The role of marketing capability in linking CSR to corporate financial performance
When CSR gives positive signals to stakeholders

Sean Yim
Penn State Erie, The Behrend College, Erie, Pennsylvania, USA

Young Han Bae
Marketing Department, Penn State University, Greater Allegheny, McKeesport, Pennsylvania, USA

Hyunwoo Lim
Penn State Erie, The Behrend College, Erie, Pennsylvania, USA, and

JaeHwan Kwon
Marketing Department, Baylor University, Waco, Texas, USA

Abstract

Purpose – The authors use signaling theory in proposing a conceptual framework that simultaneously incorporates both the mediating effects of corporate reputation (CR) and the moderating effects of marketing capability (MC) into the corporate social responsibility (CSR)–corporate financial performance (CFP) link and theorize a single moderated mediation model. The empirical results of the research confirm the theorized moderated mediation model among the four variables, where a firm's CR plays a mediating role in the relationship between CSR and CFP, and a firm's MC moderates the effect of CSR on CR exclusively in the first link. Both theoretical and practical implications of the moderated mediation model are discussed.

Design/methodology/approach – This study uses structural equation model estimations with the relevant secondary datasets collected from publicly available databases.

Findings – The empirical results confirm the theorized moderated mediation model in the conceptual framework that uses signaling theory. Specifically, the results identify the moderating role of MC in only the CSR- CR link (but not in the CR and CFP link), such that CR plays a moderated mediation role in the CSR–CFP link.

Research limitations/implications – The current research is not without limitations. These limitations mainly stem from data sets used in the empirical analyses. More details are discussed in the limitations and future research directions section.

Practical implications – The empirical findings suggest that a firm needs to develop a consolidated CSR-marketing program, simultaneously satisfying stakeholders' needs for both the firm's socially desirable business practices and value-creating marketing programs to increase its CR, which will, in turn, lead to better profitability for the firm.

Originality/value – To the best of the authors' knowledge, the current research is the first to use signaling theory in building a conceptual framework that theorizes a moderated mediation model regarding the simultaneous effects of CR and MC on the relationship between CSR and CFP and to empirically test this conceptual framework of the single moderated mediation model. By doing so, the current research clarifies an unanswered question in the literature of whether the underlying

mechanism in the CSR–CFP link is based on a mediated moderation or moderated mediation of CR and MC.

Introduction

> Creating a strong business and building a better world are not conflicting goals – they are both essential ingredients for long-term success (of a business). – William Clay Ford Jr., Executive Chairman, Ford Motor Company

For the past few decades, various firms have made significant investments in their corporate social responsibility (CSR) programs, with increased hopes for their corporate financial performance (CFP) (Chabowski *et al.*, 2011; Whelan and Fink, 2016). In contrast to these expectations, however, not all CSR programs have resulted in positive returns. For instance, Abercrombie and Fitch's failure in its CSR investments is one case in point (Matthews, 2013). Matthews (2013) notes a "[. . .] complete CSR fail. As the dive in A&F's reputation among its key demographic of 18-34 year olds shows." In efforts to solve the problems considered in CSR practices, researchers have attempted to establish a direct relationship between CSR and CFP for more than two decades. However, the findings are still inconclusive, and thus, unreliable (Margolis and Walsh, 2003).

After a comprehensive literature review of research on the link between CSR and CFP, Margolis and Walsh (2003) do not find equivocal results in the literature (e.g. positive, negative, mixed, and even no relationship), although the majority of previous research shows a positive relationship between CSR and CFP. Margolis and Walsh (2003) also argue that it will therefore be very critical for marketing academics to further study the detailed mechanism (e.g. mediating effects) and boundary conditions (e.g. moderating effects) in the CSR–CFP link. Likewise, many marketing researchers have questioned the direct effect of CSR on CFP, and instead have begun investigating the intervening variables between CSR and CFP (Galbreath and Shum, 2012; Luo and Bhattacharya, 2006).

In efforts to establish an indirect relationship, one stream of research focuses on investigating the *indirect* effect of CSR on CFP and proposes the mediating effects of certain intervening variables between the two constructs. For example, Luo and Bhattacharya (2006) suggest that customer satisfaction mediates the effect of CSR on CFP. Galbreath and Shum (2012) find that rather than customer satisfaction, corporate reputation (CR) mediates the CSR–CFP relationship. Although there is disagreement regarding which variable mediates the relationship, this stream of research agrees that the effect of CSR on CFP is indirect and is mediated by a third factor, if not multiple ones.

The other stream of research focuses on certain contingent effects of firm-specific variables between CSR and CFP, such as advertising spending and R&D budget–marketing efforts (McWilliams and Siegel, 2001; Luo and Bhattacharya, 2009). This stream of research concludes that the effect of CSR on CFP should be moderated by firm-specific factors.

Although these two streams of research contribute to our understanding of the CSR–CFP relationship, CSR researchers have paid surprisingly little attention to incorporating these two streams of research, thereby failing to advance or provide a more holistic view on this CSR–CFP relationship. Note that the research on the mediating effects alone can explain the underlying mechanism between the two constructs, but cannot sufficiently explain the differing effects of CSR on CFP (i.e. positive, negative, or insignificant[1]). In addition, the research on moderating effects alone can explain why the impacts of CSR are inconsistent,

but cannot provide evidence on *how* either the positive or negative effects of CSR occur. Therefore, we argue that it is worth simultaneously examining these two types of intervening factors in a single model, and providing a deeper understanding of the connection between CSR and CFP – *how* and *why* a firm's CSR initiatives affects its financial performance. Yet, very little is known about how these moderation and mediation processes work together.

When both processes (i.e. mediation and moderation) are simultaneously considered in a single model, the combination can result in either of the two completely different outcomes, such that either the moderation is mediated (i.e. the mediated moderation model) or the mediation is moderated (i.e. the moderated mediation model) (Muller *et al.*, 2005). Clarifying this question is especially important in understanding the CSR–CFP link. If the case is a mediated moderation, it may suggest that the magnitude of the overall effect of CSR on CFP is relatively more dependent on a moderating variable, such that the moderator – a firm-specific condition – is the key to yielding a positive contribution to CFP. In other words, investment in CSR can have a meaningful impact on its CFP only for some, but not all, groups of firms. However, if it is a moderated mediation, the mediator, which may vary by the level of a moderator, is more responsible for producing the positive effect of a firm's CSR on its financial returns, compared to the moderator. In the current research, we attempt to answer this question and provide a more holistic view of the processes in which a firm's investment in CSR can yield positive financial outcomes. Such an understanding is needed not only to add to the literature on the CSR–CFP relationship, but also to provide practitioners with a clear answer to the question of whether CSR is worthwhile, *and* if so, how it should be carried out to maximize its contribution to CFP.

To test whether moderation is mediated (i.e. the mediated moderation model) or mediation is moderated (i.e. the moderated mediation model) regarding the simultaneous effects of CR and marketing capability (MC, hereafter) on the relationship between CSR and CFP, our current research employs signaling theory in building our conceptual framework.

Specifically, signaling theory (for multiple stakeholders' perspectives) guides us to theorize a single moderated mediation model in the conceptual framework, which simultaneously incorporates both the mediating effect of CR and the moderating effect of MC into the relationship between CSR and CFP. In this conceptual framework, which theorizes a single moderated mediation model, a firm's CR plays a mediating role in the relationship between CSR and CFP (i.e. the indirect effect of a firm's CSR on CFP through its CR, leading to CSR–CR–CFP links), such that CR, which is shaped by CSR and serves as a quality signal, promotes the firm's unobservable quality information to its shareholders and enhances shareholders' expectations for the corporation's future financial performance[2]. Moreover, the conceptual framework theorizes that the firm's MC exclusively moderates the A path (i.e. the link between CSR and CR) because CSR has more to do with enhancing CR from the customers' perspectives. However, it is unlikely to moderate the B path (i.e. the link between CR and CFP), given that shareholders rather than customers play a more important role in terms of the B path.

Put differently, our conceptual framework suggests that when a firm has a higher level of MC, the indirect effect of a firm's CSR on CFP via CR is enhanced, inasmuch as the resulting synergies between CSR and MC (which can deliver high-quality signals to consumers) can enhance the firm's overall CR among consumers. This earned reputation, which can deliver high-quality signals to shareholders, finally results in positive financial outcomes. We provide more details behind the theorization of our conceptual framework regarding the relationships among these four variables in the next section. We depict our conceptual model in Figure 1 below.

The contribution of the current research is twofold. First, we provide a more comprehensive, holistic view on the CSR–CFP relationship by simultaneously examining both the mediating
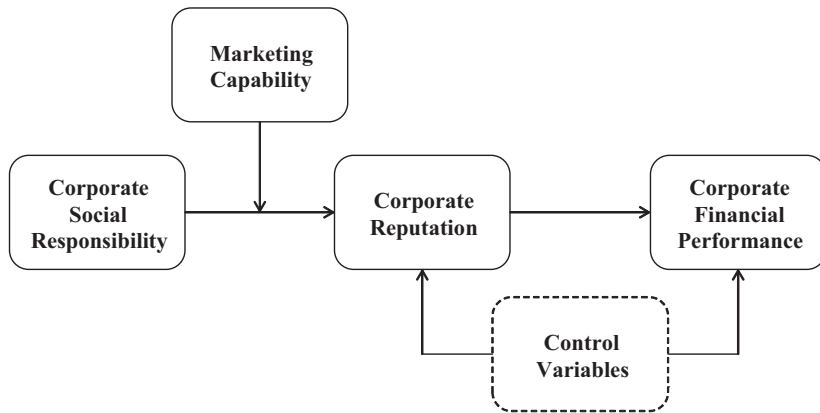
effect of CR and the moderating effect of MC on the CSR–CFP link. As mentioned above, when we consider both mediation and moderation processes in a single model, we may combine them in theoretically informative ways – whether the relationship is a mediated moderation or a moderated mediation model. Clarifying this question is important in the context of the CSR–CFP link, given that it can yield significantly different outcomes. If the case is a mediated moderation, then the effect of CSR on CFP is highly, if not entirely dependent on MC, such that MC is the key to yielding a positive impact of CSR on CFP. Put differently, without great MC, a firm's investment in CSR would be meaningless in terms of financial returns. If it is a moderated mediation, however, we can conclude that CR (the mediating process), which depends on how great a firm's MC is, will be more responsible for producing a positive effect of CSR on CFP. That is, a great CR may be the key for a firm to yield positive CFP through its investment in CSR. In short, although both CR and MC can play major roles in the CSR–CFP link, the key factor should differ, based on whether the link follows the moderated mediation or the mediated moderation model. Hence, it is significantly important to clarify and provide evidence for either of the relationships between the moderator and mediator in the CSR–CFP link. Based upon signaling theory, we provide our theoretical background regarding why the intervening process in the CSR–CFP link must be a moderated mediation (instead of a mediated moderation) in the proposed conceptual model in the following section.

Second, the current research also contributes to business practices. Since investment in CSR does not guarantee favorable financial returns, as documented in both the literature and practices, it is necessary for practitioners to understand the immediate outcomes of CSR activities, which may eventually contribute to CFP. As such, firms can provide their stakeholders with justifications of huge CSR investments. Additionally, marketing practitioners may be able to customize their CSR messages for more effective communication under certain firm-specific conditions. The findings of the current research will provide practitioners with better ideas on where to allocate their resources to amplify and maximize the effects of their CSR efforts for better financial returns.

Conceptual framework and hypotheses development
Stakeholder orientation for corporate social responsibility
There has been a need for marketing to implement the extended scope of the stakeholder orientation (e.g. employees, suppliers, customers, and shareholders) rather than the narrower scope of market orientation, which typically focuses on a single key stakeholder –

customers (Maignan *et al.*, 2005). Undoubtedly, however, most approaches in marketing have chosen to meet the needs/interests of (if not only) customers (Maignan and Ferrell, 2004)[3]. Nevertheless, the scope of CSR with regard to stakeholders aims to expand beyond customers, given that not only the marketing function of a firm, but also the firm as a whole is accountable to society (as defined by CSR). Thus, CSR initiatives should be implemented at the corporate level. Consequently, the audience of a firm's CSR encompasses a broader set of stakeholders, which is not limited to customers (Mish and Scammon, 2010).

However, most of the "immediate" outcomes of a firm's CSR initiatives, as documented in the extant literature, are customer-centric variables – to name a few, the two most extensively identified are customer satisfaction and CR (Galbreath and Shum, 2012; Luo and Bhattacharya, 2006). Of importance, there are several firm-level outcomes found in the literature, such as competitive advantage and firm performance. Yet, past research shows that these consequences originate from customer-oriented variables, i.e. a high level of customer satisfaction and/or CR resulting from a firm's successful CSR initiatives (Anderson and Sullivan, 1993; Matzler and Hinterhuber, 1998; Walsh *et al.*, 2006). We adopt this approach in the current research – we suggest that a firm's embracement of CSR will directly appeal to customers first, whose effect will depend on the firm's MC. These changes within customer perceptions will finally produce changes in its financial performance. In other words, a firm's CSR initiatives will initially have a direct impact on the single key stakeholders only – customers – but the changes in these stakeholders' minds will be appreciated by other stakeholders (e.g. shareholders), and the CSR initiatives will finally affect the firm's performance (i.e. CFP). In theorizing this, we build our conceptual model, drawing upon the signaling theory framework.

Signaling theory in the corporate social responsibility–corporate financial performance link
Whenever it is appropriate and beneficial to firms, they will attempt to signal their information not only to their customers, but also to a wide range of stakeholders (Connelly *et al.*, 2011), to potential investors (Filatotchev and Bishop, 2002; Certo, 2003), and to potential acquirers (Coff, 2002). Signaling theory underlies a situation in which two or more parties (e.g. a firm and its stakeholders) intend to reduce information asymmetry to achieve more beneficial outcomes (Stiglitz, 2002); otherwise, the parties may end up with suboptimal outcomes (Spence, 2002; Connelly *et al.*, 2011). Over the decades, signaling theory has made prominent contributions to the management literature[4].

Relatively recently, marketing academics have begun applying signaling theory in diverse marketing contexts. For instance, Schlosser *et al.* (2006) find that different marketing signals influence consumers' trust, benevolence and integrity beliefs, thereby influencing their purchase intentions. More specifically, online buyers are affected by website design (Schlosser *et al.*, 2006), and online auction participants are affected by the auction system's institutional features (Li *et al.*, 2009) given that consumers see the website design and auction system features as quality signals of the online store/auction system. This stream of research suggests that these subtle signals are used as important marketing communication tools for practitioners to minimize information asymmetry, and thus, build trust in them.

With respect to CSR, previous research suggests that a firm's CSR initiatives may increase its CFP most likely by signaling the firm's superior capability in "filling institutional voids" for investors (Su *et al.*, 2016) and/or by signaling firms' reputation and organizational commitments to employees for their current and potential employees. (Albinger and Freeman, 2000; Chong and Tan, 2010). However, this stream of research limits its scope to specific stakeholder groups (i.e. investors and employees).

Surprisingly, no prior research on the CSR–CFP relationship has used signaling theory with the customer perspective – the primary stakeholder of a firm's marketing initiatives. In the current research, we employ signaling theory in building our conceptual model, which incorporates multiple stakeholders, including customers. In doing so, we focus on the capability of a firm's marketing function. We argue that using the signaling theory framework is crucial in the CSR–CFP link, especially when MC is incorporated into the model, given that MC can play an important role in communicating a firm's CSR initiatives with its customers, which can later determine the (level of) beneficial CSR consequences (e.g. CR) that concern other stakeholders.

The mediating effect of corporate reputation
There have been several different views on understanding the underlying mechanism for the relationship between CSR and CFP. For example, one stream of research shows that CSR leads to higher customer satisfaction, which eventually translates into higher firm performance (Fornell *et al.*, 2006; Luo and Bhattacharya, 2006). However, this research limits, at least to a certain level, the scope of the CSR audience into a single stakeholder – customers (Brown and Dacin, 1997). Note that, however, as suggested in the literature, many CSR initiatives go "beyond customers" – the audience of a firm's CSR encompasses a broader set of stakeholders, and is not limited to customers (Mish and Scammon, 2010). Relatively more recently, another stream of research has focused on the "broader" consequences of CSR and shows that CR is a critical interim process between CSR and CFP (Galbreath and Shum, 2012; Robinson *et al.*, 2011; Saeidi *et al.*, 2015). Indeed, Galbreath and Shum (2012) find that although CSR affects both CR and customer satisfaction, only reputation mediates the relationship between CSR and CFP. Therefore, CR is one of the most important underlying mechanisms in understanding the CSR–CFP relationship.

In this mediating role of CR, two distinct relationships exist: CSR and CR (A path, hereafter) and CR and CFP (B path, hereafter). Signaling theory plays an important role in theorizing both the A and B paths. First, Fombrun and Shanley (1990) introduce informational signals as the antecedents of reputation, albeit not in the context of CSR. Given that a firm's CSR activities can produce certain informational signals about the firm values and its products/services, we argue that these signals can have particular impacts on the firm's stakeholders, especially for its customers. In addition, although prior research on CSR is not built on signaling theory, it also suggests a positive relationship between CSR and CR. Williams and Barrett (2000) contend that a firm's CSR (i.e. corporate giving) has a positive effect on CR (i.e. Fortune's Corporate Reputations). In a similar vein (but in a different context), Robinson *et al.* (2011) provide evidence that CSR (i.e. Dow Jones Sustainability Indices, or DJSI, membership) can create a positive CR. Furthermore, research finds that a firm's CSR can send positive signals to its stakeholders to evaluate the firm's potential value (King *et al.*, 2005; Montiel *et al.*, 2012). In sum, we predict that the positive signal, stemming from a firm's CSR activities, can affect its reputation.

Second, with regard to the B path, there is cumulative evidence suggesting that CR has a positive influence on CFP, where CR is often operationalized as CSR performance measurement (Margolis and Walsh, 2003; Pava and Krausz, 1996). The reputation literature also supports this relationship between CR and CFP (De la Fuente Sabaté and De Quevedo Puente, 2003). In this path, CR can provide various groups of relevant stakeholders with strong informational signals about the firm (Boulding and Kirmani, 1993; Fombrun and Shanley, 1990; Rao *et al.*, 1999; Roberts and Dowling, 2002). As such, the firm's reputation can signalize underlying quality information, influence favorable evaluations of the firm from its stakeholders, and in turn, enhance stakeholders' responsiveness to the firm's CSR

programs. Note that in the literature, CR is mainly considered as an intangible asset (Black *et al.*, 2000), and even as brand equity (Srivastava *et al.*, 1997). Research documents that this relational asset has a positive influence on competitive advantage, such as CFP, given that the reputation is valuable, rare, and even difficult for rivals to imitate; moreover, it is not substitutable by others (Roberts and Dowling, 2002; Srivastava *et al.*, 2001). Further, according to signaling theory (Connelly *et al.*, 2011; Spence, 2002), when two different quality signals (i.e. CSR and CR together) deliver congruent messages to stakeholders, they can synergistically enhance the effectiveness of the informational signals – i.e. a dual (multiple) signaling effect (Gao *et al.*, 2008). Consequently, the firm's investors are likely to evaluate the firm's higher level of CR favorably and to express a higher level of future expectation regarding the firm's cash flow.

By simultaneously considering the two consecutive relationships, we expect that a firm practicing CSR initiatives will be recognized more by its stakeholders, and thus, will elicit a positive reaction from its relevant stakeholders. Institutional signals allow the firm to gain a high CR, compared to its competitors. This CR, as a market-based asset, will enable the firm to achieve positive financial returns. As such, we propose the following hypothesis:

H1. A firm's CSR has a positive indirect effect on CFP through CR.

The moderating role of marketing capability

MC refers to the firm's ability to implement marketing activities such as market research, advertising, promotions, customer relations, sales efforts and so on (Dutta *et al.*, 1999; Vorhies and Morgan, 2005).

As discussed earlier, previous research documents that CSR initiatives do not universally generate the same performance impacts for all firms, which suggests that firm-specific factor(s) may significantly (if not entirely) decide the effect of CSR on CFP. Indeed, Luo and Bhattacharya (2009) find that the positive effect of CSR on CFP is greater among firms with higher advertising spending (i.e. the interaction between CSR and advertising spending has a significant impact on firm-idiosyncratic risk[5]). Similarly, McWilliams and Siegel (2001) argue that a firm's advertising and R&D budget provide a firm-specific context to the CSR–CFP link.

Drawing upon this stream of research, we predict that CSR has differential effects on CFP, depending on a firm's MC (note that a firm's investment in R&D is often considered as one of the key strategic marketing levers; Luo and Bhattacharya, 2009). In other words, the current research focuses on the moderating role of MC in the context of the CSR–CFP link. Note that, however, although the current research is built on Luo and Bhattacharya's (2009) work, it is different from their research, in that it clarifies the important, unanswered issue of whether a firm's greater MC enhances either the effect of CSR on CR (i.e. arguably, an intangible asset), or the effect of CR on CFP (i.e. a tangible asset[6]). Recall our previous discussion of the two consecutive paths depicting the underlying process in the CSR–CFP link (i.e. CSR to CR and CR to CFP). The key distinction with respect to the two paths is the "level" of the outcomes of a firm's CSR initiatives: the outcome of CSR in A path is enhanced CR, which is considered as an intangible benefit, whereas that of CSR in B path is greater CFP, which is an immediately tangible benefit. Indeed, the advertising literature documents that such marketing activities as advertising can both result in an intangible market-based asset (e.g. creating competitive barriers/advantages; Mizik and Jacobson, 2003) and can directly create such tangible assets as increased stock returns, even after controlling for the impact of advertising on sales (Luo, 2008). Given that either type of asset is often more desirable than the other, depending on the firms and/or situations in a given time, it is

important to clarify which types of outcomes MC "helps" to produce in the CSR context. In other words, where, between the two paths in the CSR–CFP link, does MC manifest itself as a moderator? We predict that MC plays an important role exclusively in the A path – it moderates the effect of CSR on CR – for the following two reasons.

First, compared to firms with lower marketing capabilities, firms with greater marketing capabilities can enjoy more information channels to communicate their CSR initiatives with their stakeholders (Dutta *et al.*, 1999; Vorhies and Morgan, 2005). Note that not only does this wider range of channels contribute to broadening firms' information dispersion, but it also helps firms' stakeholders have more *frequent* exposure to their CSR activities. This repetitive exposure, in turn, would help create firms' mental representations (e.g. "Toyota produces the Prius, which is a clean energy and fuel-efficient car" → "Toyota is a company that produces clean energy and fuel-efficient cars") and would make these mental representations salient in the stakeholders' minds. Since mental representations are associative networks in memory (Anderson, 1983; Collins and Loftus, 1975) (spreading activation theory of memory), they are likely to bias/influence subsequent judgments with some degree of abstraction (Houston and Fazio, 1989). As such, they are likely to facilitate (versus hinder) the influence of a firm's CSR initiatives on stakeholders' perceptions about and subsequent judgments regarding the firm's goodwill by strengthening the associative network in their minds ("Toyota – doing good things"). We expect that this abstracted, but fortified association between the target ("Toyota") and the evaluation ("good") in stakeholders' minds is likely to boost the effect of CSR on CR. In contrast, we expect that a firm with a lower level of MC would not fully enjoy the facilitating effect of MC, not only because of its limited information channel range – a possibility in which stakeholders would not hear about its CSR initiatives – but also because of the lack of repetitive exposure to CSR information. In sum, a firm's greater (versus lower) MC would enhance the effect of its CSR activities on its CR by providing its stakeholders with repetitive exposure to information about its CSR activities.

Marketing strategies, to a certain extent, apply signaling approaches to achieve their objectives: each element of the marketing 4P's works as a signal to minimize information asymmetry. A firm communicates all 4P's, to a certain degree, with its signal receivers (i.e. stakeholders). In fact, such communication is one of the most important marketing processes in achieving the objectives of a firm's marketing program. In addition, research finds that although a firm's CSR initiatives can send positive signals to its stakeholders, especially customers, the strength of such signals may vary by different institutional capabilities (King *et al.*, 2005; Montiel *et al.*, 2012; Su *et al.*, 2016).

Hence, by building on signaling theory, we expect that the greater MC a firm has, the more likely it will be to minimize information asymmetry, and thus, the more the firm will enjoy the positive impacts of the firm's CSR initiatives on its reputation. Put differently, the additive signaling effect resulting from differing levels of firms' MC will be captured by a significant interaction between CSR and MC on CR. Note that we expect this interaction to emerge only in the A path (i.e. CSR to CR). Given that a firm's reputation is not an independent element of its marketing initiatives (rather, it is a consequence of the marketing activities), it does not *directly* signal, by itself, a firm's value to shareholders – rather, it is the result of a firm's value signals created by the firm's CSR and marketing initiatives. In other words, the current research proposes that a firm's CSR and its MC are likely to interact with each other so as to synergistically enhance the firm's reputation.

In sum, our contention with regard to the role of MC is twofold. First, we hypothesize that for the A path between CSR and CR, MC makes informational signals (i.e. the strategic

signals of CSR and institutional signals of being ethical and socially normative) more salient, which, in turn, helps creates a positive CR among stakeholders.

> *H2.* A firm's CSR efforts will be positively associated with the level of CR, and this association will be stronger when the firm possesses a higher level of MC than when it possesses a lower level of MC.

Second, the indirect effect of CSR on CFP through CR and the moderating effects of MC (as depicted in Figure 1) lead us to hypothesize a conditional indirect effect (a.k.a., moderated mediation; see Hayes, 2013; Preacher *et al.*, 2007). We predict that a firm with greater MC can expect a higher reputation from CSR practices and stronger CFP from its reputation. Therefore, we propose the following hypothesis:

> *H3.* A firm's CR, which is moderated by its MC, will positively mediate the effect of the firm's CSR efforts on its CFP, and this moderated mediation mechanism will be stronger when the firm possesses a higher level of MC than when it possesses a lower level of MC.

Research methodology
Data collection
We used multiple sources of data by adopting existing measures of the constructs of interest from the literature. A proxy for a firm's CSR measurement was constructed using the Kinder, Lyndenberg and Domni (KLD) Research and Analytics, Inc. dataset. CR was measured by Fortune's Most Admirable Company (MAC) index. All other variables, including MC, CFP (Tobin's Q) and control variables were measured using The Center for Research in Security Prices (CRSP) and Standard and Poor (S&P)'s COMPUSTAT databases. We used the lagged values of the variables to improve the explanatory power in the model, as well as to avoid a possible reverse causality issue (Luo and Bhattacharya, 2009). Regarding the timeframe for our datasets, the latest publicly available reputation data (i.e. Fortune's MAC) are from 2011-2012. For the later years, Fortune does not fully release the MAC data for the companies in consideration for this paper. Therefore, our study used the most up-to-date, publicly available datasets. After matching three different datasets, we tested our model with a sample size of 265 firms in eight different industries.

Measures
Corporate social responsibility. We measured CSR in 2011 using KLD data. We followed the CSR measure in the literature (Hillman and Keim, 2001; Jayachandran *et al.*, 2013), such as measuring CSR scores by the difference between the scores of strengths and concerns. Furthermore, we considered the difference between the ratios of the strength and concern scores over the number of possible questions in each KLD category (refer to Table I). In this way, we could avoid misinterpreting the raw scores by ignoring the denominating factors, and could appropriately evaluate the firm's CSR scores.

Corporate reputation. We measured a firm's CR with Fortune's MAC index, following the reputation measure in the literature (Roberts and Dowling, 2002). Among the 1,000 largest USA companies by revenue, the top executives, directors, and analysts in each industry are asked to evaluate the companies according to the various categories, ranging from investment to social values. We used the natural logged value of each firm's 2012 MAC index as a proxy for CR.

Variables	Measures	Data source
CSR	$$CSR_i = \sum_j \ln\left[1 + \left(\frac{Sum\ of\ Scores_{strengths.j}}{1 + Number\ of\ Questions_{strengths.j}}\right.\right.$$ $$\left.\left. - \frac{Sum\ of\ Scores_{concerns.j}}{1 + Number\ of\ Questions_{concerns.j}}\right)\right],$$ where, CSR_i is firm$_i$'s corporate social performance, and j represents seven major categories in the KLD data (i.e., community, corporate governance, diversity, employee relations, environment, human rights, and product). This approach takes into account both the strengths and concerns of a firm's CSR practices in the seven areas. We use the 2011 KLD data to measure each firm's CSR score	*KLD Research and Analytics, Inc.*
MC	Following Dutta *et al.* (1999), Stochastic Frontier Estimation (SFE) is employed to measure MC. Here, we use the technical efficiency of the Frontier Regression Estimation as a proxy for MC in 2011	*COMPUSTAT*
CR	A firm's Fortune's Most Admirable Company index (Roberts and Dowling, 2002), which was announced in 2012	*Fortune's MAC*
CFP	$Tobin's\ q_{it} = (Share\ price_{it} \times Common\ Stock\ Outstanding_{it}$ $+ Liquidation\ value\ of\ preferred\ stock_{it}$ $+ Short\ term\ liabilities_{it} - Short\ term\ assets_{it}$ $+ Long\ term\ debt_{it})/Total\ assets_{Book\ value,it}$ This represents investor expectations regarding the risk-adjusted future cash flows of firm i in year t. Here, we use each firm's Tobin's q in 2013 as a proxy for CFP	*CRSP/ COMPUSTAT*

Table I.
Measures of the main variables

Marketing capability. We obtained a firm's financial data from COMPUSTAT. Stochastic Frontier Estimation (SFE) was employed to calculate MC (Dutta *et al.*, 1999). A firm's sales revenue in 2011 was regressed on the past 5 years' Koyck-lagged[7] values of its advertising stock, R&D stock, and marketing expenses. Using Frontier Regression Estimation, we obtained the calculated technical efficiency for each firm, representing the efficiency of the marketing inputs on the marketing outcomes (revenue). We used the natural logged value as a proxy for each firm's MC.

Corporate financial performance. Tobin's Q in 2013, as a market-based measurement of CFP, was computed as the return on assets evaluated by the market, explaining the efficiency of inputs from shareholders and bondholders in the market value, inasmuch as the share price in the market represents the present value of the future cash flow that a firm can generate (Anderson *et al.*, 2004; Morgan and Rego, 2009). The natural logged Tobin's q in 2013 was used as a proxy for each firm's CFP.

Control variables. We included the natural logged values of each firm's past period return on assets (ROA), measured by the firm's net income over total assets in 2011, to control for the alternative explanation of CR and CFP. Following the literature, we included the *resource slack* in the analyses (Fang *et al.*, 2008) to account for firm size. The factor scores between two financial ratios: retained earnings to total assets and working capital to total assets indicate the extent of firm resources that can be devoted to building up the CR and sustaining a profitable business, while controlling for firm size. The larger firms have greater retained earnings and working capital; thus, the resource slack enables us to control

for both firm size and each firm's resource availability. We included the natural logged values of *industry growth* (the past four years of revenue growth in the four-digit SIC industry, which is standardized by the average industry revenues), *industry turbulence* (the ratio of the standard deviation of the revenues in 4-digit SIC industry firms over the average industry revenue), and *industry competitiveness* (one minus the Herfindahl index), consistent with the literature (Fang *et al.*, 2008; Finkelstein and Boyd, 1998). We controlled for industry fixed effects by including industry dummy variables. Following the SIC Division Structure (OSHA.GOV), our sample includes: Divisions B (Mining), C (Construction), D (Manufacturing), E (Transportation, Communications, Electric, Gas, and Sanitary Services), F (Wholesale Trade), G (Retail Trade), I (Services) and K (Others). We set the SIC Division D as a reference group. We used the ROA and the industry variables to control for both CR and CFP. We report a summary of the descriptive statistics with the correlation matrix among the variables in Table II. Multicollinearity does not seem to be an issue, as there is no significantly high correlation between the variables.

Model specification
We estimated our model as follows: the moderation effect of MC on the relationship between CSR and CR; the effect of CR on CFP after controlling for the effect of CSR and MC, along with the other control variables. Path analysis is a special form of structural equation model (SEM) with the assumption of no measurement error. We only had observed variables (i.e., proxy variables measured from the secondary data sources) in the estimations. We employed SEM estimations for the path analysis, as suggested in the literature (Hayes, 2013). Then, we estimated the conditional indirect effect of CSR on CFP through CR, contingent on the level of MC using the bootstrap method, as the literature suggests (Hayes, 2013; Preacher *et al.*, 2007).

Whereas the normality-based estimation assumes an asymptotically normal distribution of error terms, with a mean of 0 and a variance of σ^2, the bootstrap approach is a resampling strategy without a normal assumption that reconstructs the distribution of the population via a number of iterating processes of the resampling (Zhao *et al.*, 2010). Since the variance of the interaction term cannot guarantee the normality assumption, the bootstrap approach is the most appropriate method to test

Variables	1	2	3	4	5	6	7	8	9
1. Tobin's Q (2013)	1								
2. CR (2012)	0.286*	1							
3. CSR (2011)	0.201*	0.218*	1						
4. MC (2011)	−0.304*	0.286*	0.152*	1					
5. Return on asset (2011)	0.642*	0.379*	0.158*	−0.128*	1				
6. Resource slack (2011)	0.278*	0.226*	−0.036	−0.128*	0.466*	1			
7. Industry growth (2011)	0.050	0.059	0.005	−0.040	0.148*	0.203*	1		
8. Industry turbulence (2011)	−0.062	0.041	−0.136*	−0.019	−0.096	0.056	−0.092	1	
9. Industry competitiveness (2011)	0.036	−0.081	0.075	0.021	0.022	−0.050	0.110	−0.892*	1
MEAN	0.883	1.957	−0.098	0.425	0.070	0.215	0.034	0.090	0.565
STD DEV	0.322	0.134	1.169	0.045	0.044	0.216	0.043	0.063	0.090
MIN	0.227	1.571	−3.954	0.315	−0.090	−0.717	−0.116	0.015	0.184
MAX	2.198	2.243	1.282	0.531	0.236	0.995	0.160	0.360	0.677

Notes: *$p < 0.05$; $N = 265$

Table II.
Descriptive statistics and correlation matrix

the conditional indirect effect (Hayes, 2013; Preacher *et al.*, 2007). Figure 2 depicts the statistical model for the overall estimation, reflecting the following two equations:

$$Reputation_{i.2012} = \alpha_0 + \alpha_1 CSR_{i.2011} + \alpha_2 MktCap_{i.2011} + \alpha_3 CSR_{i.2011}MktCap_{i.2011}$$

$$+ \alpha_4 ROA_{i.2011} + \alpha_5 Slack_{i.2011} + \alpha_6 IndGrw_{i.2011} + \alpha_7 IndTub_{i.2011}$$

$$+ \alpha_8 IndCom_{i.2011} + \sum_{k=9}^{15} \alpha_k Ind_k + \varepsilon_{repuration} \qquad (1)$$

$$CFP_{i.2013} = \beta_0 + \beta_1 Reputation_{i.2012} + \beta_2 CSR_{i.2011} + \beta_3 MktCap_{i.2011} + \beta_4 ROA_{i.2011}$$

$$+ \beta_5 Slack_{i.2011} + \beta_6 IndGrw_{i.2011} + \beta_7 IndTub_{i.2011} + \beta_8 IndCom_{i.2011}$$

$$+ \sum_{k=9}^{15} \beta_k Ind_k + \varepsilon_{CFP} \qquad (2)$$

where MktCap refers to MC, IndGrw to industry growth, IndTub to industry turbulence, IndCom to industry competitiveness, and Ind to industry dummies. The $\alpha's$ and $\beta's$ are the regression coefficients, and the $\varepsilon's$ are the error terms in the equations. The first equation explains the moderating effect of MC on the relationship between CSR and CR, holding the other variables constant. The second equation explains that CFP is explained by CR, CSR, and MC, holding the other variables constant. The conditional indirect effect (i.e. moderated mediation; Hayes, 2013; Preacher *et al.*, 2007), therefore, is calculated as:

$$Conditional\ Indirect\ Effect\ (\gamma_i) = \beta_1(\alpha_1 + \alpha_3 MktCap_{i.2011}) \qquad (3)$$
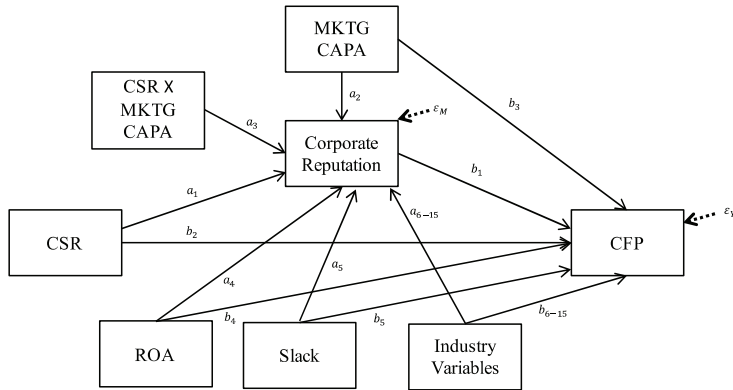
Notes: There are two endogenous variables (i.e. CR and CFP) and all other exogenous variables in the current model. We do not include the path from the interaction term between CSR and MC on CFP because the moderating effect of MC on the relationship between CSR and CFP is beyond the scope f the current research. Coefficients a6-15 and b6-15 of the industry variables include industry growth, industry turbulence, industry competitiveness and industry dummies

Figure 2.
Statistical form of the empirical model

Empirical results

We report the empirical results of the estimation of our model above in Table III. The concurrent estimation of both equations (1) and (2) using SEM has a statistically significant chi-square value, satisfying the model fit, and the explanatory variables in both equations explain over 35 per cent of the variance of the dependent variables in the equations (i.e. CR and CFP). We checked the variance inflation factor (VIF) for each explanatory variable. Multicollinearity is not an issue in our estimations. We checked the heteroscedasticity using the Cook–Weisberg test, confirming no concern regarding heteroscedasticity. Taken together, these measures allowed us to interpret subsequent analyses of the model.

The estimation results (i.e. mediation only model; CSR–CR–CFP) indicate that the estimated coefficient of CSR on CR without the interaction term ($B = 0.017$, $p < 0.01$) is statistically significant and positive (see the first column of estimations in Table III). In addition, the effect of CR on CFP (see the second or fourth column of the estimations in Table III) is statistically significant and positive, holding the other variables constant ($\beta 1 = 0.526$, $p < 0.001$). Considering these estimation results simultaneously, we found that *H1*, regarding the mediating effect of CR in the CSR–CFP link, was supported. With regard to *H2*, the result showed that the moderating effect of MC on the CSR–CR link, represented by the coefficient of the interaction term between CSR and MC, was statistically significant and positive ($\alpha_3 = 0.080$, $p < 0.05$) (see the third column of the estimations in Table III; equation (1)). Therefore, *H2* was supported.

| | Mediation only model | | | | Moderated mediation model | | | |
| | CR | | CFP | | CR equation (1) | | CFP equation (2) | |
	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)
Explanatory variables								
CR			0.526	(0.120)***			0.526	(0.120)***
Corporate Social Responsibility	0.017	(0.006)**	0.024	(0.013)	−0.008	(0.013)	0.024	(0.013)
MC	0.781	(0.166)***	−2.094	(0.337)***	0.793	(0.165)***	−2.094	(0.337)***
CSR × MC					0.080	(0.036)*		
Control variables								
ROA	1.110	(0.179)***	3.871	(0.374)***	1.104	(0.178)***	3.871	(0.374)***
Resource slack	0.070	(0.037)	−0.050	(0.073)	0.066	(0.037)	−0.050	(0.073)
Industry growth	0.063	(0.169)	−0.302	(0.330)	0.093	(0.168)	−0.302	(0.330)
Industry Turbulence	−0.063	(0.259)	0.605	(0.506)	0.041	(0.261)	0.605	(0.506)
Industry Competitiveness	−0.162	(0.176)	0.336	(0.344)	−0.113	(0.176)	0.336	(0.344)
SIC Div. B	0.007	(0.039)	−0.125	(0.077)	0.025	(0.040)	−0.125	(0.077)
SIC Div. C	0.101	(0.064)	−0.133	(0.126)	0.112	(0.064)	−0.133	(0.126)
SIC Div. E	0.012	(0.024)	0.105	(0.047)*	0.017	(0.024)	0.105	(0.047)*
SIC Div. F	0.012	(0.027)	−0.060	(0.054)	0.008	(0.027)	−0.060	(0.054)
SIC Div. G	−0.077	(0.021)***	0.199	(0.042)***	−0.072	(0.021)***	0.199	(0.042)***
SIC Div. I	−0.033	(0.020)	0.074	(0.039)	−0.024	(0.020)	0.074	(0.039)
SIC Div. K	0.046	(0.065)	−0.002	(0.127)	0.045	(0.065)	−0.002	(0.127)
Constant	1.642	(0.146)***	0.203	(0.346)	1.586	(0.147)***	0.203	(0.346)
N	265				265			
LR χ^2 (Baseline vs. Saturated)	332.077				342.126			
d.f.	29				31			

Table III.
Results of the SEM (path analysis) model estimation

Notes: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$ SEM estimation for path analysis with a sample size of 265. SIC Div. D is the reference group for the other seven industry dummies

Table IV shows the results of the conditional indirect effect estimation. We tested *H3* using two different approaches, following the literature (Hayes, 2013; Preacher *et al.*, 2007). We ran the normality-based estimation of equation (3); the results showed that the indirect effect of CSR on CFP through CR is positive and statistically significant; moreover, it becomes stronger when MC increases. We then applied the bootstrap approach to re-estimate the standard errors of the conditional indirect effect. After running 4,861 sampling iterations out of 5,000 attempts in the bootstrap approach, the estimation could be converged[8]. When MC was 1) one standard deviation below the mean; 2) at the mean; and 3) one standard deviation above the mean, the indirect effects (γ_i) were positive and statistically significant: 1) $\gamma_{i\_low} = 0.0118$, $p < 0.05$; 2) $\gamma_{i\_mean} = 0.0137$, $p < 0.01$; 3) $\gamma_{i\_high} = 0.0156$, $p < 0.01$, respectively, which indicates that the indirect effects will be stronger when the firm possesses a higher level of MC versus a lower level of MC. Thus, the bootstrap estimation result supported *H3*.

A remaining unanswered question is whether MC can play a moderating role in the B path of the mediation (see this conceptual model in the Appendix). We empirically tested this possible mediated moderation effect of CR and MC on the CSR–CFP link in Model Specification 2 of Table V, where MC enters into the second equation of the model. We report the empirical results of this model (Model Specification 2, which investigates the mediated moderation effect) with the original model (Model Specification 1, which explores the moderated mediation effect) [9] in Table V. These results indicate that the coefficient of the interaction term between CR and MC did not approach statistical significance (*-4.206, n.s.*). Thus, we conclude that the mediated moderation effect does not hold, but the moderated mediation effect holds for our answer to the question of whether MC plays a moderating role for the first path (i.e. the CSR–CR link) or the second one (i.e. the CR–CFP link) in the relationships of CSR-CR–CFP.

Taking these results together, we can confirm our conceptual model in Figure 1 and conclude that the impact of CSR on CFP is driven by the moderated mediation mechanism. In the following section, we review the general results of the current research and discuss the theoretical and managerial implications of these findings.

General discussion

Contribution to theory

Researchers have attempted to establish a direct and/or consistent relationship between CSR and CFP for more than two decades (Margolis and Walsh, 2003). To address the inconsistent findings in the CSR–CFP link, some researchers have questioned the approach adopted by the majority of researchers, which has examined the direct relationship between CSR and CFP and has contended that the relationship should be more complex than the previous research has found (Luo and Bhattacharya, 2006; Margolis and Walsh, 2003; Saeidi *et al.*, 2015).

MC (2011)[a]	Normality-based estimation[a]	Bootstrap[b]
Low	0.0118 (0.0045)**[c]	0.0118 (0.0047)*
Mean	0.0137 (0.0050)**	0.0137 (0.0053)**
High	0.0156 (0.0057)**	0.0156 (0.0060)**

Notes: *$p < 0.05$; **$p < 0.01$; two-tailed estimation; unstandardized coefficients with (bootstrap) standard errors are in parentheses; [a]in the normality-based estimation, the delta method is used to obtain standard errors; [b]in the bootstrap estimation, 5,000 iterations are implemented to obtain the simulated standard errors in the model, and the estimation is converged after 4,861 iterations using Stata/IC 13.1; [c]For a different level of MC, the mean and mean ± 1 SD are used as high, mean, and low conditions, respectively (Hayes, 2013; Preacher *et al.*, 2007)

Table IV.
Conditional indirect effect analysis

	Model Specification 1: moderated mediation				Model Specification 2: mediated moderation			
	CR		CFP		CR		CFP	
	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)
Explanatory variables								
CR			0.526	(0.120)***			2.288	(0.946)*
CSR	−0.008	(0.013)	0.024	(0.013)	0.017	(0.006)**	0.022	(0.013)
MC	0.793	(0.165)***	−2.094	(0.337)***	0.781	(0.166)***	6.140	(4.399)
CSR × MC	0.080	(0.036)*						
Reputation × MC					−4.206	(2.240)		
Control variables								
ROA	1.104	(0.178)***	3.871	(0.374)***	1.110	(0.179)***	3.943	(0.374)***
Resource slack	0.066	(0.037)	−0.050	(0.073)	0.070	(0.037)	−0.043	(0.073)
Industry growth	0.093	(0.168)	−0.302	(0.330)	0.063	(0.169)	−0.326	(0.328)
Industry turbulence	0.041	(0.261)	0.605	(0.506)	−0.063	(0.259)	0.580	(0.503)
Industry competitiveness	−0.113	(0.176)	0.336	(0.344)	−0.162	(0.176)	0.320	(0.342)
SIC Div. B	0.025	(0.040)	−0.125	(0.077)	0.007	(0.039)	−0.131	(0.076)
SIC Div. C	0.112	(0.064)	−0.133	(0.126)	0.101	(0.064)	−0.129	(0.125)
SIC Div. E	0.017	(0.024)	0.105	(0.047)*	0.012	(0.024)	0.107	(0.046)*
Sic Div. F	0.008	(0.027)	−0.060	(0.054)	0.012	(0.027)	−0.061	(0.053)
SIC Div. G	−0.072	(0.021)***	0.199	(0.042)***	−0.077	(0.021)***	0.210	(0.042)***
SIC Div. I	−0.024	(0.020)	0.074	(0.039)	−0.033	(0.020)	0.070	(0.039)
SIC Div. K	0.045	(0.065)	−0.002	(0.127)	0.046	(0.065)	0.005	(0.127)
Constant	1.586	(0.147)***	0.203	(0.346)	1.642	(0.146)***	−3.235	(1.863)
N	265				265			
LR χ^2 (Baseline vs Saturated)	342.126				1434.125			
d.f.	31				31			

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; SEM for the path analysis with a sample size of 265; Model 1 tests the conceptual model of the paper – the moderated mediation; Model 2 tests the alternative model – the mediated moderation

Table V.
Results of the moderated mediation effect and mediated moderation effect analyses

While recent research has attempted to investigate the underlying mechanism (meditation) in the CSR–CFP link and explore the roles of firm-specific contingent conditions, CSR academics have paid surprisingly little attention to incorporating these two streams of research, to the best of our knowledge.

However, it is crucial to simultaneously explore these two types of intervening factors within a single, integrated framework that can provide a deeper understanding of *how* and *why* a firm's CSR initiatives generate inconsistent results on its CFP, and test whether moderation is mediated (i.e. the mediated moderation model) or mediation is moderated (i.e. the moderated mediation model). To address this research gap, we used signaling theory in building a conceptual framework that theorizes a single, integrated moderated mediation model regarding the relationships among the four variables, where a firm's CR plays a mediating role in the relationship between CSR and CFP, and a firm's MC moderates the first link between CSR and CR instead of the second link between CR and CFP in the mediated links of CSR–CR–CFP. Our theoretical background regarding why the intervening process in the CSR–CFP link is a moderated mediation in the conceptual framework is based on the notion that the synergy between CSR and MC reduces the information asymmetry between a firm's socially responsible business practices and its customers. The amplified quality signal overall enhances the firm's CR. On the other hand, CR as a quality indicator of the

firm reduces shareholders' concerns about future performance expectations, increases the positive cash flow from shareholders, and in turn, results in positive CFP.

There have been two perspectives in regard to the roles played by CR in signaling theory. The economics literature theorizes a signal as a firm's intended action to reduce the information asymmetry between the sender and the receivers (Akerlof, 1970; Spence, 1973). In this view, CR may not serve as a firm's quality signal because it is the outcome of deliberate firm efforts rather than the intended actions of signaling (e.g. CSR, marketing programs). In addition, it is argued in the emerging literature that the firm's reputation effectively signalizes the firm's unobservable quality (Boulding and Kirmani, 1993; Connelly et al., 2011; Fombrun and Shanley, 1990; Rao et al., 1999; Roberts and Dowling, 2002). For example, Connelly et al. (2011, p. 53) assert the following:

> One way firms gain legitimacy is by signaling their unobservable quality with prestigious boards of directors [Certo, 2003]. Somewhat related, others have described how firms attempt to gain a positive reputation over time as a signal of underlying quality [Coff, 2002; Deephouse, 2000].

We adopt the perspective of the emerging literature in our theorization on the mediated links of CSR–CR–CFP. Therefore, CR is not only an outcome of CSR and marketing programs in path A (i.e. CSR–CR), but also serves as a quality signal in path B (i.e. CR–CFP).

Our current research provides empirical evidence of these theorized relationships among the four variables. We would also like to emphasize that CR is a more appropriate quality signal of the firm and fits better with our current research framework (i.e. signaling theory) than other mediators. Although customer satisfaction can be another mediator among others (Galbreath and Shum, 2012), it is not readily available and does not successfully fill the information gap between a firm and its stakeholders. On the other hand, CR (earned reputation) is available to all levels of stakeholders and effectively links CSR and CFP under the signaling theory mechanism.

While empirically exploring these relationships, we found significant effects of CSR only on Tobin's q in our follow-up test, but not other performance measurements, such as accounting-based CFP (i.e. ROA or ROE), which accounts for resource efficiency. Retrospective accounting-based CFP cannot be explained by firm CSR or reputation, probably because the enormous consumption of the firm's resources by the CSR strategy is detrimental in gaining accounting competitiveness. On the contrary, Tobin's q is well legitimized in the extant literature as a measurement of future competitiveness, along with accounting for the efficiency of the resources in use[10]. Thus, this finding implies stakeholders' reactions to a firm's strategy with the positive expectation of future cash flows (Mizik and Jacobson, 2003).

Finally, our research controls for possible industry heterogeneity by including several industry variables that can effectively represent the characteristics of the industries in our empirical analyses. By doing so, the empirical findings from our study suggest the industry-generalized moderated mediation effects of CR (dependent on the level of MC) on the CSR–CFP link.

Contribution to practice

In addition to the theoretical contributions specified above, the current research provides managerial implications to practitioners. The findings of the current research suggest that firms involved in CSR programs should communicate their CSR programs to a great extent with their stakeholders so that they can maximize the positive impact of their CSR activities on the firms' reputation. Otherwise, poor MC can be detrimental to gaining CR, which may lead to competitive advantage in a relational horizon (Sen and Bhattacharya, 2001). These findings suggest that firms with CSR missions should build upon a higher level of MC to ultimately gain competitive advantage or to increase their CFP. Both a firm's CSR initiatives and marketing programs require

strong managerial commitment and the firm's internal resources (Sheth and Parvatiyar, 1995). Our study indicates that two congruent signals from both CSR and marketing synergistically enhance CR, which ultimately translates into greater financial performance. However, it does not suggest a tradeoff of resource allocation between CSR and marketing, nor the over-allocation of both while sacrificing other core business functions (e.g. R&D or other business operations). Rather, we suggest that firms need to develop a consolidated CSR-marketing program, simultaneously satisfying stakeholders' needs for both the firm's socially desirable business practices and value-creating marketing programs. In such a way, firms can balance their resource deployment across business functions and can sharpen their competitive edge in the marketplace.

Limitations and future research directions

The current research is not without limitations. First, as explored in prior research (Galbreath and Shum, 2012), customer satisfaction may play a mediating role in the relationship between CSR and CFP. However, this variable was not incorporated into our empirical analyses (which utilize secondary datasets) mainly because of data limitations. Specifically, we do not have, unfortunately, access to individual firm-level data on customer satisfaction in the ACSI (American Customer Satisfaction Index) database during the time period of our empirical analyses. It will be beneficial to incorporate customer satisfaction into the CSR–CFP framework in the future.

Second, the moderated mediation role of MC and CR might differ in the relationship between CSR and CFP, depending on which stakeholders (e.g. shareholders or customers) are investigated (Maignan et al., 2005). The current research incorporates the moderated mediation role of MC and CR in the CSR–CFP link. In the first CSR–CR link of the relationship (where MC plays the role as a moderator), how customers respond to the interaction between CSR and MC is important. That is, in the A path, customers' perspectives regarding CSR matter. Then, in the B path, shareholders/internal stakeholders' future expectations (as reflected in Tobin's Q), based on customer responses in the A path, are important. That is, shareholders' perspectives are important in the B path. As such, our framework incorporates the perspectives of both customers and shareholders. However, the current research did not incorporate actual customers' perception data, such as attitudinal loyalty, brand equity, CLV or other variables (Katsikeas et al., 2016) in the empirical model. It will be beneficial to incorporate actual buying from customer perspectives into the relationship between CSR and CFP in the future.

Third, different types of contingency conditions (other than MC), which may or may not alter the relationships of CSR–CR–CFP, can be examined, such as advertising capability, managerial excellence or a market-oriented firm culture.

Finally, we argue that CR is one of the most important underlying processes among other market-based assets, which narrowed our scope. We suggest that, in future research, a multiple, or serial mediation model can also be applicable for direct comparison among other market-based assets (e.g. customer satisfaction, accounting-based brand equity, and the like), to determine which intangible equity is the most critical in explaining the CSR–CFP relationship.

Notes

1. The CSR–CFP literature has shown inconsistent results on the impact of CSR on CFP (Kotler, 2011; Margolis and Walsh, 2003; Walley and Whitehead, 1994). Specifically, the CSR literature provides conflicting empirical evidence showing that the relationship between CSR and firm performance is either positive (Cheung et al., 2010; Luo and Bhattacharya, 2006), negative (Boyle et al., 1997; Mueller, 1991), mixed (Hillman and Keim, 2001), or insignificant (Aupperle et al., 1985; Cheung and Mak, 2010).

2. Emerging literature supports the notion that CR serves as a quality signal (Boulding and Kirmani, 1993; Connelly *et al.*, 2011; Fombrun and Shanley, 1990; Rao *et al.*, 1999; Roberts and Dowling, 2002). We discuss further details in the general discussion section.

3. Brown and Dacin (1997) also provide evidence that a firm's CSR efforts can influence consumers' evaluations of the firm and their responses to the firm's products.

4. The concept of signaling theory originally emerged in the informational economics and game theory literatures to explain the behaviors of prospective employees in the labor market, in terms of trying to signal their quality information to prospective employers (Spence, 1973).

5. Luo and Bhattacharya (2009) define firm-idiosyncratic risk as the unsystematic, residual risk that cannot be explained by changes in average market portfolio returns (i.e. systematic risk).

6. In addition to the difference discussed above, the current research is uniquely different from Luo and Bhattacharya (2009), in that we use a more encompassing CFP measure (i.e., Tobin's Q) as a criterion variable in our model, whereas they use a specific financial risk dimension (i.e., firm-idiosyncratic risk). As such, the findings of the current research should provide more generalizable knowledge to deepen our understanding of the moderating role of marketing capability in the CSR–CFP link.

7. The Koyck lag model explains that earlier years' resources have a lower effect than later years' resources on the capability measured in the current study.

8. For attempts of higher iteration numbers (10,000 and 50,000), we obtained almost identical results. Therefore, we believe that the bootstrap estimation was converged.

9. We also report the empirical results of Model Specification 1 for comparison purposes.

10. The inconsistent findings in the CSR-CFP link reported in the literature may be partly related to these measurement issues. The literature suggests that different measurements of CFP may be responsible for the inconsistency (Luo and Bhattacharya, 2006).

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Appendix

Figure A1. Mediated moderation effect of CR and MC on the CSR–CFP Link
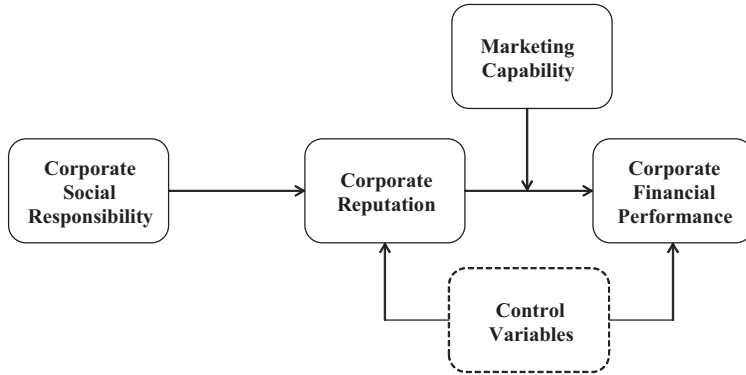
About the authors

Sean Yim, PhD, is an Assistant Professor of Marketing at the Penn State Erie, the Behrend College. Dr Yim holds a doctorate degree in marketing from the Washington State University. His research interests include corporate social responsibility, interfirm relationship marketing, innovation and marketing-finance interface.

Young Han Bae, PhD, is an Assistant Professor of Marketing at the Penn State University, Greater Allegheny. Dr Bae holds a doctorate degree in marketing from the University of Iowa. His research interests include empirical marketing modeling, marketing analytics, marketing-finance interface, new digital advertising, weather marketing and non-profit marketing. Young Han Bae is the corresponding author and can be contacted at: yzb1@psu.edu

Hyunwoo Lim, PhD, is an Assistant Professor of Marketing at the Penn State Erie, the Behrend College. Dr Lim holds a doctorate degree in marketing from the University of Toronto. His research interests include marketing strategy, econometric modeling and international marketing.

JaeHwan Kwon, PhD, is an Assistant Professor of Marketing at the Hankarmer School of Business of Baylor University. Dr Kwon holds a doctorate degree in marketing from the University of Iowa. His research interests include consumer behavior.