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Managerial Cognition and Reputation: Does Communication about Firms' Intangibles affect Performance?

ABSTRACT

Corporate reputation is viewed as fundamental to firm performance, growth and survival and the maintenance and enhancement of that reputation is a key responsibility of senior executives. However, relatively little is known about the main dimensions of corporate reputation and the amount of attention given to them by senior executives. Based on the corporate reputation and intangible resources literatures, thirteen reputational elements were identified and the amount of attention given to those elements in a large, longitudinal sample of annual reports from Australian firms was measured using computer aided text analysis. This identified five, main reputational dimensions that were both stable over time and related to firms' future financial performance.

Keywords:

Corporate reputation, managerial cognition, intangible resources

RECONCEPTUALISING CORPORATE REPUTATION

Corporate reputation has been recognised as fundamental to firm performance, growth and survival. Empirical research across a variety of contexts has found that firms with better reputations are able to charge higher prices, develop stronger alliances and attract talented employees (Fombrun & Shanley, 1990; Gatewood, Gowan, & Lautenschlager, 1993; Dollinger, Golden and Saxton, 1997). Drawing on the resource-based view (RBV) of the firm, corporate reputation can be viewed as residing in a range of potential intangible resources possessed by a firm that have a significant impact on the potential of a firm to compete in a given market (Wernerfelt, 1984; Barney, 1991; Rao, 1994). However, relatively little is known about the main dimensions of corporate reputation, and whether these impact on firm performance. Several researchers have found that while financial reputation is generally seen as a key dimension of overall corporate reputation (Kotha, Rajgopal and Rindova, 2001; Roberts and Dowling, 2002) there are potentially other reputational elements, or dimensions, that remain largely unidentified and therefore understudied. To date only a few studies have empirically studied the nature and influence of such, non-financial reputational dimensions (Roberts and Dowling, 2002; Inglis, Morley and Sammut, 2006) and therefore a key objective of this research was to contribute to their identification and measurement.

Working with a sample of 77 Australian firms, Inglis and colleagues (2006) investigated whether an increase or decrease in reputational standing was associated with a respective increase or decrease in financial performance. They found that reputation did not seem to affect financial performance nor did financial performance affect reputation. However, Roberts and Dowling (2002), using a much larger sample of US firms and Fortune’s Corporate Reputation Index as their measure of corporate reputation, found evidence to support both relationships - the quality of a firm’s previous financial performance influenced its subsequent reputational standing, and reputation influenced the sustainability of above average profits into the future. Importantly, as well as identifying a financial performance related, reputational element, Roberts and Dowling (2002) also found there were other reputational elements as well as financial reputation that significantly contributed to overall corporate reputation. Their notable conclusion was that a large proportion of the reputational effect was represented by what they described as 'residual reputation'. Roberts and Dowling (2002, 1083) found that, "roughly 15 percent of the variance in relative reputation is explained by prior financial performance alone", they also found that a firm's 'residual reputation' had a significant effect upon subsequent performance, above and beyond the effects of financial reputation. This suggests that corporate reputation consists of a combination of both a financial element and other less well understood elements which they termed collectively 'residual reputation'. Love and Kraatz (2009) came to a similar conclusion.

Love & Kraatz (2009) argued that corporate reputation was based not only upon financial performance but that it has a range of underlying elements which potentially have more influence than financial performance alone. They argued that different audiences attend to different reputational signals sent by senior executives which could be categorised into three broad groups namely, organisational character, symbolic conformity, and technical efficacy (Love & Kraatz, 2009). Further, their findings suggested that technical efficacy, largely the equivalent of financial performance, had only a smaller influence on overall corporate reputation than the other two categories. These findings reinforce the view that there is a range of underlying factors which make up corporate reputation apart from financial performance alone. A number of other researchers have sought to identify and investigate these 'other' underlying dimensions of corporate reputation (Hall, 1992; Dollinger, Golden and Saxton, 1997; Schwaiger, 2004; de Castro, López, & Sáez, 2006) however, their findings have a number of limitations.

Limitations of previous corporate reputation research

Studies using the Fortune Reputation Index, or similar measures as their measure of corporate reputation are relatively common (Gatewood, Gowan, and Lautenschlager 1993; McGuire, Sundren, and Schneeweis, 1988; Bennett and Gabriel, 2003). However, while this measure has considerable face validity and is based on large samples of expert judges (Griffin and Mahon, 1997), there is considerable debate about the extent to which it represents a true measure of firms' corporate reputation rather than a relatively narrow measure of firms' recent financial performance (Brown and Perry 1994; Fryxell and Wang, 1994). Fryxell and Wang (1994) suggest that the eight items used by Fortune as an index of corporate reputation, "imply a model where all items load on a single factor" which to a large degree represents financial performance.

The influence financial performance has on the Fortune Index ratings becomes evident when the attributes used in the assessment of firms' reputation are considered in terms of standard accounting information. The attributes are: long-term investment value; financial soundness; use of corporate assets; quality of management; quality of products and services; innovativeness; use of corporate talent and community and environmental responsibility. Upon review of the eight attributes used by industry experts to assess corporate reputation it is evident that the largest number and the most specific attributes are concerned with financial performance. Research has also shown that those items aimed at providing an indication of financial performance are highly correlated with standard accounting information (Mcguire, Sundren and Schneweis, 1988). Therefore, Fortune-type reputation rankings provide a valid but limited insight into firms' broader corporate reputation.

Another limitation of the earlier corporate reputation literature is that many studies have investigated the impact of a single reputational element, such as environmental reputation or corporate social responsibility and its relationship with financial performance (McGuire, et al., 1988; Griffin and Mahon, 1997; Peloza and Pepania, 2008). This research is beneficial in understanding the impact of a single reputational construct but provides little insight into the broader nature of overall corporate reputation and its influence. Further, studies of corporate reputation have largely tended to be methodologically homogeneous, relying on surveying either internal (Hall, 1992) or external (Flanagan and O'Shaughnessy, 2005) 'stakeholders', such as industry experts, analysts and even university students (Dollinger et.al. 1997).

While surveys can provide a rich source of information, Barr and Huff (2004) observed that most data sources, including questionnaires have a range of potential contaminating effects. By providing respondents with a list of possible reputational elements or resources and asking them to rate or rank their importance, the researcher implies that the list is comprehensive, thereby eliminating any alternatives not included in the list. As a result of providing a specific list, the researcher may unintentionally create bias by introducing a construct which until then was not present in the respondent's usual understanding. Therefore, these limitations reinforce a need for exploring alternative ways of identifying and measuring the elements of corporate reputation that are potentially important to different stakeholders. Such methods would preferably be less intrusive and capable of measuring aspects of corporate reputation over longer periods in order to permit more rigorous investigation of links to future financial performance.

The present study attempts to do this using a managerial cognition approach to the identification and measurement of elements of corporate reputation. Our approach rests on two assumptions – that a central role of senior executives is the preservation and enhancement of a firm's reputation (Hall, 1992; Gray and Balmer, 2002) and that because managers' cognitive resources are limited (Moors and De Houwer, 2006) they will tend to focus their attention on those reputational elements that they perceive as being the most important to the firm's current and future outcomes, and to its stakeholders.

In order to study managerial cognition about firms' reputation we use content analysis of firms' annual reports as an important, standardised source of information about managers' cognition and communications to stakeholders. We elaborate on our methodology later in the Methods section however as Short, Broberg, Cogliser and Brigham (2010) observed, content analysis of managerial communications can be either inductively or deductively based, but often researchers combine the two approaches by beginning with a theoretically-based set of content categories and modifying or elaborating these during interaction with the text being analysed. This is the approach adopted here.

As noted earlier, from an RBV perspective corporate reputation can be viewed as residing in a range of potential intangible resources possessed by a firm as Table 1 shows, while researchers differ in terms of what they identify as central elements of corporate reputation, most or all of these can be seen as representing different kinds of intangible resources. Therefore the present study began by identifying a set of content categories representing a set of firm-level, intangible resources to represent elements of corporate reputation that senior executives attend to and communicate to external stakeholders. To clarify, we are not measuring corporate reputation per se but rather the attention given in annual reports by senior executives to various firm-related, intangible resources which we argue reflects their perceptions about the firms' most important reputational resources for external stakeholders.

Insert Table 1 about here

To summarize, researchers have found that while financial reputation is seen as important, there are other underlying elements which remain understudied. Roberts and Dowling (2002) identified what they termed, 'residual reputation' as being an important source of corporate reputation without being able to 'unpack' this category further. While a number of authors (Dollinger et al., 1997; Schwaiger, 2004; de Castro, et al., 2006) have attempted to decompose corporate reputation into its underlying elements these studies have a number of limitations including a reliance on Fortune-type reputation indices (Schwaiger, 2004; de Castro, et al., 2006; Dollinger et al., 1997), small sample sizes (de Castro, et al., 2006; Dollinger et al., 1997; Hall, 1992), and the use of intuitively derived lists of reputational elements (Hall, 1992; Dollinger et al., 1997; Schwaiger, 2004; de Castro, et al., 2006). However drawing on the resource-based view of the firm, and the reputational elements identified by previous researchers, we identify intangible resources as key sources of a firms' corporate reputation. To describe and measure important elements of corporate reputation we measure the amount of managerial attention given in annual reports to various firm level, intangible resources. By using an unobtrusive methodology and a naturally occurring data source we provide an alternative to previous studies' reliance on survey methods which also provides us with the opportunity to derive longitudinal information and relate it to independently derived measures of financial performance.

METHODOLOGY

Sample

The text data used to identify reputational dimensions came from 10,582 electronically available annual reports for 2,658 companies listed on the Australian Stock Exchange (ASX) between the years 1992 and 2008. The second part of the study focused on financial performance of over 1,200 Australian companies between the years 2003 and 2006 (inclusive). This period was chosen as it avoids abnormal peaks or troughs in the market, and has the highest number of annual reports; 1009 in 2003 to 1188 in 2005 and 925 in 2006, covering all industry sectors. However, since it was not possible to access reports from all companies across all four years for a variety of reasons (such as firms being taken over, privatised, failing, or merging with another firm), the sample size for these analyses was 498 (1,992 firm-year observations).

Reputational sources in annual reports

There has been some criticism of studies involving content analysis in managerial and organisational research which centre not so much on content analysis *per se*, but rather the use of annual reports as valid and reliable sources of information about managerial, or senior executive cognition. Critics have focused on two potential issues: first, senior managers may have little or no role in producing the reports, and secondly, even if they play a role, they contain mainly impression management directed towards certain key stakeholders, rather than information about executives' real cognitions. At the extreme, these criticisms seem unfounded given the growing body of evidence suggesting that the text content of annual reports can reveal useful information about managerial perceptions and beliefs (Abrahamson and Park, 1994; Kabanoff and Brown, 2008; Duriau et. al. 2007), in particular, the shareholders' letter has been seen to reflect concerns of importance to the author(s) (Barr & Huff, 2004).

Bar and Huff (2004) sought to understand the different responses firms make in dealing with environmental change by analysing the content of corporate documentation, including annual reports. In doing this they also considered a range of issues related to the use of annual reports as sources of information about managerial perceptions. Barr and Huff (2004) note that since there is a shared strategic framework within the unit of analysis (the firm) given that the senior leadership of larger organisations is made up of a group of individuals, rather than one person, documents such as the shareholders' letter are an indicator of shared. They also offer evidence against the second main criticism of annual reports, in that they are merely public relations exercises and as such are meant to be persuasive, and therefore seriously distort the information provided. In light of the concern that the information contained in the annual reports is not accurate or verifiable, Bar and Huff note that unrealistic statements are often constrained by a broad body of 'common observation' by a range of interested stakeholders. This point is supported by findings from several other studies including that by Abrahamson and Park (1994), Abrahamson and Hambrick (1997), Clapham and Schwenk (1991), Huff and Schwenk (1990), Fiol (1995). Daly et al. (2004) also highlight the fact that once the annual report has been published, it cannot be altered.

These observations reinforce the notion that the content of annual reports provides valid information about senior managements' perceptions of the relative importance of firms' intangible resources to the firm's significant stakeholders. Therefore, not only is the annual report a reliable and reasonably accurate source of information, but the content, particularly references to intangible resources, can be argued as having a direct impact on future financial performance. Furthermore, in terms of practicality for research purposes, the content analysis of annual reports is the least intrusive, most flexible, least difficult to replicate in future studies and the most cost effective method available. In addition, this approach to understanding the cognition of senior executives, in relation to intangible resources and the impact on financial performance, overcomes many of the concerns sometimes associated with more traditional data collection techniques, for example, interviews or direct observation. Finally, through the use of this methodology, this study overcomes many of the limitations found in earlier reputation research, particularly those concerned with attempting to measure reputation per se, and the bias introduced by providing predefined lists of resources. Therefore by analysing the content of managerial and board discourse in annual reports it is possible to study senior decision-makers' attention to different forms and sources of corporate reputation and the subsequent effect this has on firm performance.

Developing the intangible resource categories

While Hall's (1992) list of intangible resources provides an appropriate starting point for identifying different potential aspects of reputation it became evident that considering other authors' reputational dimensions was useful. For example Hall (1992) originally identifies concern for the environment and/or the community as aspects of 'public knowledge' whereas other authors differentiate between: social responsibility, ethical behaviour, reliability, fair attitude toward competitors, transparency and openness and credibility (Schwaiger, 2004), or include a combined category of "social responsibility among the community" (de Castro, et al 2006). This provides an appropriate starting point for the description and measurement of a set of reputation-related themes or categories which senior executives are actually communicating to their stakeholders. These categories form the basis for the analysis of the reputational content of the senior executives' discussion within annual reports.

Working with this initial set of categories as identified in the literature, approximately 10,000 sentences were coded manually into text analysis software, termed the ‘classifier’. These sentences were randomly selected from a dataset containing over 700,000 sentences which were extracted from Australian annual reports dating from 1992 to 2008 (*N*=10,582). Only portions of the annual report that were identified as originating from senior executives were included. This helped to ensure that analysis focused on the cognition of senior executives rather than mere reporting statements such as the Auditor’s Statement or declarations required by law. This process provided a preliminary insight into the content of the annual reports and resulted in the development of a modified set of reputational categories, not originally considered in the earlier literature. Appendix A, Table A1 details the final set of reputational categories with definitions and examples.

Training the ‘classifier’, involves manually classifying sentences containing the particular themes and saving them to a file created by the software. These examples or ‘training sentences’ provide the basis for the calculation of a probability ranging between 0.0 and 1.0, representing the likelihood of a theme being present in a sentence based on the occurrence of words within sentences that have been selected by the coder as containing a particular theme. As sentences are added to the classifier the researcher assesses how accurately the classifier is performing in relation to identifying different themes, whether there is a need to add more examples and whether there are any systematic errors being made by the classifier and how these might be corrected (e.g. by refining or narrowing a category).

This is done by asking the classifier to identify collections of sentences containing one or more of the themes and assign them a probability. Should the researcher notice that the software is having difficulty in accurately classifying certain themes, based on the human coder’s judgments about how the classifier is currently classifying sentences, the number of sentences related to that theme is increased, thereby providing the software with more examples from which to 'learn' i.e. develop its decision process further using its in-built algorithm. As the number of sentences becomes larger, they provide an increasingly more accurate guide for the classifier for the selection of other sentences containing the same theme. Note that should multiple themes be present in any sentence that sentence is coded across as many categories as required. The final classifier was developed by creating four smaller, separate classifiers and then combining them. This provided the opportunity to ensure reliability and consistency between individual classifiers and the final, combined version. Where inconsistencies were identified, the classifier was reviewed and erroneous entries were removed. At the end of this process the classifier contained over 2,200 sentences which were then used to score the whole dataset where an overall score for each annual report was calculated. Once the classifier has calculated a probability for each sentence it aggregates them providing a basic estimate of the likelihood a particular theme is present in each annual report. These results are adjusted for the number of sentences in order to provide what Kabanoff and Brown (2008) term 'density' or a measure that estimates the frequency or 'level' at which a particular theme occurs in each annual report.

Measures of financial performance

Given the multi-industry sample, it is necessary to use measures of financial performance that can be used across industries. Consistent with the approach by Kabanoff and Brown (2008) three measures of financial performance have been selected, return on assets (ROA), return on equity (ROE) and a measure of market performance (PER). ROA has been used in many studies including those by Kabanoff and Brown (2008), Roberts and Dowling (2002), Inglis et al. (2006)

and as such is seen as a common measure of firm profitability (Roberts & Dowling, 2002). It is calculated as the earnings per financial year, divided by total assets, including shareholders' equity and other borrowings. ROE provides a raw estimate of company performance by measuring a firm's efficiency at generating a profit from every unit of shareholders' equity (also known as net assets or assets minus liabilities). PER is a measure of share price relative to a firm's earnings per share and is defined as the closing share price on the last day of the company's financial year divided by the pre-abnormal earnings per share for that year (Kabanoff & Brown, 2008). The higher PER is, the higher are investors' expectations of future earnings, thus PER is a reflection of market judgment of a firm's future prospects unlike the measures of profitability, which reflect past performance.

When analysing the relationship between the five reputational dimensions and financial performance the factor loadings and the financial measures were averaged to avoid unnecessary fluctuation in the data, thereby controlling for any minor movement of reputation overtime and any large fluctuations in financial performance. Averaging the scores on each reputational dimension, rather than using the factor loading, provided a better measure of the construct. The years 2003 and 2004 are shown as 't1' whereas the years 2005-06 are shown as 't2'. Table 2 provides a detailed explanation of the operationalisation of each of these variables. This approach more accurately represented the nature of the dimensions of corporate reputation given the earlier literature which suggests that there is at least some change in reputation over time, yet this change is not usually dramatic (Roberts and Dowling, 2002; Hall, 1992). However, when analysing the temporal nature of these same dimensions, each year was compared individually so as to be able to identify any changes in the variables. The five reputational dimensions identified in the earlier analysis are used here to investigate the temporal nature of the dimensions of corporate reputation. Therefore it is necessary to also treat the scores for each reputational dimension in any one year as distinct to that of any other year.

Insert Table 2 about here

RESULTS

Data Screening

Following the scoring of all annual reports, the data was screened for normality in order to conform to the assumptions underpinning multivariate analysis. Through this analysis it was observed that the data were positively skewed with considerable numbers of reports scoring zero or very near zero on a theme. Unlike questionnaires where people are required to respond to every concept presented by the researcher, even ones they do not normally consider or consider to be important, natural text reflects only things that the communicator has articulated. Clearly, not every firm will necessarily see every reputational element as important or relevant and, this being the case, not all themes are present in all of the reports. However from the viewpoint of analysing this data such variables clearly required transformation. A range of methods were trialled, including inversion, Log(n) and square root with the latter being selected as it was the most effective in transforming the data into an approximation of normal distribution.

Insert Figure 1 about here

Factor Analysis

The majority of the categories identified could be grouped into a higher-order structure that is related to the themes conveyed in the earlier research. This was also supported by the co-occurrence of some of the themes within the sentences. For example, the three themes, employee welfare, environmental responsibility, and community responsibility, were often found to be in the same sentence, suggesting that these three themes were in fact part of a larger construct. This observation can also be made about the Fortune Index. There are clearly some elements that refer to aspects of financial performance (Fryxell and Wang, 1994; McGuire, et al, 1988) whereas there are other elements that relate to corporate social responsibility, organisational culture, and various aspects of quality. Given this, principle-component factor analysis was used to explore whether the reputational categories measured could be adequately represented by a smaller number of broader reputational factors, or dimensions. Further, this was reinforced by the correlation matrix shown in Table 3 which indicated that there are numerous significant correlations between individual variables. Given the very large N for this matrix even trivial correlations are significant (e.g. a value of .02 is < .05) so Table 4 highlights only correlations above 0.10. However, overall the correlation matrix supports the view that there may be a meaningful structure underlying the specific reputational elements measured.

Insert Table 3 about here

A principle-components analysis of the reputational themes followed by a varimax rotation was therefore conducted. Five factors were identified (Table 4), which accounted for over 58% of the variance. The initial eigenvalues showed that the first factor explained 18.9% of the variance and the second factor 13.7% of the variance. The third, fourth and fifth factors account for the remainder of the variance at 9.2%, 8.5% and 8.1% respectively. Product Reputation and Customer Focus were the only variables to show relatively high cross loadings. Product reputation had a primary loading of 0.54 on factor one and a secondary loading on factor three of 0.44. The variable Customer Focus had a reduced cross-loading weight (0.45 to 0.40) and an increase in the primary loading from 0.55 to 0.63, indicating a better relationship with factor three, ‘Service Reputation’.

Insert Table 4 about here

Interpreting the Factor analysis

It is evident that the factors have a natural clustering around specific topics that make intuitive and theoretical sense. A brief interpretation of the five factors identified above is included here.

Factor 1, Company reputation: The three main themes forming this factor all focus on aspects of the company, its products or services. This includes the markets it serves and potential opportunities in those markets or new markets.

Factor 2, Service Culture: Organisational culture, employee expertise and customer focus are clearly related. Much of the literature relating to the development of customer service highlights the need for training and the development of a service culture (Sturdy, 2000; Sidorko & Woo, 2008; Denburg & Kleiner, 1994). Because of the clear linkage between culture, employee expertise and customer service this factor has been interpreted as Service Reputation.

Factor 3, Corporate Social Responsibility (CSR): It is not unexpected that the three variables, Environmental Responsibility, Employee Welfare and Community Responsibility appear together within one factor. The literature on corporate social responsibility clearly links all three constructs under the umbrella of CSR (Carroll, 1991, Blackburn, 2007).

Factor 4: Financial Reputation: This factor is more complex to interpret because it is a bi-directional factor in which stronger positive scores indicate a greater focus on management quality, expertise and reputation while higher negative scores indicate more focus on the firm’s financial reputation. Given the focus here on financial reputation and following the earlier example of Kabanoff and Brown (2008), the factor has been labelled ‘Managerial Versus Financial Reputation’.

Factor 5, Governance Reputation: The relationship between the wo variables, ‘Board Expertise’ and ‘Corporate Governance’ isn’t surprising given that a board’s level of expertise is widely assumed to impact on the firm’s ability to provide or implement sound approaches to corporate governance (Ashbaugh-Skaife, Collins, and La Fond, 2006). Interpreting this factor in this way is consistent with existing corporate governance literature that stresses the impact the characteristics and experience of board members has on a firm’s reputation for corporate governance quality.

Overall the interpretations of the five factors are consistent with earlier research and are quite readily interpretable and meaningful based on the results of the factor analysis. These factors (Company Reputation, Service Reputation, CSR, Financial Reputation, and Governance Reputation) are termed collectively ‘Reputational Dimensions’ and are used in the following parts of this study.

Temporal stability of reputational dimensions

Since reputations have been conceptualised largely as reflecting intangible elements that are relatively difficult to develop, change or copy (Hall, 1992; Roberts and Dowling, Eberl and Schwaiger, 2005), these elements should be relatively stable over time as a result, it is expected that reputational dimensions do not fluctuate greatly over time, except in exceptional circumstances. To investigate this question, multilevel analysis was conducted for each reputational dimension (i.e. corporate reputation, service reputation, corporate social responsibility, financial reputation and governance reputation) across each of the years (2003 – 2006). Table 5 provides the most significant correlations between 2003 and the following three years for each of the reputational dimensions. Each of the five reputational dimensions, with the exception of Governance correlated strongly with the same reputational dimension in each of the following years.

Insert Table 5 about here

While there were some correlations between different reputational dimensions', across different years, the strongest in all cases was with the same dimension. For instance, while there was a correlation between 'CSR' in 2003 and 'Corporate Reputation' in 2004 (.22), there is a far stronger relationship between 'Corporate Reputation' in 2003 and 'Corporate Reputation' in 2004 (.48). These results also suggest that while the relationship between each reputational dimension in each of the years is strong, it does become weaker over time. This is to be expected given a multitude of reasons such as changes in corporate strategy, the competitive environment, or a need to comply with certain legislation. Also, based on the rate of change in the correlation scores, the results indicate that this decline is relatively steady across all dimensions. Given these results, there is empirical evidence to support the claim that corporate reputation does remain relatively stable over time, with little variation between each year, or between each dimension. The observation that this same pattern was evident in all of the reputational dimensions except, arguably, 'Governance Reputation' supports the notion that corporate reputation has temporal stability.

Governance Reputation was significantly correlated with the first two years, that is, 2004 (.27) and 2005 (.20), but had a minimal correlation with that in 2006 (.05). The reasons for this are likely to be complex given the range of influences that may have impacted on managerial perceptions over the period in question. One explanation that may go some way to explaining this result is the recognition that the dataset uses annual reports of Australian companies between 2003 and 2006, and that managerial focus may have changed as a result of implementing changes to governance procedures, for example, complying with the Australian Stock Exchange (ASX) Principles of Corporate Governance and Best Practice Guidelines, released in 2002. This is particularly relevant given that one of the key elements of sound corporate governance is the composition of the board. As this factor loaded on two variables, namely 'Corporate Governance' and 'Board Expertise' it is not surprising that the results show change in firms' relative focus on this dimension, subsequent to the release of the ASX guidelines. The findings appear to support this explanation. However, much work remains to be done in respect to explaining this variation in the results given the importance of governance issues within the community in general.

Impact of reputational dimensions on financial performance

A key aspect of the current research is the investigation of the relationship between the reputational dimensions and financial performance as measured by ROA, ROE and PER. Given the earlier literature there is an expectation that future financial performance is affected by past financial performance (Roberts and Dowling, 2002). A hierarchical regression was used to test this relationship. Each reputational dimension (i.e. corporate reputation, service reputation, corporate social responsibility, managerial expertise versus financial reputation, and governance reputation) was measured in terms of its potential impact on financial performance in 2005-2006. Table 6 shows the results for this analysis.

Insert Table 6 about here

Control variables were entered in step 1 while the reputational elements were added in the following steps in separate iterations of the same regression. Based on the earlier research, there was an expectation that previous financial performance and future financial performance would be related, so this was controlled for in two ways. Firstly, each of the three measures of financial performance was entered in the first step in each of the separate analyses. That is, current ROA was controlled for in the analysis involving future ROA, while ROE was controlled for in the analysis for the ROE variable, and PER in the analysis involving PER. The influence of previous financial performance was also controlled for in terms of the potential effects of managerial discourse relating to financial information. That is, management discussion independent of actual financial performance can provide information about managerial expectations about future financial performance and influence investor behaviour (Abrahamson, and Park, 1994; Abrahamson and Hambrick, 1997; Devinney & Kabanoff, 1999). By including ‘financial performance’ as one of the content categories in the initial development of the text classifier (see Study 1), it was possible to control for this potential influence that can be related to, but is distinct from, financial reputation (Roberts and Dowling, 2002). Thus, this variable controls for the financial performance component held to affect the ‘Financial Reputation’ dimension. Each of the five dimensions was then used to predict each of the three measures of financial performance while controlling for the matching measure of current financial performance and the level of managerial discourse about the firm’s financial performance. However, on the initial regressions the bidirectional nature of the dimension ‘managerial expertise versus financial reputation’ was seen to be causing some unexpected results, discussed in more detail below. As a result of this, this dimension was split into its underlying elements, namely, ‘financial reputation’ ($FinRep_{t1}$) and ‘Managerial Expertise’ ($ManRep_{t1}$).

Subsequent to splitting the ‘managerial expertise versus financial reputation’ dimension, control variables for both previous ROA (ROA_{t1}) and financial performance ($FinPer_{t1}$) were entered into the regression. The results of this analysis indicate that financial reputation and service reputation had a significant effect on one aspect of financial performance ROA. Current ‘Financial Reputation’ accounted for significant variation in future ROA (the dependent variable, ROA_{t2}), $R^2 = 0.12$, $F(45, 345) = 14.11$, $p < 0.01$. ‘Service reputation’ was also seen to account for a significant variance in future ROA, controlling once again for current ROA (ROA_{t1}) and financial performance ($FinPer_{t1}$), $R^2 = 0.86$, $F(34, 356) = 20.53$, $p < 0.01$. None of the other reputational dimensions accounted for variance in the dependent variable (ROA), nor were the other measure of financial performance (i.e. ROE, PER) influenced by any of the reputational dimensions. Whilst there have been a number of studies questioning the existence of a relationship between reputation and overall performance, the results presented here suggest that some elements have a significant impact on firm performance. The results suggest that after splitting the reputational dimension identified as ‘Managerial Expertise versus Financial Reputation’ into its underlying component variables, ‘Financial Reputation’ had a positive impact on financial performance whereas the impact from ‘Managerial Expertise’ was negligible, after allowing for the control variables, the reputational dimension, ‘Service Reputation’ also had a positive impact on ROA.

The results show that managers’ perceptions of the firms’ reputation along a number of dimensions are relatively stable overtime. The results not only support the notion that overall there is little movement, but individually, or for each reputational dimension, there is a clear link between the focus of each annual report between the years in review. The results from this study confirm lend support to Hall’s (1992) assumption that managerial perceptions of what is important to the success of their company are stable over time. Further, these results also suggest that there is a relationship between two of the reputational dimensions ('Financial Reputation' and 'Service Reputation') and future financial performance. This research, therefore, also lend support to the earlier findings by Roberts and Dowling (2002), among others, in that financial reputation impact on future financial performance, as does another aspect of firm reputation, that of 'Service'.

DISCUSSION

There is evidence that senior managers attend to a number of different reputational elements or themes in discourse within annual reports. These themes largely overlap with different types of intangible resources which lends support to the argument that intangible resources represent a useful starting point for describing and measuring important dimensions of corporate reputation. These reputational themes can in turn be described in terms of five, higher-order dimensions that are consistent with previous empirical and theoretical considerations of corporate reputation, and represent a more comprehensive, empirically derived set of dimensions than have generally been studied in the past. Furthermore these reputational dimensions have a degree of consistency at firm level over time and several of them affect firms' future financial performance.

The reputational elements we identified are consistent with those identified by Hall (1992) whose primary interest was in understanding senior executives' judgments about their firms' intangible resources. These include, for example, employee know-how, organisational culture, financial performance and product/brand reputation. The current findings are also consistent with those of de Castro, López, & Sáez (2006) whose list of intangible resources includes several of those identified here, for example, managerial quality, product and service quality and corporate social responsibility. Furthermore, the results support Roberts and Dowling's (2002) contention that corporate reputation consists of both a 'financial element' and other less well understood elements, which they termed 'residual reputation'; this study helps to 'unpack' this residual reputation construct into a set of reputational elements that are seen as important by senior executives.. Therefore, it seems reasonable to conclude that conceptualising important elements of corporate reputation in terms of intangible resources has both empirical and theoretical value. The evidence that the attention executives give to different intangible resources is relatively consistent over moderately long periods adds further evidence to our interpretation of attention as indicating managers' perceptions and communications about reputational elements that are important to their organisation.

Roberts and Dowling's study (2002), which still represents one of the most rigorous empirical demonstrations that both 'financial reputation' and 'residual reputation' influence firms' future financial outcomes. Our findings are quite consistent with their findings in that financial reputation had, in this case the strongest influence on at least one aspect of financial performance (ROA) and a second reputational dimension, service reputation that can be considered as part of their residual category also had some influence. The fact that our non-financial reputational dimensions did not appear to have the dominant influence that Roberts and Dowling (2002) attributed to their residual dimension is not necessarily inconsistent with their findings for several reasons. Their residual category treats all unexplained variance as due to unknown reputational dimensions and it may be that unknown factors other than reputation have a role in explaining some of this variance. Second, it is inevitable that once one begins to 'unpack' such a residual category the individual, reputational dimensions will have a smaller effect than the whole. Finally, it can still be the case that non-financial aspects of reputation are indeed more important for influencing future firm outcomes but other factors need to be considered in order to uncover these effects. We elaborate on this aspect later when discussing future research.

In terms of methodological contributions, this study overcomes some of the limitations of earlier research including the use of intrusive data collection methods, and limited, primarily intuitively derived, sets of reputational dimensions. The identification of reputational dimensions in natural organisational documents mitigates against the influence of the researcher's *a priori* expectations about what respondents will consider to be important aspects of firm reputation and, since annual reports are publicly available, have a legal standing with a wide audience, the reputational dimensions identified within them can be considered to be reasonably representative of the overall construct of corporate reputation. Given that the sample had over 10,000 cases, was drawn from annual reports covering an extended timeframe of 16 years and focused on the communications of senior executives across all industry sectors, it is reasonable to argue that this study overcomes a number of the limitations of earlier research.

Limitations and further research

While this study sought to overcome the limitations found in earlier research, there are inevitably several limiting factors which must be considered. One potentially significant limitation of this study is that we have relied on managerial statements about their firms to measure differences in what we interpret as their perceptions about firms' reputational resources. We explained somewhat earlier why we believe that it is extreme to dismiss annual report content as simply 'image management' or 'public relations fluff', nevertheless there is a valid distinction to be made between what executives actually perceive to be a firm's reputational resources or strengths, and their attempts to influence the perceptions of external stakeholders.

This issue can be interpreted as in part at least in terms of ongoing debate about the similarities and differences between ‘image’ and ‘reputation’ and also relates to notions about organisational identity (Chun, 2005).

For at least one of our research objectives this may not be highly problematic issue. It seems reasonable to argue that in order to study what executives perceive actual or potential dimensions of a firm’s corporate reputation it is reasonable to identify the reputational elements they seek to communicate to significant stakeholders, whether they believe their firm possesses these reputational elements or not. That is, reputational elements can be viewed as important to executives because the firm currently possesses them; aspires to possess them, or seeks to convince stakeholders that it possesses or aspires to them. Based on terminology used by Gioia, Schultz and Corley (2000) for discussing organisational identity and image we can term these respectively as (actual) corporate reputation, desired future reputation, and projected reputation. However, it becomes more important to establish whether actual, desired or projected reputation is being measured in order to understand how corporate reputation can be important to aspects of firm behaviour, such as future performance, since it is important to understand whether we are studying the effects of projected reputation or of actual, reputational resources. We took some preliminary steps in exploring this issue by assessing whether executives’ focus on different reputational dimensions relatively consistently over time, and found that it was. Future research can examine whether firms in which managers are more consistent over time in their attention to various reputational dimensions also perform more consistently, implying that lower consistency is more indicative of projected than actual corporate reputation (cf. Gioia, Schultz & Corley, 2000).

Of course it would also be very useful to examine the relation between executives' level of attention to different reputational resources and external judgments about firms' reputation across the various reputational dimensions we have studied. Unfortunately, at present, there is no equivalent to the Fortune Reputation Index for Australian firms. However it may be possible to examine this question in another fashion either by surveying experts such as industry analysts or by seeking evidence of firms' reputational standing in business and industry publications.

While overall these results indicate that only two reputational dimensions ('Financial Reputation' and 'Service Reputation') have an effect on financial performance, for several reasons it is inappropriate to conclude that the other reputational dimensions have no influence or importance. These findings can be interpreted as showing that, *on average*, for the whole sample of firms only two dimensions influence future performance. This can be viewed as unsurprising in the case of financial reputation which, as previously noted, has been argued to be a key reputational dimension for all for-profit firms that make up the current sample, however other reputational dimensions may be contingently or situationally important for some firms while being less important for others. For example, while service reputation had a significant general effect it is arguable that this is because service oriented firms make up a significant proportion of the overall sample. Furthermore, it can be argued that the size of this effect could be increased if we distinguished between service and non-service sector firms. Put another way, sector or industry is arguably a moderator of reputational effects such that reputational dimensions vary in their importance according to situational contingencies, often dictated by the sector or industry within which the firm operates. This is consistent with several important theoretical streams that have been previously discussed in relation to corporate reputation and may be the result of a range of potential reasons including sectoral differences. Using institutional theory as a guide, it may be that firms within specific industry sectors tend to focus on particular reputational dimensions at different times to show an element of legitimacy in respect to other incumbents in that industry. Research into such an important aspect of reputation is certainly advantageous to the development of our understanding in this area (Ferguson, Deephouse, and Ferguson, 2000; Thomas, 2007).

CONCLUSION

In the introduction we suggested that relatively little is known about the important dimensions of corporate reputation apart from the apparent centrality of financial reputation. Most of the current reputational research has either focused on just a few aspects of corporate reputation, relied on the Fortune Index which can be viewed as representing largely financial reputation and/or performance, or sets of reputational elements intuited to be important by different researchers. Drawing on the resource-based view of the firm, corporate reputation was viewed as ultimately residing in a range of potential intangible resources possessed by a firm that have a significant impact on the potential of a firm to compete in a given market (Wernerfelt, 1984; Barney, 1991; Rao, 1994). Instead of relying on an obtrusive methods such as surveys the present study sought to identify the kinds of reputational resources that senior executives focus on in their communications to key stakeholders by analysing the amount of attention given to a range of intangible resources in firms'' annual reports. As a result the current research has arguably succeeded reasonably well in not only identifying a range of intangible, reputational elements to which senior executives give attention in annual reports, but also identified a set of higher-order reputational factors that, while consistent with previous thinking, extend our understanding and confidence in the empirical and real-world validity of these factors. While there are many unanswered questions the present research also shows how a research approach based in managerial cognition can contribute to a better, empirically grounded understanding of an issue that is increasingly important to organisations but has to some extent frustrated the efforts of management researchers to study it.

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APPENDIX A

TABLE A1
Definitions and Examples of the Final set of Corporate Reputation Categories

Category Title	Category Definition and Example
Financial Reputation	References made to financial 'reputation', as opposed to mere statements of fact relating to financial performance. *Consolidated has a strong balance sheet with numerical million in cash and receivables providing a particularly solid platform for its continued growth.*
Financial Performance	Reflects statements that mainly just describe the firm's financial outcomes or performance rather than signifying any reputational aspect such as 'strong performance', 'best ever profit'. *The increased activity in all areas of the company resulted in revenue from ordinary activities increasing from numerical to numerical from the previous year*
Corporate Governance	These statements relate to aspects of corporate governance with a reputational impact such as signifying an effort to incorporate best practice governance systems or a commitment to comply with ASIC regulations. *We are committed to high standards of corporate governance and in 2005 will implement the international financial reporting standards*
Organisational Culture	References to concepts related to organisational culture, for example, 'strong culture', 'performance oriented culture'. Other terms normally associated include 'vision', 'mission' or 'values'. *The soft tactics include important items such as a clear set of values and behaviours that define the culture of Perpetual*
Managerial Expertise	Statements relating to professional staff and senior management and either their individual expertise in a given profession or the excellent quality of the overall management team. Board members are not included. *John has strong experience in general management and IT distribution*
Board Expertise	Focus here is on the expertise and experience of board members only. These statements reflect a high degree of expertise in a relevant field or the expertise of the board as a whole. *Three new non- executive directors were invited to join the board expanding its membership to six and adding seasoned expertise and skill.*
Employee Welfare	Statements related to the health and safety, work/life balance of employees. This is often in reference to OHS practices, recognition of employee concerns, or the provision of employee share schemes. *These include paid maternity paternity and adoption leave flexible working hours job sharing home based work and on-site child care facilities*
Employee Expertise	Captures comments related to the expertise of employees, their development and efforts to retain or improve it by the company. Employees are seen here as lower level employees with a focus on operational roles including front line supervision. *Training programs have been built or sourced externally to enhance*

	staff skills
Product Reputation	Focused on product or service and its qualities, for example, product innovation, statements that indicate a long and distinguished history, gaining accreditation/certification, winning awards. *We have developed a reputation for producing consistently good wine that meets the needs of the market and which is well regarded*
Company Reputation	This category is seen as the overall 'reputation' of a company. On occasion the company name is a well-known brand, for example, 'Coca Cola'or 'Just Jeans'. It includes reference to companies rather than product or process. *Austereo's award winners this year were, for best newcomer on-air, best station produced commercial, best station produced comedy segment, best community service project, best sales promotion, best sports event coverage and best documentary*
Market Opportunity	Defined as the potential of a market to grow and deliver significant returns. It includes references to new markets, internationalisation activities or the potential of a current market to grow in the future. *FSC certification is recognition that our forests are well managed and ensures access to high value markets particularly in north America as well as providing opportunities for pricing premiums*
Environmental Responsibility	Captures efforts by companies to behave in an environmentally aware manner such as statements relating to above average compliance with environmental legislation, attempts to improve systems or gain accreditation. *PBRS environmental management performance at the East Bentleigh site in Melbourne was recognised when it received certification for ISO [numerical], the international standard for environmental best practice*
Community Responsibility	Statements refer to a respect for local communities and the inclusiveness with which the company approaches difficult community issues. This is shown through, for example, awards for excellence, employment of local populations, or references to the need to be an active member of the community. *We were pleased to receive wide ranging recognition for some of these programs in particular the global business coalition on HIVAIDS award, ... and a special award for impact on a community in the Australian Prime Ministers, 2003 awards for excellence in community business partnerships*
Customer Focus	This category captures references made to the ability of the company to listen to its customers. It includes references to client feedback, customer surveys, and policy implementation advocating a desire to listen and learn from customers. *During the year the group adopted a new regional operating model that is designed to make the organisation more nimble and customer focused*

TABLE 1
Different Authors' Lists of Reputational Sources

Hall (1992)	Dollinger et al. (1997)	Schwaiger (2004)	de Castro et al. (2006)
• Product/ Brand Reputation • Employee Know-how • Organisational Culture • Networks and Alliances • Specialist Physical Resources • Databases • Supplier Know-how • Distributor Know-how • Public knowledge • Contracts • Intellectual Property Rights • Trade Secrets	• Quality of Management • Financial Reputation • Quality of Product	• Quality of employees • Quality of Management • Financial Performance • Quality of Products and Services • Market leadership • Customer Orientation • Attractiveness • Social Responsibility • Ethical Behaviour • Reliability • Fair attitude toward competitors • Transparency and Openness • Credibility	• Managerial quality • Financial strength • Product and service quality • Innovation • Use of corporate assets/efficiency • Capability to gather, develop, and retain talented people • Social responsibility among the community • Value of long term investments

TABLE 2
Operationalisation of Variables

Variable	Operationalisation
ROA_{t1}	Average(ROA_{2003}, ROA_{2004})
ROA_{t2}	Average (ROA_{2005}, ROA_{2006})
ROE_{t1}	Average (ROE_{2003}, ROE_{2004})
ROE_{t2}	Average (ROE_{2005}, ROE_{2006})
PER_{t1}	Average (PER_{2003}, PER_{2004})
PER_{t2}	Average (PER_{2005}, PER_{2006})
$FinPer_{t1}$	Average (Financial Performance[a], 2003, Financial Performance[a] 2004)
$CoyRep_{t1}$	Average (Company Reputation[a] 2003, Company Reputation[a] 2004)
$ServRep_{t1}$	Average (Service Reputation[a] 2003, Service Reputation[a] 2004)
CSR_{t1}	Average (Corporate Social Responsibility[a] 2003, Corporate Social Responsibility[a] 2004)
$FinRep_{t1}$	Average (Financial Reputation[b] 2003, Financial Reputation[b] 2004)
$ManExp_{t1}$	Average (Managerial Expertise[b] 2003, Managerial Expertise[b] 2004)
$GovRep_{t1}$	Average (Governance Reputation[a] 2003, Governance Reputation[a] 2004)

[a] denotes the average of the factor loadings for this dimension;
[b] denotes average of category scores

TABLE 3
Correlations and Descriptive Statistics for the Reputational Elements

Reputational Element	Mean (S.D.)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Financial Reputation	.26(.13)												
2. Corporate Governance	.06(.07)												
3. Organisational Culture	.08(.07)		.14**										
4. Managerial Expertise	.23(.11)	-.21**											
5. Board Expertise	.05(.06)		.14**	.10**	.12**								
6. Employee Welfare	.21(.11)			.19**	.10**								
7. Employee Expertise	.20(.11)			.22**	.14**		.19**						
8. Product Reputation	.10(.10)	.10**		.20**				.22**					
9. Company Reputation	.38(.12)			.13**	.10**			.12**	.31**				
10. Market Opportunity	.11(.09)	.19**		.16**		.14**	.13**		.29**	.32**			
11. Environmental Responsibility	.14(.11)	-.15**			.19**		.33**	.11**					
12. Community Responsibility	.11(.09)			.16**	.13**		.21**	.18**				.29**	
13. Customer Focus	.21(.13)	.19**	.14**	.36**		.13**	.11**	.25**	.38**	.27**	.31**	-.13**	

Only correlations above 0.10 have been included given the large number of cases (*N* = 10,582)
*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

TABLE 4
Principal component analysis of corporate reputation themes

Theme	Company Reputation	Service Reputation	Corporate Social Responsibility	Managerial Expertise vs. Financial Reputation	Governance Reputation
Company Reputation	.75				
Market Opportunity	.69			-.24	
Product Reputation	.54	.44			
Organisational Culture		.67			.21
Employee Expertise		.66	.21	.23	-.21
Customer Focus	.40	.63		-.23	
Environmental Responsibility			.78		
Employee Welfare			.73		
Community Responsibility		.22	.59		
Managerial Expertise				.72	
Financial Reputation	.28			-.71	
Board Expertise	.27			.24	.74
Corporate Governance	-.21	.25			.69
Eigenvalue	2.46	1.78	1.19	1.10	1.06
% Total Variance	18.89	13.71	9.16	8.46	8.14
Cumulative %	18.89	32.60	41.76	50.22	58.37

Note. Factor loadings < .2 are suppressed.
Shaded items are used for factor interpretation.

TABLE 5
Correlation of reputational dimensions between 2003 and 2006

Reputational Dimension	2004	2005	2006
Company Reputation	.48**	.38**	.27**
Service Reputation	.54**	.49**	.42**
Corporate Social Responsibility	.49**	.42**	.35**
Managerial Expertise vs. Financial Reputation	.42**	.40**	.38**
Governance Reputation	.27**	.20**	.05

*. Correlation is significant at the 0.05 level (2-tailed)
**. Correlation is significant at the 0.01 level (2-tailed).

TABLE 6
Results of regression analysis of reputational dimensions on financial performance

	Dependent Variables		
Predictors	**ROA_{t2}** ***β***	**ROE_{t2}** ***β***	**PER_{t2}** ***β***
Step 1, Control Variables			
ROA_{t1}	.14***	-	-
ROE_{t1}	-	.01	-
PER_{t1}	-	-	.03
$FinPer_{t1}$	.24***	.08	.06
R^2 Change	.59***	.01	.00
Steps 2 – 7, Reputational Dimensions			
$CoyRep_{t1}$	.00	-.02	-.04
$ServRep_{t1}$	.10***	.01	.00
CSR_{t1}	.00	.02	.03
$GovRep_{t1}$	-.02	-.01	-.01
$FinRep_{t1}$	.20***	0.4	.04
$ManExp_{t1}$	-.04	0.3	-.09
R^2 Change	.29***	.00	.00

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$; '-' denotes not measured

FIGURE 1
Histograms of Financial Reputation Prior to and Post Transformation

Prior to Transformation **Post Transformation**