

# Leadership, Social Networks and Workplace Climate Through a Gender Lens

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## Abstract

Using uniquely detailed data from over 2000 professionals in 23 large corporations, we show that the gender of leaders has a significant impact on the structure of social networks within firms. We document that female leaders do not possess “male-like” characteristics but rather preserve their female qualities that help them shape social interactions and workplace climate differently from male leaders. Homophilic professional ties among male workers characterize departments with male leadership. Female leadership breaks male homophily and eliminates the gender difference in homophilic professional and personal interactions. Under female leadership, both males and females establish more professional links with their female colleagues. Workplace climate is healthier when workers establish professional and personal support links with their leaders, and female leaders are significantly more likely than male leaders to develop such links with their female subordinates. However, female employees depict a gloomy workplace climate when working under non-supportive female leaders. Our results highlight the importance of supportive leadership, and suggest that increasing female presence in corporate decision-making positions may be an effective way to improve organizational culture.

**VERY PRELIMINARY. PLEASE DO NOT CIRCULATE.**

# 1 Introduction

Creating and maintaining a healthy and cohesive work environment is essential for workers' motivation, well-being, and productivity. Central to a good work environment is the quality of social interactions, characterized by support networks established among colleagues as well as between leaders and subordinates (Kahn et al., 2018; Dutton and Ragins, 2007). The latter is particularly important as leaders have an undeniable role in setting the tone of social interactions and therefore shaping the workplace atmosphere (Hoffman and Tadelis, 2021; Artz et al., 2017; Lazear et al., 2015). There is now a growing interest in understanding how leadership qualities and social skills shape employees' experiences in a workplace (Haylock et al., 2022; Heinz et al., 2020). Research efforts in this regard often go in tandem with the issue of gender and, in particular, the under-representation of women in corporate leadership positions. This conjoint effort is motivated by recent evidence that women in decision making positions tend to transform the workplace atmosphere by bringing their own style of leadership and management of social relationships into the workplace (see, Chakraborty and Serra, 2019; Bednar and Gicheva, 2014; Matsa and Miller, 2013).<sup>1</sup>

In this paper, we study the role of corporate team leaders in shaping the relational atmosphere of their work units. We focus on leaders' gender and aim to identify its impact on the formation of support networks within work units and perceived workplace atmosphere by subordinates. To do this, we enlisted 23 large corporations operating in Turkey with highly centralized and transparent subordinate-leader matching practices and reached an agreement with each one to allow us to collect detailed data from their white-collar professionals and team leaders. These corporations, some of them multinationals operating in Turkey, represent defense, energy, chemistry, finance, construction, and textile sectors. Our identification relies on firms' centralized subordinate-leader matching practices both at the hiring and post-hiring stages.

Our study required collecting data to map out social networks and measure the relational atmosphere in workplaces. To do this, we designed a diverse measurement toolkit containing incentivized lab-in-the-field experiments, cognitive and socio-cognitive tests, detailed network elicitation templates, and surveys. We then physically visited all 23 firms in Fall 2019, and in each firm, we gathered white-collar workers in meeting rooms based on

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<sup>1</sup>A broader literature exists on managers and their personal management practices that they bring to their firms. See, e.g., Malmendier et al. (2011), Bloom and Van Reenen (2010), Graham and Narasimhan (2004), and Bertrand and Schoar (2003).

their current departments. In the first session, we created a lab setting to implement our incentivized games. These are a 3-stage competition game, a public good game, and an investment (risk) game. We completed this session with a dictator game. In the second session, we implemented three tests to measure fluid cognitive ability (IQ) via Raven’s Progressive Matrices (Raven, 1960), emotional intelligence (cognitive empathy) via Reading the Mind in the Eye test (Baron-Cohen et al., 2001; Baron-Cohen et al., 1997), and verbal creativity (convergent thinking) via the Remote Associates test (Mednick, 1962). In the last session, participants filled in a network elicitation template where they were asked to nominate up to three colleagues from whom they receive professional help, and up to three from whom they receive help for personal matters, allowing for overlap across the two categories. At the end of the three sessions, the participants were directed to an online platform to fill in a detailed survey, which in addition to demographics and workplace-related questions, elicited several indicators of perceived workplace climate.

Our first set of outcomes are constructed utilizing the tools of social network theory. We construct both individual and department level network measures to characterize the established social relationships among colleagues. In doing so, we are interested in two particular measures: (i) whether a worker receives support from his/her team leader on professional and personal matters, and (ii) the degree of male and female homophily within a department. Following Coleman (1958), we construct female and male homophily indices in each department by calculating the higher than expected intra-gender ties.

Our second set of outcomes are related to the workplace climate perceived by employees. These outcomes are constructed using item-response survey questions. Using multiple items for each category, we construct normalized indices of i) workplace satisfaction, ii) perception of firms’ meritocratic values, iii) collegiality, iv) job satisfaction, iv) social norms, and v) leader professionalism.

We first document the individual characteristics of a corporate team leader using our rich measures of cognitive, socio-cognitive, and socio-emotional skills as well as social and economic preferences. First, controlling only for firm fixed effects and the share of females in the department, we observe a small 3% gender gap in favor of men in the probability to become a team leader in our data. However, this gap disappears once we control for demographics, with older and married workers being significantly more likely to be leaders. We find that having a higher fluid cognitive ability (IQ) and altruism make one more likely to become a team leader in a corporation.

We then show that female team leaders’ characteristics are significantly different from those of male team leaders. While there is no gender difference in IQ, creativity, and the level of altruism, female leaders are significantly less competitive, more risk-averse, and less cooperative (Furtner et al., 2014; Brown-Kruse and Hummels, 1993; Sell et al., 1993; Sell and Wilson, 1991). On the other hand, we find that female leaders score significantly higher in cognitive empathy and hold more modern gender role beliefs. These findings imply that progression into leadership positions does not require one to possess male attributes, which goes against a prominent literature that suggest that lack of competitiveness and risk-taking are factors for women to shy away from leadership positions (see, e.g., Eckel and Grossman, 2008; Fisman and O’Neill, 2006), reticence to initiate negotiations (e.g. Babcock and Laschever, 2021; Bowles et al., 2007), aversion to competitive environments (e.g. Niederle, 2017; Flory et al., 2015; Preece and Stoddard, 2015; Niederle and Vesterlund, 2007; Gneezy et al., 2003). Instead, we show that female team leaders are significantly different from their male counterparts in terms of their skill endowments, except for innate cognitive ability and creativity.

We then set out to show that the gender of leaders has a significant impact on the structure of social networks and reported workplace climate within firms. The identification of this effect is based on the variation in working under a female leader, or between-department variation in the share of female leaders within firms, depending on the unit of analysis. Our identification assumption requires that employees who work under female leader do not systematically differ from employees who work under male leaders other than the characteristics we condition upon. In other words, it states that after conditioning on a rich set of employee and department level characteristics, the remaining variation in working under a female leader is as-good-as random.

To justify the plausibility of this assumption, we first provide qualitative evidence from detailed testimonies about employee-leader matching practices from human resources directors of the participant companies. Second, utilizing our rich data, we show that conditional on socio-demographic variables, share of females within department, department size, job task, and firm fixed effects, the assignment of employees to female-led teams is indeed random. Third, we show that employees who work under female leader do not differ from those who work under male leader in terms of pre-determined outcomes, such as, fluid cognitive ability, cognitive empathy, and verbal creativity. Finally, we also run a Monte Carlo simulation following Bietenbeck (2020) to compare our data to hypothetical data set where the employees are assigned to female-led teams randomly, and show that the error terms yield

almost identical distributions.

We document several findings related to the impact of leader gender on the structure of social networks and workplace climate within firms. First, we find that female leaders are 11% more likely than male leaders to provide professional support to their female subordinates, 16% more likely to provide support on personal matters to their female subordinates. Compared to males, female subordinates significantly receive more professional and personal support under female leaders. Second, female leadership eliminates the gender difference in homophilic professional and personal interactions within departments. Homophilic social ties among male workers characterize departments with male leadership. This finding is consistent with Cullen and Perez-Truglia (2019), which shows that male leaders tend to interact more with male subordinates. We then show that female leadership breaks male homophily, and increases female homophily which is negative in the absence of female leaders. Third, we find that both males and females establish remarkably more social ties with their non-leader female colleagues under female leadership.

Receiving professional support from team leaders translates into a better workplace climate for all. In departments where team leaders are deemed supportive, workers report a significantly workplace satisfaction, meritocracy, collegiality, job satisfaction, behavioral norms, and leader professionalism. Perceived workplace climate exhibits interesting gender patterns in our data. Under supportive leadership, we detect no gender difference in reported workplace climate regardless of the leader’s gender. When leaders are not approachable, however, females are significantly less happy than males under female leaders. We find that under supportive female leaders, female subordinates are more likely to state that they prefer a female leader. Our results suggest that having a female leader is important to female workers’ well-being in the workplace, but this is conditional on their leader being a supportive one. Female workers seem to paint darker workplace conditions than their male colleagues when they do not receive support from their female leaders. This finding squares well with evidence that females have different expectations from other females and perhaps tend to hold each other against higher standards.<sup>2</sup>

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<sup>2</sup>In recent work, Abel (2019) finds that negative feedback by female managers decreases the job satisfaction and the perceived importance of the task significantly in the US, and Abel and Buchman (2020) find no gender effect in India. Abel (2019) also shows that the effect of negative feedback doubles in magnitude when given by female managers. Consistently, Grossman et al. (2019) show that women leaders are assessed less positively and rewarded less generously than equally effective men. Reuben and Timko (2018) show unsuccessful males have a higher likelihood of being elected than unsuccessful female leaders, although this result disappears with repeated interactions. Even in academia, we observe harsher standards for female professors (Dupas et al., 2020). Boring (2017) shows that male professors are perceived as more knowledgeable than female

Our contribution owes to the unique data we managed to collect. Our data first allow us to document, for the first time, detailed characteristics of actual leaders as well their subordinates. To the best of our knowledge, this is the first paper that documents a wide range of cognitive and socio-cognitive skills associated with being a corporate team leader and how these skills differ across male and female leaders in large corporations. Our data also allows us to make causal interpretations regarding the role of leaders' gender in shaping the workplace environment and influencing social networks in large corporations.

The field of gender and leadership in economics encompasses a vast amount of scholarly work. Our paper contributes to this field by complementing several of its distinct strands. It broadly speaks to the literature that strives to identify the impact of female leadership on gender-related personnel decisions. Kunze and Miller (2017), Kurtulus and Tomaskovic-Devey (2012) and Matsa and Miller (2011) show that when there are more female bosses in the higher ranks, women have a significantly higher likelihood of career-advancing. In contrast, Bagues et al. (2017) and Bagues and Esteve-Volart (2010), respectively, find that the share of females in hiring committees do not change the likelihood of females getting hired or even decreases it. Bertrand et al. (2019) find no effect of female presence in corporate boardrooms on other women beyond the women who made it to the boardrooms.<sup>3</sup> See an excellent review article by Miller (2018) on women and leadership research.

Our paper is best positioned within a new and growing literature on the nexus between leadership quality, social interactions, and workplace climate. Cullen and Perez-Truglia (2019), for example, show that male employees who socialize more with their male managers get promoted more easily than their male colleagues who are assigned to female leaders, whereas career progression of females is not affected by leader gender. Ashraf and Bandiera (2018) review the evidence on the effects of social interactions in the workplace on the effort choice and productivity of employees. Bandiera et al. (2010) show that working alongside productive friends increases productivity. Recent work by Dahl et al. (2018) shows that exposing men to more women in the workplace (in the military) increases productivity and attitudes. Griffith and Dasgupta (2018) show that females regard gender imbalanced academic departments as noncollegial and inequitable. Our paper advances this literature by

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professors. Hengel (2016) finds females are held to higher writing standards in the academic peer-reviewing process.

<sup>3</sup>There is also a distinct literature on the effects of female leadership on firm performance, value, etc. See Kuzmina and Melentyeva (2021), Flabbi et al. (2019), Gagliarducci and Paserman (2015), Amore et al. (2014), Ahern and Dittmar (2012), Wolfers (2006), among others. We do not directly contribute to this literature.

showing that female leadership changes the structure of relational networks in the workplace and help employees form more social connections with their leaders and their female colleagues, which yields a more positive workplace climate.

Finally, we contribute to the literature on self-selection into leadership. This literature documents consistent gender differences in self-selecting into leadership positions and strives to understand the factors explaining this difference. Much of this literature utilizes controlled lab settings and point to gender differences in specific attributes such as confidence, responsibility aversion, fear of backlash, aversion to competition, and risk-taking in explaining the documented gender gap in the willingness to become a leader; see Alan et al. (2020), Born et al. (2020), Bordalo et al. (2019), Chen and Houser (2019), Coffman (2014). We advance this literature by showing that actual female leaders do not necessarily share male attributes. Instead, our results strongly suggest that women bring their own style of leadership to corporate life and manage interpersonal relationships differently than men, which accords well with the findings of Chakraborty and Serra (2019), Bednar and Gicheva (2014), and Matsa and Miller (2013).

Our results suggest that the benefits of the fair representation of female leadership goes beyond social justice concerns. Having more women in decision-making positions may go a long way in taming toxic social relationships in the workplace, contributing to perceived climate in the high-paced corporate environment. Recent work like Azulai et al. (2020) and Alan et al. (2022) show organizational culture can be improved via training programs. Cultural transformations are probably painfully slow. Innovative training programs notwithstanding, increasing female presence in decision-making positions and improving support by leaders, may be a faster and higher-return approach to establishing a healthy organizational culture.

The rest of the paper is organized as follows. Section 2 provides the background and the context for the study. Section 3 describes our outcomes of interest and the way we construct them. Our results are presented and discussed in Section 4. We conclude in Section 5.

## 2 Background and Context

Micro data on corporate professionals spanning multiple firms are not available in details required by this study. To answer the questions we ask in this study, we needed to enlist

several large corporations with centralized and transparent hiring and subordinate-leader matching practices. Enlisting these firms meant their full cooperation in allowing us to collect detailed individual information from their white-collar professionals of all ranks on demographics, socio-cognitive skills (fluid IQ, emotional intelligence, verbal creativity), social networks, economic and social preferences, and perceived workplace climate. We reached out to prominent large corporations operating in various sectors in Turkey and requested their involvement in the project under these conditions. As these are large corporations with hectic operation hours and busy professionals, enlisting them involved multiple meetings with their CEOs, HR officials, compliance departments, and eventually signing confidentiality agreements and research collaboration protocols with each of them.<sup>4</sup> Out of 40 corporations we contacted, we managed to secure the collaboration of 23 companies from 6 sectors that met our criteria regarding subordinate-leader matching practices. A number of these firms are large multinationals operating in Turkey, and the majority of them are companies that belong to large conglomerates. While more companies expressed interest in being part of this project, we capped the number at 23 due to our physical capacity of on-site visits for onerous data collection. We also rejected corporations where subordinate-leader match practices implied selection.<sup>5</sup> Our firms are significant players with large market shares in their sectors; defense, chemical, energy, finance, construction, and textile.

After enlisting 23 companies, we launched an extensive field study. In Fall 2019, we visited each firm (often multiple times), gathered workers and team leaders, department by department in meeting rooms, and collected our data. An average data collection session lasted about 3 hours. Each session started with a brief introduction and signing individual consents.<sup>6</sup> We first played incentivized games to elicit social and economic preferences (lab-in-the-field experiments). Then, we conducted three major cognition tests, followed by a detailed social network elicitation. Finally, participants were directed to a detailed survey. Preventing participants' communications with other departments for the incentivized

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<sup>4</sup>Each formal document was signed by the relevant company's CEO, and the president of Kadir Has University. We also obtained ethics approval from Kadir Has University Ethics Board

<sup>5</sup>None of the corporations we approached had a match practice based on gender. However, some corporations declared that supervisors (team leaders) might be consulted in choosing subordinates for some tasks on some occasions. We took this as an indication of selection and did not include these firms in our study

<sup>6</sup>Designated HR coordinators informed all white-collar workers prior to our visit, and only the ones who wanted to participate in the study did come to meeting rooms. We made sure that companies informed their workers that the participation was voluntary, and not joining would not have any consequences for them. Most workers participated. We provide our translated introduction slide, which is similar to the information provided to all participants by HR units prior to our visit, in the Online Appendix.



games was the most important logistical challenge we faced in large firms. To overcome this, we conducted our incentivized experiments in parallel using different meeting rooms. Participants used their smartphones to enter into our data collection platforms, following our instructions step by step. We provided tablets and internet to participants when needed.

Besides our access to these firms and identification advantages, Turkey offers an ideal setting to study female leadership and workplace climate in large corporations. On the one hand, it is a large OECD country with relatively high rates of female corporate professionals and high rates of female leaderships.<sup>7</sup> On the other hand, despite significant advances made regarding gender equality since the foundation of the secular republic in 1923, the conflict between traditional and modern gender norms remains in all walks of life. Given that we reached out to prominent modern corporations employing highly educated men and women professionals, our findings are likely to be generalizable to countries where there is a relatively high presence of females in the corporate sector, but nevertheless, gender equality in corporate life is still a distant goal.

### 3 Outcomes

Below, we provide details of our data collection procedures and the way we construct our outcomes of interest.

#### 3.1 Economic and Social Preferences: Lab-in-the field experiments

Incentivized games represent an important component of our toolkit. Economists have long been measuring economic and social preferences using these games to minimize demand effects. We began our data collection session by informing the participants that our data collection session would consist of 4 main parts. We played 3 games in Part 1, from which they had the opportunity to earn actual money. Participants were informed that at the end of Part 1, the computer would choose one of the games for each participant for payment so that the earnings from games would not accumulate.

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<sup>7</sup>According to McKinsey’s “[Women Matter Turkey 2016](#)” report, although female participation in labor force is still low in Turkey, female representation in the leading companies (41%) is only slightly lower than that of Latin America (43%) and not so far from that of the US (53%). The representation of females in executive committees is 25% in Turkey, which is higher than 8% in Asia, 17% in the US, and 20% in Europe.

We began our Part 1 by a standard 3-stage competition game where the underlying task was the addition of 3 two-digit numbers. In the first stage, participants were asked to complete as many addition tasks as possible under piece rate (\$0.5 per correct answer) in 2 minutes. They then did the same task under a tournament regime where they were assigned to three-people groups (anonymous) within their department. A participant would earn three times the piece rate (\$1.5) per correct answer if and only if he/she comes first in his/her group. In the final stage, participants were asked to self-select into a payment scheme, piece rate (as in stage 1) or tournament (as in stage 2). They were informed that if they chose the tournament regime, their performance would be compared against their group members' stage 2 (tournament) performances. The binary indicator of tournament choice in stage 3 is our measure of competitiveness (Niederle and Vesterlund, 2007).<sup>8</sup>

To measure cooperation, we played a simple public goods game (Fischbacher et al., 2001). In this game, participants were informed that they were in a 3-person group randomly determined by the computer among the current participants (colleagues in their department). Each participant was given a \$5 endowment, and they were asked to contribute to a joint project. The project provided a 100% sure return so that the computer doubled the total contributions for each group. The doubled contributions were then divided equally among all three group members, regardless of their initial contribution. Our measure of cooperation is the amount contributed to the project, which lies between 0 and \$5.

Our third game aims to measure individuals' risk attitudes. For this, each participant received a \$5 endowment, and they were given an option to invest in a risky venture. The risky venture tripled the initial investment with a 50% chance and wiped it out entirely otherwise. The participants were told that the amount they did not invest in the risky venture remains safe. The amount of investment a participant makes into the risky venture is our measure of risk tolerance, which lies between 0 and \$5.

At the end of Part 1, participants played a simple dictator game. They were asked what fraction of their experimental earnings they were willing to donate to disadvantaged children in Eastern Turkey. The fraction they state (between 0 and 100%) is our measure of altruism. This game completed our Part 1. We use these measures to document gender differences in economic and social preferences of corporate leaders, and to control for individual characteristics when estimating the effect of leaders' gender on social networks and workplace

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<sup>8</sup>The participants were informed that if the computer picked this game for payment, it would also randomly choose one of the stages for payment

climate. The full flow of Part 1 with detailed instructions of games is given in the Online Appendix.

### **3.2 Cognitive and Socio-Cognitive Skill Measures**

In Part 2, we measured participants’ cognitive and socio-cognitive abilities. There are various ways of measuring human cognitive capacity in psychology literature. Typically, standardized numeracy and verbal tests are used to measure crystallized IQ. Here, we were able to conduct a test that measures fluid IQ, which is considered to be closer to what is known as the “innate ability” of an individual. For this, we implemented Raven’s Progressive Matrices (Raven, 1960). Our second measure of cognitive capacity relates to cognitive empathy. For this, we implemented the “Reading the Mind in the Eyes Task” developed by Baron-Cohen et al. (2001) and Baron-Cohen et al. (1997). In this test, participants were given pictures of different people’s eyes and asked to pick the correct emotion reflected in those eyes by choosing one of four options presented. This test is known to measure emotional intelligence (cognitive empathy) in adults and children. Finally, we measured verbal creativity (Mednick, 1962). For this, participants were given three unrelated words and asked to find a single word that turns all three into meaningful phrases when added to the end or the beginning of all three words. We use these measures to document gender differences in skills of corporate leaders, and to control for individual characteristics when estimating the effect of leaders’ gender on social networks and workplace climate. Sample questions of each test are available in the Online Appendix.

### **3.3 Social Networks**

The extent of supportive networks is likely to be one of the important markers of a healthy workplace climate. These networks may be professional, utilized to maximize individual as well as team performance or involve support in personal matters, which may, in turn, improve performance. These support networks may also be important to achieve job satisfaction, develop a sense of belonging to the firm, and boost solidarity with colleagues (Guadalupe et al., 2020; Srivastava et al., 2018; Judge et al., 2001; Ostroff, 1992).

Part 3 of the data collection session involved eliciting social networks in the firm. We collected social network data in two domains of interactions, professional and personal. For the former, participants were asked to list up to 3 colleagues they regularly consult when

they need professional (work-related) help. For the latter, they were asked to nominate up to 3 colleagues whom they consult when they need help in personal matters, allowing natural overlaps across two domains. The participants were given the option of nominating no one, a single or two or three colleagues. Using these nominations, we construct individual (node) level and department level outcome measures that characterize the nature of social interactions established in the firm.

Our node-level network measures use out-degree ties, that is, the nominations made by a participant. The minimum value of out-degree is 0, corresponding to no nomination, whereas the maximum possible value is set to 3 colleagues. As in a healthy workplace unit, we expect leaders to provide both professional and personal help to their subordinates, our main focus is whether a team leader is nominated by his/her subordinates. We are also interested in the gender composition of nominations. For this, we construct a measure that gives the ratio of female colleagues nominated by a participant. Naturally, this ratio is not independent of the proportion of females in the department. Therefore, in all our individual-level analyses, we control for the share of females in the department and the department size.

Our second set of network measures include department-level gender homophily indices. For this, we first follow Coleman (1958) and construct a homophily index for females and males separately. Coleman’s Homophily Index summarizes the degree to which the members of a group form links with the members of the same group (referred to as inbreeding) and is constructed as follows.

Let  $F$  and  $M$  denote groups of females and males in a department respectively. Let us also denote the number of intra-gender links formed by group  $i$  in department  $j$  as  $s_{ij}$ , and the total number of links formed by group  $i$  in department  $j$  as  $t_{ij}$ , where  $i \in \{F, M\}$ . The ratio  $\frac{s_{ij}}{t_{ij}}$  then gives us the share of within-group (homophilic) ties for group  $i$ .

Denoting  $w_{ij}$  as the expected proportion of within group links of group  $i$  if the links are formed at random, the excess homophily of group  $i$  is defined as  $\frac{s_{ij}}{t_{ij}} - w_{ij}$ . To make this index invariant to department size and gender composition within department, following Coleman (1958), we normalize excess homophily by  $1 - w_{ij}$ , which is the maximum possible excess homophily that can be observed for group  $i$  in the case of excess homophily. If however excess homophily is negative (forming more links with the out-group compared to in-group), we then normalize excess homophily index by  $w_{ij}$ . This ensures that the measure takes values between -1 and +1. Consequently, Coleman’s Homophily Index for group  $i$  in department  $j$  is given by:

$$C_{ij} = \begin{cases} \frac{\frac{s_{ij}}{t_{ij}} - w_{ij}}{1 - w_{ij}} & \text{if } \frac{s_{ij}}{t_{ij}} - w_{ij} \geq 0 \\ \frac{\frac{s_{ij}}{t_{ij}} - w_{ij}}{w_{ij}} & \text{if } \frac{s_{ij}}{t_{ij}} - w_{ij} < 0 \end{cases}$$

We compute Coleman’s Homophily Index separately for females and males in both professional and personal support domains.

Second, we construct a gender segregation index to track the total amount of gender segregation within departments. Following Schelling (1969), for each department, we define the gender segregation as the difference between the theoretical probability of randomly formed inter-gender links and the actual share of inter-gender links within the department. This gender segregation index differs from the Coleman homophily index in that it summarizes the total level of gender segregation within the department, whereas the Coleman index measures segregation (or, equivalently, homophily) for each gender separately.

To construct the theoretical probability of inter-gender links under the assumption that links were formed at random, we proceed as follows.<sup>9</sup> In the theoretical case of forming links at random, the number of links a male employee forms with female employees (and vice versa) would follow a hypergeometrical distribution. Accordingly, for a male employee who nominates  $x \in \{1, 2, 3\}$  colleagues, the probability of nominating  $y \geq x$  female colleagues is given by:

$$p_M(x, y) = \frac{\binom{n_F}{y} \binom{n_M - 1}{x - y}}{\binom{n_M + n_F - 1}{x}},$$

where  $n_F$  is the number of female employees and  $n_M$  is the number of male employees within the department.  $n_F$  and  $n_M$  are replaced by the actual number of female and male employees within the department. If an employee does not nominate anyone (i.e.,  $x = 0$ ), we have  $p_i(x, y) = 0$  for all  $i \in \{F, M\}$ .

Analogously, for a female employee, who nominates  $x \in 1, 2, 3$  colleagues, the probability of nominating  $y \geq x$  male colleagues is given by:

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<sup>9</sup>An analogous implementation of segregation index in the context of ethnic segregation, based on Schelling (1969), is given by Alan et al. (2021).

$$p_F(x, y) = \frac{\binom{n_M}{y} \binom{n_F-1}{x-y}}{\binom{n_M+n_F-1}{x}}.$$

The theoretical probability of forming inter-gender links under the assumption that links were formed at random is then given by:

$$\mu = \frac{\sum_{x=1}^3 \sum_{y=1}^x [n_M(x)p_M(x, y)y + n_F(x)p_F(x, y)y]}{\sum_{x=1}^3 x [n_M(x) + n_F(x)]},$$

where  $n_M(x)$  and  $n_F(x)$  are, respectively, the number of male and female employees who nominate  $x$  colleagues.

The observed frequency of inter-gender links based on the actual nominations within each department is given by:

$$\tilde{\mu} = \frac{e_{MF} + e_{FM}}{e_{MF} + e_{FM} + e_{MM} + e_{FF}},$$

where  $e_{ij}$  denotes the number of links between gender  $i$  and gender  $j$  where  $i, j \in \{M, F\}$ . Finally, we define the gender segregation index as the difference between  $\mu$  and  $\tilde{\mu}$ . The positive values of this difference ( $\mu > \tilde{\mu}$ ) indicate gender segregation.

### 3.4 Perceived Workplace Climate

After Part 3 was completed, participants were directed to a survey platform. The survey includes detailed questions on demographics and a rich set of item-response questions to measure workplace climate perceived by the participant. We focus on four workplace climate proxies: i) sense of belonging, ii) workplace satisfaction, iii) job satisfaction, iv) collegiality, v) perception of firms' meritocratic values, vi) leader professionalism, and vii) social norms. We extract common factors to construct each of these measures, and they are constructed so that higher values represent favorable indicators. In addition to these proxies, which we use as our primary outcomes, we construct a gender norms index using several item-response questions with higher values indicating more modern (equal) gender role beliefs. All except the index of meritocratic values involve standard items. We developed our "meritocracy

scale” as we believe that it is an essential component of the perceived corporate climate. All individual items we use to construct indices (translated to English) are given in the appendix.

## 4 Results

Before documenting our data and main results, we note that we use the term “leader” broadly throughout the paper. A “leader” in our study is someone responsible for multiple white-collar workers in a team within a department. He/she is the first point of contact for the workers within the team in terms of reporting and receiving feedback. With this definition, while some (small) departments have a single leader, larger departments have multiple leaders in our data. Therefore, we will use the binary indicator of leader’s gender for our individual-level analyses, and our department level analyses will use the “share of female leaders” in the department as the variable of interest. Note also that our team leaders naturally have leaders as well. We make a strong distinction between a leader and a subordinate by referring to the former as someone who is responsible for several workers, regardless of the number. The latter is a worker who has no supervisory and leadership duties in the firm.

### 4.1 Descriptive Statistics

We begin by noting that 37% of our sample consists of female professionals. This number is higher than the overall Turkish female labor force participation rate recorded in 2019 (33.7%). The discrepancy is not surprising as our sample contains highly educated private sector professionals. Table 1 summarises our individual-level measures, separately for females and males. The last column in this table provides the p-values obtained from the test of equality of means across gender, controlling for firm fixed effects and clustering the standard errors at the firm level. First, note that about 12% of females and 15% of males hold a leadership position in our sample, and this difference is statistically significant. Note also that 40% of the females work in female-led teams as opposed to only 22% for males. On average, females are 2 years younger, and 18% less likely to be married in our sample.

In terms of socio-cognitive skills, while we observe no statistically significant gender difference in fluid cognitive ability, we observe that females have significantly higher cognitive

empathy and verbal creativity than males in our sample. The mean difference in the eyes test score is considerably large (0.3 standard deviations).

Consistent with what is found in the experimental literature, female professionals in our sample are significantly less risk-tolerant (Booth et al., 2014; Borghans et al., 2009), less competitive (Niederle and Vesterlund, 2007), more altruistic (Andreoni and Vesterlund, 2001), but interestingly, significantly less cooperative than males (Brown-Kruse and Hummels, 1993; Sell et al., 1993; Sell and Wilson, 1991).

The summary of social network measures exhibits interesting gender patterns as well. Professional and personal support links formed between leaders and subordinates are important for our purposes. For both professional and personal support categories, females report a lower propensity to receive professional and personal help from their leaders. While 57% and 37% of females state that they receive professional and personal support from their leaders, respectively, these proportions stand at 60% and 49% for men. Finally, we observe that female professionals hold a much more pessimistic view of their workplace environment than their male colleagues. They report lower job satisfaction and workplace satisfaction than their male colleagues. They also have a significantly more pessimistic view of their firm’s meritocratic values and report worse behavioral norms than their male colleagues.

Table 2 presents the summary statistics of our department level measures. The average department size in our sample is 17.5, with a minimum of 5 and a maximum of 143 white-collar workers. The share of females in departments exhibits substantial heterogeneity, with some departments being predominantly male and some predominantly female, with an average female share of 24%. Similarly, the proportion of female leaders in departments vary greatly, with some departments being led entirely by males, and others entirely by females, with an average of 33.5% female leadership. As a final note, departmental network structures exhibit significant male homophily in professional and personal support domains, with substantial variation across departments. The female homophily, on the other hand, emerges only in personal support domain, and is negative in professional relationships.

Before analyzing the role of leaders’ gender in shaping social interactions and workplace climate, we first document the characteristics of a corporate leader in our sample. While not being the paper’s central focus, to the best of our knowledge, this is the first comprehensive documentation of gender differences in a wide range of characteristics of actual corporate leaders.



## 4.2 Characteristics of a Corporate Leader

Our rich data allow us to explore the distinctive characteristics of a corporate leader. Table 3 presents the predictive power of demographics, cognitive and socio-cognitive abilities, competitiveness, economic and social preferences on the probability of being a corporate team leader. Controlling for firm fixed effects, females are 2.7% less likely to be in a leadership position. However, adding tenure in the firm, age, and marital status, eliminates this gender difference entirely.<sup>10</sup> Overall, older workers with higher fluid cognitive ability are significantly more likely to be in a leadership position in a corporation. A one standard deviation increase in Raven score is associated with a 5% increase in the likelihood of being a leader. Interestingly, competitiveness, risk-taking and cooperation do not predict leadership.

Results regarding risk-taking and competitiveness are worth further discussion. There is a large literature that strives to understand the factors behind females' unwillingness to assume leadership positions in all economically significant domains. A strand of this literature claims that leadership requires particular skills and attitudes, with which women may not be as well-endowed as men. For example, there is active experimental literature that shows that women shy away from competitive tasks, and this attitude may also explain their reluctance to self-select into leadership positions (Niederle, 2017; Balafoutas and Sutter, 2012; Gneezy et al., 2003). Similarly, females are shown to be more risk-averse, which is also associated with their lack of interest in leadership positions (Booth et al., 2014; Borghans et al., 2009). These claims imply that women who are self-selected into leadership would exhibit similar characteristics as male leaders. Our data do not corroborate this implication.

Figure 5 plots gender differences in cognitive abilities, social and economic preferences, and gender role beliefs of leaders and non-leaders (subordinates) in our data. Controlling for firm fixed effects, female leaders stand out as significantly more risk-averse, less willing to compete, and less cooperative. They hold more progressive gender role beliefs than their male counterparts. We detect no gender differences in fluid cognitive ability in either leaders or subordinates. These findings suggest that the skill set of females who hold leadership po-

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<sup>10</sup>Eckel et al. (2020) provide an excellent review on gender gap in leadership. They identify three main arguments in this literature: i) women may be less eager for leadership roles (Li et al., 2020; Exley and Kessler, 2019; Grossman et al., 2019; Gangadharan et al., 2016; Ertac and Gurdal, 2012), ii) they may be less likely to be selected as leaders due to stereotypes about ability or discrimination (Cason et al., 2020; Moss-Racusin et al., 2012; Johnson et al., 2008; Eckel and Grossman, 2002; Goldin and Rouse, 2000), iii) when in leadership positions, women may be evaluated differently than men (Sarsons et al., 2021; Boring, 2017; Brooks et al., 2014; Reuben et al., 2012; Andreoni and Petrie, 2008).

sitions are not necessarily the same as males who hold similar positions. The figure suggests that female leaders do not necessarily possess more male-like characteristics than non-leader females. On the contrary, the gender differences in characteristics are even more pronounced for the leader sample. This finding challenges the prior that “male-like” characteristics are requisite for leadership positions. These findings are consistent with those of Adams and Funk (2012), which finds that female and male directors differ in their core values and risk attitudes. The authors show that female directors are more benevolent and universally oriented, less power-oriented than male directors. Given that their skill endowments exhibit differential patterns, it is plausible to expect female leaders to shape social interactions and workplace climate differently from male leaders.

### 4.3 Identification

Our main empirical specification, which is presented in the next subsection, relates working in a female-led team to a battery of social network and workplace climate outcomes. Figure 1 displays the distribution of the proportion of female leaders within departments. While 252 departments have no female leaders, there is quite a lot of heterogeneity in the proportion of female leaders in the remaining 221 departments.

Identification of the effects of female leadership is based on the variation in working under female team leader, or between-department variation in the proportion of female team leaders within firms, depending on the unit of analysis. This identification strategy requires that employees (departments) that work under female leaders (that have a higher proportion of female leaders) do not systematically differ from those who work under male leaders in any other dimension than the characteristics we condition upon. Below we demonstrate the plausibility of this assumption in several ways.

One challenge to identification arises because female leadership and share of female employees are higher in female-dominated sectors and “female-type jobs”. In our data, the share of female employees ranges from 19% in the construction sector to 60% in the textile sector. Mechanically, female leadership is more prevalent in sectors employing a higher share of females. It is also likely to observe more female leaders and female employees in departments dealing with administrative tasks, such as human resources (HR) department, in contrast to departments related to production. We address this endogeneity issue by controlling for job task and firm fixed effects in all of our regressions. Since the assignment

of employees to female leaders took place within firms, we control for firm fixed effects to account for the firm level variation in working under female leader. We control for job task to account for the variation driven by “female-type jobs”. The job task variable maps the job task description reported by the employee into the standard ISCO-08 job classification.

Another threat to our identification strategy concerns the endogeneity of working in a female-led department or a female-led team within a department. This endogeneity may rise in three ways. First, workers may self-select into female-led teams/departments if they are allowed to choose their team leaders. Second, team leaders may choose a particular type of worker to work with if they are allowed to do so. Finally, workers may be assigned to a female-led team by the company HR based on certain characteristics. This can happen if for example, HR officials try to match gender or personalities of workers with those of leaders. For example, they may try to allocate particularly easy going people with particularly difficult leaders. To the extent that these worker-leader matching practices are correlated with the outcomes of interest, our analyses remain correlational.

As mentioned in Section 2 above, to make sure these selection mechanisms are unlikely in our sample of firms, we enlisted firms with highly centralized and transparent hiring and worker allocation policies. Nevertheless, we also ran an extensive qualitative survey where HR officials were asked to provide a detailed account of their firm’s hiring and worker-leader matching policies. While qualitative, these results provide some assurance for us that it is highly unlikely that workers are allocated to team leaders based on anything other than the qualifications required by the job. Only one out of 23 firms declared that gender of leader is somewhat important, while the remaining firms declared that it is not important (see Figure 2). One firm did not respond to the HR survey. Our results are robust to excluding non-response firm, or the firm that declared leader gender is somewhat important, or both.

In addition to detailed testimonies received from HR directors, we utilize our data to further check possible sorting based on the gender of leaders. Specifically, we evaluate whether individuals were indeed randomly assigned to female-led teams conditional on demographic variables, share of females within department, department size, job task, and firm fixed effects. Table 4 shows the importance of different worker characteristics on being assigned to female-led teams.

We find no evidence of selection based on many characteristics, including cognitive and socio-cognitive abilities, once we control for job task, share of females within department, department size and firm fixed effects. The only characteristics that turn out to be statistically

significant are competitiveness, and risk tolerance. Employees who are more competitive, and less risk tolerant are more likely to work under a female leader. Although statistically significant, these coefficients imply limited economic significance. In our following analyses, we include these variables and also the ones that do not turn out to be statistically significant as controls.

We further demonstrate that pre-determined individual characteristics are balanced across male and female-led teams. Appendix Table A.1 reports the mean characteristics for individuals working under male and female leaders. The last column reports whether the differences in pre-determined characteristics, between employees who work under female leader and male leader, are statistically significant after controlling for share of female within department, department size, job task, and firm fixed effects. None of the characteristics significantly differ across employees who work under female leaders and male leaders.

To further ensure that assignment to female-led teams is conditionally as-good-as random, we carry out a Monte Carlo simulation following Bietenbeck (2020). Specifically, we test whether the within-firm variation in exposure to female leaders (working under female leaders) observed in our data is consistent with a random allocation process. Figure 3 plots the distribution of the residuals from 1,000 replications of this exercise, vis-à-vis an equivalent regression using the actual data, using only firm fixed effects. The two distributions look very similar, providing further compelling support for our identification assumption.

#### 4.4 Empirical Model

Our basic empirical specification for individual-level outcomes is as follows:

$$y_{ijf} = \alpha_0 + \alpha_1 \text{FemLead}_{ijf} + \text{IC}'_{ijf} \beta + \text{DC}'_{jf} \gamma + \delta_f + \varepsilon_{ijf}, \quad (1)$$

where  $y_{ijf}$  is the outcome of interest for worker  $i$  in department  $j$  in firm  $f$ .  $\text{FemLead}_{ijf}$  is the binary indicator of working under female leader.  $\text{IC}_{ijf}$  is a vector of individual characteristics for worker  $i$  in department  $j$  firm  $f$  that are likely predictive of the outcome  $y$ . Vector  $\text{DC}_{jf}$  contains department characteristics, including the share of female workers in the department and department size. Finally,  $\delta_f$  represent firm fixed effects. The coefficient of interest in this basic specification is  $\hat{\alpha}_1$ , which we interpret as the effect of working under female leader. The above specification is modified as appropriate to conduct various heterogeneity analysis.

Our department level empirical specification is as follows:

$$y_{jf} = \alpha_0 + \alpha_1 \text{ShareFemLead}_{jf} + \text{DC}'_{jf} \gamma + \delta_f + \varepsilon_{jf}, \quad (2)$$

where  $y_{jf}$  is a department level outcome of interest (for example, male homophily index),  $\text{ShareFemLead}_{jf}$  is the share of female leaders in the department, the variable of interest. Recall that larger departments may have multiple leaders in our data. Therefore, our department level analyses uses “share of female leaders” in the department as the variable of interest. Vector  $\text{DC}_{jf}$  contains departmental characteristics. Finally,  $\delta_f$  denotes firm fixed effects. In all analyses, we cluster standard errors at the firm level.

#### 4.5 Social Networks and the Gender of Corporate Leader

We first examine the effect of working under female leader on node-level network ties. Table 5 reports whether working under a female leader has an effect on receiving support from the leader, separately for female and male workers. Female workers are significantly more likely to receive professional and personal support from their female leaders. They are 11% (16%) more likely to nominate their leaders as professional (personal) support provider. On the other hand, the gender of the leader does not have an effect on receiving support from the leader for male employees. The differences in the female leader effect for male and female employees are statistically significant for both professional and personal support.

Our second piece of evidence relates to the effect of leader’s gender on inter-gender social ties within the firm. Table 6 presents the effect of working with a female team leader on the percentage of female colleagues (non-leaders) nominated as professional and personal support provider. Here, we see clearly that having a female leader increases social interactions between males and females. Both males and females nominate higher numbers of (non-leader) female colleagues in professional and personal support networks under female leadership. Both male and female subordinates have 22 to 26% higher female colleague nominations for professional help category under female leadership. Next, we will examine this at the departmental level looking at the effect of working in a female-led department on male and female homophily levels.

Table 7 presents the effect of the proportion of female leaders on department level male and female homophily separately. Controlling for department size, department female share, and firm fixed effects, as the proportion of female leaders increases, the degree of male

homophily declines and that of female homophily increases significantly. This is consistent with our node-level findings that female leaders lead workers (both males and females) to form more professional ties with their female colleagues. To quantify the estimates, 10% increase in the proportion of female leaders is associated with a 12.7% decline in male homophily, and a 43.1% increase in female homophily for professional help category. The results are quantitatively similar for personal help category (Table A.4). Overall, department-level gender segregation remains unchanged, as can be seen in column 3.

Figure 6 presents the unconditional degree of homophily in departments with no female leaders and at least one female leader, with respect to professional support ties. It is clear from this picture that female leadership breaks male homophily and eliminates the gender difference in homophilic professional and personal interactions. At the same time, female leadership brings females back into the relational structure within the firm. Whereas female homophily is  $-0.31$  (females forming few links with other females) in departments without female leaders, in departments with at least one female leader, female homophily increases to  $0.06$  (females equally likely to form links with females and males). Results are even more striking in personal support network, as provided in Figure A.3.

These results can be viewed visually via our semi-parametric estimates. Figures A.4 presents the nonparametric relationship between the proportion of female leaders and male and female homophily, controlling for firm fixed effects. Corroborating our parametric results, female leadership lowers male homophily and increases female homophily in professional support domain. Figure A.5 presents similar results for personal support domain.

#### 4.6 Corporate Climate and the Gender of Corporate Leader

Our analysis on social networks shows that female leadership has a significant impact on the nature of the social ties formed within firms. In particular, workers under female leader form more inter-gender professional and personal ties. What does this structure imply for workplace climate? In particular, how does female leadership affect workers' i) workplace satisfaction, ii) perception of firms' meritocratic values, iii) collegiality, iv) job satisfaction, v) behavioral norms, and vi) leader professionalism in firms.

Table 8 reports the effects of working under female leader on perceived workplace climate. Although the estimates suggest that leader's gender does not have any statistically significant effect on reported workplace climate indicators, females on average report worse outcomes for

work satisfaction, and behavioral norms within the firm. The gender gap in workplace climate indicators seem to be especially pronounced for employees who work under male leaders; see the reported p-values in *Male leader (Male=Female)* row in Table 8. Interestingly, females working under female leaders report lower workplace satisfaction, and perceive their firms as less meritocratic.

Table 9 similarly considers the effect of working under female leader on reported workplace climate indicators but with a focus on the role of professionally supportive leaders. The estimates suggest no statistically significant effect of leader’s gender on workplace climate indicators. Yet, leaders who are deemed to be professionally supportive by their subordinates consistently create significantly better workplace environment for them on all dimensions. These results hold for personally supportive leaders as well; see Table A.5.

A careful look at climate perception of males and females separately reveals interesting patterns. Table 10 reports the climate perceptions separately under professionally supportive and non-supportive leadership. We focus on whether female leadership translates into a better workplace climate perception. Under supportive leaders, there is no gender gap in reported workplace climate under male and female leadership. In contrast, under non-supportive leaders, female workers report 0.33 standard deviations lower workplace satisfaction, 0.37 standard deviations lower meritocracy, 0.47 lower job satisfaction, and 0.46 worse behavioral norms than their male colleagues. Similar values are estimated for personal help category (see Table A.9). In both categories, this gender difference disappears when the leader is deemed to be professionally supportive; see Panel I in Table 10 and Table A.9.

This result goes hand in hand with the finding that female subordinates paint a darker picture of their workplace than their male colleagues under non-supportive female leaders. It may be that female workers’ expectations from their female leaders are different (higher) from what they expect from male leaders. This is also consistent with the finding that female leaders tend receive harsher backlash from their subordinates (Chakraborty and Serra, 2019).

Given these results, we ask the question whether there is any preference toward working under female leader and whether there is any gender difference in this preference. To answer this, we construct the binary indicator for female leader preference using the 5-category item-response question “I prefer to work under female leader”. Figure 7 presents the estimated coefficients on female (subordinate) dummy from the linear probability regression. The estimates indicate that females are 27 to 31% more likely to state preference toward a female leader if they are currently working under a female leader who provide professional support.

We observe no gender difference in leader gender preference among workers who work with male leaders. This is yet another piece of evidence emphasizing the role of female leaders particularly for female employees.

## **5 Conclusion**

Results suggest that female leaders are transforming corporate culture to a more inclusive one. However, the relationship between female workers and their female leaders contain some puzzling elements. It appears that female workers' expectations from female leaders may be different. While it may be acceptable for them not to receive much help from male leaders, some behavior from female leaders seem to cause significant negative sentiments for the workplace.

In a world where we are trying to promote female leadership in corporations may be too naive of a view of female preferences. We need to understand more what makes an ideal female working environment and what role leaders play.



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## 6 Tables

**Table 1: Individual Level Characteristics**

<b>Panel I: Individual Characteristics</b>					
	N	Males	Females	Difference (F-M)	P-value of Difference
Age	2394	35.652	33.485	-2.065	0.000***
Married	2394	0.559	0.458	-0.093	0.020**
Tenure	2394	7.077	5.896	-0.702	0.093*
Fluid Cognitive Ability	2394	0.070	-0.034	-0.025	0.647
Cognitive Empathy	2394	-0.085	0.201	0.299	0.000***
Verbal Creativity	2394	0.079	0.061	0.083	0.003***
<b>Panel II: Incentivized Outcomes</b>					
	N	Males	Females	Difference (F-M)	P-value of Difference
Risk Tolerance	2394	0.128	-0.198	-0.313	0.000***
Competitiveness	2394	0.582	0.398	-0.170	0.000***
Cooperation	2394	0.078	-0.140	-0.194	0.000***
Altruism	2394	-0.078	0.047	0.101	0.037**
<b>Panel III: Survey Outcomes</b>					
	N	Males	Females	Difference (F-M)	P-value of Difference
Job Satisfaction	1791	0.114	-0.140	-0.182	0.001***
Work Satisfaction	1707	0.093	-0.199	-0.266	0.002***
Collegiality	1824	0.052	-0.056	-0.108	0.136
Descriptive Norms	1764	0.015	-0.064	-0.119	0.071*
Leader Professionalism	1787	0.037	-0.045	-0.111	0.092*
Meritocracy	1652	0.035	-0.109	-0.143	0.048**
<b>Panel IV: Leader Variables</b>					
	N	Males	Females	Difference (F-M)	P-value of Difference
Leader	2394	0.149	0.121	-0.031	0.011**
Under Female Leader	1745	0.215	0.403	0.102	0.007***
Professional Help from Leader	1805	0.597	0.573	-0.007	0.772
Personal Help from Leader	1805	0.490	0.370	-0.125	0.002***
<b>Panel V: Network Variables</b>					
	N	Males	Females	Difference (F-M)	P-value of Difference
In-degree, Professional Help	2394	0.009	0.008	-0.001	0.071*
In-degree, Personal Help	2394	0.007	0.007	0.001	0.165
Out-degree, Professional Help	2394	0.011	0.011	-0.000	0.924
Out-degree, Personal Help	2394	0.010	0.009	0.000	0.272
%Female Noms, Professional Help	1797	0.196	0.431	0.141	0.000***
%Female Noms, Personal Help	1698	0.179	0.522	0.275	0.000***

Reported statistics under *Females* and *Males* headings use the female and male subsamples of the full sample. Cognitive test scores, incentivized outcomes other than competitiveness, and survey outcomes are standardized. *Difference* column reports the coefficient of female dummy in regressions of variables in first column on female dummy and firm fixed effects. *P-value* column reports p-values for the estimates in the previous column. Standard errors are clustered at firm level.

**Table 2:** Department Level Characteristics

	Mean	SD	Min	Max	N
Department Size	17.562	19.271	5.000	143.000	473
Share of Females	0.282	0.239	0.000	1.000	473
Proportion of Female Leaders	0.208	0.335	0.000	1.000	403
% Fem-Fem Professional Links	0.162	0.266	0.000	1.000	351
% Fem-Male Professional Links	0.167	0.214	0.000	1.000	351
% Male-Male Professional Links	0.538	0.380	0.000	1.000	351
% Male-Fem Professional Links	0.133	0.186	0.000	1.000	351
% Fem-Fem Personal Links	0.201	0.303	0.000	1.000	340
% Fem-Male Personal Links	0.130	0.204	0.000	1.000	340
% Male-Male Personal Links	0.540	0.394	0.000	1.000	340
% Male-Fem Personal Links	0.129	0.194	0.000	1.000	340
Coleman Male Homophily-Professional	0.295	0.629	-1.000	1.000	269
Coleman Female Homophily-Professional	-0.108	0.661	-1.000	1.000	197
Coleman Male Homophily-Personal	0.329	0.679	-1.000	1.000	259
Coleman Female Homophily-Personal	0.098	0.766	-1.000	1.000	191

Reported statistics use the full sample and present department level characteristics. *Fem-Fem Professional*, *Fem-Male Professional*, *Male-Male Professional*, *Male-Male Professional*, *Male-Fem Professional*, *Fem-Fem Personal*, *Fem-Male Personal*, *Male-Male Personal*, *Male-Fem Personal* indicate the number of intra- and inter-gender links in the professional and personal support networks. *Coleman Male Homophily-Professional*, *Coleman Female Homophily-Professional*, *Coleman Male Homophily-Personal*, *Coleman Female Homophily-Personal* indicate the Coleman homophily index for each gender in the professional and personal support networks.

**Table 3:** Characteristics of a Corporate Leader

	Holding a Leadership Position			
	(1)	(2)	(3)	(4)
Female	-0.027*	-0.008	-0.005	-0.003
	(0.013)	(0.015)	(0.015)	(0.014)
Department Size	0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Department Female Share	0.033	0.062	0.056	0.057
	(0.041)	(0.046)	(0.044)	(0.045)
Age		0.010***	0.012***	0.011***
		(0.002)	(0.002)	(0.002)
Married		0.024	0.028*	0.028*
		(0.014)	(0.014)	(0.014)
Tenure		0.003	0.003	0.003
		(0.002)	(0.002)	(0.002)
Fluid Cognitive Ability			0.054***	0.052***
			(0.012)	(0.012)
Cognitive Empathy			0.001	0.001
			(0.011)	(0.010)
Verbal Creativity			0.012	0.011
			(0.009)	(0.008)
Risk Tolerance				0.005
				(0.008)
Competitiveness				0.011
				(0.008)
Cooperation				0.005
				(0.007)
Altruism				0.000**
				(0.000)
N	2394	2394	2394	2394
R <sup>2</sup>	0.103	0.157	0.177	0.180

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a binary indicator of holding a leadership position. All regressions control for job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 4:** Selection into Female-led Team

	Full Sample			Subordinate Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.019 (0.024)	-0.023 (0.032)	-0.019 (0.032)	-0.026 (0.024)	-0.028 (0.032)	-0.026 (0.032)
Age	-0.002 (0.002)	-0.003 (0.002)	-0.003 (0.002)	-0.001 (0.002)	-0.003 (0.002)	-0.003 (0.002)
Married	0.022 (0.016)	0.034 (0.020)	0.036* (0.019)	0.020 (0.021)	0.030 (0.027)	0.033 (0.026)
Tenure	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)
Fluid Cognitive Ability		-0.010 (0.007)	-0.011 (0.007)		-0.010 (0.008)	-0.012 (0.008)
Cognitive Empathy		0.017 (0.012)	0.016 (0.012)		0.016 (0.012)	0.015 (0.012)
Verbal Creativity		0.014 (0.014)	0.012 (0.014)		0.016 (0.016)	0.013 (0.015)
Competitiveness			0.036** (0.014)			0.036** (0.013)
Risk Tolerance			-0.011 (0.008)			-0.017* (0.010)
Cooperation			-0.000 (0.009)			-0.001 (0.010)
Altruism			-0.007 (0.010)			-0.002 (0.009)
N	2283	1763	1745	2023	1536	1520
R-Squared	0.233	0.241	0.247	0.244	0.252	0.259

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a binary indicator of being assigned to a female leader. All regressions control for job task, share of females in the department, department size and firm fixed effects. Standard errors clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 5:** Effects of Having a Female Leader on Receiving Support from Leader

<b>Panel I: Full Sample</b>				
	Professional Support		Personal Support	
	Females	Males	Females	Males
Under Female Leader	0.108*	-0.013	0.159***	0.003
	(0.062)	(0.054)	(0.044)	(0.036)
N	621	1032	621	1032
P-Value (Male=Female)	0.039		0.001	
<b>Panel II: Subordinate Sample</b>				
	Females	Males	Females	Males
Under Female Leader	0.113*	-0.036	0.157***	-0.029
	(0.056)	(0.055)	(0.040)	(0.042)
N	560	879	560	879
P-Value (Male=Female)	0.010		0.000	

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a binary indicator of nominating leader in the network. *Females* columns use the female subsample. *Male* columns use the male subsample. *P-Value (Male=Female)* rows test whether a gender gap exists in receiving support from female leaders. All regression controls for age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 6:** Effects of Having a Female Leader on Receiving Female Colleague Support

<b>Panel I: Full Sample</b>				
	Professional Help		Personal Help	
	Females	Males	Females	Males
Under Female Leader	0.252*** (0.022)	0.219*** (0.038)	0.222*** (0.029)	0.232*** (0.044)
N	614	1015	591	952
P-Value (Male=Female)	0.457		0.845	
<b>Panel II: Subordinate Sample</b>				
	Females	Males	Females	Males
	Females	Males	Females	Males
Under Female Leader	0.262*** (0.023)	0.240*** (0.040)	0.223*** (0.033)	0.230*** (0.048)
N	553	863	534	808
P-Value (Male=Female)	0.611		0.914	

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is the proportion of females nominated in the network. *Females* columns use the female subsample. *Male* columns use the male subsample. *P-Value (Male=Female)* rows test whether a gender gap exists in receiving support from female leaders. All regression controls for age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 7:** Leader's Gender and Homophily in the Department

	Male Homophily	Female Homophily	Gender Segregation
Proportion of Female Leaders	-0.377*** (0.121)	0.466*** (0.144)	0.036 (0.053)
Outcome Mean	0.295	-0.108	0.061
N	267	197	296
R <sup>2</sup>	0.301	0.244	0.064

Reported results are obtained from ordinary least squares (OLS) regressions at department level. Dependent variable is *Coleman's homophily index* in Columns 2 and 3, and *Gender Segregation* in Column 4. All regressions control for firm fixed effects and department size. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 8: Leader's Gender and Reported Workplace Climate**

<b>Panel I: Full Sample</b>						
	W-Satisfaction	Meritocracy	Collegiality	Job Satisfaction	Behavioral Norms	Leader Prof.
Under Female Leader	0.011 (0.085)	0.021 (0.082)	0.118 (0.089)	0.077 (0.069)	0.040 (0.091)	0.015 (0.095)
Female	-0.154* (0.081)	-0.046 (0.069)	-0.064 (0.086)	-0.095 (0.061)	-0.150* (0.085)	-0.101 (0.073)
Under Female Leader × Female	-0.220** (0.106)	-0.199** (0.089)	-0.077 (0.112)	-0.099 (0.071)	-0.088 (0.123)	0.064 (0.132)
N	1540	1491	1645	1616	1593	1614
Male leader (Male=Female)	.0705	.511	.468	.136	.093	.183
Female leader (Male=Female)	.000613	.00267	.0749	.00868	.00524	.668
<b>Panel II: Subordinate Sample</b>						
Under Female Leader	-0.006 (0.094)	0.029 (0.077)	0.098 (0.113)	0.051 (0.079)	-0.003 (0.104)	-0.061 (0.113)
Female	-0.174* (0.091)	-0.035 (0.066)	-0.093 (0.088)	-0.109 (0.069)	-0.164* (0.086)	-0.081 (0.077)
Under Female Leader × Female	-0.178 (0.118)	-0.181* (0.088)	-0.048 (0.120)	-0.039 (0.088)	-0.022 (0.136)	0.097 (0.132)
N	1338	1295	1429	1402	1383	1403
Male leader (Male=Female)	.0685	.603	.303	.127	.0718	.304
Female leader (Male=Female)	.0046	.0171	.141	.0506	.0482	.847

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. *Male leader (Male=Female)* rows test whether a gender gap exists in perceived climate under male leaders. *Female leader (Male=Female)* rows test whether a gender gap exists in perceived climate under female leaders. All regression controls for age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 9:** Leader's Gender, Professional Support, and Reported Workplace Climate

<b>Panel I: Full Sample</b>						
	W-Satisfaction	Meritocracy	Collegiality	Job Satisfaction	Behavioral Norms	Leader Prof.
Female Leader	-0.155 (0.097)	-0.067 (0.095)	0.062 (0.092)	-0.027 (0.106)	-0.028 (0.109)	0.115 (0.093)
Professionally Helpful Leader	0.293*** (0.087)	0.313*** (0.096)	0.287*** (0.079)	0.231** (0.093)	0.206*** (0.072)	0.564*** (0.072)
Female Leader X Professional Help	0.079 (0.161)	-0.039 (0.177)	0.016 (0.153)	0.089 (0.179)	0.021 (0.116)	-0.137 (0.150)
N	1485	1436	1598	1555	1551	1565
R <sup>2</sup>	0.155	0.139	0.085	0.123	0.072	0.131
<b>Panel II: Subordinate Sample</b>						
Female Leader	-0.136 (0.104)	-0.027 (0.103)	0.068 (0.091)	-0.023 (0.115)	-0.051 (0.112)	0.061 (0.093)
Professionally Helpful Leader	0.296*** (0.088)	0.276** (0.102)	0.274*** (0.069)	0.237** (0.093)	0.211*** (0.072)	0.556*** (0.077)
Female Leader X Professional Help	0.050 (0.160)	-0.071 (0.185)	0.009 (0.143)	0.097 (0.199)	0.046 (0.118)	-0.135 (0.147)
N	1288	1245	1387	1347	1344	1359
R <sup>2</sup>	0.158	0.139	0.095	0.133	0.076	0.136

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. All regression controls for gender, age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table 10:** Leader's Gender, Professional Support, and Reported Workplace Climate, Full Sample

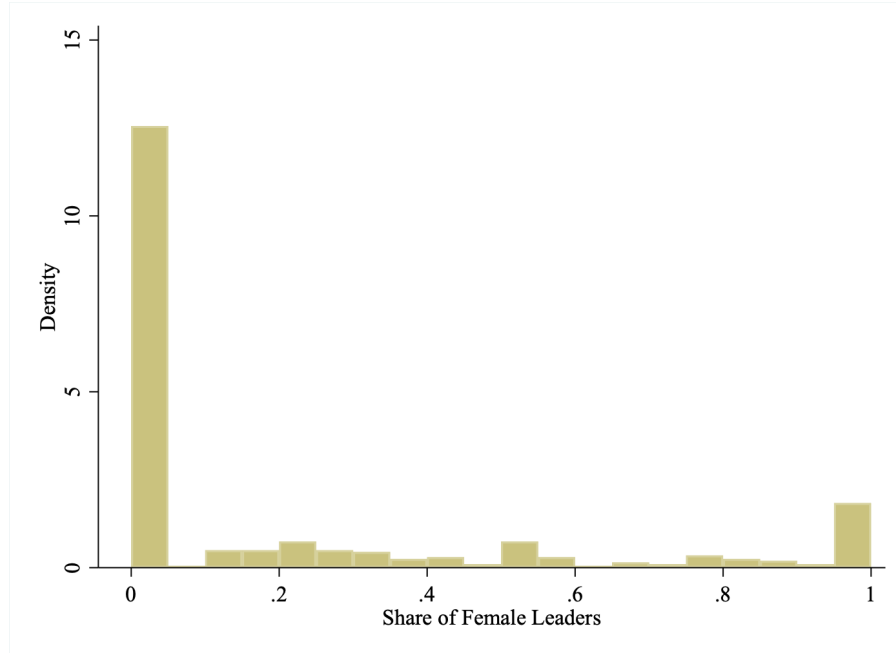
<b>Panel I: Under Supportive Leadership</b>						
	W-Satisfaction	Meritocracy	Collegiality	Job Satisfaction	Behavioral Norms	Leader Prof.
Female	-0.168 (0.103)	-0.071 (0.091)	-0.084 (0.099)	-0.234** (0.091)	-0.261** (0.113)	-0.086 (0.066)
Female Leader	-0.018 (0.136)	-0.100 (0.132)	0.022 (0.138)	0.008 (0.153)	-0.060 (0.112)	-0.124 (0.114)
Female X Female Leader	-0.233 (0.142)	-0.131 (0.121)	-0.055 (0.140)	0.115 (0.118)	0.065 (0.146)	0.126 (0.110)
N	918	892	985	954	956	974
R <sup>2</sup>	0.171	0.160	0.087	0.132	0.074	0.084
<b>Panel II: Under Non-Supportive Leadership</b>						
Female	-0.106 (0.137)	0.026 (0.111)	0.013 (0.137)	0.096 (0.123)	0.043 (0.111)	-0.129 (0.152)
Female Leader	0.046 (0.102)	0.137* (0.078)	0.281** (0.123)	0.202 (0.149)	0.165 (0.140)	0.214* (0.123)
Female X Female Leader	-0.333** (0.131)	-0.372** (0.153)	-0.260 (0.168)	-0.469*** (0.129)	-0.461*** (0.145)	-0.118 (0.225)
N	567	544	613	601	595	591
R <sup>2</sup>	0.153	0.141	0.120	0.168	0.105	0.112

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. All regression controls for gender, age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.



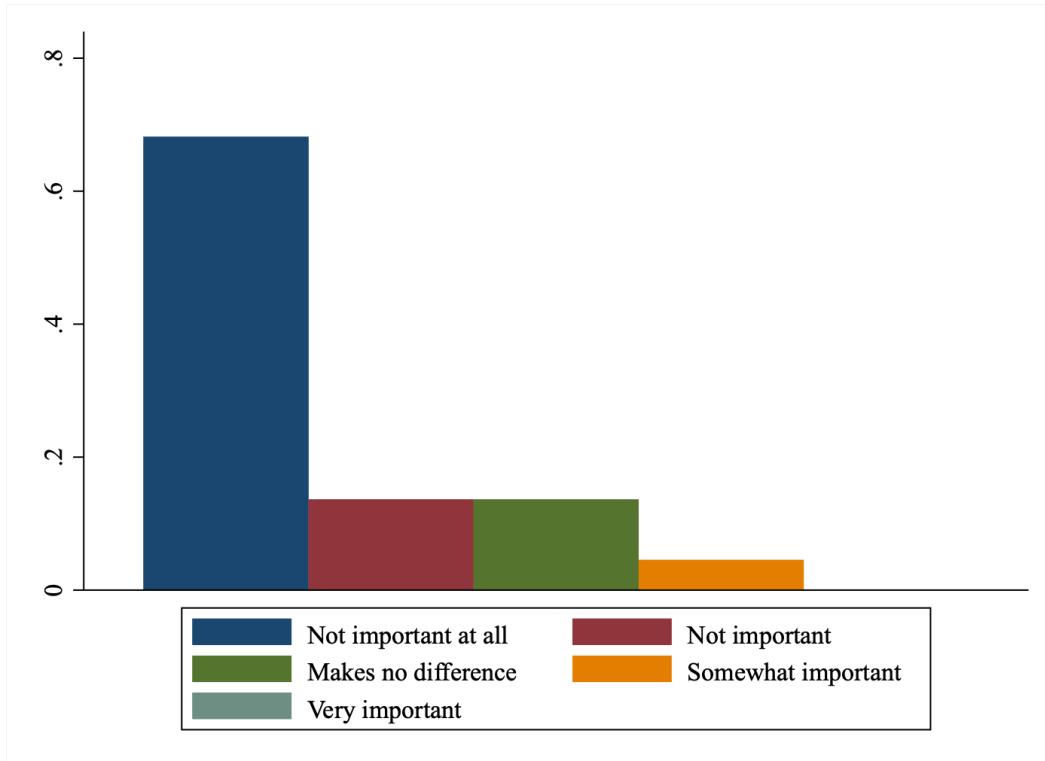
## 7 Figures

**Figure 1:** Distribution of Female Leadership at Department Level



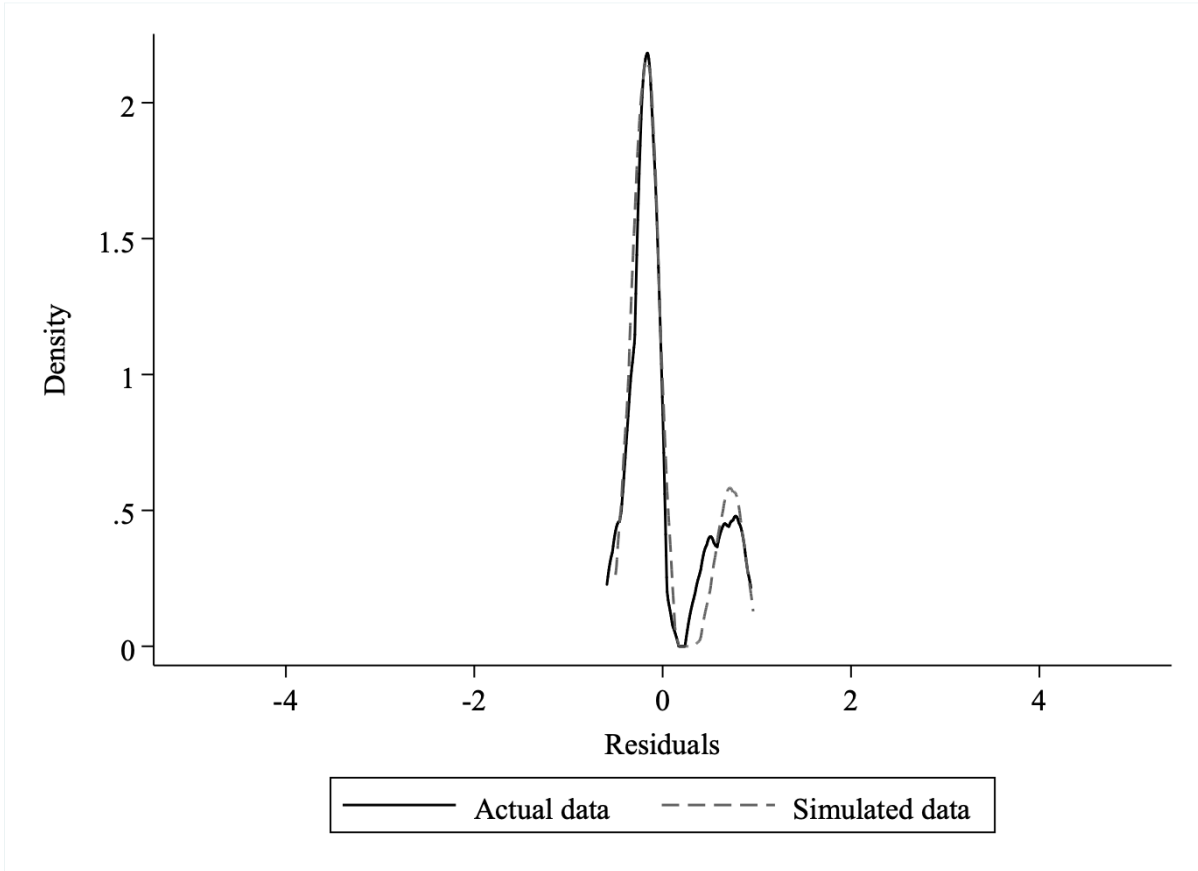
The figure plots the distribution of female leaders at department level. y-axis is the number of departments. x-axis is the share of female leaders at department level. Bin width is 0.1.

**Figure 2:** Importance of Prospective Team Leader’s Gender



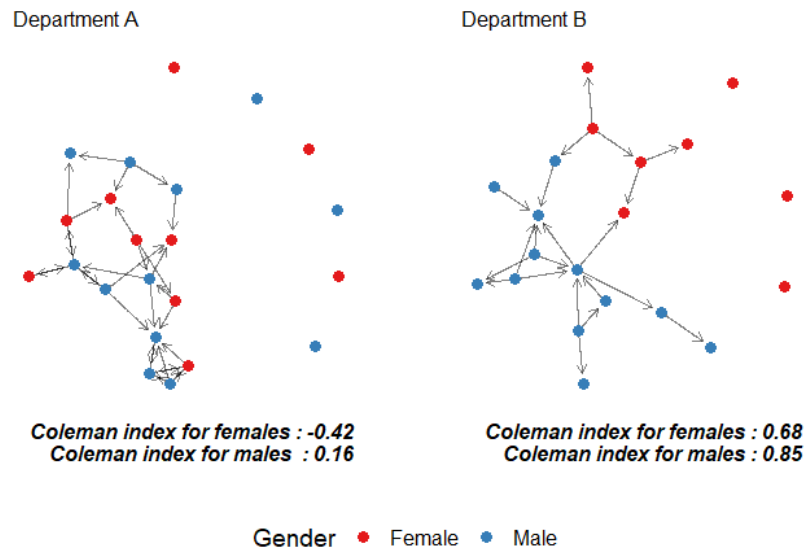
The figure plots the distribution of responses from HR department of companies to the question of “How important is the gender of prospective team leader in assessing applicants during the recruitment process in your company?” The response categories are *Not important at all*, *Not important*, *Makes no difference*, *Somewhat important*, *Very important*. No firm indicated that the leader’s gender is “Very important”. Numbers on top of the bars indicate the firm count for each response category.

**Figure 3:** Actual and Simulated Variation in Working Under Female Leader

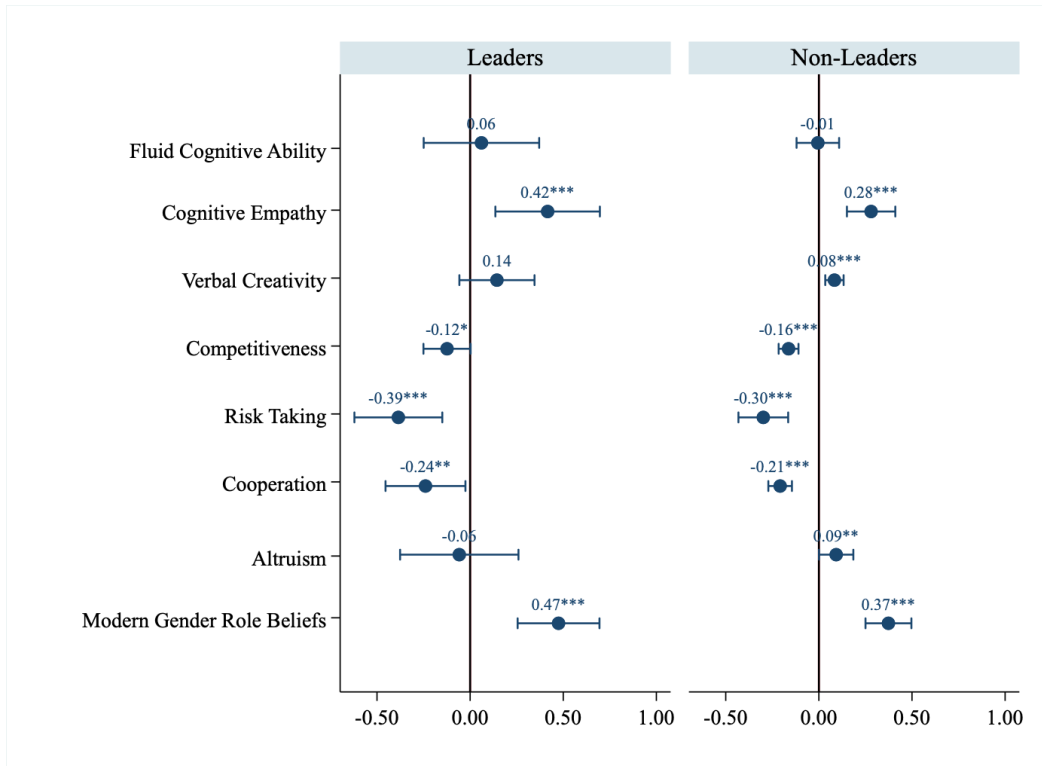


Actual and simulated variation in the proportion of female leaders within departments. The figure shows kernel density plots of residuals from regressions of the proportion of female leaders within department on firm fixed effects. The solid line corresponds to residuals from a single regression using the actual data, whereas the dashed line corresponds to residuals from 1,000 regressions using simulated data in which employees are randomly assigned to teams within departments in firms. Density calculations are based on an Epanechnikov kernel with the optimal bandwidth of 0.083 in the actual data.

**Figure 4:** Illustration of Coleman Homophily at Department Level: Professional Help

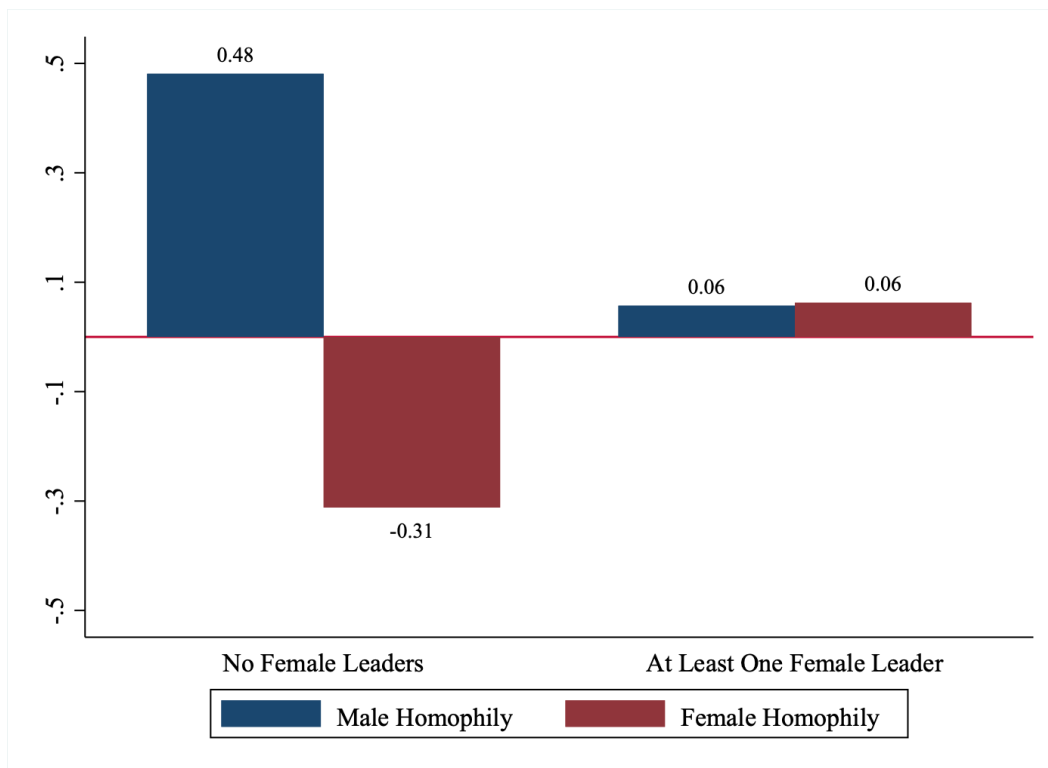


**Figure 5:** Gender Differences in Cognitive Skills and Economic Preferences of Leaders and Non-Leaders



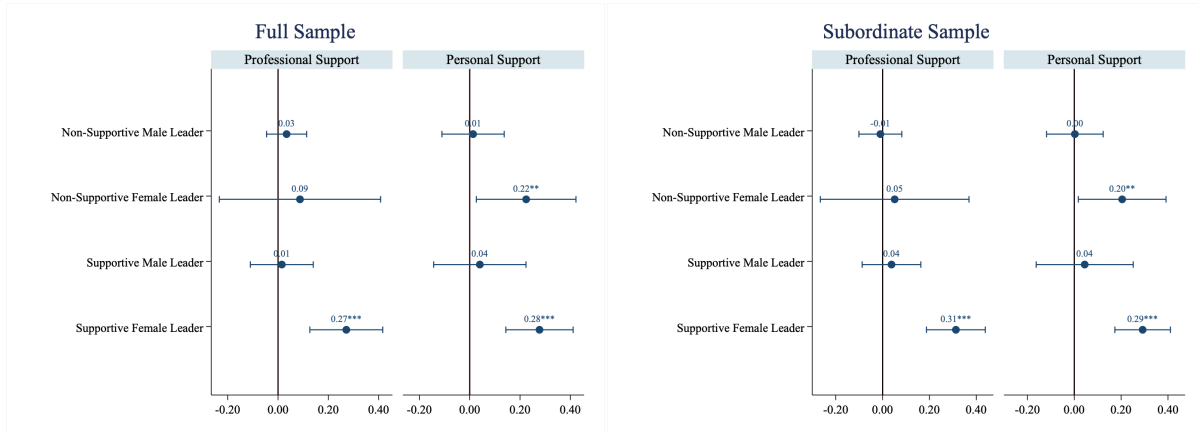
The figure plots the estimated gender differences (females-males) for corporate team leaders in fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, and holding modern gender role beliefs. *Leader* heading indicates the leader sample, *Non-Leaders* heading indicates the subordinate sample. Coefficients are obtained from ordinary least squares (OLS) estimations by regressing the indicated variable in y-axis on a female dummy, and controlling for firm fixed effects. 95% confidence intervals are based on standard errors clustered at the firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Figure 6:** Presence of Female Leaders and Homophily: Professional Support



The figure plots the mean female and male Coleman homophily index at department level separately for departments with no female leaders and at least one female leader. Numbers on top of the bars indicate the mean Coleman homophily index.

**Figure 7:** Gender Differences in Preference for Female Leader



The figure plots gender differences (female-male) in preferences for female leader separately under non-supportive male leader, non-supportive female leader, supportive male leader, and supportive female leader. Coefficients are obtained from ordinary least squares (OLS) estimations by regressing the binary indicator of preferring a female leader on female dummy, and controlling for age, marital status, tenure, cognitive ability, cognitive empathy, verbal creativity, competitiveness, risk taking, cooperation, altruism, share of females within department, department size, job task, and firm fixed effects. 95% confidence intervals are based on standard errors clustered at the firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

# Online Appendix: Not for Publication

## A Additional Tables and Figures

**Table A.1:** Balance Tests with Individual Characteristics

<b>Panel I: Full Sample</b>						
	N	Under Male Leader Mean	Under Female Leader Mean	Difference (F-M)	P-value of Difference	
Female	2431	0.306	0.523	-0.020	0.499	
Age	2431	35.404	34.003	-0.672	0.144	
Married	2431	0.660	0.589	0.015	0.547	
Tenure	2431	7.585	5.964	-0.639	0.110	
Fluid Cognitive Ability	1877	-0.112	-0.132	0.024	0.538	
Cognitive Empathy	1877	-0.137	0.047	0.103	0.119	
Verbal Creativity	1877	-0.114	-0.161	0.078	0.169	
<b>Panel II: Subordinate Sample</b>						
Female	2165	0.318	0.529	-0.029	0.318	
Age	2165	34.599	33.418	-0.389	0.428	
Married	2165	0.640	0.570	0.018	0.575	
Tenure	2165	7.077	5.658	-0.421	0.285	
Fluid Cognitive Ability	1645	-0.141	-0.168	0.017	0.709	
Cognitive Empathy	1645	-0.126	0.044	0.088	0.139	
Verbal Creativity	1645	-0.117	-0.177	0.075	0.207	

Reported statistics use the full sample in Panel I and subordinate sample in Panel II. *Difference (F-M)* column reports the coefficient of working under female leader in regressions of variables in first column on working under female leader. All regressions control for gender, age, marital status, tenure, share of female within department, department size, job task, and firm fixed effects. Standard errors clustered at firm level. *P-value of Difference* column reports p-values for the estimates in the previous column. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.



**Table A.2:** Gender Difference in Receiving Support from Leaders

	Professional Support		Personal Support	
	(1)	(2)	(3)	(4)
<b>Panel I: Full Sample</b>				
Under Female Leader	-0.001 (0.050)	0.006 (0.061)	0.009 (0.045)	0.039 (0.050)
Female	-0.015 (0.030)	-0.011 (0.032)	-0.139*** (0.025)	-0.118*** (0.036)
Under Female Leader × Female	0.082 (0.051)	0.075 (0.050)	0.134** (0.054)	0.081* (0.044)
N	2045	1653	1807	1653
Male leader (Male=Female)	.628	.728	.0000136	.00345
Female leader (Male=Female)	.134	.186	.933	.463
Covariates	No	Yes	No	Yes
<b>Panel II: Subordinate Sample</b>				
Under Female Leader	-0.014 (0.050)	-0.010 (0.064)	0.009 (0.045)	0.011 (0.063)
Female	-0.024 (0.033)	-0.026 (0.037)	-0.139*** (0.025)	-0.126*** (0.041)
Under Female Leader × Female	0.096* (0.052)	0.092 (0.053)	0.134** (0.054)	0.100 (0.059)
N	1807	1439	1807	1439
Male leader (Male=Female)	.465	.498	.0000136	.00596
Female leader (Male=Female)	.132	.199	.933	.652
Covariates	No	Yes	No	Yes

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a binary indicator of nominating leader in the networks. Columns 1 and 3 only control for the share of females within department, department size, job task and firm fixed effects. Columns 2 and 4 control for age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. *Male leader (Male=Female)* and *Female leader (Male=Female)* rows test whether a gender gap exists in receiving support from leaders, respectively, under male and female leaders. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.3:** Leader's Gender and Professional Links in the Department

	Fem-Fem	Fem-Male	Male-Male	Male-Fem
Proportion of Female Leaders	0.105** (0.043)	-0.123*** (0.042)	-0.074* (0.043)	0.092* (0.044)
N	347	347	347	347
R <sup>2</sup>	0.587	0.140	0.639	0.161

Reported results are obtained from ordinary least squares (OLS) regressions at department level. Dependent variable is the proportion of inter-gender links within the department. All regressions control for department size, the share of females in the department, and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.4:** Leader's Gender and Homophily in the Department: Personal Support

	Male Homophily	Female Homophily	Gender Segregation
Proportion of Female Leaders	-0.466** (0.186)	0.504*** (0.143)	-0.003 (0.067)
N	256	190	288
R <sup>2</sup>	0.281	0.360	0.102

Reported results are obtained from ordinary least squares (OLS) regressions at department level. Dependent variable is *Coleman's homophily index* in Columns 2 and 3, and *Gender Segregation* in Column 4. All regressions control for firm fixed effects and department size. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.5:** Effect of Leader’s Gender and Support on Reported Workplace Climate: Personal Support

<b>Panel I: Full Sample</b>						
	W-Satisfaction	Meritocracy	Collegiality	Prescriptive Norms	Behavioral Norms	Leader Prof.
Female Leader	-0.11 (0.08)	-0.03 (0.07)	0.09 (0.11)	-0.11 (0.11)	-0.06 (0.09)	0.11 (0.09)
Personally Helpful Leader	0.29*** (0.06)	0.32*** (0.06)	0.38*** (0.05)	0.27*** (0.07)	0.22*** (0.05)	0.60*** (0.06)
Female Leader X Personal Help	-0.03 (0.10)	-0.17 (0.13)	-0.08 (0.12)	0.06 (0.11)	0.07 (0.09)	-0.21** (0.09)
N	1485	1436	1598	1546	1551	1565
R <sup>2</sup>	0.15	0.14	0.10	0.09	0.08	0.14
<b>Panel II: Subordinate Sample</b>						
Female Leader	-0.08 (0.08)	0.03 (0.05)	0.10 (0.11)	-0.09 (0.10)	-0.06 (0.10)	0.07 (0.09)
Personally Helpful Leader	0.32*** (0.07)	0.31*** (0.07)	0.41*** (0.05)	0.32*** (0.07)	0.26*** (0.05)	0.62*** (0.07)
Female Leader X Personal Help	-0.09 (0.10)	-0.24** (0.11)	-0.10 (0.13)	0.03 (0.11)	0.06 (0.10)	-0.23** (0.11)
N	1288	1245	1387	1343	1344	1359
R <sup>2</sup>	0.16	0.14	0.11	0.09	0.08	0.15

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. All regression controls for gender, age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.6:** Reported Corporate Climate, Gender, and Leader's Gender: Professional Support

<b>Panel I: Full Sample</b>												
	W-Satisfaction		Meritocracy		Collegiality		Prescriptive Norms		Behavioral Norms		Leader Prof.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Female Leader	0.028 (0.103)	-0.322** (0.125)	0.147 (0.092)	-0.245* (0.119)	0.154 (0.114)	0.004 (0.128)	-0.085 (0.110)	-0.064 (0.172)	0.104 (0.139)	-0.212 (0.131)	0.156 (0.121)	0.100 (0.159)
Professional Help	0.288** (0.122)	0.318*** (0.104)	0.331*** (0.116)	0.297** (0.124)	0.248** (0.099)	0.336*** (0.103)	0.307*** (0.086)	0.316** (0.147)	0.272*** (0.071)	0.017 (0.115)	0.563*** (0.104)	0.538*** (0.121)
Female Leader X Professional Help	-0.039 (0.173)	0.210 (0.187)	-0.171 (0.169)	0.129 (0.205)	-0.054 (0.203)	0.080 (0.128)	0.007 (0.197)	0.084 (0.164)	-0.122 (0.151)	0.336** (0.142)	-0.253 (0.152)	-0.007 (0.197)
N	920.00	565.00	888.00	548.00	993.00	605.00	953.00	593.00	958.00	593.00	973.00	592.00
Unhelpful (Fem L.-Male L.)	0.790	0.018	0.124	0.052	0.191	0.974	0.448	0.713	0.464	0.120	0.213	0.534
Helpful (Fem L.-Male L.)	0.917	0.394	0.856	0.421	0.460	0.466	0.560	0.886	0.842	0.327	0.393	0.450
(Male=Female) UnHelpful L.		0.020		0.007		0.363		0.889		0.029		0.799
(Male=Female) Helpful L.		0.530		0.531		0.893		0.496		0.348		0.171
<b>Panel II: Subordinate Sample</b>												
Female Leader	0.070 (0.113)	-0.279** (0.132)	0.211* (0.116)	-0.206 (0.128)	0.159 (0.121)	0.026 (0.134)	-0.043 (0.114)	-0.008 (0.152)	0.065 (0.145)	-0.206 (0.144)	0.077 (0.136)	0.062 (0.152)
Professional Help	0.309** (0.122)	0.306** (0.127)	0.303** (0.121)	0.253* (0.136)	0.236** (0.095)	0.331*** (0.108)	0.325*** (0.093)	0.299* (0.146)	0.277*** (0.058)	0.033 (0.132)	0.574*** (0.117)	0.481*** (0.134)
Female Leader X Professional Help	-0.149 (0.163)	0.204 (0.215)	-0.257 (0.166)	0.122 (0.232)	-0.078 (0.205)	0.067 (0.125)	-0.086 (0.189)	0.064 (0.151)	-0.121 (0.158)	0.372** (0.150)	-0.249 (0.169)	0.005 (0.212)
N	779.00	509.00	752.00	493.00	841.00	546.00	808.00	535.00	809.00	535.00	825.00	534.00
Unhelpful (Fem L.-Male L.)	0.539	0.047	0.083	0.124	0.204	0.847	0.712	0.956	0.656	0.168	0.576	0.686
Helpful (Fem L.-Male L.)	0.477	0.600	0.679	0.577	0.626	0.396	0.364	0.669	0.628	0.238	0.212	0.638
(Male=Female) UnHelpful L.		0.033		0.018		0.441		0.832		0.069		0.944
(Male=Female) Helpful L.		0.982		0.793		0.929		0.187		0.205		0.170

Reported results are from OLS estimation at department level. Dependent variables are belongingness, meritocracy, and job satisfaction. Males and Females correspond to male and female sub-samples of the data. Regressions control for sector fixed effects, age, marital status, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, and share of females within department. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.7:** Reported Corporate Climate, Gender, and Leader's Gender: Personal Support

<b>Panel I: Full Sample</b>												
	W-Satisfaction		Meritocracy		Collegiality		Prescriptive Norms		Behavioral Norms		Leader Prof.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Female Leader	0.004 (0.095)	-0.128 (0.144)	0.262** (0.123)	-0.205 (0.125)	0.246*** (0.082)	-0.013 (0.198)	-0.057 (0.121)	-0.133 (0.199)	0.007 (0.126)	-0.104 (0.137)	0.150 (0.091)	0.092 (0.144)
Personal Help	0.325*** (0.068)	0.291** (0.139)	0.351*** (0.083)	0.273* (0.140)	0.382*** (0.056)	0.351*** (0.124)	0.325*** (0.077)	0.126 (0.125)	0.272*** (0.052)	0.068 (0.098)	0.597*** (0.062)	0.515*** (0.127)
Female Leader X Personal Help	-0.018 (0.143)	-0.145 (0.155)	-0.423* (0.228)	0.049 (0.197)	-0.251* (0.144)	0.093 (0.230)	-0.051 (0.157)	0.269 (0.168)	0.032 (0.145)	0.214 (0.137)	-0.292** (0.113)	-0.069 (0.153)
N	920.00	565.00	888.00	548.00	993.00	605.00	953.00	593.00	958.00	593.00	973.00	592.00
Unhelpful (Fem L.-Male L.)	0.967	0.383	0.045	0.116	0.007	0.948	0.641	0.511	0.955	0.455	0.115	0.529
Helpful (Fem L.-Male L.)	0.891	0.051	0.303	0.340	0.968	0.453	0.316	0.244	0.691	0.362	0.196	0.836
(Male=Female) UnHelpful L.		0.435		0.009		0.124		0.654		0.515		0.665
(Male=Female) Helpful L.		0.110		0.981		0.634		0.091		0.608		0.334
<b>Panel II: Subordinate Sample</b>												
Female Leader	0.060 (0.106)	-0.090 (0.140)	0.344** (0.139)	-0.164 (0.117)	0.276** (0.102)	-0.005 (0.200)	-0.023 (0.118)	-0.112 (0.193)	-0.010 (0.129)	-0.087 (0.147)	0.110 (0.108)	0.055 (0.147)
Personal Help	0.378*** (0.076)	0.274* (0.142)	0.349*** (0.102)	0.247* (0.121)	0.416*** (0.066)	0.360*** (0.125)	0.379*** (0.079)	0.114 (0.131)	0.310*** (0.055)	0.105 (0.112)	0.615*** (0.093)	0.511*** (0.119)
Female Leader X Personal Help	-0.163 (0.141)	-0.141 (0.160)	-0.567** (0.242)	0.045 (0.192)	-0.331* (0.177)	0.110 (0.250)	-0.142 (0.150)	0.325 (0.197)	-0.000 (0.136)	0.233 (0.168)	-0.360** (0.137)	-0.054 (0.187)
N	779.00	509.00	752.00	493.00	841.00	546.00	808.00	535.00	809.00	535.00	825.00	534.00
Unhelpful (Fem L.-Male L.)	0.579	0.527	0.022	0.175	0.013	0.982	0.850	0.566	0.939	0.558	0.322	0.714
Helpful (Fem L.-Male L.)	0.327	0.080	0.143	0.431	0.742	0.362	0.175	0.059	0.930	0.341	0.079	0.993
(Male=Female) UnHelpful L.		0.391		0.010		0.087		0.624		0.658		0.680
(Male=Female) Helpful L.		0.468		0.623		0.461		0.007		0.359		0.200

Reported results are from OLS estimation at department level. Dependent variables are belongingness, meritocracy, and job satisfaction. Males and Females correspond to male and female sub-samples of the data. Regressions control for sector fixed effects, age, marital status, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, and share of females within department. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.8:** Leader’s Gender, Professional Support, and Reported Workplace Climate, Subordinate Sample

<b>Panel I: Under Supportive Leadership</b>						
	W-Satisfaction	Meritocracy	Collegiality	Job Satisfaction	Behavioral Norms	Leader Prof.
Female	-0.197*	-0.067	-0.105	-0.228***	-0.279**	-0.083
	(0.113)	(0.092)	(0.102)	(0.078)	(0.110)	(0.080)
Female Leader	-0.045	-0.090	0.024	-0.016	-0.109	-0.167
	(0.141)	(0.117)	(0.168)	(0.170)	(0.129)	(0.140)
Female X Female Leader	-0.159	-0.105	-0.034	0.173	0.151	0.155
	(0.156)	(0.118)	(0.163)	(0.140)	(0.159)	(0.152)
N	797	774	855	827	827	846
R <sup>2</sup>	0.180	0.178	0.100	0.145	0.084	0.098
<b>Panel II: Under Non-Supportive Leadership</b>						
Female	-0.122	0.059	-0.033	0.046	0.038	-0.086
	(0.168)	(0.117)	(0.161)	(0.152)	(0.119)	(0.157)
Female Leader	0.034	0.168*	0.228	0.168	0.114	0.112
	(0.109)	(0.093)	(0.148)	(0.156)	(0.138)	(0.132)
Female X Female Leader	-0.337**	-0.407**	-0.205	-0.424***	-0.417**	-0.092
	(0.141)	(0.161)	(0.194)	(0.135)	(0.156)	(0.220)
N	491	471	532	520	517	513
R <sup>2</sup>	0.157	0.130	0.130	0.182	0.109	0.131

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. All regression controls for gender, age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.9:** Leader’s Gender, Personal Support, and Reported Workplace Climate, Full Sample

<b>Panel I: Under Supportive Leadership</b>						
	W-Satisfaction	Meritocracy	Collegiality	Job Satisfaction	Behavioral Norms	Leader Prof.
Female	-0.081	-0.043	-0.051	0.032	-0.198*	0.036
	(0.121)	(0.155)	(0.136)	(0.107)	(0.113)	(0.080)
Female Leader	0.035	-0.198	-0.008	0.086	0.095	-0.127
	(0.102)	(0.166)	(0.132)	(0.148)	(0.116)	(0.106)
Female X Female Leader	-0.357**	-0.051	0.047	-0.163	-0.017	0.042
	(0.143)	(0.210)	(0.200)	(0.154)	(0.161)	(0.169)
N	697	678	746	723	720	741
R <sup>2</sup>	0.183	0.163	0.058	0.135	0.069	0.081
<b>Panel II: Under Non-Supportive Leadership</b>						
Female	-0.118	0.055	0.060	-0.137	-0.017	-0.007
	(0.104)	(0.091)	(0.106)	(0.086)	(0.108)	(0.100)
Female Leader	-0.015	0.261*	0.266**	0.086	0.036	0.187**
	(0.118)	(0.141)	(0.096)	(0.082)	(0.128)	(0.090)
Female X Female Leader	-0.173	-0.505**	-0.314**	-0.102	-0.232	-0.139
	(0.153)	(0.197)	(0.147)	(0.127)	(0.154)	(0.123)
N	788	758	852	832	831	824
R <sup>2</sup>	0.118	0.116	0.089	0.121	0.094	0.092

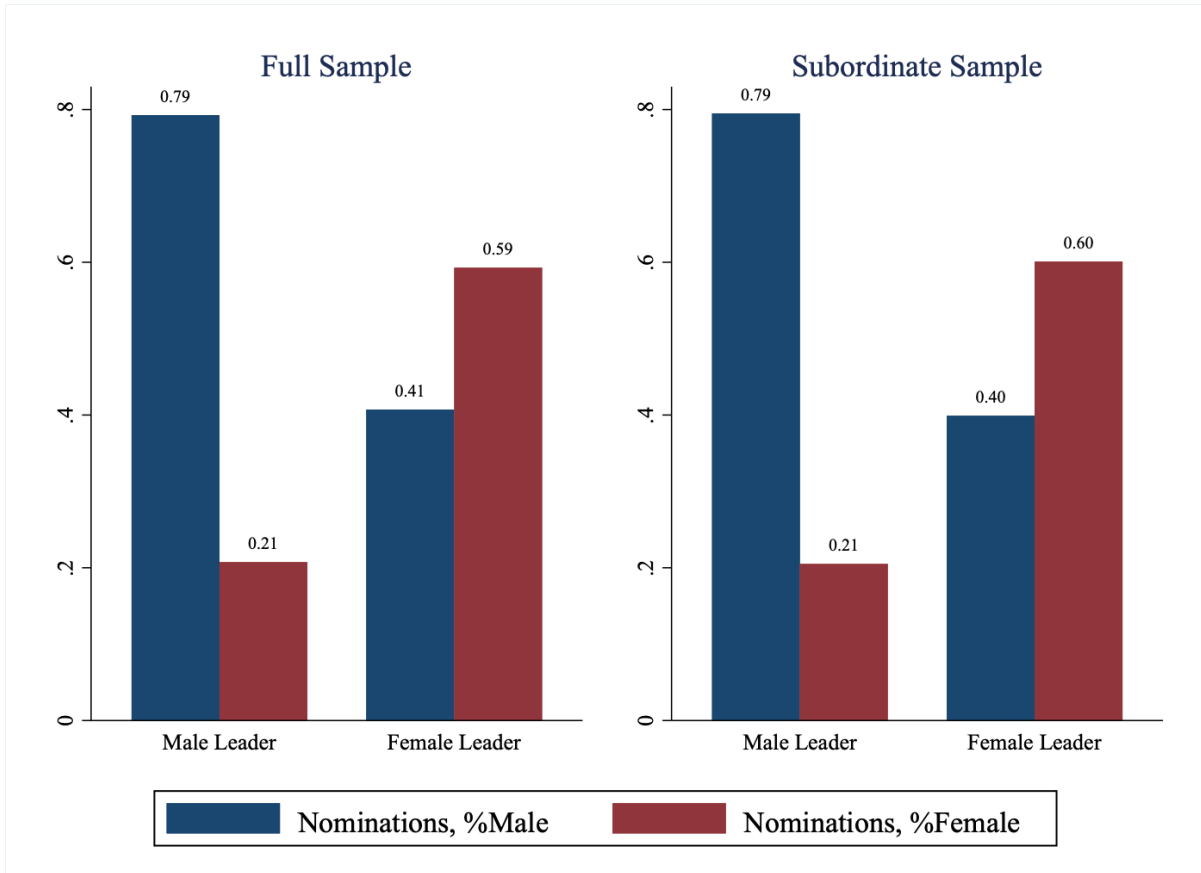
Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. All regression controls for gender, age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

**Table A.10:** Leader’s Gender, Personal Support, and Reported Workplace Climate, Subordinate Sample

<b>Panel I: Under Supportive Leadership</b>						
	W-Satisfaction	Meritocracy	Collegiality	Job Satisfaction	Behavioral Norms	Leader Prof.
Female	-0.137 (0.130)	-0.001 (0.155)	-0.112 (0.145)	0.051 (0.106)	-0.213* (0.117)	0.070 (0.105)
Female Leader	-0.024 (0.104)	-0.236 (0.152)	-0.045 (0.159)	0.031 (0.176)	0.027 (0.139)	-0.219* (0.123)
Female X Female Leader	-0.255 (0.151)	-0.022 (0.199)	0.112 (0.227)	-0.100 (0.188)	0.066 (0.185)	0.091 (0.184)
N	596	579	639	619	614	635
R <sup>2</sup>	0.196	0.188	0.088	0.159	0.080	0.114
<b>Panel II: Under Non-Supportive Leadership</b>						
Female	-0.105 (0.124)	0.080 (0.102)	0.026 (0.108)	-0.160 (0.105)	-0.035 (0.116)	0.007 (0.092)
Female Leader	0.016 (0.132)	0.318* (0.154)	0.257** (0.106)	0.075 (0.093)	0.032 (0.127)	0.135 (0.092)
Female X Female Leader	-0.200 (0.176)	-0.528** (0.219)	-0.290* (0.143)	-0.080 (0.146)	-0.206 (0.163)	-0.144 (0.119)
N	692	666	748	728	730	724
R <sup>2</sup>	0.116	0.115	0.096	0.129	0.093	0.101

Reported results are obtained from ordinary least squares (OLS) regressions. Dependent variable is a workplace climate item as indicated. All regression controls for gender, age, marital status, tenure, fluid cognitive ability, cognitive empathy, verbal creativity, risk taking, competitiveness, cooperation, altruism, share of females within department, department size, job task and firm fixed effects. Standard errors are clustered at firm level. Asterisks indicate that coefficient is statistically significant at the 1% \*\*\*, 5% \*\*, and 10% \* levels.

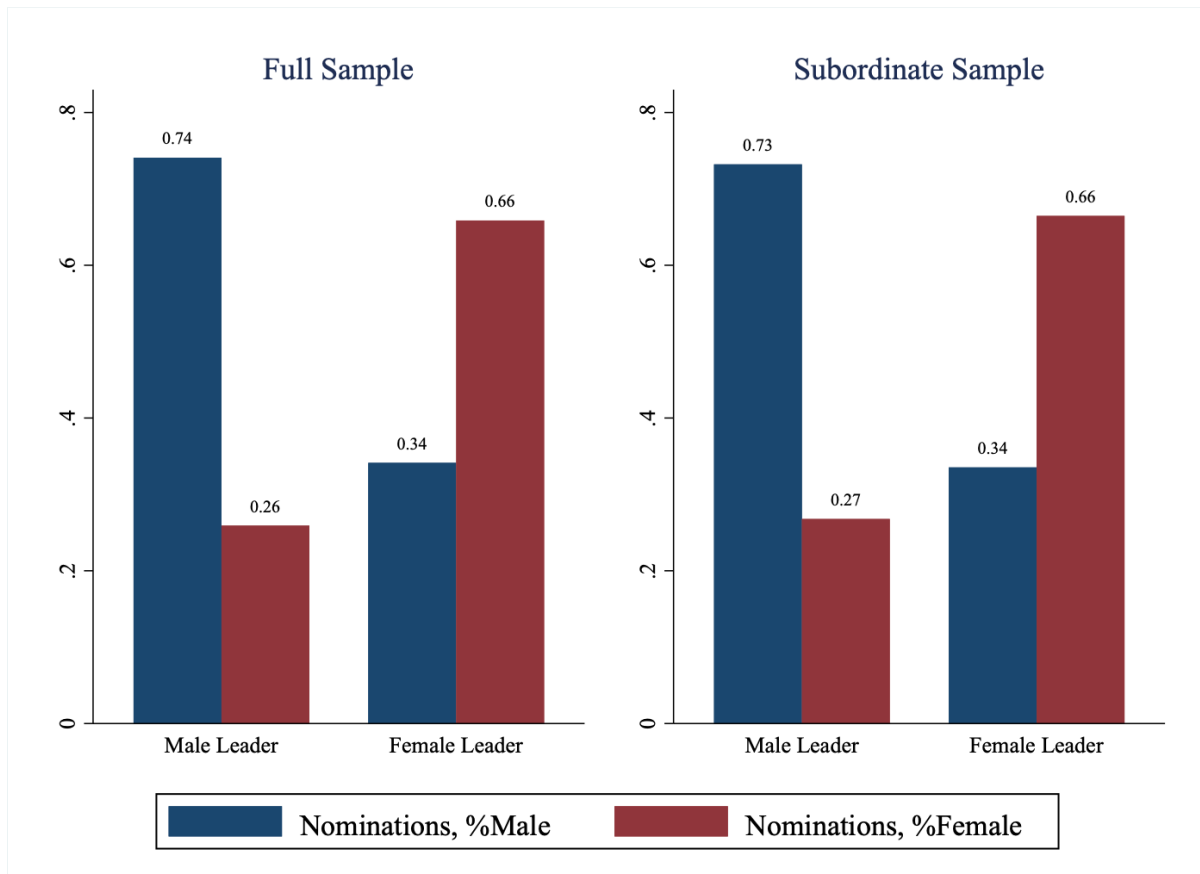
**Figure A.1:** Leader Gender and Nominations: Professional Support



The figure plots the mean proportion of females and males nominated in professional support network, separately under female and male leaders. Numbers on top of the bars indicate the mean proportions.

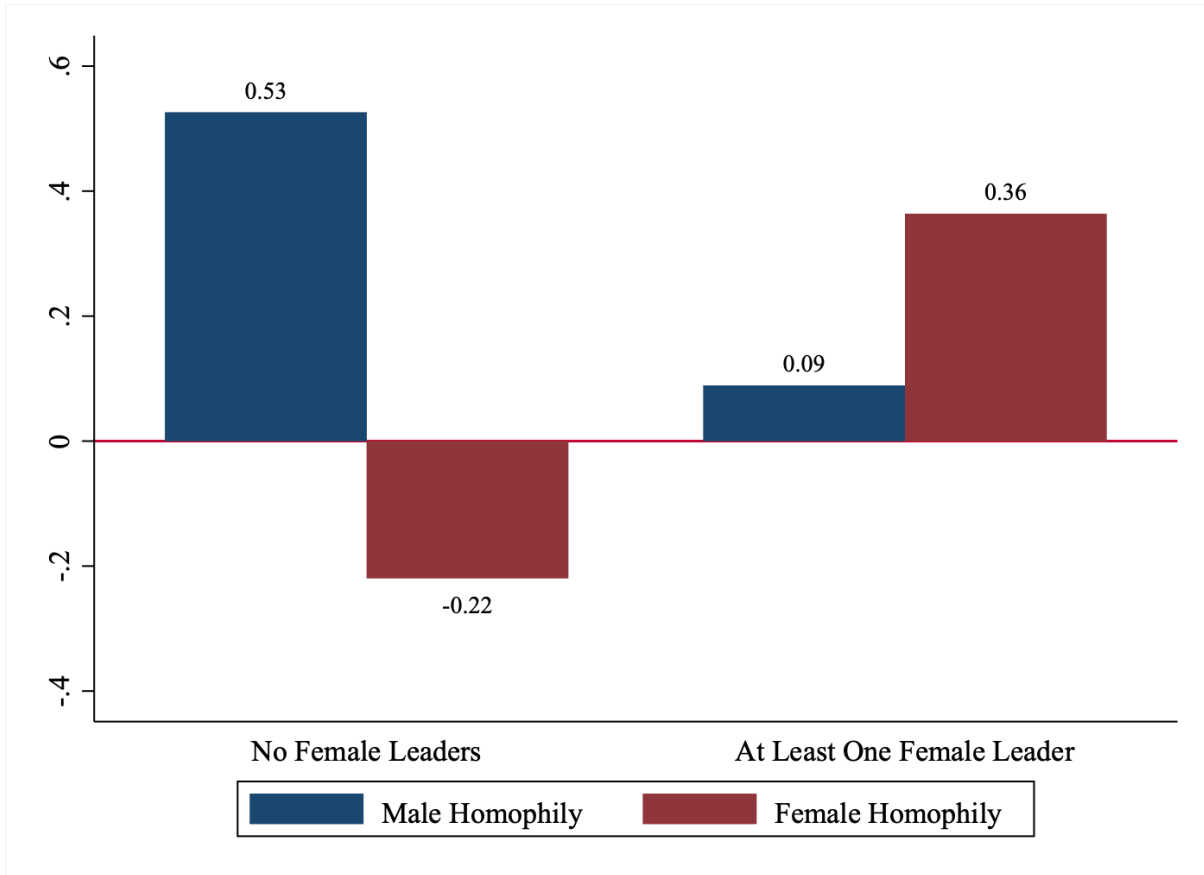


**Figure A.2:** Leader Gender and Nominations: Personal Support



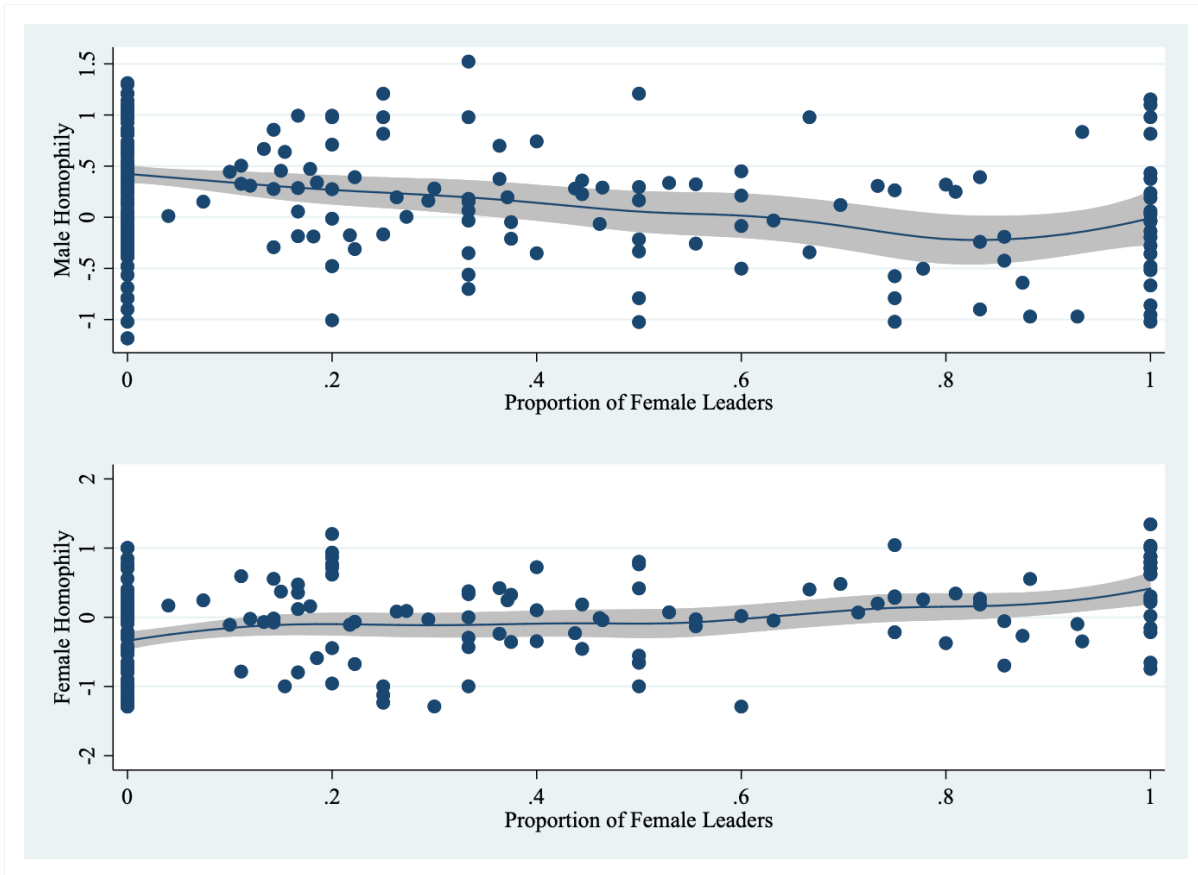
The figure plots the mean proportion of females and males nominated in professional support network, separately under female and male leaders. Numbers on top of the bars indicate the mean proportions.

**Figure A.3:** Presence of Female Leaders and Homophily: Personal Support



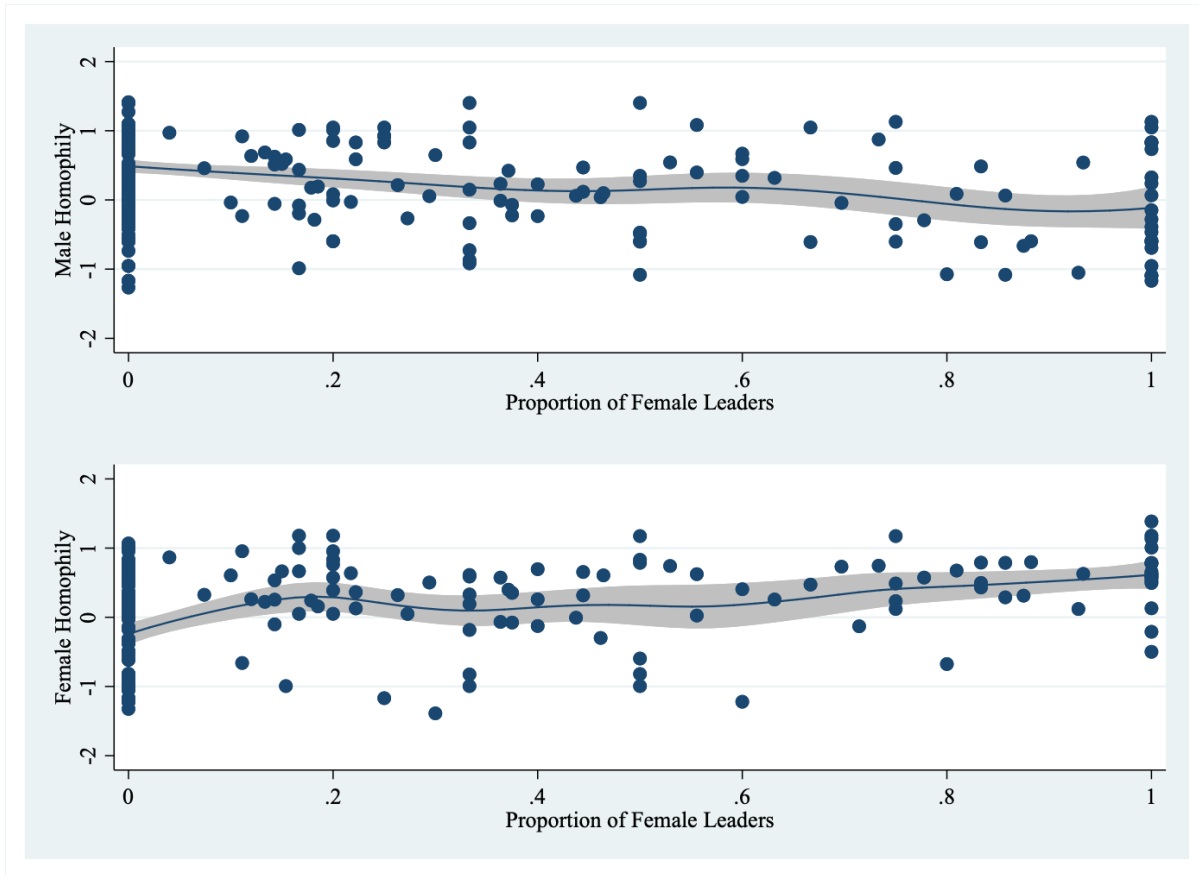
The figure plots the mean female and male Coleman homophily index at department level separately for departments with no female leaders and at least one female leader. Numbers on top of the bars indicate the mean Coleman homophily index.

**Figure A.4:** Proportion of Female Leaders and Homophily, Professional Support



The figure plots female and male Coleman homophily index at department level using semi-parametric estimation with the proportion of female leaders within department and firm fixed effects. The gray-shaded area indicates the 95% confidence intervals based on clustered standard errors at firm level.

**Figure A.5:** Proportion of Female Leaders and Homophily, Personal Support



The figure plots female and male Coleman homophily index at department level using semi-parametric estimation with the proportion of female leaders within department and firm fixed effects. The gray-shaded area indicates the 95% confidence intervals based on clustered standard errors at firm level.

## B Instructions for Incentivized Games

We will play some fun games with you today. In these games, you will make some choices. Depending on your choices and the choices of other participants, you will earn different amounts of money.

Each game has a set of rules, but there is also an important ground rule. We ask you to make sure that you keep your choices to yourselves and never share them with anyone during the games.

We will play 3 games in this part. At the end of this part, 1 of the 3 games will be randomly selected and your earnings will be equal to the money you earned in the randomly

selected game. The reason we are randomly picking a game to determine your earnings is that we want to make sure that you pay equal attention to every game. We will start the games all together at the same time. We will also wait for the instruction to move on to the next sections.

### **Competition Game:**

This game consists of 3 periods. At the end of this part, if competition game is chosen to determine the earnings, 1 of these 3 periods will also be chosen randomly to determine your earnings. Each period lasts for 2 minutes.

#### *Period 1 - Piece rate:*

For Task 1 you will be asked to calculate the sum of three randomly chosen two-digit numbers. You will be given 2 minutes to calculate the correct sum of a series of these problems. You cannot use a calculator to determine these sums. An example:

**Figure A.6:** Competition game task example

26	36	53
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If Period 1 is the one randomly selected for payment, then you get 3 TL (Turkish Lira) per problem you solve correctly in the 2 minutes. Your payment does not decrease if you provide an incorrect answer to a problem. We refer to this payment as the piece rate payment.

Please do not talk with one another for the duration of the game. If you have any questions, please raise your hand. ARE THERE ANY QUESTIONS BEFORE WE BEGIN?

#### *Period 2 - Tournament:*

As in Period 1 you will be given 2 minutes to calculate the correct sum of a series of three two-digit numbers. However for this task your payment depends on your performance relative to that of a group of other participants. Each group consists of three people, the two other members of your group are randomly selected members of your class. You will not know who is in your group.

If Period 2 is the one randomly selected for payment, the individual in the group who

correctly solves the largest number of problems will receive 9 TL per correct problem. The other participants receive no payment. We refer to this as the tournament payment. If there are ties the winner will be randomly determined.

Please do not talk with one another for the duration of the game. If you have any questions, please raise your hand. ARE THERE ANY QUESTIONS BEFORE WE BEGIN?

*Period 3 - Choice:*

As in the previous period you will be given 2 minutes to calculate the correct sum of a series of three 2-digit numbers. However you will now get to choose how you want to be paid: piece rate or tournament.

If Period 3 is the one randomly selected for payment, then your earnings for this task are determined as follows. If you choose the piece rate you receive 3 TL per problem you solve correctly. If you choose the tournament your performance will be compared to the performance of the other two participants of your group in Period 2. Period 2 is the one you have just completed. If you correctly solve more problems than the others in your group did in Period 2, then you receive 9 TL per correct problem. You will receive no earnings for this task if you choose the tournament and do not solve more problems correctly than the others in your group did in Period 2.

Please do not talk with one another for the duration of the game. If you have any questions, please raise your hand. Please indicate below which payment scheme you choose: piece rate or tournament. ARE THERE ANY QUESTIONS BEFORE WE BEGIN?

**Public Good Game:**

In this game, you will be in a randomly formed group of three participants. Each participant in the group is given 30 TL. The group has the opportunity to undertake a joint project. Each participant in the group decides how much she or he is going to contribute to the project. Contribution could be any amount from 0 to 30 TL. The earnings from the project are calculated as follows: The contributions of all 3 participants are added up, the total contribution is multiplied by 2, and the resulting amount is the total earnings from the project, which is evenly split among all 3 participants. Your payoff equals your earnings from the project, plus the amount you did not contribute.

Let us work out an example. Suppose that the total contribution to the project is 15 TL. It is multiplied by 2 and divided equally between the three participants in the group.

Therefore, each participant receives back 10 TL from the joint project. Suppose that you have contributed 8 TL. Then your earning is  $22+10=32$  TL.

Please do not talk with one another for the duration of the game. If you have any questions, please raise your hand. ARE THERE ANY QUESTIONS BEFORE WE BEGIN?

### **Risk Game:**

In this game, you will make an investment decision. You will be given 30 TL in the beginning of this game. You will then allocate this 30 TL between a risky and risk-free option. The amount invested in the risky option will be multiplied by 3 with %50 probability and will be lost with %50 probability. You will keep the amount invested in the risk-free option as it is.

Please do not talk with one another for the duration of the game. If you have any questions, please raise your hand. ARE THERE ANY QUESTIONS BEFORE WE BEGIN?

### **Donation Game:**

We give you an option to donate your earnings from the previous games to the disadvantaged schools (CONFIRM WHETHER SCHOOLS OR STUDENTS) in the South-East of Turkey. Please indicate what percentage of your earnings you would like to donate. This number can range from %0 to %100.

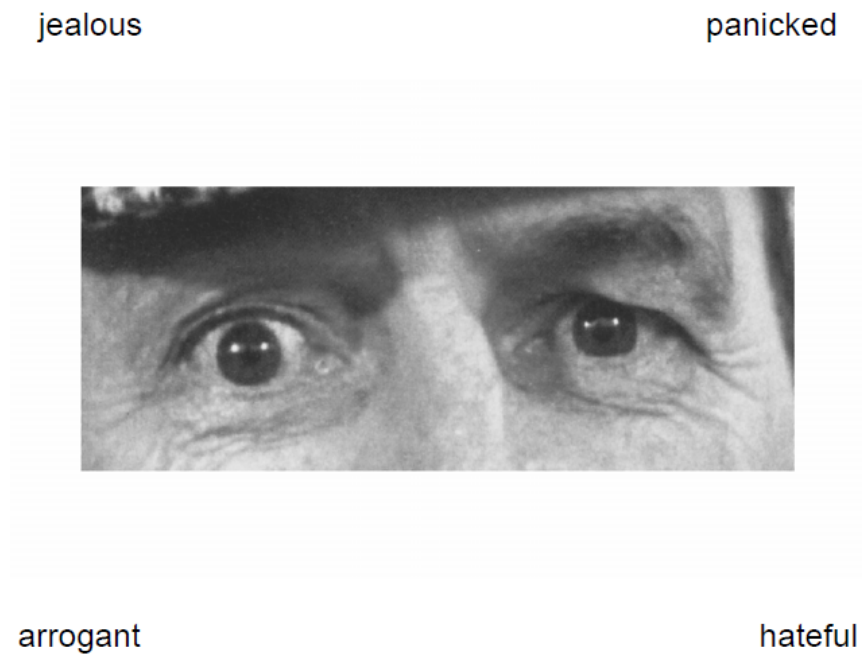
## **C Instructions for Cognitive Tests**

### **Reading the Mind in the Eyes:**

We use “Reading the Mind in the Eyes” test developed by Baron-Cohen et al. (1997) and Baron-Cohen et al. (2001) to measure the cognitive empathy of the respondents. An example question from this test is given in Figure A.7. We instruct the respondents as follows:

“For every pair of eyes, please choose the word that you think reflects most accurately what the person in the picture thinks or feels. If you think more than one word describes it, please choose only the one that you find most accurate. Please also make sure that you read all of the four words before making your choice.”

**Figure A.7:** Reading the mind in the eyes example



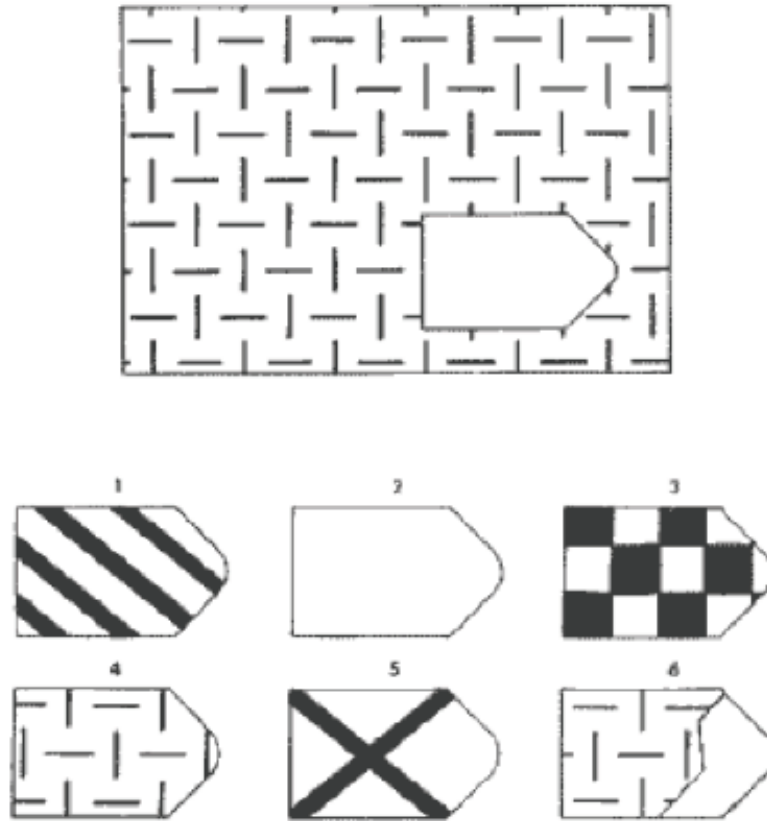
**Raven's Advanced Progressive Matrices:**

We use Raven's progressive matrices to measure abstract reasoning and non-verbal fluid intelligence (Raven, 1960). An example of Raven's progressive matrices is given in Figure A.8. We ask the following question to the participants:

“Which of the smaller figures does fit the pattern in the picture?”



**Figure A.8:** Raven advanced progressive matrices example



### The Remote Associates Test

We use the Remote Associates Test to measure the verbal creativity of the respondents. This test was originally developed by Mednick (1962). It is accepted as a valid measure of creative thinking (Lee et al., 2014; Bowden and Jung-Beeman, 2003; Marko et al., 2019).

We instruct the respondents as the following:

“Please look at the three remotely associated words below and find a fourth word that is related to all these three words. The fourth word must either prefix or suffix the three words given. If you cannot find any, you can leave the question empty and move on to the next one.

Let us illustrate it with an example:

**sense / courtesy / place**

For the three words above, an answer can be “common”: *common* sense, *common* courtesy, and *common* place.”

## D Survey Items

Instrument	Items
Workplace Satisfaction	<i>To what extent do the following statements describe your thoughts about your company? (Definitely not True-Not True-Somewhat True-True-Definitely True)</i>
	I am not able to practice my own profession at this workplace. I am very pleased to have chosen to work at this company. Working in this company inspires me. I think my ideas are valued and my achievements are acknowledged here. Employees get unhappy here due to competition and individualization. I think I am not given enough initiative and decision-making authority here.
Meritocratic Values	<i>To what extent do the following statements describe your thoughts about your company? (Definitely not True-Not True-Somewhat True-True-Definitely True)</i>
	My chances of advancing in my profession and career are very high here. I believe if I work hard and perform well here, I will be promoted very quickly. I don't believe I'll be promoted unless I've enough connections with executives. Objective and transparent performance criteria are applied in this workplace.
Collegial Department	<i>The following statements are related to your department colleagues. Please use the following scale to state your opinion. (Never-Rarely-Sometimes-Often-Always)</i>
	My department colleagues protect each other against an outside criticism. Those working in this department only think of and work for themselves. Different ideas are discussed extensively within the department. Everyone's ideas are listened to and taken into consideration in our department. People attack others verbally and with disrespect during departmental meetings. Disputes within the department are resolved in a way that protects the interests of the company.
Behavioral Norms	<i>How often do you observe your department colleagues in the following situations? (Never-Rarely-Sometimes-Often-Always)</i>
	Gossiping Criticizing someone Helping someone Protecting someone else's rights Violating someone's rights Spending time on social media (during working hours on matters unrelated to work) Staying silent in situations of injustice
Prescriptive Norms	<i>In your opinion, what fraction of your department colleagues think in the following way? (Almost nobody-Around 25% -Around 50%-Around 75% -Almost everybody)</i>
	It is important to be friendly and treat others nicely. It is crucial to stay out of disputes and quarrels. It is normal to comment on others' appearance and clothing. It is normal to take credit for a department member's success as a group. It is important to speak for our department's demands when needed. Gossiping is bad. We should claim collective responsibility for a group member's mistakes. It is crucial to trust and to be honest with each other within the department. It is normal and expected to compete with our department colleagues. It is quite normal to help each other with work.
Leader Professionalism	<i>The following statements are related to your your team leader. Please use the following scale to state your opinion. (Never-Rarely-Sometimes-Often-Always)</i>
	Our department leaders are good listeners. Our department leaders have favorites and they are given favorable treatment. Our department leader is modest and accepts her mistakes. I completely trust our department leader's professionalism. I receive regular and motivating feedback from my department leader. Our department leader claims achievements, but blames mistakes on others. Our department leaders serve the interests of department rather than their own. When we have a new idea, our department leader suggests leaving it to senior colleagues.
Leader Empathy	<i>The following statements are related to your your team leader. Please use the following scale to state your opinion. (Never-Rarely-Sometimes-Often-Always)</i>
	Our department leader tries to put himself in our place during disagreements. Our department leader intervenes when there is injustice. Our department leader listens my problems and approaches them understandingly. Our department leader takes sudden emotional decisions. Our department leader listens disagreements carefully and considers all angles.

Own Empathy	<i>To what extent do the following expressions describe you? (Never-Rarely-Sometimes-Often-Always)</i>
	Before criticizing someone, I try to think about how I would feel if I were them. If I am sure that I am right about something, I wouldn't waste too much time listening to other people's arguments. Sometimes I try to understand my friends better by imagining how things look from their perspective. I believe there are two sides to every problem and I try to see it from both perspectives. Sometimes I have a hard time seeing things from the other point of view. I try to see everybody's perspective, before I take a decision in a disagreement. When I get angry with someone, I usually try to put myself in their shoes for a while. When I see people being abused, I feel protective of them.
COVID-19 Related Social Isolation	<i>The following questions have been prepared to determine the effects of the current pandemic on us. Please pick the answer that suits you best. (Strongly Disagree-Disagree-Somewhat Agree-Agree-Strongly Agree)</i>
	I think working from home is more productive. Lately I feel lonelier than usual. I think I haven't been communicating well enough with my colleagues lately. I think I haven't been communicating well enough with my team leader lately.
	<i>(Yes-No-Do not Drink/Smoke)</i>
	Do you feel like you have increased your cigarette consumption lately? Do you feel like you have increased your alcohol consumption lately?

## E HR Testimonials

<b>Instrument</b>	<b>Items</b>
Assignment to leader: Importance of Candidate Qualities	Are candidate's qualifications, education, and experience important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>  Is candidate's age important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>  Is candidate's gender important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>  Are candidate's personal characteristics, measured by psychometric tests or observations, important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>
Assignment to leader: Importance of Leader Qualities	Are prospective leader's age and experience important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>  Is prospective leader's gender important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>  Are prospective leader's personal characteristics, measured by psychometric tests or observations, important when assigning candidates to a unit? <i>Not important at all - Not important - Makes no difference - Somewhat important - Very important</i>