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## RESEARCH NOTES AND COMMENTARIES

# FIRM PERFORMANCE: THE INTERACTIONS OF CORPORATE SOCIAL PERFORMANCE WITH INNOVATION AND INDUSTRY DIFFERENTIATION

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*The impact of corporate social performance on firm financial performance has been examined previously with mixed results. This study examines the possibility that corporate social performance enhances financial performance by allowing the firm to differentiate, and that this effect may be moderated both by innovation, which also drives firm differentiation, and the level of differentiation in the industry. Hypotheses concerning both direct and moderating effects are developed and tested using secondary data. Our results support both innovation and the level of differentiation in the industry as moderators for a positive relationship between corporate social performance and financial performance: corporate social performance most strongly affects performance in low-innovation firms and in industries with little differentiation. Copyright © 2008 John Wiley & Sons, Ltd.*

## INTRODUCTION

The effect of corporate social performance (CSP) on firm financial performance has been debated for decades (Margolis and Walsh, 2003; Orlitzky, Schmidt, and Rynes, 2003; Vogel, 2005). The debate has yet to be resolved, in part because what may have seemed a straightforward relationship has proven to be complex. CSP has been hard to measure, and identifying the right variables to

include in a testable model has been a challenge (Margolis and Walsh, 2003). Even though the relationship between CSP and financial performance is complex, decades of research would almost certainly have yielded more understanding of it if CSP researchers had a greater tendency to use similar definitions and operationalizations. Historically, there has been difficulty identifying an objective, generally available measure of CSP, which has contributed to disparity and irreproducibility in earlier results (Waddock and Graves, 1997).

We build on two important studies that have made significant contributions to our understanding of the CSP-financial performance link. Waddock and Graves (1997) describe the measurement problem associated with CSP in considerable

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detail and offer an effective solution, discussed in our Measures section below. In their extension of Waddock and Graves (1997), McWilliams and Siegel (2000) make a crucial contribution to the discussion of the CSP-financial performance link. They include a variable long argued to be a strong driver of financial performance: innovation (Abernathy and Clark, 1985; Abernathy and Utterback, 1978; Burns and Stalker, 1961; Christensen and Bower, 1996; Hamel and Prahalad, 1994; Schumpeter, 1934). As McWilliams and Siegel (2000) demonstrate, innovation is a significant driver of firm performance, and when innovation is included among the independent variables the significance of the CSP-financial performance relationship disappears. Furthermore, McWilliams and Siegel (2000) do all this using the same operationalization of CSP as Waddock and Graves (1997). One of the strengths of the McWilliams and Siegel (2000) study is that it relies on an existing measure of CSP to develop the possibility of a more complex relationship between CSP and financial performance.

McWilliams and Siegel (2000) suggest that it is important to consider more complex possibilities when examining the CSP-financial performance relationship, as they did in their extension of Waddock and Graves (1997). We follow their lead by developing and testing a somewhat more complex model of the CSP-financial performance relationship.

Companies that manage to differentiate themselves will typically achieve above-average returns (Porter, 1980, 1996). A high level of CSP has been shown to be one way that a firm can differentiate itself (Mackey, Mackey, and Barney, 2007; Siegel and Vitaliano, 2007); innovation is another, which may explain how innovation dampens the effects of CSP on financial performance (McWilliams and Siegel, 2000). Whatever the basis, differentiation involves establishing the firm as different in a positive way. However, rivalry—each firm working to establish its own reputation—makes it more difficult for any single firm to distinguish itself as having high levels of CSP.

Using the same data as Waddock and Graves (1997) and McWilliams and Siegel (2000), we examine the possibilities that CSP enhances financial performance by allowing a firm to differentiate, and that this effect may be *moderated* both by innovation and by the level of differentiation in the

industry. Our study considers the direct and moderating effects of both innovation and the average level of differentiation in a firm's industry, thus further developing the previous research, using the same measure of CSP.

After briefly reviewing the relevant literature and presenting our hypotheses, we discuss our methodology. We then present and discuss our findings.

### Literature review and hypotheses development

Firms face increasing pressure to maximize their social performance as well as their financial performance (Grow, Hamm, and Lee, 2005). A growing body of empirical studies examines the relationship between financial performance and CSP, with mixed results (Aupperle, Carroll, and Hatfield, 1985; Orlitzky *et al.*, 2003; Ullmann, 1985; Vogel, 2005).

Those suggesting a negative relationship between corporate social performance and financial performance argue that firms trying to enhance social performance draw resources and management effort away from core areas of the business, resulting in lower profits. In this view, managers cannot make both social and competitive improvements (Klassen and Whybark, 1999). Some argue that there is no relationship between CSP and financial performance (McWilliams and Siegel, 2000) or, if there is one, that it is too complex to be found (Margolis and Walsh, 2003; Ullmann, 1985).

Yet there are reasons to believe that CSP is positively related to financial performance. In many cases the costs of superior CSP are lower than the benefits. Improving CSP can attract and retain quality employees, reduce costs, and increase operational efficiency (Hart and Ahuja, 1996); it can also increase both market opportunities (Porter and van der Linde, 1995) and quality (King and Lenox 2001; Pil and Rothenberg, 2003). More broadly, CSP can improve stakeholder relationships and prevent costly stakeholder conflicts. Forced social responsibility may negatively impact both profits and long-term social benefits (Miles, Munilla, and Covin, 2002, 2004), but companies with higher levels of voluntary CSP may be able to avoid this fate.

In fact, while there is no consensus in the debate on the CSP-financial performance relationship, most of the research in this area does support

a positive relationship (Dowell, Hart, and Yeung, 2000; Hart and Ahuja, 1996; Hillman and Keim, 2001; Orlitzky *et al.*, 2003). Thus, although a central premise of this paper is that the relationship between CSP and financial performance is not straightforward, we predict that the overall relationship is a positive one.

*Hypothesis 1: Corporate social performance positively affects performance.*

Innovation is generally conceded to be positively related to performance and, indeed, essential to survival (Brown and Eisenhardt, 1995; Covin and Miles, 1999; Christensen and Bower, 1996; Clark and Fujimoto, 1991; Hamel and Prahalad, 1994; O'Reilly and Tushman, 2004; Peters, 1990, 1991; Schumpeter, 1934; Teece, Pisano, and Shuen, 1997; Zahra and Covin, 1995). As new ideas enter the market, companies that cling to the old are likely to be destroyed (Schumpeter, 1934). On the other hand, companies that introduce new ideas to the market may find themselves prospering as the old ideas are replaced. Managing innovation to survive and grow has been a focus of study for decades (e.g. Burns and Stalker, 1961), and has been demonstrated to positively impact firm performance when environmental factors are taken into account (Chandler, Keller, and Lyon, 2000; Zahra and Covin, 1995; Zahra and Neubaum, 1998). Given the difficulty of sustaining a competitive advantage in any setting where resources are not immobile (Barney, 1991), the resource-based view and related work (Hamel, 2000) also suggest that innovation is needed to survive and maintain profitability. Any study that examines the antecedents of financial performance should clearly include innovation to avoid missing or misattributing its effects (McWilliams and Siegel, 2000).

In this study, we predict that, consistent with the theory and findings discussed above, innovation has a positive influence on firm financial performance.

*Hypothesis 2: Innovation positively impacts performance.*

Innovation is just one source of competitive advantage for a firm. The industry's level of differentiation may also affect firm performance, as competition in a highly-differentiated industry is

unlikely to be price-based and, thus, is likely to be profitable for all concerned (Porter, 1980, 1996). Some industries, however, lend themselves to higher levels of differentiation than others, and there is evidence that industry level factors, such as overall levels of differentiation, impact performance (McGahan and Porter, 1997). Given the evidence that suggests that firms do better in industries in which companies allocate more resources to differentiation activities (McWilliams and Siegel, 2000), it seems reasonable to expect that industry differentiation will impact firm performance.

*Hypothesis 3: Differentiation within an industry positively impacts firm performance.*

As discussed above, the evidence suggests that the relationship between CSP and financial performance is complex. Many who argue for a positive relationship do so within the resource-based view of the firm; they contend that by engaging in the pursuit of social responsibility, firms acquire the resources that allow them to differentiate themselves and increase their competitiveness (Hart, 1995; Russo and Fouts, 1997; Schnietz and Epstein, 2005). Yet, as mentioned above, other research suggests a negative or neutral relationship between CSP and financial performance. The inconclusive nature of the findings to date (Grow *et al.*, 2005) indicates that the relationship may be more complex than a direct causal relationship (Margolis and Walsh, 2003).

Achieving better CSP is one way firms attempt to differentiate themselves (Klein and Dawar, 2004; Reinhardt, 1998). Innovation is another. Evidence suggests both that CSP will have negligible effect on performance in innovative firms, and that innovative firms are likely to have high CSP (McWilliams and Siegel, 2000; Rothenberg and Zyglidopoulos, 2007). Innovation should therefore be included when modeling the CSP-financial relationship performance (McWilliams and Siegel, 2000).

When innovation is essential to immediate survival, CSP may not have much effect. When a company is not forced to innovate, but chooses to do so, CSP may have some impact on the firm's financial performance, but not as much as innovation. Companies with the best new products need offer little other reason for customers to

choose them. Even among companies that continually innovate, CSP at some minimal level may be necessary to prevent the negative consequences of external controls (Miles *et al.*, 2002). Less innovative companies, meanwhile, may still manage to differentiate themselves—and thus boost their financial performance—by improving their CSP. As long as their products are of acceptable quality and comparable to those of the competition, CSP may provide less innovative companies with a significant edge (Mackey, Mackey, and Barney, 2007; Siegel and Vitaliano, 2007). Innovation blunts this edge (McWilliams and Siegel, 2000) by providing customers with a new, potentially unique option, regardless of the firm's CSP. Thus, the more innovative a firm, the less CSP will help.

*Hypothesis 4: Corporate social performance impacts performance more positively in low-innovation firms than it does in high-innovation firms.*

Another factor that might impact the efficacy of a firm's efforts to differentiate itself through CSP is the level of differentiation in the firm's industry. It would be reasonable to expect the added differentiation provided by CSP to have less effect in the face of highly-differentiated competitors. On the other hand, in an otherwise minimally differentiated industry CSP might have considerable impact. In such low-differentiation industries, when one company begins differentiating itself with CSP, other companies that are not used to differentiated competition may not recognize that CSP provides a competitive edge and thus may fail to imitate the differentiator even though they could. We therefore expect that CSP will have the most impact in industries with low levels of differentiation.

*Hypothesis 5: Corporate social performance impacts performance more positively in industries with low levels of differentiation than it does in industries with high levels of differentiation.*

## Methods

We used the methods outlined by Waddock and Graves (1997) and McWilliams and Siegel (2000) to measure CSP. Consistent with Ullmann's (1985) suggestion, we constructed an index of CSP, based in this case on the CSP attributes ratings of the

firm Kinder, Lydenberg, and Domini (KLD). The KLD ratings are, as explained by Waddock and Graves (1997), well-suited to CSP research, as they are calculated by disinterested researchers using all available data on multiple aspects of CSP. These aspects, while disparate, share the common trait of representing actions that are of direct benefit to society and of indirect benefit, at best, to the corporation, the essential trait of CSP in general (Gerde and Logsdon, 2001). KLD provides numerical data on corporate behavior in multiple areas, including community, corporate governance, diversity, employee relations, environment, and human rights. As originally suggested by Ullmann (1985), Waddock and Graves (1997) constructed an aggregate measure of CSP, an index of the eight categories of CSP rated by KLD. They note a variety of reasons (Waddock and Graves, 1997: 307–308) why using such an aggregate of the KLD data is an advance in the operationalization of CSP.

Our aggregate takes each item of potential social concern into account, with those categories (e.g., community) that have many distinct subcategories receiving proportionally greater weight than those (e.g., tobacco) that have only one subcategory. This approach has the advantage of providing a numerical score, rather than a dummy variable as was used by McWilliams and Siegel (2000). But it is more easily reproduced by future researchers than is the weighted index described by Waddock and Graves (1997), though the weights they describe appear to correspond fairly well with ours. Validating our measure was a relatively straightforward task: we tested the same relationships as Waddock and Graves (1997) and McWilliams and Siegel (2000); different results from the same dataset would have indicated a problem with our operationalization, but our results confirmed their findings.

A side benefit of processing the KLD data this way is that we have demonstrated that the data itself is robust: two indices and a dummy variable based on this data all provide the same answers—until different questions are asked. Our measure is consistent with the previously validated measure of CSP based on objective standards applied across multiple generally accepted dimensions of social performance first introduced by Waddock and Graves (1997) then used, with considerable modifications, by McWilliams and Siegel (2000).

As did Waddock and Graves (1997) and McWilliams and Siegel (2000), we combined the KLD data with Compustat data on financial and other non-CSP data to create a single database. Excluding companies with missing data on a list-wise basis rather than a pairwise basis yielded 69 companies for which all relevant data was available in all four years from 1998 through 2001. For these companies we calculated weighted averages (with a cumulative weight of 0.5) for all independent measures and control variables over the three-year period from 1998 through 2000, to allow for lagged effects. To assess the impact of the independent variables on future performance, we then measured performance as return on assets (ROA) in the year 2001. This measure seems appropriate as it represents the profitability of the firm with respect to the total set of resources, or assets, under its control. Strategy involves the use of resources to give the company a competitive advantage (Barney, 1991), and ROA yields the most direct information about the results of the chosen allocation of those resources.

We operationalized innovation as the weighted three-year average of the company's research and development spending, and industry differentiation as the weighted three-year average of the average advertising intensity in each firm's industry. We included as control variables: the firm's size, operationalized as the weighted average of its total assets; a proxy for the firm's risk, operationalized as the three-year weighted average of its debt/asset ratio; and the firm's industry, operationalized as its standard industrial classification code in 2001. These have all been suggested as factors that will affect both CSP and firm performance (McWilliams and Siegel, 2000; Ullmann, 1985): Larger companies will have more money to invest in CSP while being more visible to external stakeholders who demand higher CSP (Ullmann, 1985); firms facing high debt/asset ratios will have fewer resources to spare for innovation and for pursuing CSP (Zyglidopoulos, 1999), and the profitability and visibility of the firm's industry are likely to affect both CSP and performance.

The choice of these broad-scale measures represents a deliberate choice to evaluate strategic decisions at a general level. This seems appropriate given the breadth of our hypotheses and the broad conclusions reached by earlier contributions (McWilliams and Siegel, 2000; Waddock and Graves, 1997). Although the CSP measure we

employ lacks the richness of primary data and is a blunt instrument, capturing multiple aspects of CSP, this measure remains the best available for our study. What it lacks in richness it makes up in reproducibility: this study uses the same data as Waddock and Graves (1997) and McWilliams and Siegel (2000), and is able to build directly on their results to test our more complex model. Our measure's catholic nature means that it captures the full spectrum of CSP, a corporation's actions intended to benefit society directly and itself indirectly rather than the other way around. Whether it does so by becoming more 'green' or by promoting fairness in the workplace, a company taking action to benefit the greater good in any way is pursuing CSP. Any such action can be criticized—if CSP is believed to be unrelated to firm performance—as unrelated to firm performance. Our measure, then, in capturing a wide range of behavior associated with CSP, is an ideal tool for addressing the question of how CSP, in general, affects firm performance.

The hypotheses were tested by running multivariate regression analysis in SPSS analytical software. Model 1 contained only the control variables. Model 2 also contained the independent variables, and in Model 3 we added the hypothesized interaction effects. The results are presented in the following section.

## RESULTS

Table 1 presents the correlation matrix of the research variables. Table 2 presents the results of the regression analysis. As shown in Model 2, innovation and industry differentiation do both positively affect firm financial performance ( $p < 0.01$ ). Corporate social performance, however, shows little sign of directly affecting firm financial performance. This last finding is consistent with the ambiguous findings concerning CSP and financial performance discussed above (Ullmann, 1985). Thus, Model 2 provides support for Hypotheses 1 and 2, but not for Hypothesis 3.

In Model 3, we see that when the interactions of CSP with firm innovation and with differentiation in the industry are included, CSP has a positive, if marginally significant ( $p < 0.10$ ), effect on performance. Model 3 also shows that the interaction

Table 1. Correlation matrix of research variables

Variables	1	2	3	4	5	6	7
1. Assets		0.538**	-0.253**	0.244**	0.041	0.701**	0.030
2. Sales			-0.213**	0.114*	0.067	0.659**	-0.152**
3. Risk				-0.107*	-0.189*	-0.204*	0.154**
4. Industry					-0.118	-0.139	0.015
5. Innovation						0.032	-0.166*
6. Industry differentiation							-0.103
7. Corporate social performance							

\*\* Correlation is significant at the 0.01 level (two-tailed).

\* Correlation is significant at the 0.05 level (two-tailed).

Table 2. Regression results

Variables	Model 1	Model 2	Model 3
Assets	-0.06	-0.20	-0.04
Sales	0.01	0.10	0.11
Risk	-0.27**	-0.33	-0.22*
Industry	-0.16**	-0.05	-0.16
Corporate social performance		-0.16	0.33†
Innovation		0.53**	0.54**
Industry differentiation		0.39**	0.72**
CSP* Innovation			-0.44**
CSP* Industry differentiation			-0.60**

\*\*  $p < 0.01$ , \*  $p < 0.05$ , †  $p < 0.10$

of CSP with industry differentiation has a negative coefficient ( $p < 0.01$ ), indicating that, as predicted, CSP has a more positive impact on financial performance among firms in relatively undifferentiated industries. Finally, the coefficient of the CSP-innovation interaction is negative ( $p < 0.01$ ), indicating that CSP more positively impacts the financial performance of companies low on innovation. Hypotheses 4 and 5 are thus supported.

## DISCUSSION AND CONCLUSION

### Theoretical implications

A goal of this study was to develop the possibility that the relationship between CSP and financial performance has been difficult to establish because it was more complex than a simple linear relationship (McWilliams and Siegel, 2000;

Ullmann, 1985). Our model is complex, incorporating the direct and moderating effects of innovation and industry differentiation. But our model is also empirically supported and internally consistent. Thus, while our findings are consistent with those of McWilliams and Siegel (2000) in that the relationship is not simple, our extension of their model leads us to support the initial conclusions of Waddock and Graves (1997) that CSP is beneficial to financial performance.

Another implication is that innovation, besides being a strong predictor of financial performance, may moderate other variables that affect financial performance. We suggest that innovation should be included as a moderator in other theoretically robust models which have received mixed or ambiguous empirical support (cf. Han, Kim, and Srivastava, 1998).

### Managerial implications

This study may be of use to managers seeking to understand the impact of CSP on financial performance. Our findings suggest that the relationship is complicated, but that practical conclusions can be drawn. The first is that CSP can be achieved without a corresponding negative effect on financial performance—there is no zero-sum game to be played between these two. Furthermore, CSP appears to be a way to enhance financial performance. If a firm chooses not to innovate, or to innovate only to a small degree—perhaps only as much as it must and no more—it may instead use CSP to differentiate itself. And innovative companies may find CSP helpful when they are between innovations. Since it does no harm and can be of value, we conclude that managers are well-advised to pursue CSP as well as a suitable level of innovation.

Companies may be able to combine CSP and innovation. Many innovative companies have carried out major CSP projects as innovations that challenge and improve their learning capabilities (Hart, 1995; Rothenberg and Zyglidopoulos, 2007). Less innovative firms, challenged by CSP-related innovations, are advised to seek external help (Hoskisson and Busenitz, 2002; Hull and Covin, 2009).

For firms in low-differentiation, typically commodity industries, enhancing CSP may again be an effective means of increasing performance. In industries where most companies are differentiating, even companies that rely on innovation to succeed may find CSP a valuable asset in the quest for differentiation. If *sustainable* competitive advantage rests on having not one but several intertwined core competencies (Barney, 1991; Hamel, 2000), two might be innovation and CSP.

#### *Limitations and future directions*

This study relies entirely on secondary data. While archival data may be more objective, it doesn't allow researchers access to the perceptions and other subjective factors that influence managerial decisions. The broad concepts of interest in this study can be operationalized using archival data, but an extension of this study that adds in primary data might shed further light on the subject. Similarly, as in most studies that use archival databases, the data used were originally collected for purposes other than those of the current research. In our case, because they are the relevant data, this is not a problem; although had data been available on, for example, different sorts of innovation, we might have been able to look at a set of more complex relationships.

We concede there are problems with current measures of CSP. Some may argue that any findings based on these measures are problematic as well (Margolis and Walsh, 2003). We contend, however, that researchers should continue to develop a better understanding of CSP using the best existing measures of CSP. In fact, studies of these relationships may actually contribute to our understanding of the limitations of existing CSP measures (Waddock and Graves, 1997).

Corporations lacking the capability to innovate easily may choose to improve their CSP with external assistance. Such an initiative could be considered an innovation, albeit not an internal one, and

companies that innovate this way may find that the learning capability gained through their experiences in developing greater CSP makes it easier to create subsequent innovations. A potential direction for future research is thus an examination of the effects of CSP on future firm innovation with a focus on its effects on different types of innovation, for example, by including cooperative and external innovation as well as internal innovation (Hull and Covin, 2009; Zahra, Jennings, and Kuratko, 1999), radical versus incremental innovation (Dewar and Dutton, 1986), and so on.

Similarly, the effects of CSP on industry differentiation might be worth investigating. Rivals may have a blind spot for the competitive advantages of CSP, but this blind spot has not been empirically validated. A longitudinal study of the interactions between these variables in a single industry, and in clusters within an industry, is called for.

Another future direction is prompted by our argument that firms may be able to avert the negative impact of forced social responsibility (Miles *et al.*, 2002, 2004) by voluntarily finding more suitable means of CSP. A study of the interactions of voluntary and involuntary CSP and of how those variables interact with innovation, differentiation, and firm performance would also seem useful.

Different elements of CSP may have different effects on financial performance. Good labor relations, for example, may result in an enthusiastic and effective workforce (Hamel and Prahalad, 1994), while environmentally friendly practices may reduce costs as well as provide new opportunities to differentiate (Hart and Ahuja, 1996; Porter and van der Linde, 1995). It seems worthwhile to examine the effects and interactions of these types of CSP, both from a theoretical perspective and in terms of being able to give relevant advice to managers trying to find the best configuration of CSP and financial performance.

Using archival, reusable data, we have established that corporate social performance helps financial performance. We hope that this helps advance the debate, and that this dataset can now be used to help discover the most effective ways by which firms can combine CSP and innovation to produce the greatest benefit for society, and the greatest possible profits.

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