative or insignificant.

Next, we study whether the interaction between CSR and advertising intensity also affects sales growth and find that this is the case (model (iv) of panel A of Table 4). Moreover, sales growth is negatively related to CSR for firms with zero advertising intensity. These findings are consistent with the view that customers are more likely to purchase products of companies that engage in CSR, assuming that they are aware of it, thereby leading to increased sales growth.

Finally, we specifically study the relation between markups and the CSR–advertising interaction. If the increased valuation and profitability we document are due to the ability to charge a higher price for a product, it should show up in markups. We compute the markup as the ratio of sales to cost of goods sold minus one. The results, reported in model (v) of panel A of Table 4, indicate that the CSR–advertising interaction has a positive and significant impact on markups.

4.4.2. CSR Measures. First, we examine whether our results are robust to the definition of CSR as discussed in §2.1. We subdivide the CSR measure into two components. The first component, which we call third-party CSR, is mainly focused on parties other than direct stakeholders and includes environment, human rights, and community. The second component, which we call stakeholder CSR, is more internally focused and includes diversity and employees. In model (i) of panel B of Table 4, we show that the interaction between advertising intensity and both components of CSR is significantly related to firm value. The effect is larger for stakeholder CSR, but we cannot reject equality of the two coefficients.[14]

Next, we split our measure of CSR up into CSR strengths and CSR concerns, and interact each of these elements with advertising intensity. According to our argument, both components, when interacted with advertising, should affect value because advertising raises awareness about all aspects of the firm, including CSR concerns. One could argue, however, that strengths matter more when capturing the CSR efforts made by firms than concerns; the latter are unlikely to be due to specific efforts of the firm in the CSR area, but rather the outcome of other decisions. For example, it is unlikely that a firm with a poor environmental record has made a concerted CSR effort to obtain such a record. The result of this analysis is reported in model (ii) of panel B of Table 4. The regression illustrates that the interactions of advertising with strengths and concerns have the same effect on firm value. The coefficient on the strength interaction is 8.56, and the coefficient on the concern interaction is −7.23. We cannot reject equality of the absolute values of both coefficients (p-value of 0.68).[15] This evidence provides further support for our argument that the increased awareness created by advertising applies to all aspects of CSR, including the concerns, and it is not consistent with the view that advertising is employed to provide information about product quality. In unreported tests, we have also interacted industry advertising with strengths and concerns; these interactions are never significant, suggesting that it is firm-specific advertising that matters for the CSR–value relation.

A final potential concern is that we do not allow for a sufficient time lag between CSR activities and our measurement of firm value. To address this problem, we reestimate our base case model but lag our CSR measure (and advertising intensity) by one year. The findings, reported in model (iii) of panel B of Table 4, are very similar to those in our base case: CSR activities have no impact on firm value unless the firm has high advertising intensity. When we include both lagged and contemporaneous advertising and their interactions with CSR, the interactions are both positive and significant (untabulated). We have also verified that our results continue to hold if we increase the lag by another year (untabulated).

4.4.3. Treatment of Missing Advertising Expenditures. In our regression models, we set advertising expenditures equal to zero when missing, consistent with the prior literature. In panel C of Table 4, we report the results of two alternative approaches to

[14] These results continue to hold when we move the community category from third-party CSR to stakeholder CSR.

[15] Note that when we compute the net measure of CSR, we subtract concerns from strengths. Thus, if both interactions have the same impact on value, we would expect the coefficient on the concerns interaction to be the negative of the coefficient on the strengths interaction.

determine whether our findings are robust. In the first approach, we remove all observations for which advertising expenditures are missing, and reestimate model (iv) of Table 2. These findings are reported in column (i) of panel C of Table 4. The results are very similar to those in column (iv) of Table 2: CSR activities are only positively valued by the market if firms are advertising intensive.

In the second robustness check, we set advertising expenditures equal to the industry mean if missing. Industry is defined at the four-digit SIC code level; if there are no observations at the four-digit level,

Table 4 Robustness Tests

Panel A. Different performance measures

	(i) Operating return on assets	(ii) Operating return on sales	(iii) Return on equity	(iv) Sales growth	(v) Markup
Intercept	0.324 (0.00)***	0.055 (0.11)	0.300 (0.00)***	−0.027 (0.08)*	0.525 (0.16)
Log *assets*	−0.021 (0.00)***	0.018 (0.00)***	−0.021 (0.02)**	0.009 (0.00)***	0.060 (0.21)
Advertising intensity	−0.160 (0.11)	−0.280 (0.04)**	0.002 (0.99)	−0.162 (0.01)***	4.009 (0.02)**
R&D intensity	−0.257 (0.00)***	−0.281 (0.01)***	−0.714 (0.00)***	0.010 (0.79)	1.354 (0.08)*
CSR	−0.005 (0.10)*	−0.002 (0.71)	−0.006 (0.46)	−0.026 (0.00)***	0.062 (0.17)
CSR ∗ Advertising intensity	0.189 (0.04)**	0.216 (0.02)**	0.643 (0.02)**	0.388 (0.01)***	2.643 (0.05)**
Year dummies	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	No	Yes
Adjusted R^2	0.76	0.85	0.52	0.03	0.89
N	10,712	10,712	10,712	7,717	10,712

Panel B. Different measures of CSR

	(i)	(ii)	(iii)
Intercept	6.37 (0.00)***	6.51 (0.00)***	5.68 (0.00)***
Log *assets*	−0.50 (0.00)***	−0.52 (0.00)***	−0.45 (0.00)***
Advertising intensity	−1.44 (0.38)	−1.59 (0.36)	
Lagged advertising intensity			−1.03 (0.58)
R&D intensity	−0.62 (0.24)	−0.64 (0.23)	−0.89 (0.25)
Third-party CSR	−0.05 (0.54)		
Stakeholder CSR	−0.08 (0.28)		
Third-party CSR ∗ Advertising intensity	4.20 (0.10)*		
Stakeholder CSR ∗ Advertising intensity	10.51 (0.00)***		
CSR strengths		−0.16 (0.16)	
CSR strengths ∗ Advertising intensity		8.56 (0.00)***	
CSR concerns		0.02 (0.74)	
CSR concerns ∗ Advertising intensity		−7.23 (0.01)***	
Lagged *CSR*			−0.05 (0.49)
Lagged *CSR* ∗ Lagged *advertising intensity*			7.72 (0.00)***
Year dummies	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Adjusted R^2	0.74	0.74	0.76
N	10,712	10,712	7,802

Panel C. Treatment of firms with missing advertising expenditures

	(i) Removed	(ii) Set to industry mean
Intercept	6.17 (0.00)***	6.30 (0.00)***
Log *assets*	−0.55 (0.00)***	−0.50 (0.00)***
Advertising intensity	0.85 (0.71)	0.14 (0.89)
R&D intensity	−1.98 (0.11)	−0.63 (0.23)
CSR	−0.10 (0.34)	−0.20 (0.00)***
CSR ∗ Advertising intensity	6.88 (0.00)***	7.73 (0.00)***
Year dummies	Yes	Yes
Firm fixed effects	Yes	Yes
Adjusted R^2	0.74	0.73
N	4,129	10,712

Table 4 (Continued)

Panel D. Additional control variables

	(i) Number of employees as control for size	(ii) Industry/year dummies	(iii) Strategy variables added
Intercept	3.15 (0.00)***	3.42 (0.00)***	8.87 (0.00)***
Log *assets*		−0.19 (0.00)***	−0.57 (0.00)***
Log *employees*	−0.29 (0.00)***		
Advertising intensity	−1.05 (0.55)	3.33 (0.00)***	−0.63 (0.74)
R&D intensity	−0.73 (0.21)	1.98 (0.00)***	0.59 (0.57)
CSR	−0.06 (0.26)	0.27 (0.00)***	−0.01 (0.90)
CSR ∗ *Advertising intensity*	7.06 (0.00)***	6.74 (0.03)**	7.30 (0.00)***
Capital expenditures/sales			0.68 (0.08)*
Capital intensity			−0.00 (0.34)
Selling intensity			−3.74 (0.00)***
Efficiency (*lack of*)			−3.15 (0.00)***
Year dummies	Yes	No	Yes
Firm fixed effects	Yes	No	Yes
Industry/year dummies	No	Yes	No
Adjusted R^2	0.73	0.29	0.73
N	10,712	10,712	9,140

Notes. In panel A, we employ different measures of performance: (i) operating return on assets, computed as operating income divided by assets; (ii) operating return on sales, computed as operating income divided by sales; (iii) return on equity, computed as net income divided by shareholders' equity; (iv) sales growth, computed as $(\text{sales}_t/\text{sales}_{t-1}) - 1$; and (v) markup, computed as (sales − cost of goods sold)/cost of goods sold. In panel B, we employ different measures of CSR: CSR subdivided into third-party CSR (community, environment and human rights) and stakeholder CSR (diversity and employees) (model (i)); CSR strengths and concerns (model (ii)); and lagged CSR (model (iii)). In panel C, we use different approaches to deal with missing advertising expenditures: removal of the firm (model (i)); and setting advertising equal to the industry average (model (ii)). In panel D, we add various control variables: number of employees to control for size (model (i)); dummies for each industry/year combination (model (ii)); strategy variables (capital expenditures/sales; capital intensity, computed as total assets/number of employees; selling intensity, computed as general, selling, and administrative expenses/sales; and efficiency (the lack of), computed as cost of goods sold/sales) (model (iii)). The CSR measure employed is the conservative CSR measure based on five KLD categories (community, diversity, employees, environment, and human rights). The *p*-values are reported in parentheses.

***, **, and * indicate significance of the coefficient at the 1%, 5%, and 10% levels, respectively.

we compute the industry average at the three-digit level or two-digit level. These findings are reported in column (ii) of panel C of Table 4. Our findings on the interaction of CSR and advertising continue to persist; furthermore, in these specifications, the impact of CSR on value for firms with zero advertising expenditures is significantly negative. These findings indicate that our results do not depend on the exact treatment of missing advertising expenditures.

4.4.4. Control Variables. The last set of robustness checks relates to our choice of control variables.

First, given that book value of assets is employed in the construction of Tobin's q, it is possible that its inclusion as an explanatory variable in our regression models yields a mechanical relation between size and value, which may also affect other inferences. In model (i) of panel D of Table 4, we replace the log of assets by the log of employees as a size control. Our findings are not affected.

Second, we remove the firm fixed effects and replace those by annual industry dummies, using the 48 Fama–French industries, to make sure that our results are not caused by time-varying industry effects (634 dummies in total). The impact of the CSR–advertising interaction on value remains positive and significant (model (ii) of panel D). Note that in this specification, the coefficient on the level of CSR is also positive and significant. Given that this positive relation disappears in models with firm fixed effects, this result again confirms that controlling for unobservable firm-specific heterogeneity is important.

Third, we verify that our results are not caused by time-varying omitted variables (as opposed to time-invariant omitted variables that are captured by firm fixed effects models). In model (iii) of panel D of Table 4, we include the four strategy measures proposed by Berman et al. (1999): (i) selling intensity, computed as general, selling, and administrative expenses divided by sales; (ii) capital expenditures divided by sales; (iii) efficiency (the lack of), computed as cost of goods sold divided by sales; and (iv) capital intensity, computed as total assets, divided by the number of employees. We have a smaller number of observations in these models because the data items required to construct these variables are not available on Compustat for all the firms in our sample.

There is a positive relation between capital spending and firm value, but this may be because more valuable firms have better investment opportunities. There is a negative relation between selling intensity and firm value, probably because firms with more general, selling, and administrative expenses are simply less capable. Finally, less efficient firms are valued less. What matters most for the purpose of this paper is that our findings remain unaltered: there is no association between CSR involvement and firm value unless the firm has high advertising intensity.[16]

Fourth, motivated by Kacperczyk's (2009) evidence that CSR activities of firms that enjoy greater takeover protection enhance firm value, we study whether our findings continue to hold after controlling for increases in takeover protection. According to Kacperczyk (2009), Delaware firms with a staggered board enjoyed increased takeover protection after 1996. We include the same measure in our models and also interact it with CSR. The inclusion of these variables does not affect the significance of the CSR-advertising interaction (not reported in the table).

Finally, we study whether the impact of advertising on the CSR–value relation is stronger for consumer-oriented companies, but we do not find this to be the case (not reported in the table). However, given that consumer-oriented firms spend more on advertising (2.49% of sales compared with 0.57% for nonconsumer oriented firms), more consumer-oriented companies are in the range where CSR adds to the value of the firm (50% of consumer oriented firms versus 14% of nonconsumer oriented firms).[17]

4.5. The Impact of the Firm's Reputation

In this section, we test whether the impact of awareness/advertising on the CSR–value relation depends on the firm's prior reputation. Schuler and Cording (2006) and Du et al. (2010) make the point that the image projected through CSR must be aligned with the firm's reputation. If this is not the case, customers may not respond to the CSR effort, even if they know about it. To investigate this conjecture, we study whether the relation between firm value and the CSR-advertising interaction depends on the firm's prior reputation.

To proxy for reputation, we employ *Fortune's* ranking of "America's Most Admired Companies." Every year, *Fortune* magazine ranks companies along various criteria ranging from people management to the quality of management, based on surveys of managers, directors, and analysts in various industries. The number of firms ranges from 300 to about 600. Firms are ranked and they also receive a score. We gather these data for our sample period and merge it with the firms in our main sample.[18] The resulting data set contains 3,436 observations. As discussed by Brown and Perry (1994) and Roberts and Dowling (2002), *Fortune's* reputation scores are related to firm financial performance, and it is important to remove this financial halo effect. To do this, we follow Brown and Perry (1994) and estimate a model of reputation scores as a function of operating return on assets (contemporaneous and lagged one period), industry-adjusted market to book (contemporaneous and lagged one period), sales growth, and leverage.[19] We employ the residual from this model as the clean admired score.[20]

To determine whether the CSR/advertising–value relation is stronger for more admired companies, we create a triple interaction term of the CSR measure, advertising intensity, and the residual admired score and reestimate our base case regression model. For completeness, we also include the residual admired score itself, and the interaction between advertising intensity and the residual admired score.

As pointed out by Jaccard and Turrisi (2003), among others, interpreting triple interactions is very difficult when the interacted variables themselves can only have positive or negative values.[21] Fortunately, in our

[16] In unreported models, we have also included interaction effects between these strategy variables and CSR involvement. Two of these interactions are significant: CSR activities have a more negative impact on firm value for less efficient firms and for firms with higher capital intensity. Inclusion of these variables does not affect our main findings.

[17] In unreported models, we also verify that our results hold for various subsamples; our findings hold for small and large firms, for the first and second half of the sample period, and for firms that are in the S&P 500 Index as well as firms that are not. The coefficient on the CSR–advertising interaction is larger for smaller firms, consistent with the notion that advertising increases awareness more for small firms. However, the difference between large and small firms is not statistically significant. We also study whether the impact of information intensity on the CSR–value relation is nonlinear, or whether CSR itself enters the model nonlinearly (see also Brammer and Millington 2008), but we do not find this to be the case. Finally, we examine whether the effect of the CSR–advertising interaction on value differs across the 48 Fama–French industries, but we find no evidence that this is the case.

[18] The overall score is a combination of scores on eight components, one of which is social responsibility. Unfortunately, the scores on the individual components are no longer available for our sample, but prior research has shown that the scores on the individual components are highly correlated (see Brown and Perry 1994).

[19] We only include one lag of profitability and market-to-book as further lags are insignificant. We include no lags of growth and leverage because these are not statistically significant. Using further lags or no lags, as well as using just a subset of these variables, does not affect our findings.

[20] The number of observations employed in this analysis is less than the 3,436 discussed earlier because all the explanatory variables are not available for all firms in the sample, especially at the start of the sample period.

[21] If this is the case, determining the independent effect of a variable becomes challenging because one has to take into account all

Table 5 The Impact of Prior Reputation on the Relation Between Firm Value and the CSR–Advertising Interaction

	CSR measure	
	(i) Conservative	(ii) Including product and industry
Intercept	6.93 (0.00)***	6.84 (0.00)***
Log *assets*	−0.52 (0.00)***	−0.51 (0.00)***
Advertising intensity	1.28 (0.64)	2.16 (0.49)
R&D intensity	−5.33 (0.13)	−5.22 (0.13)
CSR	−0.02 (0.82)	0.02 (0.70)
CSR ∗ *Advertising intensity*	6.45 (0.03)**	3.41 (0.10)*
Residual admired score	0.06 (0.13)	0.05 (0.28)
Residual admired score ∗ *Advertising intensity*	1.05 (0.38)	1.58 (0.24)
CSR ∗ *Residual admired score*	−0.12 (0.14)	−0.09 (0.18)
CSR ∗ *Advertising intensity* ∗ *Residual admired score*	5.33 (0.03)**	2.83 (0.09)*
Year dummies	Yes	Yes
Firm fixed effects	Yes	Yes
Adjusted R^2	0.72	0.72
N	2,993	2,993

Notes. Admired score is the score received by the firm on the list of "America's Most Admired Companies" published by *Fortune* magazine. Residual admired score is the residual of a regression of the admired score on profitability (and its lag), growth, leverage, and the industry-adjusted market-to-book ratio (and its lag). The conservative CSR measure is based on five KLD categories (community, diversity, employees, environment, and human rights). The *p*-values are in parentheses.

***, **, and * indicate significance of the coefficient at the 1%, 5%, and 10% levels, respectively.

setting, that is not the case. Both the CSR measure and advertising expenditures can be zero, whereas the residual admired score is centered around zero as it is computed as a regression residual.

The findings are reported in Table 5. In column (i), we employ the conservative measure of CSR, and in column (ii), we employ the broad measure. The results are striking. The positive coefficient on the interaction between advertising and CSR persists. This suggests that for a firm with an average residual admired score of zero, our basic findings go through. The triple interaction term between advertising, CSR, and the residual admired score is positive and significant, with a coefficient of 5.33 in column (i) (*p*-value of 0.03), and a coefficient of 2.83 in column (ii) (*p*-value of 0.09). These figures indicate that advertising's impact on the CSR–value relation is stronger for more admired companies, weakens for less admired companies, and turns negative for the least admired companies.[22] In other words, there has to be consistency between the firm's CSR efforts and its prior reputation if advertising is to enhance the value of CSR efforts. The level of the residual admired score for which the overall impact turns negative is −1.21 in model (i), computed as the negative of 6.45 (the coefficient on the interaction of CSR and advertising) divided by 5.33 (the coefficient on the triple interaction); in model (ii) the level where it turns negative is −1.20. Approximately 10% of all firms fall into this category. The residual admired score itself is not significant, nor is the interaction between the residual admired score and advertising or CSR.

Overall, these results indicate that for advertising to be effective in enhancing the value of CSR efforts, consistency is required between these efforts and the firm's general corporate reputation. This supports the predictions of Schuler and Cording (2006) and Du et al. (2010).

5. Discussion and Conclusion

This paper makes four points. First, CSR activities can enhance firm value for firms with high public awareness, as proxied by advertising intensity. However, firms with high public awareness are also penalized more when there are CSR concerns. Second, for firms with low public awareness, the impact of CSR activities on firm value is either insignificant or negative. Third, advertising has a negative impact on the CSR–value relation if there is an inconsistency between the firm's CSR efforts and the company's overall reputation. Fourth, after including firm fixed effects there is no *direct* relation between CSR and firm value.

Our finding of an interaction between advertising intensity and CSR activities is consistent with theoretical work suggesting that without awareness customers are unable to reward CSR involvement (Sen and Bhattacharya 2001, McWilliams and Siegel 2001). It is also consistent with the view that CSR efforts have to be aligned with the firm's prior reputation to create value, as articulated by Schuler and Cording (2006).

If we assume that the customer channel is one of the main channels through which CSR affects firm value, then our results offer a number of managerial implications: If a firm engages in CSR, but does not operate in an advertising-intensive environment, its management should reconsider its CSR efforts, or search for opportunities to enhance the benefits of CSR by, for example, disseminating information about its CSR efforts. This implication is only relevant, of course, if the firm is concerned with maximizing shareholder wealth rather than other objectives (for example, engaging in CSR could be an objective in itself). It is entirely possible, however, that firms engage in CSR activities with the goal of enhancing shareholder wealth but find it difficult to assess whether these activities actually create value.

the interactions. Centering the explanatory variables around zero overcomes this problem.

[22] We have also verified that high awareness does not enhance value for firms with poor prior reputations and CSR concerns by estimating separate effects for CSR strengths and concerns.

We believe that our evidence may help them in making this assessment.

Our evidence also suggests that firms engaging in and publicizing CSR activities can only add value if these activities and firm reputation are aligned. Hence, firms with poor reputations are unlikely to reap any immediate benefits (in terms of shareholder value creation) from engaging in CSR. In fact, such activities may appear disingenuous and may well have the opposite effect. In the long run, the engagement in and dissemination of such activities could create value if they change the customers' perceptions of the firm.

Our findings are also relevant for institutional investors deciding on whether or not to support CSR initiatives. For example, ISS (Institutional Shareholder Services) provides investors with explicit guidelines on how to vote on proxy proposals, including those relating to CSR activities (see ISS 2011). Our evidence can be employed to inform these guidelines by taking into account the firm's public awareness.

Finally, our study also confirms the view that to fully understand under which circumstances CSR activities enhance firm value, we need to focus on the moderating effects of other variables on the CSR–firm value relation.

Our findings add to the recent literature on CSR, which focuses on better identifying the mechanisms through which CSR can add value to the firm. One tenet of this literature is that evidence of a direct relation between CSR and firm value appears to be spurious. Another is that whereas direct relations do not survive some specifications, the indirect ones appear to be more robust. For example, Surroca et al. (2010) find that evidence of a direct relation between financial performance and CSR disappears after controlling for the firm's intangible resources; only an indirect relation emerges through the effect of CSR on the firm's intangibles. Hull and Rothenberg (2008) find that the impact of CSR on performance is stronger in low-innovation firms and in industries with little differentiation. They still find a weak positive direct relation between CSR and performance as well, but they do not control for firm fixed effects in their specifications.

Our work suggests several avenues for future research. The link between CSR activities and performance through the customer channel is only one way in which CSR may affect firm value. We believe that focusing on other channels would be a fruitful area for future theoretical and empirical research. The employee channel, in particular, seems to deserve further exploration. For example, to what extent can CSR activities enhance employee productivity and reduce absenteeism, thereby enhancing firm value? In which types of organizations is this particularly relevant? Is there a link between the customer and the employee channel? This research will also help in validating the managerial implications we propose.

Our evidence that awareness about the firm is crucial for CSR to add value also suggests that exploring channels available for dissemination of CSR activities could be an interesting area of research. In our current work, awareness is just a by-product of firm advertising. However, firms with positive CSR involvement may wish to actively communicate this information.[23] This conjecture leads to several areas for further research. For example, which communication channels are more credible and effective? Are mechanisms employed mainly to disseminate information to shareholders, such as investor relations departments and annual reports, also useful in providing information about CSR? Given these channels, are separate CSR reports, which have become more prominent recently, incrementally useful?

A final unexplored avenue is the link between corporate governance and CSR. Our evidence suggests that firms that are not advertising intensive should either stay away from CSR or find another way of increasing information about their CSR activities. Why would some firms persist with CSR activities without publicizing them, thereby incurring the costs of CSR without realizing the benefits? One possibility is that such firms have poor corporate governance and, as a result, executives are not focused on maximizing the wealth of shareholders. By focusing on other stakeholders such as the community or employees, these managers may in fact try to entrench themselves, as suggested by Jensen (2001). This leads to a large number of interesting questions. For example, do firms for which the impact of CSR on value is negative have poor corporate governance? What happens to the CSR activities of these firms after changes in governance? Are managers of firms with high levels of CSR more entrenched (see, for example, Cheng et al. 2012)? Studying these questions and, more broadly, the link between agency problems and CSR, would be a fertile area for further work on the topic.

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[23] See Du et al. (2010) for further research directions on the substance of CSR communication.

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