

**CAN SOCIAL RESPONSIVENESS CAPABILITIES DELIVER  
COMPETITIVE ADVANTAGE IN INDUSTRY SETTINGS?**

**AN EMPIRICAL STUDY OF THE ELECTRICITY GENERATION  
INDUSTRY IN VICTORIA, AUSTRALIA**

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**Abstract:** This paper tests a model of corporate social responsiveness capabilities in an industry setting. It seeks to understand whether corporate social responsiveness can be a source of competitive advantage for a given company in an industry where participants face similar constraints and issues.

**Keywords:** corporate social responsiveness; capabilities; resource-based view of the firm; electricity generation industry; Australia

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## **INTRODUCTION**

Understanding the extent to which corporate social responsiveness should be pursued at an industry level, for example through initiatives such as the Responsible Care Program in the chemicals industry, or whether it can be used for firm-level competitive advantage, is an important question of strategy for scholars and practitioners alike.

This paper tests a model of corporate social responsiveness capabilities in an industry setting. It seeks to understand whether corporate social responsiveness can be a source of competitive advantage for a given company in an industry where participants face similar constraints and issues. In other words, to what extent can

firm-level capabilities over-ride industry effects to produce superior social responsiveness?

Four brown coal electricity generators in the Gippsland region of the state of Victoria in south eastern Australia provided the setting for this study. They form an “extreme” setting (Yin, 1994) for a case study on industry effects on social responsiveness because of their similarities and shared constraints. If these companies can obtain any individual competitive advantage from corporate social responsiveness capabilities, the strategic view of corporate social responsibility is strengthened.

## **THE CONSTRUCT OF SOCIAL RESPONSIVENESS CAPABILITIES**

Theories of the firm, such as the resource-based view, suggest that capabilities, processes, knowledge and relationships between a firm and its stakeholders can be marshalled in unique combinations to contribute to value creation (Barney, 1991, Hart, 1995).

Organisational capabilities are group-level, socially complex outcomes of collective learning that combine processes and routines with the skills and knowledge of people who are often employed in different functions and at different hierarchical levels to perform co-ordinated tasks that are important to an organisation’s survival (Buller & McEvoy, 1999; O’Regan & Ghobadian, 2004).

Capabilities are just as important in producing performance in small and medium companies, as they are in big companies, illustrated by a study of generic capabilities in nearly 200 small and medium manufacturing companies (O’Regan & Ghobadian, 2004). Capabilities may be idiosyncratic, rare and inimitable (Litz, 1996), or they may be common, but configured dynamically to generate new, valuable outcomes (Cavusgil, Seggie & Berk Talay, 2007).

Companies may develop capabilities for ethics (Buller & McEvoy, 1999), environmental management (Sharma & Vredenberg, 1998), or customer service (Ray, Barney & Muhanna (2004). Arguably, any performance outcome that relies on combinations of socially complex processes, resources and interactions could be considered an outcome of organizational capabilities. Social responsiveness is an organisational set of processes such as environmental assessment, stakeholder management and issues management (Wood, 1991), knowledge (Preston & Post 1975) and structures (Bhambri & Sonnenfeld, 1988) that relies on tacit knowledge of both specialist staff and operational staff (Ackerman & Bauer, 1976). Thus, social responsiveness may be considered an organisational capability.

Social responsiveness capabilities have been empirically tested and described as comprising stakeholder engagement, social accountability, ethical business behaviour, value attuned communication and dialogue (Black & Hartel, 2004). These five capabilities disaggregate into eight measurable factors; three relating to the aspects of capabilities within an organization’s culture (ethical climate, sense of social accountability, and stakeholder identity) and three related to aspects of the capabilities within an organisation’s structure and formal processes (social reporting, stakeholder management, and ethics compliance).

Value attuned communication and dialogue are sense-making capabilities that enable organisations to integrate social responsiveness in their day-to-day decision-making (c.f. Weick, 2001; Cramer, van der Heijden & Jonker, 2006).

Definitions of the eight factors comprising the construct of social responsiveness capabilities appear at Table 1.

Ethics Atmosphere	Employees sincerely care about the wellbeing of others
Ethics Commitment	Ethical behaviour is reinforced through formal systems of rewards and punishments
Sense of Social Accountability	Managers feel accountable to stakeholders for the firms social impacts
Social Accountability Report	Employees perceive that the firm substantially accounts for its social performance, without "spin"
Stakeholder Identity	Employees understand how the firms future is linked with its stakeholders
Stakeholder Management	Business decisions take stakeholder needs into consideration
Dialogue	Managers display a respectful attitude and permit power-sharing over the agenda for discussion
Value-attuned communication	Boundary spanners contribute to business strategy with information about stakeholder values

**Table 1: Definitions of social responsiveness capabilities**

Given that industry effects can moderate the extent to which companies can benefit strategically from corporate social responsiveness (Cottrill 1990; Cowen, Ferreri & Parker, 1987; Jones 1999) we can surmise that two opposing forces might influence the corporate social responsiveness capabilities of firms that share similar industry constraints. On the one hand, the resource-based view of the firm suggests that the drivers of performance are internal rather than market-based. On the other hand, industry effects may sometimes prevail. An ideal setting for exploring this tension presents in a rural community in south eastern Australia.

### **FIELD SETTING**

Collectively, the four brown coal electricity generators participating in this study provide 90% of the electricity requirements for the State of Victoria, with a population of five million. They are geographically proximate to each other, based in a rural community approximately 150 kilometres east of Melbourne.

They share the same physical resource for their operations (the abundant local brown coal seams), employ people from the same community, share common community stakeholders and issues and face common environmental impact issues.

They differ in the age of their operating plants; the oldest is about 30 years and the most recently built is around 12 years. None of the plants is required to publicly disclose financial, environmental or social performance, but each provides some

disclosures either on its website or via the parent company's annual financial or sustainability report.

Until the early 1990s the electricity generation industry was state-owned. Privatisation initiatives and restructuring since then have resulted in a high level of foreign ownership. Today, two plants are owned by the UK-based International Power, one is owned by a consortium of Australian and international investors, and one is owned by Hong-Kong-based China Light and Power. Employment in power generation has declined from around 6,000 in 1991 (DOTARS, 2003) to around 1,400 direct employees plus contractors.

Brown coal emits 37% more carbon dioxide per unit of power output than black coal and more than three times the emissions of a co-generation plant using natural gas (Institute for Sustainable Futures, 2002), meaning Victoria has the highest rate of greenhouse gas emissions in Australia, and one of the highest rates of greenhouse gas emissions in the world (Berger & Phelan, 2005).

Despite environmental investment, greenhouse gas intensity rose at two of the companies from 1998-2004, and declined only slightly at the other two (Berger & Phelan, 2005). Significant reductions in greenhouse gas emissions, such as are called for under the Kyoto Protocol, would result in a further loss of employment in the Gippsland region of over 8% (Allen Consulting, 2000).

Therefore, the Gippsland electricity generators find themselves caught in CSR trap. To meet their economic responsibilities, the generators need to provide a reasonable return on investment to their owners and ensure that the lights stay on in the State of Victoria. To meet their social responsibilities, the generators need maintain and develop a highly skilled workforce and contribute to the overall development of the region. To meet their environmental responsibilities, the generators need to invest heavily in clean coal technology or other greenhouse gas emission-abatement technology. Caught between the proverbial rock and a hard place, the Victorian electricity generators need to develop high-level social and environmental responsiveness capabilities to survive.

### **SAMPLE**

Four electricity generating companies collectively employ about 1,400 people, plus contractors. A senior manager from each company invited selected employees to complete an on-line survey. A total of 111 responses were received from the four companies. An overall response rate cannot be calculated as one company did not keep a record of the number of invited participants. However, the response rates at the other three companies were 29%, 57% and 80%. The roles performed by respondents were executive (12.6%), manager (64.9%) and other (22.5%). The respondents worked in either a coal mine (23.4%) or a power generating station (34.2%) or in a corporate role (42.3%). Thus, the sample included both operations and corporate, with a deliberate bias towards senior employees who are more likely to be better informed about the companies' social and environmental practices.

## HYPOTHESES

A survey of the Canadian oil and gas industry (Sharma & Vredenberg, 1998) found that environmental responsiveness strategies explained a significant amount of variance in the emergence of organisational capabilities and competitive benefits. This study also found evidence of greater abilities to develop trust based relationships with stakeholders in firms with environmental responsiveness strategies. Other studies have found that top management commitments influence the extent of ethical behaviour in corporations (Weaver & Trevino, 1999). Stakeholder relationships and ethical business behaviour are central elements in the construct of social responsiveness capabilities. Thus:

H1: Environmental management capabilities are positively associated with general management capabilities.

H2: General management capabilities are positively associated with corporate social responsiveness capabilities.

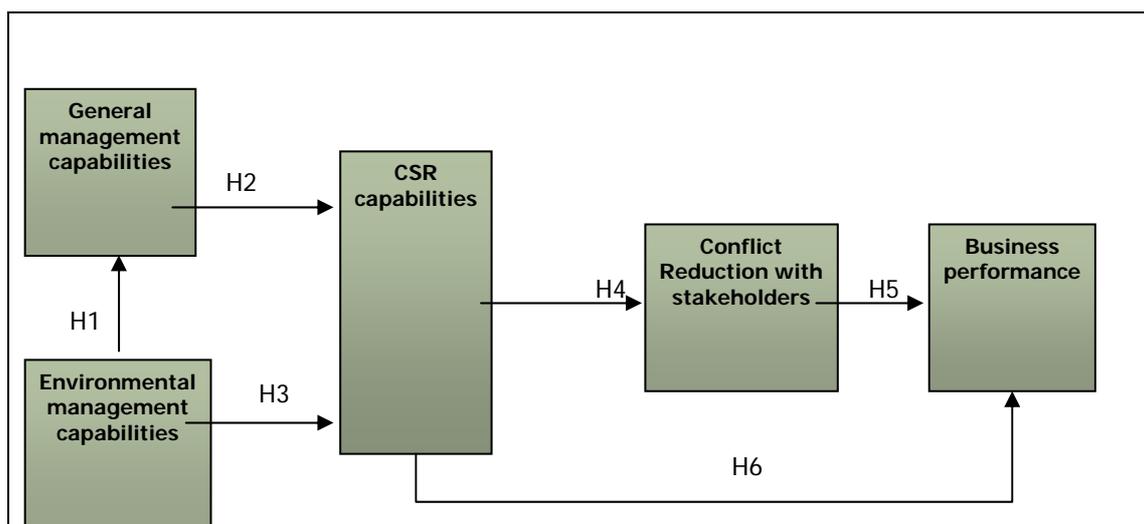
H3: Environmental management capabilities are positively associated with corporate social responsiveness capabilities.

Stakeholder theory suggests social responsiveness might contribute to business performance, since firms with effective stakeholder management processes are more likely to ward off the negative effects of stakeholder actions (Wood et al., 1998: 344). Such effects might include strikes, boycotts, and the passage of undesirable legislation or costly disputes with stakeholders. Given there is a positive relationship between social and financial performance. (Orlitzky, Schmidt & Rynes, 2004):

H4: CSR capabilities are positively associated with conflict reduction with stakeholders.

H5: Conflict reduction is positively associated with business performance.

H6: CSR capabilities are positively associated with business performance.



**Figure 1 - Hypothesised relationship between CSR capabilities and business performance**

The resource-based view of the firm suggests that a firm's capabilities drive performance (Wernerfelt, 1984). This view is confirmed by empirical studies that

show the positive impact of capabilities on performance (O'Regan, et. al., 2004; Carmeli and Tishler, 2004). Even in empirical studies where companies face the same market environment, business effects contributed more variance than industry effects (Adner and Helfat, 2003). Thus:

H7: The four companies will show significant variation in CSR capabilities and business performance.

## **METHOD AND MEASURES**

All measures were operationalised with a series of Likert-style psychometric scales. Psychometric scales are preferred for measuring abstract attitudinal and behavioral constructs because they rely on multi-item scores by asking respondents to indicate their level of agreement with several statements which each reflect a part of the intended meaning of the concept being measured (Nunnally & Bernstein, 1994). Calculation of co-efficient alpha was used to assess the extent to which items in each scale correlated. Items that are highly correlated tap the same content domain and enhance the reliability of measures.

Four of the variables of interest (CSR capabilities, environmental capabilities, performance and general management capabilities) were multidimensional measures. The fifth variable, an eight-item conflict avoidance scale (Dozier and Grunig, 1995) was uni-dimensional with an alpha co-efficient of .74.

Social responsiveness capabilities were measured with a series of scales used for an earlier study in an Australian setting (Black, 2004). Analysis produced an eight-factor solution consistent with the theoretical definition and previous results. Co-efficient alpha for the eight scales ranged from .51 to .93. All but one of the scales had a co-efficient alpha of over .70, considered acceptable for the reliability of such measures (Nunnally & Bernstein, 1994).

The construct of environmental management capabilities was operationalised using 7 items from scales developed by Banerjee (2002) to measure environmental orientation and environmental strategy. Two factors emerged, relating to environmental orientation ( $\alpha = .90$ ) and environmental strategy ( $\alpha = .90$ ).

General management capabilities were measured with a series of scales based on Sharma and Vredenberg (1998). We adapted the measures by asking about the extent to which social responsibility and environment practices had contributed to a range of general management capabilities. Three factors were isolated for the effects of each of the social and environmental practices: intangible effects (e.g. problem solving skills, employee morale, innovation and improved trust with stakeholders), process effects (e.g., supply and compliance costs) and market effects (e.g., product and service quality or market share gains). The alpha co-efficients for each of these scales ranged from .69 to .91.

Business performance was measured using the self-report scales developed by Saimee and Roth (1992). Several studies support the reliability of self-reported performance measures (e.g. Dess & Robinson, 1984). Accounting based measures of performance

are potentially limited because of their short time horizon and focus on a narrow range of tangible criteria, and they do not capture competitive positioning (Saimee & Roth, 1992). Further, objective measures of business performance are not publicly available from all of the businesses in this study as most are operating sites of large companies that report only aggregated firm performance data.

We used two-item scales that asked respondents to separately rate their company's financial, economic and social performance over the last three years, and to rate these aspects of performance compared to major competitors over the last three years. Two factors emerged, related to financial performance ( $\alpha = .80$ ) and non-financial performance ( $\alpha = .84$ ).

## RESULTS

The hypothetical model of CSR capabilities and their relationship to business performance was supported. Regression analyses and correlations were performed to test each hypothesis.

Environmental management capabilities were a significant predictor of general management capabilities ( $F(2,99) = 18.64, p=.000$ ), accounting for 27.4% of variance, supporting hypothesis one. However, the only significant individual predictor in the model was environmental orientation ( $\beta = .532, p=.000$ ). Essentially an increase in environmental orientation is associated with an increase in general management capabilities.

General management capabilities were a significant predictor of corporate social responsiveness capabilities ( $F(6,100) = 8.004, p=.000$ ), accounting for 32.4% of variance, supporting hypothesis two. However the only significant individual predictor to emerge from six sub-scales was the factor related to the intangible social effects of management capabilities, such as practices that stimulate innovation, collective learning and build trust ( $\beta = .422, p=.008$ ). Essentially an increase in practices that build these intangible management capabilities is associated with an increase in corporate social responsiveness capabilities.

Environmental management capabilities significantly predicted corporate social responsiveness capabilities ( $F(2,103) = 19.230, p=.000$ ), accounting for 27.2% of variance, supporting hypothesis three. However consistent with the findings from hypothesis one, the only significant predictor was environmental orientation ( $\beta = .468, p=.000$ ).

Corporate social responsiveness capabilities (dialogue, stakeholder engagement, ethics, social accountability and value-attuned communication) significantly predicted conflict avoidance and reduction, accounting for 17.7% variance. Thus hypothesis four was supported. However the only capabilities to emerge as significant predictors were stakeholder engagement ( $\beta = -.436, p=.005$ ), dialogue ( $\beta = .430, p=.002$ ) and ethics ( $\beta = .424, p=.006$ ).

A significant Pearson-product moment correlation was found between conflict avoidance and reduction and business performance ( $r=.311, p=.000$ ), supporting

hypothesis five. As conflict with stakeholders decreases, business performance increases.

Corporate social responsiveness capabilities significantly predicted business performance ( $F(5,94) = 14.403, p=.000$ ), accounting for 43.4% of variance. However only one capability emerged as a significant predictor, dialogue ( $\beta = .335, p=.004$ ). When corporate social responsiveness capabilities were regressed separately against the non-financial and financial components of performance, stakeholder engagement was the only significant predictor of non-financial performance ( $\beta = .359, p=.011$ ) and dialogue ( $\beta = .341, p=.009$ ) and ethics ( $\beta = .327, p=.024$ ) were significant predictors for financial performance.

Our final hypothesis was that despite the similarities between the four companies studied, they would show significant variance in social responsiveness capabilities. To test this, we ran a series of ANOVAs that individually examined the differences between the companies. We separately examined the aggregate social responsiveness capabilities score (achieved by finding the mean of the five capabilities), the five social responsiveness capabilities, and the eight factors that comprise these capabilities. At the aggregate level, the differences were not significant. When disaggregated into five capabilities, the differences value attuned communication were not significant, while the differences in ethics ( $F(3,107) = 3.827, p=.012$ ), dialogue ( $F(3,106) = 6.377, p=.0001$ ), stakeholder engagement ( $F(3,107) = 3.247, p=.025$ ) and social accountability ( $F(3,106) = 4.209, p=.0007$ ) were significant.

When disaggregated further into eight factors, only the structural components of capabilities were significant (ethics structure  $F(3,101) = 6.021, p=.0001$ ; stakeholder engagement structure  $F(3,107) = 4.862, p=.0003$ ; social accountability structure  $F(3,106) = 4.557, p=.0008$ ). In other words, the four companies have very similar cultures for corporate social responsibility. The way they think about and conceptualise their relationships with stakeholders and the nature of their social accountabilities is very similar. The ethical atmosphere in each workplace is very similar. Such differences as can be observed between them are due to differences in the implementation of codes of conduct, stakeholder management systems and social reporting.

The most significant difference between them was the dialogue maintained between the companies and their stakeholders, which as noted previously, was the corporate social responsiveness capability that most strongly predicted performance. Therefore, hypothesis seven was supported.

## **DISCUSSION**

The results of this study suggest that even in an industry setting where firms face similar constraints, individual firms can differentiate themselves in corporate social responsiveness capabilities, and thereby gain the advantage of “soft” business benefits such as more opportunities for collective learning and innovation in the workplace. Practices such as stakeholder dialogue are particularly important in this respect. Stakeholder engagement, dialogue and ethics also help to reduce costly conflict with stakeholders and contribute to financial and non-financial business performance. So it

is worth going it alone on social responsibility for these firms, even though the differences in performance it produces are small.

So far, the companies in this study have attempted to differentiate themselves by building capabilities in the structural aspects of corporate social responsiveness, such as sustainability reporting, codes of ethics, and stakeholder management systems. However, cultural aspects of corporate social responsiveness, such as ethics atmosphere, have been harder to date to leverage for individual advantage. Further, none of the companies is significantly different in its value attuned communication capability, suggesting the nature and quality of external community interaction (as opposed to engagement with activist or special interest stakeholders) varies little.

The companies are faced with two choices. They can either work harder to differentiate their workplaces cultures and community interaction in the hope that further advantage will accrue, or they can combine forces to address some social responsibility issues that they may share.

A social responsiveness strategy based on a collective approach for social responsibility issues with wide external community impacts, supplemented by firm level strategies with special interest stakeholders that build opportunities to stimulate collective learning and innovation, could provide optimal outcomes for these companies.

## **RESEARCH LIMITATIONS AND FUTURE RESEARCH**

Like all case study results, we must be cautious in generalising our results to other firms or settings. Although all of the measures used in this study have been validated in previous studies, and performed consistently with those studies, all the constructs are multidimensional measures of abstract concepts. Therefore, there are likely to be other occasions when the measures may not perform as they have in this, and other, studies.

Future research may further explore the conditions under which firms are best advised to pursue collective social responsiveness strategies and the conditions under which it is possible for them to use their social responsiveness capabilities in unique combinations to produce superior performance.

Finally, the suggestion that this particular group of firms would benefit best from using collective strategies for community relations and individual strategies with specialist stakeholders requires empirical testing.

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