

Playing the Boys Game: Golf Buddies and Board Diversity

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Abstract: We study the participation of women in golf, a predominately male social activity, and its influence on their likelihood of serving on a board of directors. Exploiting a novel dataset of all golfers in Singapore, we find that woman golfers enjoy a 54% higher likelihood of serving on a board relative to male golfers. A woman's probability of serving on the board in a large firm or in a predominately male industry increases by 117% to 125% when she plays golf. Joining the boy's informal network appears to facilitate women's entrance or success in the executive labor market.

Women's share of board seats in developed economies averaged 16.7% in 2014, varying from 3% in Japan to 19% in the US and 30% in France (Catalyst, 2015). Although a stream of studies demonstrates performance benefits from boards comprised of both men and women (Adams and Ferreira, 2009), alleviating gender disparity proves difficult to achieve. Female director nominations often arise from government regulation or from shareholder resolutions introduced by institutional investors (Anderson et al., 2011; Bertrand et al., 2014). Despite these external calls for greater female representation on the board, we have limited information on the impediments to their participation or the mechanisms women use to overcome these frictions in the executive labor market.

Research indicates that social capital influences placement and earnings in the labor market (Simon and Warner, 1992).

Unsurprisingly, gender norms and social identity influence the assembly and duration of social networks (Lewis et al., 2012; McPherson et al., 2001). For instance, in sports - a common social activity, gender stereotype influences the involvement of women by type and participation rates within the sports (Eccles and Harold, 1991). Reinforcing the gender disparity issues, women comprise less than 9.7% of sports editors in the Associated Press and less than 2% of sports radio hosts (Women's Media Center, 2014). Yet, sport groups constitute one of the most prevalent types of social networks among adults (Putnam, 1995).

We explore the role of informal networks and gender ceiling in the executive labor market using data on golf games. Specifically, we study whether women who play golf - a largely male-dominated sport - are also more

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likely to serve on the board of directors of publicly-listed companies.

Anecdotally, golf is an important social network tool in corporate America. One perspective is that golf outings reinforce male social networks and bonding, limiting their usefulness for female golf players. Mayer and Puller (2008) report that social networks often operate along gender lines and serve to emphasize gender identity. Heilman et al. (2004) find that women involved in male-dominated activities are often penalized in their career outcomes. Because golf is a social activity with substantial male participation, involvement in this predominately male activity could limit a woman's opportunities in the executive labor market.

Alternatively, female participation in golf may allow women to enter prominent social networks and increase their involvement in the labor market. Female executives reap career benefits from sports participation in general (Ernest and Young, 2014), suggesting that golf may provide a similar social capital for both men and women. Moreover, women engaging in a predominately male activity might gain additional social capital relative to their male counterparts. This perspective suggests that women participating in the boy's informal network could increase their acceptance by predominantly male corporate

boards. Overall, cogent arguments exist that women's participation in golf could either hinder or increase the likelihood of them serving on a board of directors.

I. Data and Statistics

We use the setting of Singapore to investigate the role of male-oriented informal networks on women's entrance or success in the board of director market. Singapore provides an especially interesting venue to evaluate which frictions limit women's access to top positions due to its high GDP per capita, low fertility rates, high female workforce participation, and widespread educational opportunities (Agarwal and Qian, 2014).¹ To examine the relationship between women's participation in golf and their likelihood of serving on a board of directors, we use information from Datastream for listed firms on the Singapore Exchange (SGX) from 2000 to 2014. We restrict our sample to listed firms that derive earnings from operation in Singapore. For these 431 Singapore-based firms, we manually collect information on boards of directors (name and gender) from annual reports. Table 1 provides descriptive statistics.

¹ More broadly, our work relates to the literature on gender differences across various economic outcomes and possible determinants, including communism, culture, discrimination, economic power, socio-economic status, and testosterone (Bertrand et al., 2015; Gneezy et al., 2009; Guiso et al., 2008; Reeb et al., 2016).

TABLE 1 - SUMMARY STATISTICS

	Mean	Median	Std. Dev.
Market cap (in mils)	775.4	765.9	147.0
Market to book	1.56	1.52	0.31
Assets	2,157	2,164	413
# of directors	7.06	6.95	0.26
Female (%)	8.07	7.85	0.87
Non-Chinese (%)	11.21	11.32	0.60
N	431		

Based on the time series average of the year-end firm characteristics from 2000-2014.

A typical firm has, on average, a market capitalization of S\$775.42 million, an asset size of S\$2,157.41 million, and a market-to-book ratio of 1.56. Among the firms, on average, there are 7 members on the board of directors, of which 8.07% are women and 11.21% are from minority ethnic groups (i.e., non-Chinese). We also obtain data from two other sources, which contain information on golf players, and demographic details of all Singapore residents. Singapore golf courses require *all* players to possess and present a current handicap card to play golf; consequently the data captures the entire golf playing population. In the golf database, we observe the player's name, gender, and registration date. In the golf data over 88% of golfers are male. The demographic data contains information on birthdate, gender, home address, and ethnicity of Singaporean residents.

We match the databases on the board of directors and the golf participants, along with the demographic details for the directors/golf players. We further restrict the analysis to individuals with ages between 30 and 75 in order to capture valid counterfactuals. We obtain a comprehensive sample of 1,472,462 Singaporean residents that contains 10,584 golfers and 1,646 directors. We compute the unconditional odds ratio to study the association between playing golf and serving on corporate boards. We find the odds ratio of 65.3, indicating that playing golf is strongly associated with serving on corporate boards.

For the matched board of directors, 155 (9.4%) are female and 1,491 (90.6%) are male. Using these numbers, we compute the odds ratio by gender and board membership at 0.094, suggesting that on average, females are 90% less likely to serve on the boards of directors in our sample. We observe a strong association between playing golf and corporate board membership for men (odds ratio = 38.9), but the magnitude is smaller than found for women. When comparing the odds ratios by gender, the results suggest that playing golf is associated with a stronger propensity to serving on corporate boards for women than for men. Thus, the odds ratio indicates that female golfers exhibit a 54%

greater chance than their male counterparts of serving on a board of directors.

II. Multivariate Analysis and Results

To control for observable differences in demographics, we run multivariate logistic regressions with a binary dependent variable that is equal to one, if an individual serves on a corporate board of listed firms in Singapore, and zero otherwise. The key explanatory variables include a female dummy, a golfer dummy, and an interaction of the two dummy variables. We include the year of birth and a non-Chinese binary variable to control for heterogeneity in age and ethnicity. Location and type (public versus private) of houses are strongly correlated with wealth (Deng et al., 2012). We control for variations in house price by including the postal code fixed effects in the model (Agarwal and Qian, 2016).²

Table 2 reports the odds ratio estimates for the logistic regressions. Column 1 shows the results for the full sample. Consistent with the univariate analysis, we observe that females, on average, are 89% less likely to serve on corporate boards of listed firms in Singapore,

and the effect is statistically significant at the 1% level. We also find that playing golf is statistically and economically significant in predicting the likelihood of serving on corporate boards for both genders. More interestingly, the interaction between ‘female’ and ‘golfer’ is also large and statistically significant. To interpret the results, this suggests that relative to the effect of male golfers, women who play golf are 74% more likely to serve on corporate boards. The effect is statistically significant at the 10% level.

To further explore whether the women-golfer effect stems from either general wealth or social capital effects, we split the sample into small and large firms. If wealth effects explain the women in golf results, then the impact should be greater in small firms relative to large firms. In contrast, if social capital explains these findings, then the effect should be more pronounced in large, hierarchical firms.

TABLE 2 - GOLF AND FEMALE DIRECTORS

VARIABLES	(1)	(2)	(3)
	All firms	Large firms	Small firms
Female	0.110 ^a (-24.49)	0.0983 ^a (-18.24)	0.111 ^a (-18.01)
Golf	7.210 ^a (32.95)	7.787 ^a (26.83)	6.657 ^{b*} (22.98)
Female x Golf	1.735 ^c (1.840)	2.246 ^b (2.212)	1.327 (0.602)
Controls	YES	YES	YES
Postal Code-	YES	YES	YES

² Another potential concern is that athletic skills drive the results on female golf participation. In an earlier version of the paper, we find no significant difference between female directors and non-directors in terms of their initial or current golf skills (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2702742).

Housing Sector			
FE			
Ps R-square	0.13	0.14	0.11
N	1,423,142	1,293,599	1,370,369

The dependent variable is a dummy variable equal to 1 if the person serves on the board of directors. We report the odds ratio estimates and include t-statistics (based on robust standard errors) below in parentheses, and ^a, ^b, and ^c denote statistical significance at the 1%, 5%, and 10% level.

The results as reported in column 2 of Table 2 show that the women-golfer effect is concentrated in large firms. Female golfers are 125% more likely to serve on a board relative to male golfers in large firms with presumably a more hierarchical structure. This effect is economically large and statistically significant at the 5% level. For small firms (column 3 of Table 2), women's participation in golf has no differential effect, both statistically and economically, on board membership relative to their male counterparts.

An alternative explanation for the differential effects of women's golf participation on their likelihood of serving on a board could result from the consumption of leisure by successful women. To investigate this explanation, we split the analysis by the concentration of female employment shares in different industries in Singapore. A leisure or quiet life explanation suggests that the women's golf participation effects should dominate in high female concentrated industries. However, arguments regarding the

use of golf to overcome the corporate glass ceiling suggest that the effect should occur in industries with limited female participation in the workforce.

In Table 3, we find that women golfers are more likely to serve on the board of directors in low female representation industries (by 117%) relative to their male counterparts. The effect is statistically significant at the 5% level. In contrast, the results indicate that in industries with high female representation, a woman's participation in golf has no differential effect on the likelihood of her holding a board seat relative to her male counterparts. In summary, the results suggest a strong influence of social capital in helping to overcome the gender ceiling in the executive labor market.

TABLE 3 - LOW FEMALE INDUSTRIES

VARIABLES	(1)	(2)
	High female representation industries	Low female representation industries
Female	0.102 ^a (-18.53)	0.101 ^a (-19.02)
Golf	7.144 ^a (25.42)	7.381 ^a (26.48)
Female x Golf	1.708 (1.319)	2.173 ^b (2.138)
Controls	YES	YES
Postal Code-Housing Sector FE	YES	YES
Ps R-square	0.13	0.13
N	1,304,690	1,344,332

The dependent variable is a dummy variable equal to 1 if the person serves on the board of directors. We report the odds ratio estimates and include t-statistics (based on robust standard errors) below in

parentheses, and ^a, ^b, and ^c denote statistical significance at the 1%, 5%, and 10% level.

III. Conclusion

Our analyses suggest that the participation of women in golf - a predominately male social activity, significantly increases their likelihood of serving on a board of directors. Using a dataset of over 1 million golf games played in Singapore over a 15-year period, we find that female golfers exhibit a 54% higher likelihood of serving on a board relative to male golfers. A woman's probability of serving on the board in large firms increases by 116% if she plays golf, while golf has no such effect in small firms. Perhaps even more surprising is the finding that the gender-golf effect increases to 158% for women in a predominantly male industry. In summary, the results suggest that becoming part of the boy's network increases a woman's chance of serving on the board of directors in large firms in male dominated industries.

One clear issue that emerges in this analysis is that golf is an important social network. In a country with low birth rates, high wages, and inexpensive access to live-in helpers, we provide strong correlation evidence suggestive of an informal network that women use to overcome or deal with gender disparity.

The data support both the notion that golf facilitates women's appointment to the board or alternatively, that board membership leads women to play golf. Either perspective indicates that "*playing the boys game*" is an important component of women's directorships in publicly-traded firms. While this effect occurs in both men and women, women's involvement in a male-dominated social activity appears more pronounced when they serve on board in large, hierarchal firms or those in male dominated industries. We interpret this evidence to suggest that engaging in social activities that run counter to the social norms or behaviors provide an important mechanism for women to partially mitigate the glass ceiling in corporate boards.

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