# Supply and Demand Side Determinants of Board Gender Imbalance: The U.S. Evidence<sup>+</sup>

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#### Abstract

Women are heavily underrepresented in U.S. boardrooms at a time when many countries are introducing policies such as gender quotas to achieve greater gender balance in boards. To understand why, we examine how successful women are -- relative to men -- in finding a second board appointment after an initial appointment. We find that women do better than comparable men in terms of the quality, likelihood and speed of the second appointment. While we cannot rule out the possibility that boards discriminate against women, such discrimination, if present, does not prevent highly qualified women from finding board seats. Examining first appointments, we find that women who obtain board seats generally have significantly less leadership and work experience in quoted firms than men, but (after controlling for observable attributes) are appointed at larger firms. Our findings are consistent with under-representation of women being more a consequence of supply-side factors: in particular, a lack of opportunities for women in rising up the corporate ladder, so that only a small number of exceptionally capable women manage to be in the radar of nomination committees. The findings also possibly reflect that lack experience in leadership positions in quoted firms and are more keen to make up for their "experience deficit" by investing more in quoted firm networks subsequent to the first appointment.

**Keywords**: Board Diversity, Board Gender Balance, Gender Quota, Taste-based Discrimination, Statistical Discrimination

JEL Classification: G34, J16, G38, J31

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While women remain significantly under-represented in corporate boards worldwide, following Norway's lead, several countries have recently passed laws aimed at gender balance in the boardroom. In recent years the parliaments of Spain (2007), Iceland (2010), France (2011), the Netherlands (2011), Belgium (2011), Italy (2011), Malaysia (2011), India (2013) and Germany (2014) have adopted gender quota laws regulating the gender composition of corporate boards. In 2013, the European parliament voted in favor of a proposed draft law that would require 40% female board members in about 5,000 listed companies in the European Union by 2020. Several other countries are considering similar legislation, sometimes limited to state-owned or mixed ownership companies (e.g., Brazil), while others have set voluntary goals.

In contrast, in the United States, there has been virtually no discussion of policy initiatives aimed at gender diversity. This is the case even though the U.S. is now among the few Western developed economies with neither voluntary nor mandatory targets, and female board representation remains well below those of most European countries. According to a 2016 Harvard Business Review article that interviewed directors of companies in the U.S. and Denmark, both male and female directors were opposed to gender quotas. According to one interviewed female director in the U.S., "Quotas are just anathema in the U.S. — I don't think we will ever see quotas here." Shareholders also appear apathetic towards the need for gender diversity on boards. We see relatively few shareholder proposals about gender diversity in the boardroom beyond a small number of activist shareholders. Nor does boardroom diversity feature in any prominent way in discussions or indices of corporate social responsibility in the U.S.

The case for or against gender quotas depends crucially on the reasons for the absence of more females in the boardroom.<sup>3</sup> In this paper, using U.S. data, we examine female progression in the director labor market to throw light on which factors are likely to be driving female underrepresentation in corporate boards. Such an exercise is necessary because the lessons learnt from the imposition of quotas in other countries may not be useful, for two reasons. First, despite some claims to the contrary, the introduction of quotas in some countries is unlikely to be exogenous to the socio-political and socio-economic environment

<sup>&</sup>lt;sup>1</sup> Among European countries, Denmark remains an "outlier" in terms of its low female representation in boards of public companies.

<sup>&</sup>lt;sup>2</sup> In Canada, leading proxy advisory firms Institutional Shareholder Services (ISS) and Glass Lewis have added a voting policy in respect of board gender diversity to their 2018 proxy voting guidelines.

<sup>&</sup>lt;sup>3</sup> Of course, balanced representation could be a goal in itself from a fairness perspective. However, policymaking could still benefit from an understanding of whether quotas are the best way to implement such an objective.

of the country, so generalizations are difficult. Second, the metric in terms of which the success of a quota policy is to be judged is far from clear.<sup>4</sup>

Several arguments have been put forward in support of gender quotas. The most obvious case for policy intervention in the form of quotas is the presence of so-called "taste-based discrimination" in the boardroom. This occurs if a male-only board prefers to keep it so because men enjoy associating more with other men, or if perceptions or cultural norms are biased against females. 5 When gender discrimination is based on taste or preference, it leads to equally or more skilled women being overlooked in favor of men.

Other possible reasons for under-representation of females on boards are related to the lack of opportunities for women in the workplace. Most board members are recruited from the ranks of corporate executives and women are significantly under-represented in the upper echelons of the corporate hierarchy. This can lead to two types of problems. The first is lack of information about qualified female candidates. The system of selection for corporate board members often makes use of networks of existing board members and senior management of a firm, who in most cases are predominantly men. Female candidates may find it difficult to break into male-dominated networks (Janiak 2003, Fairfax 2006). The search and information costs associated with identifying qualified female candidates may be too high for nomination committees responsible for board appointments. A second problem is that women may be overlooked because of stereotypes or biased perceptions about their abilities to function effectively at the highest levels of the corporate hierarchy – a perception that could be reinforced by the paucity of women in high positions in the first place. Therefore, information bias in board appointments can manifest in "statistical discrimination", i.e., basing board appointment decisions on average characteristics of a group.

Presumably, gender quotas would cause firms to choose search technologies that would overcome these information disadvantages that boards face regarding the qualities of female candidates, as they did in France after that country's adoption of a mandatory board gender balancing policy in 2011 (Ferreira et al. (2017)). However, the problem with basing an argument for a board gender quota on its effect on search

firm match.

<sup>&</sup>lt;sup>4</sup> For example, some studies examine market reaction to the announcement of reform or firm performance subsequent to reform and find mixed evidence. See Ahern and Dittmar (2012), Matsa and Miller (2013), Eckbo, Nygaard and Thorburn (2016). Ferreira et al. (2017) examine the stability of director-firm match. One could also argue that if externalities are important, then the impact of quotas on career choices of females, or their movement up the corporate hierarchy, are the more relevant indicators of success.
<sup>5</sup> A recent article in the *Guardian* (There is Sexist Bias in the Boardroom: conscious and unconscious) provides several examples

of an "all-boys culture" in the boardroom that discriminates against women.

<sup>6</sup> According to a Catalyst 2015 report, women account for 45% of the work force in S&P 500 companies, but hold only 25% of the

executive and senior-level official and manager positions, and only 4% of CEO positions.

<sup>7</sup> Ferreira et al. (2017) find that the 2011 board gender reform in France changed the search technology for directors. The director network in France prior to reform was dominated by elitist *Grande Ecole* graduates, in which women were under-represented. The gender reform therefore led to greater reliance on search firms for the recruitment of directors, which improved director-

technology is that it is unclear why, if such technologies are beneficial for the shareholders, they would not be already be adopted in the first place. In fact, as noted above, shareholders in the U.S. and elsewhere have been generally silent about gender diversity – perhaps recognizing that, despite numerous studies pointing to the benefits of diversity for decision making, the costs of closing information gaps are too high for such processes to work to shareholder advantage. <sup>8,9</sup>

Our results in this paper indicate that once women attain board seats, they progress much faster in the director labor market than men. Search and information costs of finding qualified women are thus likely reasons for the underrepresentation of women in boards, but such costs have their origins in the underrepresentation and lack of opportunities for women in higher positions in firms (especially in publicly traded (quoted) firms). As discussed below, our results are highly consistent with the idea that women face greater hurdles in career advancement, and so they have to be exceptionally talented to attract the attention of nomination committees. Our results are also consistent with the notion that additional board seats and the associated quoted firm networks are more valuable for women in overcoming their "experience deficit" in quoted firms and for career advancement. While we cannot rule out the existence of taste-based and statistical discrimination being a factor contributing to gender imbalance in boards, our results show that these are not serious enough to prevent the appointment of highly skilled women to board seats.

Using data on over 50,000 individual directors of listed US firms, we examine the differences in the career progression of male and female directors subsequent to their first non-executive director appointment. Specifically, we examine the likelihood of finding a second seat, the speed with which women who have obtained a first board position obtain a second board seat, and the quality of that second seat (controlling for the time required to find the second seat), of females relative to males who obtain their first board seats in the same year. One of the major advantages of looking at second seat appointments is that we are able to tell whether the individuals are at all participants in the labor market, both from the supply side (i.e., whether they are open to board appointments) and the demand side (i.e., whether they are in the radars of boards that could potentially recruit them). Without this information, it is impossible to determine how women are faring relative to men in the labor market for directors. An additional advantage is that we can control for not only the observable qualifications/attributes of the individual, but also the characteristics (firm size, board size and profitability) of the firm where the board member obtains the first appointment. Controlling

<sup>&</sup>lt;sup>8</sup> Of course, boards could be economizing on their own search costs, as opposed to those of shareholders, who could benefit from a closer scrutiny of the female pool. However, even in this case, it is unclear whether the costs of shareholder action would outweigh the benefits.

<sup>&</sup>lt;sup>9</sup> Other arguments for gender quotas emphasize externalities, such as role model effects for other women. These benefits are also unlikely to be internalized by shareholders.

<sup>&</sup>lt;sup>10</sup> Xu (2018) finds evidence of a significant promotion gap based on comprehensive data on U.S. executives.

for the latter helps mitigate our inability to completely control for individual attributes that matter for the second director appointment outcome, to the extent that the board that appoints the individual to the first board position is able to observe them.<sup>11</sup>

Our main results are as follows. We find that compared to males, female directors are more likely to receive second appointments. These results hold for a Cox Proportional Hazard model as well as linear probability models where we examine the likelihood of a second appointment within one or two years of the first. The age at the first board appointment matters. Throughout, we examine the sensitivity of gender effects with respect to four age splines corresponding to the four quartiles of the age distribution of females at first appointment. These correspond to age ranges 47 and below, 47-52, 52-57 and above 57 years, respectively. Not surprisingly, both males and females are more likely to get second appointments as the age at entry is higher. More importantly, for all age groups, the likelihood of a female director finding a second appointment is higher than comparable males. However, the difference is only significant for the 47-52 age group and the oldest age group (above age 57).

We next examine the speed of finding a second appointment, conditional on finding one. We find that it takes longer for women in the youngest age group to find a second appointment than comparable men. However, the difference disappears for the two immediately higher age groups, and reverses for the highest age group. While both males and females who enter the director labour market above age 57 get second director appointments faster than younger entrants in their respective gender groups, females in this age group get theirs much faster than corresponding males. To mitigate the possibility that faster moves to a second board position could be trading off quality for speed, we control for the size of the firm (a proxy for the quality)<sup>13</sup> where the second appointment occurs. Our results remain unaffected.

Last, we examine whether female directors find better quality second appointments relative to males, measured by the size of the firm they are appointed to, after controlling for the time required for the second appointment and other individual attributes and characteristics of the firm of first appointment. We find this is the case. Moreover, both male and female directors get their second appointments at larger firms when the age at first appointment is higher.

What explains these results? There are several potential explanations. First, while we control for first appointment individual attributes and firm characteristics, our results could reflect the possibility that

<sup>&</sup>lt;sup>11</sup> For example, unobserved superior skill could lead to first appointment in a larger firm. If this were the case, the size of the firm would proxy for this unobserved attribute.

<sup>&</sup>lt;sup>12</sup> We use cohort (defined as all those getting their first appointments in the same year) and first-appointment firm's industry fixed effects in all our regressions.

<sup>&</sup>lt;sup>13</sup> Firm size is likely to be correlated with greater visibility, director compensation, and connections.

these do not correctly reflect female skills because females are underplaced at their first appointments. Statistical discrimination could give rise to such a situation and would be consistent with our results.

Statistical discrimination could occur if male dominated boards have biased views regarding the capabilities of first-time female entrants. These women would then get "lower quality" first board appointments – e.g., at smaller firms – than men of comparable observable individual attributes (qualifications, labor market history etc.) because of biased perceptions about their ability. However, after they obtain the first board seat, their skills become more visible (possibly spreading to other firms' boards via board networks) and therefore for their second appointments, they would outperform males who are placed at similar size firms at their first appointment. Thus, any evidence of better female progression in the director labor market could be reflecting statistical discrimination by the board at the first appointment.

To examine whether women are underplaced relative to men at their first board appointment, we examine if, after controlling for previous employment history (number of positions held), age, qualifications, leadership experience (experience as Chief officer, COO, CEO, or CFO) and work experience, women are appointed to board positions in smaller firms than men. We find the opposite: the first appointment for women is in larger firms. Leadership experience and work experience in quoted firms are also positively related to the size of the firm where the first appointment occurs. Thus, it does not appear that statistical discrimination, or biased perceptions about unobserved outcome-relevant attributes, explains our results.

The results on the first appointment, however, are very consistent with a selection argument (Adams and Funk (2012), Schmid and Urban (2015); Keloharju et al. (2017)) which suggests that because women face higher hurdles for advancement up the corporate ladder, only very talented women attract the attention of boards and receive a board appointment. Keloharju et al. (2017) find that women who reach comparable status as men within the organization and overcome the effect of family decisions early in their careers are in fact more qualified than men. While they examine observable attributes, the same argument applies to skills that the researcher cannot observe. Because women face higher hurdles in the labor market, to achieve similar outcomes (e.g., leadership positions or work experience in quoted firms), they have to be of higher ability than men. If boards recognize this or observe some components of such ability, women would end up with higher quality first appointments than men of comparable achievements. However, the appointments that women are able to get may still be limited by their lack of exposure to quoted firm networks. Indeed, when we compare the average characteristics of women with those of men at first appointment, we find that women have significantly lower leadership experience in quoted firms. Thus, even though they obtain better first appointments than comparable men based on observable attributes, women could still be underplaced in relation to their true abilities. Women would then outperform men who are comparable in terms of

observable attributes (including the size of the firm of first appointment) as their superior talents get revealed in the director network subsequent to their first appointment.

In addition to this "demand side" explanation, our results are also consistent with a "supply side" explanation. It could be the case that women do better than men for second-seat board appointments because board seats in quoted firms matter more for the career progression of females. If females suffer from statistical or taste-based discrimination in their own firms or in the labor market for executives (as opposed to the labor market for directors), they might want to invest in building networks or in signals of ability. Thus, second (or multiple) board seats could be more valuable for women, causing them to invest more intensively in the network that a first employment at a quoted firm opens up for them. As mentioned, we examine in detail past work and leadership experience of first-time board appointees. We find that women of all age groups have less leadership experience than men when we consider all types of firms (quoted, private, and "other" such as non-profits), but especially in quoted firms. However, younger women have more quoted firm work experience, and conditional on having prior work experience at a quoted firm, they come from larger quoted firms. These observations are consistent with the idea that women face more barriers to career advancement — especially in reaching senior positions in quoted firms — and therefore additional board positions in quoted firms are more valuable for them.<sup>14</sup>

As discussed earlier, in our regressions, women outperform men in terms of second seat appointments for two age groups for the first appointment: the age groups of 47-52 and older than 57. We find that first-time board appointees in the 47-52 age group have the most leadership experience and work experience in quoted companies (for both men and women). Thus, this group fits the profile of highly skilled individuals, and possibly the selection explanation (that women have to be exceptionally skilled to make it more visible or leadership positions) seems more plausible explanation as to why women outperform men in terms of their second appointments. In contrast, the oldest group has less quoted firm work and leadership experience and the gender gap is particularly glaring, with women having overall more work experience but most of this being in non-quoted firms. For women in this group, additional board seats in quoted firms could either be an end in itself (some may not be very far from retirement) or a means of making up for their experience deficit in quoted firms. This could be the reason why women in this age group also outperform men in terms of the second appointment.

Another potential set of explanations for our results is that largest firms (boards) have more capacity to (i) engage in "tokenism", that is, appear as gender-sensitive by appointing women to boards, (ii) take

<sup>&</sup>lt;sup>14</sup> These findings also suggest that our results are not driven by a small group of well-connected women who have easier access to boards than men, as such connections should also lead to more positions and leadership roles in quoted firms.

risks, or (iii) search more effectively due to more resources or larger networks. However, our results pertain to experienced directors, and it is not clear why, if tokenism were the objective, boards would have to recruit experienced directors — any female director would do. Consistent with the notion that even when inexperienced (rookie) female directors are recruited, the purpose is the potential contribution they could make to board activities, we find that rookie female directors are significantly more likely to get committee appointments between their first and second appointments. While our evidence is consistent with a more effective search strategy which allows larger boards to identify talented women and to take risks, this argument has more relevance for first appointments than second. Further, we find that our results for the second appointments remain even when we remove appointments in the top size decile of firms.

To summarize, while we cannot rule out the existence of taste-based discrimination and statistical discrimination completely (as we do not observe which individuals the boards might consider but not appoint, especially at first appointment), it does not appear that such discrimination, if present, prevents the appointment of very talented women to board positions. In this regard, Boards in the U.S. seem to be performing their fiduciary duties when deciding on board composition, which possibly explains the absence of shareholder pressure on this issue. Gender imbalance seems to be a result of search costs associated with identifying well-qualified women: once information gaps are eliminated subsequent to a first appointment, women make better progress in the director labor market than men. To a large extent, the information gap seems to be a consequence of lack of opportunities for women in reaching top positions in organizations, and especially quoted companies that are more in the public domain.

These findings imply that the case for a gender quota for the U.S. is far from clear, and has to be based on the externalities such a policy could create by addressing the more fundamental problem of continued female labor force participation.<sup>15</sup> However, it would appear that social policy aimed directly at helping women manage work-family balance would be equally, if not more, effective. We postpone a more complete discussion of the quota debate for the U.S to the concluding section of the paper.

The rest of the paper is organized as follows. Section 2 discusses the sample and summary statistics. Section 3 presents our main results and tests that help distinguish between alternative explanations. Section 4 provides some concluding thoughts on the quota debate in the light of our results.

8

<sup>&</sup>lt;sup>15</sup> See Adams and Kirchmair (2015) and Pande and Ford (2012) for insightful discussions. Adams and Kirchmair (2015) provide evidence on the relationship between continued female labor force participation and board gender balance.

# 2 Data and Methods

# 2.1 Sample

Our sample selection starting point is BoardEx coverage of North American public firms (classified as "quoted" by BoardEx) over the sample period 1999 to 2015. We restrict our analysis to non-executive directors (also classified as SD directors) and to individuals with both first and second directorships (if one exists) within BoardEx.

Each individual's history is back-filled by BoardEx and kept up to date for as long as they continue in a firm that is part of the BoardEx main coverage. We extract information about current and historic board roles of individual directors from the Director Profile – Employment files. Individual directors' age and gender are extracted from the files Director Profile – Characteristics and Board Summary files.

We merge BoardEx data with Compustat using CIK, CUSIP and company name (sequentially) and retain only boards that are matched in BoardEx and Compustat. We only keep cases where both the firms for the first and the second appointments of the individual directors can be clearly identified in Compustat.

Firms with insufficient information to calculate total assets have been excluded from the sample as well as individuals who are appointed at the same board where they previously served as a CEO. We also exclude cases where the director is appointed at the board as an interim position to be later promoted to CEO at the same firm. Appendix A0 describes the definition of the main variables used. The result is an initial universe of over 26338 directors with at least one board seat across 6584 firms during the 17-year sample period.

# 2.2 Empirical strategy

Our objective is to examine whether the under-representation of women in U.S. boards is the outcome of taste-based and statistical discrimination by mostly male-dominated boards. The main focus of the empirical strategy is to investigate the labor market outcomes for female directors compared to their male counterparts, post their first appointments to a board seat. We examine, in turn, the likelihood of obtaining a second board appointment, the speed with which a board member finds a second appointment, and the quality of the second appointment, controlling for the time it takes to obtain it.

Each of these outcome variables has some advantages and some limitations in discerning the presence of discrimination at the board level. The likelihood of finding a second appointment, for example, could depend both on demand and supply factors. So, if women are less likely to find a second seat than

males, that could reflect that they are less willing to look for a second seat, rather than the presence of taste-based discrimination in the board appointments. Conversely, women could be more keen to obtain a second seat (particularly, one of better quality than the first one) because such appointments are more likely to help their career advancement in their own organizations compared to males. If such incentives lead to better second seat outcomes for females relative to males, one would have to conclude that taste-based discrimination is not a barrier to more female representation in the boardroom.

An alternative is to examine the speed of obtaining a second seat. The advantage here is that we know that the director in question, whether male or female, looked for a second seat. However, the missing element here is the quality of the job – it could be the case, for example, that if females get the second appointment sooner, they are settling for one that is not as attractive.

One way to resolve this issue is to control for the quality of the second appointment. Our proxy for the quality of the second appointment is the size of the firm where the individual obtains the second appointment. Firm size is likely to be positively correlated with visibility, connections and remuneration, and thus appointment at a larger firm is considered more desirable. Thus, as a robustness test, we also control for the size of the firm where the individual gets the second board appointment to investigate whether there are gender differences in the time it takes to obtain the second appointment.

We also do the reverse exercise, that is, examine whether the individual is able to obtain a better quality of second appointment (measured by firm size) after controlling for the time to the second appointment. The size of the "second-seat" firm is not entirely free from supply side considerations. For example, the marginal effort cost of working in the board of a larger firm may be higher for one gender than another. However, since a board member can always relinquish the first board position if appointment at a larger (and higher quality) firm requires too much effort, we think it is unlikely that differences in the likelihood of being appointed to a second board are driven by differences in the marginal disutility of effort. We examine two specifications – in one, the dependent variable is the size of the firm of second appointment and we control for the size of the firm of first appointment, and in the other, the dependent variable is the difference in the size of the two firms.

In our regressions, we control for observable characteristics of the individual, such as qualifications, whether the individual has an MBA or a Ph.D. degree, and whether the individual has a CEO position in the company where he/she is employed. Age at the time of the first director appointment is an important control variable for our purposes, as it is in most studies of the labor market. We define four age splines corresponding to quartiles of the age distribution of females in our sample when they receive the first

director appointment: 47 years or younger (Age Group 1), 47 - 52 years (Age Group 2), 52 - 57 years (Age Group 3) and more than 57 years (Age Group 4). 16,17

We also control for observable characteristics of the firm where the first appointment occurs, as well as committee appointments of the individual as a member of the board where the first appointment occurs, and if the individual holds a CEO position. We expect that if there are components of skill or ability that are not observable to the researcher but observable to the appointing firm, and more skilled candidates are matched to larger firms, then the size of the firm at first appointment should largely absorb these components of skill. However, the possibility exists that the characteristics of the appointing firm do not perfectly reflect all relevant aspects of skill. We discuss this issue further below.

# 2.3 Descriptive statistics

Table 1 reports summary statistics for the main characteristics of first time directors entering our sample. Female directors represent 13.1% of the total and the average age at the first appointment is roughly 55 years old. Almost 33 % of first-time directors have an MBA degree, while less than 10% have a Ph.D. degree. Between 53% and 59% of the directors start with a position in one of the main three committees of the board (Compensation, Auditing and Nomination committees). The average board where the first directorial appointment takes place has 9 members and the mean total assets of such firm is 8 billion USD. This is consistent with a sample selection that consists of rather large quoted firms included in the Russel 3000 index coming from BoardEx database coverage.

There are significant differences by gender in the directors' main characteristics, as reported in Table 2. Using univariate tests of difference of means, we find that female first-time directors tend to be on average three years younger than male first-time directors (entering their first board at 52 years old, compared to 55 years for male directors). While women joining a board for the first time are just as likely to have an MBA, they are more likely to have a PhD. Only 3.6% of first-time female directors have CEO experience whereas 10% of the first-time male directors have already had some CEO experience. Finally, female directors start their directorial careers at significantly larger boards and firms.

<sup>16</sup> "47 and below" includes individuals who at first appointment are 47 years or younger. An interval [a,b], e.g., 52-57, represents Age greater than **a** (52) and less than or equal to **b** (57).

<sup>&</sup>lt;sup>17</sup> Some studies use polynomial specifications of age effects (e.g., Ferreira et al. (2017)). Since we rely heavily on interaction of age with gender, the spline specification is more appealing for our purposes. Our results remain qualitatively similar if we interact gender with age at first appointment, instead of age splines.

The differences in educational outcomes are similar for the sub-sample of directors who find a second non-executive appointment. In terms of experience, male directors are more likely to have experience of being Chairpersons of audit, and remuneration committees (but not nomination committees), and more CEO experience. Female members are more often members of nomination committees, but there is no difference between males and females for audit and compensation committees. Directors, both female and male, who get a second appointment are more experienced in committee roles but the gender differences in committee experience are similar to the overall sample of directors.

Only 4487 of the directors find a second appointment within our sample period. The gender composition of individuals who find a second non-executive director appointment is similar to the full sample: 16.6% of the individuals who find a second appointment are female. The proportion of female directors in our sample increase from about 12.9% in 1999 to 19% in 2015 and similar trends are observed in the subsample of directors who get a second non-executive appointment.

#### [Insert Figure 1 around here]

On average, the time gap between the first and the second appointments is 1035 days. The firms in which these directors are appointed are, on average, large with a mean board size of about 9.

#### [Insert Table 1 near here]

In terms of the proportions, 19.7% of the female directors find a second appointment which compares favorably to 17% of male directors finding a second board appointment. The time to the second non-executive appointment takes 1071 days for female directors, compared to 1039 days for male directors.

[Insert Table 2 near here]

#### 2.4 Prior labor market experience

The performance of individuals in the director labor market is likely to be related to their prior work experience. For example, individuals may be more visible to appointing boards if they hold leadership positions, especially in public firms. Conversely, if individuals have less experience in leadership positions or less work experience in public firms, they may have a greater incentive to invest in developing networks that enable them to get additional board seats in public firms. We compare the prior work and leadership experience of males and females in our sample with at least one board seat at the time of first appointment, for different age groups at the time of first appointment. To do so, we run regressions with prior work

experience (number of positions held) and leadership positions held in quoted firms, private firms, other types of firms (such as non-profits),<sup>18</sup> and all types of firms as dependent variables, respectively. The explanatory variables are an indicator variable for female gender, age groups and interactions of the female gender indicator and age groups. Since the work experience precedes the age at first appointment, we can only interpret the relationships as correlations, not as causal relationships. All regressions control for the size of the firm where the first directorship appointment takes place, and include cohort fixed effects (cohort being the year the individual starts the first directorial appointment), and 2-digit SIC industry fixed effects (corresponding to the firm where the first seat takes place).

The main findings, reported in Appendix Tables A1-A3, are as follows.

#### Leadership experience:

- Women of all age groups have less leadership experience (Chief officer, COO, CEO, or CFO) than men when we consider all categories of firms together, but especially in quoted firms.
- For both genders, the likelihood of having leadership positions at the time of first appointment (for all firms as well as quoted firms) peaks in the two intermediate entering age groups (47-52 and 52-57).
- Women have similar histories as men in the "other" category of firms in terms of leadership positions.
- For both men and women, leadership experience drops sharply for the highest (post 57) entering age group relative to the two intermediate groups, but this is more significant for women.

#### Previous job experience (all types):

- For men, total previous job experience (in all categories of firms) increases with the age of first appointment until the second oldest entering age group, and then decreases for the oldest entering age group.
- For women, total previous job experience (in all categories of firms) increases monotonically with age of first appointment, with the most significant increase coming in the oldest age group. This increase occurs entirely in the "other" category.
- Women have more work experience in "other" type of firms than men for all age groups. This gap increases with age at first appointment.
- Women have less experience than men in private firms.

<sup>&</sup>lt;sup>18</sup> Quoted firm employment constitutes 26%, Private 53% and Other 21% of the employment histories, respectively.

The picture, though, is very different if one looks at previous job experience in quoted firms only.

- Younger women (in the two youngest age groups) are likely to have more work experience in quoted firms. This effect reverses for the third oldest age group and is marginal for the oldest age group.
- When female directors at first appointment have prior quoted firm experience, they come from (or have prior experience in) firms that are larger in size than for male directors.
- Quoted firm job experience decreases for men and women for the two oldest age groups.
- Women experience sharper decreases than men in quoted firm experience for the two oldest age cohorts.
- The size of the firm where an individual obtains the first board appointment is positively correlated with experience and leadership positions in quoted and "other" firms but is negatively correlated with these two variables in private firms. It is also positively correlated with the size of the current firm (if quoted), and the size of the largest quoted firm the individual has worked in.

These observations are consistent with the idea that women face more barriers to career advancement -- especially leadership positions in quoted firms – and therefore board positions in quoted firms are more valuable for them. However, lack of leadership positions in quoted firms do not appear to impede progress to *board positions* in other quoted firms for women. This argues against statistical discrimination by the board, to the extent that it implies that women do get appointed to boards even when they lack experience in visible positions. It is likely that nomination committees are willing to assign weight to soft information when exceptionally talented women enter their radars. The fact that first-time female board members are more likely to be working in non-leadership positions in quoted firms (and especially in larger quoted firms) is also consistent the idea that these women deem board appointments in quoted firms as a means of career advancement in the domain of quoted firms.

# 3 Results and Discussion

# 3.1 Likelihood of second non-executive appointment

To understand the relative likelihood of female directors to get a second non-executive director position, we model the likelihood of a second non-executive director appointment of individual directors using the Cox (1972) proportional hazard model. A hazard analysis is appropriate in our context because our data is both

left-truncated and right censored. In our hazard models, the second non-executive director appointment is an event of "failure".

We examine the likelihood of individual directors to have a second non-executive appointment within the sample period, conditional on gender, education and experience. In Table 3, we present the estimates from the Cox-Proportional Hazard Models (columns 1 and 2) and the linear probability models (columns 3 and 4).<sup>19</sup> For the latter, the dependent variable takes a value of 1 if a director obtains a second board seat within one (two) years of the first appointment, and zero otherwise. We include cohort fixed effects as well as industry fixed effects corresponding to the industry of the firm where the first appointment occurs. This means that the female dummy compares a female director's labor market outcome with that of a male who receives his first appointment in the same year and in the same industry.

The excluded group in Table 3 is males below the age of 47. The standalone female dummy represents females in that same age group. The Cox Hazard Model results indicate that while older females are more likely to obtain second appointments than younger females, the age effect is not monotonic for males, with the oldest males being the least likely to find a second appointment. While there is no significant difference between males and females in the youngest age group, for the second and fourth oldest age groups, women are significantly more likely to obtain a second board appointment than men. The results from linear probability models in columns 3 and 4 provide similar results, except that here, the oldest men are more likely to obtain second appointments within one or two years after the first appointment than the youngest group. The gender differences are similar to those from the Cox model.

In terms of economic magnitude, the linear probability model estimates imply that females in the age group 47-52 are 3.6% more likely to find a second appointment within 1 or 2 years of the first than males in the same age group. Given that the probability of a second appointment in the entire sample is about 18%, this is a significant economic effect.

The likelihood of second board appointment improves with the size of the firm for the first appointment, qualifications, CEO experience, and audit and compensation committee membership experience as well as chairman experience in these committees. The likelihood increases if the board member has an MBA degree, but is lower if the board member has a Ph.D. degree.<sup>20</sup>

[Insert Table 3 near here]

<sup>&</sup>lt;sup>19</sup> Results based on a probit model are very similar. In subsequent Tables, when we report probit or ordered logit model results, we do not include interaction terms, as these do not represent the correct marginal effects in non-linear models.

<sup>&</sup>lt;sup>20</sup> All our results are robust to a more comprehensive set of controls that include the prior employment history and leadership experience of each individual.

## 3.2 The time to the second appointment

Next, we consider the time to second appointment for female directors relative to equivalent male directors. The dependent variable for all the specifications is the natural logarithm of the difference in days between the first and the second appointments. As before, we include cohort and industry fixed effects. We present the results in Table 4 where columns 1 and 2 present the OLS estimates with cohort-fixed effects and columns 3 and 4 presents the Tobit estimates. Note that the sample for this test is much smaller than the one in Table 3 as the dependent variable restricts us to the subsample of directors who obtain a second appointment to a board seat.

Females in the youngest age category take longer than males to find the second position. The interactions of age and gender in the time to the second appointment reveal that this gap disappears for the next two age categories, and reverses sharply for the oldest age category.

The time to the second appointment could be trading off quality for speed. Waiting longer may result is higher quality appointments, in which case, the result that women (except for those in the youngest age group) find second appointments faster would not unambiguously be a sign of better labor market outcomes. In Table A4 in the Appendix, we control for the size of the firm where the individual receives the second appointment. The size of the firm is arguably a proxy for the quality of the second appointment. We find that our results remain even after controlling for the size. As expected, it takes longer for individuals to find a second appointment at a larger firm, whereas individuals who start at a larger firm (the firm of first appointment) find a second appointment more quickly.

We next provide evidence on the quality of appointments.

[Insert Table 4 near here]

#### 3.3 The quality of the second appointment

To determine whether females have better second appointment outcomes than comparable males, we next examine directly the quality of appointments, proxied by firm size. We create 3 types of dependent variables: the natural logarithm of the size of the firm where the appointment occurs, an indicator variable if the size of the firm is above the sample median, and a categorical variable corresponding to which size decile the appointing firm belongs to. As before, we control for qualifications, whether the individual has an MBA or a Ph.D. degree, holds a CEO position, and characteristics of the firm where the first appointment occurs, and cohort and industry fixed effects. In addition, we control for the number of days from the first to the second appointment.

In Table 5, we find that, controlling for observables, women are placed at larger firms at their second appointment than comparable men. The female dummy is significant at the 1 percent level in all specifications. The linear probability model suggests that females are 13 percent more likely to have a second appointment in a firm that is above median firm in terms of size. The quality of the first appointment is positively related to the quality of the second appointment. This could reflect the advantages of a bigger network as well as attributes of the individual not observed by the researcher. Waiting for the next appointment does pay off in terms of a higher quality appointment; however, after controlling for the time to the second appointment, prior committee appointment is not significant. Older age at first appointment translates to higher quality second appointments. However, unlike our results for the likelihood and time to second appointment, we do not find here any significant interactions of gender and age. One possible reason for this could be that older age at first appointment leads to first appointment at larger firms for both genders, as evidenced by the results in Panel A., which could be limiting the possibilities for upward mobility.

#### [Insert Table 5 here]

In Table 6, rather than control for the size of the firm of first appointment, we examine whether the same individual moves to a larger firm at second appointment relative to the size of the firm at which the first appointment occurred. We create eight different dependent variables. In column (1), the dependent variable is the difference in the logarithm of firm size (second minus first). In column (2), the dependent variable is an indicator variable which equals 1 if the difference in firm size is positive, and zero otherwise. In columns (3)-(5), the dependent variable is 1 if the size of the firm of second appointment is in a higher (lower, same) decile of the size distribution than the initial one, and zero otherwise. Here, the size deciles are calculated by year, based on the distribution pooling all firms where first and second appointments occur. In columns (6)-(8), the dependent variables are similar, except that deciles are computed by year but separating first and second appointments. Females are significantly more likely to move up the size distribution, and less likely to move down, but as likely to remain in the same decile as males.

#### [Insert Table 6 here]

### 3.4 Discussion, further tests, and interpretation of our results

#### 3.4.1 Statistical discrimination versus selection

Our results indicate that except possibly for entrants at the youngest age group, females have significantly better second appointment outcomes, in terms of likelihood, speed, and quality. What explains the generally better second appointment outcomes for females? There are several potential explanations. We now address these in turn.

In our regressions in Tables (3)-(5), we control for individual attributes and characteristics of the firm where an individual receives the first appointment, in an attempt to capture aspects of individual ability which could be correlated with subsequent labor market performance. However, it is possible that we do so imperfectly, and these imperfections are correlated with gender. If this is the case, gender would predict labor market progress even after controlling for observable characteristics.

One reason why the female dummy could predict better labor market outcome is that women are underplaced, relative to men, at their first appointment. This could occur due to statistical discrimination, whereby women are penalized because of a perception that they lack experience (e.g., due to family choices they make which could interrupt their continued participation in the labor market) and therefore ability to perform at the same level as otherwise comparable males. It has been documented in other contexts that women experience significant setbacks to their careers within the organizations they work for due to such choices and the associated biases (Keloharju et al. (2017)). If board decisions are affected by the same biases that affect women's progress within organizations, women would be underplaced at their first appointments (e.g., placed in smaller firms than what would be the case had their true abilities not been discounted). However, if their abilities are revealed in the director labor market once they obtain a first appointment, they would subsequently outperform men who are comparable on the basis of observable characteristics (individual characteristics including the size of the firm of first appointment).

We directly test whether women are underplaced relative to men with comparable observable characteristics by looking at the quality of the *first* appointment. Once again, quality is measured by firm size. We control for qualifications, MBA or PhD degrees, number of past positions held in different types of firms, and leadership positions in different types of firms. The results are reported in Table 7. The female dummy has a significant positive effect in all specifications. The linear probability estimate suggests that females are 7.5 percent more likely to find the first appointment in the board of a firm that is above-median in size than comparable men. This makes it unlikely that there is statistical discrimination against women, and that our results on second seat appointments are driven by women being underplaced in their first appointments.

However, our results are consistent with the selection argument. Because women face discrimination in the workplace, they have to be more talented to achieve the same labor market outcomes prior to first appointment as men.<sup>21</sup> Such components of talent could be "soft information" that nomination committees observe or have access to, but we cannot control for. This would mean that after controlling for

<sup>&</sup>lt;sup>21</sup> Keloharju el al. (2017) find consistent evidence – the qualifications of females are above those of males at comparable ranks. Gayle, Golan and Miller (2012) compile detailed panel data on executives and find that unconditional gender pay gap and job rank differences are primarily attributable to female executives exiting the occupation at higher rates than men.

observable attributes, women would be better placed than men. As discussed in Section 2.4, prior to the first appointment to a board position, women have significantly less leadership experience, especially in quoted firms, than men. In other words, far from being penalized for this "experience deficit", women actually do better than men with comparable *observable* attributes. This suggests that they dominate on the unobservable attributes, and are rewarded with better placements in the director market, which is precisely the opposite of statistical discrimination. However, to the extent that their abilities may not be widely observable to the nomination committees, they may still be unreplaced relative to their *true abilities*. Consequently, after controlling for observable attributes including the size of the firm of first board appointment, they outperform men.

It is important to recognize that while it does not appear that either taste-based or statistical discrimination by boards prevents the appointment of highly qualified females to board positions, we cannot completely rule out the presence of such discrimination as factors contributing to the board gender imbalance. This is because we do not observe which individuals the board might have considered but passed over, especially at first appointment. For example, in choosing between two otherwise equally qualified and talented candidates of different gender, boards may be consistently preferring men. What our results may be showing is that boards do not overlook exceptionally talented females. But women may be discriminated against when they do not stand out.

One could also argue that the reason some women obtain better quality seats at first appointment and subsequently do better in terms of second appointments may have nothing to do with advisory skills *per se* but rather better ability to "get along" with men, which matters because boards are overwhelmingly maledominated. It is highly doubtful, however, that such components of talent are so scarce that based on these, only a very small number of women make it to visible positions in corporations and attract the attention of nomination committees. The components of talent that drive our results must be sufficiently scarce – otherwise gender imbalance would have disappeared. Finally, as we show in section 3.4.3 (Table 9), women who are appointed for the first time are more likely to be placed in important committees than men. To the extent that certain types of experience and skills are needed for such committee roles, it appears unlikely that our results are explained by more commonly observed personality traits of women.

#### 3.4.2 The supply side: value of board seats

Additional board seats in quoted firms could be valuable to a board member as a way of tapping into a wider network of individuals who serve on the boards of other quoted firms or those who are senior executives of quoted firms. This could be especially valuable for female first-time board members since, as discussed in Section 2.4, they have significantly less leadership experience than men. Thus, women could be performing

better than men in terms of second seat appointments because they are more willing to invest in developing relationships via these networks.

Our results reported Section 3 show that women outperform men in several dimensions in two of the age groups – the second age group (47-52) and the last (57 and older). The latter age group of entrants is remarkable in that both men and women in this age group have less leadership and quoted firm experience – especially women – than other age groups. Therefore, it seems reasonable to assume that the desire for additional board seats in quoted firms is the strongest in this age group. Considering men first, we see from Tables 3-5 that men in this category are more likely to obtain an additional board seat in the first one or two years after the first appointment, get the second appointment more quickly, and are placed in larger firms than males in the other age categories. Turning to women, we find that relative to men in the same age group, women are more likely to find a second seat, and find it more quickly. However, there are no significant differences with men in terms of the quality of the second appointment, as measured by firm size.

For the age group 47-52, women also outperform men in terms of likelihood of a second seat and the speed of finding a second seat. Recall from Section 2.4 that for this age group, both men and women getting their first appointments have the highest leadership and work experience in quoted firms among all age groups. If women have to be especially talented to reach such leadership positions, it appears that the selection argument is the likely explanation as to why females in this age category outperform men in terms of the second appointment.<sup>23</sup>

#### 3.4.3 Tokenism, Risk Taking and Search Efficiency

It is possible that boards want to be seen as being gender-sensitive and socially responsible, and hence female first appointees get recruited very quickly. However, if this were the case, any female director would have done, and there would be no reason to recruit female directors with existing board seats.

It is possible, however, that tokenism, if recognized, would impose costs on the board, which would suggest that females with an existing seat would have an edge over rookies when it comes to female appointments, relative to men. To see if this is the case, in Table 8, we examine the likelihood that a rookie is chosen vis-à-vis an individual with director experience (one who is currently holding a board seat at another company). The dependent variable takes a value of 1 if the new director appointed is a rookie, and

<sup>&</sup>lt;sup>22</sup> The one exception is that in the Cox model in Table 3, these men appear less likely to find a second seat. This could be due to a possible truncation bias associated with retirements.

<sup>&</sup>lt;sup>23</sup> For the 52-57 age group, women do not outperform men. This could be because, in our sample, this age group of women has the least work experience in quoted firms. While this experience deficit could make them more eager to seek a second appointment, the ability difference vis-à-vis men could be lower.

zero otherwise. In columns (1) and (2), a newly appointed director is defined as a rookie if the individual has no previous experience in a quoted board. In column (3), the individual is a rookie if there is no previous experience in a public or private board, while in column (4), a rookie is someone without any experience in public, private or non-profit board. We control for gender, age at appointment (indicator variables corresponding to age splines<sup>24</sup>), plus characteristics of the appointing firm, including its size, the size of the board, whether a female member sits on the nomination committee, the fraction of independent directors, and the number of independent female directors. Results reported in Table 8 show that the female dummy is significantly positive in all columns, and the marginal effect of the female dummy remains positive for all age splines, suggesting that female rookies are more likely to be hired relative to seasoned female candidates than male rookies are (relative to seasoned male candidates) at all age groups. This result does not support the notion that women get better second appointments because boards try to hide tokenism by recruiting relatively fewer rookie females.<sup>25</sup>

At first glance, the result that when the appointed candidate is a female, she is more likely to be a rookie than a seasoned candidate than when the appointed candidate is a male, appears to contradict our contention that the information gap about new entrants is greater for females than for males. However, what our results most likely reflect is the fact that there is a much deeper pool of male board members than female board members, which makes it easier to recruit seasoned male members. For example, if a seasoned candidate is unlikely to take up a new board position at a smaller firm, it might be easier for smaller firms – given that it wants to recruit a male candidate – to recruit a seasoned candidate than a similar firm which want to recruit a female candidate.

#### [Insert Table 8 here]

We show next that when boards do recruit female rookies, they are more likely to be placed in important committees. In Table 9, we examine whether females are more likely to be appointed a committee member (columns (1) and (2)), a committee chair (columns (3) and (4)), or a board chair (columns (5) and (6)) after their first appointment. We find that they are significantly more likely to be appointed committee members than comparable males, but less likely to be board chairs. The linear probability model estimate suggests that females are 5 percent more likely to be appointed to committees than comparable males, and 4 percent less likely to be appointed board chairs. In unreported results, we find that female representation is especially likely in nomination and governance committees – females are 8 percent more likely to be nomination committee members after first appointment than comparable males. Younger females are also

<sup>&</sup>lt;sup>24</sup> These are now computed based on the quartiles of the age distribution of *all* appointed females.

<sup>&</sup>lt;sup>25</sup> Not surprisingly, the "rookie advantage" deceases as the age at appointment increases. Senior board appointments are more likely to have other board experience.

more likely to sit on audit committees, but there is no difference between males or females in terms of the likelihood of being on compensation committees.

Overall, these results do not suggest that females have better second seat outcomes than males because of tokenism. Female rookies have more advantage over seasoned females compared to male rookies at all ages, and when female rookies are hired, they are more likely to sit on important committees. Therefore, it appears unlikely that females are hired to make boards look better.<sup>26</sup>

#### [Insert Table 9 here]

#### 3.4.4 The large firm effect

Large firms are more in the public eye and also have more room to accommodate female members for the purposes of tokenism. This could be another source of tokenism. Therefore, we examine whether our results are driven by females with an existing board seat being in greater demand by larger firms.

To do so, we run our results in Tables 3 and 5 by removing from our regression sample all cases when the second appointment occurs in the top size decile of firms. Results reported in Table 10 (for the Cox Model) and Appendix Tables Table A5-A6 (for time to second appointment and quality of second appointment) show that all our results remain.

#### [Insert Table 10 here]

#### 3.4.5 Another test of taste-based discrimination

Taste-based discrimination implies that women are disadvantaged in certain boards because these boards are not friendly towards women. A direct test of this premise is to examine whether women are less likely to end up in boards that have no female members, and whether the board's past record of appointing female members has any effect on whether women are more likely to go to such boards. With this in mind, we examine the gender composition of the board where an individual receives the first appointment. We define two indicator variables. "Male Only" takes a value of 1 if a board currently it has no female members, and zero otherwise. "Female Friendly" takes a value of 1 if a board had a female board member in the past 3 years, and zero otherwise. In the first columns of Table 11, the dependent variable takes a value of 1 if it is Male Only and not Female Friendly, and zero otherwise. In column 2, the dependent variable takes a value of 1 if it is Male Only and also Female Friendly, and zero otherwise. Finally, in column 3, the dependent

<sup>&</sup>lt;sup>26</sup> However, there seems to be a glass ceiling when it comes to board chair appointments, similar to CEO appointments.

variable takes a value of 1 if the board to which an individual is appointed is Female friendly, and zero otherwise.

Column 1 shows that when the board has no recent history of having a female board member, women are neither more, nor less, likely to end up in such a board. In particular, there is no indication that such boards are less willing to appoint women. In contrast, as seen in Column 2, when the board has recently had a female board member, other females are more likely to end up in such a board, compared to men, when the board has currently no female members. This could reflect that the board is trying to replace a female member who left, and/or that the board values gender diversity and is this attractive to women. Finally, column 3 confirms that females are more likely to get their first appointments in female friendly boards, and this is especially the case when there are currently no females. Overall, these results do not show any evidence that boards that do not have any recent experience with female members are averse to hiring women, or that there is any tendency for boards to prefer appointing men after recent experience with women in the board. However, as with our earlier results, the caveat here is that perhaps the women that do receive board appointments are so talented that board preferences become secondary, and the latter could matter more when potential candidates are more comparable in terms of skill.

# 4. Conclusion

Where do our findings leave us concerning the (lack of) quota policy discussion in the U.S? There seems to be little evidence that biases at the board level affect the recruitment of highly talented female members. Boards do not seem to be deviating from their fiduciary duties to such an extent that highly qualified women are being passed over because of taste-based or other biases.

The case for quotas, therefore, has to be based on the possible positive externalities that such a policy could create. It has been argued that presence of more women in boards would increase aspiration levels of other females, provide role models for women, and enrich the pool of leadership talent if female directors are effective in addressing biases within the corporation.<sup>27</sup> Such factors could in turn affect the choices women make and erode the very biases on which discrimination is based. If such externalities are present, they weaken the main argument against quotas that in reality, the pool of "qualified" females in the upper levels of corporate hierarchy is rather thin for a macro-quota to be successful (although for the externalities to work, a phased implementation of quotas may be necessary, especially for a country like the

<sup>&</sup>lt;sup>27</sup> See Duchin, Simutin and Sosyura (2017) for evidence on inefficient capital allocation within the firm associated with the CEO's gender bias.

U.S.). However, other arguments have been made regarding the possible disincentive effects of quotas, <sup>28</sup> and while it can be problematic to draw policy lessons from the experience of other countries, a recent paper by Bertrand et al. (2017) does not find any strong evidence that such externalities have materialized after Norway's gender quota in 2005.

It is therefore not obvious that requiring boards to meet gender quota targets is the best or the only way to overcome the biases within organizations that seem to drive board gender imbalance. Social policies, especially those that enable women to manage work and family more easily, appear at least as important. The U.S. ranks among the lowest in the list of OECD countries in terms of different measures of family policy and is one of only three countries worldwide to offer no paid maternity leave. Social policy therefore can address not only the specific issue of female underrepresentation in boards, but the broader issue to female underrepresentation in the higher tiers of organizations. Quotas can also be useful, but a "macro quota" might seem too drastic and destabilizing when the pool of women from which directors can be drawn is rather thin. Especially for the U.S., a major policy innovation could be a *phased implementation* of a quota policy. Such a phased implementation would allow time for the externalities to materialize and allow policymakers to evaluate whether such benefits are at all present and refine policy further.<sup>29</sup>

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<sup>&</sup>lt;sup>28</sup> Other arguments have been advanced against quotas. Quotas could reduce investment incentives for women if the path to the top becomes easier and could worsen attitudes towards women if qualified females do not participate because they do not want to be seen as second-class citizens. The Harvard Business Review article discussed above mentions that women directors interviewed were concerned that women would find it demeaning to sit on a board where they are appointed only because they are women.

<sup>&</sup>lt;sup>29</sup> Our conclusions in this paper reinforce Adams and Kirchmaier's (2015) conclusion that "While quotas and governance codes may be effective at solving problems of discrimination, they may still need to be complemented with policies that help women at all levels of the corporate hierarchy combine work with family."

# References

Adams, Renée B, and Patricia Funk, 2012, Beyond the Glass Ceiling: Does Gender Matter? *Management Science* 58, 219–235.

Adams, Renée B. and Daniel Ferreira, 2009, Women in the boardroom and their impact on governance and performance, *Journal of Financial Economics* 94, 291–309.

Adams, Renée B and Tom Kirchmaier, 2016, Barriers to the Boardroom, SSRN Electronic Journal.

Ahern, Kenneth R., and Amy K. Dittmar, 2012, The Changing of the Boards: The Impact on Firm Valuation of Mandated Female Board Representation, *The Quarterly Journal of Economics* 127, 137–197.

Altonji, Joseph G, and Charles R Pierret, 2001, Employer Learning and Statistical Discrimination, *The Quarterly Journal of Economics* 116, 313–350.

Arrow, Kenneth, 1973, The Theory of Discrimination, Discrimination in Labor Markets.

Ayres, Ian, and Peter Siegelman, 1995, Race and gender discrimination in bargaining for a new car, *The American Economic Review* 85, 304–321.

Azmat, Ghazala, and Rosa Ferrer, 2017, Gender Gaps in Performance: Evidence from Young Lawyers,

Journal of Political Economy 125, 1306–1355.

Bertrand, Marianne, Sandra E. Black, Sissel Jensen, and Adriana Lleras-Muney, 2017, Breaking the glass ceiling? The effect of board quotas on female Labor market outcomes in Norway, Working Paper 20256, <a href="http://www.nber.org/papers/w20256">http://www.nber.org/papers/w20256</a>.

Bertrand, Marianne, Claudia Goldin, and Lawrence F. Katz, 2010, Dynamics of the gender gap for young

professionals in the financial and corporate sectors, *American Economic Journal: Applied Economics* 2, 228–255. Bertrand, Marianne, and Kevin F. Hallock, 2001, The gender gap in top corporate jobs, *Industrial and Labor Relations Review* 55, 3–21.

Bertrand, Marianne, and Sendhil Mullainathan, 2004, Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination, *American Economic Review* 94, 991–1013.

Black, Sandra E., and Chinhui Juhn, 2000, The rise of female professionals: Are women responding to skill demand?, *American Economic Review* 90, 450–455.

Bordalo, Pedro, Katherine B. Coffman, Nicola Gennaioli, and Andrei Shleifer, 2016, Beliefs about Gender *NBER Working Paper Series*.

Branson, Douglas M., 2007, No seat at the table: how corporate governance and law keep women out of the boardroom, *Choice: Current Reviews for Academic Libraries* 44, 1574.

Coate, Stephen, and Glenn C. Loury, 1993, Will Affirmative-Action Policies Eliminate Negative Stereotypes?, *American Economic Review* 83, 1220–1240.

Cornell, Bradford, and Ivo Welch, 1996, Culture, Information, and Screening Discrimination, *Journal of Political Economy* 104, 542–571.

Cox, DR, 1972, Regression models and life tables, Journal of the Royal Statistical Society. Series B: 34, 187-220.

Croson, Rachel, and Uri Gneezy, 2009, Gender Differences in Preferences, *Journal of Economic Literature* 47, 448–474.

Duchin, Ran, Mike Simutin Denis Sosyura, 2017, The Origins and Real Effects of the Gender Gap: Evidence from CEOs' Formative Years, SSRN Electronic Journal.

Eckbo, B. Espen, Knut Nygaard and Karin S. Thorburn, 2016, Does Gender-Balancing the Board Reduce Firm Value? CEPR Discussion Paper Series, DP11176.

Fairfax, L.M. 2006, Clogs in the Pipeline: The Mixed Data on Women Directors and Continued Barriers to their Advancement, *Maryland Law Review* 65, 579-601.

Ferreira, Daniel, Edith Ginglinger, Marie-Aude Laguna, and Yasmine Skalli, 2017, Board Quotas and Director-Firm Matching, SSRN Electronic Journal.

Gayle, George-Levi, Limor Golan, and Robert A. Miller, 2012, Gender Differences in Executive Compensation and Job Mobility, *Journal of Labor Economics* 30, 829–872.

Gneezy, U., M. Niederle, and A. Rustichini, 2003, Performance in Competitive Environments: Gender Differences, *The Quarterly Journal of Economics* 118, 1049–1074.

Guryan, Jonathan, and Kerwin Kofi Charles, 2013, Taste-based or statistical discrimination: The economics of discrimination returns to its roots, *Economic Journal* 123.

Janiak, C., 2003, The "Links" Among Golf, Networking, and Women's Professional Advancement, *Stanford Journal of Law, Business & Finance* 317, 312-333.

Keloharju, M., Samuli Knüpfer, and Joacim Tåg, 2017, What Prevents Female Executives from Reaching the Top? SSRN Electronic Journal.

List, J. A., 2004, The Nature and Extent of Discrimination in the Marketplace: Evidence from the Field, *The Quarterly Journal of Economics* 119, 49–89.

Lord Davies, 2011, Women on Boards. Retrieved From:

https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/31480/11-745- women-on-boards.pdf

Mailath, George J., Larry Samuelson, and Avner Shaked, 2000, Endogenous inequality in integrated labor markets with two-sided search, *American Economic Review* 90, 46–72.

Matsa, David A., and Amalia R. Miller, 2013, A Female Style in Corporate Leadership? Evidence from Quotas, *American Economic Journal: Applied Economics* 5, 136–169.

Phelps, Edmund S, 1972, The Statistical theory of Racism and Sexism, American Economic Review 62, 659–661.

Sapienza, P., L. Zingales, and D. Maestripieri, 2009, Gender differences in financial risk aversion and career choices are affected by testosterone, *Proceedings of the National Academy of Sciences* 106, 15268–15273.

Schmid, Tomas, and Daniel Urban, 2015, The Economic Consequences of a "Glass-Ceiling": Women on Corporate Boards and Firm Value, SSRN Electronic Journal.

Schuessler, Karl, and Gary S. Becker, 1958, The Economics of Discrimination., *American Sociological Review* 23, 108.

"There is Sexist Bias in the Boardroom: Conscious and Unconscious?", The Guardian, May 2, 2016.

Wiersema, Margarethe and Marie Louise Mors, What Board Directors Really Think About Gender Quotas, *Harvard Business Review*, November 14, 2016.

Yinger, John, 1998, Evidence on Discrimination in Consumer Markets, Journal of Economic Perspectives 12, 23-40.

Xu, Jing, 2018, The Gender Gap in Executive Promotions, working paper.

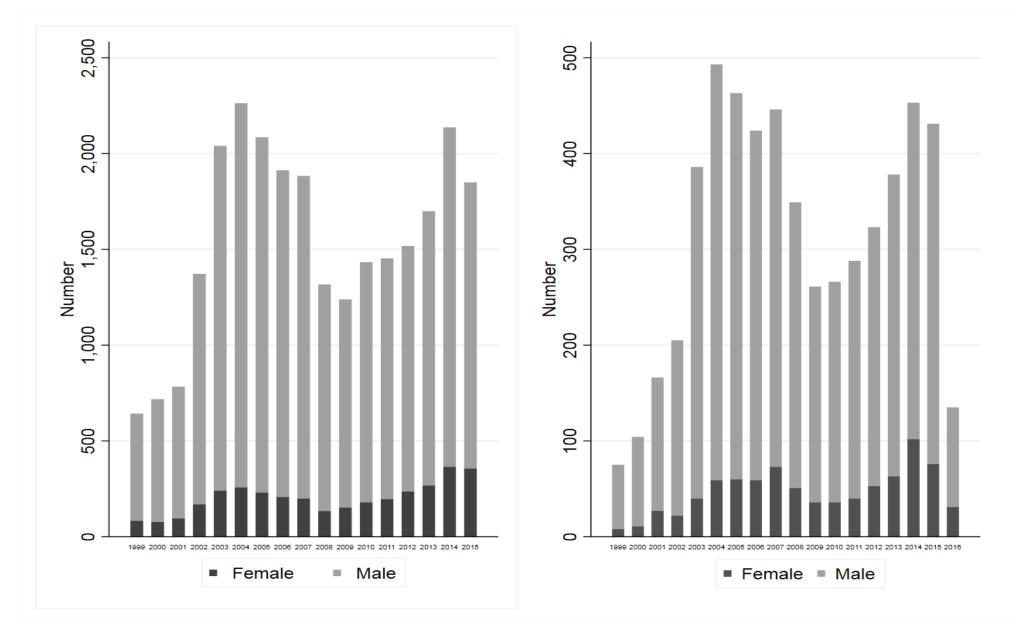


Figure 1: Number of First Time Director Appointments (Panel A) and Second Time Director Appointments (Panel B) by Gender over the years.

**Table 1: Descriptive Statistics.** This table displays the summary statistics for the sample of all unique individuals with at least one non-executive director appointment. *Female* is an indicator variable equal to 1 if the independent director is a woman. *Age* is the age in years of the independent director at the appointment of the first directorship. *No. qualifications, MBA* and *PhD* are indicator variables for the number of total qualifications, MBA degree and PhD. *Compensation . XP, Audit comm. XP* and *Nomination comm. XP* indicate if the director takes also a seat at any of these committees during their first appointment. *Comp. comm. Chair, Audit. comm. Chair, Nomi. comm. Chair, Board Chairman XP* indicate if the director obtains chairmanship of the committees or the entire board during the first seat. *Board Size* is the number of directors in the board at the first appointment. *ROA* is the return on assets of the firms calculated as of December before the directors join the board. *Assets – Total* is the total assets of the firm where the first appointment takes place, measured as the total assets in millions by end of calendar year.

Variable	N	Mean	SD	Median
Female	26338	0.1311	0.3375	0.0000
Age	26133	54.7341	9.2487	55.0000
No. qualifications	23572	2.2531	1.0842	2.0000
MBA degree	23572	0.3276	0.4693	0.0000
PhD degree	23572	0.0952	0.2934	0.0000
Compensation XP	26338	0.5391	0.4985	1.0000
Audit comm. XP	26338	0.5888	0.4921	1.0000
Nomination comm. XP	26338	0.5364	0.4987	1.0000
Comp. comm. Chair	26338	0.1486	0.3557	0.0000
Audit. comm. Chair	26338	0.1579	0.3647	0.0000
Nomi. comm. Chair	26338	0.1398	0.3468	0.0000
Board Chairman XP	26338	0.1194	0.3242	0.0000
CEO experience	26338	0.0947	0.2928	0.0000
Board size	26338	9.0748	3.0267	9.0000
ROA	25443	4.5676	310.3448	0.0122
Assets - Total	26086	8052.2780	65833.8900	611.3660

**Table 2: Gender Differences in Non-Executive Directors Attributes at first seat**. All variables as defined in Table 1. Last column reports the t-statistic of a univariate test of difference of means (male – female). \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	Males		F	emales	Difference of means
	N	Mean	N	Mean	t -statistic
Age	22710	55.0985	3423	52.3170	16.48747***
No. qualifications	20395	2.2331	3177	2.3818	-7.199119***
MBA degree	20395	0.3270	3177	0.3311	-0.456768
PhD degree	20395	0.0918	3177	0.1165	-4.401693***
Compensation XP	22886	0.5450	3452	0.5006	4.878502***
Audit comm. XP	22886	0.5945	3452	0.5507	4.879021***
Nomination comm. XP	22886	0.5338	3452	0.5539	-2.208292*
Comp. comm. Chair	22886	0.1539	3452	0.1133	6.260314***
Audit. comm. Chair	22886	0.1663	3452	0.1025	9.584973***
Nomi. comm. Chair	22886	0.1425	3452	0.1222	3.196878**
Board Chariman XP	22886	0.1317	3452	0.0377	15.96081***
CEO experience	22886	0.1035	3452	0.0362	12.62691***
Board size	22886	8.9849	3452	9.6712	-12.45543***
ROA	22069	5.2765	3374	-0.0696	0.931912
Assets - Total	22674	7300.6670	3412	13047.0100	-4.755396***

Table 3: Age and Gender Differences in the Probability of Second Non-Executive Director

**Appointments**. This table presents the results for the likelihood of the second non-executive director appointment. In columns 1 and 2, we present the coefficients and proportional hazards, respectively, from the Cox Proportional Hazards model. Columns 3 and 4 present estimates from the linear probability model for the second non-executive director appointment within the first 1 year and 2 years of the first appointment. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Age splines are defined at the first appointment according to quartiles of age for all the female directors with first appointments. Age groups 2, 3, and 4 correspond to age ranges 47-52, 52-57 and above 57 years, respectively. The omitted category is *Age* less than or equal to 47 years. Robust Standard Errors in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Cox PH			PM
	Coefficient	Hazard Ratio	Within 1 year	Within 2 years
E1	0.110	1.117	-0.011	-0.002
Female	(0.083)	(0.093)	(0.007)	(0.011)
A C 2	0.000	1.000	-0.002	-0.002
Age Group 2	(0.054)	(0.054)	(0.004)	(0.006)
A == C==== 2	0.121**	1.129**	0.010**	0.019***
Age Group 3	(0.051)	(0.057)	(0.005)	(0.006)
A co Chara 1	-0.144***	0.866***	0.011***	0.013**
Age Group 4	(0.048)	(0.041)	(0.004)	(0.005)
Female x Age Group 2	0.250**	1.284**	0.030**	0.036**
remaie x Age Group 2	(0.114)	(0.146)	(0.012)	(0.017)
Female x Age Group 3	0.052	1.054	0.015	0.011
remale x Age Group 3	(0.118)	(0.124)	(0.012)	(0.017)
Female x Age Group 4	0.280**	1.323**	0.039***	0.041**
remaie x Age Group 4	(0.124)	(0.164)	(0.013)	(0.017)
Firm size	0.200***	1.222***	0.011***	0.017***
FIIIII SIZE	(0.010)	(0.012)	(0.001)	(0.001)
Board size	-0.004	0.996	-0.001	-0.001
Board Size	(0.008)	(0.008)	(0.001)	(0.001)
ROA	-0.033**	0.967**	-0.001	-0.002
KOA	(0.014)	(0.014)	(0.001)	(0.001)
MBA	0.198***	1.220***	0.004	0.013***
MDA	(0.033)	(0.040)	(0.003)	(0.004)
PhD	-0.157***	0.854***	-0.013***	-0.017**
TIID	(0.058)	(0.049)	(0.005)	(0.007)
No. qualifications	0.062***	1.064***	0.004***	0.005***
No. qualifications	(0.015)	(0.016)	(0.001)	(0.002)
CEO experience	0.362***	1.436***	0.008*	0.019***
CLO experience	(0.051)	(0.073)	(0.005)	(0.007)
Compensation Committee Member	0.048	1.049	0.001	0.001
Compensation Committee Wember	(0.035)	(0.036)	(0.003)	(0.004)
Audit Committee Member	0.123***	1.130***	0.005	0.013***
radit committee wember	(0.036)	(0.040)	(0.003)	(0.004)
Nomination Committee Member	0.018	1.018	-0.002	0.003
Tronmation Committee Wember	(0.034)	(0.035)	(0.003)	(0.004)
Compensation Committee Chair	0.118***	1.125***	0.000	0.009
Compensation Committee Chan	(0.045)	(0.050)	(0.004)	(0.006)
Audit Committee Chair	0.366***	1.443***	0.020***	0.034***
rudit Committee Chan	(0.041)	(0.059)	(0.005)	(0.006)
Nomination Committee Chair	-0.005	0.995	0.003	0.006
Trommuton Committee Chun	(0.047)	(0.046)	(0.004)	(0.006)

Board Chairman	-0.309*** (0.053)	0.734*** (0.039)	-0.021*** (0.004)	-0.027*** (0.006)
Constant			-0.055** (0.022)	-0.126*** (0.021)
Observations $R^2$	25301	25301	23645 0.063	21866 0.126
Pseudo $R^2$	0.022	0.022		

**Table 4: Age and Gender Differences in the Time to Second Appointment**. In this table, we present the results for the time to the second non-executive director appointments by gender. Columns 1 and 2 report the OLS estimates and columns 3 and 4 report the Tobit estimates. The dependent variable in all the specifications are natural log of the difference in days between the first and the second non-executive appointments. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Age splines are defined as in table 3. Robust standard errors are in the parentheses. \*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	OLS		Tobit	
	Ln Difference in Days	Ln Difference in Days (Winsorized)	Ln Difference in Days	Ln Difference in Days (Winsorized)
Female	0.265***	0.255***	0.266***	0.259***
	(0.090)	(0.088)	(0.089)	(0.088)
Age Group 2	0.003	-0.000	0.003	-0.001
	(0.070)	(0.068)	(0.069)	(0.068)
Age Group 3	-0.082	-0.085	-0.082	-0.084
	(0.063)	(0.061)	(0.062)	(0.061)
Age Group 4	-0.383***	-0.381***	-0.383***	-0.382***
	(0.058)	(0.057)	(0.058)	(0.056)
Female x Age Group 2	-0.242*	-0.238*	-0.242*	-0.239*
	(0.131)	(0.130)	(0.129)	(0.129)
Female x Age Group 3	-0.270*	-0.245*	-0.272**	-0.250*
	(0.139)	(0.134)	(0.138)	(0.133)
Female x Age Group 4	-0.371**	-0.344**	-0.371**	-0.359**
	(0.151)	(0.145)	(0.149)	(0.146)
Firm size	-0.013	-0.012	-0.013	-0.013
ъ	(0.014)	(0.014)	(0.014)	(0.014)
Board size	0.023**	0.022**	0.023**	0.023**
DO 4	(0.009)	(0.009)	(0.009)	(0.009)
ROA	0.159*	0.137*	0.162*	0.142*
MDA	(0.086)	(0.077)	(0.086)	(0.078)
MBA	0.029	0.031	0.029	0.030
DLD	(0.040)	(0.039)	(0.040)	(0.039)
PhD	0.178**	0.174**	0.178**	0.176**
N1:6:+:	(0.072)	(0.071)	(0.071)	(0.070)
No. qualifications	-0.018	-0.020	-0.018	-0.020
CEO aymanianas	(0.019) 0.124**	(0.019) 0.116**	(0.019) 0.124**	(0.019) 0.121**
CEO experience	(0.059)		(0.058)	(0.058)
Componention	0.156***	(0.058) 0.141***	0.157***	0.145***
Compensation Committee Member	(0.044)	(0.042)	(0.043)	(0.042)
Audit Committee	0.128***	0.119***	0.129***	0.121***
Member	(0.045)	(0.043)	(0.045)	(0.043)
Nomination	0.107**	0.097**	0.108***	0.100**
Committee Member	(0.041)	(0.040)	(0.041)	(0.040)
Compensation	0.129**	0.130***	0.129***	0.130***
Committee Chair	(0.051)	(0.050)	(0.050)	(0.050)
Audit Committee	0.100**	0.092*	0.100**	0.092*
Chair	(0.050)	(0.049)	(0.049)	(0.049)
Nomination	0.013	0.016	0.013	0.014
Committee Chair	(0.058)	(0.057)	(0.057)	(0.057)
	(0.000)	(0.007)	(0.057)	(0.007)

<b>Board Chairman</b>	0.188***	0.185***	0.189***	0.183***
	(0.060)	(0.059)	(0.059)	(0.059)
Constant	6.772***	6.777***	6.769***	6.777***
	(0.329)	(0.322)	(0.326)	(0.319)
Observations	4283	4283	4283	4283
$R^2$	0.148	0.149		
Pseudo $R^2$			0.047	0.048

**Table 5: The Quality of the Second Appointment**. In this table we examine the predictor of firm size for the second non-executive appointment of individual directors. Columns (1) to (4) present OLS, linear probability, probit and ordered probit estimates respectively. Age splines are defined as in table 3. We control for the days to second appointment and the firm size of the first appointment. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Robust standard errors are in the parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	OLS	LPM	Probit	O - Probit
Female	0.500***	0.116***	0.213***	0.209***
	(0.156)	(0.038)	(0.059)	(0.045)
Age Group 2	0.224**	0.060**	0.148**	0.096*
	(0.109)	(0.026)	(0.070)	(0.053)
Age Group 3	0.297***	0.088***	0.235***	0.143***
	(0.096)	(0.023)	(0.063)	(0.048)
Age Group 4	0.241***	0.088***	0.233***	0.123***
	(0.089)	(0.022)	(0.060)	(0.046)
Female x Age Group 2	-0.244	-0.055		
	(0.226)	(0.054)		
Female x Age Group 3	-0.222	-0.059		
	(0.220)	(0.053)		
Female x Age Group 4	-0.174	-0.075		
	(0.224)	(0.054)		
Days to second Appointment	0.053**	0.021***	0.063***	0.027**
, , , ,	(0.024)	(0.006)	(0.017)	(0.013)
ROA	0.228**	0.029	0.187**	0.175***
	(0.104)	(0.025)	(0.094)	(0.064)
MBA degree	-0.009	-0.001	0.004	-0.010
<u>C</u>	(0.062)	(0.015)	(0.045)	(0.034)
PhD degree	-0.046	0.004	0.016	-0.016
	(0.111)	(0.027)	(0.081)	(0.061)
No. qualifications	0.047	0.007	0.019	0.021
1	(0.029)	(0.007)	(0.021)	(0.016)
Board size	0.045***	0.007**	0.019*	0.032***
	(0.015)	(0.004)	(0.011)	(0.008)
CEO experience	0.178*	0.034	0.103	0.108**
1	(0.096)	(0.023)	(0.069)	(0.053)
Compensation comm. XP	0.004	0.008	0.020	0.013
1	(0.065)	(0.016)	(0.047)	(0.036)
Audit comm. XP	-0.143**	-0.028*	-0.083*	-0.066*
	(0.068)	(0.016)	(0.049)	(0.037)
Nomination comm. XP	-0.051	-0.003	-0.014	-0.029
	(0.064)	(0.015)	(0.047)	(0.035)
Comp. comm. Chair	-0.112	-0.013	-0.041	-0.065
1	(0.084)	(0.020)	(0.061)	(0.047)
Audit. comm. Chair	-0.179**	-0.059***	-0.180***	-0.113***
	(0.078)	(0.019)	(0.057)	(0.043)
Nomi. comm. Chair	0.060	-0.001	0.008	0.014
	(0.088)	(0.021)	(0.063)	(0.049)
Board Chairman XP	0.134	0.020	0.064	0.098*
<del> </del>	(0.100)	(0.024)	(0.073)	(0.055)
Firm size	0.427***	0.058***	0.183***	(2.000)
	(0.020)	(0.006)	(0.020)	
Above the median	(0.020)	0.113***	0.247***	
		0.110	U.= 17	

Size decile=2				0.266***
G: 1 :1 2				(0.097)
Size decile=3				0.474***
				(0.096)
Size decile=4				0.541***
				(0.098)
Size decile=5				0.697***
				(0.101)
Size decile=6				0.885***
				(0.102)
Size decile=7				1.141***
				(0.101)
Size decile=8				1.117***
				(0.100)
Size decile=9				1.214***
				(0.101)
Size decile=10				1.594***
				(0.105)
Constant	4.074***	-0.399**	-2.639***	` /
	(0.725)	(0.176)	(0.538)	
Observations	4247	4247	4244	4247
R2	0.299	0.208		
Pseudo R2			0.165	0.071

**Table 6: Moves to Larger Firms.** In this table we use linear probability models to we examine the likelihood that the same individual moves to a larger firm at second appointment relative to the size of the firm at which the first appointment occurred. In panel A, size deciles are calculated by year, based on the distribution pooling all firms where first and second appointments occur, and in panel B size deciles are computed by separating first and second appointments Age splines are defined as in table 3. The omitted category is *Age* less than or equal to 47 years. Regressions control for director cohort and first appointment industry fixed effects. Robust standard errors in the parentheses. \*\*\*, \*\*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Panel A: Size de	eciles of the poole	d sample of firms			deciles of first and alculated separatel	
	Difference in	Move to	Move to upper	Move to lower	Move within	Move to upper	Move to lower	Move within
	Size	Larger firms	decile of firm	decile of firm	the same	decile of firm	decile of firm	the same
			size	size	decile	size	size	decile
Female	0.500***	0.070*	0.088**	-0.070*	-0.017	0.103***	-0.068*	-0.035
	(0.144)	(0.038)	(0.037)	(0.038)	(0.030)	(0.036)	(0.039)	(0.030)
Age Group 2	0.224**	0.040	0.052*	-0.029	-0.023	0.021	-0.018	-0.003
	(0.104)	(0.027)	(0.027)	(0.027)	(0.022)	(0.026)	(0.028)	(0.023)
Age Group 3	0.297***	0.048**	0.046**	-0.059**	0.012	0.047**	-0.039	-0.008
	(0.094)	(0.024)	(0.023)	(0.023)	(0.020)	(0.022)	(0.024)	(0.020)
Age Group 4	0.241***	0.055**	0.057***	-0.052**	-0.005	0.037*	-0.044**	0.007
	(0.087)	(0.022)	(0.021)	(0.022)	(0.018)	(0.021)	(0.022)	(0.019)
Female x Age Group 2	-0.244	-0.050	-0.068	0.067	0.001	-0.034	0.015	0.018
	(0.224)	(0.057)	(0.052)	(0.056)	(0.044)	(0.051)	(0.058)	(0.044)
Female x Age Group 3	-0.222	0.023	0.048	-0.055	0.007	-0.003	-0.066	0.069
	(0.203)	(0.054)	(0.051)	(0.052)	(0.045)	(0.051)	(0.055)	(0.044)
Female x Age Group 4	-0.174	0.005	0.007	0.038	-0.045	-0.038	-0.004	0.042
	(0.225)	(0.055)	(0.053)	(0.056)	(0.044)	(0.050)	(0.057)	(0.045)
Days to second appt.	0.053**	0.010*	-0.000	0.009	-0.008	0.012**	-0.013**	0.001
	(0.023)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Firm size	-0.573***	-0.102***	-0.115***	0.087***	0.028***	-0.100***	0.097***	0.003
	(0.022)	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)
Board size	0.045***	0.004	-0.000	-0.008**	0.008***	0.004	-0.007**	0.003
	(0.016)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)
ROA	0.228**	0.013	0.095***	0.013	-0.108***	0.074***	-0.003	-0.071***
	(0.095)	(0.022)	(0.023)	(0.019)	(0.021)	(0.023)	(0.021)	(0.022)
MBA degree	-0.009	0.011	-0.005	0.003	0.002	-0.010	-0.001	0.011
	(0.061)	(0.015)	(0.015)	(0.015)	(0.013)	(0.014)	(0.016)	(0.013)
PhD degree	-0.046	0.003	0.004	-0.016	0.012	0.020	-0.014	-0.006
-	(0.116)	(0.027)	(0.026)	(0.027)	(0.023)	(0.025)	(0.027)	(0.022)
No. qualifications	0.047	0.007	0.004	-0.005	0.000	0.006	-0.009	0.002
-	(0.032)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.007)	(0.006)
CEO experience	0.178*	0.031	0.021	-0.046*	0.025	0.004	-0.025	0.021

	(0.095)	(0.025)	(0.024)	(0.024)	(0.020)	(0.022)	(0.025)	(0.020)
Comp. comm. XP	0.004	-0.005	0.003	-0.013	0.010	0.008	-0.008	-0.000
	(0.065)	(0.016)	(0.015)	(0.016)	(0.013)	(0.015)	(0.016)	(0.013)
Audit comm. XP	-0.143**	-0.038**	-0.034**	0.026	0.008	-0.026*	0.006	0.021
	(0.068)	(0.017)	(0.016)	(0.017)	(0.014)	(0.015)	(0.017)	(0.014)
Nomination comm. XP	-0.051	-0.019	-0.011	0.017	-0.006	0.007	0.005	-0.012
	(0.064)	(0.016)	(0.015)	(0.016)	(0.013)	(0.014)	(0.016)	(0.013)
Comp. comm. Chair	-0.112	-0.007	-0.023	0.012	0.012	-0.022	0.016	0.005
	(0.083)	(0.021)	(0.021)	(0.020)	(0.017)	(0.020)	(0.021)	(0.018)
Audit. comm. Chair	-0.179**	-0.038*	-0.048**	0.029	0.019	-0.041**	0.045**	-0.004
	(0.078)	(0.020)	(0.019)	(0.019)	(0.016)	(0.018)	(0.020)	(0.016)
Nomi. comm. Chair	0.060	0.002	-0.015	0.006	0.009	-0.005	0.017	-0.011
	(0.091)	(0.022)	(0.021)	(0.021)	(0.018)	(0.021)	(0.022)	(0.018)
Board Chairman XP	0.134	0.030	0.020	-0.036	0.016	-0.000	-0.036	0.037*
	(0.102)	(0.026)	(0.025)	(0.025)	(0.021)	(0.023)	(0.026)	(0.021)
Constant	4.074***	1.311***	1.459***	-0.328**	-0.130	0.866***	0.129	0.005
	(0.957)	(0.182)	(0.171)	(0.163)	(0.139)	(0.140)	(0.156)	(0.139)
Observations	4247	4283	4283	4283	4283	4283	4283	4283
R2	0.249	0.156	0.212	0.129	0.057	0.170	0.144	0.031

**Table 7: Predictor of firm size at the first directorial appointment controlling for employment experience.** Columns (1) and (2) report OLS specifications where the dependent variable is the size of the firm where the first appointment takes place. Column (3), (4) and (5) report LPM and Probit results where the dependent variable is a dummy equal to one if the firm of the first directorial appointment is above the median. Column (6) reports results for an ordered probit specifications, where the dependent variable is the size decile of the firm that makes the first appointment in the director's career. All specifications include controls for director cohort and first appointment industry fixed effects. Age splines are defined as in table 3. Robust standard errors in the parentheses. \*\*\*\*, \*\*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	0	LS	LF	PM	Probit	Ordered Probit
Female	0.576***	0.380***	0.076***	0.083***	0.271***	0.253***
	(0.070)	(0.100)	(0.025)	(0.013)	(0.042)	(0.031)
Age Group 2	0.169***	0.115*	0.042***	0.047***	0.150***	0.090***
	(0.043)	(0.061)	(0.015)	(0.014)	(0.043)	(0.032)
Age Group 3	0.277***	0.204***	0.047***	0.052***	0.173***	0.112***
	(0.041)	(0.059)	(0.015)	(0.013)	(0.043)	(0.032)
Age Group 4	0.250***	0.188***	0.043***	0.041***	0.132***	0.098***
	(0.036)	(0.055)	(0.014)	(0.013)	(0.040)	(0.030)
Female X Age Group 2	0.084	0.145	0.025			
	(0.101)	(0.138)	(0.034)			
Female X Age Group 3	0.032	0.034	0.034			
	(0.101)	(0.143)	(0.035)			
Female X Age Group 4	-0.040	-0.087	-0.036			
	(0.099)	(0.148)	(0.037)			
MBA	0.140***	0.056	0.017*	0.017*	0.055*	0.026
	(0.028)	(0.039)	(0.010)	(0.010)	(0.031)	(0.023)
PhD	0.131***	0.070	0.005	0.005	0.019	0.035
	(0.045)	(0.071)	(0.018)	(0.018)	(0.058)	(0.042)
No. qualifications	0.001	-0.017	-0.007	-0.006	-0.025	-0.009
•	(0.012)	(0.020)	(0.005)	(0.005)	(0.016)	(0.012)
Quoted Experience	0.236***	-0.319***	-0.057**	-0.058***	-0.188***	-0.186***
	(0.032)	(0.090)	(0.022)	(0.022)	(0.072)	(0.053)
Private XP	-0.437***	-0.354***	-0.076***	-0.076***	-0.230***	-0.219***
	(0.043)	(0.060)	(0.015)	(0.015)	(0.047)	(0.035)
Other XP	0.040	0.004	0.002	0.002	0.007	-0.000
	(0.026)	(0.039)	(0.010)	(0.010)	(0.031)	(0.023)
Quoted leadership XP	0.465***	0.615***	0.108***	0.108***	0.349***	0.369***
1	(0.035)	(0.038)	(0.009)	(0.009)	(0.031)	(0.023)
Private leadership XP	-0.136***	-0.220***	-0.050***	-0.050***	-0.154***	-0.130***
1	(0.027)	(0.039)	(0.010)	(0.010)	(0.031)	(0.023)
Other leadership XP	0.150**	0.035	0.008	0.008	0.022	0.022
1	(0.063)	(0.109)	(0.027)	(0.027)	(0.086)	(0.064)
Same industry XP 1D	0.143***	-0.010	-0.002	-0.002	-0.010	-0.016
,	(0.051)	(0.053)	(0.013)	(0.013)	(0.042)	(0.031)
Same industry XP 2D	-0.398***	-0.270***	-0.068***	-0.068***	-0.209***	-0.159***
, , , , , , , , , , , , , , , , , , ,	(0.057)	(0.058)	(0.014)	(0.014)	(0.045)	(0.034)
Size of the largest quoted	(0.00.)	0.200***	0.033***	0.033***	0.106***	0.118***
firm where they worked		(0.008)	(0.002)	(0.002)	(0.006)	(0.005)

Constant	6.602***	5.508***	0.100	0.099	-1.259***	
	(0.244)	(0.376)	(0.093)	(0.093)	(0.287)	
Observations	21727	9682	9682	9682	9665	9682
R2	0.307	0.364	0.262	0.262		
Pseudo R2					0.211	0.091

**Table 8: Likelihood of Hiring Rookie Female Directors.** This table presents the likelihood of first non-executive appointment of female directors with no previous experience. We use different measures of previous experience: we present results for directors with no previous quoted board experience in columns 1 and 2, with no quoted and private board experience in column 3, and with no, quoted, and non-profit board experience in column 4. In all specifications, we control for individual characteristics. Robust standard errors in parentheses. In all the specifications, we control for year fixed effects and the industry of the firm of the first appointment. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	LPM	Probit	LPM	LPM
	No Quoted Board	No Quoted Board	No Quoted and Private	No Quoted, Private and
	Experience	Experience	Board Experience	other Boards Experience
Female	0.114***	0.247***	0.146***	0.145***
	(0.011)	(0.018)	(0.013)	(0.013)
Age Group 2	-0.081***	-0.243***	-0.067***	-0.065***
	(0.008)	(0.020)	(0.008)	(0.008)
Age Group 3	-0.130***	-0.408***	-0.110***	-0.114***
	(0.007)	(0.019)	(0.007)	(0.007)
Age Group 4	-0.242***	-0.689***	-0.180***	-0.184***
	(0.006)	(0.017)	(0.006)	(0.006)
Female x Age Group 2	-0.008	,	-0.052***	-0.056***
	(0.016)		(0.018)	(0.018)
Female x Age Group 3	-0.068***		-0.065***	-0.068***
	(0.017)		(0.018)	(0.018)
Female x Age Group 4	-0.037**		-0.083***	-0.090***
	(0.017)		(0.018)	(0.017)
Firm size	-0.038***	-0.104***	-0.024***	-0.024***
	(0.001)	(0.004)	(0.001)	(0.001)
# female SDs	0.003	0.009	0.011***	0.012***
	(0.003)	(0.008)	(0.003)	(0.003)
Female on nominating comm.	0.016***	0.043***	0.012**	0.013**
	(0.006)	(0.017)	(0.005)	(0.005)
Board size	-0.002**	-0.006**	-0.002*	-0.002**
	(0.001)	(0.003)	(0.001)	(0.001)
Independence ratio	-0.206***	-0.586***	-0.191***	-0.182***
1	(0.025)	(0.073)	(0.025)	(0.024)
ROA	0.000*	0.000	0.000 *	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	1.390***	2.535***	0.790***	0.755***
	(0.051)	(0.168)	(0.057)	(0.056)
Observations	45363	45361	45363	45363
R2	0.101		0.063	0.066
Pseudo R2	V V-	0.078	4.4.4.2	2.2.2

**Table 9: Probability of Committee Member, Committee Chair, and Board Chair Appointments in the First Seat**. In this table we present the likelihood of being a member of the key committees, committee chairs, and board chair in the first non-executive director appointment, controlling for education and experience of individual directors. We report results from linear probability and probit models. The main variable of interest is the Female indicator and the interactions of the female indicator and age-splines. Age splines are defined as in table 3. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Robust standard errors in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% levels, respectively.

	Committe	e Member	Comitte	ee Chair	Board C	hairman
_	(1)	(2)	(3)	(4)	(5)	(6)
	LPM	Probit	LPM	Probit	LPM	Probit
Female	0.045***	0.231***	-0.008	-0.105***	-0.037***	-0.363***
	(0.012)	(0.035)	(0.018)	(0.026)	(0.010)	(0.044)
Age Group 2	0.059***	0.302***	0.069***	0.185***	0.022***	0.120***
	(0.007)	(0.034)	(0.011)	(0.027)	(0.006)	(0.038)
Age Group 3	0.074***	0.349***	0.100***	0.253***	0.015**	0.091**
	(0.007)	(0.033)	(0.010)	(0.026)	(0.006)	(0.037)
Age Group 4	0.067***	0.314***	0.101***	0.254***	-0.001	-0.000
	(0.006)	(0.029)	(0.009)	(0.024)	(0.005)	(0.034)
Female x Age Group 2	0.020		-0.008		-0.023	
	(0.018)		(0.026)		(0.015)	
Female x Age Group 3	-0.016		-0.045*		-0.006	
	(0.018)		(0.026)		(0.015)	
Female x Age Group 4	-0.007		-0.067***		0.009	
	(0.017)		(0.026)		(0.015)	
Firm size	0.008***	0.033***	-0.007***	-0.019***	-0.001	-0.005
	(0.001)	(0.007)	(0.002)	(0.006)	(0.001)	(0.008)
Board size	-0.017***	-0.077***	-0.028***	-0.082***	-0.004***	-0.028***
	(0.001)	(0.005)	(0.001)	(0.004)	(0.001)	(0.006)
MBA degree	0.013***	0.068***	0.044***	0.118***	0.009**	0.058**
	(0.005)	(0.025)	(0.007)	(0.019)	(0.004)	(0.027)

PhD degree	-0.012	-0.064	-0.087***	-0.242***	-0.012*	-0.089*
	(800.0)	(0.041)	(0.011)	(0.032)	(0.007)	(0.046)
No. qualifications	0.009***	0.048***	0.008***	0.023***	-0.003	-0.015
	(0.002)	(0.011)	(0.003)	(0.009)	(0.002)	(0.012)
CEO experience	0.028***	0.160***	0.055***	0.147***	0.044***	0.251***
	(0.008)	(0.044)	(0.012)	(0.032)	(0.007)	(0.040)
Constant	0.825***	0.985***	0.781***	0.815***	0.319***	-0.136
	(0.042)	(0.190)	(0.062)	(0.169)	(0.036)	(0.194)
Observations	23181	23148	23181	23178	23181	23148
$R^2$	0.043		0.089		0.020	
Pseudo $R^2$		0.055		0.068		0.035

**Table 10: Removing Large Firm Effects in the Likelihood of Second Appointment**. In this table we present results for the likelihood of second appointment after removing all second appointments in the top decile of the firm size distribution. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Age splines are defined as in table 3. Robust standard errors in parentheses. \*\*\*, \*\*, and \*\* represent significance at 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
		x PH		obit		PM
	Coefficient	Hazard Ratio	Within 1 year	Within 2 years	Within 1year	Within 2 years
Female	0.129	0.129	0.070	0.102***	-0.010	-0.002
	(0.087)	(0.087)	(0.045)	(0.040)	(0.007)	(0.010)
Age Group 2	0.005	0.005	0.031	0.036	-0.001	0.001
	(0.056)	(0.056)	(0.048)	(0.042)	(0.004)	(0.006)
Age Group 3	0.119**	0.119**	0.126***	0.131***	0.009*	0.017***
	(0.053)	(0.053)	(0.046)	(0.040)	(0.004)	(0.006)
Age Group 4	-0.140***	-0.140***	0.140***	0.105***	0.009**	0.012**
	(0.050)	(0.050)	(0.042)	(0.036)	(0.004)	(0.005)
Female X Age Group 2	0.222*	0.222*			0.023**	0.027
	(0.121)	(0.121)			(0.011)	(0.016)
Female X Age Group 3	0.022	0.022			0.018	0.015
	(0.126)	(0.126)			(0.012)	(0.017)
Female X Age Group 4	0.246*	0.246*			0.033***	0.036**
	(0.132)	(0.132)			(0.012)	(0.017)
Firm size	0.175***	0.175***	0.095***	0.103***	0.009***	0.014***
	(0.011)	(0.011)	(0.009)	(0.008)	(0.001)	(0.001)
Board size	-0.011	-0.011	-0.009	-0.010*	-0.001	-0.001
	(0.008)	(0.008)	(0.007)	(0.006)	(0.001)	(0.001)
ROA	-0.031**	-0.031**	-0.008	-0.006	-0.001	-0.001
	(0.015)	(0.015)	(0.008)	(0.008)	(0.001)	(0.001)
MBA degree	0.222***	0.222***	0.073**	0.092***	0.007**	0.013***
	(0.035)	(0.035)	(0.033)	(0.029)	(0.003)	(0.004)
PhD degree	-0.157**	-0.157**	-0.102*	-0.097**	-0.011**	-0.015**
	(0.061)	(0.061)	(0.054)	(0.048)	(0.005)	(0.007)
No. qualifications	0.055***	0.055***	0.030**	0.029**	0.003**	0.004**
•	(0.016)	(0.016)	(0.014)	(0.012)	(0.001)	(0.002)
CEO experience	0.370***	0.370***	0.154***	0.162***	0.012**	0.020***
•	(0.053)	(0.053)	(0.051)	(0.044)	(0.005)	(0.007)
Compensation comm. XP	0.042	0.042	0.020	0.012	0.002	0.001
-	(0.037)	(0.037)	(0.033)	(0.029)	(0.003)	(0.004)
Audit comm. XP	0.122***	0.122***	0.039	0.098***	0.004	0.013***
	(0.038)	(0.038)	(0.034)	(0.030)	(0.003)	(0.004)
Nomination comm. XP	0.007	0.007	-0.015	0.028	-0.002	0.003

	(0.036)	(0.036)	(0.033)	(0.029)	(0.003)	(0.004)
Comp. comm. Chair	0.127***	0.127***	-0.001	0.071*	-0.001	0.009
_	(0.047)	(0.047)	(0.046)	(0.039)	(0.004)	(0.006)
Audit. comm. Chair	0.384***	0.384***	0.175***	0.206***	0.019***	0.034***
	(0.043)	(0.043)	(0.042)	(0.036)	(0.005)	(0.006)
Nomi. comm. Chair	-0.025	-0.025	0.016	0.019	0.002	0.003
	(0.049)	(0.049)	(0.047)	(0.040)	(0.004)	(0.006)
Board Chairman XP	-0.337***	-0.337***	-0.259***	-0.223***	-0.020***	-0.028***
	(0.056)	(0.056)	(0.053)	(0.044)	(0.004)	(0.005)
Constant			-2.947***	-2.032***	-0.051***	-0.116***
			(0.429)	(0.189)	(0.018)	(0.016)
Observations	24699	24699	22974	20994	23062	21294
$R^2$					0.060	0.123
Pseudo R <sup>2</sup>	0.021	0.021	0.053	0.056		

Observations	23009	19945	23009	22458
R2	0.268		0.180	
Pseudo R2		0.231		0.126

Table 11: Probability of Appointment in "Men only" and "Female Friendly" Boards: This table presents results for the likelihood of new female appointments on boards with no female directors ("Men Only" boards). Boards are classified as "Female Friendly" and "not female friendly" if the board had appointed female directors in the past 3 years. We present results from linear probability models. In columns 1 and 2, the dependent variable is equal to 1 if the board has no other female director at the time of new appointment and is not a "Female Friendly" board (is a "female Friendly" board). In column 3, the dependent variable is 1 if the board where the individual is appointed is a Female Friendly board. "Nowomen" refers to an indicator variable if there are no women on the board. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Age splines are defined as in table 3. Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% levels, respectively.

	Men Only Not Female Friendly	Men Only Female Friendly	Female Friendly	
	(1)	(2)	(3)	
Female	-0.029	0.083***	0.034**	
	(0.021)	(0.028)	(0.016)	
nowomen=1 x Female			0.057***	
			(0.015)	
Age Group 2	0.019*	-0.029*	0.034***	
	(0.011)	(0.017)	(0.008)	
Age Group 3	0.021**	-0.037**	0.041***	
	(0.011)	(0.016)	(0.007)	
Age Group 4	0.031***	-0.028*	0.022***	
	(0.009)	(0.015)	(0.006)	
Female x Age Group 2	0.018	0.080**	-0.014	
	(0.030)	(0.040)	(0.021)	
Female x Age Group 3	0.010	0.091**	-0.017	
	(0.030)	(0.039)	(0.021)	
Female x Age Group 4	0.037	0.046	-0.027	
	(0.029)	(0.038)	(0.021)	
Firm size	-0.007***	-0.021***	0.053***	
	(0.002)	(0.003)	(0.002)	
Board size	-0.019***	-0.018***	0.008***	
	(0.002)	(0.002)	(0.001)	
ROA	0.010***	-0.055**	-0.002	
	(0.002)	(0.026)	(0.004)	
MBA degree	-0.019**	-0.007	-0.007	

	(0.007)	(0.010)	(0.005)
PhD degree	0.003	-0.017	0.003
<u> </u>	(0.012)	(0.016)	(0.008)
No. qualifications	0.007**	-0.005	0.006***
	(0.003)	(0.004)	(0.002)
CEO experience	0.008	-0.012	0.029***
	(0.012)	(0.013)	(0.008)
nowomen=1			-0.383***
			(0.006)
Constant	0.330***	0.695***	-0.511***
	(0.056)	(0.125)	(0.040)
Observations	16854	6155	23009
$R^2$	0.219	0.096	0.415
Pseudo R <sup>2</sup>			

## A0. Definition of main variables

Variable	Definition	Source
Female	Dummy equal to 1 if the director is a female director, 0 otherwise	BoardEx Board Summary
Age	Director's age	BoardEx Board Summary
Age splines	Age splines defined on the quartile distribution of age for all the female directors in the	Calculated based on Age as
	sample.	defined above.
MBA degree	Dummy equal to one if the director has a MBA degree qualification.	BoardEx Director Profile
PhD degree	Dummy equal to one if the director has a PhD or a Doctor degree qualification.	BoardEx Director Profile
No. qualifications	Count of the total number of qualifications accumulated by the individual (including MBA,	BoardEx Director Profile
	PHD, engineering, bachelors, etc.)	
CEO experience	Dummy equal to 1 if the individual has accumulated CEO experience by the time the	BoardEx Director Employment
	corresponding appointment takes place.	
XYZ comm. XP	Dummy equal to 1 if the individual has accumulated experience at the XYZ committee by	BoardEx Board Summary
	the time the corresponding appointment takes place.	
XYZ. comm. Chair	Dummy equal to 1 if the individual has accumulated experience at the XYZ committee as a	BoardEx Board Summary
	chair by the time the corresponding appointment takes place.	
Board Chairman XP	Dummy equal to 1 if the individual has accumulated experience board chair by the time the	Constructed using directortitle in
	corresponding appointment takes place.	BoardEx Board Summary
Firm size	Natural logarithm of total assets	Compustat: at
Board size	Number of directors in the board.	BoardEx:total number of
		directors on the board
ROA	Return on Assets calculated as net income divided by total assets.	Compustat: at, ni
Female Friendly	Dummy variable equal to one if the board has had at least one female director in the past	Constructed using female as
	three years.	defined above.

No female director	Dummy equal to 1 if there is no other female director holding a seat in the current calendar	Constructed using female as
	year.	defined above.
Diff_days	Difference in days between the start of the first directorial appointment and the start date of	startdate and enddate extracted
	the second appointment.	from Director Employment file.
Log_diff_days	Natural logarithm of Diff_days	
WDiff_days	Diff days winsorized at 1%	
Independence ratio	Ratio of supervisory directors by board size.	Calculated as number of SDs on
		board /total directors on the
		board as reported in BoardEx
		Board Summary table.
# female SDs	Number of females supervisory directors at the board.	Calculated based on Board
		Summary table, net of the new
		incoming female director in a
		given year.
Female on nominating	Dummy equal to one if there is at least one female director in the nominating committee.	Calculated using Board
comm.		Summary nomination committee
		member field.
rookie_quoted	Dummy equal to one if a new directorial appointment has no previous experience serving	Calculated using total number of
	as a director in a quoted board.	quoted boards to date
Rookie_firm	Dummy equal to one if a new directorial appointment has no previous experience serving	Calculated using total number of
	as a director in a quoted or private board.	private boards to date
Rookie_abs	Dummy equal to one if a new directorial appointment has no previous experience serving	Calculated using total number of
	as a director in a quoted, private or other type of board.	other boards to date
UP	Dummy equal to one if the second seat takes place at firm in a higher decile of firm size	Constructed using firm size as
	compared to the decile of size of the firm of the first seat.	defined above. Deciles are
		computed in two alternative

		ways: considering first and
		second seats separately and
		pooling all seats together. In
		both ways, deciles are calculated
		by year.
SAME	Dummy equal to one if the second seat takes place at firm in the same decile of firm size	Constructed using firm size as
	compared to the decile of size of the firm of the first seat.	defined above. Deciles are
		computed in two alternative
		ways: considering first and
		second seats separately and
		pooling all seats together. In
		both ways, deciles are calculated
		by year.
DOWN	Dummy equal to one if the second seat takes place at firm in a lower decile of firm size	Constructed using firm size as
	compared to the decile of size of the firm of the first seat.	defined above. Deciles are
		computed in two alternative
		ways: considering first and
		second seats separately and
		pooling all seats together. In
		both ways, deciles are calculated
		by year.
One_year	Dummy equal to 1 if the second appointment takes place within one year from the first	Constructed using startdate of
	board seat.	directorial appointment as stated
		in the Director Employment file.
Two year	Dummy equal to 1 if the second appointment takes place within two years from the first	Constructed using startdate of
	board seat.	directorial appointment as stated
		in the Director Employment file.
	<u> </u>	

sizeMed	Dummy equal to 1 if the appointment takes place above the median firm size, and zero	Constructed using Firm size as
	otherwise.	defined above.
Sizep10	Dummy equal to 1 if the appointment takes place at a firm in the top decile of firm size,	Constructed using Firm size as
	and zero otherwise.	defined above.
Quoted Experience	Dummy equal to 1 if the director has had any type of employment in a quoted firm (quoted	
	as reported in BoradEx, equivalent to q	
Private XP	Dummy equal to 1 if the director has had a leadership role while employed in a quoted firm	
	(quoted as reported in BoradEx, equivalent to Public firms). Leadership is dfined as any	
	role with the words "Chief" & "Officer", CEO, CFO and COO.	
Other XP	Dummy equal to 1 if the director has had a leadership role while employed in a quoted firm	
	(quoted as reported in BoradEx, equivalent to Public firms). Leadership is dfined as any	
	role with the words "Chief" & "Officer", CEO, CFO and COO.	
Quoted leadership XP	Dummy equal to 1 if the director has had a leadership role while employed in a quoted firm	
	(private as reported in BoradEx) Leadership is dfined as any role with the words "Chief" &	
	"Officer", CEO, CFO and COO.	
Private leadership XP	Dummy equal to 1 if the director has had a leadership role while employed in a quoted firm	
	(quoted as reported in BoradEx, equivalent to Public firms). Leadership is dfined as any	
	role with the words "Chief" & "Officer", CEO, CFO and COO.	
Other leadership XP	Dummy equal to 1 if the director has had a leadership role while employed in a quoted firm	
	(quoted as reported in BoradEx, equivalent to Public firms). Leadership is dfined as any	
	role with the words "Chief" & "Officer", CEO, CFO and COO.	
Size of the largest quoted	Size of the largest quoted firm where the newly appointed director has ever worked before	Calculated using the log of total
firm where they worked	starting her first directorial appointment.	assets. Total assets as reported in
		AT in Compustat by December
		of the previous fiscal year.

Table A1: Linear Probability Model (LPM) estimates for the probability of hiring a director with previous leadership experience.

Dependent variable is an indicator variable equal to one if the director has held at least one leadership position before starting the first directorial appointment. Leadership position is defined as employment experience in a role with a title of CEO, COO, CFO or containing the words "Chief officer". Column (1) displays LPM for leadership experience at any type of company, column (2) shows equivalent results for leadership experience at Quoted (public) firms, column (3) for leadership experience at Private firms and column (4) for experience at other type of institutions (not quoted or private firms). Age splines are defined as in table 3. All specifications include controls for the cohorts (year of first appointment) and the industry of the firm of the first appointment. Robust standard errors are in parentheses. \*\*\*, \*\*\*, and \* denote significance at 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Any	Quoted	Private	Other
Female	-0.039**	-0.023*	-0.060***	0.012*
	(0.018)	(0.014)	(0.017)	(0.007)
Age Group 2	0.144***	0.119***	0.089***	0.013***
	(0.011)	(0.009)	(0.011)	(0.004)
Age Group 3	0.140***	0.092***	0.101***	0.017***
	(0.010)	(0.009)	(0.010)	(0.004)
Age Group 4	0.067***	0.019***	0.064***	0.016***
	(0.009)	(0.007)	(0.009)	(0.003)
Female X Age Group 2	-0.058**	-0.070***	-0.010	-0.004
	(0.026)	(0.021)	(0.025)	(0.011)
Female X Age Group 3	-0.059**	-0.080***	-0.005	0.008
	(0.026)	(0.020)	(0.025)	(0.012)
Female X Age Group 4	-0.081***	-0.049***	-0.052**	0.010
-	(0.025)	(0.019)	(0.024)	(0.011)
Firm size	0.014***	0.029***	-0.008***	0.002***
	(0.002)	(0.001)	(0.002)	(0.001)
Constant	0.177***	-0.132***	0.279***	-0.023
	(0.061)	(0.043)	(0.059)	(0.016)
Observations	24774	24774	24774	24774
$R^2$	0.040	0.068	0.020	0.011

**Table A2: Total Experience**. OLS regressions with the dependent variable being the count of prior known employments (according to BoardEx), regardless of the title (including all lower and mid-level positions). All specifications include controls for the cohorts (year of first appointment) and the industry of the firm of the first appointment. Age splines are defined as in table 3. Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	ALL	QUOTED	PRIVATE	OTHER
Female	0.134	0.181***	-0.232***	0.197***
	(0.107)	(0.041)	(0.079)	(0.056)
Age Group 2	0.368***	0.240***	0.055	0.074**
	(0.066)	(0.024)	(0.050)	(0.031)
Age Group 3	0.484***	0.188***	0.095**	0.192***
	(0.064)	(0.022)	(0.048)	(0.031)
Age Group 4	0.393***	-0.028	-0.042	0.465***
	(0.055)	(0.019)	(0.041)	(0.028)
Female X Age Group 2	0.104	-0.129**	0.139	0.080
	(0.158)	(0.060)	(0.118)	(0.085)
Female X Age Group 3	0.144	-0.260***	0.188	0.188**
	(0.164)	(0.059)	(0.116)	(0.090)
Female X Age Group 4	0.378**	-0.168***	0.157	0.410***
	(0.165)	(0.056)	(0.115)	(0.098)
Firm size	-0.016	0.051***	-0.108***	0.040***
	(0.012)	(0.004)	(0.008)	(0.006)
Constant	4.345***	-0.036	3.251***	1.176***
	(0.432)	(0.109)	(0.288)	(0.253)
Observations	24774	24774	24774	24774
$R^2$	0.053	0.109	0.038	0.047

**Table A3: Size of quoted firm employer.** Columns (1) and (2) reports OLS results where the dependent variable is the size of the quoted firm where the newly appointed director is currently employed. Columns (3) and (4) report OLS results where the dependent variable is the size of the largest quoted firm where the director has ever worked. Age splines are defined as in table 3. All specifications include controls for the cohorts (year of first appointment) and the industry of the firm of the first appointment. Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% levels, respectively.

	Current employment		Largest E	mployment
	(1)	(2)	(3)	(4)
Female	0.903***	0.650***	0.753***	0.543***
	(5.018)	(3.816)	(5.618)	(4.179)
Age Group 2	0.354***	0.231**	0.147*	0.071
	(3.266)	(2.282)	(1.739)	(0.866)
Age Group 3	0.384***	0.145	0.141*	0.039
	(3.459)	(1.413)	(1.742)	(0.501)
Age Group 4	0.092	-0.073	-0.274***	-0.340***
	(0.756)	(-0.650)	(-3.529)	(-4.520)
Female X Age Group 2	-0.198	-0.255	-0.215	-0.228
	(-0.814)	(-1.104)	(-1.177)	(-1.297)
Female X Age Group 3	-0.192	-0.143	-0.215	-0.210
	(-0.710)	(-0.574)	(-1.131)	(-1.151)
Female X Age Group 4	-0.417	-0.281	0.029	0.065
	(-1.109)	(-0.845)	(0.141)	(0.332)
Firm size	,	0.474***	,	0.370***
		(24.171)		(28.038)
Constant	8.484***	4.760***	8.521***	6.065***
	(10.328)	(7.954)	(17.891)	(13.640)
Observations	3913	3892	10748	10683
$R^2$	0.136	0.269	0.076	0.146

**Table A4: Robustness test for Table 4 including both firms size at the first and second directorial appointment**. All variable as defined in Table 4. All specifications include controls for the cohorts (year of first appointment) and the industry of the firm of the first appointment. Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5% and 10% levels, respectively.

	C	DLS	Tobit	
	(1)	(2)	(3)	(4)
	Ln Difference in Days	Ln Difference in Days (Winsorized)	Ln Difference in Days	Ln Difference in Day (Winsorized)
Female	0.258***	0.249***	0.259***	0.253***
	(0.090)	(0.089)	(0.089)	(0.088)
Age Group 2	0.011	0.009	0.012	0.009
	(0.065)	(0.064)	(0.064)	(0.064)
Age Group 3	-0.107*	-0.112*	-0.107*	-0.111*
8 - · · · · · · · ·	(0.062)	(0.061)	(0.062)	(0.061)
Age Group 4	-0.419***	-0.418***	-0.419***	-0.419***
1-8	(0.060)	(0.059)	(0.060)	(0.059)
Female x Age Group 2	-0.284**	-0.273**	-0.286**	-0.275**
Temme mage eroup 2	(0.128)	(0.125)	(0.127)	(0.125)
Female x Age Group 3	-0.212	-0.194	-0.213	-0.202
Tennale Arige Group 5	(0.141)	(0.138)	(0.139)	(0.138)
Female x Age Group 4	-0.380**	-0.348**	-0.380**	-0.361**
Temale Arige Group	(0.159)	(0.151)	(0.157)	(0.153)
Firm size 1st appointment	-0.025*	-0.022	-0.025*	-0.024*
Tim size 1st appointment	(0.014)	(0.014)	(0.014)	(0.014)
Firm size 2nd appointment	0.022**	0.021**	0.022**	0.021**
Tim size zna appointment	(0.010)	(0.010)	(0.010)	(0.010)
Board size	0.022**	0.021**	0.022**	0.021**
Board Size	(0.009)	(0.009)	(0.009)	(0.009)
ROA	0.159*	0.136*	0.162*	0.140*
KOA	(0.086)	(0.077)	(0.086)	(0.078)
MBA degree	0.024	0.027	0.024	0.026
WIDA degree	(0.040)	(0.039)	(0.040)	(0.039)
PhD degree	0.156**	0.153**	0.156**	0.155**
Tild degree	(0.072)	(0.071)	(0.072)	(0.071)
No. qualifications	-0.021	-0.022	-0.020	-0.022
No. quamications	(0.021)	(0.019)	(0.019)	(0.019)
CEO experience	0.121**	0.114*	0.122**	0.119**
CEO experience	(0.059)	(0.059)	(0.058)	(0.058)
Commonsation comm VD	(0.039) 0.147***	0.059)	(0.038) 0.148***	0.137***
Compensation comm. XP		(0.042)		
Audit comm. XP	(0.044) 0.130***	(0.042) 0.122***	(0.043) 0.131***	(0.042) 0.125***
Audit comm. XP				
N'	(0.045)	(0.043)	(0.044)	(0.043)
Nomination comm. XP	0.100**	0.092**	0.101**	0.095**

	(0.041)	(0.040)	(0.041)	(0.040)
Comp. comm. Chair	0.131***	0.132***	0.131***	0.132***
-	(0.051)	(0.050)	(0.050)	(0.050)
Audit. comm. Chair	0.100**	0.092*	0.100**	0.092*
	(0.050)	(0.049)	(0.049)	(0.049)
Nomi. comm. Chair	0.009	0.012	0.009	0.010
	(0.058)	(0.057)	(0.057)	(0.057)
Board Chairman XP	0.183***	0.180***	0.183***	0.178***
	(0.060)	(0.059)	(0.059)	(0.059)
Constant	6.716***	6.714***	6.715***	6.716***
	(0.335)	(0.328)	(0.331)	(0.325)
Observations	4247	4247	4247	4247
R2	0.151	0.152		
Pseudo R2			0.049	0.049

**Table A5: Removing Large Firm Effects in the Speed of Second Appointment.** In this table we present results for the Speed of second appointment after removing all second appointments in the top decile of the firm size distribution. The regressions mirror those reported in table 4. In all the specifications, we control for the cohorts of individual directors (year of first appointment) and the industry of the firm of the first appointment. Robust standard errors in parentheses. \*\*\*, \*\*, and \*\* represent significance at 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	OI	S	To	bit
	Ln Difference in Days	Ln Difference in Days (Winsorized)	Ln Difference in Days	Ln Difference in Days (Winsorized)
Female	0.297***	0.286***	0.298***	0.290***
	(0.093)	(0.081)	(0.092)	(0.091)
Age Group 2	0.002	0.000	0.002	-0.000
	(0.068)	(0.067)	(0.067)	(0.066)
Age Group 3	-0.090	-0.095	-0.089	-0.094
	(0.065)	(0.063)	(0.064)	(0.063)
Age Group 4	-0.379***	-0.379***	-0.379***	-0.379***
	(0.063)	(0.061)	(0.062)	(0.061)
Female x Age Group 2	-0.278**	-0.267**	-0.280**	-0.268**
•	(0.134)	(0.131)	(0.133)	(0.130)
Female x Age Group 3	-0.324**	-0.304**	-0.324**	-0.309**
	(0.149)	(0.145)	(0.147)	(0.144)
Female x Age Group 4	-0.458***	-0.419***	-0.459***	-0.436***
	(0.170)	(0.161)	(0.168)	(0.163)
Controls	Yes	Yes	Yes	Yes
Observations	3862	3862	3862	3862
$R^2$	0.152	0.152		
Pseudo $R^2$			0.049	0.049

**Table A6: Removing Large Firm Effects in the Quality of Second Appointment**. The table reports results for the quality of second appointment after removing all second appointments in the top decile of the firm size distribution. The specifications mirror those reported in Panel B of table 5. All variables as defined previously. Robust standard errors in parentheses. \*\*\*, \*\*, and \*\* represent significance at 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	OLS	LPM	Probit	Ordered Probit
Female	0.618***	0.134***	0.213***	0.228***
	(0.141)	(0.040)	(0.062)	(0.048)
Age Group 2	0.279***	0.080***	0.172**	0.107**
	(0.091)	(0.026)	(0.068)	(0.050)
Age Group 3	0.347***	0.100***	0.290***	0.210***
	(0.086)	(0.024)	(0.066)	(0.050)
Age Group 4	0.294***	0.098***	0.241***	0.154***
	(0.082)	(0.023)	(0.065)	(0.049)
Female X Age Group 2	-0.455**	-0.112**		
	(0.195)	(0.056)		
Female X Age Group 3	-0.192	-0.007		
	(0.206)	(0.059)		
Female X Age Group 4	-0.483**	-0.145**		
	(0.216)	(0.061)		
Firm size	0.310***	0.050***	0.150***	
	(0.019)	(0.007)	(0.022)	
Above the median		0.106***	0.267***	
		(0.025)	(0.073)	
Size decile=2				0.307***
				(0.101)
Size decile=3				0.438***
				(0.103)
Size decile=4				0.544***
				(0.101)
Size decile=5				0.739***

				(0.108)
Size decile=6				0.844***
				(0.107)
Size decile=7				1.143***
				(0.106)
Size decile=8				1.099***
				(0.107)
Size decile=9				1.143***
				(0.109)
Size decile=10				1.359***
				(0.117)
Constant	4.748***	-0.268	-2.183***	
	(0.651)	(0.186)	(0.580)	
Controls	Yes	Yes	Yes	Yes
Observations	3826	3826	3804	3826
$R^2$	0.271	0.180		
Pseudo R <sup>2</sup>			0.139	0.064

Table A7: Removing Larger Firm Effects - Moving to a Larger Firm. In this table we we examine whether the same individual moves to a larger firm at second appointment relative to the size of the firm at which the first appointment occurred. For this analysis, we exclude the second appointments in the top decile of firm size distribution. In panel A, size deciles are calculated by year, based on the distribution pooling all firms where first and second appointments occur, and in panel B size deciles are computed by separating first and second appointments. Robust standard errors in the parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels, respectively.

	Panel A: Size deciles of the pooled sample of firms				Panel B: Size deciles of first and second firms calculated separately			
	(1) Difference in Size	(2) Move to Larger firms	(3) Move to upper decile of firm size	(4) Move to lower decile of firm size	(5) Move within the same decile	(6) Move to upper decile of firm size	(7) Move to lower decile of firm size	(8) Move within the same decile
Female	0.619*** (0.130)	0.200*** (0.063)	0.300*** (0.064)	-0.199*** (0.064)	-0.127* (0.073)	0.348*** (0.066)	-0.273*** (0.065)	-0.046 (0.074)
Age Group 2	0.275*** (0.088)	0.106 (0.068)	0.130* (0.070)	-0.078 (0.068)	-0.058 (0.078)	0.066 (0.073)	-0.060 (0.070)	0.021 (0.077)
Age Group 3	0.337*** (0.084)	0.198*** (0.066)	0.204*** (0.067)	-0.223*** (0.067)	0.026 (0.073)	0.215*** (0.070)	-0.200*** (0.068)	0.001 (0.074)
Age Group 4	0.271*** (0.081)	0.178*** (0.064)	0.169** (0.066)	-0.178*** (0.064)	-0.009 (0.072)	0.130* (0.069)	-0.177*** (0.066)	0.053 (0.073)
Female x Age Group 2	-0.466**							
Female x Age Group 3	(0.184) -0.194 (0.197)							
Female x Age Group 4	-0.476** (0.206)							
Constant	(0.200) 4.594*** (0.763)	3.104*** (0.569)	3.319*** (0.493)	-3.605*** (0.459)	-0.910 (0.633)	2.018*** (0.550)	-2.708*** (0.553)	-0.294 (0.669)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations R2	3826 0.378	3855	3855	3861	3804	3826	3856	3784
Pseudo R2		0.184	0.201	0.186	0.041	0.192	0.230	0.061