CREDENTIALS MATTER, BUT ONLY FOR MEN:

EVIDENCE FROM THE S&P 500

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ABSTRACT: We study gender differences in the value of credentials in managerial labor markets. We use within-firm variation in S&P 500 status for marginal firms "just included" on the index and managers who joined a marginal firm before its addition to the index to obtain variation in S&P 500 experience. We then difference out any unobservables that affect both women and men within the same firm-year. Men with experience at an S&P 500 firm obtain more subsequent independent directorships and executive roles at other S&P 500 firms, but not at non-S&P 500 firms. The increase is 12-42% relative to the average. Strikingly, we observe no such relationship for women. Our results suggest that one obstacle women face in the managerial labor market is that they receive less credit than men for similar credentials.

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Despite representing over 45% of the civilian labor force for each of the last 32 years, the proportion of women holding senior management positions remains low. In 2018, the New York Times somewhat cheekily noted that there were more men named James than there were women among CEOs of Fortune 500 companies (Miller, Quealy, and Sanger-Katz, 2018). Scholars and commentators have advanced a variety of explanations for this underrepresentation. It may reflect a "pipeline problem," which leads to a lack of qualified women in the pool from which top managers can be selected. Alternatively, women may simply have, on average, less interest in, or aptitude for, high level managerial roles than men. Finally, women may receive less credit for their accomplishments and experience, which could lead to the appearance of fewer qualified women.

We shed light on the last explanation by studying the careers of women and men who have *already* become executives or independent directors of some of the largest companies in the U.S. Among these individuals, we study the extent to which one particularly high-profile credential—experience as an executive or independent director of an S&P 500 company—leads to more future positions at other S&P 500 companies.

Our main result is that that while men with experience at S&P 500 firms are significantly more likely to obtain additional positions at other S&P 500 firms in the future, women are not. For men, experience at an S&P 500 firm is associated with 0.006 more future independent directorships and 0.005 more executive positions at other S&P 500 firms per year over the course of the next ten years, representing a 12% and 42% increase relative to the average, respectively. Both these increases are completely absent for women.

Our empirical strategy captures the effect of S&P 500 credentials on future career paths as long as there are no firm-specific time-varying unobservables correlated with S&P 500

inclusion that affect women and men differently. We proceed in four steps. First, we exploit the discretionary nature of the S&P 500's construction as a source of variation in this credential. To consider a set of comparable firms, our empirical strategy focuses on the managers of firms ranked 350-650 by market capitalization. Size is a significant determinant of index membership, but among firms ranked 350-650, there remains considerable variation in index membership. The index methodology explicitly states that, subject to certain eligibility criteria, "[c]onstituent selection is at the discretion of the Index Committee," and that one of the factors that the committee considers is "sector balance" (S&P Dow Jones Indices, 2019).

Second, our models include fixed effects for firm, size rank, manager age cohort, and year. Including firm fixed effects eliminates cross-sectional variation between marginal firms on and not on the index and exploits within-firm changes in S&P 500 status. We also control for firm characteristics that the index committee discloses as relevant in its decisions, as well as an indicator for the manager's current employment status.

Third, to further reduce concerns about omitted variables, we restrict attention to instances where the manager was *already* associated with the firm when it was added to the index. We control separately for S&P 500 experience obtained by joining a firm already on the index, where endogenous manager-firm matching may confound the results.

Fourth, because our key coefficient of interest is the *difference* between men and women in the relationship between S&P 500 credentials and future positions, even firm-specific time-varying unobservables not captured in the previous steps would only pose a challenge to our identification strategy if they affected men and women managers present at the same firm at the same time differently.

We address several additional concerns in robustness tests. First, notwithstanding the information in the publicly available index methodology documents, firms just included on the index may be different from those that just missed inclusion. If this were the case, these firm-level differences may imply differences between these firms' managers. To address this concern, we estimate a propensity score to gauge each firm's likelihood of being on the index. Following Crump, Hotz, Imbens, and Mitnik (2009), we then drop observations with propensity scores below 0.1 or above 0.9. We also use this score to implement inverse probability weighting in our regressions (Horvitz and Thompson (1952), Hirano, Imbens, and Ridder (2003)). Further, to ensure that our results are not driven by the size rank range that we employ, we repeat our tests using a larger (300-700) and a narrower (400-600) size rank range. Our results remain similar in all of these tests.

Another potential concern is that the index committee may be attempting to "pick winners" by selecting firms it believes will perform better, perhaps because their managers are more able. While this is theoretically possible, the committee has no incentive to do so, and doing so would be contrary to its objective of creating a proxy for the performance of the market as a whole. Nevertheless, we test for this explanation by including measures of the firm's future performance to proxy for beliefs about managerial ability. Our results remain unaffected by the inclusion of these variables.[1] Finally, we rule out survivorship bias (successful managers staying in the sample longer) as a mechanism for our results.

Having established that S&P 500 experience is a valuable credential for men—but not for women—we study its impact on career paths in more detail. First, we ask whether

[1]Inclusion on the S&P 500 may also have a direct short-term effect on returns. There has historically been evidence of an "inclusion effect," where a firm's stock experiences a positive abnormal return upon the announcement that it will be added to the index (Shleifer, 1986), although recent empirical work suggests that this phenomenon may no longer exist (Patel and Welch, 2017).

the value of the S&P 500 credential extends across industries. We find that it does not: the new positions that managers obtain are in the industry (or industries) in which they have previously worked. Next, we examine its relationship with other signals used in hiring. We focus on personal connections, and find that S&P 500 experience and connections tend to be substitutes rather than complements. We then look at how quickly the effects of S&P 500 experience materialize by varying the horizon under study, and find that the effects appear within the first 10 years of obtaining the experience.

One potential explanation for why we observe no increase in subsequent positions for women is saturation: if firms are desperate to find women for executive and board positions, the S&P 500 credential might have no value for women because all the women who satisfy the minimum criteria are *already* highly sought after. Under this interpretation, the credential doesn't matter for women because even women who do not have it are selected as managers of S&P 500 firms.

While we cannot definitively rule out this explanation, two pieces of circumstantial evidence suggest that it is unlikely. First, while qualified women have been in high demand in recent years, this is less likely to have been true early in our sample. We therefore look for evidence that the interaction between S&P 500 experience and gender has changed over time. We find no consistent evidence that it has. Second, because managers tend to stay in the same industry, qualified women may be in especially short supply in industries where women make up a smaller percentage of the workforce. Hence, if saturation were driving our results, we would expect the interaction between S&P 500 experience and gender to vary systematically across industries with the percentage of women in the labor force. We find no such cross-sectional pattern.

Our results relate to several literatures. A large literature examines the labor market for independent directors, including the value of career histories and reputation in this market.[2] The perceived value of a newly appointed director depends on the director's reputation. Signals about reputation can be positive (Fich (2005), Harford and Schonlau (2013)) or negative (Fich and Shivdasani, 2007), or using a different characterization, shareholder-friendly or management-friendly (Levit and Malenko, 2016). Past work experience is also important in top executive hiring (Kaplan, Klebanov, and Sorensen (2012), Custódio, Ferreira, and Matos (2013), Custódio and Metzger (2013, 2014)).

A separate literature shows that, in a number of contexts, women receive less credit for similar work than men. In academia, women receive less credit for co-authored publications (Sarsons (2017b), Sarsons, Gërxhani, Reuben, and Schram (2021)), and fewer citations (Koffi, 2021a,b). Benson, Li, and Shue (2021) study a large retail chain and show that women are paid and less, and are less likely to be promoted, than similarly performing men because they receive significantly lower "potential" ratings, yet these "potential" ratings do not predict subsequent performance. Female surgeons (Sarsons, 2017a) and financial advisors (Egan, Matvos, and Seru, 2017) also face harsher punishment than men when they make similar mistakes. We bring together and extend these two streams of the literature by showing that S&P 500 experience predicts future executive positions and board seats at S&P 500 firms for men, but not for women. We interpret this as evidence that women receive less credit for having S&P 500 experience.[3]

[2]On average, independent directors do provide value to shareholders, with significant variation in this value across directors (Nguyen and Nielsen, 2010).

[3]Our results also point to segmentation in the managerial labor market between firms on and not on the S&P 500 index, a financial product that is neither designed nor marketed as certification of manager (or firm) quality. These findings therefore also relate to the literature studying spillovers from association with indices or other "prestigious" groupings *outside* of financial markets. Focke, Maug, and Niessen-Ruenzi (2017) show that prestige stemming from Fortune's ranking of America's most admired companies is a

Finally, our findings advance the literature on female underrepresentation on corporate boards (Adams and Kirchmaier (2016), Kim and Starks (2016), Field, Souther, and Yore (2020)), and among top executives (Matsa and Miller, 2011). With an active policy interest in the topic (Fisch and Solomon, 2019), a growing literature examines the role of women on corporate boards and the effects of policies aimed at promoting gender diversity (Ahern and Dittmar (2012), Ferreira, Ginglinger, Laguna, and Skalli (2017), Hwang, Shivdasani, and Simintzi (2018), Gertsberg, Mollerstrom, and Pagel (2021)).[4] Ahern and Dittmar (2012) show that after Norway imposed a quota mandating that at least 40% of directors be female, older male directors with more CEO experience were replaced by younger female directors with less CEO experience. If the pool of female candidates with adequate experience is indeed limited, our findings suggest that even experienced women may not always be selected for executive and board roles. The differential assessment of credentials may cause the pool of qualified women to appear even smaller. Matsa and Miller (2011) find evidence of a "gender spillover" effect: firms with more women on their boards are more likely to employ women as top executives. Consistent with their findings, our results point to the importance of the supply of female directors, and suggest a new channel that affects it.

source of nonpecuniary benefits for top executives. Chattopadhyay, Shaffer, and Wang (2020) find that firms aspire to be a part of new market index launched in Japan.

[4]Adams and Funk (2012) show that female and male directors differ systematically in their core values and risk attitudes. Adams and Ferreira (2009) and Kim and Starks (2016) find that gender diversity leads to better monitoring. Bernile, Bhagwat, and Yonker (2018) find that it is associated with lower risk and higher performance, while Adams and Ferreira (2009) document mixed effects on performance.

1. Data and Sample Construction

1.1. *Eligible Firms*

We exploit the discretionary nature of changes to the constituents of the S&P 500 index in our analysis. Unlike the Russell 1000 and Russell 2000 indices, which are constructed using fairly mechanical rules, the S&P 500 methodology provides the index committee—a group of individuals employed by S&P Dow Jones Indices, LLC—with a substantial amount of discretion in selecting which securities to add to, or remove from, the index. For example, Robertson (2020) shows that the actual set of S&P 500 constituents departs substantially from a more mechanical alternative, including the set of the 500 largest securities in CRSP on the final trading day of the prior year. For the period beginning in 2015, S&P provides additional information regarding the characteristics that it uses to determine eligibility for addition to the index. These characteristics include size (i.e., market capitalization), IPO seasoning, and proxies for liquidity and profitability. Subject to the eligibility criteria, selection of specific constituents is at the discretion of the index committee. In making its constituent selection decisions, the index committee also considers "[s]ector balance," where sector is defined by Global Industry Classification Standard ("GICS") code (S&P Dow Jones Indices, 2019). We include controls for the relevant characteristics in our analysis using accounting data from Compustat and security data from CRSP. We obtain S&P 500, 400, and 600 constituent data from CapitalIQ.

We examine individuals who entered the sample through their association with firms ranked [350,650], thereby focusing on the range where the committee's discretion is at its greatest.[5] To do so, we compute the equity market capitalization of each security in CRSP

[5]While the size ranks are calculated at the security level, the remainder of the controls are at the firm level. We discuss the matching from securities to firms in Section 1.2.

on the last trading day of each year between 1979 and 2017 by multiplying the number of shares outstanding by the price. We use these sizes to assign size ranks to firms for each year between 1980 and 2018. A manager enters our sample the year she first becomes associated with a firm in the size range [350, 650], either because she joined a firm in that range or because a firm she was already associated with entered that range. The manager then remains in our sample until she leaves the BoardEx dataset or the end of the sample period, whichever is sooner.[6]

Figure 1 provides support for our approach. While the number of firm $\times$ year observations on the S&P 500 decreases monotonically as rank increases, there is a substantial mass of firm $\times$ year observations across that size rank range [350, 650] both on and off the S&P 500. Notably, unlike the Russell indices, there is no bunching in the density around the 500 rank cutoff. These observations demonstrate that while size (rank) is an important determinant of index inclusion, it is far from the only only determinant.

To further confirm that firms in the 350-650 range that are on the index are comparable to firms not on the index, we estimate a propensity score using a probit regression. The dependent variable is a dummy variable equal to one if a firm is on the index, and zero otherwise. The independent variables are characteristics that, according to the index documentation, are used to determine index inclusion. We estimate this model for the entire set of firms in the CRSP-Compustat merged database.[7]

[6]Occasionally, after entering our sample in year t, a manager will hold no positions in year $t + j$, but then obtain a further position in year $t + j + k$. In such cases, because we include firm level controls, and the individual has no associated firm in year $t + j$, the individual will not appear in our sample in year $t + j$, but will reappear in year $t + j + k$. This movement in and out of the sample is fairly uncommon. Gaps account for 5.02% of potential manager $\times$ years, while we observe the remaining approximately 95%.

[7]The results of this probit regression are presented in Table IA.1 of the Internet Appendix. All of the statistically significant regression coefficients have the expected sign.

Figure 2 shows the propensity scores of the observations in our sample. All observations are on the common support of the treated (on the index) and control (not on the index) distributions, validating our approach based on rank cutoffs (Smith and Todd, 2005). Both distributions have very significant mass between 0.3 and 0.7. The estimated propensity scores suggest that the firms employing the managers in our sample had a similar likelihood of being included on the index. This result lends support to our claim that, for managers of firms in the 350-650 range, once we control for observable firm characteristics, the firms on the index are similar to the ones that are not.

1.2. *Executive and Board Member Data*

Data on executive and independent director positions, gender, and age are from BoardEx.[8] We extract the number of new positions for each year in the sample from the information on each individual's work history and board appointments. We also separate executive positions and independent (non-executive) director positions, positions at public and private firms, and positions at firms on and off the S&P 500. We classify a person-year observation as a within-firm promotion if a person has a role (job title) ending at a firm in one year and is listed with a different role at the same firm starting in the same year or the subsequent year. We do not consider such within-firm promotions to be new positions. We merge information from BoardEx with CRSP and Compustat on CUSIP.[9]

[8] BoardEx reports the birth date or year of individuals, which allows us to compute their age.

[9] Fracassi and Tate (2012) and Engelberg, Gao, and Parsons (2013) provide details on merging BoardEx with CRSP-Compustat and the coverage of BoardEx. Issues with merging and with data coverage are less severe in our context because we focus on a subset of the largest firms listed in the United States.

1.3. *Descriptive Statistics*

Our sample is comparable to those used in other studies of executive or independent director labor markets. Table 1 presents summary statistics for the managers and firms in our sample. Panel A contains the sample used in Section 2: managers (i.e., executives and independent directors) who, at some point between 1980-2018, were associated with a firm ranked between 350-650 by size that year. We follow these individuals until their last appearance in BoardEx, or the end of the sample period, whichever is first. Because a manager in the sample who is associated with n firms in year t appears in the sample n times in that year, the unit of observation is a manager $\times$ firm $\times$ year.

Firms in our sample have an average equity market capitalization of $8 billion, slightly higher than the sample average of $6.4 billion in Cai, Nguyen, and Walkling (2017). We follow the index guidelines and measure profitability as net income excluding discontinued operations.[10] To render the measure comparable across firms, we scale it by total assets. The average of approximately 3% is slightly lower than the ROA of 4% reported by Cziraki and Jenter (2020).

Panel B of Table 1 examines differences between men and women in our sample. Men are older when they enter the sample (aged 56.5 years vs. 53.7 for women), and especially when they leave (66.2 years vs 62). The difference is larger for independent directorships than for executive positions. The average (median) age at which men retire from their last independent director position is 66.9 (69) years for men, but 62.3 (63) years for women: thus, men step down from directorships after the traditional retirement age of 65 years, while women do so more than 2 years before.[11]

[10]The index guidelines state that net income excluding discontinued operations must be positive for a firm to be considered for addition.

[11]Executive retirement increases at age 65 (Jenter and Lewellen (2015), Cziraki and Groen-Xu (2020)).

As a result, men spend approximately one year longer in the sample than women. Men and women have held the same number of independent directorships when they enter the sample, on average, but men have held more executive positions. In contrast, women have larger networks, whether we consider all connections or only connections through employment. Finally, women enter the sample at firms that are slightly larger: while there is no gender difference for executives entering the sample, independent directors who are women enter the sample at marginally larger firms.

2. S&P 500 Experience and Future Managerial Roles

2.1. *Empirical Strategy*

We examine the career implications of experience as an executive or director of an S&P 500 company. To do so, we regress the number of new positions a person obtained in a given year t on whether she has served as an executive or independent director of a firm that was on the S&P 500 and in the range [350, 650] of size at some point in the past (up to and including year $t-1$). We therefore estimate the following regression:

$$\begin{aligned} NewPositions_{i,t} =& \alpha + \beta \times S\&P500ExperienceNew_{i,t-1} \\ &+ \gamma \times S\&P500ExperienceNew_{i,t-1} \times Female_i \\ &+ \delta \times S\&P500ExperienceEstablished_{i,t-1} \\ &+ \eta \times S\&P500ExperienceEstablished_{i,t-1} \times Female_i \\ &+ \mu \times Female_i + \Phi_{i,t-1} + \Psi_{i,j,t-1} + \tau_{t-1} + \varepsilon_{i,t} \end{aligned} \tag{1}$$

where i indexes individual managers and j indexes the firm(s) individual i is associated with in year $t-1$. A manager enters our sample the first time that she is associated with a

firm in the [350, 650] size rank range. In our main analysis, we retain each manager for 10 years from their first appearance in the sample—the average (median) number of years a manager spends in the unrestricted sample is 10.06 (9) years. Fixing the horizon at 10 years circumvents endogenous changes in sample composition whereby more successful managers may stay in the sample longer.[12]

$NewPositions_{i,t}$ represents the number of new positions held by individual i in year t. $S\&P500Experience_{i,t-1}$ is a dummy variable equal to one if individual i has been an executive or independent director of an S&P 500 company within the range [350, 650] of size at some point in the past, up to and including year $t-1$ (and zero otherwise). We separate S&P 500 experience into $S\&P500ExperienceNew_{i,t-1}$ and $S\&P500ExperienceEstablished_{i,t-1}$ to isolate two channels.

First, a manager with S&P 500 experience may be viewed as having a stronger resume simply by virtue of this credential. This stronger resume may, in turn, lead to better subsequent career outcomes. We focus our analysis on this channel by exploiting the timing of when a manager becomes associated with an S&P 500 firm. If, within the [350, 650] range, conditional on covariates, firms on the index are similar to those thar are not, managers whose spell at a firm began *before* the firm was added to the S&P 500 should also be similar to managers of firms that were not. Any relationship between such experience and future career outcomes can therefore be interpreted as the result of a treatment on the manager.[13] We refer to these firms as "new" S&P 500 firms ($S\&P500ExperienceNew_{i,t-1}$).

[12] We revisit how changes in the horizon we impose affect our results in Section 3.3.

[13] One mechanism for this treatment is that the individual is added to the set of managers considered for future positions.

Second, a positive correlation between index experience and future roles may indicate that *firms* benefit from S&P 500 inclusion as they are able to select from a different (and potentially better) pool of candidates. S&P 500 firms may be able to attract managers with certain characteristics (such as ability) that are correlated with the number of future managerial positions.[14] For managers whose association with a firm began after the firm was added to the S&P 500—which we refer to as "established" S&P 500 firms—the fact that a manager joined the firm may reflect the firm's S&P 500 status ($S\&P500ExperienceEstablished_{i,t-1}$).

Throughout the paper, we focus on $S\&P500ExperienceNew_{i,t-1}$ as it offers the cleanest way to capture the benefit of S&P 500 experience to the manager. We include both types of experience in the regressions simultaneously to hold one type of effect constant while measuring the other.[15] $Female_i$ is an indicator for managers who are women, $\Phi_{i,t-1}$ is a vector of controls related to individual i in year $t-1$, $\Psi_{i,j,t-1}$ is a vector of controls related to firm j in year $t-1$, τ_{t-1} is a vector of year fixed effects, and $\varepsilon_{i,t}$ is the error term. Because an individual may appear more than once in a given year (for example, because she is on the board of multiple firms that year), we implement a weighted least squares (WLS) regression, where each observation is weighted by the inverse of the number of times that individual appears in the data in the relevant year.

All our tests contain managers who entered the sample through their affiliation with a firm ranked 350 to 650 by size. The distribution of firm size has a long right tail, and the

[14] Bertrand and Schoar (2003), Tervio (2008), Gabaix and Landier (2008), Eisfeldt and Kuhnen (2013), Fee, Hadlock, and Pierce (2013), Custódio and Metzger (2014), Matveyev (2017), and Kotter and Larkin (2018), study endogenous matching between firms and executives, while Matveyev (2016) and Ferreira, Ginglinger, Laguna, and Skalli (2017) examine matching between firms and directors.

[15] Because a manager can be affiliated with multiple firms over the course of her career, the same manager can have both types of experience during her time in the sample.

largest firms on the S&P 500 are different on several dimensions, including prestige, top executive hiring (Cziraki and Jenter (2020)), information asymmetry (Cziraki, Mondria, and Wu (2021)), and analyst coverage (Martineau and Zoican (2019)). We mitigate these issues by focusing on firms in the 350-650 range. To the extent that working for the largest firms in the US carries a higher prestige value, our estimates using firms ranked 350-650 will understate the value of having S&P 500 experience on one's resume, since our estimates rely on variation among the less prestigious firms on the S&P 500.

We add a variety of controls and fixed effects to our regressions in an attempt to rule out alternative explanations. These controls and fixed effects address three dimensions: (1) individual manager characteristics, (2) characteristics of the firm(s) the individual is *currently* associated with, and (3) economy-wide features of the labor market over time.

At the individual level, we include fixed effects for the manager's age and the rank of the firm through which she entered the sample, as well as an indicator variable to control for whether manager i is currently employed as an executive in year $t-1$. Age fixed effects allow us to compare managers in similar stages of their career. Rank fixed effects ensure that we compare managers who entered the sample through their association with firms of similar size rank over time, which holds constant, to an approximation, the likelihood of being on the index. The current executive indicator controls for the fact that an executive position requires a significant time commitment, which may preclude a manager from taking up another executive position concurrently at a different firm. The same does not hold for independent directorships.

With respect to the firms that the individual is associated with, we control for characteristics similar to those that the S&P 500 index committee considers in deciding whether or

not to include a firm on the index: natural log of size (defined as shares outstanding times share price), two proxies for liquidity (minimum monthly trading volume over the last 6 months, and dollar value traded over the past year divided by average market value over the past year), a dummy indicating that the firm's IPO date was at least one year ago, dummies for eligible share class and exchange, earnings in the most recent quarter and year, and a dummy indicating that earnings were positive in the past quarter.[16]

These variables also capture aspects of the firm's position in the labor market for executives and directors. Large, profitable firms may be more attractive, or may attract managers with different expertise compared to smaller, less profitable firms. We provide detail regarding the construction of these variables in the caption to Table 1. In our preferred specifications, we also add firm fixed effects to eliminate any cross-sectional differences across firms and focus on *within-firm* variation in S&P 500 inclusion over time. Finally, we include calendar year fixed effects to capture changes in economic conditions and the way hiring is conducted (which could include improvements in information and communication technology, professional networking websites, search firms, etc.).

2.2. *Similarity of Managers at Firms on vs. not on the S&P 500*

Table 1 Panel C compares managers entering the sample through an affiliation with an S&P 500 firm (ranked 350-650 by size) to those entering the sample by working at a non-S&P 500 firm. Fourteen percent of managers at S&P 500 firms in the 350-650 range are women compared to only 9% of managers entering the sample through non-S&P 500 firms. However, differences between managers along other observable characteristics are economically small, and, if anything, suggest that managers of non-S&P 500 firms are

[16]The committee also considers the industry composition of the S&P 500. In our analysis, industry fixed effects are subsumed by firm fixed effects.

slightly more accomplished. Managers in both groups have an average (median) age of 56 years. Managers of non-S&P 500 (S&P 500) firms have accumulated 5 (4) roles on average, or 4 (3) at the median. This difference is due to non-executive directorships: managers at non-S&P 500 firms have accumulated an average of 3.4 compared to 2.9 for managers at S&P 500 firms. Differences in past executive roles, CEO roles, and roles at public firms are economically small. These patterns of covariate balance support our empirical approach of comparing managers entering the sample at marginal S&P 500 and non-S&P 500 firms.

2.3. *S&P 500 Experience and Future Positions for Men vs. Women*

Table 2 shows the main results. We separately regress the number of new independent directorships (Panel A) and executive positions (Panel B) at S&P 500 firms on past experience with an S&P 500 firm (as an executive or as an independent director) where the manager joined the firm before it was added to the index. The results in columns 1-3 of Table 2 indicate that individuals with experience at an S&P 500 firm obtain significantly more new such roles in the future than otherwise similar individuals. This relation holds using fixed effects for calendar year, the individual's age, and the size rank of the firm that the individual was affiliated with when they entered the sample (column 1). In column 2, we add fixed effects for the firm(s) with which the individual is affiliated at the time she obtains the new roles. Doing so eliminates cross-sectional variation between firms and focuses the identification of *S&P 500 Experience* on firms that are added to, or removed from, the index. Focusing on within-firm variation in S&P 500 status, we continue to find a significant association between *S&P 500 Experience* and future positions at S&P 500 firms. Column 3 controls for firm characteristics. As we add more fixed effects and

controls to the model, the coefficient of *S&P 500 Experience* remains highly statistically significant. Including controls, in column 3, changes the results little relative to column 2.

According to our preferred model specification in Panel A (column 3), having (executive or director) experience a new S&P 500 firm—i.e. a firm that was added to the S&P 500 after the manager joined—is associated with approximately 0.006 more new directorships in each future year. This corresponds to an increase of 12% relative to the unconditional yearly likelihood of obtaining a new independent directorship at an S&P 500 firm (0.050, Table 1). A different interpretation is that if a (male) manager becomes affiliated with an S&P 500 firm halfway through his "career" in the sample, on average, this translates into approximately 0.03 = (10/2×0.006) more independent directorships in second half of his life in the sample, or a 1/33 probability of obtaining one additional directorship.[17]

This increase in independent directorships is completely absent for women: the interaction term is negative, statistically significant, and larger in absolute value than the overall slope coefficient. The net effect for women is therefore negative, although it is only marginally significant.[18] We interpret this as evidence that S&P 500 experience leads to more future S&P 500 directorships for men, but not women.

Panel B of Table 2 reports similar patterns for executive positions. S&P 500 experience is associated with significantly more new executive positions (for men) at S&P 500 firms. The coefficient of 0.005 (column 3) corresponds to an increase of 42% relative to the sample average of new executive positions per year obtained at an S&P 500 firm (0.012, Table

[17] In untabulated tests, we find that changes to the executive suite and to independent directorships happen gradually. We find no consistent evidence that the turnover rate of executives or of independent directors is higher in the year after a firm is added to the S&P 500 or removed from it.

[18] The p-value of an F-test under the null hypothesis that the sum (-0.011) is equal to zero is 0.058. Summing all three coefficients, the results indicate that women with S&P 500 experience obtain fewer subsequent independent directorships than men without it (-0.0065), but this sum is not statistically significant (p=0.22).

1). Again, only men experience this increase: the interaction for women is negative, statistically significant, and offsets the level increase.[19] Summing the two coefficients, the net effect for women is both economically and statistically indistinguishable from zero.[20]

Table 2 Columns 4-6 show that having S&P 500 experience is not associated with more roles at firms that are not on the S&P 500. For executive positions (Panel B), the absolute value of the coefficients is similar to the corresponding estimates in columns 1-3.[21]

The negative interaction terms for women indicates that while men benefit from S&P 500 experience, women do not. This suggests that the managerial labor market values S&P 500 credentials of men and women differently. Our interpretation is that women receive less credit then men for having similar work experience.[22] This main result is robust across a wide range of alternative specifications. Table 3 compares the results in column 3 of Table 2 across several alternative specifications.

2.3.1. *Restricting the Sample Based on the Propensity Score.* Marginal S&P 500 and non-S&P 500 firms may differ along observable characteristics. To address this concern, we follow Crump, Hotz, Imbens, and Mitnik (2009) and restrict the sample to observations with

[19] IA.2 in the Internet Appendix confirms that S&P 500 experience at new firms is associated with more independent directorships and more executive positions at S&P 500 firms if we do not interact the coefficient with gender. This is unsurprising as the majority of managers are men. We also find a positive and significant coefficient if we do not split experience by whether it was obtained at new or established S&P 500 firms (columns 2 and 4).

[20] The p-value of an F-test under the null hypothesis that the sum is zero is 0.96. The results also indicate that women with S&P 500 experience obtain fewer subsequent executive positions than men without this credential: the sum of the three coefficients is negative (-0.0041) and statistically significant (p=0.042).

[21] If we instead define non-S&P 500 positions as positions at firms on the S&P MidCap 400 or S&P SmallCap 600, the coefficient estimates remain similar and their statistical significance increases. For men, S&P 500 experience is associated with fewer subsequent executive positions at firms on the S&P 400 or S&P 600. In contrast, the sum of the coefficients shows that for women, the number of new executive positions at S&P 400 and S&P 600 firms does not change—see Table IA.3 in the Internet Appendix. The decrease in executive positions at non-S&P 500 firms for men is consistent with a capacity constraint: once (male) managers have experience at an S&P 500 firm, they allocate more of their time to other positions at firms on the S&P 500. Because it is uncommon to be an executive at more than one firm at the same time, this results in fewer executive positions at firms not on the S&P 500.

[22] We discuss other interpretations in Section 4.

estimated propensity scores between 0.1 and 0.9.[23] Our results remain similar, as shown in column 2 of Table 3. If anything, the coefficients in the regression of independent directorships (Panel A) slightly increase relative to Table 2, suggesting that selection on observables is not driving our results.

2.3.2. *Inverse Probability Weighting.* To further assuage the concern that that the covariate distributions of S&P 500 and non-S&P 500 firms are different, in addition to restricting the sample based on the propensity score, we apply inverse probability weighting to the model in Table 2 using the propensity score (Horvitz and Thompson (1952), Rosenbaum (1987), Hirano, Imbens, and Ridder (2003)). Column 3 of Table 3 shows that the results remain similar.

2.3.3. *Selection into the S&P 500 Based on Expected Future Performance.* A possible alternative explanation of our results is that the committee's decision to add a firm to the S&P 500 index is based on its expectation of the firm's future performance. Managers (executives or independent directors) with higher ability may both cause better future performance and obtain more subsequent positions. This is unlikely to be the main explanation of our results for two reasons. First, picking winners is *not* the stated goal of the index committee and deviates from its published methodology. Hence, committee members have no incentives to engage in picking winners.

Second, we show that controlling for expected future performance does not change our main results. In column 4 of Table 3, we control for proxies of the committee's expectation of the company's future performance: the natural logarithm of equity market

[23] Section 1.1 discusses the propensity score analysis. Figure 2 shows the distribution of propensity scores.

capitalization, stock returns, and earnings before extraordinary items scaled by total assets measured in year $t+1$. Our results remain very similar to those in Table 2, suggesting that selection on manager ability (to the extent that it is correlated with future firm performance) is not driving our results.

2.3.4. *Survivorship Bias.* Individuals who are less successful in their career may exit the sample earlier. In column 5 of Table 3, we restrict the analysis to individuals who spend *at least* 10 years (the average horizon of an individual) in our sample. Past experience at an S&P 500 firm is still significantly positively correlated with future positions at S&P 500 firms: neither the point estimates of the coefficients nor their statistical significance change very much relative to Table 2, indicating that survivorship bias is unlikely to have a major effect on our results.

2.3.5. *Varying Rank Cutoffs.* Finally, our results are robust to varying the rank cutoffs used to determine which individuals enter our sample. Rather than [350, 650], columns 6-7 of Table 3 use the broader range of [300, 700] and the narrower range of [400, 600], respectively. Using both ranges, our results remain similar, although the significance of the point estimates declines using the tighter range of [400, 600], as we are relying on a smaller set of firms and managers to estimate the coefficients.

3. S&P 500 Experience and Career Paths

Given the relative underrepresentation of women among managers of large firms, we hypothesize that career paths of women and men may differ. We study the relationship between S&P 500 experience and subsequent careers, and whether it varies by gender.

3.1. *The Value of S&P 500 Experience and Moving to a New Industry*

Is S&P 500 experience associated with new positions in industries that the manager has never worked in? Previous work has documented significant variation in the percentage of women in board or executive positions across industries (e.g., Bertrand and Hallock (2001), Hillman, Shropshire, and Cannella Jr (2007), Ahern and Dittmar (2012), Huang and Kisgen (2013), Adams and Kirchmaier (2016)) and segmentation of managerial labor markets by industry (Cremers and Grinstein, 2014).

Table 4 studies whether the new positions associated with S&P 500 experience are in the industries in which the manager had previously held an executive position or directorship. We use two industry definitions: 4-digit SIC codes (odd-numbered columns) and the text-based classification developed by Hoberg and Phillips (2010, 2016) calibrated to a granularity similar to 4-digit SIC codes, yielding 500 separate industries (even-numbered columns). For men, S&P 500 experience is associated with more independent directorships (columns 1-2) and more executive positions (columns 5-6) at other S&P 500 firms in the same industry, but not in industries that they have never held executive or director positions (columns 3, 4, 7, and 8). For women, S&P 500 experience is also associated with more independent directorships in the same industry (columns 1-2). However, unlike men, women with S&P 500 experience are significantly *less* likely to obtain independent directorships outside an industry that they have previously worked in (columns 3-4). One interpretation of this pattern is that, even though an individual may simultaneously hold multiple independent directorships, women with S&P 500 experience deliberately accumulate such positions in the same industry, leaving less time or motivation to take on

positions in different industries. Last, women with S&P 500 experience do not receive more executive positions at S&P 500 firms, regardless of industry (columns 5-8).[24]

Overall, we find that S&P 500 experience predicts new positions at S&P 500 firms in industries where the manager has work experience, but not in other industries.

3.2. *S&P 500 Experience and Network Connections*

Along with credentials and experience, firms' hiring of executives and directors is based on other factors, including personal connections (Fracassi and Tate (2012), Cai, Nguyen, and Walkling (2017), Cziraki and Jenter (2020)). Knowing a director candidate personally may provide a more precise signal of the candidate's ability than having information about the individual's credentials. We therefore examine whether S&P 500 experience is a complement or a substitute for connections. To do so, we interact S&P 500 experience with an indicator for women managers and an indicator for whether the manager is highly connected. We obtain information on managers' connections from BoardEx and call a manager highly connected if she has more connections than the median of all managers in the same industry-year. As in Section 3.1, we use two industry classifications: 4-digit SIC codes, and the Hoberg-Phillips text-based industry classifications with 500 industries, calibrated to a granularity similar to 4-digit SIC codes.

Table 5 shows the results. We are most interested in the interaction term *S&P 500 Experience, New Firms* $\times$ *Highly Connected* and the triple interaction *S&P 500 Experience, New Firms* $\times$ *Female* $\times$ *Highly Connected*. The interaction of S&P 500 experience and the highly

[24]Because we find that S&P 500 experience is associated with significantly more positions in the *same* industry, using the most granular classification possible, defining "the same industry" narrowly, will bias our results towards zero. Consistent with this prediction, the patterns we document in Table 4 remain broadly similar—and become slightly more pronounced—when using broader industry definitions, such as 2- or 3-digit SIC codes, and Hoberg-Phillips Text-based Fixed Industry Classifications with 100 or 300 industries, calibrated to match the granularity of 2- or 3-digit SIC codes.

connected dummy is not statistically significant for independent directorships (columns 1-2). However, it is negative and borderline statistically significant ($p < 0.10$) for executive positions (columns 3-4), suggesting that network connections and S&P 500 work experience may be substitutes when individuals are considered for executive positions at S&P 500 firms. The triple interaction of S&P 500 experience, the highly connected indicator, and the indicator for women is negative and statistically significant for independent directorships (columns 1-2), and not statistically significant for executive positions (columns 3-4). The large negative coefficient for independent directorships suggests that highly connected women in particular benefit significantly less from S&P 500 experience relative to both less connected women and to highly connected men.[25]

Looking at the level coefficients, we continue to find that experience at new S&P 500 firms is associated with more future executive and independent director positions, even after controlling for whether the manager is highly connected, and interaction terms. Our results also reflect the well-established finding from the literature that highly connected individuals are more likely to obtain future positions.

In short, we find that for directorships, S&P 500 experience and network connections are independent of each other for men, but they are substitutes for women. For executive positions, we find some evidence that S&P 500 experience and network connections are substitutes. The observation that highly connected women benefit less from S&P 500 experience when seeking independent directorships contributes to our understanding of the differences in the career paths (and potential obstacles) of men and women managers.

[25] We obtain qualitatively similar results using coarser industry definitions, and/or using terciles, quintiles, or deciles.

3.3. *When do Managers Obtain the New Positions at S&P 500 Firms?*

Finally, we study the career trajectories of managers by varying the number of years we keep each manager in our sample. Rather than retaining individuals for 10 years from their first appearance in the sample, we repeat the analysis in Table 2 retaining only the first 5 years in the sample, and then again with the entire sample. By comparing the results across horizons, we gauge how the relationship between S&P 500 experience and subsequent positions changes over time.

Table 6 shows that women with S&P 500 experience are not significantly less likely to obtain independent directorships (column 1) or executive positions (column 4) than men at the 5-year horizon. However, at the 5-year horizon, S&P 500 experience does not predict significantly more independent director positions even for men. The significant difference between men and women emerges as we move from a 5-year horizon to a 10-year horizon (columns 1-2 and 4-5 for independent directorships and executive positions, respectively). As discussed in Section 2.3, the negative coefficient on the interaction completely offsets the positive coefficient on S&P 500 experience. The point estimates and statistical significance on the four experience coefficients—the experience term and its interaction with the indicator for women, for both independent directorships and executive positions—remain similar as we move from 10 years to the entire career (columns 2-3 and 5-6). The only notable change when moving from 10 years to the entire horizon is that the coefficient of the indicator for women increases from 0.004 to 0.007 and becomes statistically significant at the 5% level for independent directorships. This result suggests that

women who stay in corporate careers longer are more likely to receive independent directorships, although this effect is more than offset for women with S&P 500 experience.[26]

4. Why Don't Women Benefit From S&P 500 Experience?

Our main result, that S&P 500 experience is valuable for men but not for women, has two contrasting interpretations. The first is that women receive less credit than men for the same credential. Under this interpretation, the credential does not "matter" for women because it is viewed as less valuable on a woman's résumé than on a man's.

The second interpretation, which we refer to as "saturation," is that S&P 500 firms are actively seeking out women to hire as executives or independent directors. Because qualified women are in high demand, firms may be less concerned about elite credentials (such as S&P 500 experience) when selecting women than they are when selecting men. Under this interpretation, the credential doesn't matter for women because they are viewed as qualified—and receive managerial positions—*even without* S&P 500 experience.

While these two interpretations are observationally equivalent in the full sample, we exploit time-series and cross-sectional variation for indirect evidence about which is more likely. First, we note that while qualified women may currently be in high demand for directorships and executive positions, their historical underrepresentation in such roles suggests that this is less likely to have been true at the beginning of our sample. Second, we exploit the fact that managers tend to stay within the same industry. This, coupled

[26] At first blush, one may attribute this increase in the size and significance of the female coefficient in part to having more manager-year observations towards the end of our sample, when firms were actively seeking out women for their boards. However, this is unlikely to be the case: the coefficient equals 0.005 using a 5-year horizon (column 1) and *declines* to 0.004 when we use a 10-year horizon (column 2). If the results were driven by a time trend, the point estimates should increase monotonically with longer horizons.

with the fact that the percentage of women in the labor market differs widely across industries, suggests that saturation is likely to be most severe in industries with relatively few women, and least severe in industries with a large proportion of women among rank and file employees.

4.1. *Have Women Benefited More From S&P 500 Experience Over Time?*

To study time-series variation in the coefficient estimates, we repeat the main analysis for each (overlapping) 10-year period within our sample. We plot the coefficient on the interaction term from each of these regressions in Figure 3, showing the last year of each 10-year period on the horizontal axis. If the negative interaction term captured saturation in the latter part of our sample because firms have been increasing their efforts to recruit women, the coefficient of the interaction term should be decreasing over time.

We find little evidence of this. Figure 3 shows that the coefficient on the interaction term remains relatively constant over time for both independent directorships and executive positions. For independent directorships, we see an increase in the coefficient estimates in the 1990s, a decline between 1999-2004, and a gradual increase thereafter. For executive positions, the point estimates fluctuate a little, but display no discernible pattern. In all cases, the confidence intervals overlap. Table IA.4 in the Internet Appendix uses a triple interaction specification to test whether the interaction term changes between the first and second part of the sample. The difference is not statistically significant for either independent directorships or executive positions.[27] If saturation is the explanation for

[27]We use two different years to split the sample. Our preferred split is 2004, which represents the midpoint of the observations in our sample (49 versus 51%) as data are sparser in the early years. We also present the results splitting the sample in 2000, which is the midpoint of years in the sample (19 and 19). In untabulated analysis, we repeat the analysis using 2001, 2002, and 2003. Splitting in 2000 generates the most statistically significant estimate on the coefficient of interest. Even in that specification, shown in odd columns of Table IA.4, the coefficient is not statistically significant.

the null result for women, this would imply that women have been highly sought after for independent directorships and executive positions for decades.[28] In untabulated results, we repeat the analysis from Figure 3 using the total effect of S&P 500 experience for women (the sum of the coefficients on S&P 500 experience and its interaction with the female indicator) and again find no clear pattern.

4.2. *Do Women Benefit More From S&P 500 Experience In Certain Industries?*

Next, we exploit cross-sectional variation in the percentage of women employees across industries. As Section 3.1 shows, managers tend to obtain new positions in industries in which they have previously worked. Because of this, women may be in especially short supply in industries that have few women employees. Under the saturation hypothesis, firms in these industries should be more willing to overlook a lack of S&P 500 experience among women candidates for executive or board positions. As a result, S&P 500 experience should "matter" less for women in these industries, since even women *without* S&P 500 experience can obtain the highest level managerial positions at S&P 500 firms.

Figure 4 plots the interaction term between S&P 500 experience and the female indicator on the vertical axis against the percentage of workers in each SIC division who are women on the horizontal axis.[29] We find no clear relationship between the coefficient

[28]The two interpretations may coexist. It is possible that women were receiving less credit for the same credential in the early period, and this has been replaced by an eagerness to attract women more recently. If this were the case, we would expect Figure 3 to display a hump-shaped pattern. Negative coefficients in the early period should become less negative over time, reflecting a shift away from undervaluing women's credentials. The coefficient might even become positive, reflecting a market that places a premium on qualifications in the hands of women. Eventually, the coefficient declines over time as the market becomes saturated: credentials no longer matter for women, as even those lacking credentials are recruited. We see no clear evidence of this pattern in Figure 3.

[29]We obtain data on the percentage of women workers from the Bureau of Labor Statistics, https://www.bls.gov/cps/tables.htm#charemp and map their industry classifications manually into SIC divisions.

of the interaction term and the percentage of workers in an industry who are women.[30] Overall, neither of these tests provides evidence in favor of the saturation hypothesis.

5. Conclusion

We study how the same credentials predict career outcomes for women and men in the labor market for top executives and independent directors. We focus on "marginal" S&P 500 firms, and rely on within-firm variation and managers who joined firms before they were added to the index. Finally, we difference out any unobservables that affect both women and men within the same firm-year.

Strikingly, we show that S&P 500 experience leads to more future independent directorships and executive positions for men, but not women, suggesting that the same credential is evaluated differently when firms consider candidates from historically underrepresented groups. The increase for men is significant, 12% relative to the sample average for independent directorships and 42% for executive positions. Yet a woman with S&P 500 experience obtains fewer future executive positions at S&P 500 firms than a man without it. S&P 500 experience predicts new positions at S&P 500 firms in industries that the manager has previously worked in, but not in other industries, and it may partially substitute for having a large personal network. The gender gap in the value of S&P 500 experience shows no time trend and is similar across industries.

Our results have implications for the understanding of how firms recruit executives and directors, and of the role that experience at large public firms plays in their choice.

[30] As with the time series analysis, in untabulated results, we repeat the analysis from Figure 4 using the total effect of S&P 500 experience for women (the sum of the coefficients on S&P 500 experience and its interaction with the female indicator). Here again, we find no clear pattern.

The evidence indicates that experience at an S&P 500 firm opens the door to future executive and non-executive positions at other S&P 500 firms for men, but not for women. Combined with existing evidence of "pipeline problems" for women in top positions, the differential evaluation of work experience that we document represents a further obstacle to increasing the representation of women on corporate boards and among top executives.

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FIGURE 1. Histogram of Size Rank
For Firms On vs. Not On the S&P 500

The two histograms show the empirical distribution of firm-year observations in CRSP that are on (left graph) and are not on (right graph) the S&P 500 index each year throughout our sample period 1980-2018 by their size ranking among all firms in CRSP. A rank of k means that the firm is the k-th largest by equity market capitalization among all firms in CRSP that year. Size rankings are shown in bins of 50 ranks. The two dashed vertical lines in each graph represent the rank cutoffs of 350 and 650 used in the empirical analysis of the paper.

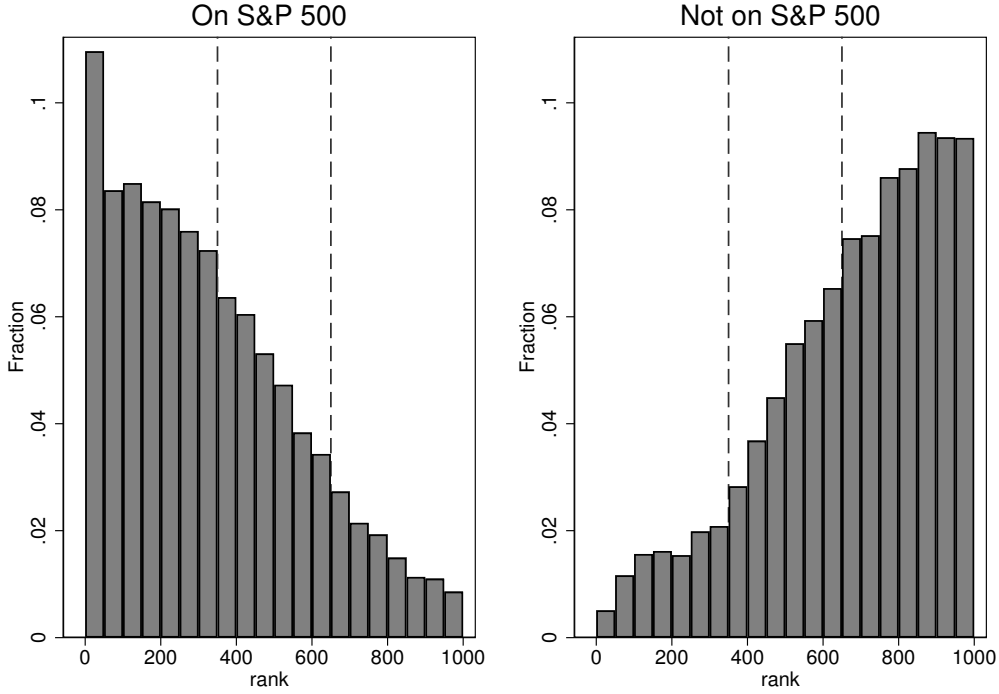


FIGURE 2. Propensity Score Distributions
For Firms On vs. Not On the S&P 500

The graph shows the distribution of estimated propensity scores for our regression sample using bins of 0.05. The light gray bars above the horizontal axis show the distribution of propensity scores for the treated observations (firms on the S&P 500), and the dark gray bars below the axis show the distribution for the control observations (firms not on the S&P 500). A firm enters our sample the year it is first in the size range [350, 650], and remains in the sample until 2018, or until it disappears from CRSP-Compustat, whichever is sooner. Propensity scores are estimated using a probit regression of all firms in CRSP-Compustat for the period 1980-2018, with the same covariates as listed in Table 2. The results of this probit regression are in Table IA.1 of the Internet Appendix.

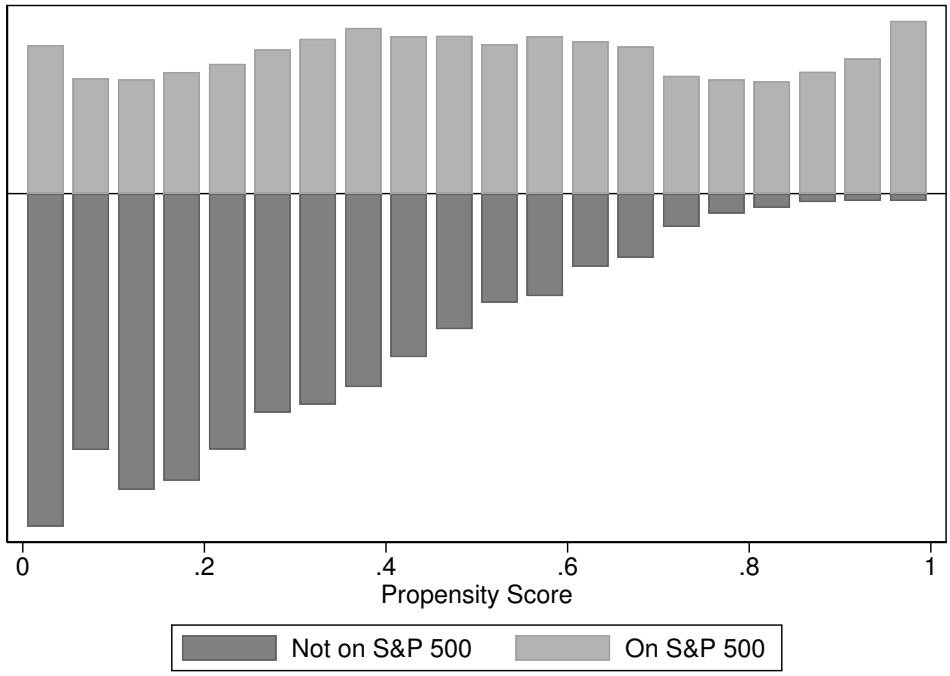


FIGURE 3. Difference in the Value S&P 500 Experience
For Women vs. Men, Over Time

This figure shows coefficient estimates from rolling 10-year periods within our sample. We re-estimate the model reported in column 3 of Table 2 for each 10-year period. The horizontal axis shows the last year of the period. The vertical axis shows the coefficient estimate of S&P 500 Experience, New Firm × Female and the 95% confidence interval. The first plot shows the coefficient estimate for New Independent Directorships as the dependent variable (Table 2 Panel A) and the second plot shows the coefficient estimate for New Executive Directorships (Table 2 Panel B).

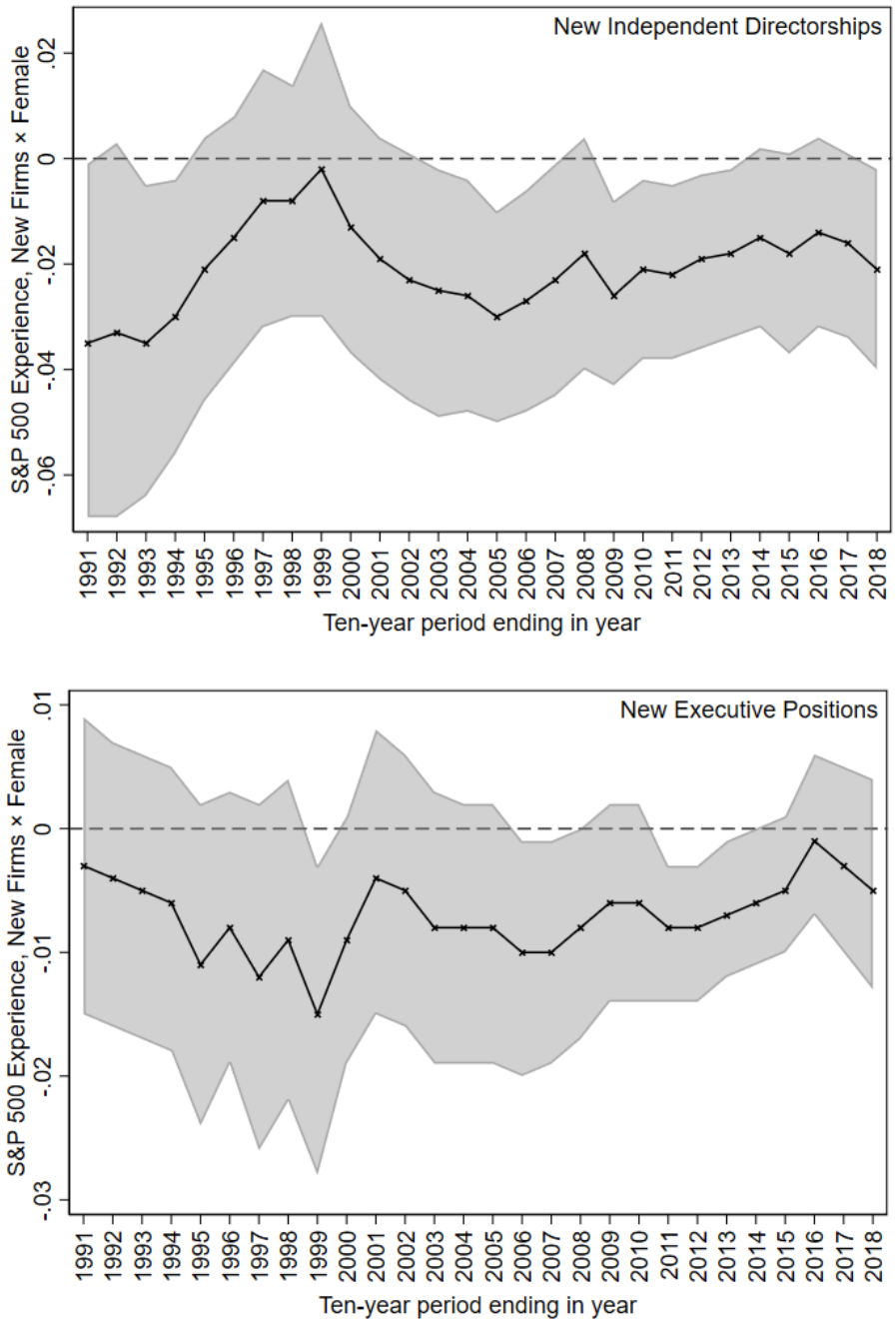
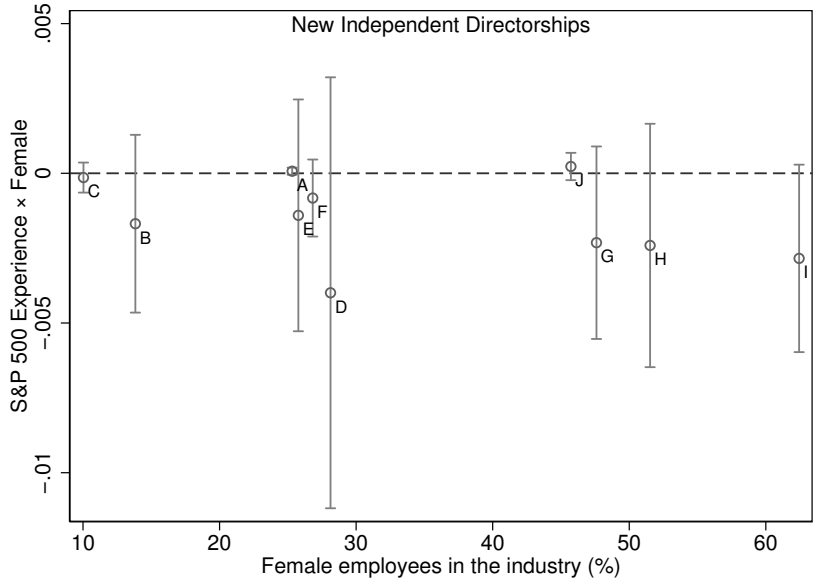


FIGURE 4. Difference in the Value S&P 500 Experience
For Women vs. Men, Across Industries

This figure shows coefficient estimates from different industries arranged by the percentage of workers in the industry who are women. We re-estimate the model reported in column 3 of Table 2 changing the dependent variable to the number of new positions obtained at S&P 500 firms in a particular industry. The horizontal axis shows the percentage of workers in that industry (SIC division) who are women, obtained from the Bureau of Labor Statistics. The vertical axis shows the coefficient estimate of S&P 500 Experience, New Firm × Female and the 95% confidence interval. The first plot shows the coefficient estimate for New Independent Directorships in each industry as the dependent variable (Table 2 Panel A) and the second plot shows the coefficient estimate for New Executive Directorships in each industry (Table 2 Panel B). The SIC divisions labeled in each graph are A - *Agriculture, Forestry, And Fishing*; B - *Mining*; C - *Construction*; D - *Manufacturing*; E - *Transportation, Communications, Electric, Gas, And Sanitary Services*; F - *Wholesale Trade; G - Retail Trade*; H - *Finance, Insurance, and Real Estate*; I - *Services*; J - *Public Administration*.



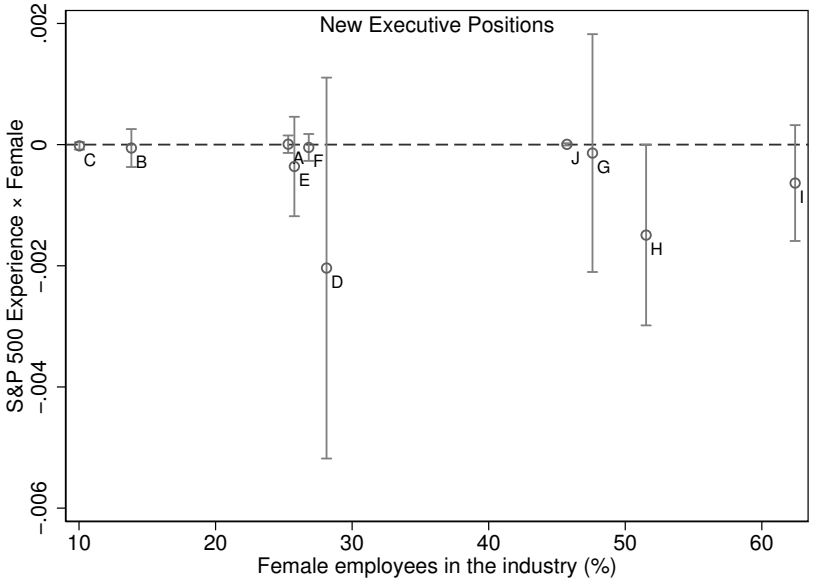


TABLE 1. Descriptive Statistics

This table presents descriptive statistics for our main regression sample. Executives and independent directors enter the sample when they first work for a firm ranked 350-650 by size in the CRSP database in any year between 1980-2018 and remain in the sample for a maximum of 10 years from their first appearance. During this time, we track all other positions they have at other firms. There are 3,810 unique firms and 10,205 unique managers (executives or independent directors) in our sample. Panel A shows the variables used in the analysis of manager careers in Section 2. The unit of observation in Panel A is a manager $\times$ firm $\times$ year. Panel B compares the characteristics of women and men in our sample. Panel C compares the careers of managers entering the sample through an affiliation with S&P 500 firms and non-S&P 500 firms. The last two columns in Panels B and C show the difference in means (medians) between the two groups. The symbols *, **, and *** indicate that the difference is statistically significant at the 10%, 5%, and 1% level, respectively. All dollar values are in millions of USD. *New Roles* is the number of new executive or director roles obtained by individual i in year t. *New Roles at S&P 500 firms* is the number of new executive or director roles obtained by individual i in year t at firms that are on the S&P 500 in year t. *New Executive Roles (Independent Directorships) at S&P 500 firms* is the number of new executive roles (independent directorships) obtained by individual i in year t at firms that are on the S&P 500 in year t. *S&P 500 Experience* is an indicator variable equal to one if individual i has had experience as an executive or director of an S&P 500 company at some point up to and including year $t-1$. *S&P 500 Experience, New (Established) Firm* is an indicator equal to one if individual i was an executive or director of a company that was added to the S&P 500 company when it was added to the index (joined the company after it was added to the index) at some point up to and including year $t-1$. *Female* is an indicator variable equal to one if the manager is female. *Manager Age* is the manager's age in years. *Yearly Stock Turnover by Value* is the dollar value traded over the past year divided by average market capitalization (number of shares outstanding multiplied by share price) over the past year. Averages for both measures are taken over monthly values over the previous 12 months. *Min Monthly Trading Volume* is the minimum of monthly trading volume over the last 6 months. *Market Capitalization* is the number of shares outstanding multiplied by share price, obtained from CRSP. *IPO Date Was at Least 1 Year Ago* is an indicator variable equal to one if the first date on which the security appeared in CRSP was at least one year (365 days) ago. *Eligible exchange* is an indicator equal to one if the exchange code for the security, as defined by CRSP, is none of the following: Halted by Primary Listing Exchange, Suspended by Primary Listing Exchange, Not Trading on Primary Listing Exchange, Bats (As Quoted By NASDAQ), Boston Stock Exchange, Chicago Stock Exchange, Pacific Stock Exchange, Philadelphia Stock Exchange, Toronto Stock Exchange, and Over-The-Counter (Non-NASDAQ Dealer Quotations) (exched -2, -1, 0, 5, 10, 13, 16, 17, 19, and 20). *Eligible Share Class* is an indicator equal to one if the share class for the security, as defined by CRSP, is equal to either "Ordinary Common Shares - Securities which need not be further defined" or "Ordinary Common Shares - REIT's (Real Estate Investment Trusts)" (shrcd 11 or 18). *Past Quarter Earnings* is net income excluding discontinued operations (per the S&P 500 index guidelines), scaled by total assets, measured in the most recent quarter. *Past Quarter Earnings > 0* is an indicator equal to one if past quarter earnings are positive. *Past Year Earnings* is net income excluding discontinued operations (per the S&P 500 index guidelines), scaled by total assets, measured in the previous year. *Past Year Earnings > 0* is an indicator equal to one if past year yearnings are positive. *Age Entered (Left) Sample* is the age of the manager, in years, at the time that she entered (left) the sample. *Age Entered Sample as Executive (Independent Director)* and *Age Left Sample as Executive (Independent Director)* are defined analogously but condition on individuals entering or leaving the sample in an executive (independent director) role. *Spell in Sample* is the total number of years a manager spends in the unrestricted sample – including her entire career history available. *Past Roles* is the total number of positions that the individual has held in the sample up to and including year $t-1$. *Past Executive/Independent/CEO Roles* and *Roles at Public Firms* are defined analogously. *Nr of Connections* is the total number of connections of the individual. *Nr of Employment Connections* is the number of connections established through employment at the same firm. *Firm Rank at Entry* is the rank of the firm (by size in the CRSP database) that the individual was affiliated with when entering the sample. *Firm Rank at Entry, Executive (Independent Director)* is defined analogously but conditions on individuals entering the sample in an executive (independent director) role.

Panel A — Managerial Careers and Firm Characteristics

	Mean	Median	SD	N
New Roles	0.412	0	0.824	89,302
New Roles at S&P 500 firms	0.077	0	0.288	89,302
New Executive Roles at S&P 500 Firms	0.012	0	0.113	89,302
New Independent Directorships at S&P 500 Firms	0.050	0	0.230	89,302
S&P 500 Experience	0.575	1	0.494	89,302
S&P 500 Experience, New Firms	0.191	0	0.393	89,302
S&P 500 Experience, Established Firms	0.413	0	0.492	89,302
Female (d)	0.106	0	0.308	89,302
Manager Age	59.7	60	8.41	89,302
Yearly Stock Turnover by Value	2.12	1.46	2.29	89,302
Min Monthly Trading Volume (m$)	21.7	6.90	61.3	89,302
Market Capitalization (m$)	8,052	3,268	20,630	89,302
IPO Date At Least 1 Year Ago (d)	0.958	1	0.200	89,302
Eligible Exchange (d)	0.999	1	0.031	89,302
Eligible Share Class (d)	0.911	1	0.285	89,302
Past Quarter Earnings	0.005	0.011	0.504	89,302
Past Quarter Earnings > 0 (d)	0.642	1	0.479	89,302
Past Year Earnings	0.033	0.043	0.307	89,302
Past Year Earnings > 0 (d)	0.775	1	0.418	89,302

Panel B — Careers of Women and Men

	Women		Men		Difference in	
	Mean	Median	Mean	Median	Means	Medians
Age Entered Sample	53.7	54	56.5	57	0.049***	0.053***
Age Left Sample	62	62	66.2	68	0.063***	0.088***
Age Entered as Indep. Dir.	54.0	54	57.6	58	0.062***	0.069***
Age Left as Indep. Dir.	62.3	63	66.9	69	0.068***	0.087***
Age Entered as Executive	50.4	51	52.8	53	0.046***	0.038
Age Left as Executive	54.7	56	58.7	59	0.067***	0.051***
Spell in Sample	9.27	8	10.6	9	0.129***	0.111***
Past Roles	4.05	3	4.66	4	0.131***	0.250***
Past Indep. Directorships	3.29	2	3.24	2	0.016	0
Past Exec. Roles	0.756	0	1.42	1	0.468***	1***
Nr of Connections	1,575	828	1,015	422	0.356***	0.491***
Nr of Employment Connections	1,151	475	779	310	0.323***	0.347***
Firm Rank at Entry	499	500	513	523	0.028***	0.044***
Firm Rank at Entry, Exec.	520	518	515	524	0.010	0.012
Firm Rank at Entry, Indep. Dir.	500	501	516	528	0.031***	0.051***

Panel C — Careers of Managers Entering the Sample at Firms on and not on the S&P 500

	Non-S&P 500 Firms		S&P 500 Firms		Difference in	
	Mean	Median	Mean	Median	Means	Medians
Female (d)	0.092	0	0.141	0	0.342***	0
Manager Age	56.3	56	55.9	56	0.008**	0
Past Roles	4.79	4	4.22	3	0.120***	0.250***
Past Indep. Directorships	3.43	2	2.92	2	0.150***	0
Past Exec. Roles	1.37	1	1.31	1	0.044*	0
Past CEO Roles	0.659	0	0.631	0	0.043	0
Past Roles at Public Firms	2.68	2	2.51	2	0.063***	0

TABLE 2. Subsequent Career Outcomes

This table reports the coefficient estimates from weighted OLS regressions. The dependent variable in Panel A is all future independent directorships obtained by individual i in year t. The dependent variable in Panel B is future executive positions obtained by individual i in year t. Columns (1) - (3) of each panel relate to future roles at S&P 500 firms; columns (4) - (6) relate to future roles at non-S&P500 firms. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was a director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls* include the natural logarithm of equity market capitalization, two proxies for liquidity ((i) minimum monthly trading volume over the last 6 months, and (ii) dollar value traded over the past year divided by average market value over the past year), a dummy indicating that the firm's IPO date was at least one year ago, dummies for eligible share class and exchange, earnings before extraordinary items scaled by total assets in each of the past quarter and the past year, and dummies indicating that earnings before extraordinary items were positive in each of the past quarter and year. *Established Firm Controls* represent a dummy variable equal to one if individual i became an executive or director of a company already on the S&P 500 company at some point up to and including year $t-1$, as well as a term interacting this with *Female*. *Current Exec. Control* is a dummy variable equal to one if the individual is employed as an executive in year $t-1$. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	S&P 500 Firms			Non-S&P 500 Firms		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: New Independent Directorships						
S&P 500 Experience,	0.010***	0.006**	0.006**	-0.021**	-0.013	-0.011
New Firms	(5.15)	(2.50)	(2.38)	(-2.52)	(-1.47)	(-1.30)
S&P 500 Experience,	-0.013**	-0.017***	-0.017***	0.014	0.013	0.013
New Firms × Female	(-2.32)	(-2.79)	(-2.80)	(0.64)	(0.63)	(0.62)
Female	0.008**	0.004	0.004	-0.060***	-0.051***	-0.051***
	(2.26)	(1.21)	(1.21)	(-3.80)	(-3.52)	(-3.49)
Adjusted R^2	0.017	0.027	0.027	0.021	0.070	0.070
N	89,302	89,302	89,302	89,302	89,302	89,302
Panel B: New Executive Positions						
S&P 500 Experience,	0.007***	0.005***	0.005***	-0.009***	-0.006*	-0.006*
New Firms	(6.11)	(4.07)	(3.82)	(-3.08)	(-1.71)	(-1.71)
S&P 500 Experience,	-0.004**	-0.005**	-0.005**	0.006	0.005	0.005
New Firms × Female	(-2.09)	(-2.17)	(-2.17)	(0.91)	(0.72)	(0.70)
Female	-0.004***	-0.004***	-0.004***	-0.028***	-0.026***	-0.026***
	(-4.69)	(-4.08)	(-4.15)	(-6.05)	(-5.38)	(-5.39)
Adjusted R^2	0.005	-0.004	-0.004	0.012	0.026	0.026
N	89,302	89,302	89,302	89,302	89,302	89,302
Firm Controls			Yes			Yes
Established Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE		Yes	Yes		Yes	Yes

TABLE 3. Subsequent Positions at S&P 500 Firms
Robustness Tests

This table presents results from 6 alternative specifications of the model used to estimate the results presented in Table 2. The dependent variable in Panel A is a future independent directorships at S&P 500 companies obtained by individual i in year t. The dependent variable in Panel B is future executive positions at S&P 500 companies obtained by individual i in year t. For convenience, column (1) repeats column (3) from Table 2. Column (2) restricts the sample to observations with estimated propensity scores between 0.1 and 0.9. Column (3) does the same as column (2), but then reports the coefficient estimates from regressions reweighted using Inverse Probability Weights. Column (4) tncludes controls for future firm performance. Column (5) restricts attention to managers who remained in the sample for at least 10 years. Columns (6) and (7) use include only individuals who were associated with a firm ranked within the range [300, 700] and [400, 600] by size, respectively. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was a director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. Except for columns (6) and (7), we include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Future Performance Controls* include the natural logarithm of equity market capitalization, earnings before extraordinary items scaled by total assets, and stock returns, measured in year $t+1$. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. All models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Baseline	PS	IPW	Future	$\geq$ 10 yrs	[300, 700]	[400, 600]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: New Independent Directorships							
S&P 500 Experience,	0.006**	0.007***	0.006**	0.006**	0.007**	0.006***	0.002
New Firms	(2.38)	(2.63)	(2.37)	(2.38)	(2.45)	(2.64)	(0.88)
S&P 500 Experience,	-0.017***	-0.018***	-0.014**	-0.017***	-0.019***	-0.016***	-0.018***
New Firms × Female	(-2.80)	(-2.78)	(-2.10)	(-2.80)	(-2.63)	(-2.73)	(-2.77)
Female	0.004	0.004	0.005	0.004	0.005	0.008**	0.006
	(1.21)	(0.91)	(1.10)	(1.21)	(1.02)	(2.14)	(1.46)
Adjusted R^2	0.027	0.030	0.038	0.027	0.025	0.027	0.026
N	89,302	69,961	69,961	89,302	70,581	98,301	75,827
Panel B: New Executive Positions							
S&P 500 Experience,	0.005***	0.005***	0.005***	0.005***	0.004***	0.005***	0.004***
New Firms	(3.82)	(3.83)	(3.83)	(3.82)	(2.87)	(3.89)	(2.77)
S&P 500 Experience,	-0.005**	-0.006***	-0.005**	-0.005**	-0.005**	-0.006***	-0.004
New Firms × Female	(-2.17)	(-2.69)	(-2.08)	(-2.17)	(-2.02)	(-2.69)	(-1.58)
Female	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***	-0.005***
	(-4.15)	(-3.44)	(-3.14)	(-4.15)	(-3.06)	(-4.25)	(-5.24)
Adjusted R^2	-0.004	0.003	0.010	-0.004	-0.005	-0.002	-0.006
N	89,302	69,961	69,961	89,302	70,581	98,301	75,827
Future Performance Controls				Yes			
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Established Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	
Current Exec. Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 4. Subsequent Positions at S&P 500 Firms
In the Same / Different Industry

This table reports the coefficient estimates from weighted OLS regressions. The dependent variable in columns (1) - (4) is the number of new independent directorships at S&P 500 firms obtained by individual i in year t. The dependent variable in columns (5) - (8) is the number of new executive roles at S&P 500 firms obtained by individual i in year t. *Same Industry* refers to subsequent roles in an industry that the individual has previous work experience as an executive or an independent director. *Different Industry* refers to subsequent roles in an industry that the individual does not have previous work experience as an executive or an independent director. In odd columns, industry is defined by 4-digit SIC code. In even columns, industry is defined using the Hoberg-Phillips 500 Text-based Fixed Industry Classifications (TFIC). *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was an independent director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Independent Directorships				Executive Positions			
	Same Industry		Different Industry		Same Industry		Different Industry	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
S&P 500 Experience,	0.008***	0.006***	-0.000	0.001	0.004***	0.003***	-0.000	0.001
New Firms	(5.70)	(4.18)	(-0.10)	(0.69)	(3.28)	(2.94)	(-0.38)	(0.95)
S&P 500 Experience,	-0.002	-0.001	-0.014***	-0.018***	-0.005***	-0.005***	-0.000	-0.001
New Firms × Female	(-0.52)	(-0.31)	(-2.82)	(-3.85)	(-3.70)	(-3.54)	(-0.29)	(-0.92)
Female	-0.001	-0.002**	0.004	0.005	-0.000	-0.000	-0.002**	-0.002**
	(-1.06)	(-1.98)	(1.04)	(1.50)	(-0.07)	(-0.37)	(-2.57)	(-2.05)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Established Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Definition	SIC4	TFIC500	SIC4	TFIC500	SIC4	TFIC500	SIC4	TFIC500
Adjusted R^2	0.028	0.018	0.020	0.021	-0.006	-0.005	-0.009	-0.011
N	89,302	89,302	89,302	89,302	89,302	89,302	89,302	89,302

TABLE 5. Subsequent Positions at S&P 500 Firms
Interaction Between Experience, Gender, and Connections

This table reports the coefficient estimates from weighted OLS regressions. The dependent variable in columns (1) and (2) is the number of new independent directorships at S&P 500 firms obtained by individual i in year t. The dependent variable in columns (3) and (4) is the number of new executive roles at S&P 500 firms obtained by individual i in year t. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was an independent director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. *Highly Connected* is a dummy variable equal to one if individual i had at least the median number of connections among individuals within the same industry in year t. In odd columns, industry is defined by 4-digit SIC code. In even columns, industry is defined using the Hoberg-Phillips 500 Text-based Fixed Industry Classifications (TFIC). We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Independent Directorships		Executive Positions	
	(1)	(2)	(3)	(4)
S&P 500 Experience, New Firms	0.006**	0.007**	0.007***	0.008***
	(2.09)	(2.35)	(4.49)	(4.50)
S&P 500 Experience, New Firms	-0.007	-0.011	-0.007***	-0.004
× Female	(-0.89)	(-1.33)	(-2.94)	(-0.94)
S&P 500 Experience, New Firms	0.000	-0.002	-0.004*	-0.004*
× Highly Connected	(0.03)	(-0.58)	(-1.69)	(-1.66)
S&P 500 Experience, New Firms	-0.030***	-0.021**	0.003	-0.005
× Female × Highly Connected	(-2.70)	(-2.04)	(0.51)	(-0.87)
Female	0.005	0.005	-0.004***	-0.004***
	(1.32)	(1.25)	(-3.56)	(-3.70)
Highly Connected	0.009***	0.010***	0.002**	0.002***
	(4.06)	(4.69)	(2.35)	(2.69)
Firm Controls	Yes	Yes	Yes	Yes
Established Firm Controls	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry Definition	SIC4	TFIC500	SIC4	TFIC500
Adjusted R^2	0.029	0.029	-0.003	-0.003
N	76,968	76,968	76,968	76,968

TABLE 6. Subsequent Positions at S&P 500 Firms, Varying Horizons

This table reports the coefficient estimates from weighted OLS regressions. The dependent variable in columns (1) - (3) is the number of new independent directorships at S&P 500 firms obtained by individual i in year t. The dependent variable in columns (4) - (6) is the number of new executive roles at S&P 500 firms obtained by individual i in year t. In columns (1) and (4), we restrict attention to each individual's first 5 years in our sample. In columns (2) and (5), we restrict attention to each individual's first 10 years in our sample. In columns (3) and (6), we include all years. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was a director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *S&P 500 Experience, Established Firms* is a dummy variable equal to one if individual i became a director or executive of a company already on the S&P 500 company at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Independent Directorships			Executive Positions		
	5 years	10 years	All years	5 years	10 years	All years
S&P 500 Experience, New Firms	0.004	0.006**	0.005***	0.007***	0.005***	0.004***
	(1.11)	(2.38)	(2.88)	(3.30)	(3.82)	(4.92)
S&P 500 Experience, New Firms × Female	-0.002	-0.017***	-0.020***	-0.003	-0.005**	-0.004*
	(-0.21)	(-2.80)	(-4.31)	(-0.71)	(-2.17)	(-1.90)
Female	0.005	0.004	0.007**	-0.004***	-0.004***	-0.005***
	(1.04)	(1.21)	(2.11)	(-2.88)	(-4.15)	(-5.15)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Established Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.030	0.027	0.026	-0.002	-0.004	-0.003
N	51,798	89,302	131,013	51,798	89,302	131,013

Supplementary Internet Appendix to

Credentials Matter, but Only for Men: Evidence from the S&P 500

Intended for online publication.

TABLE IA.1. Propensity Score Estimation: Determinants of Inclusion in the S&P 500 Index

This table presents coefficient estimates from a probit regression of an indicator variable equal to one if the firm is on the S&P 500. The regression is estimated on the sample of all firms in CRSP-Compustat during the period 1980-2018. The table shows t statistics in parentheses below the coefficient estimates. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	On S&P 500 (d)
Yearly Stock Turnover by Value (m$)	-0.135***
	(32.14)
Min Monthly Trading Volume (m$)	0.005***
	(17.41)
Log Market Capitalization	0.549***
	(95.35)
IPO Date At Least 1 Year Ago (d)	0.278***
	(9.76)
Eligible Exchange (d)	0.634**
	(2.19)
Eligible Share Class (d)	0.913***
	(46.53)
Past Quarter Earnings	-0.024
	(-0.78)
Past Quarter Earnings > 0 (d)	0.068***
	(3.76)
Past Year Earnings	0.005
	(0.24)
Past Year Earnings > 0 (d)	0.071***
	(3.28)
Constant	-13.880***
	(-44.17)
Pseudo R^2	0.311
N	53,866

TABLE IA.2. Subsequent Positions at S&P 500 Firms
Independent Directorships and Executive Positions

This table reports the coefficient estimates from weighted OLS regressions. The dependent variable in columns (1) - (2) is the number of new independent directorships at S&P 500 firms obtained by individual i in year t. The dependent variable in columns (3) - (4) is the number of new executive roles at S&P 500 firms obtained by individual i in year t. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was a director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *S&P 500 Experience, Established Firms* is a dummy variable equal to one if individual i became a director or executive of a company already on the S&P 500 company at some point up to and including year $t-1$. *Any S&P 500 Experience* is a dummy variable equal to one if individual i has had experience as an independent directorships or executive of an S&P 500 company at some point up to and including year $t-1$. We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Independent Directorships		Executive Positions	
	(1)	(2)	(3)	(4)
S&P 500 Experience, New Firms	0.004*		0.004***	
	(1.83)		(3.67)	
S&P 500 Experience, Established Firms	0.010***		0.001	
	(3.66)		(0.78)	
Any S&P 500 Experience		0.009***		0.004***
		(3.62)		(3.58)
Firm Controls	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.026	0.026	-0.004	-0.004
N	89,302	89,302	89,302	89,302

TABLE IA.3. Subsequent Career Outcomes
Using S&P MidCap 400 and S&P SmallCap 600 Firms as Comparison

This table presents results from 6 alternative specifications of the model used to estimate the results presented in Table 2. The dependent variable in Panel A is all future independent directorships obtained by individual i in year t. The dependent variable in Panel B is future executive positions obtained by individual i in year t. Columns (1) - (3) of each panel relate to future roles at S&P MidCap 400 or S&P SmallCap 600 companies; columns (4) - (6) relate to future roles at non-S&P500 companies. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was a director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	S&P 500 Firms			S&P 400 and S&P 600 Firms		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: New Independent Directorships						
S&P 500 Experience,	0.010***	0.006**	0.006**	-0.001	-0.001	-0.001
New Firms	(5.15)	(2.50)	(2.38)	(-0.74)	(-0.65)	(-0.52)
S&P 500 Experience,	-0.013**	-0.017***	-0.017***	0.006	0.005	0.005
New Firms × Female	(-2.32)	(-2.79)	(-2.80)	(1.11)	(0.96)	(0.95)
Female	0.008**	0.004	0.004	0.004	0.003	0.003
	(2.26)	(1.21)	(1.21)	(1.44)	(1.10)	(1.14)
Adjusted R^2	0.017	0.027	0.027	0.009	0.025	0.025
N	89,302	89,302	89,302	89,302	89,302	89,302
Panel B: New Executive Positions						
S&P 500 Experience,	0.007***	0.005***	0.005***	-0.003***	-0.003***	-0.003***
New Firms	(6.11)	(4.07)	(3.82)	(-5.69)	(-4.49)	(-4.24)
S&P 500 Experience,	-0.004**	-0.005**	-0.005**	0.003**	0.003**	0.003**
New Firms × Female	(-2.09)	(-2.17)	(-2.17)	(2.11)	(2.03)	(2.04)
Female	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***
	(-4.69)	(-4.08)	(-4.15)	(-2.98)	(-3.04)	(-3.01)
Adjusted R^2	0.005	-0.004	-0.004	0.004	0.013	0.013
N	89,302	89,302	89,302	89,302	89,302	89,302
Firm Controls	No	No	Yes	No	No	Yes
Established Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	Yes	Yes	No	Yes	Yes

TABLE IA.4. Subsequent Positions at S&P 500 Firms
Interaction Between Experience, Gender, and Time Period

This table reports the coefficient estimates from weighted OLS regressions. The dependent variable in columns (1) and (2) is the number of new independent directorships at S&P 500 firms obtained by individual i in year t. The dependent variable in columns (3) and (4) is the number of new executive roles at S&P 500 firms obtained by individual i in year t. *S&P 500 Experience, New Firms* is a dummy variable equal to one if individual i was an independent director or executive of a company at the time that the company was added to the S&P 500 at some point up to and including year $t-1$. *Female* is a dummy variable equal to one if individual i is female. In odd columns, *Post Period* is a dummy variable equal to one if individual i obtined the position after 2000. In even columns, *Post Period* is a dummy variable equal to one if individual i obtined the position after 2004. We include only individuals who were associated with a firm ranked within the range [350, 650] by size, measured by equity market capitalization (defined as the price multiplied by the number of shares outstanding, as reported in CRSP) at some point in the past. *Firm Controls*, *Established Firm Controls*, and *Current Exec. Control* have the same meaning as in Table 2. Models also include fixed effects (FE) for the individual's age in year $t-1$, calendar year, the rank of the firm that caused the individual to enter the sample, and firm, as indicated at the bottom of each column. Standard errors are clustered by individual manager. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Independent Directorships		Executive Positions	
	(1)	(2)	(3)	(4)
S&P 500 Experience, New Firms	0.002	0.003	0.005**	0.006***
	(0.41)	(0.93)	(2.29)	(3.60)
S&P 500 Experience, New Firms	-0.006	-0.014*	-0.005*	-0.004
× Female	(-0.59)	(-1.69)	(-1.91)	(-1.36)
S&P 500 Experience, New Firms	0.006	0.006	0.000	-0.004
× Post Period	(1.36)	(1.40)	(0.15)	(-1.62)
S&P 500 Experience, New Firms	-0.016	-0.006	0.000	-0.000
× Female × Post Period	(-1.31)	(-0.62)	(0.08)	(-0.06)
Female	0.004	0.004	-0.004***	-0.004***
	(1.08)	(1.11)	(-4.22)	(-4.35)
Firm Controls	Yes	Yes	Yes	Yes
Established Firm Controls	Yes	Yes	Yes	Yes
Current Exec. Control	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Rank FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Split Year	2000	2004	2000	2004
Adjusted R^2	0.027	0.027	-0.004	-0.004
N	89,302	89,302	89,302	89,302