

# Online Appendix to “Gender Equality in Private Sector Leadership: Employers, Childcare, and Women’s Professional Advancement”

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## Field Experiment

Below, I include additional details regarding the experimental ethical review, protocol, and descriptive statistics on the sample.

## Consent and Debriefing of Experimental Subjects

Per the IRB approval, the formal consent process for experimental subjects was waived and subjects were not debriefed at the conclusion of the experiment.

To justify waiving consent for participants, I note the following. First, this research

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presents negligible risk to subjects and is greatly exceeded by the scientific knowledge we gain as a consequence of the work. Second, since the study does not adversely affect the welfare of subjects, the consent waiver itself does not either. Third, asking subjects for consent alerts them to the fact that the job advertisement in the field experiment is fictitious, thus rendering the experiment impracticable to conduct.

The only right that study participants forego is the right to decline to participate, which some, and perhaps all, would elect to do if asked for their consent, even though the study presents no more than minimal risk to them. Furthermore, alerting job seekers to the study would render it null and void as a test of *actual* labor market behavior, even if these potential research subjects did consent to participate. This is because asking participants to consent to apply for a job that they know is not real would by definition make their participation a measure of *hypothetical* labor market behavior only. This would threaten the scientific validity of field experiment. It could also depress participation if job seekers informed other job seekers that the posted ad was “only” a research study.

To justify not debriefing subjects following the conclusion of the experiment, I note the following. After applying to the posted job, study participants see a brief message in Qualtrics thanking them for their application and informing them that that they will not be contacted unless the employer wishes to interview them. Submitting a resume to a job listing for which one may not receive any follow up from the prospective employer is a typical part of the job search process. Many, if not most, employers in the labor market do not contact applicants to inform them they were not selected for the position in question, particularly when the application is as low-cost as the application in this field experiment. For this reason, subjects should not expect to hear anything further about their application. This is the normal circumstance of an employment search: job seekers apply to more jobs than they will be contacted about as a follow up. However, some subjects may strongly desire to be contacted for an interview, especially those in the treatment conditions with childcare benefits, precisely because these benefits are rare. In those instances, the distress of learning

that the job is fictional, which would be outside the bounds of normal circumstances for a job search, could be greater than the disappointment of never being contacted for an interview, which would be inside the bounds of normal circumstances. Therefore, debriefing might be more “costly” to those participants than not debriefing at all. Because there is no way to distinguish between those subjects that would be adversely affected by debriefing and those that would not, no subjects were debriefed at all.

## **Experimental Protocol**

The occupational type and industry for the field experiment were chosen to avoid male-dominated occupations/industries and job types that entail highly specific skills or training so as not to artificially depress the number of applicants for reasons unrelated to the treatment.

In each metropolitan area, the job advertisement in the online employment platform ran for three weeks at a time. Local ads ran sequentially from November 2018 through June 2019. This prevented job candidates from viewing multiple versions of the treatment in the event that they were job searching in more than one location.

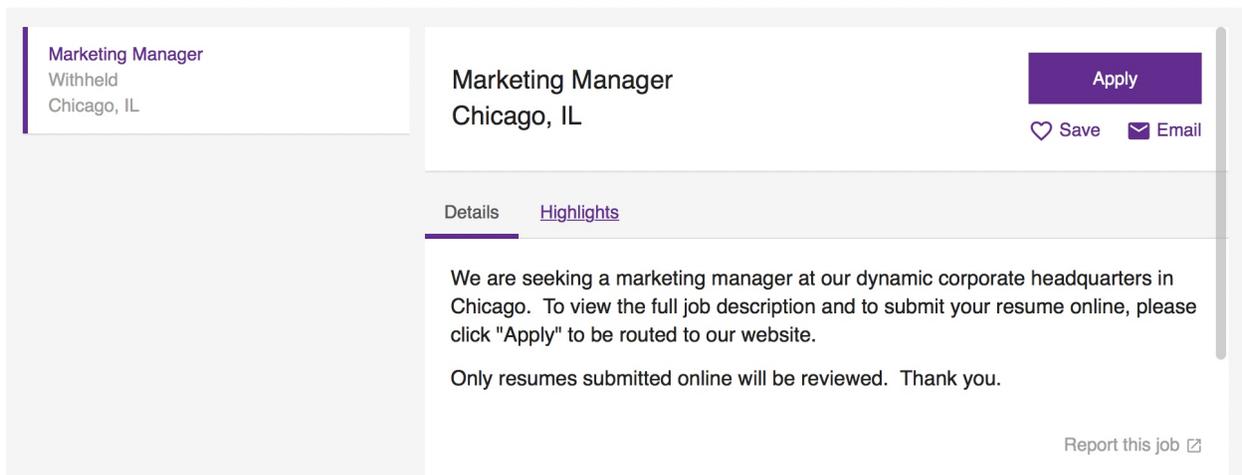
In the platform, ads are typically purchased by employers and then appear in the search results of job seekers by location or job type. The employer for the ad in this experiment appeared as “Withheld” to potential applicants. Few job advertisements omit the name of the hiring company on this platform. However, while this may have dampened the number of applicants, it should not bias the sample. Short of creating a fake company, which presents its own set of risks and potential biases, it is impossible to list a company name without also risking that applicants discover the company to be fictitious.

Subjects who chose not to apply when first presented with the job description for their randomly assigned dyad were blocked by IP address from viewing the job description again later in Qualtrics so as to prevent them from seeing different randomizations of the job de-

scription. After applying, subjects were informed in a short “thank you for submitting your application” message that they would only be contacted if an interview was desired. They were not debriefed upon completion of the experiment, per IRB requirements.

Figure A1 displays a screen shot from the employment platform for what a search in the Chicago metropolitan area in which the job was advertised would have looked like to potential applicants. This appearance was identical in all 10 metropolitan areas of the study except for the city and state, which reflected the metropolitan area in which the ad was posted.

Figure A1: Job Advertisement As It Appears on Employment Platform



Interested applicants who clicked on “Apply” were then routed to the Qualtrics website where the full job description was posted with the childcare and salary offered as benefits randomly varied. Figure A2 displays a screen shot from Qualtrics for what a subject randomly assigned to the extended-hours childcare treatment and  $y$  salary level for the Chicago metropolitan area would have seen before applying to the job. This appearance was identical for all subjects in all 10 metropolitan areas of the study except for 1) the location of the corporate headquarters, which reflected the metropolitan area in which the job ad was posted, ;

and 2) the treatment dyad to which the subject was randomly assigned. Subjects saw either the extended-hours childcare treatment, regular-hours childcare, or no childcare in the job description and one of three salaries price-parity-adjusted for their area, as described in the main article.

Figure A2: Full Job Description with Randomized Conditions As It Appears on Qualtrics

We are a family-friendly company seeking a marketing manager at our dynamic corporate headquarters in Chicago. This is a mid-level position with opportunities to advance into senior management.

**REQUIREMENTS**

- 5+ years marketing experience, preferably in healthcare or a related industry
- Bachelor's degree minimum
- Excellent analytical and problem solving skills
- Occasional overtime required to meet project deadlines

**COMPENSATION AND BENEFITS**

- Salary: \$117,000
- Medical and Dental Insurance
- 401 K
- On-site childcare open during normal business hours with extended-hours care available before and after normal business hours (unsubsidized)

**To apply, please enter your contact information below and upload a copy of your current resume. Applicants will only be contacted in the event that a follow-up interview is requested. Equal opportunity employer.**

First Name:	<input type="text"/>
Last Name:	<input type="text"/>
Street Address:	<input type="text"/>
City:	<input type="text"/>
State:	<input type="text"/>
Zip Code:	<input type="text"/>
Email:	<input type="text"/>
Telephone:	<input type="text"/>

**Resume (.pdf format only)**

Drop files or click here to upload

>> Next

As described in Table 1 of the paper, the three possible salary levels offered in the random assignments for each metropolitan area were derived from 100%, 90%, and 80% of a base, price-parity-adjusted salary,  $y$ , for a marketing professional in that market. The actual numeric values were calculated as follows.

A mean national salary of \$117,000 was estimated for a “marketing manager” in the United States based on an average of regional salaries from the ADECCO 2019 Creative and Marketing Salary Guide. Using this mean national salary, I then calculated a state-level  $y$  base salary using a price parity adjustment from the “Average Income and Cost of Living in Every State” published by Money magazine in 2018. For each area,  $y$  is determined by dividing the price parity by 100 and multiplying it by \$117,000, then rounding the result to the nearest thousand. From there, I calculated the 90% $y$  and 80% $y$  salaries by multiplying  $y$  by .90 and .80, respectively. Table A1 lists these figures. Because salaries in major metropolitan areas are typically higher than in other parts of a state, the salaries used in the field experiment likely reflect lower-than-average salaries for a marketing manager in those areas. As such, it is unlikely that inflated salaries drove research subjects to apply for the job.

Table A1: Salaries Used in Field Experiment, By Metropolitan Area

Metropolitan Area	Price Parity for State	$y$	90% $y$	80% $y$
Atlanta	92.6	\$108,000	\$98,000	\$87,000
Boston	106.9	\$125,000	\$113,000	\$100,000
Chicago	99.7	\$117,000	\$106,000	\$94,000
Dallas	96.8	\$113,000	\$102,000	\$91,000
Houston	96.8	\$113,000	\$102,000	\$91,000
Los Angeles	113.4	\$133,000	\$119,000	\$106,000
Miami	99.5	\$116,000	\$105,000	\$93,000
New York	115.3	\$135,000	\$121,000	108,000
Philadelphia	97.9	\$115,000	\$103,000	\$92,000
Washington, DC	117	\$137,000	\$123,000	\$110,000

## Descriptive Statistics for Sample

In total, 147 subjects applied to the posted job: 86 women and 61 men. The mean age for female applicants was 37.5 and 41.9 for males. Among women, the majority of applicants were in their thirties, while the distribution for men was comparatively flat across ages. A substantial number of applicants were 50 years of age or older (14.3%), a demographic with more experience than necessary for the job in question and also less likely to have young children. Of those over 50, 65% were men and 35% were women. Male applicants in each market were also more likely to be unemployed than female applicants, as seen in Table A2. Given the fact that the job posted provided little information about the position and the company name was withheld for research design purposes, these older, male applicants may have been less discriminating. In expectation, the over-representation by less competitive applicants implies that the treatment effect would need to be even stronger on the applicants of interest for it to be detectable.

Table A2: Descriptive Statistics for Sample

Metro. Area	Total	<i>Women</i>				<i>Men</i>			
	<i>n</i>	<i>n</i>	Mean Age	% Emp.	%BA	<i>n</i>	Mean Age	% Emp.	%BA
Miami	27	13	36.5	53.8	92.3	14	42	35.7	64.3
Dallas	20	12	38.7	41.7	100	8	42.4	37.5	87.5
LA	17	11	37.1	54.5	90.9	6	39.7	16.7	100
Houston	17	13	38.6	69.2	84.6	4	47.8	25	100
Atlanta	17	8	37.6	50	87.5	9	43.2	55.6	100
Philadelphia	14	6	46.8	50	100	8	40	50	100
New York	14	10	31.3	60	100	4	43	25	100
Chicago	10	7	37	42.9	100	3	43.7	0	100
DC	7	5	37.6	60	100	2	31.5	50	100
Boston	4	1	38	100	100	3	41.3	100	33.3

In the pre-analysis plan for this experiment, I registered a breakdown of ages as represented in column (4) of Table 1 in the main paper, but we only observe the significance

of the age group 30 to 34 if considered alone against all other ages pooled (column 1) or without the youngest cohort in their late twenties (columns 2 and 3). The pre-analysis plan included younger individuals on the intuition that women in their late twenties might not be having children yet but might be thinking of doing so and would respond to the childcare interventions in the experiment, but this appears not to be the case. I report the results in column (4) and a robustness check in column (5) for transparency.

## SIPP Data

The matched labor profile control provides another piece of descriptive evidence in support of one of the central claims of this project: that the limited number of employers offering on-site childcare results from low supply in the presence of latent demand, not from a lack of demand driving the low supply. In order to make definitive claims about whether the low incidence of employer childcare benefits observed in the SIPP panel stems from a situation in which employers are offering the benefit to all eligible employees but not all of them are taking it up (i.e., low demand) – or, on the contrary, from a situation in which only some eligible employees are taking up the benefit because not all of them are offered it (i.e., low supply) – we would need to make intra-employer comparisons where employer-childcare benefits were randomly distributed. The SIPP panel is a household-level survey so we do not have access to which respondents may be at the same employer. In any event, employer benefits are rarely distributed at random in the real world. Nonetheless, we can make an *intra-labor-profile* comparison that provides some descriptive insight into the expected results of such a test.

Matching two labor profiles that differ in employer childcare benefit receipt assumes that the labor profile without childcare benefits can be considered a reasonable counterfactual to the labor profile with them. Under this assumption, there is no *a priori* reason to believe that two groups of people with statistically similar labor profiles would have starkly different demand preferences for employer childcare and work hours. Therefore, it follows that if

the women with children in formal childcare in the counterfactual matched labor profile group *had been offered* employer childcare benefits they *would have* used the benefits and *would have* worked longer hours, similar to their counterparts in the labor profile group who *did* receive employer childcare and who *did* work longer hours. We would not expect the observed beneficiaries of employer childcare in the SIPP panel to demand this benefit more than other individuals working in similar industries and occupations who also have young children. Thus, the *matched* control provides further descriptive evidence in support of the causal claim demonstrated with the field experiment: that the additional hours worked by women with employer childcare is a supply-driven phenomenon stemming from increased employer-provision of childcare benefits.

In the full sample, the *female\_childcare \* employer\_assist* variable remains positive and significant and none of the leads is significant, as reported in the paper. In the male-only subset, *childcare \* employer\_assist* also remains insignificant with leads. However, in the female-only subset, the results for the *childcare \* employer\_assist* variable remain positive and significant, the first-order time lead is not significant, but the second-order lead is significant. Therefore, the causal claim made with the panel is robust to leads check on the full panel only. Table A3 reports these results.

Table A3: Results from Weighted SIPP Data, with First- and Second-Order Time Leads

	<i>Dependent variable:</i>		
	Average weekly hours at primary job		
	(1)	(2)	(3)
	Full Sample	Female Only Subset	Male Only Subset
<i>female_childcare*employer_assist</i>	11.756*** (3.806)		
<i>childcare*employer_assist</i>		14.505*** (4.171)	1.563 (14.953)
<i>female_childcare</i>	-0.814*** (0.067)		
<i>childcare</i>		1.905*** (0.068)	0.818*** (0.272)
<i>employer_assist</i>	-6.927** (2.885)	-9.711*** (3.365)	-1.562 (5.960)
<i>female_childcare*employer_assist(t + 1)</i>	-0.162 (5.233)		
<i>female_childcare*employer_assist(t + 2)</i>	-5.473 (3.752)		
<i>childcare*employer_assist(t + 1)</i>		-0.175 (5.649)	-0.147 (21.128)
<i>childcare*employer_assist(t + 2)</i>		-9.355** (4.034)	1.143 (15.827)
<i>employer_assist(t + 1)</i>	0.035 (3.895)	0.056 (4.458)	-0.032 (8.283)
<i>employer_assist(t + 2)</i>	3.737 (2.777)	7.634** (3.163)	-1.420 (6.008)
Wave-Month Fixed Effects	Yes	Yes	Yes
Person Fixed Effects	Yes	Yes	Yes
Observations	2,596,176	1,346,814	1,249,362
R <sup>2</sup>	0.0002	0.001	0.00004
Adjusted R <sup>2</sup>	0.0001	0.001	-0.0001

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01