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Abstract

We explore whether demand factors contribute to low female board participation. We use time-varying public attention to gender equality as a shock that differentially affects the demand for female directors of firms with different ex ante culture towards gender equality. We find that public attention is associated with an increase in female board representation, especially in firms whose ex ante culture is more sympathetic to gender equality. Furthermore, public attention to gender equality changes the way female directors are recruited. First, the pool of female directors broadens without any obvious compromises on quality. Second, public attention to gender equality reduces the probability that connected men are appointed, leading to higher female board representation.

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Public Attention to Gender Equality and the Demand for Female Directors*

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Keywords: Boards, Gender, Public Attention, Networks, Connections, Homophily, Corporate Culture
JEL codes: G3, M5, D22

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Women are starkly underrepresented on corporate boards and more in general in leadership positions. Under-representation may be a consequence of demand or supply. Limited supply of women with the skills and experience to serve on the boards of listed companies may explain why in the absence of quotas, firms choose not to appoint female directors. However, demand may also play an important role. Preferences and stereotypes may lead to low demand for female directors and ultimately female board under-representation.

Carefully controlling for supply constraints, this paper asks whether demand factors associated with preferences and stereotypes contribute to depress female board participation. We exploit changes in public attention to gender equality, which are likely to be associated with changes in decision makers' awareness of gender equality problems, as a shock to the demand for female directors. When awareness improves, to what extent do firms increase female board representation? And if so, do they compromise on director quality? Do firms change recruiting policies? Answering these questions would allow us to evaluate whether increasing public awareness, a less contentious intervention than board quotas and other affirmative action policies, may increase female board representation.

To tease out the effects of public awareness, we build on the psychology literature on implicit attitudes, which has proposed that raising individuals' awareness of biases may reduce implicit biases and stereotyping (see, e.g., Bohnet, 2016; Pope, Price and Wolfers, 2018). Others argue however that some individuals may perceive public attention to gender equality as violating social norms, which may precipitate a backlash against women, as has been argued for example in the case of gender quotas (Goldin, 2002).

We conjecture that the effects of public attention to gender equality on individuals' attitudes towards career women are likely to vary depending on preferences and culture. We provide suggestive evidence that this is indeed the case. In particular, following heightened public attention to gender equality, implicit biases against career women appear to decrease to a larger extent for individuals with views that are ex ante more favorable to women, such as liberals and individuals who self-report to have less pronounced explicit biases against working women. The implicit biases of women against career women also become less pronounced when public

attention to gender equality is higher. However, the implicit biases of individuals who self-identify as conservatives and who explicitly prefer women to stay at home decrease to a lower extent.

Based on these findings, we conjecture that time-varying public attention to gender equality may increase the demand for female directors to a larger extent in firms that are ex ante culturally more female friendly for two reasons. First, decision makers in these firms are likely to always have been more favorable to women and their implicit biases may be further attenuated by public attention. Second, when they are made aware of gender equality problems, shareholders and other stakeholders in these firms, being ex ante more likely to be favorably disposed towards women, may put more pressure on management to reduce gender gaps in comparison to those in other firms.

We map individual characteristics that are associated with more favorable effects of public attention to gender equality on implicit biases (such as being explicitly more favorable to career women, being liberal, or being a woman) to firm characteristics (such as firms with better diversity ratings, firms that are Democratic leaning, or firms with ex ante greater female board representation). We then test to what extent the gender ratio of these firms is more positively affected by public attention to gender equality issues. We find that, following heightened public attention to gender equality, firms with ex ante characteristics that reflect explicit attitudes more favorable to women are indeed more likely to increase female board representation. We find no or even negative effects of public attention to gender equality on female board representation for firms that do not value diversity and firms that are Republican leaning.

These results hold when we control for the supply of eligible women for board positions in various ways. For example, building on prior evidence that directors are more likely to be local and to have industry-specific experience (Masulis, Wang and Xie, 2012), we include state-industry-year fixed effects because the supply of eligible women for board positions should be the same for firms in the same state, industry, and year. Yet, we expect firms' demand for female directors to vary due to their differential reactions to time-varying public attention to gender equality. Our results continue to hold in these specifications. These findings also indicate that our

results are not driven by firms' differential exposure to industry shocks correlated with public attention to gender equality, which are absorbed by the fixed effects.

Next, we explore how public attention to gender equality affects the way firms recruit female directors. Specifically, we examine how public attention to gender equality affects gender differences in newly appointed directors' qualifications and experiences and the role of prior connections in director appointments. We find that heightened public attention leads listed companies' boards to reach out to a broader pool of potential female directors, including women from other industries and women outside the existing board members' connection circle.

There are, however, no obvious compromises on the quality of newly appointed female directors. First, on average, female directors are more likely to have industry experience than newly appointed male directors. High public attention to gender equality reduces the gap in industry experience requested on female directors in comparison to male directors that are appointed by the same firm at the same time. Second, even in periods of high public attention, newly appointed female directors are more likely to have advanced education degrees and professional awards than male directors appointed by the same firm at the same time. Third, consistent with the idea that the qualities and expertise of female directors are well-suited to the boards on which they serve, female directors are as likely as other directors to sit on key committees, such as the audit committee and the compensation committee, and this tendency does not change with public attention to gender equality. Last but not least, announcement returns upon appointment are not statistically different for male and female directors even in periods of high public attention to gender equality, indicating that differences in unobserved abilities are unlikely.

We also find that female directors are less likely to have previously overlapped with other members of the board and become even more so in periods of high public attention to gender equality. On the one hand, this may reflect shortage in the supply of women within the network. Firms may thus incur large search costs to identify and appoint female directors from outside the network. On the other hand, biases due to homophily, that is, individuals' desire to associate with similar people, may prevail in network-based appointments and lead directors to prefer male

candidates within their networks. These biases in network-based appointments may contribute to limit the demand for connected female directors.

To shed light on why female directors are under-represented on the board, we explore how firms choose whom to appoint between all individuals who are connected with the firms' existing board members. We consider different types of connections either through prior jobs or also through educational programs and social activities. We examine how these connections affect firms' demand for female versus male directors and how public attention to gender equality affects the effect of connections for women versus men.

These tests indicate that connected men are more likely to be appointed to the board of a listed company than connected women, even after controlling for directors' qualifications and experiences. The results also hold if we restrict to connections established via common work experience on corporate boards or in listed companies. Furthermore, stronger connections with the current board members of a listed company, as reflected by a prior connection with the CEO or a larger number of connections with current board members, increase an individual's chance of being appointed to the company's board. However, for given strength of the connection, firms are more likely to appoint men over women. These results suggest that firms do not necessarily need to go a long way to identify suitable women, but rather that homophilistic biases lead directors to nominate individuals who are more similar to them.

An increase in public attention to gender equality not only reduces the differential effect of connections for men and women, but it is also associated with a lower reliance on connections in director appointments. These effects contribute to higher female board representation and suggest that, when public attention to gender equality is weak, homophily and other biases constrain female board representation when firms select candidates within their director networks.

This paper contributes to the literature on the labor market for corporate directors. This literature investigates how the characteristics of directors vary under different corporate circumstances (see, e.g., Boone, Field, Karpoff and Raheja, 2007; Denis, Denis, and Walker, 2015; Adams, Akyol, and Verwijmeren, 2018; Erel, Stern, Tan, and Weisbach, 2018). We explore how

public attention to gender equality affects gender diversity and other characteristics of the appointed directors.

By highlighting the role of demand factors in female board representation, we also contribute to the literature on discrimination and implicit biases. Individuals may discriminate against certain groups because of tastes (Becker, 1971) or because group membership provides information about a relevant characteristic (Phelps, 1972; Arrow, 1973), such as productivity. Discrimination may however also be outside of an individual's awareness and arise from implicit beliefs about gender and other stereotypes (Bertrand and Mullainathan, 2004; Bertrand, Chugh and Mullainathan, 2005; Bordalo, Coffman, Gennaioli and Shleifer, 2016, 2019). Our study provides evidence that implicit biases and preferences contribute to low demand for female directors and, consequently, female board under-representation.

Existing literature evaluates different interventions to change implicit bias and stereotypes and to increase female representation in leadership positions. For instance, a growing literature in economics and finance evaluates gender quotas in politics and corporate boards as an instrument to achieve gender equality, and their effects on the skills of leaders and economic outcomes (Matsa and Miller, 2011; Ahern and Dittmar, 2012; Besley, Folke, Persson and Rickne, 2017; Ferreira, Ginglinger, Laguna, and Skalli, 2017; Bertrand, Black, Lleras-Muney and Jensen, 2019). We complement this literature by studying how attention to gender equality affects board composition. Increasing public attention may be less contentious than affirmative-action policies and therefore more politically feasible.

Various interventions to reduce implicit biases have been evaluated in laboratory experiments. For instance, providing examples (mental imagery) that go against stereotypes appears to reduce implicit biases (Blair, Ma and Lenton, 2001). Beaman, Chattopadhyay, Duflo, Pande and Topalova (2009) and Dasgupta and Asgari (2004) show that implicit beliefs are malleable to the provision of role models, again suggesting that norms and stereotypes can be altered. Based on this evidence, most large corporations offer some sort of diversity training, aiming to increase awareness of the biases and to reduce unconscious discrimination. Yet, empirical evidence in favor of these kinds of interventions is mixed (Bohnet, 2016; Paluck and

Green, 2009). In addition, laboratory experiments may lack external validity, not least because of the subjects' background (mostly undergrads) and the difficulty of providing naturalistic incentives. Our study provides real-world evidence on the role of increased awareness in reducing biases.

Finally, our paper is related to an emerging literature highlighting the importance of corporate culture (Guiso, Sapenza and Zingales, 2014). In particular, Tate and Yang (2015) find that plants run by female managers have smaller gender wage gaps suggesting that female leadership cultivates a more female-friendly culture. Duchin, Simutin and Sosyura (2018) show that managerial preferences and cultural traits affect women outcomes in firms. We show that culture affects how firms react to public attention to gender equality. In this respect, our findings support the conclusions of Gorton and Zentefis' (2019) theoretical model that changes in social views in favor of minority groups may or may not affect corporate policies in the absence of government interventions if cultural traits are heterogenous.

1. Data

1.1 Measuring Public Attention to Gender Equality

We use Google Search Trends to construct an index of public attention to gender equality issues. Google Search Trends report the Google Search Volume Index (SVI) starting from January 2004, which is constructed as follows. First, for a specific search term or topic, Google constructs the ratio of the monthly total query volume for this search term or topic in a given geographic region relative to the total number of all queries in the same month and region. Then, Google rescales the monthly ratios across all the months in a given time period so that the month with the peak (lowest) search intensity for the given search term or topic gets a value of 100 (0).

The SVI measures the intensity of searches on a term or a topic during a given period of time in a given area. It is considered a good proxy for the interest and attention to a particular issue for several reasons. First, the aggregate search frequency reported by Google is likely to be representative of the search behavior of the general population. For example, Ginsberg et al. (2009) show that the queries in Google for search terms related to the flu accurately estimate influenza

epidemics across different regions. Second, Google search data have proved useful in a variety of settings. For instance, Choi and Varian (2012) show that Google search data are related to contemporaneous home sales, automotive sales, and tourism. Relatedly, Drake, Rouldstone and Thornock (2015) show that Google searches on particular firms are good proxies for investors' demand for information. Finally, we consider important to use a measure of *revealed* attention harnessing the collective interest of millions of users, as news coverage does not guarantee that investors pay attention to news. Consistently, Da, Engelberg, and Gao (2011) show that Google Search Trends capture attention better than news and headlines.

We use Google Search Trends to gauge public interest in gender equality between January 2004 and December 2017 in the U.S. The results we present hereafter are based on the search for the term "Gender Equality." However, the results are robust if we set the search for the terms "Gender Inequality" or "Feminism". The results are equally robust if we consider searches on the topics (instead of the terms) "Gender Equality" or "Gender Inequality". A search topic is broader than a search term, but is less precisely defined. These alternative searches lead to SVI indices that have a correlation in excess of 0.9 with our main proxy based on the search term "Gender Equality".

Panel A of Table 1 provides summary statistics for the "*Gender Equality SVI*", the average SVI on the search term "Gender Equality" over the previous 12 months in the U.S. We scale the original SVI data by 100 so that the values fall between 0 (the month with the lowest attention) and 1 (the month with the peak attention). Figure 1 shows the time-series pattern of the *Gender Equality SVI* between January 2005 and January 2018. While public attention to gender equality issues increases dramatically in the later part of our sample, the pattern of our index is non-monotonic. Public attention to gender equality appears to decrease between 2005 and 2008, temporarily increases around 2010, then to be pretty low up to 2012, when it starts to dramatically increase. This non-monotonic pattern, together with the fact that the results we present hereafter are generally robust if we limit the sample up to 2014, mitigates concerns that our analysis might only capture time trends.

The use of google trends allows us to be agnostic about the underlying drivers of the changing public attention to gender equality and to avoid any classification of events that would necessarily be arbitrary. However, as shown in Figure 1, we do find that the intensity of Google searches for gender equality is strongly and positively correlated with the intensity of searches for feminism, for famous career women, such as Hillary Clinton, for national public events related to women's rights, such as the debate on fair pay in the period leading to the 2007 Supreme Court's decision on Ledbetter v. Goodyear, the Women's March, and the Me-Too movement.

While the events highlighted above are clearly exogenous to the corporate world, a possible concern is that public attention to gender equality may be driven by changes in the corporate world, such as positive shocks to industries with more female representation, which could affect the demand for female directors. We deem this to be unlikely because the correlation between monthly google searches for "gender equality" and terms, such as "female director" or "female executive", is around 10% and far from being statistically significant. Nevertheless, in all our tests, the gender equality SVI is predetermined with respect to corporate choices. More importantly, we show that our results are robust if we absorb industry shocks or we allow firms in industries or states with different female board representation to be differentially exposed to public attention to gender equality.

1.2 Discrimination and Implicit Bias

Economists and psychologists have put forward the hypothesis that individuals do not necessarily consciously discriminate against certain groups because of tastes (Becker, 1971) or because group membership provides information about relevant characteristics (Phelps, 1972; Arrow, 1973), such as productivity. Discrimination may be unintentional and outside of an individual awareness (Bertrand and Mullainathan, 2004; Bertrand, Chugh and Mullainathan, 2005). Besides having preferences and beliefs towards different groups, which are often referred to as explicit attitudes, individuals make unconscious mental associations between members of a group (such as an African American or a woman) and a given attribute (e.g., productivity). These

implicit mental associations are referred to as implicit biases and may affect decision-making in a way that opposes individuals' explicitly expressed views, and even, explicitly known self-interests.

The Implicit Association Test (IAT) designed by Greenwald, McGhee, and Schwartz (1998) is widely used in psychology to measure implicit biases. It is based on the observation that subjects make connections much faster between pairs of ideas that are already related in their mind than between pairs of ideas that are unfamiliar. The relative strength of association can, therefore, be detected by comparing response time across the stereotypical and nonstereotypical block. The normalized difference in mean response times between the nonstereotypical and stereotypical test blocks is the D-measure of IAT bias, with higher values indicating stronger implicit bias.

We obtain the gender-career IAT scores from Project Implicit, a non-profit organization that facilitates research on implicit biases.[1] In the gender-career IAT, participants are asked to match words referring to a man or a woman with words about career or home related tasks. Many people react faster when pairing men with career and women with home related tasks. The data includes more than 960,000 U.S. individuals' IAT scores between January 2005 and December 2017. The IAT scores range between -2 and +2, with a larger value corresponding to a higher level of implicit mental association of men with career and women with family. The median value of the gender-career IAT score is 0.40, corresponding to a moderate degree of implicit bias against women pursuing careers. The data also reveals that more than 74% of the test takers exhibit some degree of implicit bias against women pursuing careers. Panel B of Table 1 present summary statistics for the gender-career IAT score.

Besides taking the IAT test, respondents provide demographic information (e.g., sex, age, race, education, income level, and family background) and answer a questionnaire on their explicit preferences on various issues (e.g., political preference, religiosity, preferences on women to stay at home). Interestingly, Panel B of Table 1 shows that IAT test takers are more likely to be women, liberals and individuals with at least a college degree. We use this additional information about the

[1] Webpage: https://implicit.harvard.edu/implicit/. Project Implicit constructs the IAT scores using the methodology in Greenwald, Nosek, and Banaji (2003).

respondents to construct our controls and to provide evidence on the cross-sectional differences of public attention to gender equality on implicit biases.

1.3 Corporate Boards and Firm Level Data

Our main source of corporate board data is the BoardEx database, which provides full biographies of directors and senior managers at U.S. public and private companies from 2005 to 2017. For each director, we obtain information on gender, education, professional experience, certifications, professional experience, education, and social networks, committee appointments, and outside board and committee service. Our main sample includes 5,936 U.S. listed companies from 2005 to 2018, for a total of 34,283 directors.

For this sample of directors of listed companies, we construct proxies for industry experience considering also their prior appointments in unlisted companies. We obtain the industries of prior employers from Compustat for listed companies and Bureau Van Dick's Orbis for unlisted companies.

To explore the importance of prior connections with existing directors for board appointments and to have an idea of the pool of potential candidates for directorships in listed companies, in some tests, we also consider the directors of U.S. unlisted companies and non-profit organizations. The sample of connected directors that are not appointed to a listed company's board during our sample period includes 489,847 individuals. Slightly over 13% of these directors of unlisted firms are women, a remarkably similar percentage to that of listed companies' boards.

We merge Boardex data with data from various other sources. First, we obtain firms' financial information from COMPUSTAT. Second, we use the MSCI database (formerly known as the KLD database), which provides firms' ratings on strengths and concerns for gender and minority representation on boards, and in general, firms' diversity policies. Specifically, MSCI provides strength ratings on seven dimensions (CEO, promotion, gender, benefits, women and minority contracting, gay and lesbian policies, and other) and concern ratings on five dimensions (controversies, non-representation, board gender diversity, board minority diversity, and other). Since the number of strengths and concerns considered varies over time, we compute the average

strength rating ("*Diversity Strength*") and the average concern rating ("*Diversity Concern*") for each firm in each year.

Finally, we use two approaches to classify a firm as Democratic or Republican leaning. First, we collect information on state-level presidential elections outcomes. The dummy "*Democratic (Republican) Firm*" takes value equal to one if the firm is headquartered in a state in which more that 60% of the votes went for a Democratic (Republican) presidential candidate in the most recent presidential election. Second, we collect information on political campaign contributions made by a firm's employees from the Federal Election Commission website. Most of the donating employees are senior managers in a firm, who tend to have a large impact on the firm's culture. The limitation of this approach is that about 87% of firm-year observations do not have political campaign contributions,[2] and many donating firms make contributions to both parties. We define a dummy variable, "*Democratic (Republican) Firm 2*", which equals one if more than 55% of the firm's political campaign contributions during an election cycle of two years go to Democratic (Republican) candidates.

Panel C of Table 1 provides summary statistics for the firm level sample, for the directors of listed companies, and for the more comprehensive sample of directors of listed and unlisted companies.

2. Public Attention to Gender Equality and Individual Implicit Biases

This section provides suggestive evidence on the malleability of implicit bias against career women to changes in public attention to gender equality, distinguishing between individuals with different characteristics. This analysis contributes to motivate why we expect firms with different corporate culture to respond differently to public attention to gender equality.

Table 2 relates the gender-career IAT scores to the *Gender Equality SVI*. In column (1) of Panel A, greater public attention to gender equality in the previous 12 months is associated with lower gender-career IAT scores (thus a lower implicit bias) for individuals taking the IAT test in

[2] This is consistent with the descriptive evidence in Aggarwal, Meschke, and Wang (2012).

a given month. Importantly, these estimates do not simply capture a time trend as the results are fully robust if we stop the sample before the recent spike in public attention to gender equality.

However, in interpreting the coefficient estimates, we face the challenge that we do not observe the same individual over time. The fact that the bias is implicit, meaning that individuals are unaware of it, should limit selection problems that could arise from the fact that individuals with weaker implicit bias take the IAT following heightened public attention. Yet, to control for the fact that individuals with different characteristics or more polarized opinions could take the test when public attention to gender equality is high, we estimate a Heckman selection model in which the selection equation is allowed to depend on the *Gender Equality SVI* and the number of individuals taking the test in a given year-month, our instrument.

The result holds when we allow individuals with different unobserved characteristics to self-select in taking the test in a given year-month (column (2)) and also when we control for various demographic characteristics of the test takers (column (3)). In the rest of Panel A, we continue to control for observed and unobserved individual characteristics and explore how ex ante individual characteristics, which are expected to be associated with different preferences towards gender equality, and career women in particular, are associated with a different effect of the *Gender Equality SVI* on the IAT score.

We first differentiate individuals who self-report to have explicit bias against career women and those who do not. Specifically, we define a dummy variable that equals one if a respondent self-reports to moderately or strongly associate women with family. The estimates in column (4) of Panel A suggest that individuals with stronger explicit bias have significantly stronger implicit bias. The positive and significant interaction effect suggests that public attention to gender equality decreases these individuals' implicit bias to a lower extent. Because individuals are known to be more receptive of news that confirm their beliefs (Mullainathan and Shleifer, 2005), individuals with a stronger explicit bias may be more receptive of negative coverage of gender issues, which explaining the persistence of their implicit biases.

The rest of Panel A considers other individual characteristics that are expected to be associated with tastes on gender equality. For instance, although women appear to have larger

implicit biases against career women than men, public attention to gender equality is associated with a larger decrease in women's implicit biases. Public attention to gender equality is also associated with a larger (smaller) drop in the implicit bias of individuals who declare themselves as politically liberal (conservative). Being liberal is typically associated with preferences towards gender equality, while being conservative is typically associated with preferences towards traditional gender roles. These differences affect also how individuals react to public attention to gender equality.[3]

Since we cannot rule out that some omitted shock, unrelated to public attention to gender equality, affects implicit attitudes towards career women, in Panel B, we include fixed effects for the month-year in which the test was taken, which absorb the direct effect of the *Gender Equality SVI* as well as the effect of any time-series factors, and test whether public attention to gender equality continues to have different effects on individuals with different ex ante characteristics. Throughout the analysis, we control for the direct effect of these individual characteristics. Our results are robust.

Finally, we consider the criticism that individuals taking the test in periods of heightened public attention may have more polarized views even though on average they are less biased and more liberal. The Heckman selection model should partially address this concern. In addition, we allow the effect of explicit bias to vary with public attention to gender equality in an attempt to control for differences in the views of individuals taking the test at different times. We re-estimate columns (2) to (4) including this interaction term as a control. The effects are not only qualitatively, but also quantitatively invariant. Taken together, these tests suggest that public attention decreases the implicit bias of individuals better predisposed towards gender equality to a larger extent.

[3] In interpreting the above estimates, one may be concerned that individuals who more strongly support gender equality and that for this reason have lower implicit bias take the IAT test when public attention to gender equality increases. We indeed find that this is the case and the Heckman selection model addresses concerns about unobserved heterogeneity. In addition, we note that such selection could explain why the implicit bias of liberals is lower during these periods. However, an explanation merely based on the selection of individuals taking the test cannot account for the fact that in periods of high public attention to gender equality, individuals who identify as conservative or report a stronger explicit bias are relatively more, not less biased.

3. Public Attention to Gender Equality and Board Composition

3.1 Methodology

Testing whether female under-representation in positions of leadership is driven by demand or supply factors is challenging. For instance, a positive correlation between proxies for a female friendly culture and female board representation cannot be interpreted as evidence that demand matters. Firms in areas or industries with a larger supply of women in positions of leadership may be able to hire more female directors. Thus, these firms could have a more female-friendly culture thanks to a larger supply of women even if all firms have the same demand for female directors.

To identify the demand for female directors, we need a shock to demand. We conjecture that public attention to gender equality provides such a shock. In addition, motivated by our findings on individuals' implicit biases, we conjecture that greater public attention to gender equality may increase firms' demand for female directors to a larger extent in firms with an ex ante culture that is more friendly towards career women. In this way, we generate cross-sectional variation in changes in demand for female directors between firms following an increase in public attention to gender equality. We can thus ask to what extent changes in demand affect board composition and whether public attention matters.

3.2 Board Gender Ratio

Table 4 relates the gender ratio, defined as the percentage of female directors on a board during a year, to the *Gender Equality SVI* over the previous year, controlling for board size and firm fixed effects. Being determined the year before the changes in board composition, public attention cannot depend on current changes in corporate boards. We also explore how the effect of the *Gender Equality SVI* varies between firms with different ex ante characteristics. In all specifications, we include firm fixed effects to control for firms' time-invariant characteristics.

The estimates in column (1) of Panel A, Table 3 suggest that stronger attention to gender equality over the previous year is associated with significantly higher female board representation, consistent with a higher demand for female directors following heightened public attention to gender equality. The economic magnitude of the effect is nontrivial. A one-standard-deviation

increase in the *Gender Equality SVI* corresponds to a 1.7 percentage point (pp) average increase in the gender ratio of listed companies' boards (a 17% increase relative to the sample mean).

Next, we add time fixed effects and explore cross-sectional heterogeneity in firms' responses to public attention to gender equality. We differentiate firms on the basis of ex ante characteristics associated with a corporate culture more or less inclusive towards women. To the extent that these firm characteristics help to capture differences in the intensity of the demand shock firms experience due to changes in public attention to gender equality, we can identify the effect of the demand for female directors on board gender composition.

Our main proxy for a female-friendly (unfriendly) corporate culture is *Diversity Strength* (*Diversity Concern*), based on the MSCI ratings of a firm's diversity policies. We expect that the demand for female directors increases more in firms with higher diversity strengths and less in firms with stronger diversity concerns. Indeed, the result in column (2) of Panel A, Table 3 suggests that the sensitivity of the board's gender ratio to public attention to gender equality increases in firms' diversity strengths and decreases in firms' diversity concerns.

We also ask to what extent our results are driven by the most recent years of the sample, when public attention to gender equality increased dramatically. We note that in the first years of the sample public attention to gender equality was relatively higher and that it then decreased. Column (3) reproduces the results of columns (2) over a shorter sample period, up to year 2013. Our results are invariant, suggesting that our findings are not exclusively driven by the recent surge in public attention to gender equality.

In Panel B of Table 3, we explore several alternative measures of firm culture towards women. Tate and Yang (2015) suggest that women in managerial positions create female-friendly cultures by reducing pay gaps between men and women. In our context, the presence of female directors may reflect a more female friendly culture. Furthermore, our tests based on the IAT scores suggest that these firms may be more receptive to public attention to gender equality. Thus, their demand for female directors may increase more than in other firms even though they already have more gender-balanced boards. Consistent with this conjecture, the estimates in column (1) of Panel B suggest that following years of greater public attention to gender equality, the proportion

of female directors increases more in firms that already have female directors than in firms with no female directors.

We also consider aspects of corporate culture that are not directly related to corporate leadership. Political orientation is strongly related to corporate culture. For instance, Democratic-leaning firms spend more on corporate social responsibility than other firms (Di Giuli and Kostovetsky, 2014). Since the Democratic platform emphasizes gender equality and affirmative action more than the Republican platform, we use our classifications of Republican and Democratic firms to capture attitudes towards women.

Firms headquartered in Democratic states may experience larger increases in the demand for female directors when public attention to gender equality intensifies for two reasons. First, the firms' leadership is likely to be liberal and we have shown that public attention to gender equality is associated with a decrease in the implicit biases for these individuals. Second, since there exists a local bias in investment, firms in Democratic-leaning states are likely to have overwhelmingly liberal shareholders, investors, and employees. These firms are therefore likely to respond to their stakeholders' preferences favoring gender equality. The opposite is true for firms headquartered in Republican states. Thus, knowing the political orientation of the area where a firm is headquartered allows us to evaluate how public attention to gender equality affects the demand for female leadership.

Consistent with our prior, the result in column (2) of Table 3, Panel B shows that firms in states that voted overwhelmingly for a Democratic presidential candidate increase female board representation following periods of high public attention to gender equality, while we do not find a significant effect for firms headquartered in states that voted overwhelmingly for Republican presidential candidates. Results are consistent in column (3) where we use firms' political campaign contributions to define whether a firm is Democratic or Republican leaning. The board gender ratio of Democratic firms is more sensitive to public attention to gender equality than that of Republican firms.

Finally, the psychology and economics literatures suggest that individuals that are more exposed to female role models in professional settings tend to have less implicit and explicit bias

against career women (see, e.g., Marx and Roman, 2002; Stout, Dasgupta, Hunsinger, and McManus, 2011). We thus conjecture that firms whose directors have been more exposed to female directors on other boards might be more receptive of public attention to gender equality.[4] We define "*Director Gender Exposure*" as the average board gender ratio in companies in which a firm's current board of directors previously served. The result in column (4) of Table 3, Panel B shows that the board gender ratios of firms whose directors have been more exposed to female directors are indeed more sensitive to public attention to gender equality.

Overall, the results in Table 3 are consistent with our hypothesis that greater public attention to gender equality differentially increases the demand for female directors for firms with different ex ante culture towards career women.

3.2 Alternative Explanations and Robustness

A potential concern with our interpretation of the empirical evidence in Table 3 is that the proxies for different ex ante firm culture may reflect differences in the supply of female directors across industries or geographical areas rather than heterogeneity in the demand for female directors. For instance, firms that we consider to have a culture more favorable to women may actually be in industries or states with more women in female leadership. Since the supply of directors is largely local and industry-specific (Knyazeva, Knyazeva, and Masulis, 2013; Alam Chen, Ciccotello, and Ryan, 2014), this could explain why some firms are able to react to public attention by increasing the proportion of female directors. Other firms may also have desired to do so, but might have been unable to find suitable women.

While such an alternative explanation would still imply that firms experience a demand shock for female directors when public attention to gender equality increases, firms' differential response would depend on different supply constraints rather than on differences in the extent of the demand shock arising from corporate culture. We evaluate the merit of this alternative explanation in Table 4.

[4] In principle, these directors may also be better able to identify potential female directors. We test this conjecture in Subsection 4.3 but we find little support for it.

First, we control for the lagged average board gender ratio in the state of a firm's headquarters ("*State Gender Ratio*") and in its industry ("*Industry Gender Ratio*"), and their interactions with the *Gender Equality SVI,* respectively. The state and industry gender ratios capture that the supply constraint faced by an average listed firm is related to the total number of eligible female directors for listed companies, divided by the total demand for directors by listed companies in the same geographical area and/or industry. While the state or industry gender ratio can also reflect the average demand for female directors in a state or an industry, these variables allow us to control for the availability of female directors relative to the total demand in an industry or state. In particular, the interaction terms with the *Gender Equality SVI* capture whether differences in firms' responses to changes in public attention to gender equality are driven by supply constraints.

The estimates in columns (1) and (2) of Table 4 show that both the lagged state and industry gender ratios are positively and significantly related to the firm's board gender ratio. However, the interaction terms of industry and state gender ratios with the *Gender Equality SVI* are, if anything, negative, indicating that firms' differential reactions to changes in public attention are unlikely to be driven by supply constraints. Consistent with this interpretation, including these controls leaves unaffected the coefficients on the interaction terms between the *Gender Equality SVI* and *Diversity Strength (Concern)*.

These tests also assuage concerns that public attention to gender equality may capture shocks affecting industries with more female directors. We would expect that firms in industries and states with ex ante higher gender ratios are more exposed to these shocks. Such an alternative explanation would therefore imply that controlling for the interactions of industry and state gender ratios with the *Gender Equality SVI* should lead to large changes in the coefficients on the interaction terms between the *Gender Equality SVI* and *Diversity Strength (Concern)*, which we do not observe.

Next, we evaluate the role of supply constraints by considering cross-sectional differences in firms' ability to attract female directors. Large firms, being more prestigious, are typically considered better able to attract qualified female directors. Consistent with this conjecture, Hwang,

Shivdasani, and Simintzi (2018) estimate the costs of the board gender quota in California to be particularly large for smaller firms, which presumably face greater constraints in attracting qualified board candidates than large firms. Thus, if our results were driven by supply constraints rather than demand heterogeneity, we would expect that the board gender ratio responds less to changes in public attention to gender equality in small firms.

In column (3), we test whether the board gender ratio is less sensitive to public attention to gender equality in firms whose market capitalization is in the bottom tercile of the sample distribution ("*Small Firm*") in comparison to larger firms. The estimates show no difference in the sensitivity of the gender ratio to public attention to gender equality between smaller and larger firms, thus corroborating our interpretation that supply constraints do not drive firms' differential response.

In column (4), we evaluate the possibility that the effects of *Diversity Strength (Concern)* may conceal differences in board size. If all boards have at least a woman, smaller board may have a higher proportion of female directors and appear more diverse. While it is true that firms with ex ante smaller boards experience larger increases in the gender ratio, when public attention to gender equality increases, we find no evidence that this effect is related to that of *Diversity Strength (Concern).* If anything, the effects of *Diversity Strength (Concern)* in response to changes in public attention to gender equality appear even more important once we take into account board size.

Finally, we address the concern that state or industry gender ratios and firm size may be noisy proxies for supply constraints and firms' exposures to industry shocks. Thus, in column (5) of Table 4, we control for interactions of state, industry and year fixed effects. If the labor market for female directors is largely local and industry-specific, then the supply of female directors should be the same for all firms in the same state and the same industry at a given point in time. In this specification, the interactions between *Diversity Strength (Concern)* and the *Gender Equality SVI* should capture within-market reactions to changes in public attention to gender equality and are therefore most likely to reflect heterogeneity in demand rather than supply of female directors across firms. Column (5) shows that the coefficient on the interaction term between *Diversity Strength (Concern)* and the *Gender Equality SVI* remains unchanged after

including state-industry-year fixed effects, further suggesting that supply constraints are unlikely to explain our results.

In summary, we find no evidence that different reactions to changes in public attention to gender equality due to firms' ex ante culture, as measured by the MSCI diversity ratings, may capture differences in the availability of eligible female directors or different exposure to industry and state level shocks. These findings fully support our empirical strategy of relying on cross-sectional differences in the reaction to changes in public attention to gender equality to identify shocks to the demand for female directors. More importantly, the results suggest that only in firms with ex ante more female-friendly culture, public attention to gender equality is associated with meaningful increases in female board representation.

4. Director Appointments

This section explores how public attention to gender equality affects the way female directors are recruited. Specifically, we examine whether public attention to gender equality increases gender differences in the qualifications and experiences of newly appointed directors. We also explore the role of connections in director appointments.

We focus on directors that are newly appointed during our sample period (2005-2017) and include interactions of firm and year fixed effects to control for time-series firm-specific shocks to the way firms recruit directors. This also allows us to compare female directors and male directors appointed by the same firm at the same time. We examine how gender differences in director characteristics, if any, vary with public attention to gender equality by interacting the female director dummy with the *Gender Equality SVI* in the 12 months before the director appointment. Since director appointments occur in different months of the year, the direct effect of the *Gender Equality SVI* over the previous 12 months can be identified even if we include year fixed effects.[5]

[5] We neglect cross-sectional differences in firm culture so as not to rely on a triple interaction term. More importantly, cross-sectional differences between firms are unnecessary for the identification in these tests because firm heterogeneity is absorbed by the interaction of firm and year fixed effects.

4.1 Broadening the Female Director Pool

We first explore how the increased demand for female directors due to greater public attention to gender equality is satisfied. In Panel A of Table 5, we ask whether increased demand merely leads to more directorships for women who are already on the boards of listed companies or if instead new women obtain leadership positions. To answer this question, we create an indicator variable "*Brand New*", which equals one if the newly appointed director did not serve on the board of a listed company before the current appointment. Column (1) of Table 5 shows that women are more likely than men not to have served on the board of a listed company before the current appointment, and become even more so following an increase in public attention to gender equality. This result suggests that heightened public attention is associated with a greater pool of women serving on listed companies' boards.

In column (2), the dependent variable "# of Other Board Seats" is the number of other public company directorship that a person has at the time of the current appointment. Typically, female directors are more likely than their male counterparts to have other public company directorships at the time of the appointment, suggesting that women may need stronger "certification" to be viewed as qualified. But heightened public attention is associated with a decrease in the number of other public company directorships. This result confirms the finding in column (1) that the increased demand due to public attention does not simply translate into more directorships for women who are already on listed companies' boards.

Firms tend to appoint directors with experience in their own industry (Denis, Denis, and Walker, 2018). While directors' industry experience is often found to add value (Dass, Kini, Nanda, Onal, and Wang, 2013; Adams, Akyol, and Verwijmeren, 2018; Kang, Kim, and Lu, 2018), competences from other industries may bring firms a broader perspective and complementary skills, as Custodio, Ferreira, and Matos (2013) find to be the case for CEOs.

To evaluate whether there are any differences in industry experience between directors appointed to the board of the same firm, we define a dummy variable, "*No Industry Experience*", which equals one if a director has no prior experience in the firm's 2-digit SIC industry before its

appointment. Column (3) of Panel A shows that women are less likely than men to have no industry experience, but that heightened public attention to gender equality is associated with an increase in the probability that a woman with no prior industry experience is appointed. Interestingly, women continue to be more likely to have industry experience than newly appointed men, when public attention to gender equality is equal to the median of the sample.

This result suggests that women must be considered the obvious choice and have industry-specific skills to be appointed to the board of a listed company. When public attention to gender equality increases, listed companies appear to be willing to search more broadly for their female directors. This does not result in any obvious compromise in the experience and skills of female directors as male directors without industry experience are actually more likely to be appointed if public attention to gender equality is below average.

Social ties are known to be an important determinant of employees' selection (e.g., Hensvik and Nordström Skans, 2016) and to matter also for the selection of directors on corporate boards (e.g., Shivdasani and Yermack, 1999; Fracassi and Tate, 2012; Cai, Nguyen, and Walkling, 2019). We study whether there are any differences in prior connections to the board between newly appointed female and male directors. We define two individuals as connected if they have overlapped in prior employment or university or in some club or non-profit organizations. We define a dummy variable, "*Connected*", which equals one if a newly appointed director has previous connections with current members of a board. The result in column (4) of Panel A suggests that in general female directors are less likely to have connections with current board members relative to their male counterparts, and become even more so when public attention to gender equality increases, suggesting that public attention makes firms more open to female candidates outside their board network.

This may suggest that firms face a limited supply of female directors within their network and bear large search costs to identify potential female directors outside the network, especially when public attention to gender equality and firm demand for female directors are high. However, newly appointed male directors may be more likely to be connected to current members of the board because current, predominantly male, directors are more inclined to select male directors

within their own networks. This could arise from the tendency of individuals to associate, interact, and bond with others who possess similar characteristics and backgrounds, including gender, which has been noted in a variety of contexts (e.g., McPherson, Smith-Lovin, and Cook, 2001; Gompers, Mukharlyamov, and Xuan, 2016; Ewens and Townsend, 2019). Thus, without considering the pool of connected directors and their characteristics, it is unclear if the different propensity of newly appointed male and female directors to be connected to current board members is driven by demand or supply factors. We address this question in Subsection 4.3.

Overall, the results in Table 5, Panel A suggest that heightened public attention to gender equality pushes listed companies to reach out to a broader pool of potential female candidates for directorships. This is consistent with our conclusion in Section 3 that public attention to gender equality increases the demand for female directors.

4.2 Qualifications and Experiences

This subsection explores whether the increased demand for female directors and the resulting broader pool of female directors imply a reduction in the quality of newly appointed female directors. Supply constraints would imply that we should observe a deterioration in female director skills. If instead female board representation is limited by lack of demand, we should not observe big changes in the characteristics of female directors relative to the newly appointed men in the same firm. Thus, if the quality of newly appointed female directors did not decrease, we would have another indication that female board representation is not uniquely driven by limited supply of eligible women.

To evaluate the quality of female directors, in Panel B of Table 5, we examine how gender differences in directors' general qualifications and leadership experience vary with public attention to gender equality. All the experience variables reflect a director's cumulative experience up to the current board appointment. The first three columns in Panel B of Table 5 suggest that compared to male directors appointed by the same firm in the same year, female directors are on average younger, but are also more likely to have obtained advanced educational degrees (above college) and professional awards, consistent with the findings of Ahern and Dittmar (2012). Public attention

to gender equality does not affect gender differences in these characteristics for newly appointed directors.

Columns (4)-(7) in Panel B show that compared to male directors, female directors are expectedly less likely to have top leadership experience as CEO, top executive, or board chairman. They also have sat on the boards of fewer companies before the appointment.[6] Following heightened public attention to gender equality, newly appointed female directors are even less likely to have CEO experience, but they are more likely to have prior board experience. Overall, there is no systematic widening of the gender leadership gap following an increase in public attention to gender equality.

Columns (8)-(14) of Table 5, Panel B explore several other dimensions of the director's background. The results again indicate that there are gender differences in director experience. Compared to male directors appointed by the same firm at the same time, female directors tend to have worked in fewer industries, are less likely to have finance or military experience, but more likely to have prior experience in government, academia, and non-profit organizations, such as charities and clubs. Public attention to gender equality does not change the extent of these differences. More importantly, there are no differences in the cumulative abnormal returns that a firm experiences upon the announcements of the appointments of male and female directors, and heightened public attention to gender equality does not change this pattern (column (15)).[7] This result suggests that the market expects no gender differences in the abilities and skills of the newly appointed directors, thus corroborating our interpretation of the empirical evidence.

Overall, the results in Table 5 suggest that following an increase in public attention to gender equality, listed companies' boards tend to reach out to a broader pool of female candidates, including women from other industries and women outside the existing board members'

[6] Note that "*# of Boards Previously Served*" in Panel B of Table 5 is different from "*# of Other Boards*" in Panel A of Table 5, as the former reflects the cumulative board experience of an individual up to the current board appointment and it includes experiences in boards of public, private or non-profit companies, while the latter only reflects current board appointments and it includes only listed companies.

[7] Estimates in column (15) are robust to controlling for all director characteristics examined in Table 5 Panel B. Similarly, the results are robust if we exclude the firm-year fixed effects.

connection circle. There is however no obvious change in the qualifications of newly appointed female directors relative to their male counterparts, suggesting that the increase in demand does not lead to compromises on the quality of newly appointed female directors.

Having different skills, women could be hired for different tasks. To evaluate this, Table 6 explores how female directors are assigned to committees and whether their responsibilities vary with public attention to gender equality. We consider all directors during their tenure on listed company boards, not just newly appointed directors. The first four columns consider the probability that a director serves on a key board committee. Female directors are as likely as male directors to be on the compensation committee and the audit committee. This propensity does not vary with public attention to gender equality and is obtained controlling for director tenure. Female directors are more likely to be assigned to the nomination committee, and again public attention to gender equality does not change the gender difference. Female directors are less likely to be on the executive committee, indicating that there are few female executives on the board. This tendency is mitigated by an increase in public attention to gender equality.

The results in columns (5)-(6) suggest that female directors are less likely to have leadership roles (e.g., chair a committee, the Chairman of the Board), which resonates with the findings of Field, Souther and Yore (2019). However, heightened public attention to gender equality tends to increase the probability of women obtaining leadership roles on the board. A one-standard deviation increase in public attention corresponds to a 19% reduction of the gender gap regarding board committee chair positions and a 12% reduction of the gender gap regarding the board chairman position.

Overall, our results suggest that public attention to gender equality does not lead to a change in the characteristics of women being hired and that women are more likely to obtain board leadership positions, supporting the interpretation that demand for the expertise of female directors increases.

4.3 Connections and Recruiting Policies

As shown in Table 1 Panel C, 20% of the directors of the listed companies in our sample belong to the social circle of existing board members because they overlapped in previous jobs, educational programs, or social activities. Thus, individuals with prior connections to current directors are a relevant pool from which firms select new directors.

Existing literature suggests that hiring through connections can be efficient because it reduces information asymmetry and search costs (Hensvik and Oskar Nordström Skans, 2016). Newly appointed female directors may be less likely to be connected to current board members than their male counterparts because the networks of current directors mostly include men. Firms with high demand for female directors but low supply of potential directors within their networks may be willing to go a long way to identify suitable candidates and appoint unconnected women, even if this implies overcoming search costs and information asymmetries.

However, network-based appointments can also accentuate the effects of biases and stereotypes if current directors prefer to interact with their male acquaintances and consider them more qualified or simply more likable than women, because of "homophilistic" biases. This would imply that demand is low even for female candidates that are in the network of listed companies' current board members.

To explore this issue, we focus on all individuals in Boardex that are connected to existing board members of listed companies because they overlapped with the current directors of a listed company in previous jobs, during their university education or in some other activities. This sample includes not only individuals who serve or have served on the boards of listed companies, but also individuals on the boards of private firms and non-profit organizations.

Controlling for individuals' qualifications and experience, we first ask whether there are any gender differences in the probability that these connected individuals are appointed to the board of a listed company. If boards were to strive to identify female candidates, ceteris paribus, connected female directors should be more likely than connected male candidates to be appointed to the boards of listed companies. If instead biases and stereotypes prevailed when new appointees come from the current directors' social circle, then even women with connections should be less likely to be appointed to the board of a listed company than their male counterparts. We also

explore how public attention to gender equality affects gender differences, if any, in connected directors' appointments.

The results are reported in Table 7. All specifications include interactions of firm and time fixed effects, which fully absorb firm-specific shocks. Column (1) of Panel A, Table 7 shows that compared to connected male directors, connected female directors are less likely to be appointed to the board of a listed company. Such gender differences are somewhat reduced, but still statistically significant in column (2), when we control for directors' experiences (from Table 5), for whether the potential candidate ever held a board appointment in a listed company, for the number of positions held in the past, proxied using job titles, for previous experiences, and for the director age. Given the small probability that any connected director is appointed, the coefficient estimate in column (2) implies that connected women are 10% less likely to be appointed to the board of a listed company than connected men. This suggests that search costs play a minor role in explaining female board under-representation as connected women, which should be as easy to identify as their male counterparts, are less likely to be appointed. Homophilistic biases can better explain why newly appointed male directors are more likely to have previous connections to current listed companies' board members, as we find in Panel A of Table 5.[8]

Column (3) explores how the propensity to appoint connected directors of different genders varies with public attention to gender equality. As in the earlier tests, we expect public attention to gender equality, but not the supply of women and their qualifications, to reduce biases against female candidates, including homophilistic biases. We find that when public attention to gender equality is higher, connected female directors become relatively more likely to be appointed. Thus, heightened public attention to gender equality appears to mitigate homophilistic biases. However, connections favor the appointment of female directors only when public attention to gender equality is in the top quartile of the distribution of public attention to gender equality in the sample

[8] In results that we do not report for brevity, we show that in boards with relatively more women, connected women are relatively more likely to be appointed than in boards with fewer female directors. This finding also supports the interpretation that homophilistic biases lead to the appointment of men within the network.

(>0.5). Thus, public attention to gender equality needs to be pretty high for boards to overcome their homophilistic biases.

The results in column (3) are qualitatively unchanged if we restrict the sample to current directors' previous connections in the boardroom of listed and unlisted companies (column 4) or, alternatively, connections through any work experiences in listed companies (column 5).

Since all potential directors have previously overlapped with current members of the board, we also examine the role played by the intensity of the connections. Closer connections may help to overcome asymmetric information and women may have loose connections with members of their networks. This could explain why female directors are less likely to be appointed, rather than homophilistic biases.

Existing literature highlights that directors with prior connections to the CEO tend to favor the CEO (see, e.g., Shivdasani and Yermack, 1999; Fracassi and Tate, 2012). Hence, connections with a firm's CEO may be important for director appointment. In columns (1) to (3) of Panel B, we define "*Connections*" as a dummy variable capturing whether a director previously overlapped with a firm's current CEO. We interact this dummy with the female dummy to test for the existence of gender effects. The results suggest that individuals with prior connections to a firm's CEO are significantly more likely to be appointed to the board. However, the probability that a woman connected to the CEO is appointed to a board is significantly lower relative to a connected man. This result is unlikely to be due to gender differences in qualifications and experiences, as the effect of connections is invariant in column (3) where we control for individuals' experiences, including leadership and board experiences.

In column (4) of Panel B we examine how public attention to gender equality affects the appointment of directors connected to the CEO. We obtain a negative and significant coefficient on the interaction between *Connections* and the *Gender Equality SVI* and a positive and significant coefficient on the triple interaction among *Female*, *Connections*, and the *Gender Equality SVI*. The sum of the two coefficients is not statistically different from zero. This result suggests that public attention to gender equality decreases the probability that connected men are appointed, while leaving the probability for connected women unchanged. Thus, also in this case, public

attention to gender equality appears to reduce homophilistic biases in network-based directors' appointments.

In columns (4) to (6) of Panel B, we measure the intensity of connections by counting a potential director's number of connections with current members of the board ("*Connection*"). We obtain results similar to those in columns (1)-(3). The intensity of connections to current board members helps to explain which directors are appointed to the board of a listed company. However, in both in columns (5) and (6), similarly connected women are less likely to be appointed than men. Column (6) shows that public attention to gender equality decreases the probability that connected men are appointed, while increasing the probability of appointment for connected women. Overall, women, and women with stronger connections in particular, become more likely to be appointed to a board than similar men when public attention to gender equality increases.

Together with our earlier results that female directors appointed in periods of high public attention to gender equality are less likely to have prior connections to existing board members, the results in Table 7 suggest that public attention to gender equality increases efforts to appoint new female directors, both with and without connections.

5. Conclusion

It is challenging to evaluate whether the under-representation of women in leadership positions is merely driven by a scarcity of eligible women or if it is accentuated by lack of demand due to biases and stereotyping. In this paper, we use time-varying public attention to gender equality to shed light on the relevance of demand factors. Our results suggest that demand factors due to biases and preferences play an important role. Public attention to gender equality leads to more board gender balance, especially in firms with a corporate culture more favorably predisposed towards women.

Our results also shed light on the interventions that may lead to greater gender equality on the boards of publicly listed companies and other leadership positions. Organizations' reliance on networks in recruiting appears to be affected by homophilistic biases, which we document for the first time for the boards of listed companies. These biases are attenuated when public attention to

gender equality increases. Together with a decrease in the reliance on social networks in directors' appointments, a decrease in homophilistic biases leads to an increase in female directors' appointments during periods of high public attention to gender equality.

Finally, our results suggest that increasing public awareness, an alternative intervention to board quotas and other affirmative action policies, may lead to greater gender equality. The strength of this alternative intervention is that it avoids the cost of imposing a one-size-fit-all policy. While raising public awareness is also likely to improve gender equality more broadly by changing biases and stereotypes in the general population, firms that are ex ante more sympathetic to gender equality appear to react more than the rest. Thus, fully achieving social progress may ultimately require government intervention.

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Appendix: Variable Definitions

Google Search Trend Data	
Gender Equality SVI	The average monthly Google search volume index on the term "Gender Equality" in the previous 12 months.
IAT Data	
Gender-Career IAT Score	An individual's score from the Gender-Career Implicit Association Test.
Woman	A dummy variable that equals one if the test taker reports his or her sex as "female", and zero otherwise.
Sex Missing	A dummy variable that equals one if the test taker's sex is unknown, and zero otherwise.
White	A dummy variable that equals one if the test taker reports his or her race as "white", and zero otherwise.
Hispanic	A dummy variable that equals one if the test taker reports his or her race/ethnicity as "Hispanic", and zero otherwise.
Race Missing	A dummy variable that equals one if the test taker's race is unknown, and zero otherwise.
Ethnicity Missing	A dummy variable that equals one if the test taker's ethnicity is unknown, and zero otherwise.
Highly Educated	A dummy variable that equals one if the test taker has a college degree or above, and zero otherwise.
Education Missing	A dummy variable that equals one if the test taker's level of education is unknown, and zero otherwise.
Have Children	A dummy variable that equals one if the test taker has children, and zero otherwise.
Not Religious	A dummy variable that equals one if the test taker reports no religious affiliation, and zero otherwise.
Liberal	A dummy variable that equals one if the test taker reports to be moderately or strongly liberal in politics, and zero otherwise.
Conservative	A dummy variable that equals one if the test taker reports to be moderately or strongly conservative in politics, and zero otherwise.
Politics Missing	A dummy variable that equals one if the test taker reports no political orientation, and zero otherwise.
Annual Income	A variable with discrete values between 1 and 11, with higher values indicating higher annual income. A value of 1 indicates annual income below $20,000, and a value of 11 indicates annual income above $200,000.
Log(Age)	Logarithm transformation of the test taker's age.
Career Driven	A dummy variable that equals one if the test taker believes that career is very or extremely important to him or her, and zero otherwise.
Family Driven	A dummy variable that equals one if the test taker believes that family is very or extremely important to him or her, and zero otherwise.
Woman=Family	A dummy variable that equals one if the test taker moderately or strongly associate women with family and men with career, and zero otherwise.

Board Level Data	
Board Gender Ratio	The fraction of directors that are female.
Board Size	The number of directors on the board.
Diversity Strength (Concern)	The number of diversity strengths (concerns) that a firm has divided by the total number of diversity dimensions on which the firm is evaluated. (Source: the KLD database.)
Have Female	A dummy variable that equals one if a board has female director(s) in a year, and zero otherwise.
Democratic (Republican) Firm	A dummy variable that equals one if a firm's headquarters are located in a state with over 60% of the votes for the Democratic (Republican) Presidential candidate in the most recent Presidential election, and zero otherwise.
Democratic (Republican) Firm 2	A dummy variable that equals one if more than 55% of a firm's political campaign contributions during an election cycle of two years goes to Democratic (Republican) candidates, and zero otherwise.
Director Gender Exposure	The average board gender ratio in companies connected to a firm's board of directors.
Small Firm	A dummy variable that equals one if a firm in the bottom tecile of the sample distribution in terms of market value of equity, and zero otherwise.
State (Industry) Gender Ratio	The average gender ratio in publicly traded firms in the same headquarters state (2-digit SIC industry) as the firm.
Director Level Data	
Academia	Equals one if a director has work experience in universities, and zero otherwise.
Advanced Degree	Equals one if a director has an academic degree beyond a college degree, and zero otherwise.
Board Chairman	Equals one if a director has been a board chairmanbefore the appointment, and zero otherwise.
Brand New	Equals one if a director serves as a director of a publicly traded company for the first time, and zero otherwise.
CAR[-1, +1]	The cumulative abnormal return from event day -1 to event day +1, with event day 0 being the day in which a given director's appointment is announced. The announcement dates are from Boardex. The daily abnormal return is the difference between a firm's daily stock return (including dividends) and the value-weighted return (including dividends) for all firms in the CRSP database.
CEO	Equals one if a director has been a CEO before the appointment, and zero otherwise.
Committee Chair	A dummy variable that equals one if a director serves as the chair of the committee in a year, and zero otherwise. Multiplied by 100 in regressions.
Compensation (Audit, Nomination, Executive) Committee	A dummy variable that equals one if a director serves on the Compensation (Audit, Nomination, Executive) Committee in a year, and zero otherwise.

Connected	Equals one if an individual has previously overlapped with current members of the board on previous jobs, during university or in other activities, and zero otherwise.
Connections	The number of previous connections of an individual with current members of the boards of a listed company.
Connection to CEO	Equals one if an individual has previously overlapped with the current CEO of a given listed company, and zero otherwise.
Director Age	The age of the director based on his or her birth year.
Director Tenure	Tenure of a director on the board.
Executive	Equals one if a director has been a top executive (CEO, CFO, COO, President, founder, or Chairman) before the appointment, and zero otherwise.
Female	Equals one if an individual is a woman, and zero otherwise.
Finance	Equals one if an individual has work experience in the finance industry (work experience or board experience), and zero otherwise.
Government	Equals one if an individual has work experience in government, and zero otherwise.
Listed Company	Equals one if a director has experience in listed companies before the appointment, and zero otherwise.
Military	Equals one if an individual has work experience in the military, and zero otherwise.
No Industry Experience	Equals one if a director has no experience in the current board's 2-digit SIC industry before the appointment, and zero otherwise.
Professional Awards	Equals one if a director has professional awards, and zero otherwise.
Social	Equals one if an individual has work experience in non-profit organizations, such as charities and clubs, and zero otherwise.
# of Boards Previously Served	Number of distinctive boards (including those of public and private companies) a director has served before the appointment.
# of Other Board Seats	the number of boards on which a director serves other than the given appointment.
# of Positions	Number of previous positions (job titles) held by an individual.

Table 1: Summary Statistics

Panel A: Google Search Trend Data

	# of Obs.	Mean	Median	Std. Dev.
Gender Equality SVI	156	0.366	0.288	0.166

Panel B: Gender-Career IAT Data

	# of Obs.	Mean	Median	Std. Dev.
Gender-Career IAT Score	960,895	0.376	0.399	0.365
Woman	960,895	0.678	1.000	0.467
Sex Missing	960,895	0.026	0.000	0.159
White	960,895	0.696	1.000	0.460
Hispanic	960,895	0.094	0.000	0.292
Race Missing	960,895	0.017	0.000	0.131
Ethnicity Missing	960,895	0.081	0.000	0.273
Highly Educated	960,895	0.426	0.000	0.495
Education Missing	960,895	0.058	0.000	0.235
Have Children	960,895	0.251	0.000	0.433
Not Religious	960,895	0.254	0.000	0.435
Liberal	960,895	0.311	0.000	0.463
Conservative	960,895	0.135	0.000	0.341
Politics Missing	960,895	0.065	0.000	0.247
Annual Income	797,435	4.803	4.000	3.302
Log(Age)	886,235	3.263	3.178	0.378
Career Driven	960,895	0.727	1.000	0.445
Family Driven	960,895	0.809	1.000	0.393
Woman=Family	960,895	0.241	0.000	0.428

Panel C: BoardEx Data

Firm Level	# of Obs.	Mean	Median	Std. Dev.
Board Gender Ratio	51,399	0.104	0.100	0.111
Diversity Strength	24,844	0.074	0.000	0.179
Diversity Concern	27,467	0.177	0.000	0.227
Have Female	49,831	0.559	1.000	0.497
Democratic Firm	51,399	0.277	0.000	0.448
Republican Firm	51,399	0.069	0.000	0.254
Democratic Firm 2	51,399	0.021	0.000	0.144
Republican Firm 2	51,399	0.080	0.000	0.271
Director Gender Exposure	49,831	0.080	0.000	0.125
Log(Board Size)	51,399	2.038	2.079	0.349
Director Level (Newly Appointed, Listed companies)				
Female	47,804	0.128	0.000	0.334
Brand New	47,804	0.597	1.000	0.491

# of Other Board Seats	47,804	1.029	0.000	4.128
No Industry Experience	47,804	0.200	0.000	0.400
Connected	47,804	0.205	0.000	0.403
Director Age	47,557	55.92	56.00	9.227
Advanced Degree	47,804	0.158	0.000	0.365
Professional Awards	47,804	0.333	0.000	0.471
CEO	47,804	0.278	0.000	0.448
Executive	47,804	0.614	1.000	0.487
Board Chairman	47,804	0.272	0.000	0.445
# of Boards Previously Served	47,804	3.682	2.000	4.942
Listed Company	47,804	0.502	1.000	0.500
# of Industries	47,804	3.609	3.000	2.759
Military	47,804	0.031	0.000	0.173
Government	47,804	0.125	0.000	0.331
Academia	47,804	0.126	0.000	0.333
Social	47,804	0.043	0.000	0.202
Finance	47,804	0.503	1.000	0.500
CAR[-1,+1]	13,476	0.003	0.000	0.068
Director Level (All, Listed companies)				
Female	321,406	0.121	0.000	0.326
Compensation Committee	321,406	0.510	1.000	0.500
Audit Committee	321,406	0.560	1.000	0.496
Nomination Committee	321,406	0.469	0.000	0.499
Executive Committee	321,406	0.142	0.000	0.349
Committee Chair	321,406	0.456	0.000	0.498
Board Chairman	321,406	0.065	0.000	0.247
Director Age	321,406	68.54	69.00	9.289
Director Tenure	321,406	7.795	6.000	6.259
Advanced Degree	321,406	0.151	0.000	0.358
Professional Awards	321,406	0.377	0.000	0.485
# of Other Board Seats	321,406	1.199	0.000	4.755
CEO Experience	321,406	0.315	0.000	0.465
Director Level (All connected directors)				
Appointed(%)	272,996,290	0.003	0.000	0.580
Female	272,996,290	0.140	0.000	0.347
Connection to the CEO	272,996,290	0.074	0.000	0.262
Connections	272,996,290	1.344	1.000	1.113
Executive Experience	272,996,290	0.356	0.000	0.479
Military	272,996,290	0.006	0.000	0.078
Government	272,996,290	0.050	0.000	0.217
Academia	272,996,290	0.067	0.000	0.249
Social	272,996,290	0.021	0.000	0.142
Listed Company	272,996,290	0.094	0.000	0.291
Director Age	272,996,290	62.50	62.00	10.10
# of Positions	272,996,290	0.736	0.000	2.053

Table 2: Public Attention to Gender Equality and Implicit Bias

In this table we relate proxies of public attention to gender equality to Gender-Career IAT scores during the following month. The data unit is at the individual test taker level. The proxy of public attention to gender equality "Gender Equality SVI" is constructed as the average monthly Google search volume index in the 12 months before the test taking month. We control for a list of demographic characteristics of the test takers as well as their self-reported preferences on various issues in both Panel A (reported) and Panel B (abbreviated). Estimates in column (1) of Panel A and all columns in Panel B are obtained by ordinary least squares. In columns (2) to (7) of Panel A estimates are obtained by maximum likelihood estimating a Heckman selection model (Adjusted R-squared are not reported because they are not defined in maximum likelihood estimation). First stage estimates (not reported) are obtained considering how the probability of individuals selecting into taking the test depends on public attention to gender equality and the number of other individuals taking the test during the same month. All variables are defined in the Appendix. The standard errors are clustered by time (year-month). ***, **, * denote significance at 1%, 5%, and 10% levels, respectively.

Panel A: Gender-Career IAT Score and Public Attention

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS		Heckman Selection Models				
Gender Equality SVI	-0.130***	-0.174***	-0.075***	-0.079***	-0.047***	-0.063***	-0.079***
	(0.005)	(0.006)	(0.003)	(0.003)	(0.005)	(0.004)	(0.004)
Woman=Family * Gender Equality SVI				0.015***			
				(0.005)			
Woman * Gender Equality SVI					-0.040***		
					(0.006)		
Liberal * Gender Equality SVI						-0.036***	
						(0.006)	
Conservative * Gender Equality SVI							0.024***
							(0.007)
Woman			0.096***	0.095***	0.114***	0.096***	0.096***
			(0.001)	(0.001)	(0.003)	(0.001)	(0.001)
Sex Missing			0.028	0.028	0.022	0.027	0.028
			(0.025)	(0.025)	(0.026)	(0.025)	(0.025)
White			0.017***	0.017***	0.017***	0.017***	0.017***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic			-0.018***	-0.018***	-0.018***	-0.018***	-0.018***
			(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Race Missing			0.002	0.002	0.002	0.002	0.002
			(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Ethnicity Missing			-0.014***	-0.014***	-0.014***	-0.014***	-0.014***

			(0.002)	(0.002)	(0.003)	(0.003)	(0.002)
Highly Educated			-0.006***	-0.006***	-0.006***	-0.007***	-0.006***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Education Missing			-0.033***	-0.033***	-0.033***	-0.033***	-0.033***
			(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Have Children			0.004***	0.004***	0.004***	0.004***	0.004***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Not Religious			-0.010***	-0.010***	-0.010***	-0.009***	-0.010***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Liberal			-0.020***	-0.020***	-0.020***	-0.003	-0.020***
			(0.001)	(0.001)	(0.001)	(0.003)	(0.001)
Conservative			0.023***	0.023***	0.023***	0.023***	0.013***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
Politics Missing			-0.001	-0.001	-0.001	-0.001	-0.001
			(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Annual Income			0.000	0.000	0.000	0.000	0.000
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log(Age)			0.052***	0.052***	0.052***	0.052***	0.052***
			(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Career Driven			-0.022***	-0.022***	-0.022***	-0.022***	-0.022***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Family Driven			0.039***	0.039***	0.039***	0.039***	0.039***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Woman=Family			0.094***	0.088***	0.094***	0.094***	0.094***
			(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Observations	960,901	960,901	765,558	765,558	765,558	765,558	765,558
Adj. R-squared	0.005						

Panel B: Cross-Sectional Effects

	Gender-Career IAT Score						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Woman=Family * Gender Equality SVI	0.014**				0.018***	0.013**	0.013**
	(0.006)				(0.006)	(0.006)	(0.006)
Woman=Family	0.088***				0.086***	0.089***	0.088***
	(0.002)				(0.002)	(0.002)	(0.002)
Woman * Gender Equality SVI		-0.040***			-0.041***		
		(0.006)			(0.006)		
Woman		0.114***			0.115***		
		(0.003)			(0.003)		
Liberal * Gender Equality SVI			-0.036***			-0.035***	
			(0.006)			(0.006)	
Liberal			-0.003			-0.003	
			(0.003)			(0.003)	
Conservative * Gender Equality SVI				0.023***			0.022***
				(0.007)			(0.007)
Conservative				0.013***			0.014***
				(0.003)			(0.003)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	765,552	765,552	765,552	765,552	765,552	765,552	765,552
Adj. R-squared	0.041	0.041	0.041	0.041	0.041	0.041	0.041

Table 3

Corporate Culture, Public Attention to Gender Equality, and Board Gender Ratio

In both panels of this table, the dependent variable is "Board Gender Ratio". "Gender Equality SVI" is the average Google search intensity on the term "Gender Equality" in the prior year (scaled by 100). "Have Female" is a dummy variable that equals one if a board has female director(s) in the prior year, and zero otherwise. "Democratic (Republican) Firm" is a dummy variable that equals one if a firm's headquarters is located in a state that voted favorably (>60%) to Democratic (Republican) Presidential candidate in the most recent Presidential election, and zero otherwise. "Democratic (Republican) Firm 2" is a dummy variable that equals one if more than 55% of a firm's political campaign contribution goes to Democratic (Republican) candidates. "Diversity Strength (Concern)" is the number of diversity strengths (concerns) that a firm has divided by the total number of diversity dimensions on which the firm is evaluated. "Director Gender Exposure" is the average board gender ratio in companies connected to a firm's board of directors. Standard errors are clustered by firm and by year. ***, **, * denote significance at 1%, 5%, and 10% levels, respectively.

Panel A. Main Results

Dependent Variable	Gender Ratio		
Sample period	Full Sample		Up to 2013
	(1)	(2)	(3)
Gender Equality SVI	0.110***		
	(0.011)		
Diversity Strength		0.000	-0.037
		(0.014)	(0.029)
Diversity Strength * Gender Equality SVI		0.086***	0.212*
		(0.026)	(0.112)
Diversity Concern		-0.002	0.045*
		(0.019)	(0.022)
Diversity Concern * Gender Equality SVI		-0.136***	-0.274***
		(0.037)	(0.081)
Log(Board Size)	0.011**	-0.002	0.002
	(0.004)	(0.005)	(0.004)
Firm FE	Yes	Yes	Yes
Year FE		Yes	Yes
Observations	51,346	24,277	20,253
Adjusted R-squared	0.743	0.775	0.803

Panel B. Other Firm Cultural traits

	(1)	(2)	(3)	(4)
Have Female	0.075***			
	(0.006)			
Have Female * Gender Equality SVI	0.071***			
	(0.020)			
Democratic Firm		-0.004		
		(0.003)		
Democratic Firm * Gender Equality SVI		0.013**		
		(0.006)		
Republican Firm		-0.003		
		(0.003)		
Republican Firm * Gender Equality SVI		0.013		
		(0.009)		
Democratic Firm 2			-0.016**	
			(0.006)	
Democratic Firm 2* Gender Equality SVI			0.044**	
			(0.019)	
Republican Firm 2			-0.000	
			(0.004)	
Republican Firm 2* Gender Equality SVI			0.013	
			(0.010)	
Director Gender Exposure				-0.015
				(0.010)
Director Gender Exposure * Gender Equality SVI				0.105***
				(0.033)
Log(Board Size)	-0.009**	0.009***	0.010***	0.007**
	(0.003)	(0.002)	(0.003)	(0.003)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	49,746	51,346	51,346	49,746
Adjusted R-squared	0.811	0.757	0.757	0.759

Table 4: Evaluating Supply Constraints and Other Robustness

In this table, the dependent variable is "Board Gender Ratio", which is the fraction of directors that are female in a board during a given year. "Gender Equality SVI" is the average Google search intensity on the term "Gender Equality" in the prior year (scaled by 100). "Diversity Strength (Concern)" is the number of diversity strengths (concerns) that a firm has divided by the total number of diversity dimensions on which the firm is evaluated. "State (Industry) Gender Ratio" is the average gender ratio in firms in the same state (2-digit SIC industry) as the firm. Standard errors are clustered by firm and by year. ***, **, * denote significance at 1%, 5%, and 10% levels, respectively.

	Board Gender Ratio				
	(1)	(2)	(3)	(4)	(5)
Diversity Strength	-0.001	-0.001	0.000	-0.004	-0.006
	(0.013)	(0.013)	(0.014)	(0.014)	(0.010)
Diversity Strength*Gender Equality SVI	0.087***	0.086***	0.086***	0.096***	0.082***
	(0.026)	(0.026)	(0.026)	(0.027)	(0.021)
Diversity Concern	-0.002	-0.002	-0.002	0.009	-0.005
	(0.019)	(0.019)	(0.019)	(0.020)	(0.023)
Diversity Concern*Gender Equality SVI	-0.137***	-0.136***	-0.136***	-0.173***	-0.139**
	(0.038)	(0.038)	(0.038)	(0.043)	(0.048)
Log(Board Size)	-0.002	-0.001	-0.002	0.023**	0.002
	(0.005)	(0.005)	(0.005)	(0.008)	(0.005)
State Gender Ratio	0.503***				
	(0.096)				
State Gender Ratio*Gender Equality SVI	-0.054				
	(0.128)				
Industry Gender Ratio		0.662***			
		(0.077)			
Industry Gender Ratio*Gender Equality SVI		-0.241**			
		(0.105)			
Small Firm			0.005		
			(0.009)		
Small Firm*Gender Equality SVI			-0.030		
			(0.037)		
Log(Board Size)*Gender Equality SVI				-0.080***	
				(0.018)	
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	
State-Industry-Year FE					Yes
Observations	24,277	24,277	24,277	24,277	19,286
Adjusted R-squared	0.776	0.778	0.775	0.776	0.769

Table 5: Public Attention to Gender Equality and Characteristics of Newly Appointed Directors

This table reports the effect of public attention to gender equality on the characteristics of newly appointed directors. The dependent variables capture various characteristics and qualifications of a newly appointed director at the time of his or her appointment. In Panel A, "Brand New" indicates that a director serves as a publicly traded company director for the first time. "# of Other Board Seats" is the number of boards on which a director serves other than the given appointment. "No Industry Experience" indicates that the director has no experience in the current board's (2-digit SIC) industry before the appointment. "Connected" indicates that the director has overlapped with the existing director(s) before the appointment. In Panel B, "Advanced Degree" is the probability that a director had an academic degree beyond a college degree. "Professional Awards" is the probability that a director had professional awards. "CEO/Top Executive/Board Chairman" indicates that a director has been a CEO/top executive/board chairman before. "# of Boards Previously Served" is the number of distinctive boards (of public or private companies) the director has served before the appointment. "Quoted Company" indicates that the director has experience in publicly traded companies before the appointment. "# of Industries" is the number of distinctive (2-digit SIC) industries in which the director has experience before the appointment. "Military/Government/Academia/Social/Finance" indicates that the director has experience in the military/government/academia/social functions (e.g., charities, clubs, sporting companies)/finance sector (banking, insurance, private equity, investment companies, other specialty finance). "CAR[-1,+1] is the cumulative abnormal return from event day -1 to event day +1, with event day 0 being the day in which a given director's appointment is announced. The abnormal return is calculated as the difference between a firm's daily return and the value-weighted market return. "Gender Equality SVI" is the average Google search intensity on the term "Gender Equality" during the 12 months before a director's appointment starts (scaled by 100). "Female Director" indicates that the director is a female. Director age is the age of the director based on his or her birth year. The standard errors are clustered by firm and by year. ***, **, * denote significance at 1%, 5%, and 10% levels, respectively.

Panel A: Does Public Attention to Gender Equality Broaden the Female Director Pool?

	(1)	(2)	(3)	(4)
	Brand New	# of Other Board Seats	No Industry Experience	Connected
Female	0.028**	0.167***	-0.021***	-0.039***
	(0.014)	(0.060)	(0.007)	(0.010)
Female *Gender Equality SVI	0.185*	-0.675**	0.058**	-0.168*
	(0.097)	(0.317)	(0.026)	(0.087)
Gender Equality SVI	-0.111	0.226	0.094	-0.293
	(0.311)	(0.698)	(0.107)	(0.289)
Log(Director Age)	-0.640***	1.118***	-0.041***	0.038**
	(0.026)	(0.064)	(0.014)	(0.017)
Firm-Year FE	Yes	Yes	Yes	Yes
Observations	42,683	42,683	42,683	42,683
Adjusted R-squared	0.257	0.920	0.595	0.452

Panel B: General Experiences and Qualifications

	(1) Log(Age)	(2) Advanced Degree	(3) Professional Achievement	(4) CEO	(5) Executive	(6) Board Chairman	(7) # of Boards Previously Served
Female	-0.041***	0.088***	0.164***	-0.112***	-0.105***	-0.150***	-0.962***
	(0.005)	(0.013)	(0.015)	(0.013)	(0.015)	(0.012)	(0.133)
Female *Gender Equality SVI	0.012	-0.121	0.124	-0.175*	0.020	-0.134	1.955*
	(0.033)	(0.093)	(0.108)	(0.100)	(0.105)	(0.088)	(1.055)
Gender Equality SVI	-0.165	-0.113	-0.443	0.035	-0.168	-0.490	-4.933
	(0.116)	(0.252)	(0.308)	(0.336)	(0.304)	(0.302)	(3.009)
Log(Director Age)		-0.046**	0.362***	0.034	0.195***	0.446***	2.375***
		(0.021)	(0.025)	(0.025)	(0.028)	(0.025)	(0.308)
Firm-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	42,683	42,683	42,683	42,683	42,683	42,683	42,683
Adjusted R-squared	0.082	0.043	0.142	0.055	0.116	0.066	0.011

	(8) Listed Company	(9) # of Industries	(10) Military	(11) Government	(12) Academia	(13) Social	(14) Finance	(15) CAR[-1,+1]
Female	0.003	-0.210***	-0.020***	0.059***	0.056***	0.029***	-0.034**	-0.008
	(0.014)	(0.080)	(0.004)	(0.011)	(0.011)	(0.007)	(0.015)	(0.009)
Female *Gender Equality SVI	-0.133	-0.462	0.023	-0.023	-0.118	-0.030	0.114	0.012
	(0.088)	(0.589)	(0.027)	(0.080)	(0.076)	(0.048)	(0.103)	(0.025)
Gender Equality SVI	0.046	-3.155*	-0.034	-0.128	-0.176	-0.065	-0.212	0.050
	(0.285)	(1.793)	(0.089)	(0.215)	(0.224)	(0.143)	(0.323)	(0.197)
Log(Director Age)	0.380***	2.294***	0.116***	0.199***	0.187***	0.069***	0.006	-0.003
	(0.026)	(0.171)	(0.011)	(0.018)	(0.018)	(0.012)	(0.027)	(0.013)
Firm-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	42,683	42,374	42,683	42,683	42,683	42,683	42,683	13,476
Adjusted R-squared	0.262	0.070	0.036	0.091	0.020	0.010	0.185	0.493

Table 6: Public Attention to Gender Equality and Director Responsibilities

This table reports the effect of public attention to gender equality on the director gender gap in responsibilities. The first four columns are about a director's probability of serving on a particular board committee. Columns (5) and (6) are about a director's probability of serving as the chair of a board committee or the Chairman of the Board.

	(1) Compensation Committee	(2) Audit Committee	(3) Nomination Committee	(4) Executive Committee	(5) Committee Chair	(6) Board Chairman
Female	0.012	0.022	0.047***	-0.068***	-0.069***	-0.066***
	(0.013)	(0.014)	(0.011)	(0.008)	(0.013)	(0.004)
Female*Gender Equality SVI	-0.009	0.003	-0.011	0.032**	0.081***	0.049***
	(0.026)	(0.028)	(0.024)	(0.015)	(0.028)	(0.008)
Log(Director Age)	0.106***	0.132***	0.164***	-0.029***	0.179***	0.074***
	(0.017)	(0.019)	(0.016)	(0.010)	(0.017)	(0.009)
Log(Director Tenure)	0.052***	-0.022***	0.058***	0.059***	0.148***	0.012***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)
Advanced Degree	0.010	-0.017**	0.024***	-0.008*	0.004	-0.003
	(0.007)	(0.007)	(0.006)	(0.004)	(0.006)	(0.003)
Professional Achievement	0.019***	-0.108***	0.032***	0.001	-0.018***	0.011***
	(0.005)	(0.006)	(0.005)	(0.003)	(0.005)	(0.003)
# of Other Board Seats	0.009***	0.008***	0.010***	-0.005***	0.022***	0.001
	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)
CEO Experience	-0.008	-0.098***	-0.050***	0.051***	-0.043***	0.053***
	(0.005)	(0.006)	(0.005)	(0.003)	(0.005)	(0.003)
Firm-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	321,406	321,406	321,406	321,406	321,406	321,406
Adj. R-squared	0.087	0.011	0.240	0.342	0.028	0.087

Table 7: Connections and Director Appointment

In this table, the dependent variable is equal to 100 if director *j* is appointed to the board of listed company *i* in year *t* and equal to zero if the potential director is not appointed. Potential directors of listed company *i* include any individuals in Boardex that have previously overlapped with the current directors of listed company *i*. The current directors of listed company *i* are excluded. In column 4 and 5 of Panel A, we restrict the sample to previous connections that entail sitting on the same board and previous work connections in listed companies, respectively. In Panel B, "Connections" is a dummy variable capturing whether a potential director *j* has a prior connection with the current CEO of firm *i* in columns (1) to (3), and it is the number of connections between the potential director *j* and a company's existing directors in columns (4) to (6). "Gender Equality SVI" is the average Google search intensity on the term Connected "Gender Equality" in the prior year. All remaining variables are defined in the Appendix. Standard errors are clustered by firm and by year. ***, **, * denote significance at 1%, 5%, and 10% levels, respectively.

Panel A. Basic Findings

	% Appointed				
	All connections			Directors Only	Listed Companies Only
Sample					
	(1)	(2)	(3)	(4)	(5)
Female	-0.0005***	-0.0003***	-0.001***	-0.001***	-0.005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Female*Gender Equality SVI			0.002***	0.003***	0.007***
			(0.001)	(0.001)	(0.001)
Executive Experience		0.003***	0.003***	0.001***	0.006***
		(0.000)	(0.000)	(0.000)	(0.000)
Social		-0.002***	-0.002***	-0.000	-0.002*
		(0.000)	(0.000)	(0.000)	(0.001)
Academic		-0.001***	-0.001***	-0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.001)
Government		-0.000***	-0.000***	0.000*	0.002**
		(0.000)	(0.000)	(0.000)	(0.001)
Military		-0.001***	-0.001***	-0.001**	0.001
		(0.000)	(0.000)	(0.000)	(0.003)
Listed Company		0.003***	0.003***	0.001***	0.004***
		(0.000)	(0.000)	(0.000)	(0.000)
Log(Director Age)		0.003***	0.002***	0.003***	0.011***
		(0.000)	(0.000)	(0.000)	(0.001)
# of Positions		0.000***	0.000***	0.000**	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)
Firm-Year FE	Yes	Yes	Yes	Yes	Yes
Observations	272,996,290	272,996,290	272,996,290	99,684,644	80,364,991
Adjusted R-squared	0.001	0.001	0.001	0.003	0.006

Panel B. Intensity of Connections

`	%Appointment					
	Connection to the CEO			Number of Connections to Board Members		
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.000	-0.0002**	-0.001**	0.001	0.001*	0.004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Connections	0.003***	0.003***	0.005***	0.007***	0.007***	0.009***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
Female*Connections	-0.001***	-0.001***	-0.004***	-0.004***	-0.001**	-0.001**
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
Connections*Gender Equality SVI			-0.005***			-0.006***
			(0.001)			(0.001)
Female*Connections* Gender Equality SVI			0.006***			0.008***
			(0.002)			(0.002)
Female*Gender Equality SVI			0.002***			-0.009***
			(0.000)			(0.003)
Executive Experience		0.003***	0.003***		0.003***	0.003***
		(0.000)	(0.000)		(0.000)	(0.000)
Social		-0.002***	-0.002***		-0.002***	-0.001***
		(0.000)	(0.000)		(0.000)	(0.000)
Academic		-0.001***	-0.001***		-0.001***	-0.001***
		(0.000)	(0.000)		(0.000)	(0.000)
Government		-0.000**	-0.000**		-0.000**	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Military		-0.001***	-0.001***		-0.001***	-0.005***
		(0.000)	(0.000)		(0.000)	(0.000)
Listed Company		0.003***	-0.000**		0.002***	0.002***
		(0.000)	(0.000)		(0.000)	(0.000)
Log(Director Age)		0.003***	0.003***		0.002***	0.001***
		(0.000)	(0.000)		(0.000)	(0.000)
# of Positions		0.000***	0.000***		0.000***	0.000***
		(0.000)	(0.000)		(0.000)	(0.000)
Firm-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	272,996,290	272,996,290	272,996,290	272,996,290	272,996,290	272,996,290
Adjusted R-squared	0.001	0.001	0.001	0.001	0.001	0.001

Figure 1: Public Attention to Gender Equality over Time

This figure plots the 12-month moving average of the monthly Google search volume index for the term "Gender Equality" between January 2005 and January 2018. In the emprical analysis, the Google search volume index is divided by 100. We highlight the peak search times for events or individuals that coincide with higher public attention to gender equality, such as the Fair Pay Debate, Sheryl Sandberg, Hillary Clinton, Women's March, and the Me Too movement.