



# Does winning a CSR Award increase firm value?

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## Abstract

This study explores the effect of winning a corporate social responsibility (CSR) Award on firm value. Drawing on the stakeholder value maximization view of stakeholder theory, we analyze a sample of 14,039 US firm-years between 2002 and 2018 and find that winning a CSR Award is value enhancing. We further offer evidence that demonstrates how the CSR dimensions of environmental, social and governance criteria influence the CSR Award–firm value nexus. Our results are supported by a series of robustness tests. As CSR Awards are typically awarded to firms that excel in CSR, our findings are expected to encourage managers to pursue CSR more rigorously so as to attain high firm value.

**Keywords** CSR Award · Tobin's Q · ESG

## Introduction

Corporate social responsibility (CSR) has come a long way for corporations over recent decades since the phrase was first coined by Bowen (1953).<sup>1</sup> From ad hoc or random acts of kindness to further social good during the early days, CSR is now a central theme and an inescapable priority for corporations (Zolotoy et al. 2019; Lu et al. 2014). Indeed, many leading firms look to CSR as an opportunity to strengthen their business and as an essential mechanism for their success (Valet 2019; Keys et al. 2009). Accordingly, academic and managerial interest in CSR has been driven by the motivation to examine the notion of “doing well by doing good”. In other words, there is a need to determine whether CSR, by positively shaping stakeholder perceptions and support for the firm, enhances financial performance or firm value (Deng et al. 2013; Goss and Roberts 2011; Margolis et al. 2009; Hillman and Keim 2001; Waddock and Graves 1997). However, existing empirical evidence on the effect of CSR on firm value or financial performance seems inconclusive

(Awaysheh et al. 2020; Shi and Veenstra 2020; Mishra 2017; Servaes and Tamayo 2013, 2017; Kruger 2015; Margolis and Walsh 2003), although meta-analysis studies such as the one by Friede et al. (2015) and Margolis et al. (2009) conclude that prior empirical results point to a positive association between the two constructs. Against this backdrop, we focus on CSR Awards to shed light on this debate and ask the following question: is there a significant link between receiving a CSR Award and financial performance or, ultimately, firm value?

We focus on CSR Awards for two reasons. First, if it is true that CSR leads to better financial performance or higher firm value, then winning a CSR Award should result in an increase in firm value. This is because CSR Awards are usually organized by prestigious media outlets and conferred to firms in recognition of their outstanding, innovative and world-class CSR practices.<sup>2</sup> The websites of many media outlets provide comprehensive lists of the corporate recipients of various CSR Awards.<sup>3</sup> Arguably, then, these CSR Award winning firms are leading best practices in CSR. Moreover, anecdotal evidence on this topic suggests

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<sup>1</sup> Similar to Lu et al. (2014), Fatemi et al. (2018) and Fassin and van Rossem (2009), we use the terms CSR, corporate social performance (CSP) and environmental, social, and governance (ESG) interchangeably in this paper. These terms are widely used in both the literature and corporate practice.

<sup>2</sup> See for example: <https://sealawards.com/> and <https://www.prdaily.com/awards/corporate-social-responsibility-awards/>.

<sup>3</sup> See, for example, <https://www.worldbizmag.com/awards.html> and <https://awards-list.com/international-business-awards/corporate-social-responsibility-csr-awards/>.



that firms that win CSR Awards financially outperform other firms.<sup>4</sup> Given the mixed evidence on the relationship between CSR performance and firm value, we argue that it is worthwhile to examine whether CSR Awards lead to higher market value. Although awards are only given to firms that have demonstrated strong CSR performance, shareholders or the market might not be aware of the firm's outstanding CSR performance and that through the CSR Award this becomes known to the market and firm value is adjusted upwards. CSR Awards also reinforce the firm's reputation positively, which means winning a CSR Award in a particular year can attract a positive attention from the market. That is, a CSR Award can play a role of signaling on what the awardee has accomplished in terms of CSR engagement, and hence, the events of CSR Awards can be understood as a means to enhance firm reputation. Shareholders who understand how excellence in CSR is linked to support from other stakeholders and results in improved financial performance, would also attest greater acceptance of a firm's CSR excellence when it is recognized externally by third parties such as media outlets in the form of CSR Awards. Following this line of thinking, firm value should increase in CSR Award-winning firms because of their excellence in CSR.

Awards are designed to motivate and honor firms that best exemplify the norms and beliefs upheld by the award givers (Frey and Gallus 2017). Our second reason for focusing on CSR Awards is that, despite the prevalence of research into CSR, empirical examinations of CSR Awards in its own right are negligible in the literature. This is an important omission given the importance of CSR for corporations and the credibility and favorable reputation that follows for CSR Award winning firms. Apart from one recent study that examined how winning CSR Awards incentivize non-winners to improve their CSR performance (Li et al. 2020), there is no other known study that directly examine the antecedents or outcomes of CSR Awards. Prior studies show that shareholders respond positively to news about corporate awards in general (Hawn et al. 2018; Klassen and McLaughlin 1996). In light of this, it is worth investigating whether winning CSR Awards increase firm value. By addressing this gap in the literature, we offer new insights on the outcomes of CSR Awards and the wider literature CSR literature.

Our paper begins by determining whether a firm enhances its value by winning a CSR Award. We then draw parallels with prior studies that have examined how firm performance has been affected by the individual dimensions of CSR or environmental, social and governance criteria (ESG), including their sub-dimensions (Hillman and Keim 2001). A number of meta-analyses and empirical studies have shown that,

as a result of their increased importance, there has been a scholarly shift toward exploring linkages between specific dimensions of CSR and firm performance (Xie et al. 2019; Lu et al. 2014; Margolis et al. 2009). Moreover, bodies that confer CSR Awards, such as media outlets, typically do so based on the scores achieved by a firm in relation to environmental (*ENV*), social (*SOC*) and governance (*GOV*) criteria; firms that achieve the highest scores are typically conferred a CSR Award.<sup>5</sup> Presumably, the influence of *ENV*, *SOC* and *GOV* scores on the relationship between firm value and CSR Award will be amplified when a firm's scores in these dimensions are high. We also seek to determine which of the scores, among the *ENV*, *SOC* and *GOV* criteria and their respective sub-dimensions, are the more important in engendering the effect of CSR Award on firm value. We therefore investigate firms with high and low *ENV*, *SOC* and *GOV* scores and determine how these scores influence firm value.

Based on a large sample of US firms between the periods 2002 and 2018, amounting to 14,039 firm-year observations, we find strong support for our hypothesis that winning a CSR Award is positively related to firm value. Next, we examine how *ENV*, *SOC* and *GOV* scores, and their respective subsection scores, influence the link between winning a CSR Award and firm value. Initially, we find that the relation between being conferred a CSR Award and firm value is slightly more pronounced in firms with high *ENV* scores. However, the results are mixed when we delve into the subsections of the environmental score. When we partition our sample into firms with high and low *SOC* scores, we find that the relationship between having a CSR Award and firm value becomes insignificant for both subsample groups. However, the results are again mixed when we examine how the sub-dimensions of social scores impact on the relationship between CSR Award conferment and firm value. We also find that the relationship between having a CSR Award and firm value has a slightly higher in significance in firms with low (*GOV*) scores, but the results vary among the sub-dimensions of governance scores. Our study makes the following contributions to the existing literature. First, our findings contribute to the ongoing research exploring the link between CSR and financial performance. Against the backdrop of prior studies that find that CSR leads to improved financial performance (see Servaes and Tamayo, 2017; Friede et al. 2015; Margolis et al. 2009 for excellent reviews), we hypothesize that firms that win a CSR Award will have a higher firm value because of their excellence in CSR. Hence, this study adds a new layer to this literature by being the first large-scale study to examine the impact of CSR Awards on firm value in the USA. We also draw parallels with other papers that demonstrate the importance

<sup>4</sup> 'The World's Most Ethical Companies' at <https://www.worldsmoethicalcompanies.com/>.

<sup>5</sup> <https://www.worldsmoethicalcompanies.com/>.



of sub-dimensions of CSR (Xie et al. 2019; Lu et al. 2014; Margolis et al. 2009), and we provide further evidence that reveals the influence of these various sub-dimensions on the CSR Award–firm value nexus. Second, CSR Awards have been largely overlooked in research on CSR, financial performance, and business management (Frey and Gallus 2017). By providing evidence of the influence of CSR Awards on firm value, our study complements recent empirical evidence on CSR Awards (Li et al. 2020) and makes a compelling case for further research in this area.

The remainder of this paper is organized as follows: The next section outlines the related literature and hypotheses, which is followed by an outline of the data and research design. We then discuss our results before concluding the paper with a note on its limitations and future research opportunities.

## Related literature and hypotheses

### CSR Award and firm value

An extensive body of literature suggests that CSR activities can positively influence firm value (Sarvaes and Tamayo 2013; Berman et al. 1999). How CSR Awards have an influence on firm value can be understood with the help of stakeholder theory (Freeman 1984). The stakeholder value maximization view in this theoretical framework holds that corporate engagement with CSR has a positive effect on shareholder wealth. That is, a firm's focus on the interests of other stakeholders via its CSR activities increases the latter's inclination to support the firm's operations, products and services, and this brings about a positive effect of CSR on shareholder wealth (Deng et al. 2013). The CSR activities of firms are said to engender the trust and cooperation of stakeholders, and ultimately, this can enhance profitability and firm valuation (Sarvaes and Tamayo 2017). A firm's financial policies and outcomes are influenced by its relationship with stakeholders and firms that focus more on CSR tend to have stronger support from stakeholders to contribute resources and efforts to the firm (Cornell and Shapiro 1987). The interests of stakeholders and shareholders in firms that perform better in CSR are greater aligned, and stakeholders are more likely to contribute to the firm's profitability (Freeman et al. 2004; Jensen 2001).

The stakeholder value maximization view regards CSR as being much more than a cost, a constraint, or philanthropic deed. Rather, CSR can be a source of opportunity, innovation and competitive advantage that brings about positive shareholder wealth (Porter and Kramer 2006). Winning an award is typically a testament of one's excellence in a specific field related to the award title (McKinsey and Co 2009; English 2005), and award-winning firms are clearly

distinguished from other firms (Frey and Gallus, 2017). Wining CSR Awards implies that the third parties such as media outlets acknowledge that the firm's activities are valuable to the society. CSR awards have the potential to signal to the market on what the awardee has accomplished in terms of CSR engagement and boosts the firm's reputation considerably. Shareholders understand how excellence in CSR is linked to support from stakeholders, which positively contributes toward the firm's financial performance. As such, shareholders assign higher value to a firm that wins a CSR Award and winning a CSR Award is an important indicator of firm value.

An alternative view to that of stakeholder value maximization is the shareholder expense view, which regards CSR activities as a costly or wasteful effort (Servaes and Tamayo 2013; Griffin and Mahon 1997; Friedman 1970). Proponents of this view argue that CSR activities can reduce profitability and ultimately destroy firm value (Buchanan et al. 2018; Deng et al. 2013). If CSR is indeed a wasteful effort, we would expect to observe no relationship between having a CSR Award and firm value.

Additionally, the growing trend today for firms to incorporate CSR as part of an integrated strategy to build positive bridges with society has brought about a new era of competition into the corporate world wherein the acquisition of CSR Awards is highly desirable.<sup>6</sup> CSR is seen as being able to generate a sustainable competitive advantage that allows firms to improve their financial performance that is valued by the financial markets and which also benefits shareholders (Awaysheh et al. 2020). It has been argued that firms have a competitive advantage when implementing a value-creating strategy that its current or potential competitors are unable to duplicate or unable to enjoy its benefits (Barney, 1991). Winning a CSR Award is a feat that is not easily imitable by other firms. Taken together, these lines of arguments suggest that winning a CSR Award would be associated with an increase in firm value. Hence, we propose and test our first hypothesis as follows:

**H1** Winning a CSR Award is positively associated with firm value.

### The influence of environmental, social and governance performance on the CSR Award–firm value link

The next question we examine is this: do any of the three ESG elements—environmental, social and governance criteria—or their respective sub-elements have a more dominant

<sup>6</sup> 'CSR Awards: The new competition' at <https://sustainability-academy.org/csr-awards-the-new-competition/>.



influence on the relationship between CSR Award conferment and firm value? Is it important to score highly in certain criteria over others? As mentioned earlier, the environmental, social and governance scores that a firm obtains are important criteria for bodies that confer CSR Awards. In relation to our main argument that CSR Awards increase firm value, we might expect to observe the importance of high scores in each of these dimensions, or their sub-dimensions, in engendering the effect of CSR Award conferment on firm value. However, prior studies appear to show that, of the ESG criteria, some individual sub-elements are more important than others (Xie et al. 2019; Lu et al. 2014; Margolis et al. 2009). Firms are also known to focus on certain elements of CSR over others and studies that focus on the different elements of CSR reach different conclusions on the implications of CSR on firm performance (Xie et al. 2019; Lu et al. 2014). For example, Margolis et al. (2009) find that certain elements of CSR seem to render better financial outcomes than others (Margolis et al. 2009). Meanwhile, Hillman and Keim (2001) find that, within CSR, stakeholder management leads to improved shareholder value, while social issue participation leads to reduced shareholder value. Another study finds that employee relations (a sub-dimension of social scores) and environmental issues are the key drivers of firm value (Jiao 2010). Qiu et al. (2016) argue that environmental issues do not have any implications for firm performance—rather, it is the social issues that matter most to investors. The meta-study by Friede et al. (2015) finds that environmental and governance elements have more important implications for firm performance compared to the social element. Given this ongoing debate, we propose the following null hypotheses:

**H2a:** The effect of winning a CSR Award on firm value is not more pronounced in firms with high or low environmental scores.

**H2b:** The effect of winning a CSR Award on firm value is not more pronounced in firms with high or low social scores.

**H2c:** The effect of winning a CSR Award on firm value is not more pronounced in firms with high or low governance scores.

## Data and research design

### CSR Award

*CSR AWARD* is the primary explanatory variable of interest in this study. *CSR AWARD* is obtained from Thomson Reuters' Asset4 and is a dummy variable that is denoted as '1' if a firm received a CSR AWARD, and '0' otherwise. The

Thomson Reuters' Asset4 database is one of the world's largest database and a leading provider of ESG information. CSR data from Asset4 have been widely used by many studies, such as Shi and Veenstra (2020), El Ghouli et al. (2017), Qiu et al. (2016) and Eccles et al. (2014).

### Environmental, social and governance scores

The environmental, social and governance scores of Thomson Reuters' Asset4 are based on objective, relevant and timely measures of 178 key indicators and more than 750 data points (Shi and Veenstra 2020). Thomson Reuters' Asset4 annually constructs its ESG scores by gathering information from multiple sources (e.g., annual reports, websites, CSR reports, news). Asset4 provides an equally weighted overall ESG score as well as scores for the individual dimensions of environmental, social and governance criteria and their respective sub-dimensions. The scores for the overall metrics, the individual dimensions and their sub-dimensions are all standardized and normalized to position the score between 0 and 100%.

The environmental score (*ENV*) measures a firm's impact on living and non-living natural systems such as the air, land and water and on complete ecosystems as well. *ENV* reflects how well a firm uses best management practices to avoid environmental risks and capitalizes on environmental opportunities in order to generate long-term shareholder value. The aggregate *ENV* score is based on 90 indicators, and its sub-dimensions are emissions (22 indicators), resource use (20 indicators) and environmental innovation (19 indicators). The score for the sub-dimension of emissions (*EM*) measures a firm's commitment and effectiveness toward reducing emissions in its production and operational processes. The second sub-dimension score, resource use (*RU*), measures a firm's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving its supply chain management. The score for environmental innovation (*EI*) reflects a firm's capacity to lessen the environmental costs and burdens for its customers and thus create new market opportunities through new environmental technologies and processes or eco-designed products.

The aggregate social score (*SOC*) quantifies a firm's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It is a display of the firm's reputation and the health of its license to operate, which are key factors in determining its ability to generate long-term shareholder value. *SOC* is based on a total of 63 indicators and its sub-dimensions are workforce (29 indicators), human rights (8 indicators), community (14 indicators) and product responsibility (12 indicators). The score for human rights (*HR*) computes a firm's effectiveness toward respecting the



fundamental human rights conventions. The score for workforce rights (*WF*) measures a firm's effectiveness toward providing job satisfaction, a healthy and safe workplace, maintaining diversity and equal opportunities, and offering development opportunities for its workforce. Product responsibility score (*PR*) is indicative of a firm's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy. Community score is a computation of the firm's commitment toward being a good citizen, protecting public health and respecting business ethics. This sub-dimension is excluded from our analyses as this score includes CSR Award as one of its indicators.

Governance score (*GOV*) quantifies a firm's systems and processes, which ensure that its board of directors and managers act in the best interests of its long-term shareholders. It shows a firm's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances in order to generate long-term shareholder value. The *GOV* dimension is made up of a total of 54 indicators comprising the sub-dimensions of management (34 indicators), shareholders (12 indicators) and CSR strategy (8 indicators). The score for the sub-dimension of management (*MG*) calculates a firm's commitment and effectiveness toward observing best practice corporate governance principles. The second sub-dimension score, shareholders (*SC*), indicates a firm's effectiveness toward equal treatment of shareholders and the use of anti-takeover devices. The score for the sub-dimension of CSR strategy (*STRAT*) measures a firm's practices to communicate that it integrates the economic (financial), social and environmental dimensions into its day-to-day decision-making processes.

In our analysis, *ENV*, *SOC*, *GOV* and their respective sub-dimension scores are partitioned into 'high' and 'low' sub-samples. Firms with scores above the median for each year are classified as 'high', and conversely, firms with scores below the median are classified as 'low'.

## Firm value

We measure firm value using *TOBIN's Q*, which is defined as the market value of equity plus total assets minus the book value of equity, all divided by total assets. This measure is widely used in the accounting, finance and business literature to proxy firm for firm valuation (Buchanan et al. 2018; Servaes and Tamayo 2013; Waddock and Graves 1997). In the interests of ensuring robust results, we also measure firm value as the industry-adjusted *TOBIN's Q* (denoted as *IND-ADJ TOBIN's Q*), which is obtained by

subtracting the median industry *TOBIN's Q* of each industry from the *TOBIN's Q* of each firm in the corresponding industry category.

## Control variables

We control for a number of variables in our models, many of which are commonly used in research on firm performance, CSR, environmental, social and governance (Zolotoy et al. 2019; Buchanan et al. 2018; Mishra, 2017; El Ghouli et al. 2017). Firm size is proxied by the natural logarithm of total assets (*LNTA*). Return on assets (*ROA*) is a measure of profitability and is computed as net income before extraordinary items divided by total assets. Capital expenditure (*CAPEX*) is computed as the ratio of a firm's capital expenditure to total assets. *LEVERAGE* is defined as total debt divided by total assets. We define cash holdings (*CASH*) as a firm's cash and short-term investments to total assets and fixed assets (*PPETA*) as net property, plant, and equipment to total assets. *SALES GROWTH* is set as current year sales divided by sales in the previous year minus one, and *R&D* is set as R&D expense divided by total assets at the beginning of the year. Advertising intensity (*ADV INTENSITY*) is measured as advertising expense dividend by net sales.

## Empirical method

In order to estimate the impact of *CSR AWARD* on firm value, we specify the following empirical model:

$$\begin{aligned}
 TOBIN'SQ_{i,t} = & \alpha + \beta_1 CSRAWARD_{i,t-1} \\
 & + \beta_2 SIZE_{i,t} + \beta_3 SALES GROWTH_{i,t-1} \\
 & + \beta_4 CAPEX_{i,t-1} + \beta_5 PPE_{i,t-1} \\
 & + \beta_6 CASH_{i,t-1} + \beta_7 LEVERAGE_{i,t-1} \quad (1) \\
 & + \beta_8 R\&D_{i,t-1} \\
 & + \beta_9 ROA_{i,t-1} \beta_{10} ADVINTENSITY_{i,t-1} \\
 & + INDUSTRY_i + YEAR_t + \epsilon_{i,t}
 \end{aligned}$$

Equation (1) is estimated based on the pooled ordinary least squares (OLS) regression with the standard errors clustered at firm level. The dependent variable is measured at time  $t$ , with all other variables measured at time  $t - 1$ . All our regressions also include dummy indicators for industry effects based on two-digit Global Industry Classification Standard (GICS) codes and year effects. Definitions of all variables are presented in Table 1.



**Table 1** Variable definitions and acronyms

Variable Name	Label	Description
Tobin's Q	<i>TOBIN'S Q</i>	Market value of equity plus total assets minus the book value of equity, all divided by total assets
CSR Award	<i>CSR AWARD</i>	Dummy variable equals 1 if the company received an award for its social, ethical, community, or environmental activities or performance, and 0 otherwise
Social score	<i>SOC</i>	The social pillar measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It reflects the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long term shareholder value
Workforce Rights score	<i>WF</i>	Workforce category score measures a company's effectiveness toward providing job satisfaction, a healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce
Human Rights score	<i>HR</i>	Human rights category score measures a company's effectiveness toward respecting the fundamental human rights conventions
Product Responsibility score Rights	<i>PRRIGHTS</i>	Product responsibility category score reflects a company's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy
Environmental score	<i>ENV</i>	The environmental pillar measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems. It reflects how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities in order to generate long term shareholder value
Emission score	<i>EM</i>	Emission category score measures a company's commitment and effectiveness toward reducing environmental emissions in its production and operational processes
Resource use score	<i>RU</i>	Resource use category score reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management
Environmental Innovation score	<i>EI</i>	Environmental innovation category score reflects a company's capacity to reduce the environmental costs and burdens for its customers, and thereby create new market opportunities through new environmental technologies and processes or eco-designed products
Governance score	<i>GOV</i>	The corporate governance pillar measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances, in order to generate long term shareholder value
Management score	<i>MG</i>	Management category score measures a company's commitment and effectiveness toward following best practice corporate governance principles
Shareholder score	<i>SH</i>	Shareholders category score measures a company's effectiveness toward equal treatment of shareholders and the use of anti-takeover devices
CSR strategy score	<i>STRAT</i>	CSR strategy category score reflects a company's practices to communicate that it integrates the economic (financial), social and environmental dimensions into its day-to-day decision-making processes
Firm size	<i>SIZE</i>	Natural logarithm of total assets
Leverage	<i>LEVERAGE</i>	Total debt divided by total assets
Capital expenditure	<i>CAPEX</i>	Capital expenditure divided by total assets at the beginning of the year
Firm Profitability	<i>ROA</i>	Net income before extraordinary items divided by total assets
Cash ratio	<i>CASH</i>	Cash and marketable securities divided by total assets
Tangible assets	<i>PPE</i>	Net property, plant, and equipment divided by total assets
Sales growth	<i>SALES GROWTH</i>	Current year sales divided by sales in the previous year minus one
R&D	<i>R&amp;D</i>	R&D expense divided by total assets at the beginning of the year
Advertising intensity	<i>ADV INTENSITY</i>	Advertising expense divided by total assets at the beginning of the year



**Table 2** Yearly sample distribution by industry sectors and CSR Award

Panel A												
Year	Comm. Services	Cons. Discr	Cons. Staples	Energy	Health Care	Industrials	IT	Materials	Total	CSR Award=0	CSR Award=1	
2002	20	51	36	25	48	46	66	29	321	230	91	
2003	21	52	36	25	50	46	67	29	326	226	100	
2004	28	71	39	48	71	62	85	35	439	323	116	
2005	34	84	42	50	79	70	97	41	497	341	156	
2006	36	85	41	50	76	70	95	42	495	331	164	
2007	37	88	44	58	75	72	93	44	511	247	264	
2008	42	109	53	76	89	110	111	53	643	294	349	
2009	49	120	56	81	97	128	135	65	731	518	213	
2010	50	129	55	80	100	134	144	68	760	447	313	
2011	51	134	54	77	96	133	144	70	759	442	317	
2012	51	137	53	78	92	136	142	69	758	442	316	
2013	52	137	51	82	90	135	142	68	757	434	323	
2014	52	137	48	82	94	138	140	66	757	447	310	
2015	71	193	75	106	173	232	220	89	1159	807	352	
2016	96	273	93	118	295	332	299	112	1618	1285	333	
2017	93	291	96	129	335	354	319	114	1731	1397	334	
2018	103	298	96	134	347	359	326	114	1777	1422	355	
Total	886	2389	968	1299	2207	2557	2625	1108	14,039	9633	4406	

## Panel B descriptive statistics

Variables	Whole Sample			Firm-year obs. with CSR award			Firm-year obs. without CSR award			MeanDiff	t-stat
	N=14,039			N=4406			N=9633				
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD		
<i>TOBIN'S Q</i>	2.241	1.769	1.452	2.042	1.683	1.153	2.332	1.808	1.561	-0.289***	-12.29
<i>SIZE</i>	8.315	8.271	1.478	9.300	9.220	1.311	7.864	7.879	1.323	1.436***	60.04
<i>SALES GROWTH</i>	0.106	0.069	0.272	0.070	0.056	0.180	0.123	0.075	0.304	-0.052***	-12.74
<i>CAPEX</i>	0.054	0.035	0.061	0.051	0.038	0.047	0.055	0.034	0.066	-0.005***	-4.88
<i>PPE</i>	0.258	0.176	0.231	0.279	0.206	0.225	0.249	0.163	0.233	0.030***	7.25
<i>CASH</i>	0.166	0.101	0.180	0.130	0.089	0.128	0.182	0.108	0.198	-0.051***	-18.46
<i>LEVERAGE</i>	0.265	0.244	0.201	0.270	0.252	0.167	0.263	0.240	0.214	0.007**	1.97
<i>R&amp;D</i>	0.041	0.004	0.084	0.029	0.006	0.049	0.047	0.002	0.095	-0.178***	14.65
<i>ROA</i>	0.035	0.053	0.126	0.058	0.061	0.080	0.025	0.048	0.140	0.033***	17.42
<i>ADV INTENSITY</i>	0.014	0.000	0.029	0.014	0.000	0.027	0.014	0.000	0.030	0.000	-0.53

All variables are defined in Table 1

\*, \*\* and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively. Comm. Services, Cons. Discr. and Cons. Staples denotes communication services, consumer discretionary and consumer staples, respectively

## Sample selection

Our sample is compiled from two sources. Firm-level ESG scores and CSR Award data for all US firms are obtained from the Thomson Reuters' Asset4 database. Our period of study is from 2002 to 2018. Data on *TOBIN'S Q* and other firm characteristics are sourced from the CRSP/Compustat merged dataset. Financial, real estate, and utility firms are excluded due to their unique environmental, social,

governance, and operational characteristics and because of the fact that the *TOBIN'S Q* of these firms cannot be meaningfully compared to firms in other industries (Elyasiani and Jia 2010). Our final sample consists of 14,039 firm-year observations from 2227 US firms.



**Table 3** Correlation analyses

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
[1] <i>TOBIN'S Q</i>	1.00										
[2] <i>CSR AWARD</i>	-0.09***	1.00									
[3] <i>SIZE</i>	-0.34***	0.45***	1.00								
[4] <i>SALES GROWTH</i>	0.21***	-0.09***	-0.11***	1.00							
[5] <i>CAPEX</i>	0.00	-0.04***	0.02**	0.17***	1.00						
[6] <i>PPE</i>	-0.22***	0.06***	0.17***	-0.04***	0.67***	1.00					
[7] <i>CASH</i>	0.48***	-0.13***	-0.39***	0.16***	-0.18***	-0.37***	1.00				
[8] <i>LEVERAGE</i>	-0.16***	0.02	0.18***	-0.05***	0.04***	0.20***	-0.31***	1.00			
[9] <i>R&amp;D</i>	0.42***	-0.10***	-0.35***	0.23***	-0.12***	-0.29***	0.65***	-0.19***	1.00		
[10] <i>ROA</i>	0.08***	0.12***	0.24***	-0.04***	0.06***	0.01	-0.28***	-0.12***	-0.45***	1.00	
[11] <i>ADV INTENSITY</i>	0.16***	0.00	0.01	0.02*	-0.05***	-0.11***	0.06***	0.01	-0.01	0.05***	1.00

All variables are defined in Table 1

\*, \*\* and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively

## Results

### Univariate tests and bivariate correlations

Table 2 presents the sample distribution and summary statistics of all variables. In Panel A, we first show the yearly sample distribution by industry sectors, followed by firms that win a CSR Award compared to those who do not. The Information Technology sector has the highest firm-year observations (2625), followed by the Industrials (2558) and Healthcare (2207) sectors. The number of yearly firm-year observations ranges between 321 in 2002 and 1777 in 2018. The number of firm-year observations receiving a CSR Award increases from 91 in 2002 to 355 in 2018.

Panel B of Table 2 reports the summary statistics for the dependent and explanatory variables used in this study. For the whole sample, *TOBIN'S Q* has a mean and median of 2.241 and 1.769, respectively. The incidence of CSR Award winners is observed in 4406 firm-year observations (31.38% of the sample). In Panel B of Table 2, we also present a comparison of the variables between the ones with a CSR Award and those without. All the variables are significantly different at the 5% level or better between the two groups, except advertising intensity (*ADV INTENSITY*). In Table 3, we present the pairwise Pearson's product-moment correlations matrix between the variables. The results reveal that no pairs of variables show correlations above the critical value of 0.8, hence suggesting that multicollinearity is unlikely to be a major concern.

### Multivariate regression analysis

Table 4 presents the estimation results of the effect of *CSR AWARD* on firm value. The first regression (Column 1) constitutes results based on *TOBIN'S Q*, while the second

**Table 4** Regression results—CSR Award and Tobin's Q

Variables	<i>TOBIN'S Q</i> (1)	<i>IND-ADJ TOBIN'S Q</i> (2)
<i>CSR AWARD</i>	0.162*** (4.21)	0.147*** (3.78)
<i>SIZE</i>	-0.214*** (-11.00)	-0.209*** (-10.74)
<i>SALES GROWTH</i>	0.315*** (4.68)	0.291*** (4.28)
<i>CAPEX</i>	3.111*** (6.93)	2.854*** (6.26)
<i>PPE</i>	-0.408*** (-3.46)	-0.321*** (-2.71)
<i>CASH</i>	2.480*** (13.03)	2.434*** (12.83)
<i>LEVERAGE</i>	0.528*** (4.29)	0.538*** (4.40)
<i>R&amp;D</i>	5.178*** (11.24)	4.852*** (10.52)
<i>ROA</i>	3.990*** (15.43)	4.080*** (15.50)
<i>ADV INTENSITY</i>	5.239*** (5.49)	5.295*** (5.55)
Constant	3.024*** (14.77)	1.169*** (5.72)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
Adjusted $R^2$	0.426	0.342
<i>F</i> -statistic	49.541	40.546
Observations	14,039	14,039

This table presents the estimation results of the relationship between *CSR AWARD* and *TOBIN'S Q* and *IND-ADJ TOBIN'S Q*. All variables are defined in Table 1. Standard errors are clustered at the firm level. *t*-statistics are in parentheses

\*, \*\* and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively





Table 5 The influence of environmental, social and governance scores on the relationship between CSR Award and Tobin's Q

Variables	Dependent variable: <i>TOBIN'S Q</i>							
	<i>ENV_High</i> (1)	<i>ENV_Low</i> (2)	<i>EM_High</i> (3)	<i>EM_Low</i> (4)	<i>RU_High</i> (5)	<i>RU_Low</i> (6)	<i>EI_High</i> (7)	<i>EI_Low</i> (8)
Panel A Environmental Score ( <i>ENV</i> ) and Its Sub-dimensions <sup>a</sup>								
<i>CSR AWARD</i>	0.104*** (2.76)	0.148** (2.01)	0.106*** (2.67)	0.116* (1.69)	0.075** (2.00)	0.170** (2.39)	0.186*** (4.70)	0.090 (1.02)
<i>SIZE</i>	-0.144*** (-7.69)	-0.396*** (-10.59)	-0.150*** (-7.57)	-0.391*** (-10.59)	-0.142*** (-7.28)	-0.412*** (-11.29)	-0.204*** (-10.84)	-0.275*** (-3.81)
<i>SALES GROWTH</i>	0.349*** (3.02)	0.312*** (3.94)	0.272** (2.52)	0.348*** (4.14)	0.348*** (3.04)	0.318*** (4.02)	0.418*** (5.07)	1.043*** (4.08)
<i>CAPEX</i>	2.686*** (4.34)	3.677*** (6.22)	1.897*** (3.56)	4.801*** (7.33)	2.786*** (4.23)	3.417*** (6.12)	2.793*** (5.55)	1.706* (1.66)
<i>PPE</i>	-0.115 (-0.90)	-0.797*** (-4.87)	-0.106 (-0.85)	-0.946*** (-5.45)	-0.178 (-1.37)	-0.735*** (-4.52)	-0.314** (-2.50)	-0.382 (-1.49)
<i>CASH</i>	2.578*** (9.65)	2.118*** (9.14)	2.431*** (9.20)	2.230*** (9.25)	2.590*** (9.90)	2.081*** (8.98)	2.987*** (14.51)	2.595*** (4.84)
<i>LEVERAGE</i>	0.407*** (2.75)	0.729*** (4.50)	0.489*** (3.25)	0.678*** (4.24)	0.375** (2.49)	0.798*** (5.01)	0.504*** (3.80)	0.687*** (2.90)
<i>R&amp;D</i>	5.290*** (7.77)	4.583*** (7.96)	5.666*** (7.74)	4.281*** (7.70)	5.095*** (7.47)	4.697*** (8.02)	4.770*** (9.14)	5.818*** (3.33)
<i>ROA</i>	5.033*** (12.72)	3.398*** (10.56)	4.921*** (12.79)	3.432*** (10.80)	4.980*** (12.56)	3.430*** (10.67)	3.978*** (13.92)	4.661*** (5.44)
<i>ADV INTENSITY</i>	5.264*** (4.25)	4.981*** (4.05)	5.459*** (4.44)	4.643*** (3.71)	4.787*** (4.00)	5.474*** (4.35)	4.592*** (4.81)	3.832* (1.82)
Constant	2.320*** (11.23)	3.966*** (12.63)	2.877*** (14.23)	3.911*** (12.68)	2.321*** (11.06)	4.708*** (14.95)	3.378*** (17.46)	3.177*** (4.67)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.445	0.426	0.432	0.429	0.433	0.435	0.431	0.446
F-statistic	31.060	39.524	27.587	41.332	29.894	38.321	44.274	12.881
Observations	8056	5968	8056	5968	8062	5962	11,675	1453
Dependent variable: <i>TOBIN'S Q</i>								
<i>SOC_High</i> <i>SOC_Low</i> <i>WF_High</i> <i>WF_Low</i> <i>HR_High</i> <i>HR_Low</i> <i>PR_High</i> <i>PR_Low</i>								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Panel B Social Score ( <i>SOC</i> ) and Its Sub-dimensions <sup>b</sup>								
<i>CSR AWARD</i>	0.062	0.061	0.042	0.110**	0.173***	0.093	0.090**	0.228***



Table 5 (continued)

Dependent variable: <i>TOBIN'S Q</i>								
Variables	<i>SOC_High</i>	<i>SOC_Low</i>	<i>WF_High</i>	<i>WF_Low</i>	<i>HR_High</i>	<i>HR_Low</i>	<i>PR_High</i>	<i>PR_Low</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>SIZE</i>	(1.37)	(1.22)	(1.00)	(2.12)	(4.40)	(1.00)	(2.13)	(3.43)
	-0.166***	-0.360***	-0.160***	-0.401***	-0.218***	-0.163***	-0.181***	-0.296***
	(-7.93)	(-11.25)	(-8.08)	(-12.42)	(-10.96)	(-3.30)	(-9.52)	(-8.10)
<i>SALES GROWTH</i>	0.336***	0.364***	0.308***	0.347***	0.285***	0.966***	0.408***	0.241***
	(3.59)	(4.32)	(3.44)	(4.09)	(4.26)	(2.78)	(4.27)	(2.67)
<i>CAPEX</i>	5.021***	2.564***	3.469***	2.992***	3.181***	1.956***	4.706***	2.203***
	(5.61)	(5.36)	(5.25)	(5.78)	(6.80)	(2.70)	(5.98)	(4.03)
<i>PPE</i>	-0.370**	-0.563***	-0.279*	-0.598***	-0.420***	-0.234	-0.316**	-0.572***
	(-2.30)	(-4.05)	(-1.95)	(-4.13)	(-3.53)	(-0.96)	(-2.05)	(-3.38)
<i>CASH</i>	2.448***	2.408***	2.751***	2.078***	2.460***	2.909***	2.439***	2.507***
	(9.40)	(10.52)	(10.85)	(8.74)	(12.92)	(5.42)	(10.28)	(9.50)
<i>LEVERAGE</i>	0.483***	0.649***	0.416***	0.704***	0.542***	0.292	0.458***	0.605***
	(2.95)	(4.42)	(2.73)	(4.66)	(4.26)	(1.33)	(2.87)	(3.74)
<i>R&amp;D</i>	5.859***	4.112***	5.638***	4.246***	4.982***	10.506***	5.693***	4.038***
	(9.61)	(7.17)	(9.24)	(7.51)	(11.13)	(6.75)	(10.30)	(6.27)
<i>ROA</i>	4.727***	3.275***	4.493***	3.483***	3.950***	4.195***	4.332***	3.488***
	(13.43)	(10.80)	(13.30)	(11.07)	(15.25)	(6.13)	(13.37)	(9.22)
<i>ADV INTENSITY</i>	6.329***	4.097***	6.223***	4.352***	5.246***	5.484*	5.615***	4.689***
	(4.94)	(3.53)	(4.89)	(3.65)	(5.57)	(1.92)	(4.89)	(3.50)
Constant	2.641***	4.751***	2.634***	5.023***	3.521***	2.468***	2.479***	3.732***
	(9.90)	(15.42)	(10.84)	(16.53)	(17.76)	(4.73)	(12.37)	(10.86)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted <i>R</i> <sup>2</sup>	0.459	0.428	0.473	0.416	0.421	0.582	0.456	0.408
<i>F</i> -statistic	32.638	32.435	35.039	31.284	49.378	18.032	37.764	29.205
Observations	7018	7006	7022	7002	13,277	747	8175	5849
Dependent Variable: <i>TOBIN'S Q</i>								
Variables	<i>GOV_High</i>	<i>GOV_Low</i>	<i>MG_High</i>	<i>MG_Low</i>	<i>SH_High</i>	<i>SH_Low</i>	<i>STRAT_High</i>	<i>STRAT_Low</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel C Governance Score and Its Sub-dimensions <sup>c</sup>								
<i>CSR AWARD</i>	0.099**	0.203***	0.105**	0.214***	0.140***	0.177***	0.169***	0.077
	(2.25)	(3.84)	(2.34)	(4.05)	(3.19)	(3.21)	(4.39)	(0.74)

Table 5 (continued)

Variables	Dependent Variable: <i>TOBIN'S Q</i>							
	<i>GOV High</i> (1)	<i>GOV Low</i> (2)	<i>MG High</i> (3)	<i>MG Low</i> (4)	<i>SH High</i> (5)	<i>SH Low</i> (6)	<i>STRAT High</i> (7)	<i>STRAT Low</i> (8)
<i>SIZE</i>	-0.161*** (-6.80)	-0.291*** (-11.16)	-0.172*** (-7.15)	-0.267*** (-10.91)	-0.188*** (-8.85)	-0.243*** (-8.58)	-0.206*** (-10.74)	-0.351*** (-5.74)
<i>SALES GROWTH</i>	0.296*** (2.92)	0.320*** (3.91)	0.356*** (3.54)	0.289*** (3.56)	0.333*** (3.24)	0.292*** (3.45)	0.265*** (3.80)	0.831*** (3.86)
<i>CAPEX</i>	2.298*** (3.54)	3.691*** (7.27)	2.114*** (3.38)	3.729*** (7.23)	3.146*** (5.68)	3.008*** (5.38)	3.201*** (6.43)	3.028*** (3.01)
<i>PPE</i>	-0.285* (-1.91)	-0.519*** (-3.69)	-0.284* (-1.92)	-0.488*** (-3.55)	-0.349*** (-2.64)	-0.473*** (-2.96)	-0.418*** (-3.45)	-0.410 (-1.58)
<i>CASH</i>	2.255*** (8.43)	2.504*** (10.96)	2.195*** (8.61)	2.565*** (11.07)	2.343*** (9.71)	2.571*** (10.07)	2.466*** (12.46)	2.303*** (5.40)
<i>LEVERAGE</i>	0.601*** (3.70)	0.515*** (3.49)	0.652*** (4.15)	0.442*** (3.05)	0.549*** (3.40)	0.532*** (3.42)	0.522*** (4.10)	0.535*** (2.24)
<i>R&amp;D</i>	6.033*** (8.84)	4.593*** (8.30)	6.154*** (9.34)	4.485*** (7.86)	5.519*** (8.68)	4.876*** (8.22)	5.046*** (10.84)	6.111*** (5.49)
<i>ROA</i>	4.706*** (11.89)	3.616*** (11.90)	4.979*** (12.61)	3.421*** (11.32)	4.034*** (12.07)	3.996*** (11.63)	3.847*** (14.92)	4.979*** (7.04)
<i>ADV INTENSITY</i>	5.002*** (3.59)	5.314*** (5.19)	5.098*** (3.75)	5.222*** (5.07)	3.952*** (2.97)	6.099*** (5.28)	5.066*** (5.42)	6.119*** (2.71)
Constant	2.459*** (9.75)	4.096*** (15.04)	2.588*** (10.67)	3.940*** (15.33)	2.809*** (11.80)	3.215*** (10.71)	2.973*** (14.75)	4.901*** (7.00)
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted <i>R</i> <sup>2</sup>	0.424	0.430	0.431	0.428	0.425	0.428	0.423	0.478
<i>F</i> -statistic	29.366	33.333	30.784	32.079	29.729	31.813	48.786	15.319
Observations	7024	7013	7031	7008	7029	7010	12,408	1631

<sup>a</sup>This table presents the estimation results of the relationship between *CSR AWARD* and *TOBIN'S Q* amongst firms with high versus low environmental scores and its sub-dimensional scores. All variables are defined in Table 1. Standard errors are clustered at the firm level (*t*-statistics are in parentheses)

\*, \*\*, and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively

<sup>b</sup>This table presents the estimation results of the relationship between *CSR AWARD* and *TOBIN'S Q* amongst firms with high versus low social scores and its sub-dimensional scores. All variables are defined in Table 1. Standard errors are clustered at the firm level (*t*-statistics are in parentheses)

\*, \*\*, and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively

<sup>c</sup>This table presents the estimation results of the relationship between *CSR AWARD* and *TOBIN'S Q* amongst firms with high versus low governance scores and its sub-dimensional scores. All variables are defined in Table 1. Standard errors are clustered at the firm level (*t*-statistics are in parentheses)

\*, \*\*, and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively



**Table 6** Propensity score matching (PSM) Panel B mean differences in firm characteristics

	Dependent Variable: <i>CSR AWARD</i>				<i>TOBIN'S Q</i>	
	Pre-Match		Post-Match		PSM	
	(1)	(2)	(2)	(3)	(3)	
<i>Panel A: Pre-Match propensity score regression and post-match diagnostic regression</i>						
<i>CSR AWARD</i>					0.079**	(2.32)
<i>SIZE</i>	2.503***	22.04	0.977	-0.55	-0.175***	(-6.79)
<i>SALES GROWTH</i>	0.449***	-5.72	0.933	-0.42	0.444***	(4.05)
<i>CAPEX</i>	0.064***	-2.92	1.280	0.23	2.229***	(3.99)
<i>PPE</i>	3.114***	4.01	0.953	-0.15	-0.338***	(-2.73)
<i>CASH</i>	0.802	-0.61	0.744	-0.75	2.390***	(9.47)
<i>LEVERAGE</i>	0.534**	-2.53	1.053	0.19	0.459***	(2.82)
<i>R&amp;D</i>	12.393***	3.22	1.254	0.24	5.362***	(7.14)
<i>ROA</i>	5.890***	4.20	1.467	0.88	4.919***	(11.30)
<i>ADV INTENSITY</i>	9.813	1.34	1.020	0.01	6.341***	(5.06)
Constant	0.000***	-21.58	1.218	0.49	3.059***	(11.74)
Pseudo R2	0.241		0.001			
Adjusted R <sup>2</sup>					0.449	
F-stat					25.907	
Wald Chi-stat	890.119		4.795			
Observations	14,044		6204		6204	

*Panel B Mean differences in firm characteristics*

	CSR award firms mean (Obs. = 3102)	Matching firms mean (Obs. = 3102)	Difference	t-stat
<i>SIZE</i>	8.793	8.809	-0.016	-0.53
<i>SALES GROWTH</i>	0.078	0.080	-0.002	-0.42
<i>CAPEX</i>	0.052	0.051	0.010	0.65
<i>PPE</i>	0.270	0.268	0.002	0.44
<i>CASH</i>	0.134	0.137	-0.003	-0.85
<i>LEVERAGE</i>	0.274	0.273	0.001	0.32
<i>R&amp;D</i>	0.029	0.029	-0.000	-0.28
<i>ROA</i>	0.053	0.051	0.002	0.84
<i>ADV INTENSITY</i>	0.013	0.013	0.000	0.11

Panel A reports the pre-match propensity score regression, the post-match diagnostic regression, and regression results using the propensity score matched sample. Panel B reports the difference for each observable characteristic between the treatment firms and the matched controlled firms. All variables are defined in Table 1

\*, \*\* and \*\*\* denote statistical significance at the 10%, 5% and 1% level, respectively

regression (Column 2) is based on *IND-ADJ TOBIN'S Q*. In both regressions, we have included firm-level control variables in addition to our explanatory variables of interest. The coefficients of *CSR AWARD* are positive and significant at the 1% level in both columns, suggesting that winning a CSR Award is associated with an increase in firm value, supporting  $H_1$ . Specifically, the *TOBIN'S Q* for firms that win a CSR Award is 0.162 point higher than firms without a CSR Award. All the control variables are significantly associated with firm performance in Table 4.

Next, we consider the influence of environmental (*ENV*), social (*SOC*) and governance (*GOV*) scores and the scores of their respective sub-dimensions on our main findings, the relationship between *CSR AWARD* and *TOBIN'S Q*. Table 5 replicates the specification from Table 4 but splits firms into two subsamples based on high and low scores in *ENV*, *SOC* and *GOV* and their respective sub-dimensions. In Panel A of Table 5, we first examine the importance of *ENV* and its sub-dimension scores on the CSR Award–firm value link. The results for high and low *ENV* scores are reported in



Columns (1) and (2), respectively. It is notable that the relationship between *CSR Award* and *TOBIN'S Q* remains positive for both groups, but the coefficients' significance level for the high group is at the 1% level and for the low group is slightly lower at the 5% level. This indicates that the usefulness of *CSR Award* conferment in increasing firm value is of greater significance in firms with high *ENV* scores. We then examine the influence of the sub-dimension of *ENV* on the relationship between *CSR AWARD* and *TOBIN'S Q* from Columns (3) to (8). The influence of emissions score (*EM*) for the high and low group is shown in Columns (3) and (4), respectively. The results show that coefficient *CSR AWARD* is positive and highly significant at the 1% level for the high (*EM*) group, but it is only marginally significant at the 10% level for the low group. Columns (5) and (6) show that the coefficients of *CSR AWARD* are positive and highly significant at the 5% level for both the high and low groups of resource use score (*RU*), respectively. Finally, the influence of the sub-dimension of environmental innovation score (*EI*) is shown in Columns (7) and (8), and the results show that the coefficient of *CSR AWARD* remains positive and significant in the high group only. In sum, the findings above reveal that the positive link between *CSR AWARD* and *TOBIN'S Q* is more pronounced in firms with high environmental (*ENV*), emissions (*EM*) and environmental innovation (*EI*) scores. However, regardless of whether firms have high or low scores, resource use (*RU*) remains important for the positive association between *CSR AWARD* and firm value.

Panel B of Table 5 (Columns (1) to (8)) presents the results for the influence of the overall social scores (*SOC*) and its sub-dimensions on the association between *CSR AWARD* and *TOBIN'S Q*. In Columns (1) and (2), the results of *SOC* reveal that the coefficients of *CSR AWARD* are insignificant for the high and low groups. This indicates that the overall social score does not seem to have important implications for the positive effect of *CSR AWARD* on *TOBIN'S Q*. Next, the results for workforce rights score (*WF*) show that our main finding is only significant for the low group. Columns (5) and (6) show the results for the sub-dimension of human rights score (*HR*), and the main finding is positive and highly significant for the high group only. Finally, columns (7) and (8) show the results for the influence of the product responsibility score (*PR*). The main finding is consistently significant across the high and low groups, albeit the low group has a higher significance at the 1% level. In short, our findings reveal that with respect to the positive association between *CSR Award* and *TOBIN'S Q*, the influence of the overall social score (*SOC*) does not seem to be important although the influence of a low workforce rights sub-dimension score (*WF*) is. While a high human rights score (*HR*) appears to have more bearing on the positive association between *CSR AWARD* and firm value, product

**Table 7** Instrumental variable (IV)-GMM estimation

	Dependent Variable: <i>CSR AWARD</i>	
	First Stage	Second Stage
	(1)	(2)
<i>EMPLOYEE</i>	0.105*** (0.02)	
<i>PRED.CSR AWARD</i>		2.141*** (0.48)
<i>SIZE</i>	0.127*** (0.01)	-0.508*** (0.08)
<i>SALES GROWTH</i>	-0.066*** (0.01)	0.453*** (0.07)
<i>CAPEX</i>	-0.370*** (0.13)	3.886*** (0.54)
<i>PPE</i>	0.181*** (0.05)	-0.777*** (0.17)
<i>CASH</i>	0.079* (0.04)	2.326*** (0.22)
<i>LEVERAGE</i>	-0.100*** (0.03)	0.767*** (0.14)
<i>R&amp;D</i>	0.468*** (0.09)	4.377*** (0.53)
<i>ROA</i>	0.067 (0.04)	3.856*** (0.26)
<i>ADV INTENSITY</i>	0.466* (0.24)	4.487*** (1.06)
Constant	-0.772*** (0.05)	4.448*** (0.47)
Year Dummy	Yes	Yes
Industry Dummy	Yes	Yes
Adjusted R <sup>2</sup>		0.419
Partial F-stat	48.60***	
Underidentification test	45.90***	
Weak Identification test	156.18	
F-statistic		39.224
Observations	13,985	13,985

This table presents a series of IV-GMM regressions for the relationship between *CSR AWARD* and *TOBIN'S Q*. All variables are defined in Table 1. Standard errors are clustered at the firm level (*t*-statistics are in the parentheses)

\*, \*\* and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively

responsibility score (*PR*) remains important regardless of whether firms have high or low scores.

Panel C of Table 5 examines the importance of the overall governance scores (*GOV*) and its sub-dimension scores on the relationship between *CSR AWARD* and *TOBIN'S Q*. Columns (1) and (2) first show the influence of *GOV* and our main findings are consistently positive and significant for both the high and low groups, although the significance for



the low group is slightly higher at the 1% level. This suggests that regardless of whether firms have high or low *GOV*, the impact of *CSR AWARD* on *TOBIN's Q* remains important. Next, the influence of the sub-dimension of management score (*MG*) is shown in Columns (3) and (4) and the coefficients of *CSR AWARD* are positive and significant at the 5% level and 1% level for the high and low groups, respectively. In Columns (5) and (6), the coefficients of *CSR AWARD* are consistently positive and strongly significant at the 1% level for both the high and low groups for the sub-dimension of shareholder score (*SH*). Finally, the results for CSR strategy score (*STRAT*) reveal that our main findings remain positive and highly significant for the high group only. That is, the positive link between *CSR AWARD* and *TOBIN's Q* is more pronounced in firms with a high CSR strategy score (*STRAT*) and a low management score (*MG*) although this link remains important regardless of whether firms have high or low governance (*GOV*) and management (*MG*) scores.

Taken together, the results for the influence of CSR dimensions, *ENV*, *SOC* and *GOV*, indicate the following: (1) the added importance of high *ENV* on the positive effect of *CSR AWARD* on firm value, (2) ineffectiveness of high or low *SOC* in positively engendering firm value for CSR Award winning firms, (3) the persistent importance of high and low *GOV* in enhancing firm value for CSR Award winning firms, and (4) of the three CSR dimensions—*ENV*, *SOC* and *GOV*—*ENV* seems to have the highest influence on the link between CSR Award conferment and firm value, followed by *GOV* and finally *SOC*. Our finding in (4) above seems to resonate, in general terms, with Friede et al. (2015) who show that the environmental and governance dimensions have more important implications than the social dimension for firm performance. The results for the sub-dimensions of *ENV*, *SOC* and *GOV* are mixed and show the following: (1) some sub-dimensions exert more influence in the high group than the low group, (2) some sub-dimensions have a more pronounced influence in the low group compared to the high group, (3) some sub-dimensions are ineffective altogether (high and low groups) in exerting any influence on our main finding, and (4) of the various sub-dimensions within a CSR dimension, some of these outperform others.

### Endogeneity issues and robustness

In this section, we perform a number of additional tests to assess the robustness of our main results. In the first part, we address concerns that our estimations may still suffer from the endogeneity of firm value due to idiosyncratic shocks that vary across both firms and time periods. Certain factors that might not be directly observable could drive both *CSR AWARD* and *TOBIN's Q*. We address these concerns in the following ways. First, we perform the propensity score

**Table 8** Robustness of CSR Award and Tobin's Q results

	(1)	(2)
<i>CSR AWARD</i>	0.059* (0.04)	
<i>CONSEC AWARD</i>	0.153*** (0.03)	0.202*** (0.04)
<i>SIZE</i>	-0.220*** (0.02)	-0.218*** (0.02)
<i>SALES GROWTH</i>	0.319*** (0.07)	0.318*** (0.07)
<i>CAPEX</i>	3.113*** (0.45)	3.103*** (0.45)
<i>PPE</i>	-0.414*** (0.12)	-0.410*** (0.12)
<i>CASH</i>	2.472*** (0.19)	2.472*** (0.19)
<i>LEVERAGE</i>	0.532*** (0.12)	0.530*** (0.12)
<i>R&amp;D</i>	5.157*** (0.46)	5.162*** (0.46)
<i>ROA</i>	3.986*** (0.26)	3.986*** (0.26)
<i>ADV INTENSITY</i>	5.223*** (0.95)	5.228*** (0.95)
Constant	3.070*** (0.21)	3.111*** (0.21)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
Adjusted $R^2$	0.427	0.427
<i>F</i> -statistic	49.067	50.163
Observations	14,039	14,039

This table presents the estimation results of the effects of *CSR AWARD* and *CONSEC AWARD* on *TOBIN'S Q*. All variables are defined in Table 1. Standard errors are clustered at the firm level (*t*-statistics are in the parentheses)

\*, \*\* and \*\*\* denote statistical significance at the 10, 5 and 1% level, respectively

matching (PSM) technique in Table 6 whereby we form matched pairs of firm-years that are otherwise similar along all their (observable) economic characteristics, but which are most dissimilar in terms of *CSR AWARD*. After matching these variables, any difference in *TOBIN's Q* can be more appropriately attributed to differences in *CSR AWARD* rather than to differences in the other variables, regardless of the underlying structural form.

Table 6 compares the *TOBIN's Q* of firms with *CSR AWARD* with firms without *CSR AWARD* that have been matched via propensity score matching with the former. We first estimate the probability that a firm receives a CSR Award. This probability (i.e., the propensity score) is the predicted value from a logit regression using the same



controls as those included in our equation (Eq. 1). The logit regression results are reported in Column (1) of Panel A in Table 6. The results show that firms with *CSR AWARD* are larger and have higher sales growth, higher capital expenditure, higher asset tangibility, higher leverage ratio, greater R&D intensity, and higher ROA. The pseudo- $R^2$  for the regression is high with a value of 0.241. Next, we adopt the nearest-neighbor approach to ensure that firms with a CSR Award (i.e., the treatment group) are sufficiently similar to the matched firms without a CSR Award (i.e., the control group). Specifically, each firm with a CSR Award is matched to a firm without a CSR Award and with the closest propensity score. We further require that the maximum difference between the propensity score of each firm with a CSR Award and that of its matched peer does not exceed 3% in absolute value.

To verify that firms in the treatment and control groups are indistinguishable in terms of observable characteristics, we conduct two diagnostic tests. The first test consists of re-estimating the logit model for the post-match sample. The results are shown in Column (2) of Panel A in Table 6. None of the coefficient estimates are statistically significant, suggesting that there are no distinguishable trends in *TOBIN's Q* between the two groups. Furthermore, the coefficients in Column (2) are mostly much smaller in magnitude than those in Column (1), suggesting that the results in Column (2) are not simply an artefact of a decline in degrees of freedom in the restricted sample. The pseudo- $R^2$  also drops substantially from 0.241 to 0.001 for the post-match sample. This suggests that the propensity score matching removes all observable differences other than the difference arising from the presence of *CSR AWARD*. The second test consists of examining the mean difference for each observable characteristic between the treatment firms and the matched control firms. The results are presented in Panel B of Table 6. Again, none of the mean differences in observable characteristics between the treatment and control group are statistically significant. Overall, the results from the diagnostic tests suggest that the matching process is efficient and removes all observable differences barring the presence of *CSR AWARD*. Thus, this increases the likelihood that any difference in *TOBIN's Q* between the two groups is due to the presence of *CSR AWARD*. Finally, Column 3 of Panel A in Table 6 reports the re-estimation of (Eq. 1) using the propensity score matched sample. Consistent with the main finding, we find a positive and significant coefficient of *CSR AWARD* on *TOBIN's Q*. Taken together, the PSM results are consistent with the prediction that winning a CSR Award increases firm value.

Second, we employ the Instrumental Variable-Generalized Method of Moments (IV-GMM) approach in Table 7 to account for the possible endogeneity of *CSR AWARD*. For this, we need an instrumental variable that is associated with *CSR AWARD* but which does not directly affect *TOBIN's*

*Q*. A prior study by Helmig et al. (2016), which shows that employees have a strong impact on a firm's implementation of CSR activities, leads us to believe that the number of employees in a firm could also be positively instrumental to the likelihood of winning of a CSR Award. At the same time, there is no empirical evidence or intuitive reason to believe that the number of employees in a firm could directly impact its value. Based on this, we create a dummy variable (denoted as *EMPLOYEE*) based on the number of employees in a firm. That is, firms that have employee numbers above the median are coded as '1' and firms with employee numbers below the median are coded as '0'. In the first-stage regression, *CSR AWARD* is regressed on the instrumental variable, i.e., *EMPLOYEE* to generate the fitted value of *CSR AWARD*. The fitted value of *CSR AWARD* is denoted as *PRED.CSR AWARD* for this purpose. The first-stage fitted values of *PRED.CSR AWARD* is then used in the second-stage IV-GMM regressions. In the first-stage regression in Column 1 of Table 7, *EMPLOYEE* is positively associated at the 1% level with *CSR AWARD*, implying that our instrumental variable significantly explains *CSR AWARD*. In addition, the under-identification test and weak identification test statistics, as shown in Table 7, confirm the appropriateness of our instrument. In the second-stage regression (Column 2), the coefficient of *PRED.CSR AWARD* is positive and highly significant at the 1% level in explaining *TOBIN's Q*. In other words, the positive and significant association between *CSR AWARD* and *TOBIN's Q* remains robust even after accounting for endogeneity using the IV-GMM analyses, and this is consistent with our earlier findings.

In the second part, we assess the robustness of our main findings by performing two further tests. We surmise that if winning a CSR Award is value enhancing, then we expect the explanatory power of repeated CSR Award winners to be stronger on firm value. To do this, we create a dummy variable (denoted as *CONSEC AWARD*) that takes the value of '1' if a firm wins a CSR Award for two consecutive years and '0' otherwise. In Column 1 of Table 8, we include *CONSEC AWARD* as an additional variable to (Eq. 1) and rerun the regression. The results of our first test show that the coefficients of *CSR AWARD* and *CONSEC AWARD* are significant at the 10 and 1% levels, respectively, in explaining *TOBIN's Q*. This shows that the explanatory power of *CONSEC AWARD* on *TOBIN's Q* outperforms the explanatory power of *CSR AWARD* on *TOBIN's Q*. The results also show that although firms receiving a CSR Award in the current year have significantly higher *TOBIN's Q* compared to the reference category of firms without a CSR Award, firms receiving CSR Awards in two consecutive years have significantly higher *TOBIN's Q* compared to firms receiving a CSR Award for one year only. For the second test, we rerun (Eq. 1) by replacing *CSR AWARD* with *CONSEC AWARD* in Column 2 of Table 8. The results show that the coefficient of



*CONSEC AWARD* is positive and significant at the 1% level, indicating that *TOBIN's Q* for firms that win a CSR Award for two consecutive years is 0.202 higher than firms that do not win a CSR Award for two consecutive years. This demonstrates that firms receiving a CSR Award in two consecutive years have significantly higher *TOBIN's Q* compared to the reference category of firms without a CSR Award or firms receiving a CSR Award for 1 year only. Overall, these results strengthen the robustness of our findings and reinforce our argument that winning a CSR Award is associated with an increase in firm value.

## Conclusion

Although CSR has attracted great interest from shareholders, stakeholders and practitioners in recent decades, empirical evidence on the impact of CSR on firm performance remains inconclusive. This paper adds a new layer to this literature by examining whether winning a CSR Award increases firm value. Our aim is guided by the notion that if CSR increases firm value, then firms that win a CSR Award should experience increased firm value. We then examine how the dimensions that make up CSR—environmental, social and governance and their respective sub-dimensions—influence the relationship between winning a CSR Award and firm value. We sought to identify which, if any, of the CSR dimensions and their respective sub-dimensions exerted especial influence on the relationship between winning a CSR Award and firm value.

Based on a large sample of US firms in the period between 2002 and 2018, we find that winning a CSR Award significantly increases firm value. Our results further show that a firm's level of environmental, social and governance scores affects the link between its value and winning a CSR Award. This finding is more pronounced in firms with high environmental scores and low governance scores. Social scores do not seem to have any bearing on our main findings. Our investigation of how scores in the sub-dimensions of environmental, social and governance dimensions affected the link between firm value and CSR Award conferment produced mixed results, representing an avenue for future research. Our results are supported by a series of robustness tests.

There are limitations to our study. First, in spite of our best efforts to mitigate concerns over endogeneity by employing the instrumental variable approach, the propensity scores matching approach and others, it is possible that unobserved factors may also affect the relationship between winning a CSR Award and firm value. Second, our results may not necessarily relate to other time periods and geographical locations. Future studies should be carried out across various time periods and in other national contexts to

gauge and expand our understandings of the linkage between CSR Award conferment and firm value.

In conclusion, we strongly believe that identification of the importance of CSR Awards as a driver of firm value creation is an area of interest that will spur more research in the future. It will likely stimulate more interest in firms to excel in CSR and to strive to win these awards. As findings about the positive relationship between CSR Award conferment and firm value become more widely known, managers will be increasingly likely to pursue CSR more rigorously to attain high firm value.

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## Declarations

**Conflict of interest** All authors declare that they have no conflict of interest.

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