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Corporate Reputation and Women on the Board

Stephen Brammer, Andrew Millington and Stephen Pavelin[1]
University of Bath and [1]Economics Department, University of Reading, Reading RG6 6AH, UK
Corresponding author email: s.pavelin@reading.ac.uk

In this paper, we investigate the determinants of corporate reputation, derived from the assessments of managers and market analysts, of a sample of large UK firms. Along with the influences of a variety of firm attributes, we find a reputational effect associated with a female presence at board level. This effect varies across sectors and demonstrates the influence of a firm's stakeholder environment in determining whether a female presence on the board enhances or harms the reputation of the firm. The pattern that emerges indicates that the presence of women on the board is favourably viewed in only those sectors that operate close to final consumers. We argue that the nature of this effect reflects an imperative for equality of representation that highlights the need to reflect gender diversity among customers.

Introduction

Corporate reputation, defined as 'a perceptual representation of a company's past actions and future prospects that describe the firm's overall appeal to all its key constituents when compared to other leading rivals' (Fombrun, 1996, p. 72), has attracted a significant amount of recent attention in the academic literature (Gardberg and Fombrun, 2002; Kitchen and Laurence, 2003; MacMillan, Money and Downing, 2002; Roberts and Dowling, 2002; Sabate and Puente, 2003; Turban and Cable, 2003; Wiedmann, 2002). Significant strands of this literature have examined the meaning and measurement of reputation (Fryxell and Wang, 1994; Gardberg and Fombrun, 2002), its antecedents (Fombrun and Shanley, 1990), and its impact on other aspects of companies such as their ability to attract customers and good quality employees (Milgrom and Roberts, 1986; Turban and Cable, 2003). An important contribution by Fryxell and Wang (1994) highlighted that reputational indices (such as the *Fortune* ranking) are most closely related to a firm's reputation as a financial investment (Fryxell and Wang, 1994), suggesting a close link between external perceptions of the overall effectiveness of an organization and its reputation.

Diversity within organizations, principally in respect of gender, has also been the subject of considerable recent research with prominent strands of research focusing on the challenges involved in managing a diverse workforce (Dass and Parker, 1999; Mollica and DeWitt, 1994), the impact of diversity on the performance of teams and the individuals that compose them (Bunderson and Sutcliffe, 2002; Harrison *et al.*, 2002; Jehn, Northcraft and Neale, 1999; Randel and Jaussi, 2003), and the link between diversity and organizational survival and performance (Filatotchev and Toms, 2003). Of particular interest here is the strand in the literature that focuses upon the diversity of corporate boards of directors (Bilimoria, 2000; Bilimoria and Piderit, 1994; Carter, Simkins and Simpson, 2003; Singh, Vinnicombe and Johnson, 2001). This work has illuminated the typically very low levels of diversity present in corporate boards, which, it is argued, represent both a breakdown of corporate governance and a missed opportunity.

Board diversity has been defined in a variety of ways. As van der Walt and Ingley (2003) argue, 'the concept of diversity relates to board composition and the varied combination of attributes, characteristics and expertise contributed by individual board members' (p. 219). Within this definition, a primary distinction has been made between demographic (i.e. observable) and cognitive (i.e. unobservable) dimensions of diversity (e.g. Maznevski, 1994; Milliken and Martins, 1996), with much of the existing empirical work focusing upon demographic aspects of diversity such as gender, age and ethnicity (e.g. Conyon and Mallin, 1997; Daily and Dalton, 2003; Singh, Vinnicombe and Johnson, 2001). Earlier studies in the area of demographic diversity have raised awareness of the relative homogeneity of corporate boards of directors, highlighted the variation across countries in board diversity, and mapped its evolving pattern (Catalyst, 2003; Conyon and Mallin, 1997; Daily, Certo and Dalton, 1999; Vinnicombe and Singh, 2003).

It has been asserted for some time that board diversity may have significant payoffs in terms of improved board, and thereby corporate, effectiveness (Van den Berghe and Levrau, 2004; Vinnicombe and Singh, 2003; van der Walt and Ingley, 2003), but there have been very few systematic attempts to evaluate this view empirically. This study contributes to the literature by examining the link between corporate reputation and the gender diversity of main boards of directors. Board diversity may be expected to improve perceptions of corporate effectiveness because it is a signal of good corporate governance (Donaldson and Preston, 1995; Luoma and Goodstein, 1999; Mattis, 2000; van der Walt and Ingley, 2003),[1] because diversity brings valuable resources into the boardroom (Burke, 1997, 2000; Carver, 2002; Cassell, 2000; Conyon and Mallin, 1997), or because diversity can signal a sensitivity of the organization to the needs and requirements of particular stakeholder constituencies[2] (Bilimoria and Wheeler, 2000; Daily, Certo and Dalton, 1999).

This paper analyses the relationship between corporate reputation and female presence at board level for a sample of UK companies. We analyse reputational data constructed in a similar manner to the *Fortune* index (which has often been employed in US studies of corporate reputation), and make two main contributions to the literature. First, we present the first systematic analysis of the relationship between corporate reputation and female representation on corporate boards of directors. Our analysis permits any reputational effect to vary across industries. Through this, our study provides a means of inspecting how female directors are viewed from outside their organizations. In so doing, our analysis informs the debate concerning the demographic asymmetry between corporate boards and the societies in which they operate. Second, we conduct one of only very few studies of the antecedents of corporate reputation drawing on a multivariate data set that describes the financial performance, social performance, size, R&D and advertising intensity, and industry of sample companies. Our analysis casts light on the drivers of corporate reputations and, through this, on the meaning and interpretation of reputational indices.

In the next section, we introduce a conceptual model of the link between female presence at board level and corporate reputation and introduce our hypotheses. The following section describes the data; then the results are reported, and a final section offers some concluding remarks and suggestions for practice.

The determinants of corporate reputation

In this section, we develop a model of the influences on corporate reputation and outline a

[1]The recent Higgs Review of the role and effectiveness of non-executive directorships highlighted that 'the current population of non-executive directors is narrowly drawn' (Higgs, 2003, p.13) being mostly 'white males nearing retirement age with previous PLC director experience' (p. 42). Furthermore, the Review argued that 'a commitment to equal opportunities which can be of motivational as well as reputational importance is inevitably undermined if the board itself does not follow the same guiding principles' (p. 42).

[2]For example, some institutional investors have begun to implement diversity screens as part of their investment practices and a commitment to diversity in employment practices is part of the inclusion criteria for many socially responsible investment indices (e.g. FTSE4Good). TIA-CREFF, a large American institutional investor, requires that boards of directors are composed of 'qualified individuals that reflect diversity of experience, gender, race, and age' (TIA-CREFF, 1997).

number of hypotheses. Our starting point is Fombrun and Shanley's seminal model which hypothesizes that corporate reputations 'represent publics' cumulative judgements of firms over time', which, in turn, hinge on firms' 'relative success in fulfilling the expectations of multiple stakeholders' (Fombrun and Shanley, 1990, p. 235). A firm's current reputation is determined by the signals that publics receive concerning its behaviours, whether directly from the firm or via other information channels, such as the media or the stock market. Stakeholders are expected to have diverse preferences over a firm's actions, process and outcomes, and reputational assessments depend upon the congruence between the apparent behaviours of the firm and the preferences of those publics (Fombrun and Shanley, 1990).

As has been highlighted, this perspective on reputation generation implies that a given reputational entity (e.g. firm, individual, brand or product) is likely to have numerous distinct reputations each of which applies to a particular attribute of the entity and derives from the perceptions of a particular stakeholder group (Bromley, 2002; Fryxell and Wang, 1994; Gardberg and Fombrun, 2002). For example, a company might simultaneously have a reputation among actual and potential employees as a provider of an excellent working environment, a reputation among investors as a sound investment, and a reputation among consumers as the maker of reliable products. Significantly, there is no guarantee that these various reputations are all positive or all negative and hence that, when combined, they add up to a useful 'meta-reputation' (Bromley, 2002). Therefore, when exploring the influences on corporate reputation, it is important to be clear about the content of the particular reputation being studied and the constituency within which that reputation is held.

Given the need to contextualize the concept of reputation under study, we note that the concept of reputation being studied here is derived from the perceptions of senior managers in peer organizations and financial analysts. As earlier research has highlighted, this method, while broadly used, generates a measure of reputation that most closely reflects the reputation of an organization's effectiveness, especially with regard to its financial success (Fryxell and Wang, 1994). Our analysis focuses on the role that board diversity plays in shaping the reputation of companies thus defined. Following earlier research, we also acknowledge the importance of a range of control variables in shaping reputational assessments. We will first discuss the link between board diversity and reputation before discussing these control variables.

The link between corporate reputation and female presence at board level

Reflecting our earlier discussion concerning the nature of corporate reputation, we now turn to the relationship between board diversity and reputation thus defined. Specifically, we focus upon the role that female representation on corporate boards might be expected to play in shaping corporate reputations because of a capacity to influence perceptions of corporate effectiveness.[3] Female directors may influence the perceptions of external agents that a board will function more effectively either because of an expectation that the presence of female directors will improve board processes or because female directors bring important skills, knowledge and competencies to the boardroom. In particular, the presence of a female director may help the organization manage its relationships with key stakeholder groups such as employees and customers (Burke, 1997; Carver, 2002; Daily, Certo and Dalton, 1999; Singh and Vinnicombe, 2004).

Board diversity may contribute positively to a firm's reputation because of the perception that female directors bring distinctive and valuable resources that enhance board decision-making. If

[3]Given that a corporation has multiple reputations, it might also be the case that board diversity plays a role in shaping aspects of corporate reputation other than that associated with corporate effectiveness. For example, the board diversity literature acknowledges that board diversity can improve the moral reputation of the firm because particular stakeholders hold the view that diversity is ethically good. It may be considered wrong for individuals to be excluded from the highest echelons of the business world purely on the grounds of gender and regardless of ability and one might adhere to an imperative to enfranchise those constituencies historically excluded from positions of economic power (Carver, 2002; Garratt, 1997; Keasey, Thompson and Wright, 1997). While the drivers of the moral reputation of corporations are worthy of investigation, this line of enquiry lies outside the scope of the present analysis.

a variety of valuable abilities are not evenly distributed across demographic groups, a firm that discriminates would forgo access to some range of these potential resources were they to exclude certain groups from key decision-making roles (Westphal and Milton, 2000). This suggests that there would be significant economic benefits to organizations who select their boards from the complete pool of available talent rather than discriminating against particular demographic characteristics when selecting suitable candidates (Burke, 1997; Carver, 2002; Cassell, 2000).

It has been suggested that increased diversity may lead to improvements in workforce motivation and loyalty (Powell, 1999), and the role of female directors as providers of much-needed mentoring for more junior, ambitious female colleagues has often been cited as a spur for women to endeavour to reach their career goals within the firm (Burgess and Tharenou, 2002; Catalyst, 1995). Furthermore, there is some evidence that women board members often play a significant role in influencing the way in which products are tailored to the needs of women (Daily, Certo and Dalton, 1999). Singh and Vinnicombe (2004) observed that a particular female director felt she had been appointed because 'the board wanted to change the corporate culture to be more customer-oriented, and had identified a gap in the board competence profile' (p. 484), suggesting that female directors, and the companies they are appointed by, feel that diversity arises where it coincides with the presence of particular skill profiles.

Turning to the influence of diversity on board process, it has been suggested that a female presence enhances the independence of the board from top management (Fondas and Sassalos, 2000; Selby, 2000; van der Walt and Ingley, 2003). Agency theory has established the importance for good corporate governance of a board that is not beholden to those in senior managerial positions (Fama and Jensen, 1983). In spite of the recognition that diversity may introduce some practical problems with board functioning (Erhardt, Werbel and Shrader, 2003; Knight *et al.*, 1999), it has been argued that diversity in terms of gender, culture and education among directors, and non-executive directors in particular, further fosters board independence and may therefore be perceived positively by external agents. Selby (2000) makes this point when noting that 'directors with diverse skills, experiences and backgrounds are more likely to raise questions that add to, rather than simply echo, the voice of management' (p. 239). Increased director independence and improved monitoring may also lead to 'enhanced creativity, group flexibility, and deeper insights'; furthermore, improved diversity is expected to 'discourage groupthink and create an additional check on management prerogative' (Ramirez, 2003, pp. 848–849). Nicholson and Kiel (2004) argue that board independence and effectiveness in carrying out its duties are related to the balance of a board's intellectual capital. A board's intellectual capital, in turn, is influenced by its human, structural, cultural and social capital (Nicholson and Kiel, 2004). Diversity may be expected to play a significant role in improving a board's human, cultural and social capital, and thereby play an important role in shaping the ability of a board to perform its functions.

These preceding arguments suggest that board diversity will contribute to external perceptions of organizational effectiveness, and we hypothesize:

H1: A female presence at board level improves reputation.

The industry contexts within which firms operate vary in numerous respects, including the composition and character of their stakeholder constituencies (Burke, 1997; Pfeffer and Salancik, 1978; Rowley and Berman, 2000). Above, we argued that the contributions female directors make, by providing distinctive resources and influencing board processes, affect the perceptions of external agents concerning corporate effectiveness. Here, we argue that industry context mediates the relationship between board diversity and corporate reputation. Earlier, we argued that female directors might play an important role in enhancing corporate effectiveness by inspiring, motivating and mentoring female employees (Burgess and Tharenou, 2002; Catalyst, 1995; Powell, 1999). In this connection, we note that the composition of the workforce varies systematically across industries. Therefore, one would expect the strength of this argument to vary across industries, applying most strongly to those industries with the highest proportion of female employees. Evidence of such cross-industry variation is presented in Table 1, which was extracted from the British Workplace Employment Relations Survey 2004. The highest

Table 1. Gender composition of the workforce, across sectors

Sector	Female presence among the workforce (%)
Manufacturing	27.44
Electricity, gas and water	17.94
Construction	10.93
Wholesale and retail	50.19
Hotels and restaurants	61.35
Transport and communication	21.33
Financial services	66.66
Other business services	53.46

Source: British Workplace Employment Relations Survey 2004.

proportions of women are found in financial services, hotels and restaurants, wholesale and retail and other business services.

Similarly, we suggested that female directors bring enhanced reputation because they promote greater responsiveness to the needs of female customers (Daily, Certo and Dalton, 1999; Singh and Vinnicombe, 2004). Hence, reflecting the fact that the composition of customer constituencies varies across industries, the strength of the influence of female board representation on reputation may also vary across industries. Industries that predominantly serve final consumers, rather than business customers, tend to serve relatively high proportions of females. Such a proximity to final consumers, and/or female final consumers in particular, is attributable to sectors such as consumer goods manufacturing (e.g. clothing and household goods), retail, banking, utilities and the media (e.g. newspaper publication and TV channels). In other sectors, such as resources, business services (e.g. logistics and information management), construction and engineering, the isolation from final consumers, and the male-dominated workforces found in these activities, conspire to make female consumers relatively unimportant. Reflecting these discussions, we hypothesize cross-sectoral variation in the relationship between reputation and female presence at board level.

> *H2*: The relationship between female presence at board level and reputation varies across sectors.

Control variables

While the focus here is upon the nature of the relationship between female presence at board level and reputation, it is important to recognize that reputation is determined by many factors and to control for these factors accordingly. Drawing upon the conceptual framework outlined previously, and the findings of previous empirical studies, we will consider a range of firm attributes including measures of financial performance, firm size, media visibility, R&D and advertising intensity, risk, social performance and the composition of ownership (Fombrun, 1996; Fombrun and Shanley, 1990; Fryxell and Wang, 1994). Also, it may be that, even controlling for these firm attributes, reputation varies systematically across sectors. That is, simply as a result of being active in a particular sector, a firm may be predisposed to a better or worse reputation than firms primarily associated with other sectors.

As we wish to identify the particular reputational effect of one characteristic of corporate boards – female presence – we must control for any other characteristics that may impact on reputation and be correlated with the presence of female directors. To this end, the two controls we include are measures of board size and board composition (the balance of executive and non-executive directors). Both of these factors may influence reputational assessments, as they may reflect respectively the resources available to, and the independence of, boards. Also, given the association between the addition of women to boards and board growth, and the fact that women have been disproportionately accommodated in non-executive roles, it is expected that both are correlated with the presence of female directors – as is found to be the case for our data (see Table 2).

Data

Our sample consists of 199 UK PLCs chosen largely according to the availability of reputation data (see below[4]). Therefore, this sample, while drawn from a wide range of industrial sectors, is not randomly selected. Instead, there is a focus upon the largest firms within each industrial

[4]We have reputation data for 240 firms. However, restricted availability of other data (principally regarding institutional ownership) necessitated the exclusion of 41 of these firms from the sample.

Table 2. Descriptive statistics and correlataion matrix

Variable	Mean	SD	Min.	Max.	Correlation matrix											
					(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)
(i) Corporate reputation	53.2	7.99	30.1	73.0	–											
(ii) Financial performance	5.58	10.7	−56.8	35.4	0.293	–										
(iii) Market risk	0.96	0.31	0.17	1.86	−0.139	−0.306	–									
(iv) Leverage	24.8	16.6	0.00	83.7	−0.076	−0.231	−0.142	–								
(v) Firm size	14.7	1.72	11.5	19.7	0.185	−0.165	0.090	0.066	–							
(vi) Media exposure	6.39	1.19	4.03	9.41	0.243	−0.106	0.203	0.056	0.788	–						
(vii) R&D intensity	1.23	3.25	0.00	23.3	0.107	0.118	0.264	−0.156	−0.189	0.023	–					
(viii) Advertising intensity	0.19	0.39	0.00	1.00	0.105	0.006	−0.191	0.112	0.220	0.428	−0.079	–				
(ix) Institutational ownership	30.3	9.20	4.81	57.4	0.260	0.158	0.079	−0.028	−0.005	−0.066	0.003	−0.039	–			
(x) Social performance	4.12	2.49	0.00	8.67	0.283	0.035	−0.060	0.097	0.675	0.683	−0.031	0.294	0.025	–		
(xi) Board size	10.4	2.89	5.00	20.0	0.245	−0.040	0.095	−0.051	0.640	0.564	0.025	0.135	0.020	0.514	–	
(xii) Board composition	0.57	0.12	0.25	0.83	−0.036	−0.095	−0.014	−0.026	0.288	0.289	−0.043	0.165	−0.047	0.211	0.097	–
(xiii) Female director	0.44	0.50	0.00	1.00	0.087	−0.100	0.048	−0.018	0.220	0.232	0.016	0.062	−0.001	0.142	0.168	0.127

Some units of measurement: (ii) the ratio of pre-tax profits to total assets; (iv) the ratio of total debt to total assets; (v) the natural logarithm of the value of total assets; (vi) the natural logarithm of the average number of annual news hits 1998–2002; (vii) the ratio of R&D expenditures to total assets (as a percentage); (ix) the percentage of firm equity held by institutional investors.

sector, including about 90% of FTSE 100 companies. Nevertheless, there is considerable variation in reputational scores both within and between industrial sectors.

Corporate reputation

To measure corporate reputation we utilize the 'Britain's most admired companies' survey from *Management Today*, 2002, which employs a similar methodology to that used to construct the *Fortune* index, a commonly used measure of the reputations of US firms (e.g. Fombrun and Shanley, 1990; Fryxell and Wang, 1994; McGuire, Sundgren and Schneeweiss, 1988). The chairmen, managing directors and selected main board directors of the ten largest companies in 24 industrial sectors were surveyed, as were analysts at a selection of leading investment companies. Participants were asked to rate each company in their sector (excluding their own company) on a scale of zero (poor) to ten (excellent) for their performance in nine criteria: quality of management; financial soundness; ability to attract, develop and retain top talent; quality of products/services; value as a long-term investment; capacity to innovate; quality of marketing; community and environmental responsibility; use of corporate assets. The assessments received for each firm were averaged across criteria and respondents to produce a single reputational score.

Female presence at board level

Our data set identifies all directors on the main boards of the sample companies. The data set describes the gender of each director. For each firm, the board under consideration is that referred to as current in the 2002 Annual Report, which provides a full list of directors' names. The genders of almost all directors were clearly signalled by their names and titles. For those remaining, the matter was clarified by the use of gender-specific language in a biography given in the Annual Report (he, she, his, her etc.), by a photograph given in the Annual Report, by Internet materials (mainly news articles and the websites of foreign companies), or by cross-referencing across companies within our data set.

For use in our regression analysis, we extract our measure of female presence on the board. We capture board diversity through a dichotomous variable that records whether a firm has at least one female director (1 if they do; 0 if they do not). Clearly, this variable focuses on capturing diversity as reflected in the presence/absence of women on corporate boards rather than reflecting the depth of female board representation (as, perhaps, reflected in the percentage of a firm's directorships held by women), or the extent of female representation on boards (as, perhaps, reflected in the total number of women on a firm's board). In part, our decision to focus on a dichotomous treatment of board gender diversity stems from the observed pattern in female representation in our data. Of the 199 companies in our database, only 14% have more than one female director. This suggests that, in fact, female representation on corporate boards is typified by the presence of a single female director and, in that sense, our measure captures an important dimension of board diversity. Nevertheless, reflecting the presence of alternative measures in the existing literature, we report robustness checks in our analysis below. From this database we also extract the two control variables: board size (the total number of directors on a firm's board) and board composition (the proportion of directors on a firm's board that are non-executive).

Control variables

A measure of each firm's size (the natural logarithm of the value of total assets), principal business activity (approximately equivalent to the three-digit NACE industry), firm profitability (measured by the ratio of pre-tax profits to total assets), R&D intensity (the ratio of R&D expenditures to total assets) and corporate leverage (measured by the ratio of total debt to total assets) were extracted from accounting data, courtesy of DataStream. Using the DataStream industry classification, we allocated each firm to one of seven sectors: construction, consumer manufacturing, consumer services, energy, finance, producer manufacturing, producer services. Data concerning the market performance of sample companies were obtained from Barra Inc., a leading risk specialist. We employ a β measure of the risks associated with stock ownership that gauges the expected response of a stock to the overall market.[5]

As there is no statutory obligation to disclose such expenditures, firm-level advertising data are difficult to obtain for UK firms. However, media research agencies monitor the incidence of advertisements at the brand level throughout the main advertising media (TV, newspapers, magazines, radio, posters etc.) and estimate the levels of expenditure incurred. We construct a dummy variable on the basis of identification, by *Marketing* magazine in 2002, of a firm as one of the 'Top 100 Advertisers' or as an owner of one of the 'Biggest Brands' in the UK. Given that the levels of expenditure on advertising tail off dramatically at the foot of these rankings we are confident that our methodology allows us to capture the vast majority of the firms for which advertising is a key competitive tool.

Our measure of media visibility was obtained from the Factiva database, which provides searchable archives of news content from over 8000 global sources. We gathered data for each of the calendar years 1998–2002 inclusive, and employed as our measure the natural logarithm of the average number of annual news hits. Ownership data were drawn in June 2002 from a share ownership analysis database of more than 2000 listed UK firms managed by one of the UK's largest company registrars. Derived from records of share trading on the London Stock Exchange, the database disaggregates share ownership according to 32 different types of beneficial owner. Following Ryan and Schneider (2002) and Johnson and Greening (1999), we employ a variable that equals the sum of the proportions of firm equity held by long-term institutional investor groups, i.e. pension funds, insurance companies and life assurors.

Results

In this section, we present ordinary least squares regression results for an econometric model of corporate reputation that incorporates the explanatory variables described in the previous section. Table 2 presents descriptive statistics and a correlation matrix for key variables.[6] Table 3 presents our regression analysis. Model 1 provides a point of departure with the existing literature by examining a set of explanatory variables that overlaps considerably with those employed by Fombrun and Shanley (1990). Consistent with Fombrun and Shanley's results, we find that firm reputation is positively associated with media exposure ($p = 0.073$), the degree of long-term institutional ownership ($p = 0.003$) and social performance ($p = 0.073$), and negatively associated with market risk ($p = 0.005$). Most importantly, Model 1 shows that the presence of a female director on a firm's board has no significant effect on corporate reputations.[7]

Models 2 and 3 extend the analysis by allowing the reputational effect of a female board presence to vary systematically across sectors through the inclusion of interaction effects between the presence of a female director and the sectoral dummies, thereby permitting any. Model 2 presents the results of the interactions expressed relative to a comparator sector (producer services), while Model 3 presents the interactions relative to all other sectors in order to avoid the

[5]A β is an analytical tool, commonly employed by investors, to measure the volatility or risk of stocks. It measures the extent to which the price of a given stock varies with respect to the market as a whole. A β coefficient is derived from a regression analysis that estimates the effect, over a period of time (say, five years), of weekly or monthly percentage changes in a market index on weekly or monthly percentage changes in the price of an individual stock.

[6]Diagnostic testing provides evidence of heteroscedasticity in one of the regressions presented. In light of this, we employ White's method to correct for bias in statistical inference. Although White's method corrects the bias in standard errors, it does not correct the inefficiency of the estimators. It would therefore be better to identify the sources of the heteroscedasticity and then use either weighted least squares or maximum likelihood estimation to obtain more efficient estimates. Unfortunately, we could make no such identification.

[7]As discussed above, there are several ways of measuring board diversity. We conducted ancillary regressions to evaluate the robustness of our results to alternative measures of board diversity. Broadly, the results are comparable in that both alternative measures (the number and the percentage of women on a firm's board) are uncorrelated with a firm's reputation except in particular sectors associated with a consumer orientation. The explanatory power of the models we report in Table 3 is better than those found in the ancillary regressions and the pattern of significance somewhat starker, suggesting that reputational assessors attach greater importance to the presence of a female director, rather than the number or percentage of female directors on a board.

Table 3. The link between female board representation and corporate reputation

Variable	Model specification		
	1	2	3
Constant	37.80***	37.85***	37.85***
Financial performance	0.12	0.14*	0.14*
Market risk	– 5.33***	– 5.11***	– 5.11***
Leverage	– 0.05	– 0.04	– 0.04
Firm size	0.26	0.22	0.22
Media exposure	1.86*	1.88*	1.88*
R&D intensity	0.16	0.16	0.16
Advertising intensity	– 0.47	– 0.32	– 0.32
Institutional ownership	0.15***	0.16***	0.16***
Social performance	0.50*	0.39	0.39
Board size	0.32	0.46**	0.46**
Board composition	– 2.50	– 1.84	– 1.84
Sector			
Construction	0.28	– 0.90	– 0.90
Consumer manufacturing	– 4.79**	– 7.89***	– 7.89***
Consumer services	– 3.69**	– 6.79***	– 6.79***
Energy	– 9.82***	– 10.78***	– 10.78***
Finance	– 9.44***	– 10.68***	– 10.68***
Producer manufacturing	– 1.58	– 2.94	– 2.94
Female director	0.99	– 4.51**	
→ Construction		4.16	– 0.35
→ Consumer manufacturing		8.74**	4.23
→ Consumer services		8.31***	3.80**
→ Energy		4.49	– 0.02
→ Finance		4.51	0.00
→ Producer manufacturing		4.82	0.31
→ Producer services			– 4.51**

The dependent variable is Corporate reputation. The omitted sector dummy variable is Producer services. N = 199. Model 1: Adjusted $R^2 = 0.229$; Breusch–Pagan test statistic (12 df) = 4.7 ($p = 0.967$). Model 2: Adjusted $R^2 = 0.356$; Breusch–Pagan test statistic (18 df) = 20.7 ($p = 0.293$). Model 3: Adjusted $R^2 = 0.362$; Breusch–Pagan test statistic (24 df) = 35.1 ($p = 0.067$).
→ indicates interaction between Female director and a sector dummy variable.
*,** and *** denote significance at the 90%, 95% and 99% level of confidence respectively.

arbitrary choice of a comparator sector. The results demonstrate that the reputational effect of a female presence on the board is subject to significant cross-sector variation. The findings indicate that in two sectors, consumer services and producer services, the gender of board members significantly influences reputational assessments. Specifically, the effect of having at least one female director is positive in consumer services ($p = 0.032$) and negative in producer services ($p = 0.044$).

Taking these models together, we can draw some conclusions about the suitability of each specification with respect to hypothesis testing. That significant coefficients are associated with a number of the industry effects and interaction variables in Models 2 and 3 suggests, consistent with earlier observations, that it is important to control for industry in studies of corporate reputation, particularly when measures of reputation are industry-specific in the sense that respondents are asked to rate firms relative to industry peers (Fombrun and Shanley, 1990) and that the reputational impact of a female board presence is contingent upon a firm's industry environment. Therefore, of all the models, Model 3 is the most suitable specification and it is this model that we use to test our hypotheses.

Model 3 provides evidence in support of Hypothesis 2 (that the relationship between female presence at board level and reputation varies across sectors). However, the evidence relating to Hypothesis 1 is mixed in that there is a positive reputational effect of a female presence at board level in only the consumer services sector. We find evidence of a negative reputational effect for female directors in the producer services sector, and no significant reputational effect in all other industries.

It is worth reflecting upon how these findings relate to our previous discussion concerning the potential roles played by proximity to final consumers and the gender composition of the workforce (as reflected in Hypothesis 2). It is straightforward to align the consumer services sectors with a proximity to final consumers. Other sectors, such as finance and energy, that serve final consumers in fact do so to a rather limited extent relative to the scale of their overall operations, which in the case of finance is dominated by transactions with corporations and between traders of various descriptions. To characterize our sectors regarding the gender composition of the workforce, we will apply a concordance between these seven sectors and those reported in the British Workplace Employment Relations Survey 2004 (see Table 1). By doing so, the consumer services (corresponding to retail, hotels and restaurants), producer services (corresponding to wholesale and other business services) and finance (corresponding to financial services) sectors emerge as those to be associated with a relatively great presence of women among the workforce. Therefore, our findings suggest that the reputational payoffs from a female presence at board level reside in those sectors that operate close to final consumers, and are not contingent upon the gender composition of the workforce. This is evidenced by the lack of any positive reputational effects associated with female directors in finance and producer services.

Concerning the other influence on corporate reputation, there is good evidence in support of positive effects on reputation for financial performance ($p = 0.059$) and long-term institutional ownership ($p = 0.004$) and a negative effect for market risk ($p = 0.009$). There is also strong evidence that reputation varies systematically across sectors. The greatest predisposition to a good reputation lies in producer services; the greatest predisposition to a bad reputation resides in the energy and finance sectors. Regarding board characteristics, we find a significant positive reputational effect associated with board size ($p = 0.042$), but none associated with board composition.

Conclusion

In this paper, we investigate the determinants of corporate reputation, derived from the assessments of managers and market analysts, of a sample of large UK firms. Along with the influences of a variety of firm attributes, we find a reputational effect associated with a female presence at board level. This effect varies significantly across sectors. The pattern that emerges indicates that the presence of women on the board is favourably viewed in only those sectors that operate close to final consumers. We argue that the nature of this effect reflects an imperative for equality of representation that highlights the need to reflect gender diversity among customers.

Much of the literature regarding corporate reputation has centred on empirical study of US firms. Our analysis contributes to the small, but growing, body of work focused upon other countries (e.g. Kitchen and Laurence, 2003; MacMillan, Money and Downing, 2002; Wiedmann, 2002) and offers an opportunity to examine the international robustness of US findings. Broadly, our results are consistent with earlier work in that we find reputation to be affected by a firm's financial performance, market risk, the extent of long-term institutional ownership, and the nature of its business activities. These results suggest that the determinants of reputation, derived from the assessments of managers and market analysts, are relatively robust across countries.

Our study shows that the presence of a female on corporate boards of directors is viewed positively in industry sectors that are highly proximate to final consumers, suggesting that reputational assessors perceive that female directors may contribute important resources that make boards so composed more effective in such circumstances. Given that this is only one of several ways in which earlier research has highlighted that female directors might provide boards with important resources and that we find no evidence in favour of other motives, our evidence suggests that reputational assessors adopt a relatively narrow view of the relevant contributions of women to corporate boards. Specifically, the roles of women in enhancing board independence or as mentors of other women within organizations do not appear to be widely recognized among reputational assessors.

This study suffers from limitations that could be addressed in future work. First, our analysis is cross-sectional in nature and future attempts to examine the patterns we have identified within a longitudinal framework would both help to resolve remaining issues concerning causality and shed more light on the manner in which the perception of female directors is evolving across time, along with incremental increases in their prevalence and shifts in the perceived norms regarding female roles within society. Second, our study, in common with much of the empirical work in the area conducted in the UK, would benefit from an improved availability of data, particularly regarding corporate reputation. We would welcome time-series reputational data for a consistent and large sample of companies, derived from alternative methodologies, such as those proposed by Gardberg and Fombrun (2002).

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Stephen Brammer is Deputy Director of the Centre for Business Organizations and Society at the University of Bath. His research addresses the links between organizational strategy and social responsibility with a focus upon how organizations build effective relationships with stakeholders including employees, communities and suppliers. His research has been published in leading scholarly and practitioner journals including *Business and Society*, the *Journal of Management Studies* and the *Journal of Business Research*.

Andrew Millington is Professor of Business and Society and Director of the Centre for Business Organizations and Society at the University of Bath. His research investigates how companies manage issues of ethics and corporate responsibility, with a particular focus on multinational companies and doing business in China. His work has been published in many leading scholarly and practitioner journals including the *Journal of International Business Studies*, the *Journal of Management Studies* and *Human Relations*.

Stephen Pavelin is a Reader in Economics at the University of Reading. His current research agenda focuses upon the application of economic analysis to key issues relating to corporate social responsibility, such as the effect of corporate social performance on the reputations and financial performance of firms. Recent publications include articles in the *Journal of Management Studies*, the *Journal of Business Research*, the *Journal of Business Ethics* and the *European Management Journal*.