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In-Group Gender Bias in Hiring

Real-World Evidence



In-Group Gender Bias in Hiring: Real-World Evidence*

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Abstract. We investigate in-group gender bias in real-world hiring decisions by combining administrative data with data from a large-scale field experiment on hiring in which fictitious resumes with randomly assigned information about gender were sent to Swedish employers. Our results suggest that women (female recruiters or firms with a high share of female employees) favor women in the recruitment process. In contrast, we do not find much evidence that men (male recruiters or firms with a high share of male employees) favor men.

JEL classification: J23, J71

Keywords: In-group gender bias; Discrimination; Field experiment

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1. Introduction

In-group gender bias (i.e., favoritism toward people of one's own gender) in hiring (Hewstone et al. 2002) can have important labor market consequences, e.g., by contributing to the observed occupational gender segregation and leading to poor matching between workers and firms (Altonji and Blank 1999).

There is a large body of experimental literature on in-group bias in different settings, and this literature shows that an in-group bias can arise based on both natural social groupings and trivial identities induced in the laboratory (Leider et al. 2009; Chen and Li 2009; Hargreaves Heap and Zizzo 2009; Goette et al. 2012). However, identifying in-group bias outside the laboratory is difficult for several reasons (Sandberg 2018): there is often a correlation between the group membership of the evaluators and the quality of the candidates in different groups, information on the group membership of evaluators or candidates is not always available, and, in many cases, there are only a few female evaluators.

Regarding hiring decisions, laboratory experiments often find that women show an in-group bias in situations where information is processed in an automatic way, but this is not found for men (Rudman and Goodwin 2004). It is unclear, however, whether these results hold for real-world hiring decisions, which are likely to be characterized by a reflective (non-automatic) process. The existing studies on real-world hiring decisions typically consider particular segments of the labor market, and find mixed evidence of in-group gender bias (Bagues and Esteve-Volart 2010; Booth and Leigh 2010; Bagues et al. 2017).

We investigate in-group gender bias in real-world hiring decisions by combining data on the gender of the recruiter and the share of female employees in a large number of firms with data from a large-scale field experiment on hiring. In the experiment, we sent fictitious resumes with randomly assigned information about gender to Swedish employers with a

posted vacancy and recorded the employers' responses. This approach does not suffer from the issues raised above.

2. Data

We collected advertised vacancies from a large and nationally representative online vacancy database (kept by the Public Employment Service) for seven of the most common low- and medium-skilled occupations in Sweden: administrative assistants, chefs, cleaners, food servers, retail sales persons, sales representatives, and truck drivers. For these vacancies, we gathered data on the gender of the recruiter from the name of the contact person in the advertisements, which was possible for 53% of the firms. The contact person is usually the recruiter or another person involved in the recruitment. We also obtained administrative data on the share of female employees in the firms from Statistics Sweden, which was available for 76% of the firms.

The other part of the data is from a field experiment in which fictitious resumes – half with a female and half with a male name – were sent to the employers that posted these vacancies (cf. Carlsson and Eriksson 2019 for details).³ The resumes consisted of a cover letter and a CV with information about education, work experience, and other skills. The outcome variable for these data is a callback indicator, which is coded as one for a positive response (by email or phone) and zero for no response or a negative response. Since gender was randomly assigned to the resumes, we can interpret any gender difference in the callback rate as a causal effect.

Panel A in Table 1 reports the callback rate and the total number of observations. Panels B and C show the corresponding information for the subsamples of the firms where we have data on the gender of the recruiter and the share of female employees, respectively. The very

³ Age and a few other characteristics were also randomly assigned. Carlsson and Eriksson (2019) use this data to study age discrimination.

similar callback rates in the three groups indicate that sample selection is not a major concern.

Table 1. Descriptive statistics.

	All	Adm. assistants	Chefs	Cleaners	Food servers	Retail sales	Sales represent.	Truck drivers
Panel A) All firms								
Callback rate	.086	.053	.158	.091	.048	.040	.091	.170
Observations	6,066	1,110	1,059	789	1,137	918	558	495
Panel B) Firms for which the recruiter's gender is available								
Callback rate	.096	.050	.182	.111	.049	.046	.127	.157
Observations	3,204	630	576	360	621	450	306	261
Fraction of firms with female recruiter	.356	.519	.234	.492	.270	.447	.304	.149
Panel C) Firms for which the share of female employees is available								
Callback rate	.086	.054	.155	.081	.054	.044	.097	.154
Observations	4,607	918	825	566	906	606	411	375
Fraction of firms with 50-100% female employees	.437	.498	.360	.650	.427	.619	.285	.032

3. Results

The first column in panel A in Table 2 shows that women have a statistically significant 4.7 percentage point advantage in the callback rate over men when the recruiter is female. When the recruiter is male, men have a 1.6 percentage point advantage over women, but this difference is not statistically significant. Since the analysis includes occupational fixed effects, these differences cannot be explained by occupational characteristics (e.g., stereotypes about which occupations are “female” or “male” jobs).

The first column in Panel B shows that women have a statistically significant 4.8 percentage point advantage over men in female-dominated firms (firms with 50-100% female employees). In male-dominated firms, men have a 2.1 percentage point (weakly significant) advantage. Again, these results should be interpreted within occupations.

The remaining columns report the results for each of the occupations.⁴ These estimates should be interpreted with caution due to the small samples, and we focus on point estimates rather than on significance levels.

When the recruiter is female, women seem to have an advantage in four of the seven occupations (administrative assistants, cleaners, sales representatives, and truck drivers), and in no occupation do they appear to have a disadvantage. The results are more mixed when the recruiter is male. In two occupations (administrative assistants and retail sales), women seem to have an advantage, while they appear to have a disadvantage in three occupations (chefs, sales representatives, and truck drivers).

In female-dominated firms, women seem to have an advantage in four of the six occupations (administrative assistants, chefs, cleaners, and sales representatives), and in no occupation do they have a disadvantage. In male-dominated firms, women appear to have an

⁴ We report no results for truck drivers in panel B, since nearly all such firms are male-dominated.

advantage in two occupations (administrative assistants and cleaners) and a disadvantage in one (chefs).

Table 2. Results.

	All	Adm. assistants	Chefs	Cleaners	Food servers	Retail sales	Sales represent.	Truck drivers
Panel A) Gender of recruiter								
Female x female recruiter	.0474** (.0190)	.0458* (.0271)	-.0333 (.0837)	.1310** (.0517)	.0288 (.0429)	.0198 (.0406)	.0842 (.0546)	.0755 (.1268)
Female x male recruiter	-.0155 (.0139)	.0788*** (.0278)	-.0972** (.0390)	.0199 (.0402)	.0030 (.0235)	.0723** (.0325)	-.0688 (.0474)	-.0842 (.0552)
p-value (test of equal female coeff.):	.008	.398	.492	.087	.601	.322	.034	.252
Observations	3,204	630	576	360	621	450	306	261
Panel B) Share of female employees								
Female x females 50-100%	.0480*** (.0125)	.0618** (.0247)	.0528 (.0450)	.0811*** (.0305)	.0210 (.0215)	.0181 (.0235)	.0553 (.0464)	
Female x females 0-50%	-.0212* (.0122)	.0694*** (.0198)	-.1219*** (.0345)	.0597 (.0409)	.0191 (.0227)	-.0175 (.0219)	-.0204 (.0328)	
p-value (test of equal female coeff.):	.000	.812	.0941	.131	.950	.268	.188	
Observations	4,607	918	825	566	906	606	411	375

Notes: The regressions include covariates for female recruiter/females 50-100% and the other experimental variables, cf. Carlsson and Eriksson (2019) for details. Standard errors are clustered by firm since resumes were sent in triples. *** Significant at the 1% level; **significant at the 5% level; *significant at the 10% level.

4. Discussion

In most countries, women have lower employment rates and earnings and are less represented in managerial positions than men (Goldin 2014). The labor market is also highly gender segregated into male- and female-dominated jobs. Such differences may reflect gender discrimination or supply-side differences. Previous studies (Booth and Leigh 2010; Carlsson 2011; Carlsson and Eriksson 2019) show that, on average, discrimination in hiring decisions does not seem to be important, although these studies cannot rule out discrimination in wage and promotion decisions. However, even if there are no differences on average, there may still be gender bias in hiring decisions in firms with certain characteristics. Our results suggest that women (female recruiters or firms with a high share of female employees) favor women in the recruitment process. In contrast, we do not find much evidence that men (male recruiters or firms with a high share of male employees) favor men. Hence, our results indicate that women's disadvantage in the labor market is not explained by gender discrimination but rather may be the result of supply-side factors (e.g., the presence of children).

A potential explanation of our results is that, on average, women are more aware of the disadvantages that women face in the labor market than men are. Therefore, female recruiters (or firms with a high share of female employees) may be more likely to choose female candidates than male recruiters (or firms with a high share of male employees).

Theories in social psychology offer some additional potential explanations (Rudman and Goodwin 2004). One argument in this literature is that an in-group bias exists among both women and men but that some factor weakens the effect among men (e.g., general stereotypes that favor women).

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