

# Using Innovative Strategies to Unpack Female Contributions on Corporate Boards

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*Female participation in corporate governance has grown slowly, yet steadily, with the majority of firms now having at least one female on their boards. In this way, female board members represent symbols of a changing society. One reason for the slower growth of female directors is the lack of clarity regarding how women make contributions on the board and under what conditions. Using data spanning 16 years and a total of 20,424 firm/year observations, this study investigates the relationship between women on a firm's board and the firm's pursuit of innovative strategies. Results indicate that female directors are more than symbols of change; female presence brings actual change, contributing to aspects of firm strategy concerned with acquisition, allocation, and deployment of key assets and resources. Further, results suggest that this female contribution strengthens when women have higher influence on the board via their board tenure or voting power.*

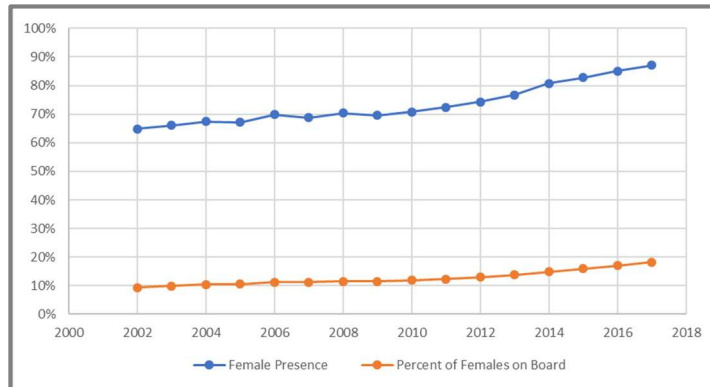
*Keywords: females, board, tenure, voting power, gender, governance*

## INTRODUCTION

Over the last several decades, we have seen a growing effort to increase the number of women on corporate boards. As the strategy-setting body of the firm (Stiles & Taylor, 2002), the board of directors hold important monitoring and governing roles at the highest echelon of the firm. Female inclusion on the board can increase gender parity and provide acknowledgement that female representation can create value for organizations (e.g., Post & Byron, 2015). Such support for female directors has contributed to a shift in board gender composition, where 87 percent of S&P 500 firms had at least one woman on their board in 2017, a significant improvement from 60 percent in 2002 (see Figure 1). While the push for female board membership often emanates from the firm, its shareholders, or other stakeholders, external forces are also contributing to this movement. For instance, Amazon, the world's third most valuable company (Forbes, 2018), answered to pressures for diversity by its shareholders and employees by recently adding a minority female as its chairman, the fourth female on its board. California passed a law in 2018 mandating that boards of publicly-traded companies include female members (Fuhrmans, 2018). These changes are encouraging from both a societal and firm perspective, as they illustrate that while there is still a long way to go to achieve gender parity, there have been large strides. While these gains accrue many benefits to firms, perhaps one of the most relevant to today's evolving, fast-paced society is the ability of firms with more heterogeneous leadership teams to more effectively respond to environmental change via the benefits offered by diversity in perspectives and backgrounds (e.g., Dailey & Schwenk, 1996; Hambrick & Mason, 1984). As the current paper discusses, this diversity has the potential to create a situation rich in

opportunities to engage in more innovative strategies and approaches (Finkelstein & Hambrick, 1990), providing firms with a competitive advantage.

**FIGURE 1**  
**FEMALE REPRESENTATION ON BOARDS (FROM 2002-2017)**



However, while there has been clear progress in the level of female representation on corporate boards—as well as research indicating the positive performance effects of such representation (e.g., Cook & Glass, 2011; Geyfman, Cooper & Davis, 2018; Post & Byron, 2015)—there are opportunities for further advancement. For instance, while 87 percent of companies had a female on their board in 2017, more than a third of these firms had only a single female board member. Further, few of these women are in board positions of power, with just six percent of female directors occupying board chair positions (Whitler & Henretta, 2018). In sum, these statistics suggest that firms may still be reticent about female directors, and the inclusion of women on the board may be due to external pressures to meet quotas or concerns about communicating an image of gender parity and diversity (e.g., Farrell & Hersch, 2005; Berndari, Bean & Weippert, 2002) rather than the positive performance effects afforded by female board presence (e.g., Geyfman et al., 2018; Post & Byron, 2015). If this is the case, it is critically important to gain a better understanding of how to help firms acknowledge the benefits afforded by female board presence so that they may capitalize on performance effects such as innovative strategy use.

As part of this effort, it is instructive to explore some of the factors that may limit the recognition of female board members' contributions. One major factor is that women leaders may be seen as more risk averse (e.g., Arch, 1993; Bernasek & Schwiff, 2001), more prudent in their approach, (Powell & Ansic, 1997), and therefore less likely to chart novel, innovative, and unexplored paths to profitability. While debate exists regarding the link between risk-taking and firm performance (e.g., McNamara & Bromiley, 1999), risk-taking behavior has historically been linked to performance gains (e.g., Brealey & Myers, 1981). Thus, a perceived lack of risk-taking behavior on the part of a female leader may prompt concerns about future firm performance. Applying these findings to female board members, stakeholders may view female board members as more risk averse than males and therefore less capable in leading the firm to identify new ways to increase performance. Indeed, studies suggest that shareholders tend to react negatively to female leadership announcements due to perceptions of future performance losses (e.g., Dixon-Fowler, Ellstrand & Johnson, 2013; Lee & James, 2007).

Thus, women may face an uphill battle when justifying their seat at the board table. Stereotypes and beliefs about female leaders are difficult to overcome, but a closer examination of (1) the conditions that foster female board members' contributions and (2) the benefits a firm reaps from these contributions, may help to unravel these stereotypes. One important condition to explore is the type of power that female board members require to be successful in this position, as power is central to an individual's ability to exert influence and have a strong voice (e.g., Grimes, 1978). While there are myriad potential sources/proxies of

power, the current study focuses on two that are theorized to play a critical role: tenure on the board and voting control.

In exploring the potential influence of these sources of power, this paper focuses on one particular aspect of performance as an outcome: the pursuit of innovative strategies that are different from a firm's peers. This examination is approached from the broad theorization that a board's heterogeneity (e.g., in the board's gender) accrues benefits due to diverse viewpoints and a willingness to break from industry norms. These additional perspectives offered by female members of the board create the potential for more innovation (e.g., Bantel & Jackson, 1989; Dezsó & Ross, 2012), which may in turn contribute to a firm's level of ambidexterity—its ability to be flexible and agile. Indeed, recent research has shown the role that ambidexterity plays in innovation and the competitive advantage that can result (Lee & Rha, 2016).

In sum, there is evidence of a link between female board representation and firm outcomes. However, there is a need to enhance our understanding of *how* these contributions are made, and the nature of the contributions themselves so that we can ensure that female board members have a seat at the table for reasons other than simple diversity signals or quotas. The current paper attempts to explore this issue by investigating (1) how having women on the board influences a firm's use of innovative strategies (e.g., a specific performance outcome), (2) how the presence and number of women with voting power on the board influence a firm's use of innovative strategies, (3) how the average tenure of women on the board influence a firm's use of innovative strategies, and (4) how a combination of number of women with voting power on the board and their average tenure influence a firm's use of innovative strategies.

## **THEORETICAL BACKGROUND AND HYPOTHESES**

### **Female Presence on Boards and Innovative Strategies**

As noted previously, innovative strategies are often seen as risk-taking strategies. Given that female leaders are often seen as more risk averse (e.g., Arch, 1993), a general assumption might be that the presence of female board members should be negatively related to innovative strategy use. However, while there is limited research exploring the relationship between female board members and risk, recent work finds that female board presence does not have a negative impact on risk (Geyfman et al., 2018), suggesting that concerns about female board presence may be inflated or unwarranted.

From a pragmatic standpoint, given that females represent 50 percent of the potential buying market, it is arguably in a firm's best interest to cultivate a board that reflects the demographic composition of their customer base. Maintaining a female presence on the board may signal (e.g., Rynes, 1991; Spence, 1973) to existing and potential customers (and perhaps future employees) that the firm is not only in tune with customer needs, but that it values diversity and equality.

Research in the area of organizational demography (Pfeffer, 1983) also suggests that heterogeneous groups may be more effective than homogenous groups, with evidence from top management teams research (e.g., Janis, 1972) suggesting that such groups contribute to higher organizational performance via the diversity of their members (e.g., Hambrick & Mason, 1984). Indeed, diversity in demographic attributes such as tenure, age, education, and functional background have all been shown to impact organizational outcomes such as performance (Daily & Schwenk, 1996; Hambrick & Mason, 1984). While homogenous teams may be more effective at making quick decisions due to similarity in perspectives (e.g., Hambrick & Mason, 1984), research suggests that heterogeneity is favored in situations where novelty is desired (Filley, House & Kerr, 1976 as cited in Hambrick & Mason, 1984), and diverse TMTs experience greater creativity, innovation (e.g., Bantel & Jackson, 1989; Dezsó & Ross, 2012) and problem-solving due to the wide variety of backgrounds and viewpoints present in the team. Given that a female board member is likely to offer additional perspectives previously untapped by an all-male board, it is expected that the presence of a female board member may offer the team a competitive advantage in the form of pursuing more innovative strategies.

In sum, the current study suggests that firms with female board members are more likely to pursue innovative strategies by virtue of their already progressive approach to the composition of their leadership team. Just as executive teams with new members are more likely to pursue innovative strategies due, in

part, to their willingness to “experiment” with strategies outside of industry norms (Finkelstein & Hambrick, 1990), teams with female board members may embark in similar innovative strategic decision-making, as their group diversity will prompt more innovation and risk-taking via the ambidexterity afforded by their board composition. The current study posits that such firms are more likely to pursue innovative strategies as part of their business model. Accordingly, the following hypothesis is offered:

***Hypothesis 1a:*** *Female presence on a firm’s board is positively related to the firm’s pursuit of innovative strategies.*

Just as the presence of female board members may enhance firm performance via the dividends offered by diversity, (Hambrick & Mason, 1984), the potential benefits afforded by differences in female leadership styles (Eagly, Johannesen-Schmidt & van Engen, 2003), and potential signaling effects (e.g., Rynes, 1991; Spence, 1973), it is expected that the actual number of females present on the board will share a positive relationship with innovative strategy use. At a basic level, having a higher number of individuals or a “critical mass” (Kanter, 1977) from an underrepresented group may enhance the effects of diversity in the team due to the potential for more progressive gender norms within the group (Daily, Certo & Dalton, 1999). In addition, relational demography theory (Tsui, Egan & O’Reilly, 1992) suggests that the degree to which a minority group member feels similar to others influences outcomes such as turnover and communication (e.g., Riordan, 2000; Riordan & Shore, 1997). This suggests that higher numbers of female board members may not only create a more supportive environment, but also a better sense of “fit” for female members via similarity effects (Byrne, 1971). These situational factors may in turn offer a higher likelihood of pursuing innovation and taking risks.

***Hypothesis 1b:*** *The number of females on a firm’s board is positively related to the firm’s pursuit of innovative strategies.*

## **Power**

The previous section discussed the general role that gender may play in a firm’s pursuit of innovative strategies. This paper next discusses one particular factor that may influence the likelihood of innovative strategy usage—power. In doing so, it is acknowledged that while having a female presence on the board may increase the use of innovative strategies, the overall effect of gender will be influenced by the power held by female board members. Previous research has illustrated the importance of power as it relates to individuals exerting influence (e.g., Finkelstein, 1992; Grimes, 1978; Salancik & Pfeffer, 1977) and its role in organizational decisions related to strategic change (Greve & Mitsuhashi, 2007; Hambrick & Fukutomi, 1991). Following previous research that has explored power at the top levels of the firm (e.g., Hutzschenreuter, Kleindienst & Greger, 2015), formal and informal power is discussed separately in this paper, recognizing that each carries influence in different ways. While there are numerous anchors of power that could be utilized by board members, this paper focuses on two in particular: tenure on the board as a source of informal power, and voting control as a source of formal power.

## *Tenure*

Recognizing the important role that the time in one’s position may play in determining one’s level of power, this paper examines how female board members’ tenure on the board may increase their ability to prompt change. Existing research on top management teams indicates that team tenure is linked to important outcomes such as changes in corporate strategy (Wiersema & Bantel, 1992) and firm performance (Hambrick & Fukutomi, 1991; Messersmith, Lee, Guthrie & Ji, 2014). In the broader literature, tenure has been used as an anchor for power (Hutzschenreuter et al., 2015), as it represents the ability of an individual to retain their position, which in turn signals that the individual is competent. In this way, tenure also signals credibility; the fact that an individual has been able to keep their role suggests that they are deserving of the position. Indeed, female board members with higher tenure are likely to be seen as more credible and

worthy of their position in the eyes of fellow board members. This validation may in turn prompt female board members to take more risks in the form of proposing new, innovative strategies.

***Hypothesis 2a:*** *The higher average tenure of the females on the board, the higher the pursuit of innovative strategies.*

However, it is also possible that tenure may have the opposite effect; rather than the beneficial outcomes of competence, credibility, and confidence leading to a higher likelihood of proposing innovative strategies, higher levels of tenure may instead lead to entrenchment and inertia (Keck & Tushman, 1993), with longer tenure leading individuals to become comfortable or complacent with current practices and strategies (Finkelstein & Hambrick, 1990). It is also possible that individuals who have achieved higher levels of tenure have done so precisely because they have remained in step with the group majority or industry norms; their subscription to existing strategies, customs, and procedures may be how they have retained their position. Thus, it is possible that female board members with higher tenures may be more likely to keep to the status quo—the way “things have always been done.” Given the challenges that face women board members as leaders, it is important to acknowledge that this may be a strategy (whether intentional or unplanned) employed to retain one’s board member position. Thus, recognizing that tenure may be a double-edged sword, an alternative hypothesis is offered:

***Hypothesis 2b:*** *The higher average tenure of the females on the board, the lower the pursuit of innovative strategies.*

#### *Voting Power*

Voting power is determined by the number of voting shares held by an individual or an organization of an underlying company and can directly affect critical company matters (Weisbach, 1988). Studies investigating the shareholder-voting theory have found that that when a director owns shares in an underlying company, there is greater incentive to monitor the firm’s senior managers (Subrahmanyam, Rangan, & Rosenstein, 1997) which results in overall higher governance by the board (Shivdasani, 1993). When directors own a significant stake in the firm, they are able to actively participate in the firm’s decision-making (Grossman & Hart, 1980; Shleifer & Vishny, 1986) and, where needed, counter the control exerted by senior managers of the firm—even the CEO (Gordon & Pound, 1993). Hence, as a director’s shareholding increases, their incentive and ability to influence critical matters of the firm increases accordingly.

For female directors who may not hold the same recognition and credibility as their male counterparts, holding significant voting control can reinforce their advocacy for specific strategic direction, including the pursuit of innovative or novel strategies. In this way, women with significant voting power have a source of formal legitimacy and voice on important company matters. Introducing a new strategic path—one that redefines how a company acquires and or deploys its key resources and assets—is a big proposition. Hence, it is hypothesized that in order to gain support for such a novel strategic direction, women may meet less resistance if they have shareholding voting power.

***Hypothesis 3:*** *The higher the number of females with shareholding voting power on the board, the higher the pursuit of innovative strategies.*

#### *Combination of Voting Power and Tenure*

Recognizing that sources of power in combination may have a stronger aggregate effect, this paper also explores how voting power and tenure, in combination, may influence the pursuit of innovative strategies. In this way, each type of informal and formal power is expected to contribute in its own way to a female board member’s power; tenure supplies informal power via credibility and competence, while voting power supplies formal authority and control. Taking the position that tenure shares a positive relationship with innovative strategy use, firms who have female board members with both high levels of voting power *and*

high tenure are expected to benefit from greater pursuit of innovative strategies. Following the previous argument that voting power provides legitimate support to “back up” an individual’s proposals, possessing a combination of these power sources is expected to positively influence innovative strategy pursuit.

***Hypothesis 4a:*** *Firms whose boards have female board members with both voting power and high tenure will be more likely to pursue innovative strategies.*

However, it is important to acknowledge the potential pitfalls associated with tenure as outlined previously. When combined with voting power, high levels of tenure may exacerbate entrenchment to an even greater degree, with individuals not only ensconced in the organization’s existing pattern of behavior, but also in possession of an official “voice” in the form of their votes. This official form of voice may carry with it a greater sense of responsibility to follow normative patterns, particularly if the individual has been on the board longer and has advocated for the former, historic strategies. Similarly, individuals with voting power may feel more inclined to maintain the status quo as this reaffirms their historic board position, and their position of voting control. As such, an alternative hypothesis is offered to acknowledge the alternate way in which voting power and tenure may combine to reduce innovative strategy use.

***Hypothesis 4b:*** *Firms whose boards have female board members with both voting power and high tenure will be less likely to pursue innovative strategies.*

## **METHODS**

Using the Institutional Shareholder Services database, Board EX data, and Compustat Capital IQ data, data was collected at the individual director-level, board-level, and firm-level for all S&P 500 firms for the years 2002 to 2017 inclusive. Age, gender, tenure, and voting power data were collected at the director level; board composition and board size were collected at the board level; firm size, industry, advertising expenses, research and development (R&D) expenses, inventory levels, gross and net values for property, plant, and equipment, total debt, return on assets (ROA), CEO gender, and CEO tenure were collected at the firm level. This resulted in 20,424 firm / year observations.

Cross-sectional regression and generalized linear models (GLMs) were the methods of analysis. Since the data consisted of unbalanced panels, ordinary least squares regression analysis was inappropriate, as it would result in inflated t-statistics and understated standard errors. Stata 15 was utilized for the estimation of the models and specification of the within-group correlation structure for the panels, also known as population-averaged panel-data models. Unlike other panel models, generalized estimating equations enable explicit assumptions concerning the correlation structure of the data and fitting regression models to panel data.

### **Measures**

*Female board presence* was calculated as a dichotomous variable where “1” represented the existence of at least one female on the board, while “0” represented an absence of female presence on the board. *Number of females* on the board was the sum total of all female directors in a given year. *Voting power* was calculated by comparing the director’s voting shares to the total voting shares outstanding where a director had voting power if they had a minimum of 1% of all voting outstanding shares. *Tenure* was calculated as the number of years between the year that the director joined the company’s board and the current year. Return on assets (ROA) was utilized to measure *firm financial performance*. ROA is measured as the firm’s net income divided by total assets. Firm size, prior performance, industry (at the 2-digit SIC level), tenure of the existing CEO, and whether the CEO is female were utilized as controls.

*Innovative strategies*. This paper draws from Finkelstein and Hambrick’s (1990) seminal research on the concept of novel strategies where the authors operationalize the ability of a firm for fresh thinking and departing from industry norms. Following Finkelstein and Hambrick’s methodology, six strategic indicators were used to create a composite measure for innovative strategies. These six measures represent

important resources available to the firm that are controlled by top management and where the manner in which the resources are combined and utilized has a significant impact on firm performance (Finkelstein & Hambrick, 1990). The measures are: (1) advertising intensity (advertising /sales), (2) R&D intensity (R&D /sales), (3) plant and equipment newness (net P&E / gross P&E), (4) nonproduction overhead (selling, general, and administrative expenses / sales), (5) inventory levels (inventory / sales) and (6) financial leverage (debt to equity). Each strategic dimension was standardized for each year ( $t$ ) by the industry, using data from the sample (at the 2-digit SIC level) where the mean was zero and the standard deviation was 1. The absolute difference for each dimension was then calculated between the firm's score and the average score for all the firms in the industry. The absolute differences were then summed to calculate a composite score where the larger the difference, the larger the departure from the industry norms, and the more innovative the strategies delivered by the firm. As found in Finkelstein and Hambrick's original study, there was considerable missing data on advertising and R&D intensity, and so a Novel Strategies 2 indicator was developed, based on the other items (indicators 3-6).

## RESULTS

Table 1 provides descriptive statistics and correlations; statistics for industry and year dummy variables are not shown. Hypothesis 1a predicted that female presence on a firm's board is positively related to the firm's pursuit of innovative strategies. As reported in Table 2, after controlling for firm size, prior firm performance, CEO gender, tenure, and industry, results indicated that female presence has a positive relationship with innovative strategies ( $\beta = 1.926, p < .05$ ), supporting Hypothesis 1a. Hypothesis 1b predicted that the number of females on a firm's board is positively related to the firm's pursuit of innovative strategies. As reported in Table 2, results indicated that the number of females shares a positive relationship with innovative strategies ( $\beta = 0.878, p < .01$ ), supporting Hypothesis 1b.

**TABLE 1**  
**DESCRIPTIVE STATISTICS AND CORRELATIONS**

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Females on Board	1.28	1.08	-									
2. Males on Board	8.12	2.10	.061***	-								
3. Average Female Tenure	7.78	9.52	.021*	.027**	-							
4. Average Male Tenure	10.39	16.10	-.026***	.000	.016	-						
5. Total Males Voting Power	0.94	1.04	-.276***	.017*	-.022**	.066***	-					
6. Total Females Voting Power	0.04	0.22	.161***	-.051***	.086***	.011	.100***	-				
7. Firm Size	22757	76117	.222***	.137***	.004	-.006	-.071***	-.024**	-			
8. Firm CEO Tenure	7.33	7.51	-.126***	-.059***	.036***	.106***	.209***	.033***	-.041***	-		
9. Female CEO	0.03	0.17	.208***	-.121***	.006	-.014	-.090***	.251***	.022**	-.060***	-	
10. ROA	4.36	9.44	.037***	-.028***	.017*	.028***	-.002	.012	.050***	.027***	.007	-
11. Innovative Strategies	3.10	38.46	.017	.009	.020*	-.002	.011	.042***	-.001	.015	-.003	-.025**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ,  $n = 20,424$



**TABLE 2**  
**REGRESSION RESULTS: EFFECTS OF FEMALE PRESENCE AND NUMBER OF FEMALES ON INNOVATIVE STRATEGY PURSUIT**

	Female Presence (Hypothesis 1a)	Number of Females (Hypothesis 1b)
Constant	-0.588 (1.967)	-0.602 (1.963)
Size	0 (0)	0 (0)
Industry	0.018 (0.018)	0.02 (0.018)
CEO Tenure	0.102 (0.046)*	0.102 (0.046)*
Female CEO	-0.579 (2.021)	-1.163 (2.055)
Prior Performance	-0.169 (0.032)***	-0.17 (0.032)***
Males on Board	0.225 (0.2)	0.261 (0.199)
Female Board Presence	1.926 (0.79)*	
Females on Board		0.878 (0.34)**
Wald $\chi^2$	36.740	37.460
Prob > $\chi^2$	0.0000	0.0000
N	12,829	12,829

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; Standard errors are in parentheses; Industry Dummies are included at the 2 digit SIC level

Hypothesis 2a predicted that higher average tenure of females on the board would be positively related to the pursuit of innovative strategies. As reported in Table 3, results indicated that higher average tenure of females on the board shared a positive and statistically significant relationship with innovative strategies ( $\beta = 0.084$ ,  $p < .01$ ), after controlling for firm size, prior firm performance, CEO gender and tenure, and industry. This supports Hypothesis 2a. Alternative Hypothesis 2b posited that the higher average tenure of females on the board, the lower the pursuit of innovative strategies. Given the findings related to Hypothesis 2a, Hypothesis 2b was not supported.

Hypothesis 3 predicted that the higher the number of females with shareholding voting power on the board, the higher the pursuit of innovative strategies. As reported in Table 3, after controlling for firm size, prior firm performance, CEO gender and tenure, and industry, results indicated that the number of females with shareholding voting power on a company's board shares a positive and statistically significant relationship with innovative strategies ( $\beta = 7.366$ ,  $p < .001$ ). This supports Hypothesis 3.

Hypothesis 4a predicted that the combination of voting shares and tenure would be positively related to innovative strategies, while the alternative Hypothesis 4b predicted that such a combination would be negatively related to innovative strategies. As shown in Table 4, after controlling for firm size, prior firm performance, CEO gender and tenure, and industry results showed that the combination of voting rights and tenure has a negative and statistically significant relationship with innovative strategies ( $\beta = -0.509$ ,  $p < .05$ ). This finding indicates a lack of support for Hypothesis 4a, and support for Hypothesis 4b.

**TABLE 3**  
**REGRESSION RESULTS: EFFECTS OF FEMALE TENURE AND VOTING POWER ON**  
**INNOVATIVE STRATEGY PURSUIT**

	Female Tenure (Hypotheses 2a & 2b)	Voting Power (Hypothesis 3)
Constant	2.723 (1.289)	-0.64 (1.976)
Size	0 (0)	0 (0)
Industry	0.014 (0.024)	0.019 (0.018)
CEO Tenure	0.163 (0.069)*	0.082 (0.046)*
Female CEO	-0.812 (2.318)	-3.751 (2.136)*
Prior Performance	-0.258 (0.048)***	-0.17 (0.032)***
Male Tenure	-0.003 (0.02)	
Female Tenure	0.084 (0.04)**	
Males on Board		0.254 (0.199)
Females on Board		0.678 (0.353)*
Males with Voting Power		0.242 (0.374)
Females with Voting Power		7.366 (1.6)***
Wald $\chi^2$	37.330	60.500
Prob > $\chi^2$	0.0000	0.0000
N	9,260	12,829

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; Standard errors are in parentheses; Industry Dummies are included at the 2 digit SIC level

**TABLE 4**  
**REGRESSION RESULTS: EFFECTS OF FEMALE TENURE AND VOTING POWER ON**  
**INNOVATIVE STRATEGY PURSUIT**

	Female Tenure and Voting Power (Hypotheses 4a & 4b)
Constant	-0.64 (1.976)
Size	0 (0)
Industry	0.02 (0.025)
CEO Tenure	0.153 (0.069)*
Female CEO	-3.597 (2.48)
Prior Performance	-0.261 (0.048)***
Males on Board	0.245 (0.266)
Females on Board	0.311 (0.558)
Female Tenure	0.083 (0.041)*
Females with Voting Power	12.842 (3.467)***
Female Tenure x Females with Voting Power	-0.509 (0.261)*
Wald $\chi^2$	58.340
Prob > $\chi^2$	0.0000
N	9,260

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; Standard errors are in parentheses; Industry Dummies are included at the 2 digit SIC level

## DISCUSSION

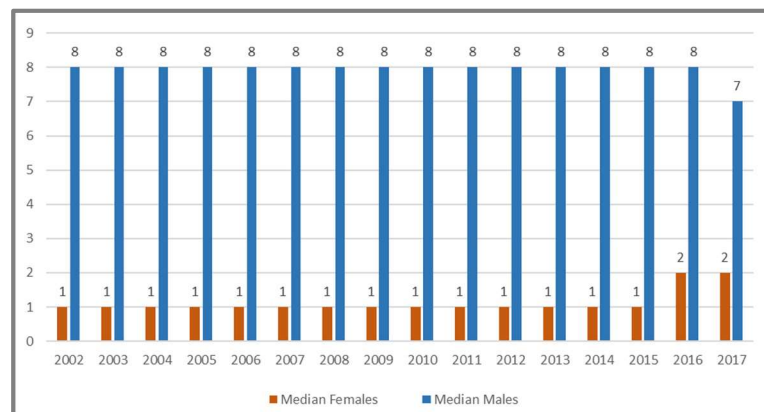
Studies investigating corporate boards have argued that women board members are symbols of change for the firm, helping the firm to convey a more accurate representation of the company's underlying

shareholders and its stakeholders (Arayssi, Dah & Jizi, 2016; Daily & Dalton, 2003). This paper tries to unpack the actual contribution of female board members and finds that women are more than mere symbols of change. Women may bring actual change to the firm through charting a path of novel, innovative strategies. Hence, women not only represent a new era for the board, they may also bring newness and change to the firm itself and how it competes in the marketplace. The current research specifically considered women’s contribution to firm strategy, defined as the firm’s use of its capital, its allocation of resources and its relationship with other firms within its industry (Porter, 1980). Findings suggest that by having the presence of a single woman on their boards, a firm may be more likely to break industry conventions, reconfigure its assets, stand apart from its peers, and pursue novel strategies. This study also found that the presence of women, women with longer board tenure, and women with voting power may all individually contribute to the firm’s pursuit of innovative strategies.

There is general agreement that female directors behave differently than male directors, as women bring a higher level of inclusion (Bear, Rahman & Post, 2010), enhance a firm’s reputation (Bernardi, Bosco & Vassill, 2006; Brammer, Millington & Pavelin, 2009), and engender greater trust with firm shareholders (Perrault, 2015). Women also bring in a higher level of monitoring and governance (Terjesen, Sealy & Singh, 2009) and improve the quality of a firms’ decision making (Mallin & Michelon, 2011) and thereby can bring about changes in how the board frames issues of competitiveness, particularly in the face of environmental shifts. This study adds to this research by demonstrating that compared to male board members, female board members may contribute by breaking traditional strategic paths in fundamental, and critical ways through how a firm’s resources are acquired and deployed. Hence, female directors may help the firm to differentiate at its core level, through how the firm bundles its resources (Penrose, 1985) and alters its anchors of competitive advantage.

Covering 16 years of data, this study found female directors in 65 percent of S&P 500 firms in 2002, growing to 87 percent in 2017. However, the median number of women on boards had only grown from one in 2002 to two in 2017 while the median number of men on boards had remained mostly consistent at eight members (see Figure 2). Hence, this suggests that the majority of firms continue to place women on boards due to pressures from its stakeholders, and perhaps as a quota-filling requirement. Given these statistics, the current research investigated whether even having a single female can help the firm chart a differentiated strategy and found that there was a significant relationship between mere female presence and innovative strategies.

**FIGURE 2**  
**MEDIAN BOARD COMPOSITION BY GENDER (FROM 2002-2017)**



This research then turned to see if having more women results in a stronger likelihood of innovative strategies and found a significant relationship between the number of women on a firms’ board and its pursuit of innovative strategies. Using male board members as a control variable, results revealed that this

relationship with innovative strategies exists only with female members and that females may be uniquely positioned to bring in a transformative pattern of change through their board directorship.

This study therefore underscores that women may bring a different type of value to boards, one that may not be generally associated with their male counterparts. These findings support the notion that women enhance the value of the firm (Campbell & Vera 2008; Carter, Simkins & Simpson, 2003; Francoeur, Labelle & Sinclair-Desgagne, 2008) and improve board performance (Hillman, Cannella & Harris, 2002) by bringing specialized, unique skills and expertise (Dunn, 2012). Still, with an average ratio 4 to 1, males dominate corporate boards, and women can still be considered outsiders (Singh & Vinnicombe 2004; Tsui et al. 1992) struggling for influence. Hence, different anchors of power and influence were investigated to find whether such bulwarks exist for women directors, and to see if these help provide female directors with legitimacy and a stronger voice to influence the firm's decisions to formulate innovative strategies. Tenure was first considered to see if the ability of a woman to remain steadfast within a nearly all-male board would increase her influence with the board. Findings indicated that female tenure shared a significant relationship with firm innovative strategies, supporting the notion that tenure provides structural power to executives (Hill & Phan 1991; Shen & Canella, 2002) and that women may be able to leverage their tenure on the board to influence the board's strategic decision-making. Male board tenure was also investigated, with findings indicating that longer-tenured women were unique in their contribution to the firm's innovative strategies.

The study next explored shareholder voting power. Directors are also often shareholders, and studies have found that significant share ownership by directors can result in better firm governance (Subrahmanyam et al., 1997; Shivdasani, 1993), as the directors have a vested interest in the company's direction and performance and are able to execute their governance through voting on critical firm matters (Grossman & Hart, 1980; Shleifer & Vishny, 1986). The current research supported these findings by revealing that women with higher share ownership may command a higher level of influence on the board and are able to strengthen their contribution toward the pursuit of innovative strategies.

Hence, this study found that the presence of female directors, female board tenure, and female directors having voting power by holding significant share ownership, all have a direct and positive relationship with the firm pursuing innovative strategies. The paper next investigated the effects of the combination of having both tenure and voting power to see whether—when present together—these would bring additional influence toward new, transformative strategies or whether it would cause entrenchment. Findings revealed that when women have both voting rights and tenure, the combined power may lead to entrenchment and greater belief in past strategies or industry norms. Hence, the accumulation of power may lead to less desire to break away from industry prescriptions. It could also suggest that the presence of powerful women on the board significantly contributes to firm performance (per other studies), creating the possibility that these firms' strategies would be copied by others in the industry who seek higher performance. In this way, while these firms' strategies may have been innovative at the outset, they become the industry norm.

### **Practical Implications**

The current study helps to unpack the conditions under which female board members are most likely to make contributions to innovative strategy use. By exploring how informal and formal sources of power aid in female board members' influence, this research helps to provide evidence to refute stereotypes that females are only present on boards to meet quotas or fulfill expectations—something that is critical in the effort to break down the barriers that exist for females. Indeed, the presence of female board members may have far-reaching effects, as existing research has found that having female board members is positively associated with the number of women in executive positions (e.g., Jansen & Kristof-Brown, 2006), suggesting evidence of a potential “trickle-down” effect (Gould, Kulik & Sardeshmukh, 2018). If more firms bring females onto their boards, this could help to reframe and reshape our image of what the board (and top levels of the organization) can “look” like. As females begin to occupy a higher number of these roles, this can prompt changes to gender-based norms and stereotypes (e.g., Daily et al., 1999). As part of the cultivation of a more female-friendly environment, this demographic shift would also allow younger female leaders access to a greater number of female role models (e.g., Morrison, White, & Van Velsor,

1992). These subtle changes to the environment and culture of the firm have the potential to offer a more positive environment for future female leaders. In relation to innovative strategy use, there is also evidence that one's propensity to engage in risk-taking behavior (Atkinson, 1957) increases with positive outcomes (Sitkin & Weingart, 1995); essentially, individuals are more likely to take risks after previous positive experiences. While this touches upon only one of myriad stereotypes, it offers a glimpse into how a simple increase in female board representation may impact important outcomes.

### **Limitations and Future Research Directions**

It is important to note that the cross-sectional nature of the data is a limitation of this approach. Although 16 years of data were examined, this data was explored as a panel data set, and changes over time were not explicitly explored. Thus, while it was possible to investigate the relationships between the variables of interest within the 16 year period, the current research is limited to discussing results in terms of the changing effects within this period of time; it is not possible to make generalizations regarding how these relationships may have evolved or shifted across time. Given that the number of females on boards has been increasing, it would be informative to use a finer-grained analysis to explore how the relationships examined in the current study may have progressed over time.

Given the large role that it may play in female board member appointment and retention, future research that more closely examines issues regarding legitimacy and power would be informative. While the current paper explores two types of power that may enhance legitimacy, additional research on the antecedents and sources of female board member legitimacy would be valuable. For instance, this research focused on the legitimacy challenges faced by existing female board members, but it is likely that challenges with legitimacy begin much earlier in a female's career. Accordingly, future research that examines the antecedents and sources of legitimacy at earlier career stages is encouraged.

Future research that examines how various sources of power may lead to entrenchment rather than innovation would also be valuable. While the current research found that tenure and voting power each contributed positively to the pursuit of innovative strategies on an individual basis, a negative effect was observed when these were present at high levels in combination. Given that each source of power facilitates innovative strategy use on an individual basis, it would be instructive to explore what specific combinations and/or levels of tenure and voting power may be optimal, as this may help to inform board composition and succession.

### **CONCLUSION**

One of the arguments against female participation at the top echelons of the firms, including in a firm's governing board, has been that women are risk averse, and therefore lead the firm towards a known, safe, and predictable path (Arch, 1993). So prevalent is this message that when a firm announces female executive leadership, there has been negative reaction in the firms' stock price and shareholder returns (Lee & James, 2007). The current research attempts to unpack the actual contribution of females on a firm's governing board and specifically investigates whether women may help to bring change and innovation to the firm through their participation on the board. This study found that firms with female directors on their boards tend to chart a less familiar and unexplored path, acquiring and deploying resources in novel ways and standing apart from their peers. Therefore, rather than adhering to tried and true formats, female directors may contribute to a firm's pursuit of new, innovative and novel strategies. This study further found that this contribution strengthens when female directors have anchors of power and legitimacy—either through their tenure on the board or through their voting control. However, findings also indicated that when female directors have both anchors of power this combination may lead to entrenchment, and is no longer associated with innovative strategies. Thus, while power and legitimacy is an important factor in determining female directors' contributions to the board, combinations of certain forms of power—such as tenure and voting power—can have the opposite effect. Given these findings, future research is needed that explores how other forms and combinations of power relate to innovative strategy use to more fully unpack the nature of this phenomenon.

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