An Examination of Female Participation on U.S. Board Subcommittees

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This study examines female membership on core corporate board committees (audit, compensation, and nominating). Individual committee characteristics were examined to determine whether gender influences core committee membership. Results show mixed support for the study's hypothesis. Specifically, females are more likely to serve as members of the nominating and audit committees but less likely to serve as members of the compensation committee after controlling for experience. The study also evaluates the relationship between firm level characteristics and the likelihood of having female core committee members. Results suggest that larger firms are more likely to have female core committee members, while rapidly growing firms are less likely to have female core committee members.

According to the Women's Bureau of the U.S. Department of Labor, women represented 46.5% of the total U.S. labor force in 2008 with the largest proportion (39% of employed women) working in management or professional positions. In addition, according to the Department of Labor, in 2008 women accounted for 51% of

[1] The authors wish to thank Alexandra Castagna for her excellent research assistance. In addition, they wish to thank Haksoon Kim, Erika Small, and two anonymous referees for useful comments that have improved the manuscript. They are also grateful for comments received at the 2007 Eastern Finance Association conference, 2007 American Accounting and 2008 American Accounting Association Annual Conference. Hong Zhu appreciates summer research funding from the Sellinger School of Business and Management.

all workers in high paying management, professional, and related occupations. Despite this significant level of participation, women are still underrepresented in the highest echelons of the corporate world. Catalyst, a non-profit organization devoted to the advancement of women in the corporate arena that conducts statistical studies to chart the progress of women in business and providing consulting to firms in the recruitment and retention of women business leaders, reported in their 2008 Catalyst Census that women held 15.2% of directorships and 15.7% of corporate officer positions at Fortune 500 companies (*www.catalystwomen.org*).

Additionally, a 10-year (1995-2005) trend report of women's progress on corporate boards found that female directors remain underrepresented in chair positions on the most powerful decision making committees (such as the audit, compensation, and nominating/governance committees), while the number of companies without women board directors fell by almost 50% (Catalyst, 2005a).

The primary objective of this study is to examine female participation on core board committees in an attempt to understand whether female directors are appointed as tokens or are recognized as, and given opportunities to make significant contributions to the critical functions of corporate boards. First, individual characteristics were examined to determine whether gender influenced the odds of serving on three core committees, the audit, compensation, and nominating governance committees. Due to data limitations on executive committee membership, only the audit, compensation, and nominating committee memberships were examined.

Board committees provide a vehicle for conducting board directed activities and are an important part of the firm's overall governance structure. These three *core committees* provide oversight activities by reviewing internal audits, controls, and policies as well as making recommendations on compensation policies, enhancing corporate governance, and selecting and evaluating nominees for director positions. Participation on one of these committees affords board members the opportunity for significant input and involvement in major board decision-making activities.

Second, firm level characteristics were examined to identify the types of firms that are likely to appoint females to the three core committees. Carter, Simkins, and Simpson (2003) present commentary from executives such as Robert Campbell, CEO of Sun Oil, and Karen Curtin, executive vice president of Bank of America, as well as policy statements from TIAA-CREF indicating that board diversity is a significant issue for corporate managers. However, many chief executives reveal that the top reasons for having women on their boards are to maintain a positive image with shareholders and to signal the companies' commitment to board diversity (Catalyst, 1995). While this reasoning may increase female board membership and serve to generate positive publicity for some firms, it may still minimize women's potential contributions. If women are appointed to board membership only as a way to enhance public perception of a firm, women may not be asked to serve on the boards' most influential committees where crucial decisions are made regarding firm policy and control. On the contrary, if women are recognized as valued contributors to a firm, they would be significantly represented on these committees as well as on the board of directors, the latter tending to be more publicly visible. By examining the

relationship between firm characteristics and female core committee membership, we are able to identify the types of firms that are more or less likely to appoint females to the three core committees.

Literature Review

Female Board Participation

The controversy over female board participation often focuses on the potential benefits of adding heterogeneity to a board or board subcommittee that would increase firm value versus tokenism. According to Karen J. Curtin:

> "There is real debate between those who think we should be more diverse because it is the right thing to do and those who think we should be more diverse because it actually enhances shareholder value. Unless we get the second point across, and people believe it, we're only going to have tokenism" (Brancato & Patterson, 1999).

A number of studies raise doubt about whether female directors are appointed to merely comply with increasingly accepted norms. In the *1995 Catalyst 500* report, chief executives reported that image management was a primary reason for female board membership. Bilimoria (2006) suggests that the mere presence of women on a corporate board signals to employees the recognition of women in the corporation. Burke (1994) argues that the presence of female board directors impresses stockholders and the public who are concerned with issues of diversity. Bernardi, Bean and Weippert (2002, 2005) find that firm diversity increases in terms of gender and ethnicity when annual reports include the photos of board members. Further, Farrell and Hersch (2001) find that the probability of adding a woman to a board is significantly increased when a woman departs the board relative to the departure of a male outside director, while the probability of adding a woman to a board in a given year is negatively related to the number of women directors already on a board. Schellhardt (1997) notes that some large companies have to explain the reason for the absence of women on their boards to the public.

The conceptual arguments in support of a heterogeneous board or committee can be broadly categorized as: (1) representation of the firm's customer base, suppliers, and employees; (2) variety of perspectives; (3) enhanced problem-solving; (4) creativity and innovation, and (5) improved monitoring due to increased independence (Carter et al., 2003; Robinson & Dechant, 1977). Firms with more women in top management positions may be more reflective of their consumers and employees and better able to meet market demands. This may be particularly relevant for specific industries or firms, e.g., retail and cosmetics. Women could provide different perspectives and alternatives which encourage discussion and improved problem solving. Through this process, firm leadership is enhanced as more than one perspective is addressed. Additionally, there is some evidence to suggest that women provide innovative and creative solutions and strategies based on beliefs and cognitive functioning (e.g., Carter et al., 2003; Robinson & Dechant, 1977).

Carter et al. (2003) suggest that a nontraditional board member (based on gender,

ethnicity, or cultural background) could be considered an outsider, which is effective for monitoring purposes. However, this type of proxy for an outsider may not be an adequate substitute if the female member is marginalized. Kanter (1977) presents evidence that women can lose their effectiveness as contributors when outnumbered by men. In addition, women could be viewed in stereotypical roles and their abilities could be undervalued. This route would reduce the likelihood of women's involvement in the firm's decision making process, which would hamper their ability to add value to the firm.

Board Committees

Kesner (1988) identifies four core committees as having the most influence: audit, compensation, nominating, and executive. The audit committee is charged with selecting auditors and reviewing audits, as well as assessing internal controls. The compensation committee reviews and sets compensation packages for senior management. The nominating committee evaluates and selects directors and reviews stockholder recommendations. The executive committee oversees other board committees and acts as a stand-in when there is a crisis. Both audit and compensation committees have come under increased scrutiny in the aftermath of the corporate governance scandals of the past few years, which is evidenced by the number of proposed and final rulings by the Securities Exchange Commission (SEC).

Previous research indicates that core committees are crucial in the corporate governance system. A firm's board of directors relies on these committees to assist in the oversight process as these committees are given specific mandates and responsibilities for corporate issues and concerns. This interplay between the board and specific committees increases the level of monitoring. In addition, the SEC recognizes the importance of standing committees by requiring firms to report the committees and their membership.

While there has been limited research on the appointment of women to core corporate committees (Kesner, 1988; Bilimoria & Piderit, 1994), the research on board diversity is more developed. Specifically, the research on board diversity examines the characteristics of the *board of directors*. The conceptual arguments in support of diversity as discussed above can also be applied to the analysis of core committee membership. Given the importance and function of these core committees, it is reasonable to suggest that the same aspects of diversity that are important for a board of directors must also be important for core committees.

Hypotheses

It is important to investigate whether women are considered real, as opposed to token contributors to the important decisions of the board and to firm value. Fama and Jensen (1983) point out that the most important role for the board is to serve as a mechanism to control and monitor managers. The extent to which women directors are provided with opportunities to be the members of key board committees that perform the crucial function of the board is an important measure of gender parity beyond signaling and/or image maintenance.

If women are truly valued as contributing members to a firm's upper management, what are the reasons for their absence or, at least, possible under-representation in the corporate hierarchy? One argument suggests that women lack the necessary experience that would make them desirable candidates relative to men. If this is the case, time would tend to erode this particular diversity issue, assuming women are allowed to advance without hindrance on the corporate ladder. However, as noted earlier, women occupied only 15.7% of corporate officer positions (defined as board-elected or board-approved positions) as compared to 51% in high-paying, management-type positions in 2008 among the Fortune 500 firms.

Another argument suggests that gender bias exists and that women are valued only for the impression they present to the public. As noted earlier, the 1995 10-year trend report by Catalyst finds that the appointment of women to board positions is used to establish a positive market perception of the firm's commitment to board diversity. Bilimoria and Piderit (1994) find evidence of sex-based bias after controlling for directors' experiences. They suggest that men were preferred for compensation, executive, and finance committees, while women were preferred for public affairs committees.

If women are considered valued contributors to the board rather than a means to reach a diversity goal, they would be significantly represented on the most important board committees: audit, compensation, and nominating. If women who serve on the board are excluded from being appointed to the core committees, this may indicate that the firm uses the more visible board membership as a way to enhance the firm's public perception and that women are used as "window dressings." From these arguments, the following hypothesis is developed:

H1a: Women directors are less likely to be appointed to the core board committees than are male directors.

Firm-level characteristics that may influence female participation at the committee level were also determined. Previous research has found that women were more likely to be appointed to the boards of *large* firms. There is evidence to suggest that larger firms, due to their increased public visibility, are more likely to appoint women directors. If a gender bias exists, women would be less likely to serve on the core committees of larger firms (as the positions are less visible to the public) relative to women directors in smaller firms. Nelson and Levesque (2007) argue that the high-demand labor markets and industry conditions of the high-growth entrepreneurial sectors, combined with more educated and experienced females, could result in increased participation by women in prominent governance positions. The *2005 Catalyst 500* report finds that larger firms are more likely to appoint female board members, even though women are still significantly under-represented on the most powerful committees. In addition, if women are constrained by gender in the hierarchical setting of a larger firm, it is possible that they would move into smaller, growth firms where talent supersedes gender. These findings lead to the following hypotheses:

H2a: Women directors are less likely to be appointed to the core board committees of *larger* firms than are male directors.

H3a: Women directors are less likely to be appointed to the core board committees of *growth* firms than are male directors.

Previous studies that focused on board composition found that women were more likely to be outside board members (Carter et al., 2003) when the full board is examined. It is possible that this also extends to board subcommittee membership, which leads to Hypothesis 4.

H4a: Women directors are less likely to be appointed to the core board committees of firms *with more insiders on the board* than are male directors.

Konrad, Kramer and Erkut (2008) found that a critical mass is necessary in order for women to be taken seriously and to surmount the risk of tokenism. With a minimum of three women on a board, the gender barrier can be removed and collaboration and communication among board members increased. In addition, women are more likely to be heard, and there is less stereotyping by male members. It is suggested that a firm with a higher percentage of women on their board was more likely to recognize women as valued contributors. As a result, these firms were more likely to appoint females to core committees, which leads to Hypothesis 5.

H5a: Women directors are more likely to be appointed to the core board committees of firms *with more female directors on the board* than are male directors.

Research Design and Results

Sample

The primary source for director information is the Investor Responsibility Research Center (IRRC) Directors database. The IRRC Directors data include director information for directors of S&P 500, S&P Midcaps, and S&P SmallCap companies. The dataset is highly detailed and, among other financial and non-financial items, includes information on the individual director's age, gender, and ethnicity. The IRRC data is partially constructed using data from the annual *Board Practices/Board Pay: the Structure and Compensation of Boards of Directors at S&P 1,500 Companies* publication. Although the IRRC Directors database contains information from 1996 to the time of conducting this research, we do not include data prior to 1999 because the director gender information is missing. We obtain all firm-level financial data from the COMPUSTAT database. After matching the IRRC Directors data to COMPUSTAT and after removing all firms with missing cases, the full matched sample consists of 4,913 firms in the aggregate-level analysis, and in the firm level analysis the final sample consists of 50,645 firm-year observations spanning 1999-2004. All the regression analyses are pooled time-series regressions.

Table 1 includes a summary of all relevant independent control variables.

Table 1: *Definitions of Variables*

Variable	Definition	Source
FemaleRatio	To construct FemaleRatio we take the ratio of all women on the board to total board members. This ratio measures the percentage of females on the board to total board members. We obtain board level data from the IRRC.	IRRC/Authors
FemaleComRatio	FemaleComRatio We tabulate the number of female members on the audit, compensation and nomination committees. We divide the total number of females on these committees by the total number of board members. This represents the ratio of females on the core committees to total board members.	IRRC/Authors
InsiderRatio	We divide the number of insiders on the board by the total number of board members. The IRRC database identifies current and former employees, board members, and directors. We use this as an indication of a board member's independence and classify individuals with these affiliations as insiders.	IRRC/Authors
Bsize	Is the total number of directors on the board.	IRRC
LnAssets	Is the natural log of total assets (COMPUSTAT Item6).	COMPUSTAT /Authors
Profitability	Is the ratio of income before extraordinary item to total equity (COMPUSTAT Item 18 / Item 6).	COMPUSTAT /Authors
Ownership	Is the ratio of shares held by a director to the total number of voting shares outstanding.	IRRC/Authors
Insider	Is a binary variable that takes the value of one when the director is an employee (current and former employees of the firm) and zero otherwise.	IRRC/Authors
TimeOn	Is the number of years the director has served on the board.	IRRC/Authors
AgeBinary	Is a binary variable that takes the value of one when the directors age is greater than the mean age of the board and zero otherwise.	IRRC/Authors
Otherboards	Is the number of other boards that a director sits on.	IRRC
Interlock	Is a variable that takes the value of one if the IRRC designates the director as having an interlocking relationship with the firms and zero otherwise.	IRRC/Authors
Leverage	Is the ratio of total-debt to total-assets (COMPUSTAT Item5 + COMPUSTAT Item9) / COMPUSTAT Item6).	COMPUSTAT /Authors
Growth	Is the ratio of capital expenditures to total sales (COMPUSTAT Item30 / COMPUSTAT Item12).	COMPUSTAT /Authors
CEO	Is a binary variable that takes the value of one when the director is a CEO.	IRRC/Authors
Gender	Is a binary variable that takes the value of one when the director is a female and zero otherwise.	IRRC/Authors
Year	Is a vector of binary variables that control for temporal effects.	Authors
SIC	Is a vector of binary variables that captures the impact of each standardized industry code.	COMPUSTAT

Univariate Results

To study the change in female board and committee membership over the study's examination window, the average change in the consistency of boards contained in the matched sample was presented. In particular, the researchers were interested in examining the change in the ratio of female board members to total board members (FemaleRatio) and changes in the ratio of females on the audit, compensation, and nomination committees to total board membership (FemaleComRatio) over the sample.

Table 2: *Sample Means*

Mean Values					
Year	**N**	***Bsize***	***InsiderRatio***	***FemaleRatio***	***FemaleComRatio***
1999	1110	9.11	.292	.076	.061
2000	1087	8.99	.291	.078	.063
2001	1009	8.64	.286	.079	.062
2002	393	8.55	.281	.083	.067
2003	369	8.47	.286	.089	.073
2004	732	8.67	.243	.097	.081

Table 2 contains the univariate means for *InsiderRatio*, the ratio of insiders to total board members, *Bsize*, the total number of directors on the board, *FemaleRatio*, and *FemaleComRatio* for 1999 through 2004. As evidenced by the *InsiderRatio* mean values, the proportion of insiders to total board members has experienced a steady decline over the examination period. This decline coincides with the steady increase of the ratio of females on the board and the steady increase of the ratio of females on

the audit, compensation, and nominating committees. The percentage of females on the board increased from 7.6% in 1999 to 9.7% in 2004, and the percent of women on the audit, compensation, and nominating committees to total board membership increased from 6.1% to 8.1% over the same period. This trend suggests that female committee and board participation is increasing in the U.S. However, to more closely examine the relationship between board composition and female membership, the relationship was examined in a multivariate logistic framework.

Individual Level Determinates of Committee Membership

To examine the relationship between board member characteristics and the likelihood of board committee membership four separate logistic regression specifications were estimated. First a specification that examines the determinates of board committee membership for the audit, compensation, and nominating committees using a single binary dependent variable, *CommitteeMember*, to represent committee membership in any of the three committees evaluated was estimated. In addition, a logistic regression for each committee was estimated separately. The researchers were particularly interested in examining the relationship between gender (Gender) and the likelihood of committee membership. We specify the model as:

$$prob(CommitteeMember = 1) = \left(\frac{e^{I}}{1 + e^{I}} \right), \qquad (1)$$

The dependent variable *CommitteeMember* takes the value of one when the director is on the audit, nominating, or compensation committees. *Ownership* is the ratio of shares held by a director to the total number of voting shares outstanding. *Insider* is a binary variable that takes the value of one when the director is an employee (current and former employees of the firm) and zero otherwise. *TimeOn* denotes the number of years the director has served on the board. *AgeBinary* is a binary variable that takes a value of one when the director's age is greater than the mean age of the board and zero otherwise. *Otherboards* is the number of other boards that a director sits on. *Interlock* takes a value of one if the IRRC designates the director as having an interlocking relationship with the firms and zero otherwise. CEO is a binary variable that takes the value of one when the director is a CEO. Gender is a binary variable that takes the value of one when the director is a female and zero otherwise. *OtherCommittee* takes a value of one when the board member already serves on the audit, compensation, or nominating committees. X is a vector of *SIC* and *Year* binary variables that controls for intertemporal and industry effects (denoted by *j*), and *i* represents each firm.

Table 3 contains the logistic regression results for the formula of Model 1. The researchers are particularly interested in the coefficient estimate on Gender. Model 1 tests whether or not women are less likely to be appointed to core committee membership after controlling for experience based attributes, such as tenure on the board and age.

Table 3: *Individual Level Determinates of Committee Membership*

	Committee Membership	Nominating Committee Membership	Compensation Committee Membership	Audit Committee Membership
Intercept	-	-	-	-
Ownership	-0.882***	-0.067	-0.645***	-3.060***
Insider	-0.162***	-0.043***	-0.134***	-0.132***
TimeOn	-0.058***	0.031***	-0.037***	-0.055***
AgeBinary	.0710***	0.023***	0.052***	0.036***
OtherBoards	0.050***	0.030***	0.026***	0.004**
Interlock	-0.028**	-0.018	-0.094***	0.044**
CEO	-0.077***	0.017***	-0.056***	-0.095***
Gender	0.096***	0.050***	-0.045***	0.067***
OtherCommittee		0.070***	0.085***	0.001***
N	50,645	50,645	50,645	50,645
Pseudo R-Squared	0.15	0.034	0.077	0.085

* *Indicates significance 10% level*
** *Indicates significance 5% level*
*** *Indicates significance 1% level*

Model 1:

$$prob(CommitteeMember = 1) = \left(\frac{e^I}{1+e^I}\right)$$

$$where,\ I = \beta_0 + \beta_1 Ownership_i + \beta_2 Insider_i + \beta_3 Timeon_i + \beta_4 AgeBinary_i + \beta_5 OtherBoards_i + \beta_6 Interlock_i + \beta_7 Ceo_i + \beta_8 Gender_i + \sum_{j=9}^{n} \beta_j X + v_i$$

The estimate on Gender is positive and significant for the total committee, nominating, and audit analysis. The marginal effects indicate that a female is 9.6% more likely than a male to be on any of the three committees. Females are 5% and 6.7% more likely to be on the nominating and audit committees, respectively. However, the compensation committee membership estimate is negative and significant suggesting that being a female makes it 4.5% less likely to be on the compensation committee.

These results provide mixed results regarding the hypotheses of whether women are less likely to be appointed to core committee membership after controlling for experience based attributes. The results suggest that they are more likely to be appointed to the nominating and audit committees, but less likely to be appointed to compensation committees.

Individual board member ownership (*Ownership*) has a negative impact on the probability of an individual serving on the nomination or audit committees. This result complements those of Vafeas (2000), who found that ownership has a positive impact on membership on the compensation committee. In addition, being an insider (*Insider*) has a negative impact on the probability of the individual serving on the nominating or audit committees. These results are partially consistent with those of

Kesner (1988), who provides evidence that the members of the four key committees she examined (audit, nominating, compensation, and executive) were more likely to be outsiders. However, being an insider has a positive, but statistically insignificant influence on compensation committee membership.

Age (*Agebinary*) has a positive impact on service across all three committees. The coefficient estimate on *TimeOn* is negative and significant in the compensation and audit committee regressions and positive in the nominating committee specification, suggesting the longer an individual has been a board member, the less likely they will be a member of the compensation and audit committees. They will be more likely to be a member of the nominating committee, however. These results are counter to those of Vafeas (2003), who argues that a longer board tenure provides the director with more knowledge about the firm and its business environment, and a long-term director engagement might be associated with greater experiences, commitment, and competence. In addition, the number of other boards (*Otherboards*) that a board member serves on has a positive impact on the likelihood that they will serve on one of the three committees. This result is consistent with Vafeas (2000), who showed that directors with more additional board seats are more likely to serve on compensation committees.

Aggregate Board and Firm Determinates of Female Committee Membership

The previous analysis addressed the relationship between board and committee membership at the individual level, but it does not examine the relationship between the firm characteristics and female board membership.

To control for mitigating factors in the relationship between firm and board characteristics and the incidence of female board committee membership, two separate logistic regression models were estimated. First, a model that includes all firms was estimated and, second, a model that only included firms that have women on the board was estimated. In particular, the researchers were interested in examining the relationship between *Bsize, InsiderRatio*, and *FemaleRatio* to the incidence of female committee membership. The formal model is specified as:

$$prob(FemalCom = 1) = \left(\frac{e^{I}}{1 + e^{I}} \right), \tag{2}$$

$$where,\ I = \beta_0 + \beta_1 LnAssets_i + \beta_2 Growth_i + \beta_3 InsiderRatio_i + \beta_4 Bsize_i + \beta_5 FemaleRatio_i + \sum_{j=5}^{n} \beta_j X + v_i.$$

The dependent variable *FemalCom* is a binary variable that takes a value of one when the firm has at least one female on the audit, compensation, or nominating committee (and zero otherwise). *LnAssets* is the natural log of the book value of the firm's assets, and *Growth* is the ratio of capital expenditures to total sales. *InsiderRatio*, *Bsize, FemaleRatio* are the same as defined previously. X is a vector of SIC and Year binary variables that control for intertemporal and industry fixed effects (denoted by j), and i represents each firm.

Table 4: *Aggregate Board Determinates of Female Committee Membership*

	Full Model	Female Inclusive Board Only
Intercept	-	-
LnAssets	0.019***	0.030***
Growth	-0.068**	-0.097**
InsiderRatio	-0.266***	-0.411***
Bsize	0.022***	0.004
FemaleRatio	2.742***	1.1359***
N	4,913	2,731
Pseudo R-Squared	0.61	0.09

** Indicates significance 10% level*
*** Indicates significance 5% level*
**** Indicates significance 1% level*

Model 2 tests H2 through H5, and the results of the logistic regressions are presented in Table 4 (marginal effects are presented).

$$prob(FemalCom = 1) = \left(\frac{e^{I}}{1+e^{I}}\right)$$

$$where,\ I = \beta_0 + \beta_1 LnAssets_i + \beta_2 LnGrowth_i + \beta_3 InsiderRatio_i + \beta_4 Bsize_i + \beta_5 FemaleRatio_i + \sum_{j=5}^{n} \beta_j X + v_i$$

The coefficient estimate on *LnAssets* is positive and significant in both specifications, suggesting that larger firms are more likely to have female committee members. When all firms are considered, the results indicate that female committee membership is 1.9% more likely for an additional $1,000,000 increase in firm size. When considering only firms that have female board members, the effect is increased. Female committee membership is 3% more likely when there are female board members. In fact, the results indicate that women are more likely to be on core committees in larger firms. This also suggests that women are being appointed to important positions even when these positions are not generally visible to the public. Therefore, we do not find evidence of gender bias in this sample.

However, more rapidly growing firms are less likely to have female committee members, which is evidenced by the negative and significant coefficient estimate on Growth. Female core committee membership is 6.8% (all firm model) and 9.7% (firms with female board directors) less likely for growing firms. This result is consistent with previous research on female board membership in growth firms. Daily, Certo and Dalton (1998) examined the level of female board appointments in high-growth, entrepreneurial firms included on Inc. 100 lists over a ten year period (1987-1996). They found that female board membership declined over the period.

Nelson and Levesque (2007) also found lower rates of women as board directors in high-growth firms.

The ratio of insiders (*InsiderRatio*) on the board significantly decreases the likelihood that a female will serve on the audit, nominating, or compensation committees. As expected, larger boards and the ratio of females-to-males on the board both lead to increases in the incidence of female committee membership.

Mixed results were found for the relationship between board size and the appointment of women to core committees in our specifications. In the full model, females are 2.2% more likely to be appointed to at least one core committee given a 1% increase in board size, while no significant relationship is found in the model that included only firms with females on the board. In addition, the likelihood that a female is appointed to a core committee increases by 274% (all firm model) and 113% (firms with female board directors) when the ratio of female board members to total board members increases by 1%. This result is consistent with the results of Bilimoria (2006), who finds that a company whose board includes female members is likely to also have women in top management positions.

Discussion and Future Research

This study adds to the current literature in several ways. First, the study revisits the board committee composition with regard to women using data that is more extensive, more current, and that uses a longer timeframe than in previous studies. The dramatic changes in the level of female participation on corporate boards since the 1980s makes it important to revisit and further investigate the issue of gender diversity in the corporate boardroom. The *2008 Catalyst 500* report indicated that women hold 15.7% of all Fortune 500 board seats. This is in contrast to the Kesner (1988) study, which found that only 3.6% of board seats were occupied by women in her sample of 250 firms from 1983, and to the Harrigan (1981) study of 112 publicly traded firms, which found that there were no women directors in 79.5% of the firms in the sample.

The results also indicate that the inclusion of women in committee positions was not uniform across all firms in that female participation is concentrated among larger firms and within specific core committees. While aggregate data offers insight into the more general characteristics of firms that appoint women to board committees and insight into the general characteristics of the women appointed to board committees, more detailed data is needed to determine the reason for female participation on board committees. Several issues emerged at the firm and individual levels which require investigation. Education and/or certification levels, as well as the perceived caliber of the education, may impact the ability of women to attain top positions, which may lead to core committee membership. Another issue may be the employment history of the female candidate. Is it more likely that women who have spent the majority of their careers at a particular firm will be appointed to a board committee for that firm, or does a woman have to prove herself first at one or more firms?

Certain firms may be more receptive to female top management and, ultimately, board committee membership. Firms that are “family friendly” are more likely to allow women to arrange their career paths around maternity and family issues in order to

allow them a continual progression in their careers without significant lapses in employment. Also, firms that are engaged with their communities and/or are invested in corporate social responsibility programs may be more likely to advance women and appoint them to a board committee.

The results also provide an avenue for future research exploration in the area of firm size and growth relative to female core committee membership. For example, why are large firms more likely to place women on core committees versus small firms? While the data supports this, it should be noted that the study's data was limited to mostly large capitalization companies. It is possible that this result may not hold if the balance of "small capitalization" firms is increased in the sample. In addition, it was found that fast growing companies were less likely to have a female on one of the core committees than slower growing companies. It is possible that these fast growing companies are also young firms that have experienced little board turnover and may still contain founding members of the firm. In addition to growth and firm size, issues such as tokenism and discrimination could be studied further using more detailed data.

Conclusion

The present research examined female membership on core corporate committees (audit, compensation, and nominating). The results suggest that when individual committees are evaluated, females are more likely to be members of the nominating and audit committees, but less likely to be members of the compensation committee even after controlling for experience.

The study also evaluated firm level characteristics such as size and growth to determine the types of firms that were likely to have female committee members. The results suggest that larger firms are more likely to have female committee members, while rapidly growing firms were less likely to have female committee members.

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