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Revisiting the corporate social and financial performance link: a contingency approach

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Revisiting the Corporate Social and Financial Performance Link:

A Contingency-Stakeholder Approach

ABSTRACT

This study draws on and extends contingency theory, in relation to stakeholder theory to understand the corporate social performance (CSP) and financial performance (CFP) link, by evaluating under what circumstances CSP influences CFP. Contingencies include stakeholder configurations/salience and crisis conditions. Using differentiated measures of CSP, this study examined financial effects of various specific stakeholder facing activities pre- and post-crisis in the food/beverage and pharmaceutical industries, and in firms selling search versus experience goods. The results indicate that pre-crisis CSP is related to post-crisis financial effects, but the relationships are dependent on the interactions among the contingencies studied, so investments in certain social areas improve CFP, whereas others may hurt it. This confirms that a finer grained approach should be taken to the examination of CSP and financial performance. On a practical basis, it shows that deep stakeholder knowledge and attention to complementary factors to CSP, such as advertising, must be understood, so CSP activities are of benefit to the firm.

INTRODUCTION

Many proponents of corporate social responsibility (CSR) claim competitive advantage and economic benefits from CSR activities. Nevertheless, evidence of any positive relationship between CSR and financial performance is far from conclusive (Godfrey and Hatch, 2007; Margolis et al., 2009; Margolis and Walsh, 2003; Orlitzky, 2011; Orlitzky et al., 2003; Schreck et al., 2013). However, most research has not taken account of contingencies, such as strategic imperatives relating to salient stakeholders in particular industries, or external economic conditions. Therefore, our study aims to investigate the strategic value of prior CSR patterns in various industry contexts and in the adverse market environment of the global financial crisis which began in 2008.

First, we show in the next section how we ground our study in contingency theory as integrated with strategic CSR and stakeholder theory, whereby economic crisis is an important contingency condition. In the following sections, we discuss some methodological issues in research which studies possible causal linkages between CSP and financial outcomes for firms and then develop our hypotheses emerging from our theoretical base. We then present our study, designed to understand the contingencies and stakeholder influences in our hypotheses, taking account of possible complex interactions among CSR and other variables that influence financial results. The industry contexts entailed different stakeholder configurations and types of goods. We also studied CSP from the perspective of specific dimensions rather than as a global measure. Another layer of the study intertwined with the strategic imperatives of different industries, examines whether firms with a strong pre-crisis commitment to various facets of CSR reported better accounting performance after

the onset of the financial crisis of 2008. The Discussion section covers the conceptual, research and practical implications of the study, as well as its limitations.

FINANCIAL PERFORMANCE CONTINGENCIES, STRATEGIC CSR AND STAKEHOLDERS

Disagreement on the purposes and effects of CSR range from the dismissal of CSR as a way of diverting resources from the profit purpose of business (Friedman, 1970; Karnani, 2011) to the societal approach to CSR which hold firms as morally obliged to serve the public interest regardless of financial performance. In between are views that advocate CSR activities as enlightened self-interest for the firm, and others that integrate social and business interests in a dynamic way (Devinney, 2009; O'Higgins, 2010; Schreck et al., 2013; Van Marrewijk, 2003).

Contingency Theory

Some researchers have moved beyond seeking a general straightforward answer to the business case question of whether 'CSR pays', or companies 'do well by doing good'. Instead, scholars are turning to questions of understanding which types of CSR produce superior financial returns, and in which circumstances this might occur (Husted et al., 2015). Conversely, when should firms refrain from certain types of CSR to safeguard their CFP? This attempt at understanding invokes questions of moderating and mediating variables and situational contingencies in the responsibility-performance relationship, recognizing that an appreciation of the complexity of the relationship between CSP and CFP is necessary beyond a simplistic direct responsibility-performance link (Carroll and Shabana, 2011). Further, the question has been rephrased, to account for possible endogeneity, whereby account is taken of internal influences, acknowledging managers do not make random isolated

decisions; certain types of strategic decisions may be related to plans to engage in CSR, which may, in tandem with, but not on their own, boost CFP (Garcia-Castro et al., 2010; Weber and Gladstone, 2014). An example is R&D intensity which has been found to be positively related to CSP and CFP (McWilliams & Siegel, 2000).

Contingency theory underlies this open approach to enactment of CSR to reap economic benefits for the firm. The contingency concept is, broadly speaking, an organizational theory, which states that there is no one best way of organizing to best effect. It depends on the kind of task or environment with which one is dealing. Many contingency theorists were concerned with organizational structure (Lawrence & Lorsch, 1967; Thompson, 1967) and leadership (Fiedler, 1967). However, latterly, contingency theory has become more all-embracing of managerial systems, including strategic subsystems, and decision making (Morgan, 2007).

Even managers who wish to engage in CSR because they want to do what they believe to be right might want to take account of the contingencies extant in their internal and external environments and business task demands, to make their CSR supportive of their business outcomes. This demands strategic thinking and planning around the contingencies. Barnett (2007, p.813) calls for a 'contingency perspective that affirms payoffs to some forms of CSR for some firms at some points in time'.

Strategic CSR and Stakeholder Theory

From a strategic CSR view, a firm can positively influence its competitive position and thus improve profits by committing resources to social areas related to its core business (Porter and Kramer, 2011). Husted and de Jesus Salazar (2006) conclude that the total welfare from social investments by all corporations is larger for strategic CSR than for purely altruistically-motivated CSR, because the corporate benefits from

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strategic CSR motivate more firms to invest in CSR. Strategic CSR leads to greater efficacy since firms target social issues compatible with their business objectives, thereby uniting social welfare and profit maximization (Mellahi et al., 2016). This is the foundation of the hypotheses in this paper.

McWilliams and Siegel (2001) argue that strategic CSR is indispensable to a firm's differentiation strategy. In their analysis, the addition of a social feature to a product results from an investment of resources into the value chain. Others go beyond differentiation and advocate that strategic CSR should shape business in a more fundamental way. Porter and Kramer (2011) view increased competitiveness and financial performance as the ultimate results of a successful CSR strategy, using their shared value concept, urging firms to consider social issues in society as an avenue to improved competitiveness. This is possible through re-design to serve unmet societal needs, for example, through eliminating the costs of social harms in value chains to increase productivity, and cluster-building to create conditions supportive to business.

The treatment of stakeholders is intertwined with strategic CSR, as well-targeted investments in stakeholder relationships have the potential to yield economic as well as social benefits (Baron, 2001, Burke and Logsdon, 1996; Gyves and O'Higgins, 2008). Broadly, stakeholder theory highlights the importance of a firm's relationships with groups and individuals, and can underpin the strategic use of contingencies. Barnett (2007) asserts that stakeholder theory has brought strong theoretical underpinnings to, and is the cornerstone of the business case for CSR. In this view, the firm meets the expectations of influential stakeholders as part of its strategy, i.e., stakeholders are addressed in accordance with their salience to the firm (Mitchell et al., 1997). CSR feeds through to CSP when it has the effect of improving relationships with relevant stakeholders, as the firm builds up a 'social influence capacity' with

stakeholders. This capacity is then instrumental in facilitating strategic action, so increasing income and reducing transaction costs and risks (Barnett, 2007). Additional benefits may be gaining competitive advantage, developing reputation and legitimacy, seeking mutually favourable outcomes through synergistic, win-win value creation with stakeholders (Carroll and Shabana, 2011). Support for an effective strategic stakeholder approach to CSR is explained in O'Higgins's (2010) framework of stakeholder orientation, under the 'engaged' orientation to stakeholders, whereby serving stakeholders simultaneously generates financial benefits.

Crisis as Contingency

Among the contingencies which may affect stakeholder relationships is the economic cycle. Can positive stakeholder relationships in good times act as insurance during times of crisis? The largely inconclusive body of research on the CSP-CFP link has been conducted during periods of prolonged economic growth in Western economies under relatively stable market conditions. In one of the few empirical tests of the relationship between social and financial performance in a crisis, Schnietz and Epstein (2005) determined that CSP contributes to a firm's reputation and that this reputation can serve as a "reservoir of goodwill" (p.329) in times of crisis because it ensures that stakeholders remain committed to the firm. Hence, CSP may act as crisis insurance by immunizing performance in adverse conditions. Schnietz and Epstein (2005) confirm this hypothesis by observing that the market values of U.S. firms with a reputation for CSR declined significantly less than their peers' after the failure of the 1999 WTO negotiations in Seattle. Similarly, Helmig et al. (2016) found that turbulent environments enhance the relationship between CSR implementation and market share performance.

Methods in CSR-CFP Studies

Inconclusive results over the years have prompted researchers to uncover methodological flaws in the studies conducted (Godfrey & Hatch, 2007; Griffin & Mahon, 1997; Margolis et al., 2009; McWilliams & Siegel, 2000). An issue is the omission of relevant control variables. In addition to controlling for size, risk and industry, McWilliams and Siegel (2000) and Anderson and DeJoy (2011) assert that a firm's R&D expenses should also be added. They demonstrate that a firm's social performance and R&D expense are positively related, such that models excluding R&D overstate CSR's impact on performance.

Studies examining the impact of CSR, when distinct aspects of CSR are combined into a single aggregated measure can oversimplify CSR phenomena and their manifestations (Godfrey and Hatch, 2007). Thus, it is suggested that multidimensional measures of CSR should be used to account for the separate effects of CSR dimensions on performance, especially if separate contingencies differentially impact the effects of diverse CSR dimensions. This also prevents strong performance in certain social areas from concealing poor performance in others (Dawkins, 2012). Then, the widespread use of multi-industry datasets is unlikely to uncover the true linkages between CSP and performance because industries and their competitive conditions/contingencies are inherently unique (Griffin and Mahon, 1997; Godfrey and Hatch, 2007; Kuntz et al., 1980). Therefore, single-industry samples or typologies should yield better results.

A study attempting to address some of these flaws was conducted by Inoue and Lee (2011). They analyzed the relationship between five dimensions of CSR and both

accounting and market-based performance for tourism-related industries. Their models employed the Kinder Lydenberg Domini (KLD) Social Performance Index and also controlled for firm size and risk. The results indicate that certain CSR dimensions are positively and others negatively related to performance. This is interpreted in accordance with the strategic stakeholder approach: firms obtain different degrees of financial benefits from serving different stakeholders (Inoue & Lee, 2011). Weber and Gladstone (2014) also applied separate KLD dimensions pertaining to different stakeholders, finding some empirical evidence for fruitful stakeholder strategies, especially involving employees and somewhat for consumers, but not for community stakeholder groups, nor the environment.

Hypothesis Development

The hypotheses of this study are guided by the premise, grounded in contingency theory and stakeholder theory, that firms engaging in strategic CSR, which entails taking account of the interaction of contingencies and expectations of relevant stakeholders, should experience favourable financial performance. Building on this premise, this study explores further the relationship between a commitment to CSR and performance. However, it takes a differentiated approach, treating CSR as a multidimensional variable, and considering various contingencies, such as industry imperatives, along with crisis versus stability environmental conditions, as interacting with significant stakeholders who are influential in particular strategic situations.

Firstly, we examine whether firms which enact CSR in stable times reduce their vulnerabilities when a crisis strikes. The term 'crisis' should be understood as a hostile business environment that significantly raises pressure on firms. Prior CSR may constitute a mechanism of insurance against adverse conditions, a logic

consistent with Porter and Kramer's (2011) view that strategic CSR investments in stakeholder relationships produce a broad array of internal and external competitive advantages. Strong employee relations, for instance, can produce higher productivity (Huselid, 1995; Weber and Gladstone, 2014) and could enable flexibility to adapt labor-related expenses to withstand a decline in demand. An awareness of mutual dependency originating from durable supplier relationships can produce joint efforts to maintain competitiveness. Customer loyalty can immunize against a sales decline. Also, a firm might have translated its concern for the environment into a more efficient value chain and a lower cost base. It is presumed that such advantages make a corporation adaptable to changing circumstances, rendering a robust financial performance in hard times. Hence, we hypothesize:

Hypothesis 1: A firm's prior commitment to CSR is positively related to financial performance in times of crisis.

Scholars argue that the relationship between CSR and performance can only be truly uncovered if it is approached on a per-industry basis (Berman et al., 1999; Griffin and Mahon, 1997). They consider industries as inherently unique in their approach to CSR, given that the composition of the stakeholder structure and social issues of each stakeholder can be distinctive for an industry. In effect, the salience of different stakeholders dictates their influence, so that the firm should satisfy those which are most critical to its success (Mellahi et al., 2016; Mitchell et al., 1997). Therefore, the relationship between CSP and CFP should take account of stakeholder configurations and salience prevailing in an industry.

For example, it makes sense that concerns about the natural environment are more germane in extractive and energy-intensive industries; hence community relations

could be more important in these industries than others. In some instances, final customers rely on the expertise of advisors or other decision makers, making these intermediaries especially salient. Examples are fund managers in financial services and medical practitioners for pharmaceutical companies. In contrast, the food and beverage industry relates directly to consumers. The objective is to find out whether this dissimilar stakeholder structure inspires dissimilar strategic approaches to CSR, with different dimensions of CSP contributing to performance during the crisis.

Therefore, the first sub-hypothesis is:

Hypothesis 1a: Due to differences in stakeholder configuration, industries whose stakeholders' key decisions do not relate to CSR dimensions (pharmaceuticals) differ to industries whose stakeholders' decisions are related to CSR dimensions (food/beverages) in their stakeholder approach to CSR and ensuing effect on financial performance in times of crisis.

Siegel and Vitaliano (2006) demonstrate that similarities between firms in their approach to CSR can be found with respect to type of goods sold. Specifically, they group industries and test whether firms selling experience goods are more likely to invest in CSR than firms selling search goods. Search goods are products like clothing, whose attributes can be assessed before purchase. Experience goods, such as automobiles, only reveal their true value during or after consumption. Advertising for experience goods consequently stresses a reputation for product quality while advertising for search goods focuses on product information. This makes sense in light of findings that companies with effective customer relations based on product safety/quality achieved superior financial returns in a study carried out by Berman et al. (1999). Thus, CSP is a way to signal product quality as firms committed to CSR

are deemed more reliable and therefore their products of higher quality (McWilliams & Siegel, 2001; Siegel & Vitaliano, 2006).

Thus, it is surmised that strategies contributing to an overall positive reputation, like product quality, are important for experience goods. For search goods, reputation is a lesser issue. Therefore, these firms might choose to focus on areas that improve efficiency and productivity like employee relations.

Building on this insight, depending on the type of good sold, industries may differ in their ability to insure against the impact of a crisis through CSR. Therefore, the second sub-hypothesis is:

Hypothesis 1b: Due to differences in the characteristics of the goods sold, firms selling goods which depend on reputation (experience goods) differ from firms selling goods less dependent on reputation (search goods) in their strategic approach to CSR and its ensuing effect on financial performance in times of crisis.

METHOD

Financial Performance Measures

This study focuses on the effect of CSR on financial performance during the 2008-2010 period after the onset of the financial crisis, one of the most severe market downturns in recent times. Performance is measured in accounting terms with net income/total assets or net return on assets (NROA), averaged over 2008-2010, the dependent variable. This measure not only incorporates operational performance but also interest payments, taxes and extraordinary expenses, such as the ones arising from restructurings. NROA comes closest to assessing viability and successful performance of the firm, as without profit, and efficient use of assets, the firm would

not be in a position to grow, or even survive long-term. Likewise, Weber and Gladstone (2014) found ROA as a financial performance measure most associated with CSP. Profitability measures are preferred because they measure the effectiveness of business activities (Carroll and Shabana, 2011). This is more fundamental than market based measures, like stock prices, since these are subject to short-term fluctuations, and impulsive sentiments rather than ongoing sustainability.

CSP/Stakeholder Performance

CSP, the independent variable was measured by the US based KLD index of firm social performance ratings in the 2007-2009 period, so as to capture the period leading into the financial crisis and because it is assumed that social investments require some time to bear fruit. The KLD ratings were selected because of their established use in the literature as objective third-party measures and their multidimensional stakeholder oriented approach to CSR.

The index is rated annually and comprised of seven issue areas, each of which consists of a number of 'strengths' and 'concerns' : 1. Community; 2. Corporate Governance (CG); 3. Diversity; 4. Employment; 5 Human rights; 6. Environment; 7. Product. A firm displaying a certain strength/concern is rated with a '1' in that category. These strengths and concerns, aggregated per issue area, were the variables used in the regression models. CSP is therefore measured by 14 different variables (7 strength and 7 concern categories). Each variable's scale ranges from zero to the maximum number of strengths or concerns it represents.

The KLD dimensions correspond roughly to particular stakeholders, although some areas affect multiple stakeholders. Areas like employment and environment are self-explanatory. The community area evidently represents efforts towards local

communities, yet these could also be valued by consumers. The product area is also part of consumer relations. Corporate governance affects multiple stakeholders, but shareholders and creditors in particular, and it may be a proxy for general integrity in the functioning of the firm. Diversity affects employees and can also account for social investments in supplier relationships (Inoue & Lee, 2011). The human rights dimension considers social harms in the value chain, which is of interest to communities, suppliers and employees.

Industry Sectors and Specific Research Questions

On the basis of their differing stakeholder configurations, the food and beverage industry was contrasted with the pharmaceutical industry to evaluate Hypotheses 1 and 1a. Pharmaceutical companies face an additional stakeholder group that significantly influences product sales, namely medical practitioners. It is only through the medical practitioners that pharmaceutical companies enjoy access to 'customers'. This group is most likely to base its buying decisions on product efficacy, irrespective of considerations like social performance of the supplier. In the food/beverages sectors consumers are the salient stakeholders who make buying decisions directly, so they may be affected by relevant CSR actions by the firm.

Hypotheses 1 and 1b were tested by evaluating the industries representing search goods (retail clothing, furniture, mattresses, carpets) and durable experience goods (cars, appliances, hardware, software). Search good and experience good industries were identified in accordance with previous research (Siegel & Vitaliano, 2006). Drugs were excluded since they have a dedicated dataset. Table 1 presents the specific industries and number of firms for each type of good.

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Table 1 here

With these specifications, concrete research questions can be formulated.

For all the industries/types of goods investigated:

Is CSP over the 2007-2009 period positively related to average accounting performance over the 2008-2010 period of the crisis?

CSP with respect to critical dimensions for particular industries/types of goods is expected to exhibit a positive relationship with accounting performance during the crisis, i.e. strengths are positively related and concerns negatively. The strategic approach to CSR dictates that not necessarily all dimensions of CSR should relate to performance. The ones that do are the strategic dimensions for that industry and/or type of good.

Regarding the first contrast (Hypothesis 1a):

Do firms in the U.S. food and beverage industry differ from firms in the U.S. pharmaceutical industry in the dimensions of CSR that influenced average accounting performance during the 2008-2010 period of the crisis?

Differences in stakeholder structure in these industries are expected to yield different dimensions of CSR that are strategic, and therefore influenced performance during the crisis.

Regarding the second contrast (Hypothesis 1b):

Do U.S. firms selling search goods versus durable experience goods differ in the dimensions of CSR that influenced average accounting performance during the 2008-2010 period of the crisis?

Variable Specification and Statistical Analysis

A regression analysis was conducted on each of four datasets, corresponding to the different industries/types of good investigated. The models shared the following structure:

Performance = CSR + Size + Risk + Advertising + R&D

The dependent variable was average net return on assets (NROA: net income/total assets).

CSP, comprising the first major group of independent variables, was measured by means of 14 KLD strengths and concerns for 2007-2009. Strengths and concerns are separate variables in the analysis as they are deemed to measure different aspects of a firm's social performance (Chatterji et al. 2009; Mattingly and Berman, 2006). We expect the relevant strengths to positively influence NROA and the concerns negatively, depending on industry and situational (crisis) conditions.

Control variables commonly suggested to affect performance in the literature were also included: size, risk, advertising and R&D (Anderson and DeJoy, 2011; Margolis et al., 2009; McWilliams and Siegel, 2000). The proxies for the control variables were as follows:

Leverage – Total debt/total assets averaged over 2008-2010;

Size – Average net revenues (in $ billions), averaged over 2008-2010;

Risk – Total debt/total assets, averaged over 2008-2010;

Advertising – Advertising expense/total assets, averaged over 2008-2010;

R&D - R&D expense/total assets, averaged over 2008-2010;

Long-term R&D – R&D expense/total assets, averaged over 2003-2007

Size, measured by annual sales, is included for its potential effect on the provision of CSR through scale and scope advantages (McWilliams and Siegel, 2001; Siegel and Vitaliano, 2006). For the pharmaceutical dataset, because of the long-term nature of R&D in that industry, 'Long-term R&D', the average R&D expense/total assets over 2003-2007 was added.

The financial and control variables (size, risk, advertising, R&D) data were obtained from Orbis, Thomson One Banker and Compustat databases.

It should be noted that the regression analysis was not limited to the simple 14 direct KLD variables. Whereas previous studies tend to rely on simple linear models, certain transformations of the KLD and control variables were added to test for more intricate relationships. Firstly, nonlinear effects were tested. For instance, it is possible that the effect Leverage has on performance is stronger for firms with higher initial leverage. Nonlinear variables such as squared or third-order variables are required to test such relationships. Squared variables, denoted with '^2' in the model e.g. 'Leverage^2', test for second-order or parabolic relationships between the dependent and independent variables. Third-order variables, denoted with '^3', do roughly the same, but relative to second-order relationships, third-order relationships progress more slowly when the independent is between 0 and 1 and faster for values above 1. This may provide a better fit for some of the relationships in the model.

Interactions between different variables were explored to test for moderation effects. Advertising is an important way to communicate CSR efforts to stakeholders

(McWilliams & Siegel, 2001). Therefore, it is plausible that advertising moderates the relationship between certain CSR variables and performance. This can be tested with an interaction variable, e.g. 'Advertising*Community strength'. However, rather than testing all interactions, only a number of plausible interactions based on the literature were tested to avoid overfitting of the models. These include interactions with advertising, risk and size.

A stepwise regression analysis was performed to select the model that fits the data best. This algorithm starts with an empty model and iteratively adds the variables with the largest explanatory power, while simultaneously dropping variables that are rendered insignificant after such additions. The output of the analysis is a model containing the most significant variables, meeting at least the 0.05 threshold of statistical significance.

RESULTS

The initial sample sizes were reduced as start-ups and merged companies which ceased to exist during 2008-2010 were dropped. Also, in the pharmaceutical industry, R&D expenses are commonly reported but advertising expenses are not. The opposite is true for search good industries. Therefore, the effect of advertising was not tested in the model for the pharmaceutical industry, whereas R&D was not included as a control variable in the model for search goods industries.

Descriptive Statistics

Table 2 here

The descriptive statistics of the variables in each dataset are presented in Table 2. NROA during the crisis was highest in the search goods industry and lowest in the

pharmaceutical industry. In all datasets, firms score, on average, highest on diversity strengths and lowest on human rights strengths. Debt-to-assets is highest in the food and beverage industry, whereas advertising is highest with manufacturers of experience goods. The pharmaceutical industry not unexpectedly spent the largest share on R&D.

Regression Results

All models presented meet the assumptions of linear regression. Residual-vs.-fitted plots indicate linearity; the null hypothesis of homoscedasticity was not rejected with the Breusch-Pagan test; normal probability plots confirm the normality of errors and variance inflation factors are reported below. These are mostly under 5 and certainly under 10 (Kutner et al., 2003).

Table 3 here

Food and beverage industry. Table 3a shows the regression results for the food and the beverage industries. Overall the F-test and R-squared values indicate a good fit.

The two control variables, advertising and leverage, are significant in the model and interrelated. Leverage displays a second-order relationship with NROA with coefficient -0.476. If advertising is zero, this relationship implies that a leverage increase of 0.02 reduces NROA by 0.0019 (resulting from $0.476*0.02^2$) rather than just by 0.009 if leverage is a simple linear variable (resulting from $0.476*0.02$). Advertising however moderates this relationship since the interaction between Advertising and Leverage^2 has a coefficient of 13.28. Using the same leverage increase as above but now with an advertising level of 0.005, a factor 0.0013

(resulting from 13.28*0.05*0.02) is added to the initial reduction of 0.0019, resulting in a NROA reduction by only 0.006 from increased leverage.

These results indicate that several dimensions of CSR are related to accounting performance during the crisis. However, they only speak partly in favour of hypothesis 1 as certain CSR dimensions appear to reduce NROA rather than improve it. The variables 'community strength', 'diversity strength' and 'environment concern' display the hypothesized relationship with NROA, but 'product concern', 'employment concern' and 'CG (corporate governance) strength' do not. Product strength is insignificant.

Pharmaceutical industry. The R-squared in Table 3b indicates that the independent variables explain 70 percent of NROA in the pharmaceutical industry. 'Long-term R&D' and an interaction between 'R&D', 'Leverage' and 'Size' were included as significant control variables in the model. This interaction variable has a positive coefficient (0.258) which can be interpreted as follows: firms with higher R&D activity during the crisis had stronger performance, but performance amongst these firms was strongest for larger firms with higher leverage. The exact size of the effect of increased 'R&D' on performance depends on the leverage and size of the individual firms. The longer term measure of R&D is negatively related to performance with a coefficient of -1.239. An increase of 'Long-term R&D' by 0.01 therefore reduced performance during the crisis by 0.012.

In the pharmaceutical industry, none of the CSR variables contributed positively to NROA. Using the coefficients in Table 3, the third-order relationship of 'Employment strength' with NROA can be constructed: -0.051Employment strength$^3 -$ 0.11Employment strength. An increase by 1 of 'Employment strength' therefore

reduces NROA by 0.059 (resulting from $0.051*1^3 - 0.11$). The interaction of corporate governance CG concern with leverage causes firms with higher leverage to have a threshold value of 'CG concern' below which the relationship with NROA is negative. 'CG strength' is negatively related to NROA, and this more so for firms with higher leverage through the interaction variable in the model.

Hypothesis 1 is therefore rejected for pharmaceutical companies as it appears that excelling on CSP had either a negative or neutral effect on NROA.

Table 4 here

Durable experience goods. The R-squared of the model for the durable experience goods dataset presented in Table 4a amounts to 76 percent. The control variables have an intricate relationship with NROA. 'Leverage^2' (-0.161) is negatively related to accounting performance during the crisis. Through the interaction with 'Advertising' and 'R&D', this relationship becomes more negative for firms with larger R&D or advertising spending.

The results partially support hypothesis 1 since 'Community concern^2' (-0.278) and 'Employment strength' (2.643) display the hypothesized sign of their relationship with NROA. Furthermore, the latter variable interacts with Advertising, so the effect of employment strength on NROA is therefore more positive with increased advertising spending. Contrary to hypothesis 1, product concern is positively related to NROA through an interaction with 'Sales'. The higher the average sales, however, the less positive this relationship. For firms with average sales above $128 billion (two firms in the dataset), the relationship actually does turn negative, i.e., in the expected direction.

Search goods. In Table 4b, the search goods model also has good overall fit, partly due to the industry control variables. Without these, R-squared drops to 0.311. Other control variables included are Leverage^2, negatively related to NROA, and 'Advertising', positively related to NROA except in the clothing industry, due to the variable 'Advertising*Clothing' with coefficient -1.2611.

Generally, only the relationship of 'Employment strength' to NROA partially supports hypothesis 1 for search goods. The model accounts for a third-order effect measured by 'Employment strength^3' and an interaction of 'Employment strength' and 'Sales'. Both effects combined imply that 'Employment strength' is positively related to performance, but only below a threshold value which increases with the average level of sales. There is a range of values for Employment strength in which its effect on NROA is positive, but outside that range, the relationship turns negative. The other CSR variables do not follow hypothesis 1 and Corporate Governance, and diversity even have a negative effect.

Industry Contrasts

Table 5 summarizes the results. It shows the significant CSR variables in each model, the sign of their relationship with NROA and potential influences from interacting variables. These can have an amplifying influence, so that a positive effect on NROA becomes more positive with increases in the interacting variable. On the other hand, interacting variables can have a moderating effect, so that the interacting variable diminishes the effect of the independent variable.

Table 5 here

Differences between the pharmaceutical industry and the food and beverage industries are apparent. In the former the relevant CSR dimensions are employment and corporate governance which all affected performance negatively. In the food/beverage industry, firms did have a way to support performance during the crisis through investments in community, diversity or avoiding damage to the environment. These results favour the acceptance of hypothesis 1a. The assumption is that differences between the pharmaceutical industry and the food/beverage industry in strategic CSR dimensions result from a dissimilar stakeholder configuration, especially due to the barrier erected between supply and demand by medical practitioners in the pharmaceutical industry.

Hypothesis 1b pertains to differences in strategic CSR dimensions between firms selling durable experience goods and those selling search goods. The results indicate that in durable experience good industries investments in community and employment relations positively influenced performance during the crisis, but product concerns are mitigated in larger firms. In search good industries, investments in the strategic CSR dimensions (corporate governance, employment relations and diversity) generally reduced performance. Hypothesis 1b specifies that differences exist between these two groups of industries regarding their strategic CSR stakeholder dimensions. Therefore, the results favour its acceptance.

DISCUSSION

The results favour the acceptance of hypothesis 1 only in the food/beverage and durable experience goods industries, but not pharmaceuticals or search goods. Thus, for food and beverages and durable experience goods, CSR is a valid crisis immunization strategy, although different dimensions of CSR are related to financial

performance during the crisis in the two industry categories. These CSR areas represent the stakeholder relationships that were strategic for firms to invest in as insurance against the financial crisis.

Hypothesis 1a is accepted, with clear differences apparent between the food/beverages industry as against the pharmaceutical industry. In the latter all CSR dimensions affected performance negatively, since none are related to the critical factors of choice of medication by doctors, the most salient stakeholders. In the food/beverage industries, various CSR dimensions showed the opposite effect to expectation with respect to financial results – CG strength and product and employment concerns, but a commitment to diversity and good community relations and elimination of environmental concerns help to immunize financial results against a market downturn. Diversity may contribute to reputation and moderate employee concerns, while addressing environmental concerns may increase efficiency and enhance community relations and reputation (Wagner and Blom, 2011). Thus, the differences between the food/beverage versus the pharmaceutical industries result from dissimilarities in stakeholder configuration as an important determinant of strategic CSR relationships, and hence a firm's ability to protect performance during the crisis.

Hypothesis 1b can also be accepted, as differences between search and experience goods industries are apparent in the results. Experience goods were expected to concentrate on areas contributing to a positive reputation. These expectations materialised with respect to community and employment dimensions. Moreover, the importance of reputation for experience goods is underlined by the amplifying effect of advertising for employment strength in durable experience companies. However, the product dimension had an impact contrary to what was expected.

Several dimensions of CSP are negatively related to CFP, suggesting certain social investments do not pay off and are therefore not strategic. Essentially this result indicates suboptimal investment behavior by certain corporations. This aligns to previous research which found that responding to secondary stakeholders does not pay off (Helmig et al., 2016). Ignoring employment and product concerns may have raised productivity and efficiency in the value chain of food and beverage companies. For search goods, apart from a conditional influence of employment strength, which may have increased efficiency, CSR oriented stakeholder practices exerted either a neutral or counterproductive influence, which corresponds to earlier findings by Siegel and Vitaliano (2006) that these firms are less likely to be socially responsible. The lack of impact of social performance on financial results in search goods suggests that consumers of these goods concentrate on information about the product itself and its attractions for them, including price, so that CSR is not a key consideration of stakeholders under financial pressure in a crisis with respect to search goods. Investment in CSR does not create any cost/efficiency advantages either.

Meanwhile pharmaceutical companies could not rely on any stakeholder group to immunize their performance, since this industry is dependent on the support of medical practitioners who adopt their products. As expected, this key stakeholder group's product endorsement does not appear to be influenced by a firm's commitment to CSR, since effectiveness of medication would be the paramount consideration in pharmaceutical prescriptions.

Negative financial outcomes for some CSR performance variables might indicate an effect at play similar to the winner's curse in auction-bidding (Thaler, 1988). Consider a social investment that yields the same value to all firms. The investment's cost is

easily estimated, but its benefits are uncertain. Such uncertainty may cause firms to disagree on the investment's value and hence on how much to invest. The firms with the highest CSP ratings are most likely to have attributed the highest value to the investment, thereby overpaying and exceeding the optimal investment level. Firms which did not invest as much achieved lower ratings but were possibly better off.

Moreover, a crisis situation could alter the cost-benefit structure of certain social investments, such that the economic costs suddenly exceed the benefits. What does not hurt a firm during prosperous times may turn out very costly during market downturns. This is consistent with Weber and Gladstone's (2014) finding of some negative correlations between environment and consumer oriented CSP and ROA three years later. In the pharmaceutical industry, investing in pro-employee or shareholder oriented corporate governance initiatives provides a possible example of wasteful CSP, since these issues are irrelevant to the success of pharmaceutical companies, which depend primarily on the development of blockbuster drugs and the support of doctors.

Interactions among CSR and Control Variables

Interactions among CSR and control variables as influencing CFP found in this study illustrate that the relationships between CSP and CFP must be understood in all their complexities. The search goods and experience goods models highlight two other factors that influence the effect of certain CSR investments on performance. Firstly there is evidence of economies of scale and scope, as suggested by Siegel and Vitaliano (2006). In the search goods model, the relationships between NROA and both 'Employment strength' and 'CG concern' are amplified by the average sales level. 'Employment strength' is negatively related to NROA for smaller firms

whereas larger firms have a range in which the relationship is positive. Scale and scope advantages may therefore enable large firms to invest in employment-related CSR. With corporate governance, firms with larger sales obtained greater advantage from reducing their 'CG concerns', possibly because larger firms which do not comply with corporate governance expectations attract more adverse attention than smaller ones.

With durable experience goods, the interaction between 'Product concern' and 'Sales' can also be interpreted as a size advantage. Addressing product concerns led to better performance in large firms, and detracted from performance in smaller firms. Thus, firm size is a contingent factor in making CSR work to advantage in durable experience goods. Potentially, CSR investments can add to the reputation of the firm, which affects entire product lines and brand portfolios (Schnietz & Epstein, 2005). Therefore this is likelier to pay off for larger firms. Such reputation effects can be augmented by activists. Siegel and Vitaliano (2006) assert that larger firms attract more activist coverage, increasing stakeholder awareness of a firm's social performance. If deemed positive, it provides an advantage (Fedderson & Gilligan, 2006), underlining Mellahi and colleagues' (2016) contention that communicating clearly a firm's CSR achievements is critical to their efficacy for the bottom line.

Advertising also augments CSR advantages for experience goods. For sellers of experience goods, advertising drives the strength of the relationship between employment-related CSR and performance. The more spent on advertising during the crisis, relative to assets, the greater the positive effect of these CSR investments on performance. These findings confirm the role of advertising as a mechanism to reduce information asymmetry between the firm and its stakeholders (McWilliams and Siegel, 2001). The latter is contingent on the inclusion of socially conscious

consumers, who incorporate such information in purchase decisions. Flatters and Wilmott (2009) observe that post-crisis, consumers refrain from experimental purchasing and revert to trusted brands. Brand value can therefore have affected performance and its relationship with CSP during the crisis, especially for durable experience goods. Additionally, talented employees are more attracted to an employer committed to good employee relations.

Contribution and Relevance

The study confirms a broad interpretation of the business case for CSR, as firms can justify CSR that goes beyond cost and risk reduction to competitive advantage and mutual value creation by working with key stakeholders (Barnett, 2007; Carroll and Shabana, 2011; Mellahi et al., 2016; Weber and Gladstone, 2014), but only when it is consistent with its industry and other situational contingencies. An insight from this study for both scholars and corporations is that there is real value when stakeholder facing CSP is integrated with a firm's strategy in helping firm performance in the face of market downturns. By targeting the stakeholders strategic to the firm with social investments, corporations can obtain a competitive edge over others in times of crisis. Moreover, the results highlight the critical success factors in the development and implementation of a CSR strategy and that stakeholders are multifaceted. The first critical success factor is deep stakeholder knowledge, which involves the identification of strategically salient stakeholders, the issues they value and how different contingencies impact on these. Secondly, economies of scale and scope should be considered when evaluating a CSR investment. Overlooking these might render a potentially profitable investment unprofitable. Finally, advertising can significantly influence CSR's ability to protect financial performance, particularly

with experience goods. Significantly, the study also indicates areas where investment in CSR may actually be counterproductive to the bottom line.

The study indicates that the dichotomy between positive and normative CSR (Schreck et al., 2013) is a false one. It is commonly believed that CSR which produces financial benefits for the firm is normatively empty, while normative CSR implies some kind of 'sacrifice' on the part of the firm. However, this study shows that carefully planned and implemented CSR can create a competitive advantage for the firm, while simultaneously doing the right thing by salient stakeholders, understanding their needs and answering them. This is consistent with an 'engaged' firm (O'Higgins, 2010) which manages simultaneously to find ways of creating benefits for itself and its stakeholders (Gyves and O'Higgins, 2008).

The study explains previous mixed results in studies that attempt to link CSR and financial performance by going further in understanding the underlying strategic contingencies that cause positive, neutral, and negative associations between stakeholder facing CSP and financial outcomes. Thus, for future research, this study can also serve as a guideline as to how to analyse the relationship between CSP and CFP. Industry stakeholder imperatives have to be considered, alongside the economic context of a beneficent or adverse environment.

Previous studies seem to have grown attached to simple linear models but, as we show, reality may be too intricate to be confined within such restrictive boundaries. Consistent with this perspective, CSR practices may reap financial rewards, but only up to a certain point, when they could become counter-productive (Carroll & Shabana, 2011). Thus, we used models testing non-linear relationships, by including squared and third order variables. A further way that we have captured the complexity

and interactive nature of the relationships among variables is by using instrumental variables, like advertising, leverage and R&D in our models' specification, thereby taking account of possible endogeneity, as advocated by Garcia-Castro et al. (2010). Cognizance of these complexities significantly enhances the quality of insights obtained. Also, in line with Garcia-Castro et al.'s recommendations for recognizing endogeneity, we have conducted a longitudinal study, incorporating meaningful time periods, as advocated by Margolis et al. (2009).

Limitations and Further Research Suggestions

Whilst this study has made a start in considering various factors in the evaluation of the CSP-CFP relationship, future research should broaden the scope of this study by taking into account more industry typologies with different stakeholder configurations and business imperatives. For example, industries which have lost the trust of key stakeholders and civil society like financial institutions would be interesting to examine, as would 'sin' type industries, such as tobacco and alcohol.

It could be insightful to analyze whether there is a disconnect between the dimensions of CSR that drive accounting performance and those that drive financial market performance in an industry, since recently, security analysts have issued favourable recommendations for firms with a good reputation for CSR, particularly when these firms have a higher visibility (Ioannou and Serafeim, 2010). Also, a firm's innovative ability has been demonstrated to mediate the relationship between CSR and market value (Luo & Bhattacharya, 2006). Therefore, future studies should include brand value and innovativeness as additional factors that might interact with CSR in affecting financial outcomes. There may be further moderating or mediating variables, beyond those in this study associated with CSR and financial performance that could

be included in future investigations. An example of such a variable is trust (Garcia-Castro et. al., 2010; Husted et al., 2015).

Like most studies on the CSP-CFP link, this study relied on secondary data. More insights might be gained in future studies that access the views and experiences of strategic managers in firms and their reasoning and evidence about the bottom line effects of CSR. Thus, clinical studies and secondary data studies should complement each other.

A final limitation is the study's emphasis on one particular crisis and one geography, the USA. Further studies with an extended historical and geographical focus are required to augment the generalizability of this study.

CONCLUSION

The results in this paper show that a commitment to strategic CSR may provide some insurance against market downturns in certain industry circumstances. By making strategic investments in salient stakeholder relationships, firms can obtain certain benefits that turn into competitive advantages in times of crisis. However, the research shows there is no one-size-fits-all approach. CSR's effect on performance depends highly on industry-related factors such as stakeholder configuration and the type of goods sold. Also, the relationships are not linear, but involve amplifying and moderating factors. Sellers of durable experience goods are shown to have more options than sellers of search goods to immunize their performance through CSR during a crisis. In certain industries, advertising also complements CSR efforts by informing stakeholders about the firm's social involvement. Finally, scale and scope advantages in the provision of CSR exist and should be accounted for when making investment decisions.

Thus, deep knowledge of stakeholders and associated strategic contingencies is required as stakeholders are not necessarily mobilized in favour of the firm by random CSR initiatives. An ill-judged investment can therefore hurt performance. These insights should motivate managers attempting to preserve their bottom line in a targeted manner to withstand hard times.

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Table 1: Sample sizes per dataset and industry

	Food/beverage	Pharmaceutical	Search goods	Durable exp.
Initial sample	45	75	55	101
Regression sample	29	67	44	96

Per industry:		**Per industry:**	
Clothing retail	35	Cars	2
Furniture	6	Appliances	9
Mattresses	2	Hardware	20
Carpets	1	Software	65

Table 2: Summary of descriptive statistics

	Scale (between)	Food/ beverage		Pharmaceutical		Durable experience goods		Search goods	
		Mean	SD	Mean	SD.	Mean	SD	Mean	SD.
NROA		0.016	0.157	-0.157	0.286	0.017	0.120	0.028	0.109
CSR variables									
Community strength	0 and 8	0.322	0.732	0.179	0.626	0.314	0.808	0.038	0.179
Community concern	0 and 5	0.138	0.351	0.045	0.208	0.072	0.246	0.000	0.000
CG strength	0 and 5	0.494	0.716	0.259	0.522	0.253	0.663	0.182	0.390
CG concern	0 and 6	0.747	0.880	0.562	0.667	1.000	0.861	0.523	0.620
Diversity strength	0 and 8	1.414	1.711	0.930	1.333	1.225	1.543	1.083	1.276
Diversity concern	0 and 3	0.299	0.457	0.284	0.435	0.489	0.481	0.220	0.443
Human rights strength	0 and 4	0.069	0.258	0.000	0.000	0.022	0.121	0.061	0.230
Human rights concern	0 and 7	0.138	0.516	0.015	0.122	0.083	0.279	0.197	0.369
Employment strength	0 and 7	0.644	0.859	0.448	0.632	0.569	0.972	0.136	0.332

Employment concern	0 and 5	0.828	0.682	0.473	0.557	0.425	0.615	0.848	0.742
Environment strength	0 and 8	0.667	0.854	0.234	0.770	0.339	0.867	0.023	0.151
Environment concern	0 and 7	0.402	0.657	0.204	0.586	0.133	0.724	0.000	0.000
Product strength	0 and 4	0.115	0.370	0.060	0.295	0.056	0.214	0.000	0.000
Product concern	0 and 4	0.391	0.767	0.448	0.922	0.286	0.638	0.053	0.215
Control variables									
Leverage	0 and 1	0.570	0.227	0.555	0.342	0.476	0.245	0.473	0.224
Advertising	0 and 1	0.031	0.030	-	-	0.013	0.021	0.070	0.089
Sales ($ billion)	($ billion)	9.494	12.909	4.083	11.738	11.285	29.573	2.815	3.951
R&D	0 and 1	0.007	0.005	0.273	0.253	0.099	0.056	-	-
Long-term R&D	0 and 1	-	-	0.230	0.170	-	-	-	-

Table 3: Summary results for the food/beverage and pharmaceutical industries

a. Food/beverage

Goodness-of-fit		
N	29	
Adj. R	0.927	
F-value	0.000	
Model attributes		
Variable	*Coefficient*	*VIF[1]*
Constant	0.150***	
Community strength	0.038*	2.30
(Diversity strength)^2	0.005***	1.90
Product strength	-0.051	1.73
Product concern	0.086***	1.89
Environment concern	-0.117***	2.94
Employment concern	0.094***	2.13
CG strength*Leverage	-0.093**	2.34
Leverage^2	-0.476***	2.09
Advertising	-6.008***	1.91
Advertising*(Leverage^2)	13.281***	3.43

b. Pharmaceutical

Goodness-of-fit		
N	67	
Adj. R	0.653	
F-value	0.000	
Model attributes		
Variable	*Coefficient*	*VIF*
Constant	0.147**	
(Product strength)^2	-0.095	1.82
(Employment strength)^3	0.051*	4.32
Employment strength	-0.11	4.16
(CG concern)^2	0.075**	3.42
(CG concern)*Leverage	-0.373***	5.12
(CG strength)*Leverage^2	-0.459***	1.78
Leverage^2	0.138	3.14
Long-term R&D	-1.239***	1.56
Leverage*R&D*Sales	0.258***	2.90

* p-value ≤ 0.05. ** p-value ≤ 0.01. *** p-value ≤ 0.001

1. VIF: Variance Inflation Factor

Table 4: Summary results for durable experience and search goods

a. Durable experience goods

Goodness-of-fit	
N	60
Adj. R	0.764
F-value	0.000
Model attributes	

b. Search goods

Goodness-of-fit	
N	44
Adj. R	0.621
F-value	0.000
Model attributes	

Variable	Coefficient	VIF[1]
Constant	0.052***	
(Community concern)^2	-0.278***	1.28
Product concern	0.128***	3.56
Sales*Product concern	-0.001**	8.97
Advertising*Employment strength	2.643**	4.04
Advertising*Community strength	1.832	4.38
(Leverage)^2	-0.161***	1.63
Leverage*R&D*Advertising	-34.772***	1.15

Variable	Coefficient	VIF
Constant	0.000	
CG strength	-0.089**	1.46
(Diversity strength)^2	-0.009*	3.99
(Employment strength)^3	-0.154**	2.76
(Employment strength)*Sales	0.047***	8.55
(Employment concern)*Sales	0.007**	1.31
(CG concern)*Sales	-0.009	2.00
Leverage^2	-0.289***	2.71
Advertising	0.377*	1.82
Advertising*Clothing	-1.261***	1.85
Clothing	0.181***	2.26
Mattress	0.340***	2.09

*p-value ≤ 0.05. ** p-value ≤ 0.01. *** p-value ≤ 0.001

1. VIF: Variance Inflation Factor

Table 5: Summary of the CSR relationships in the models

Variable	Effect NROA	Influenced by	Effect
Food/beverage			
Community strength	+		
CG strength*	-	Leverage	Amplifying
Diversity strength	+		
Product concern*	+		
Environment concern	-		
Employment concern*	+		
Pharmaceutical			
Employment strength*	-		
CG strength*	-	Leverage^2	Amplifying
CG concern*	+	Leverage	Moderating
Durable experience goods			
Employment strength	+	Advertising	Amplifying
Community concern	-		
Product concern*	+	Sales	Moderating
Search goods			
Diversity strength*	-		
CG strength*	-		
Employment strength*	+/-	Sales	Amplifying
Employment concern*	+	Sales	Amplifying

*Variables deviating from Hypothesis 1 are marked with an asterisk.