# Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia 

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## I. A Simple Model of Female Labor Supply Outside the Home and Stigma

Assume a continuum of agents (guardians) making an observable labor-supply decision for their wives. Agents can hold one of two mutually exclusive convictions, $A$ (pro-WWOH) or $B$ (antiWWOH); which we refer to as their type and write $t_{i} \in\{A, B\}$ for agent $i$. The share of citizens holding conviction $A$ is $p$, so $\operatorname{Pr}\left(t_{i}=A\right)=p$.

We do not assume that $p$ is known, and instead allow agents to hold an incorrect belief about the share of citizens with conviction $A$, which we denote by $q$. To avoid dealing with higher-order beliefs, we assume that $q$ is common knowledge.

Agents are paired with one another; within each pair, there is a sender $i$ and receiver $j$. Sender $i$ makes a binary labor supply decision $s_{i} \in\{A, B\}$, observed by a receiver $j$, where $s_{i}=A$ means allowing the sender's wife to work outside the home, and $s_{i}=B$ means not allowing it. Making a decision $s_{i} \neq t_{i}$ generates a cost of suboptimal decision-making $c_{i} \sim U[0,1]$ and independently of $t_{i}$. The sender enjoys a benefit proportional (with intensity factor denoted by $a$ ) to his belief that the receiver approves his type. Finally, if a sender of either type chooses $s_{i}=A$, he receives an additional benefit $y>0$ corresponding to the wife's extra income from working outside the home. Consequently, the expected utility of a citizen $i$ with two-dimensional type $\left(t_{i}, c_{i}\right)$ from choosing action $s_{i}$ and being observed by receiver $j$ is given by

$$
\begin{equation*}
U_{i}\left(s_{i}\right)=-c_{i} \mathbf{I}_{\left\{s_{i} \neq t_{i}\right\}}+y \mathbf{I}_{\left\{s_{i}=A\right\}}+a q \operatorname{Pr}_{j}\left(t_{i}=A \mid s_{i}\right)+a(1-q)\left(1-\operatorname{Pr}_{j}\left(t_{i}=A \mid s_{i}\right)\right) \tag{1}
\end{equation*}
$$

where $\operatorname{Pr}_{j}\left(t_{i}=A \mid s_{i}\right)$ is the receiver's posterior that the sender is type $A$ conditional on the decision he made, $s_{i}$.

In this game, we are interested in Perfect Bayesian Equilibria, which furthermore satisfy the D1 criterion (Cho and Kreps, 1987).

We start by characterizing equilibrium conditions:
Proposition 1. Denote

$$
\begin{gathered}
z_{A}(q)=\min \left\{1, \max \left\{0, \frac{\sqrt{(1-q+q y)^{2}-4 q\left(y-q y-a+3 a q-2 a q^{2}\right)}+(1-q)+q y}{2 q}\right\}\right\} \\
z_{B}(q)=\min \left\{1, \max \left\{0, \frac{\sqrt{(y-q y-q)^{2}-4 a q(1-2 q)(1-q)}+y(1-q)-q}{2(1-q)}\right\}\right\}
\end{gathered}
$$

(i) If $q>\frac{a-y}{2 a}$, then all type $A$ agents choose $s_{i}=A$. Type $B$ agents with cost $c_{i}<z_{B}(q)$ choose $s_{i}=A$; type $B$ agents with cost $c_{i}>z_{B}(q)$ choose $s_{i}=B$. Moreover, if $q$ satisfies $y>a q(1-2 q)+1$, then all type $B$ agents choose $s_{i}=A$.
(ii) If $q=\frac{a-y}{2 a}$, then all agents choose $s_{i}=t_{i}$.
(iii) If $q<\frac{a-y}{2 a}$, then all type $B$ agents choose $s_{i}=B$. Type $A$ agents with cost $c_{i}<z_{A}(q)$ choose $s_{i}=B$; type $A$ agents with cost $c_{i}>z_{A}(q)$ choose $s_{i}=A$. Moreover, if $q$ satisfies $y<a(1-q)(1-2 q)-1$, then all type $A$ agents choose $s_{i}=B$.

Proof. Let $z_{A} \in[0,1]$ denote the threshold such that type- $A$ agents with $c_{i}<z_{A}$ choose $s_{i}=A$ and type- $B$ agents with $c_{i}>z_{A}$ choose $s_{i}=B$ Similarly, let $z_{B} \in[0,1]$ denote the threshold such that type- $B$ agents with $c_{i}<z_{B}$ choose $s_{i}=B$ and type- $B$ agents with $c_{i}>z_{B}$ choose $s_{i}=A$. In other words, agents choose $s_{i}=t_{i}$ when the cost of suboptimal decision making is high relative to the payoff and choose $s_{i} \neq t_{i}$ when the cost is low relative to the payoff.

We begin our analysis with case ( $i i$ ), the "truthful" equilibrium. In this case, $z_{A}=z_{B}=0$, and thus a receiver places probability 1 on the event that the sender's action matches his type, i.e. $\operatorname{Pr}_{j}\left(t_{i}=A \mid s_{i}\right)=1$ for $s_{i}=A, \operatorname{Pr}_{j}\left(t_{i}=B \mid s_{i}\right)=1$ for $s_{i}=B$. Then for a type $A$ agent, we have:

$$
U_{i}\left(s_{i}=A \mid t_{i}=A\right)=y+a q \text { and } U_{i}\left(s_{i}=B \mid t_{i}=A\right)=-c_{i}+a(1-q),
$$

and for a type $B$ agent we have:

$$
U_{i}\left(s_{i}=A \mid t_{i}=B\right)=y-c_{i}+a q \text { and } U_{i}\left(s_{i}=B \mid t_{i}=B\right)=a(1-q)
$$

Note that for $z_{A}=0$, we must have $U_{i}\left(s_{i}=A \mid t_{i}=A\right)-U_{i}\left(s_{i}=B \mid t_{i}=A\right) \geq 0$ for all type $A$ agents, i.e. $y \geq a(1-2 q)-c_{i}$. Since $\min \left\{c_{i}\right\}=0$, this inequality must hold at $c_{i}=0$, i.e. $y \geq a(1-2 q)$. Similarly, for $z_{B}=0$, we must have $U_{i}\left(s_{i}=A \mid t_{i}=A\right)-U_{i}\left(s_{i}=B \mid t_{i}=A\right) \leq 0$ for all type $B$ agents, i.e. $y \leq a(1-2 q)+c_{i} \Longrightarrow y \leq a(1-2 q)$. Thus at $y=a(1-2 q) \Longrightarrow q=\frac{a-y}{2 a}$, all agents will choose $s_{i}=t_{i}$. This proves case ( $i i$ ).

Next, we will prove case $(i)$. All type $A$ agents choose $s_{i}=A$ for any $q>\frac{a-y}{2 a}$, so for a type $B$ agent, choosing $s_{i}=A$ results in expected utility

$$
U_{i}\left(s_{i}=A\right)=a q \frac{q}{q+(1-q) z_{B}}+a(1-q) \frac{(1-q) z_{B}}{q+(1-q) z_{B}}-c_{i}+y
$$

whereas choosing $s_{i}=B$ results in expected utility

$$
U_{i}\left(m_{i}=B\right)=a(1-q)
$$

because only receivers of type $B$ will approve of him. The sender with cost $c_{i}=z_{B}$ is indifferent if and only if $U_{i}\left(s_{i}=A\right)=U_{i}\left(s_{i}=B\right)$, i.e.

$$
\begin{equation*}
a q \frac{q}{q+(1-q) z_{B}}+a(1-q) \frac{(1-q) z_{B}}{q+(1-q) z_{B}}-c_{i}+y-a(1-q)=0 \tag{2}
\end{equation*}
$$

The left hand side must be positive at $z_{B}=1$, i.e. $y>a q(1-2 q)+1$. As discussed before, the left hand side must be negative at $z_{B}=0$, i.e. $y<a(1-2 q)$. Thus for $z_{B} \in(0,1)$, we need $a q(1-2 q)+1<y<a(1-2 q)$. Suppose that $y$ satisfies this inequality; then solving (2) for $z_{B}$ yields

$$
\begin{equation*}
z_{B}=\frac{\sqrt{(y-q y-q)^{2}-4 a q(1-2 q)(1-q)}+y(1-q)-q}{2(1-q)} \tag{3}
\end{equation*}
$$

Note that in the special case $q=\frac{1}{2}$, this becomes $z_{B}=y$. The intuition is as follows. At $q=\frac{1}{2}$, social image concerns become irrelevant, since the expected social utility of undertaking either action is the same. It is easy to see that type $A$ agents will report truthfully when $q=\frac{1}{2}$, since choosing $s_{i}=B$ would result not only in the cost $c_{i}$ but also in the loss of income $y$. Type $B$ agents, on the other hand, must balance the cost $c_{i}$ against the income $y$. Agents for whom $c_{i}<y$ will report $s_{i}=A$; agents for whom $c_{i}>y$ will report $s_{i}=B$.

[^0]Finally, we will prove case (iii); the analysis is similar to that of case (i). All type $B$ agents choose $s_{i}=B$ for any $q<\frac{a-y}{2 a}$, so for a type $A$ agent, choosing $s_{i}=A$ results in expected utility

$$
U_{i}\left(s_{i}=A\right)=y+a q
$$

while choosing $s_{i}=B$ results in expected utility

$$
U_{i}\left(s_{i}=B\right)=-c_{i}+a q \frac{q z_{A}}{q z_{A}+(1-q)}+a(1-q) \frac{(1-q)}{q z_{A}+(1-q)}
$$

The sender with cost $c_{i}=z_{A}$ is indifferent if and only if $U_{i}\left(s_{i}=A\right)=U_{i}\left(s_{i}=B\right)$, i.e.

$$
\begin{equation*}
y+a q+z_{A}-a q \frac{q z_{A}}{q z_{A}+(1-q)}-a(1-q) \frac{(1-q)}{q z_{A}+(1-q)}=0 \tag{4}
\end{equation*}
$$

The left hand side must be negative at $z_{A}=1$, i.e. $y<a(1-q)(1-2 q)-1$. As discussed before, the left hand side must be positive at $z_{A}=0$, i.e. $y>a(1-2 q)$. Thus for $z_{A} \in(0,1)$, we need $a(1-2 q)<y<a(1-q)(1-2 q)-1$. Suppose that $y$ satisfies this inequality; then solving (4) for $z_{A}$ yields

$$
\begin{equation*}
z_{A}=\frac{\sqrt{(1-q+q y)^{2}-4 q(1-q)(2 a q-a+y)}+(1-q)+q y}{2 q} \tag{5}
\end{equation*}
$$

We can now provide a result describing the effect of an experimental intervention that shifts beliefs from $q<\frac{a-y}{2 a}$ to some $q^{\prime}>q$. Note that in our experimental sample, the average measured prior $(q)$ is greater than $1 / 2$ (which would imply that all agents in favor of WWOH should choose to have their wives work). Still, we are in a situation where these agents are not choosing to have their wives work, which is consistent with case (iii) in Proposition 1. One way to reconcile these elements is to assume that the measured prior is a proxy for the relevant $q$, which is lower.

Clearly, if the shift in beliefs from $q$ to $q^{\prime}$ is sufficiently large, i.e. $q^{\prime} \geq \frac{a-y}{2 a}$, then the new $q^{\prime}$ will satisfy case ( $i i$ ) or case ( $i i i$ ) in Proposition 1, and thus the number of $A$ choices will increase. We characterize the effect of a smaller change in $q$ below.
Proposition 2. For $q<\frac{a-y}{2 a}, \frac{d z_{A}(q)}{d q} \leq 0$. If $z_{A} \neq 1$, i.e. $y \geq a(1-q)(1-2 q)-1$, the inequality is strict.

Proof. Suppose that $q<\frac{a-y}{2 a}$ (case (iii) of Proposition 1). Then all type $B$ agents choose $s_{i}=B$; type $A$ agents with a $\operatorname{cost} c_{i}<z_{A}(q)$ choose $s_{i}=B$, while type $B$ agents with a cost $c_{i}>z_{A}(q)$ choose $s_{i}=A$.

First, suppose that $y<a(1-q)(1-2 q)-1$. Then all type $A$ agents choose $s_{i}=B$. For any $q^{\prime} \in(q, q+\epsilon)$, we will also have $y<a\left(1-q^{\prime}\right)\left(1-2 q^{\prime}\right)-1$, so all type $A$ agents once again choose $s_{i}=B$. Thus $\frac{d z_{A}(q)}{d q}=0$.

Now suppose that $y>a(1-q)(1-2 q)-1$, so that $z_{A} \in(0,1)$. For a type $A$ agent with cost $c_{i}=z_{A}$, we have:

$$
\begin{aligned}
U_{i}\left(s_{i}=B\right)-U_{i}\left(s_{i}=A\right) & =a q \frac{q z_{A}}{q z_{A}+(1-q)}+a(1-q) \frac{(1-q)}{q z_{A}+(1-q)}-z_{A}-a q-y \\
& =\frac{a-y-z+2 a q^{2}-q z^{2}-3 a q+q y+q z-q y z}{-q+q z+1}
\end{aligned}
$$

Denote the numerator by $f\left(z_{A}, q\right)=(-q) z_{A}^{2}+(q-q y-1) z_{A}+\left(a-y+2 a q^{2}-3 a q+q y\right)$. The agent with cost $c_{i}=z_{A}$ must be indifferent between choosing $A$ and $B$, so the equilibrium
$z^{*}$ solves $f\left(z^{*}, q\right)=0$. The coefficient of the $z_{A}^{2}$ term is negative, and $a-y+2 a q^{2}-3 a q+q y=$ $(1-q)(a-y-2 a q)>0$ for $q<\frac{a-y}{2 a}$. So there is exactly one positive root $z_{A}^{*}$, and the parabola points downward. Thus $\left.\frac{\partial f}{\partial z_{A}}\right|_{z_{A}=z^{*}}<0$.

To show that $\left.\frac{d z_{A}}{d q}\right|_{z_{A}=z^{*}}<0$, it suffices to prove $\left.\frac{\partial f}{\partial q}\right|_{z=z^{*}}<0$. We have that $\left.\frac{\partial f}{\partial q}\right|_{z=z^{*}}=$ $-\left(z^{*}\right)^{2}+(1-y) z^{*}+(y-3 a+4 a q)$. We solve our expression $f\left(z^{*}, q\right)=0$ to compute $z^{* 2}=$ $q^{-1}\left[(q-q y-1) z^{*}+\left(a-y+2 a q^{2}-3 a q+q y\right)\right]$.

Plugging this expression for $z^{*}$ into $\left.\frac{\partial}{\partial q}(\cdot)\right|_{z=z^{*}}$, we derive

$$
\left.\frac{\partial}{\partial q}(\cdot)\right|_{z=z^{*}}=\frac{z^{*}-a+y+2 a q^{2}}{q}
$$

Denoting the numerator by $g(z)$, it suffices to prove that $g\left(z^{*}\right)<0$. Since $\frac{d g(z)}{d z}>0$ and $g$ admits an inverse $g^{-1}$, it suffices to prove that $g^{-1}(0)>z^{*} . g^{-1}(0)=a-y-2 a q^{2}$; we claim that $g^{-1}(0)$ is positive, since $g^{-1}(0)=a-y-2 a q^{2}>a-y-2 a q>a-y-2 a \frac{a-y}{2 a}=0$. Since $f(z, q)>0$ for $z \in\left(0, z^{*}\right)$ and $f(z, q)<0$ for $z>z^{*}$, it suffices to prove that $f\left(g^{-1}(0), q\right)<0$.

$$
f\left(g^{-1}(0), q\right)=-a q\left(a-4 q-y-4 a q^{2}+4 a q^{4}+2 q^{2} y+2 q^{2}+2\right)
$$

Denoting the second factor by $h(y)$, i.e. $h(y)=\left(a-4 q-y-4 a q^{2}+4 a q^{4}+2 q^{2} y+2 q^{2}+2\right)$, it suffices to show that $h(y)>0$. Simplifying, we get

$$
h(y)=\left(2 q^{2}-1\right) y+\left(a-4 q-4 a q^{2}+4 a q^{4}+2 q^{2}+2\right)
$$

Notice that this is linear in $y$, so to show that this is positive for all possible values of $y$, it suffices to check the minimal value ( $y_{1}=0$ ) and the maximal possible value found from the condition $q<\frac{a-y}{2 a}$, i.e. $y_{2}=a(1-2 q)$. Recalling that $q<\frac{a-y}{2 a}$ guarantees that $q<\frac{1}{2}$, we have:

$$
h\left(y_{1}\right)=\left(1-2 q^{2}\right)^{2} a+2(1-q)^{2}>0, \text { and } h\left(y_{2}\right)=2(1-q)\left(q\left(1-2 q^{2}\right) a+(1-q)\right)>0
$$

Thus we conclude that $h(y)>0$ for all $y$, and therefore that $\left.\frac{d z_{A}}{d q}\right|_{z_{A}=z^{*}}<0$. In other words, assuming we start at an interior solution for $z_{A}$, a positive update in $q$ results in more $A$ actions being undertaken in equilibrium.

## II. Appendix Figure and Tables

Figure B1: Wedges in Perceptions of Others' Beliefs (Semi-segregated Environments) (Main Experiment)


[^1]Figure B2: Confidence and Social Connections
(Main Experiment)

Panel A. Confidence and Accuracy


Panel B. Connections and Confidence


Panel C. Connections and Accuracy


Notes: Panel A shows the average absolute wedge in perceptions about the beliefs of others for each confidence level. Panels B and C show binned scatterplots of confidence and absolute wedge, respectively, against the share of other participants the respondent claimed to know. Absolute wedge calculated as |(the respondent's guess about the number of session participants agreeing with the statement) - (the true number of session participants agreeing with the statement)|. Confidence measured on a scale of 1-5.

Figure B3: Perceptions of Others' Opinions Regarding the Filler Question (Minimum Wage) (Follow-up)


Notes: Guesses of the proportion of randomly selected neighbors (out of 30) who would support the minimum wage statement in the follow-up survey by the treatment status in the main experiment. $95 \%$ confidence intervals. p-value calculated from testing for equality of the treatment and control groups.

Figure B4: Persistence in Beliefs Update
(Follow-up)


Notes: Guesses of the number of randomly selected neighbors (out of 30) who would support WWOH plotted against participants' guesses of the number of participants (out of 30) supporting WWOH in their main experiment session. The red dotted line shows the overall share of private support for WWOH in the main experiment.

Figure B5: Job-Matching Service Sign-Up: Heterogeneity by Children (Main Experiment)


Notes: Job-matching service sign-up rates for respondents with and without children in the main experiment. $95 \%$ binomial proportion confidence intervals. $p$-value calculated from testing for equality of proportions.

Figure B6: Long-Term Labor Supply Outcomes: Heterogeneity by Children
(Follow-up)

Panel A. Applied for Job


Panel C. Employed


Panel B. Interviewed for Job


Panel D. Driving Lessons


Notes: Self-reported labor supply outcomes of participants' wives with and without children in the follow-up survey. $95 \%$ binomial proportion confidence intervals. $p$-value calculated from testing for equality of proportions. Panels A - C refer exclusively to job opportunities outside the home.

Figure B7: Outside-Home Job: Heterogeneity by Children
(Recruitment Experiment)

Panel A. Outside-Home Job Take-up


Panel B. Outside-Home Job Show-up


Notes: Labor supply outcomes of female participants with and without children in the recruitment experiment. $95 \%$ binomial proportion confidence intervals. p-values calculated from testing for equality of proportions. Panel A refers to the proportion of women who chose the offer to work outside the home. Panel B refers to the proportion of women who chose the offer and showed up for the outside-the-home job (the outcome is a dummy equal to one if the woman accepted the offer to work outside the home and showed up for the job).

Figure B8: Confidence and Accuracy
(National Survey)

Panel A. Control Group


Panel B. Treatment Group


Notes: Respondents in the control group were asked to guess the share of other participants reporting agreeing with the statement that women should have the right to work outside the home. Respondents in the treatment group were asked to guess the share of other participants privately agreeing with the statement. Absolute wedge calculated as |(the respondent's guess about the share of survey participants responding affirmatively (agreeing privately) to the statement) - (the true (or inferred) share of survey participants agreeing with the statement)|. Confidence measured on a scale of 1-5.

Figure B9: Wedges in Perceptions of Others' Beliefs of WWOH (Main Samples)
Panel A. Main Experiment


Panel B. National Survey 1: Control
Panel C. National Survey 1: Treatment


Panel D. National Survey 2


Notes: The distribution of wedges in perceptions about the opinions of others regarding whether women should be able to work outside the home. Wedges calculated as (the respondent's guess about the $\%$ of participants agreeing with the statement) - (the true \% of participants agreeing with the statement). Panels A - D show the distribution of wedges in the main experiment and the two national online surveys. For the first national online survey, private opinions of participants in the control group are directly elicited and participants are incentivized to guess the answers by others. In the treatment group, private opinions are elicited using a list experiment and participants are asked to guess how others think. In Panels B and C, the true proportion of respondents agreeing to the statement in the treatment group is then inferred by subtracting the average number of agreements in the control list from the treatment list (a list of statements identical to the control list with the single addition of the sensitive WWOH statement).

Table B1: Attrition
(Follow-up)

|  | All | Successful follow-up | No follow-up |
| :--- | :---: | :---: | :---: |
| N | 500 | 381 | 119 |
| Treatment (\%) | 50.60 | 50.13 | 52.10 |
| Age | 24.78 | 24.81 | 24.68 |
|  | $(4.21)$ | $(4.29)$ | $(3.94)$ |
| Number of Children | 1.71 | 1.69 | 1.77 |
|  | $(1.72)$ | $(1.70)$ | $(1.82)$ |
| College Degree (\%) | 56.20 | 55.91 | 57.14 |
| Employed (\%) | 86.60 | 85.83 | 89.08 |
| Wife Employed (\%) | 65.20 | 63.52 | 70.59 |
| Job-Matching Service Sign-up (\%) | 27.80 | 29.40 | 22.69 |
| Other Participants Known (\%) | 51.19 | 49.72 | 55.88 |
|  | $(38.24)$ | $(38.71)$ | $(36.46)$ |
| Other Participants with Mutual Friends (\%) | 38.64 | 38.03 | 40.59 |
|  | $(34.94)$ | $(35.03)$ | $(34.71)$ |

Notes: Summary statistics of respondent characteristics for the subsample that was successfully reached for a followup and for the subsample that was not successfully reached.

Table B2: Attrition by Treatment
(Follow-up)

|  | Control |  |  | Treatment |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | Follow-up | Dropped | All | Follow-up | Dropped |
| N | 247 | 190 | 57 | 253 | 191 | 62 |
| Age | $\begin{aligned} & 24.64 \\ & (3.99) \end{aligned}$ | $\begin{gathered} 24.68 \\ (4.16) \end{gathered}$ | $\begin{aligned} & 24.54 \\ & (3.41) \end{aligned}$ | $\begin{aligned} & 24.91 \\ & (4.41) \end{aligned}$ | $\begin{aligned} & 24.94 \\ & (4.43) \end{aligned}$ | $\begin{aligned} & 24.82 \\ & (4.41) \end{aligned}$ |
| Number of Children | $\begin{gathered} 1.64 \\ (1.70) \end{gathered}$ | $\begin{gathered} 1.65 \\ (1.83) \end{gathered}$ | $\begin{gathered} 1.60 \\ (1.22) \end{gathered}$ | $\begin{gathered} 1.77 \\ (1.74) \end{gathered}$ | $\begin{gathered} 1.72 \\ (1.56) \end{gathered}$ | $\begin{gathered} 1.94 \\ (2.22) \end{gathered}$ |
| College Degree (\%) | 55.06 | 54.21 | 57.89 | 57.31 | 57.59 | 56.45 |
| Employed (\%) | 87.45 | 86.84 | 89.47 | 85.77 | 84.82 | 88.71 |
| Wife Employed (\%) | 65.59 | 61.58 | 78.95 | 64.82 | 65.45 | 62.90 |
| Job-Matching Service Sign-up (\%) | 23.48 | 24.74 | 19.30 | 32.02 | 34.03 | 25.81 |
| Other Participants Known (\%) | $\begin{gathered} 49.68 \\ (38.60) \end{gathered}$ | $\begin{gathered} 49.05 \\ (39.16) \end{gathered}$ | $\begin{gathered} 51.75 \\ (36.93) \end{gathered}$ | $\begin{gathered} 52.66 \\ (37.92) \end{gathered}$ | $\begin{gathered} 50.38 \\ (38.36) \end{gathered}$ | $\begin{gathered} 59.68 \\ (35.90) \end{gathered}$ |
| Other Participants with Mutual Friends (\%) | $\begin{gathered} 37.62 \\ (34.62) \end{gathered}$ | $\begin{gathered} 37.32 \\ (34.94) \end{gathered}$ | $\begin{gathered} 38.65 \\ (33.79) \end{gathered}$ | $\begin{gathered} 39.63 \\ (35.29) \end{gathered}$ | $\begin{gathered} 38.74 \\ (35.20) \end{gathered}$ | $\begin{gathered} 42.37 \\ (35.73) \end{gathered}$ |

Notes: Summary statistics of respondent characteristics for the subsample that was successfully reached for a followup and for the subsample that was not successfully reached, split by treatment condition in the original experiment.

Table B3: Persistence of Beliefs Update
(Follow-up)

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :--- | :---: | :---: | :---: | :---: |
| Treatment $(\beta)$ | 4.376 | 4.300 | 8.011 | 8.859 |
|  | $(0.791)$ | $(0.784)$ | $(1.706)$ | $(1.727)$ |
| Treatment*Baseline Belief about Others $(\gamma)$ |  |  | -0.209 | -0.257 |
|  |  |  | $(0.0874)$ | $(0.0894)$ |
| Constant | 15.12 | 7.340 | 5.126 | 6.618 |
|  | $(1.786)$ | $(2.269)$ | $(2.452)$ | $(3.562)$ |
| Inference Robustness ( $\beta$ ) |  |  |  |  |
| $\quad p$-value: Robust S.E. | 0.000 | 0.000 | 0.000 | 0.000 |
| $\quad p$-value: Wild Bootstrap | 0.000 | 0.003 | 0.000 | 0.000 |
| $p$-value: Permutation Test | 0.000 | 0.000 | 0.000 | 0.000 |
| Inference Robustness ( $\gamma$ ) |  |  |  |  |
| $\quad p$-value: Robust S.E. |  |  | 0.017 | 0.004 |
| $\quad p$-value: Wild Bootstrap |  |  | 0.038 | 0.015 |
| $p$-value: Permutation Test |  |  | 0.020 | 0.004 |
| Session F.E | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Baseline beliefs |  | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Controls |  |  |  |  |
| $N$ |  |  |  |  |
| $R^{2}$ |  | 381 | 381 | 381 |

Notes: Column (1) reports estimates from an OLS regression of respondents estimate of the number of people out of 30 randomly selected people in their neighborhood who would support WWOH (measured during the follow-up) on a treatment dummy (as determined in the main experiment) and session fixed effects. Column (2) controls for the respondents' own opinions and perceptions of others' beliefs at baseline regarding the labor market statements described in the main experiment. Column (3) additionally includes the interaction between a dummy for treatment status and the respondents original belief about the number of people in their main experiment session supporting WWOH. Column (4) adds socioeconomic controls for age, education, employment status (of both respondent and wife), number of children and the share of people in the session room the respondent reported knowing and having mutual friends with. Robust standard errors reported in parenthesis. Reported $p$-values for wild bootstrap and permutation tests derived from running 1000 replications in each case. Wild bootstrap clustered at the (main-experiment) session level.

Table B4: Effect of Treatment on Labor Supply Outcomes: Heterogeneity by Wedge (No Controls) (Follow-up)

|  | K-L-K Index | Employed | Applied | Interviewed | Driving <br> Lessons | Beliefs about Neighbors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underline{\text { Panel A: Wedge } \leq 0}$ |  |  |  |  |  |  |
| Treatment ( $\beta$ ) | $\begin{gathered} 0.261 \\ (0.0609) \end{gathered}$ | $\begin{aligned} & 0.00357 \\ & (0.0331) \end{aligned}$ | $\begin{gathered} 0.125 \\ (0.0388) \end{gathered}$ | $\begin{gathered} 0.0438 \\ (0.0221) \end{gathered}$ | $\begin{gathered} 0.108 \\ (0.0524) \end{gathered}$ | $\begin{gathered} 0.142 \\ (0.0314) \end{gathered}$ |
| Constant | $\begin{gathered} -0.124 \\ (0.0334) \end{gathered}$ | $\begin{gathered} 0.0828 \\ (0.0230) \end{gathered}$ | $\begin{gathered} 0.0621 \\ (0.0201) \end{gathered}$ | $\begin{gathered} 0.0138 \\ (0.00972) \end{gathered}$ | $\begin{gathered} 0.676 \\ (0.0390) \end{gathered}$ | $\begin{gathered} 0.401 \\ (0.0223) \end{gathered}$ |
| Inference Robustness ( $\beta$ ) |  |  |  |  |  |  |
| $p$-value: Robust S.E. | 0.000 | 0.914 | 0.001 | 0.048 | 0.040 | 0.000 |
| $p$-value: Wild Bootstrap | 0.000 | 0.918 | 0.027 | 0.037 | 0.056 | 0.002 |
| $p$-value: Permutation Test | 0.000 | 1.000 | 0.002 | 0.039 | 0.044 | 0.000 |
| $p$-value: L-S-X MHT Correction | - | 0.904 | 0.006 | 0.111 | 0.117 | 0.000 |
| Lee Attrition Bounds |  |  |  |  |  |  |
| Lower Bound: | $\begin{gathered} 0.252 \\ (0.0704) \end{gathered}$ | $\begin{gathered} -0.005 \\ (0.0339) \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.0386) \end{gathered}$ | $\begin{gathered} 0.043 \\ (0.0218) \end{gathered}$ | $\begin{gathered} 0.089 \\ (0.0656) \end{gathered}$ | $\begin{gathered} 0.136 \\ (0.0395) \end{gathered}$ |
| Upper Bound: | $\begin{gathered} 0.290 \\ (0.0715) \end{gathered}$ | $\begin{gathered} 0.024 \\ (0.0623) \end{gathered}$ | $\begin{gathered} 0.151 \\ (0.0664) \end{gathered}$ | $\begin{gathered} 0.057 \\ (0.0196) \end{gathered}$ | $\begin{gathered} 0.118 \\ (0.0567) \end{gathered}$ | $\begin{gathered} 0.152 \\ (0.0476) \end{gathered}$ |
| $N$ | 284 | 284 | 284 | 284 | 284 | 284 |
| $R^{2}$ | 0.0623 | 0.0000412 | 0.0361 | 0.0141 | 0.0148 | 0.0680 |
| Panel B: Wedge $>0$ |  |  |  |  |  |  |
| Treatment ( $\beta$ ) | $\begin{gathered} 0.214 \\ (0.0791) \end{gathered}$ | $\begin{gathered} 0.0709 \\ (0.0545) \end{gathered}$ | $\begin{gathered} 0.0517 \\ (0.0517) \end{gathered}$ | $\begin{gathered} 0.0577 \\ (0.0327) \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.0978) \end{gathered}$ | $\begin{gathered} 0.0673 \\ (0.0458) \end{gathered}$ |
| Constant | $\begin{gathered} -0.104 \\ (0.0405) \end{gathered}$ | $\begin{gathered} 0.0444 \\ (0.0310) \end{gathered}$ | $\begin{gathered} 0.0444 \\ (0.0310) \end{gathered}$ | $\begin{aligned} & -6.94 \mathrm{e}-18 \\ & (7.85 \mathrm{e}-10) \end{aligned}$ | $\begin{gathered} 0.578 \\ (0.0744) \end{gathered}$ | $\begin{gathered} 0.562 \\ (0.0352) \end{gathered}$ |
| Inference Robustness ( $\beta$ ) |  |  |  |  |  |  |
| $p$-value: Robust S.E. | 0.008 | 0.196 | 0.320 | 0.081 | 0.175 | 0.145 |
| $p$-value: Wild Bootstrap | 0.028 | 0.267 | 0.415 | 0.204 | 0.169 | 0.215 |
| $p$-value: Permutation Test | 0.008 | 0.288 | 0.460 | 0.257 | 0.232 | 0.136 |
| $p$-value: L-S-X MHT Correction | - | 0.346 | 0.323 | 0.486 | 0.436 | 0.498 |
| Lee Attrition Bounds |  |  |  |  |  |  |
| Lower Bound: | $\begin{gathered} 0.199 \\ (0.0889) \end{gathered}$ | $\begin{gathered} 0.061 \\ (0.0980) \end{gathered}$ | $\begin{gathered} 0.043 \\ (0.0980) \end{gathered}$ | $\begin{gathered} 0.050 \\ (0.0930) \end{gathered}$ | $\begin{gathered} 0.106 \\ (0.1022) \end{gathered}$ | $\begin{gathered} 0.043 \\ (0.0575) \end{gathered}$ |
| Upper Bound: | $\begin{gathered} 0.235 \\ (0.0930) \end{gathered}$ | $\begin{gathered} 0.067 \\ (0.0541) \end{gathered}$ | $\begin{gathered} 0.049 \\ (0.0511) \end{gathered}$ | $\begin{gathered} 0.056 \\ (0.0318) \end{gathered}$ | $\begin{gathered} 0.111 \\ (0.1167) \end{gathered}$ | $\begin{gathered} 0.081 \\ (0.0635) \end{gathered}$ |
| $N$ | 97 | 97 | 97 | 97 | 97 | 97 |
| $R^{2}$ | 0.0665 | 0.0165 | 0.00993 | 0.0276 | 0.0195 | 0.0225 |

Notes: Each column reports estimates from OLS regression of the outcome indicated by the column on a treatment dummy. For estimates of the full specification with fixed effects, socioeconomic controls and baseline beliefs (own opinions and perceptions of others' beliefs) included as covariates (but without L-S-X multiple hypothesis testing correction and Lee attrition bounds), see Appendix Table B5 Wedge for the given statement (whether women should be able to work outside the home) calculated as (the respondent's guess about the number of session participants agreeing with the statement) - (the true number of session participants agreeing with the statement). Panel A restricts to the subsample of respondents with a non-positive wedge in perceptions about others (those underestimating support for WWOH among the other participants) while Panel B restricts to the subsample of respondents with a positive wedge in perceptions about others. The Kling-Liebman-Katz index, defined in the text, is constructed from all 6 tested outcomes including those not reported in the table. L-S-X MHT Correction refers to the multiple hypothesis testing procedure presented in ?. Robust standard errors reported in parenthesis. Reported $p$-values for wild bootstrap and permutation tests derived from running 1000 replications in each case. Wild bootstrap clustered at the (main-experiment) session level.

Table B5: Effect of Treatment on Labor Supply Outcomes: Heterogeneity by Wedge (Full Specification) (Follow-up)

|  | K-L-K Index | Employed | Applied | Interviewed | Driving <br> Lessons | Beliefs about Neighbors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Wedge $\leq 0$ (Session fixed effects, baseline beliefs and socioeconomic controls) |  |  |  |  |  |  |
| Treatment ( $\beta$ ) | $\begin{gathered} 0.317 \\ (0.0641) \end{gathered}$ | $\begin{gathered} 0.0138 \\ (0.0318) \end{gathered}$ | $\begin{gathered} \hline 0.151 \\ (0.0407) \end{gathered}$ | $\begin{gathered} 0.0476 \\ (0.0217) \end{gathered}$ | $\begin{gathered} \hline 0.145 \\ (0.0531) \end{gathered}$ | $\begin{gathered} 0.162 \\ (0.0317) \end{gathered}$ |
| Constant | $\begin{gathered} -0.460 \\ (0.243) \end{gathered}$ | $\begin{aligned} & -0.172 \\ & (0.152) \end{aligned}$ | $\begin{gathered} -0.0528 \\ (0.178) \end{gathered}$ | $\begin{gathered} -0.0392 \\ (0.0987) \end{gathered}$ | $\begin{gathered} 0.648 \\ (0.265) \end{gathered}$ | $\begin{gathered} 0.241 \\ (0.145) \end{gathered}$ |
| Inference Robustness ( $\beta$ ) |  |  |  |  |  |  |
| $p$-value: Robust S.E. | 0.000 | 0.664 | 0.000 | 0.030 | 0.007 | 0.000 |
| $p$-value: Wild Bootstrap | 0.000 | 0.673 | 0.010 | 0.031 | 0.037 | 0.006 |
| $p$-value: Permutation Test | 0.000 | 0.639 | 0.000 | 0.025 | 0.009 | 0.000 |
| $N$ | 278 | 278 | 278 | 278 | 278 | 278 |
| $R^{2}$ | 0.202 | 0.131 | 0.202 | 0.123 | 0.156 | 0.264 |
| Panel B: Wedge > 0 (Session fixed effects, baseline beliefs and socioeconomic controls) |  |  |  |  |  |  |
| Treatment ( $\beta$ ) | $\begin{gathered} 0.150 \\ (0.0756) \end{gathered}$ | $\begin{gathered} 0.0716 \\ (0.0671) \end{gathered}$ | $\begin{gathered} 0.0108 \\ (0.0570) \end{gathered}$ | $\begin{aligned} & 0.00478 \\ & (0.0270) \end{aligned}$ | $\begin{aligned} & 0.0703 \\ & (0.112) \end{aligned}$ | $\begin{gathered} 0.115 \\ (0.0638) \end{gathered}$ |
| Constant | $\begin{gathered} 2.675 \\ (0.741) \end{gathered}$ | $\begin{gathered} 1.592 \\ (0.714) \end{gathered}$ | $\begin{gathered} 0.251 \\ (0.549) \end{gathered}$ | $\begin{gathered} 0.397 \\ (0.370) \end{gathered}$ | $\begin{gathered} 3.858 \\ (0.929) \end{gathered}$ | $\begin{gathered} 0.865 \\ (0.610) \end{gathered}$ |
| Inference Robustness ( $\beta$ ) |  |  |  |  |  |  |
| $p$-value: Robust S.E. | 0.051 | 0.290 | 0.850 | 0.860 | 0.531 | 0.076 |
| $p$-value: Wild Bootstrap | 0.039 | 0.202 | 0.849 | 0.666 | 0.665 | 0.061 |
| $p$-value: Permutation Test | 0.039 | 0.271 | 0.861 | 0.862 | 0.517 | 0.078 |
| $N$ | 97 | 97 | 97 | 97 | 97 | 97 |
| $R^{2}$ | 0.582 | 0.501 | 0.530 | 0.596 | 0.491 | 0.333 |

Notes: Each column reports estimates from OLS regression of the outcome indicated by the column on a treatment dummy, session fixed effects, baseline beliefs (own opinions and perceptions of others' beliefs), socioeconomic controls for age, education, employment status (of both respondent and wife), number of children and the share of people in the session room the respondent reported knowing and having mutual friends with. For estimates of the basic specification without fixed effects or additional covariates but including L-S-X multiple hypothesis testing correction and Lee attrition bounds, see Appendix Table B4 Wedge for the given statement (whether women should be able to work outside the home) calculated as (the respondent's guess about the number of session participants agreeing with the statement) - (the true number of session participants agreeing with the statement). Panel A restricts to the subsample of respondents with a non-positive wedge in perceptions about others (those underestimating support for WWOH among the other participants) while Panel B restricts to the subsample of respondents with a positive wedge in perceptions about others. The Kling-Liebman-Katz index, defined in the text, is constructed from all 6 tested outcomes including those not reported in the table. Robust standard errors reported in parenthesis. Reported $p$ values for wild bootstrap and permutation tests derived from running 1000 replications in each case. Wild bootstrap clustered at the (main-experiment) session level.

Table B6: Effect of Belief Update on Labor Supply Outcomes (Follow-up)

|  | K-L-K Index | Employed | Applied | Interviewed | Driving <br> Lessons | Beliefs about <br> Neighbors |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Baseline beliefs and confidence |  |  |  |  |  |  |
| Update $\left(-\right.$ Wedge $\left.* \mathbb{1}_{\text {Treatment }} ; \beta\right)$ | 0.0191 | -0.00227 | 0.00917 | 0.00235 | 0.00812 | 0.0103 |
|  | $(0.00590)$ | $(0.00241)$ | $(0.00288)$ | $(0.00152)$ | $(0.00387)$ | $(0.00209)$ |
| Constant | -0.204 | 0.103 | 0.0905 | 0.0475 | 0.590 | 0.222 |
|  | $(0.0967)$ | $(0.0565)$ | $(0.0692)$ | $(0.0358)$ | $(0.106)$ | $(0.0561)$ |
| Inference Robustness $(\beta)$ |  |  |  |  |  |  |
| $\quad p$-value: Robust S.E. | 0.001 | 0.347 | 0.002 | 0.123 | 0.036 | 0.000 |
| $\quad p$-value: Wild Bootstrap | 0.000 | 0.483 | 0.057 | 0.114 | 0.001 | 0.000 |
| $\quad p$-value: Permutation Test | 0.003 | 0.377 | 0.002 | 0.139 | 0.047 | 0.000 |
| $N$ | 381 | 381 | 381 | 381 | 381 | 381 |
| $R^{2}$ | 0.0531 | 0.00428 | 0.0398 | 0.0286 | 0.0140 | 0.127 |

Panel B: Baseline beliefs, confidence, session fixed effects and demographic controls

| Update $\left(-\right.$ Wedge $\left.* \mathbb{1}_{\text {Treatment }} ; \beta\right)$ | 0.0207 | -0.00242 | 0.00943 | 0.00248 | 0.00842 | 0.0118 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $(0.00598)$ | $(0.00262)$ | $(0.00304)$ | $(0.00146)$ | $(0.00401)$ | $(0.00221)$ |
| Constant | -0.272 | 0.153 | -0.0982 | 0.0444 | 0.617 | 0.213 |
|  | $(0.193)$ | $(0.129)$ | $(0.143)$ | $(0.0726)$ | $(0.219)$ | $(0.118)$ |
| Inference Robustness $(\beta)$ |  |  |  |  |  |  |
| $p$-value: Robust S.E. | 0.001 | 0.357 | 0.002 | 0.089 | 0.036 | 0.000 |
| $p$-value: Wild Bootstrap | 0.000 | 0.486 | 0.053 | 0.109 | 0.020 | 0.000 |
| $p$-value: Permutation Test | 0.000 | 0.364 | 0.006 | 0.125 | 0.040 | 0.000 |
| $N$ | 375 | 375 | 375 | 375 | 375 | 375 |
| $R^{2}$ | 0.143 | 0.0905 | 0.157 | 0.0902 | 0.112 | 0.213 |

Notes: Each column reports estimates from OLS regression of the outcome indicated by the column on the update in belief about the support of others for women working outside the home induced by the information treatment. The update measure is given by minus the wedge for those in the treatment condition and takes value 0 for those in the control condition. The Kling-Liebman-Katz index, defined in the text, is constructed from all 6 tested outcomes including those not reported in the table. Panel A controls for the respondent's own belief about whether women should be able to work outside the home, how many others they thought supported women working outside the home as well as their confidence in this guess. Panel B adds session fixed effects and socioeconomic controls for age, education, employment status (of both respondent and wife), number of children and the share of people in the session room the respondent reported knowing and having mutual friends with. Robust standard errors reported in parenthesis. Reported $p$-values for wild bootstrap and permutation tests derived from running 1000 replications in each case. Wild bootstrap clustered at the (main-experiment) session level.

Table B7: Perceptions of Labor Demand (Main Experiment)

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :--- | :---: | :---: | :---: | :---: |
| Treatment $(\beta)$ | 2.264 | 2.361 | 2.151 | 2.963 |
|  | $(2.527)$ | $(2.501)$ | $(2.219)$ | $(2.229)$ |
| Constant | 54.22 | 56.85 | 17.87 | 22.97 |
|  | $(1.759)$ | $(4.515)$ | $(5.911)$ | $(10.59)$ |
| Inference Robustness ( $\beta$ ) |  |  |  |  |
| $\quad p$-value: Robust S.E. | 0.371 | 0.346 | 0.333 | 0.185 |
| $\quad p$-value: Wild Bootstrap | 0.194 | 0.178 | 0.293 | 0.129 |
| $\quad p$-value: Permutation Test | 0.389 | 0.366 | 0.313 | 0.190 |
| Session F.E. |  | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Baseline beliefs |  |  | $\checkmark$ | $\checkmark$ |
| Controls |  |  |  | $\checkmark$ |
| $N$ |  | 486 | 486 | 486 |
| $R^{2}$ | 0.00165 | 0.0795 | 0.317 | 0.377 |

Notes: Column (1) reports estimates from an OLS regression of estimated labor demand on a treatment dummy. Column (2) includes session fixed effects. Column (3) controls for the respondents' own opinions and perceptions of others' beliefs at baseline regarding the labor market statements described in the main experiment. Column (4) adds socioeconomic controls for age, education, employment status (of both respondent and wife), number of children and the share of people in the session room the respondent reported knowing and having mutual friends with. Robust standard errors reported in parenthesis. Reported $p$-values for wild bootstrap and permutation tests derived from running 1000 replications in each case. Wild bootstrap clustered at the session level.

Table B8: Perceptions of Labor Demand and Job-Matching Service Sign-up (Main Experiment)

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :--- | :---: | :---: | :---: | :---: |
| Expected Labor Demand $(\beta)$ | 0.0506 | 0.0443 | 0.0192 | 0.0248 |
|  | $(0.0286)$ | $(0.0301)$ | $(0.0316)$ | $(0.0331)$ |
| Constant | 0.248 | 0.241 | -0.0847 | -0.0375 |
|  | $(0.0282)$ | $(0.111)$ | $(0.151)$ | $(0.294)$ |
| Inference Robustness $(\beta)$ |  |  |  |  |
| $\quad p$-value: Robust S.E. | 0.079 | 0.142 | 0.544 | 0.455 |
| $\quad$ p-value: Wild Bootstrap | 0.061 | 0.122 | 0.374 | 0.245 |
| $\quad p$-value: Permutation Test | 0.072 | 0.154 | 0.540 | 0.456 |
| Session F.E. |  | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Baseline beliefs |  |  | $\checkmark$ | $\checkmark$ |
| Controls |  |  |  | $\checkmark$ |
| $N$ |  |  | 236 | 236 |
| $R^{2}$ | 0.0129 | 0.0773 | 0.108 | 0.147 |

Notes: Control group only. Column (1) reports estimates from an OLS regression of an indicator for whether the respondent signed their wife up for the job-matching service on estimated labor demand (standardized to mean 0 and s.d. 1) and a treatment dummy. Column (2) includes session fixed effects. Column (3) controls for the respondents' own opinions and perceptions of others' beliefs at baseline regarding the labor market statements described in the main experiment. Column (4) adds socioeconomic controls for age, education, employment status (of both respondent and wife), number of children and the share of people in the session room the respondent reported knowing and having mutual friends with. Robust standard errors reported in parenthesis. Reported $p$-values for wild bootstrap and permutation tests derived from running 1000 replications in each case. Wild bootstrap clustered at the session level.

Table B9: Sample Summary Statistics (National Survey)

|  | All | Control | Treatment |
| :--- | :---: | :---: | :---: |
| N | 1460 | 728 | 732 |
| Age | 28.62 | 28.63 | 28.60 |
|  | $(4.35)$ | $(4.35)$ | $(4.36)$ |
| Number of Children | 2.94 | 2.95 | 2.93 |
|  | $(1.20)$ | $(1.18)$ | $(1.22)$ |
| College Degree (\%) | 59.52 | 58.65 | 60.38 |
| Employed (\%) | 79.66 | 78.98 | 80.33 |
| Wife Employed (\%) | 42.60 | 43.41 | 41.80 |
| Wife Employed Outside of Home (\%) | 4.32 | 3.98 | 4.64 |

Notes: Summary statistics of respondent characteristics in the online survey. In the control group, participants are presented with a list of statements or policy positions. Participants in the treatment group are presented with a list of statements identical to the control list with the single addition of the sensitive WWOH statement.

Table B10: Sample Summary Statistics
(Second National Online Survey)

|  | All | Randomization <br> Arm 1 | Randomization <br> Arm 2 |
| :--- | :---: | :---: | :---: |
| N | 703 | 353 | 350 |
| Age | 32.08 | 32.10 | 32.07 |
|  | $(6.02)$ | $(6.07)$ | $(5.97)$ |
| Number of Children | 2.08 | 2.10 | 2.06 |
|  | $(1.45)$ | $(1.48)$ | $(1.43)$ |
| College Degree (\%) | 75.11 | 76.77 | 73.43 |
| Employed (\%) | 93.17 | 94.05 | 92.29 |
| Wife Employed (\%) | 39.83 | 41.64 | 38.00 |
| Wife Employed (\%) Outside the Home | 8.11 | 6.80 | 9.43 |

Notes: Summary statistics of respondent characteristics in the second national online survey. In the survey, we randomize two versions of how the question was asked about opinions towards women working outside of home. Half of the sample gets the standard question (randomization arm 2) and half were asked (randomization arm 1): Which of the following two statements do you agree with? 1. In my opinion, women should be allowed to work outside of the home. 2. In my opinion, women should not be allowed to work outside of the home.

Table B11: Sample Summary Statistics (Recruitment Experiment)

|  | All | Control | Treatment |
| :--- | :---: | :---: | :---: |
| N | 291 | 144 | 147 |
| Age | 26.46 | 26.92 | 26.01 |
|  | $(6.52)$ | $(6.52)$ | $(6.52)$ |
| Number of Children | 0.83 | 0.83 | 0.82 |
|  | $(1.40)$ | $(1.35)$ | $(1.44)$ |
| Married (\%) | 35.74 | 36.11 | 35.37 |
| College Degree (\%) | 41.58 | 45.14 | 38.10 |
| Employed (\%) | 8.93 | 11.81 | 6.12 |

Notes: Summary statistics of respondent characteristics in the recruitment experiment. Participants in both treatment and control groups get information about the stance of the company with respect to female labor force participation in Saudi Arabia. The treatment group receives additional information on the level of support for WWOH by Saudi males.
III. Survey Scripts

## Main Experiment <br> ***SURVEY 1 BEGIN***

[Consent Form (all)]
If you have any additional questions please let the facilitator know now. After beginning the survey, please keep additional questions until the end of the session to minimize disruptions. I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and have received a copy of this consent form.

I consent
I do not consent <-\{cannot continue\}
Q1 Please enter the last three digits of your phone number: (This information will not be linked to any personally identifiable information)

Q2 Please fill in the following fields.
What is your age?
Q3 What is your marital status?
Single (1)
Married (2)
Widowed (3)
Divorced (4)
Q4 What is the highest education level you have achieved?
None (1)
Primary (2)
Secondary (3)
Middle (4)
Diploma (5)
Bachelor (6)
Masters (7)
Ph. D (8)
Other Post-Graduate (9)
Q5 Have you ever been employed?
Yes (1)
No (2)
Q6 Are you currently employed?
Yes (1)
No (2)
Q7 Is your wife currently employed?
Yes (1)
No (2)
Q8 What is your zipcode of residence?
don't know

Q9 How many children do you have?
(dropdown, 0-8+)
Q10 How many of the other participants in the room did you know before today's survey?
0
1-5
6-10
11-15
16-20
21-25
26-29
Q11 Based on your initial impressions, with how many of the other participants in the room would you guess you have a mutual friend?

0
1-5
6-10
11-15
16-20
21-25
26-29

Q12 We would like to ask you some questions related to employment and the Saudization of the labor market. If you are not sure about your answer, please answer to the best of your ability. All your answers are completely anonymous.

Q13 Do you agree with the following statement?
In my opinion, the current unemployment insurance system (Haafez) is good for the economy.
Yes (1)
No (2)
Q14 Do you agree with the following statement?
In my opinion, Saudi nationals should receive privileged access to job vacancies before expatriate workers.

Yes (1)
No (2)
Q15 On each of the following pages, you will be presented with a statement. First, you will be asked whether you personally agree with the statement. You will then be asked to guess how many of the other participants in the room agree with the statement. The participant who guesses most accurately across all the statements will receive a $\$ 20$ Amazon gift card.

Q16 Do you agree with the following statement? \{Looped statement\}
Yes (1)
No (2)
Q17 If you had to guess, how many people among the 29 other study participants in this room do you think agree with the same statement? \{Looped statement\}

0 (1)
1-2 (2)

```
3-4 (3)
5-6 (4)
7-8 (5)
9-10 (6)
11-12 (7)
13-14 (8)
15-16 (9)
17-18 (10)
19-20 (11)
21-22 (12)
23-24 (13)
25-26 (14)
27-28 (15)
29 (16)
```

Q18 How confident are you about your guess regarding the opinions of the other participants?
1 (1) <-Not at all confident
2 (2)
3 (3)
4 (4)
5 (5) <-Very confident
\{Looped statements:

1) In my opinion, the minimum wage for Saudis (SAR 3000) should be kept at its current level.
2) In my opinion, women should be allowed to work outside of the home.
3) In my opinion, a woman should have the right to work in semi-segregated environments.\}

Q19 We will determine the overall prize winner after tabulating the responses. If you would like to receive a $\$ 20$ Amazon gift card reward in case you are selected as the winner, please enter your email below so that we may email you the reward code after the survey concludes (the winner will be sent a reward code within 5 business days):
***SURVEY 1 END***
***SURVEY 2 BEGIN***
Q20 If the facilitator has announced the start of the second survey, please continue. If not, please WAIT for further instructions before continuing.

Q21 This second survey continues our questionnaire on employment and the Saudization of the labor market.

## TREATMENT

Q22 The charts on the following pages show the responses of the other participants in the room to the questions you just answered. Please carefully review all the information displayed before answering the question that follows. You may wish to position your device in landscape orientation for optimal display. Depending on your device, you may need to scroll to reach the bottom of the page where you will see the option to continue the survey.

Q23 Please read the following information about a software platform called
(Description of the job-matching service.)
provides an online platform and mobile app that connects Saudi women to job opportunities.
provides access to a large pool of job postings and to career fairs. You now have the opportunity to choose between two options:
A) Sign your wife up for free access to the premium version of the $\square$ platform and app.

OR
B) Receive a $\$ 5$ Amazon gift card
\{if A\}:
Q24 You have chosen to give your wife free access to the premium version of the platform and app. Please enter her contact information in the fields below. Your wife will be contacted directly by to sign up for the service.

Wife's Name (1)
Wife's Email (2)
Wife's Phone Number (3)
\{if B\}:
Q25 You have chosen to receive a $\$ 5$ Amazon gift card. Please enter your email below so that we may email you the reward code after the survey concludes (within 5 business days):

Email (1)
Q26 What percent of private sector firms do you think have semi-segregated environments?
(0-100) \%
Q27 Thank you for your participation. You will be invited to participate in a follow-up survey in the coming months.
***SURVEY 2 END***
-END-

## Follow-up Script

Hello,
Am I speaking with \{participant name\}?
\{if NO:\} -> What would be the best way to reach them?
\{record CONTACT/SCHEDULE info\}
Thank you for your time! \{-END CALL-\}
\{if YES, continue\}
My name is $\qquad$ and I am calling to follow up about a study you participated in at the about the Saudi labor market 3 months ago. This research is being conducted to understand the effect that new companies such as _ which provide job opportunities for Saudi women, are having on the labor market. I would like to ask you a few more questions about the employment of you and your wife to conclude our study.

Please keep in mind that your participation is voluntary. The information you provide will remain completely anonymous and you will not be identified by any of the answers you provide during this call or the answers provided during the previous study session. This conversation is NOT being recorded but notes will be taken to record your answers. All information disclosed during this survey will be kept confidential and stored in a secure location. I can supply you with contact information regarding this study upon request.

Do you have any questions before we get started?
\{Record CONSENT: YES or NO\}
\{If NO:\} Thank you for your time. \{-END CALL-\}
\{if YES, continue\}
Ok, let's begin.

1. Are you currently employed? \{YES/NO\}
2. Was your wife employed 3 months ago? \{YES/NO\}
\{if YES:\} -> Was she working at home or outside the home?
\{if OUTSIDE:\} -> Was this job outside the home more or less than 30 hours/week?
-> What was her occupation?
3. Is your wife currently employed? \{YES/NO\}
\{if YES:\} -> Is she working at home or outside the home?
\{if OUTSIDE:\} -> Is this job outside the home more or less than 30 hours/week?
-> What is her occupation?
4. Has your wife applied for a job in the last 3 months? \{YES/NO/UNCERTAIN\}
\{if YES:\} -> Is this for a job at home or outside the home?
\{if OUTSIDE:\} -> Is this job outside the home more or less than 30 hours/week?
5. Has your wife been interviewed for a job in the last 3 months? \{YES/NO/UNCERTAIN\}
\{if YES:\} -> Is this for a job at home or outside the home?
\{if OUTSIDE:\} -> Is this job outside the home more or less than 30 hours/week?
6. Does your wife have any job interviews currently scheduled? \{YES/NO/UNCERTAIN\}
\{if YES:\} -> Is this for a job at home or outside the home?
\{if OUTSIDE:\} -> Is this job outside the home more or less than 30 hours/week?
7. What district in Riyadh do you live in?
8. If given the opportunity, would you sign up your wife for driving lessons?

For each statement, please tell me how many people you think would agree with the statement if we asked 30 randomly selected people from your neighborhood.

If we asked 30 randomly selected residents of your neighborhood if they agreed with the following statement, how many do you think would agree?
9. In my opinion, the minimum wage for Saudis (SAR 3000) should be kept at its current level.

What about the following statement?
\{Looped statements:\}
10. In my opinion, women should be allowed to work outside of the home.
11. In my opinion, a woman should have the right to work in semi-segregated environments.

Thank you-this concludes the questions in this follow-up survey. Thank you very much for your participation. Do you have any further questions?
\{if participant has further questions:\} -> I would be glad to provide you with further information describing the purpose of this study and the way the information you have provided will be used. Would you like me to send you a detailed information sheet by email?
\{if YES:\} -> What is your email address? \{Record EMAIL\}
\{prompt for additional notes\}
-END-

## Online Survey

[Consent Form (all)]
I consent (1)
I do not consent (2) <-\{cannot continue\}
Q1 Please fill in the following fields.
What is your age? (1)
Q2 What is your marital status?
Single (1)
Married (2)
Widowed (3)
Divorced (4)
Q3 What is the highest education level you have achieved?
None (1)
Primary (2)
Secondary (3)
Middle (4)
Diploma (5)
Bachelor (6)
Masters (7)
Ph. D (8)
Other Post-graduate (9)
Q4 Have you ever been employed?
Yes (1)
No (2)
Q5 Are you currently employed?
Yes (1)
No (2)
Q5.1 (if $Q 5==$ "Yes") Is this job at home or outside the home?
At home (1)
Outside the home (2)
Q5.2 (if Q5A == "Outside") Is this job outside the home more or less than 30 hours/week?

More than 30 hours/week (1)
Less than 30 hours/week (2)
Q6 Is your wife currently employed?
Yes (1)
No (2)
Q6. 1 (if Q5 == "Yes") Is this job at home or outside the home?
At home (1)
Outside the home (2)

Q6.2 (if Q5A == "Outside") Is this job outside the home more or less than 30 hours/week?

More than 30 hours/week (1)
Less than 30 hours/week (2)
Q7 What city do you live in?

1. Riyadh
2. Jeddah
3. Mecca
4. Medina
5. Al Ahsa
6. Ta'if
7. Dammam
8. Buraidah
9. Khobar
10. Tabuk
11. Qatif
12. Khamis Mushait
13. Ha'il
14. Hafar Al-Batin
15. Jubail
16. Al-Kharj
17. Abha
18. Najran
19. Yanbu
20.AI Qunfudhah
20. Other

Q8 What district do you live in within \{city\}?
$\qquad$ (1)

Q8.1 What is your monthly household income (SR)? 0-3,000 (1) 3,000-6,000 (2) 6,000-9,000 (3) 9,000-12,000 (4) 12,000-15,000 (5) 15,000-20,000 (6) 20,000-25,000 (7) 25,000-30,000 (8) 30,000-40,000 (9) 40,000-50,000 (10)
50,000-75,000 (11)
75,000-100,000 (12) 100,000-150,000 (13) $150,000+(14)$

Q9 How many children do you have? (dropdown, 0-8+)

We would like to ask you some questions related to employment and the Saudization of the labor market. If you are not sure about your answer, please answer to the best of your ability.

All your answers are completely anonymous.
Q10C In this question, you will be presented with three statements. Please read all three statements carefully and consider whether or not you agree with each statement. Then, please indicate the number of statements (from 0 to 3) that you agree with. Note that we are not interested in which statements you agree with, only how many.
\{in randomized order\}

1. In my opinion, the minimum wage for Saudis (SAR 3000) should be kept at its current level.
2. In my opinion, the current unemployment insurance system (Haafez) is good for the economy.
3. In my opinion, Saudi nationals should receive privileged access to job vacancies before expatriate workers.

How many of the statements above do you agree with?
0 (1)
1 (2)
2 (3)
3 (4)
On the following page, you will be presented with a single statement. First, you will be asked whether you personally agree with the statement. You will then be asked to guess how many of the other participants in the study agreed with the statement. The participant who guesses most accurately will receive a $\$ 50$ Amazon gift card.

Q11C Do you agree with the following statement?
In my opinion, women should be allowed to work outside of the home.
Yes (1)
No (2)
Q12C There are 1500 total participants in this study who are all married Saudi males. These participants have been recruited from different cities across Saudi Arabia to be a representative sample of all married males in Saudi Arabia aged 18-35. If you had to guess, what percentage of the other participants do you think reported agreeing with the same statement?
In my opinion, women should be allowed to work outside of the home.
0-100 \% (1)
Q13C How confident are you about your guess regarding the answers of the other participants?
1 (1) <-Not at all confident
2 (2)
3 (3)
4 (4)
5 (5) <-Very confident
Q14C We will determine the overall prize winner after tabulating the responses. If you would like to receive a $\$ 50$ Amazon gift card reward in case you are selected as the winner, please enter your email below so that we may email you the reward code after the survey concludes:
$\qquad$
(1)
------------------------------------------------TREATMENT
We would like to ask you some questions related to employment and the Saudization of the labor market. If you are not sure about your answer, please answer to the best of your ability.

All your answers are completely anonymous.
Q10T In this question, you will be presented with four statements. Please read all four statements carefully and consider whether or not you agree with each statement. Then, please indicate the number of statements (from 0 to 4) that you agree with. Note that we are not interested in which statements you agree with, only how many.
\{in randomized order\}

1. In my opinion, the minimum wage for Saudis (SAR 3000) should be kept at its current level.
2. In my opinion, the current unemployment insurance system (Haafez) is good for the economy.
3. In my opinion, Saudi nationals should receive privileged access to job vacancies before expatriate workers.
4. In my opinion, women should be allowed to work outside of the home.

How many of the statements above do you agree with?
0 (1)
1 (2)
2 (3)
3 (4)
4 (5)
Q12T There are 1500 total participants in this study who are all married Saudi males. These participants have been recruited from different cities across Saudi Arabia to be a representative sample of all married males in Saudi Arabia aged 18-35. If you had to guess, what percentage of the other participants do you think would privately agree with the same statement?
In my opinion, women should be allowed to work outside of the home.
0-100 \% (1)
Q13T How confident are you about your guess regarding the private opinions of the other participants?

1 (1) <-Not at all confident
2 (2)
3 (3)
4 (4)
5 (5) <-Very confident
-END-

## Second National Online Survey

Q1 Please review the following consent form before proceeding with this survey.
[ Consent for Participation in a Research Study]

Please indicate, in the box below, that you are at least 18 years old, have read and understand this consent form, and you agree to participate in this online research study

I agree (1)
I do not agree (2)

Q2 What is your gender?
Male (1)
Female (2)

Q3 What is your nationality?
Saudi (1)
Non-Saudi (2)

Q4 What is your age?

Q5 What is your marital status?
Single (1)
Married (2)
Widowed (3)
Divorced (4)
Q6
What is the highest education level you have achieved?
Read and write (8)
Elementary (2)
Intermediate (9)
Secondary (3)
College (4)
B.Sc. or B.A. degree (10)

Master degree (13)
Doctorate (14)

Q7 Have you ever been employed?
Yes (1)
No (2)

Q8 Are you currently employed?
Yes (1)
No (2)

Display This Question:

[^2]Q9 Is this job at home or outside the home?
At home (1)
Outside the home (2)

## Display This Question: <br> If Is this job at home or outside the home? = Outside the home

Q10 Is this job outside the home more or less than 30 hours/week?
More than 30 hours/week (1)
Less than 30 hours/week (2)

Q11
We will ask you a few questions about your household.
Is your wife currently employed?
Yes (1)
No (2)

## Display This Question: <br> If We will ask you a few questions about your household. Is your wife currently employed? = Yes

Q12 Is this job at home or outside the home?
At home (1)
Outside the home (2)

## Display This Question: <br> If Is this job at home or outside the home? = Outside the home

Q13 Is this job outside the home more or less than 30 hours/week?
More than 30 hours/week (1)
Less than 30 hours/week (2)

Q14 How many children do you have?
0 (1)
1 (2)
2 (3)
3 (4)
4 (5)
5 (6)
6 (7)
7 (8)
8 or more (9)

Q15 In which city do you live?
Riyadh (1)
Jeddah (2)
Dammam (3)
Other (4)

Q16 In which neighborhood do you live?
$\qquad$
Q17 Which of the following two statements do you agree with?

1. In my opinion, women should be allowed to work outside of the home.
2. In my opinion, women should not be allowed to work outside of the home.

I agree with statement 1 (1)
I agree with statement 2 (2)

Q18 Out of 100 randomly surveyed married Saudi men aged 18 to 45 in your city, how many would you guess agreed with the statement:
"In my opinion, women should be allowed to work outside of the home. "

## Randomization Arm 2

Q19 Do you agree with the following statement?

In my opinion, women should be allowed to work outside of the home.
I agree (1)
I do not agree (2)

Q20 Out of 100 randomly surveyed married Saudi men aged 18 to 45 in your city, how many would you guess agreed with the statement:
"In my opinion, women should be allowed to work outside of the home. "
$\qquad$

Q21 Think of the topic on whether women should be allowed to work outside of the home.

Is this a topic that is:
Very often discussed among your male friends and relatives (1)
Often discussed among your male friends and relatives (2)
Sometimes discussed among your male friends and relatives (3)
Rarely discussed among your male friends and relatives (6)
Very rarely discussed among your male friends and relatives (7)

## Women Recruitment Survey I

## General Observations and Surveyor Information

The following questions are meant to be answered by the caller.
What phone number are you calling?

Please select the option that contains the last digit of the phone number you are calling. Make sure that this is the same as the number you stated above.
$0,2,4,6$, or 8
$1,3,5,7$, or 9
What is your (caller's) name?

What is your (caller's) gender?
Male
Female

## Surveyor Introduction

Hello. My name is $X$, and I work for $\square$, a survey company based in $\square$. I am calling regarding a short-term job opportunity, paying between 25 and 30 Saudi Riyals per hour. Am I speaking with [respondent name here]?

If so: Do you have a few minutes to answer a few quick questions so that we can verify your eligibility for this opportunity?
If not: Is [respondent name] available, and if so, could you please put her on the phone?
Did the respondent answer the call and remain on the phone?

Yes
No
Other

## Personal Information

What is your name?

## Demographics

What is your age?

What is the highest level of schooling you have completed or the highest degree you have received?
Primary

Middle
Secondary
Vocational Training
4-year Bachelor's
6-year Bachelor's
Master's
Doctorate
Professional Degree
What is your marital status?

Single
Married

Have you ever worked for our company administering surveys before?

Yes
No

Have you ever worked for another company administering surveys before?

Yes
No

## Previous Work Experience

Are you currently employed?
Yes
No

What is your occupation?

Do you work from home or outside of the home?
From home
Outside of home

How many hours a week do you work?

Have you ever worked outside of the home?
Yes
No

How many children do you have?
0
1
2
3
4
5
6

7
8 or more

Our company is looking to hire surveyors for a part-time job opportunity. As a surveyor, you would work from home and make phone calls to collect surveys. The surveys are a 5 -minute opinion survey of Saudi males about the Saudi entertainment industry. The pay will be between 25 and 30 Saudi Riyals per hour.

Would you be interested in working from home for this part-time job opportunity?
Yes
No

Thank you for your interest. We will contact you within the next week to follow-up with more information about the position.

## End Call

Surveyor: Please thank the interviewee and confirm this is the end of the survey. Hang up with the interviewee.

## Final notes

The following question is meant to be answered by the caller.
Did the woman talk with anyone else at any point during the call?
Yes
No

Please include any notes from the call: Did the woman speak with another person in the household? If so, what did they discuss?

If the woman spoke with anyone else during the call, could you tell if it was one of the following?
Husband
Child
Other

Please include any notes from the call: Did the woman have any questions? If so, about what?

Any other notes about the call?
-END-

## Women Recruitment Survey II

## General Observations and Surveyor Information

The following questions are meant to be answered by the caller.

What phone number are you calling?

Please select the option that contains the last digit of the phone number you are calling. Make sure that this is the same as the number you stated above.
$0,2,4,6$, or 8
$1,3,5,7$, or 9
What is your (caller's) name?

What is your (caller's) gender?

## Male

Female

## Surveyor Introduction

Hello. My name is X, and I work for , a survey company based in . I am calling regarding a short-term job opportunity, paying between 25 and 30 Saudi Riyals per hour. Am I speaking with [respondent name here]?

If so: Last week you indicated interest in working from home. Do have a few minutes for a follow-up about the positions available.

If not: Is [respondent name] available, and if so, could you please put her on the phone? Did the respondent answer the call and remain on the phone?

Yes
No

## Treatment

Before I describe the position I would like to tell you that our company supports Vision 2030, which encourages women to participate in the Saudi labor force. We would like to share some information about a recent study that may be of interest to you. In a recent survey of a national sample of about 1,500 married Saudi men aged 18-35, 82\% agreed with the statement "In my opinion, women should be allowed to work outside of the home." This means that the vast majority of young married Saudi men support women working outside of the home.
\#EditSection, TimingExplanation\#
First Click: 0 \#EditSection, TimingSeconds\#
Last Click: 0 \#EditSection, TimingSeconds\#
Page Submit: 0 \#EditSection, TimingSeconds\#
Click Count: 0 \#EditSection, TimingClicks\#

## Control

Before I describe the position I would like to tell you that our company supports Vision 2030, which encourages women to participate in the Saudi labor force.

## \#EditSection, TimingExplanation\#

First Click: 0 \#EditSection, TimingSeconds\#
Last Click: 0 \#EditSection, TimingSeconds\#
Page Submit: 0 \#EditSection, TimingSeconds\#
Click Count: 0 \#EditSection, TimingClicks\#

## Second Job Offer Decision

For the part-time job, two surveyor positions are available. As a surveyor, you would collect 10 surveys/day. The surveys are a 5 -minute opinion survey of Saudi males about the Saudi entertainment industry. In the first position, you would work in a mall and speak with people face-to-face, and your salary would be 30 Saudi Riyals per hour/240 per day. In the second position, you would work from home and call people on the phone, and your salary would be 25 Saudi Riyals per hour/200 per day. All other direct expenses will be covered by _._. If you're selected for the job, we'll give you a call within the next few days.

In which of these two options would you be interested?
Working in a mall at a salary of 30 Saudi Riyals per hour/240 per day Working from home at a salary of 25 Saudi Riyals per hour/200 per day

## Confirm Work

Thank you so much for your interest. We will follow up with you in the next few days.

## End Call

Surveyor: Please thank the interviewee and confirm this is the end of the survey. Hang up with the interviewee.

## Final notes

The following question is meant to be answered by the caller.

Did the woman talk with anyone else at any point during the call?

Yes
No
Please include any notes from the call: Did the woman speak with another person in the household? If so, what did they discuss?

If the woman spoke with anyone else during the call, could you tell if it was one of the following?
Husband
Child
Other
Please include any notes from the call: Did the woman have any questions? If so, about what?

Any other notes about the call?
-END-


[^0]:    ${ }^{1}$ Agents with $c_{i}=z_{A}$ are indifferent; we will ignore this population of measure 0.

[^1]:    Notes: The distribution of wedges in perceptions about the beliefs of others regarding whether women should be able to work in semi-segregated environments. Wedges calculated as (the respondent's guess about the \% of session participants agreeing with the statement) - (the true $\%$ of session participants agreeing with the statement).

[^2]:    If Are you currently employed? = Yes

