

Online Appendix

for

Inefficient Hiring in Entry-Level Labor Markets

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1 Appendix A: Proposition Proofs

1.1 Proof of Proposition 1

Any perfect Bayesian equilibrium must have a single-crossing property. That is, if a worker with expected ability \hat{a}_i^1 is hired, all workers with expected abilities $\hat{a}_i^2 > \hat{a}_i^1$ will also be hired. All workers weakly prefer working at any non-negative wage to their outside options and, at the same wage, firms strictly prefer to hire workers with higher expected abilities. Similarly, if a firm with fixed cost c_j^1 hires a worker, all firms with $c_j^2 < c_j^1$ also hire a worker.

Some agents accept their outside options: every firm prefers its outside option of zero to hiring a worker with negative expected ability at a non-negative wage. However, not all agents take their outside options: firms with c_j arbitrarily close to zero and workers with arbitrarily high expected abilities prefer employment relationships with each other to their outside options. Thus, there exists thresholds \hat{a}_w and c_f such that only workers with $\hat{a}_i \geq \hat{a}_w$ and firms with $c_j \leq c_f$ are in employment relationships. These inequalities are weak because of the assumption that indifferent agents enter the market.

Market wages must equal $w_{ij} = \hat{a}_i - b$ for some b . If $\hat{a}_i - w_{ij}$ were not constant for all hired workers, for some $\varepsilon > 0$, there would exist a hiring firm that would benefit by offering a wage of $w_{ij} + \varepsilon$ to a worker employed by another firm at a wage of w_{ij} . Because the marginal firm and worker must earn zero profit and wages, $c_f = b = \hat{a}_w \equiv \bar{c}$. This \bar{c} exists such that the market clears: as c increases on $[0, \alpha)$, the mass of firms with $c_j \leq c$ increases monotonically from 0 to 1, while the mass of workers with $\hat{a}_i \geq c$ decreases monotonically to 0.

There are no profitable deviations from this equilibrium. Hiring firms earn expected profit $\bar{c} - c_j$ from hiring any worker with $\hat{a}_i \geq \bar{c}$, which weakly exceeds their outside option. Firms with $c_j > \bar{c}$ would earn negative profit from paying market wages. All firms would earn lower profit from hiring workers with $\hat{a}_i < \bar{c}$ at non-negative wages. No workers with $\hat{a}_i \geq \bar{c}$ strictly prefer their outside option to market work. Veteran workers' wages weakly exceed their outside options. If novices work, they earn $\hat{a}_i - \bar{c}$ in their novice period which weakly exceeds their total maximum earnings over two periods if they take their outside options: $0 + \beta(\hat{a}_i - \bar{c})$.

1.2 Proof of Proposition 2

Let $l \in [0, 1]$ index workers and firms in each period such that only agents with $l \leq \bar{l}$ participate in the market. The utilitarian social planner maximizes

$$\sum_{t=0}^{\infty} \beta^t \int_0^{\bar{l}} (\hat{a}_l - c_l) dl$$

Here, $\bar{l} \in (0, 1)$. If $\bar{l} = 0$, having firms with arbitrarily low fixed costs hire novices with arbitrarily high expected abilities would increase social surplus. If $\bar{l} = 1$, having veterans with negative expected abilities take their outside options would increase expected surplus. There is a single-crossing property where if a firm with c_j^1 hires a worker, firms with $c_j^2 < c_j^1$ also hire a worker. Thus, there exists a c^* , such that all firms with $c_j \leq c^*$ and only those firms hire workers. (This relies on the assumption that if entering the market and taking their outside options generate equal social surplus, agents enter the market.)

The current-period expected social surplus from hiring the additional worker i is $\hat{a}_i - c^*$. Veterans will be hired if and only if $\hat{a}_{i1} \geq c^*$. The social planner will employ novices if and only if

$$\underbrace{(\hat{a}_{i0} - c^*)}_{\text{Novice-Period Surplus}} + \underbrace{\beta \Pr(\hat{a}_{i1H} \geq c^*) \times E[\hat{a}_{i1H} - c^* | \hat{a}_{i1H} \geq c^*]}_{\text{Veteran-Period Surplus}} \geq 0. \quad (1)$$

The social planner employs all novices with $\hat{a}_{i0} \geq c^*$. (Equation (1) holds for these workers.) If unemployed, these workers generate a maximum surplus of $0 + \beta(\hat{a}_{i0} - c^*)$ over their lives, which is less than the novice-period surplus generated from hiring them: $\hat{a}_{i0} - c^*$. If novices with $\hat{a}_{i0} < c^*$ are unemployed, they will have $\hat{a}_{i1} = \hat{a}_{i0} < c^*$ and be unemployed as veterans, generating zero social surplus over their lives. If employed as novices, the left-hand side of Equation (1) gives the lifetime surplus produced: they will be hired as veterans with probability $\Pr(\hat{a}_{i1H} \geq c^*)$, in which case, they will generate expected surplus $E[\hat{a}_{i1H} - c^* | \hat{a}_{i1H} \geq c^*]$.

A c^* exists that clears the market: as c increases on $[0, \infty)$, the mass of firms with $c_j \leq c$

increases monotonically from 0 to 1 while the mass of veterans with $\hat{a}_{i1} \geq c$ and the mass of novices for whom Equation (1) holds decrease monotonically to 0.

It must be that $c^* > \bar{c}$. For any hiring threshold c , more novices and veterans are hired in the social planner's solution than in the market equilibrium. (The social planner's solution employs some novices with $\hat{a}_{i0} < c$, which leads to more veterans with $\hat{a}_{i1} \geq c$.) Thus, if $c^* \leq \bar{c}$, the social planner's solution would have more employed workers than hiring firms. The social planner's solution must employ more novices than the market equilibrium. If it did not, it would employ fewer veterans than the market equilibrium. Both the social planner's solution and the market equilibrium hire novices with $\hat{a}_{i0} \geq c^*$. A higher fraction of these workers will be hired as veterans in the market equilibrium, since $c^* > \bar{c}$. The remaining novices hired by the market have $\hat{a}_{i0} \geq \bar{c}$, so they have more than a 50% chance of being rehired as veterans, while the remaining novices hired by the social planner have $\hat{a}_{i1} < c^*$, so they have less than a 50% chance of being rehired as veterans. The social planner's solution cannot hire fewer veterans and no more novices than the market equilibrium while having more hiring firms ($c^* > c$).

1.3 Proof of Proposition 3

Relative to remaining in the market equilibrium, being hired by Employer C does not affect the expected veteran-period employment outcomes of novices with $\hat{a}_{i0} \geq \bar{c}$. These workers will be hired and receive an output signal with the same distribution whether Employer C hires them or they remain in the market. In contrast, if not hired by Employer C, novices with $\hat{a}_{i0} < \bar{c}$ will not be hired. Thus, they will have $\hat{a}_{i1} = \hat{a}_{i0} < \bar{c}$ and will be unemployed with no earnings and with reservation wages equal to their outside option of zero in their veteran periods. However, if hired by Employer C, some will receive sufficiently high output signals that their veteran-period expected abilities will exceed \bar{c} . They will be employed in their veteran periods with positive earnings and reservation wages.

Now, I consider the effect of being hired by Employer D relative to Employer C. The market uses Bayesian updating to determine its expectation of workers' abilities. The market's expectations of worker i 's ability if she is hired by Employer C (\hat{a}_{i1C}) and Employer D (\hat{a}_{i1D}), respectively, are:

$$\begin{aligned}\hat{a}_{i1C} &= \frac{\sigma_M^2 \hat{a}_{i0} + \sigma_{ai}^2 \hat{y}_{iM}}{\sigma_M^2 + \sigma_{ai}^2} \\ \hat{a}_{i1D} &= \frac{\sigma_D^2 \hat{a}_{i0} + \sigma_{ai}^2 \hat{y}_{iD}}{\sigma_D^2 + \sigma_{ai}^2}\end{aligned}$$

The terms \hat{y}_{iM} and \hat{y}_{iD} can be rewritten as

$$\begin{aligned}\hat{y}_{iM} &= a_i + \varepsilon_{iM} = (\hat{a}_{i0} - \varepsilon_{ia}) + \varepsilon_{iM} \\ \hat{y}_{iD} &= a_i + \varepsilon_{iD} = (\hat{a}_{i0} - \varepsilon_{ia}) + \varepsilon_{iD}\end{aligned}$$

Substituting these expressions into the above equations gives

$$\begin{aligned}\hat{a}_{i1C} &= \frac{\sigma_M^2 \hat{a}_{i0} + \sigma_{ai}^2 (\hat{a}_{i0} - \varepsilon_{ia} + \varepsilon_{iM})}{\sigma_M^2 + \sigma_{ai}^2} \\ \hat{a}_{i1C} &= \hat{a}_{i0} + \frac{\sigma_{ai}^2 (-\varepsilon_{ia} + \varepsilon_{iM})}{\sigma_M^2 + \sigma_{ai}^2} \\ \hat{a}_{i1C} &\sim N\left(\hat{a}_{i0}, \frac{\sigma_{ai}^4}{\sigma_M^2 + \sigma_{ai}^2}\right) \\ \hat{a}_{i1D} &= \frac{\sigma_D^2 \hat{a}_{i0} + \sigma_{ai}^2 (\hat{a}_{i0} - \varepsilon_{ia} + \varepsilon_{iD})}{\sigma_D^2 + \sigma_{ai}^2} \\ \hat{a}_{i1D} &= \hat{a}_{i0} + \frac{\sigma_{ai}^2 (-\varepsilon_{ia} + \varepsilon_{iD})}{\sigma_D^2 + \sigma_{ai}^2} \\ \hat{a}_{i1D} &\sim N\left(\hat{a}_{i0}, \frac{\sigma_{ai}^4}{\sigma_D^2 + \sigma_{ai}^2}\right)\end{aligned}$$

Since $\sigma_D^2 < \sigma_M^2$, the distribution of \hat{a}_{i1D} is a mean-preserving spread of the distribution of \hat{a}_{i1C} . Worker's expected veteran-period earnings and reservation wages are $E[\max(\hat{a}_{i1} - \bar{c}, 0)]$, a convex function of \hat{a}_{i1} . Thus, by Jensen's inequality, $E[\max(\hat{a}_{i1D} - \bar{c}, 0)] > E[\max(\hat{a}_{i1C} - \bar{c}, 0)]$: being hired by Employer D relative to Employer C strictly increases workers' expected earnings and reservation wages.

A worker is employed in her veteran period with probability $\Pr[\hat{a}_{i1} \geq \bar{c} | \hat{a}_{i0}]$. The probabilities that a worker will be employed in her veteran period after being employed by Employers C and D, respectively are

$$\begin{aligned}\Pr[\hat{a}_{i1C} \geq \bar{c} | \hat{a}_{i0}] &= \Phi\left(\frac{(\hat{a}_{i0} - \bar{c}) \sqrt{\sigma_M^2 + \sigma_{ai}^2}}{\sigma_{ai}^2}\right) \\ \Pr[\hat{a}_{i1D} \geq \bar{c} | \hat{a}_{i0}] &= \Phi\left(\frac{(\hat{a}_{i0} - \bar{c}) \sqrt{\sigma_D^2 + \sigma_{ai}^2}}{\sigma_{ai}^2}\right)\end{aligned}\tag{2}$$

where Φ is the standard normal cumulative distribution function. Since $\sigma_D^2 < \sigma_M^2$, a worker with $\hat{a}_{i0} < \bar{c}$ has a higher probability of veteran-period employment after being hired by Employer D, while a worker with $\hat{a}_{i0} > \bar{c}$ has a higher probability of veteran-period employment after being hired by Employer C.

1.4 Proposition 5

Proposition 1 *Conditional on novice expected ability, \hat{a}_{i0} , the effect of being hired by Employer C (relative to remaining in the market equilibrium) on expected veteran-period employment, earnings, and reservation wages is weakly increasing in the market's initial uncertainty about the worker's ability, σ_{ai}^2 . The effect is strictly increasing in σ_{ai}^2 for workers with $\hat{a}_{i0} < \bar{c}$. However, conditional on \hat{a}_{i0} , the effect of being hired by Employer D (relative to being hired by Employer C) on expected veteran-period employment, earnings, and reservation wages is not monotonic in σ_{ai}^2 .*

Proof. First, I consider the effect of being hired by Employer C relative to remaining in the market equilibrium. Being hired by Employer C has no effect on expected employment outcomes for workers with $\hat{a}_{i0} \geq \bar{c}$. Thus, all that remains to prove is that the effect of being hired by Employer C is strictly increasing in σ_{ai}^2 for workers with $\hat{a}_{i0} < \bar{c}$. The probability that a worker with $\hat{a}_{i0} < \bar{c}$ who was hired by Employer C is hired in her veteran period is

$$\begin{aligned} \Pr(\hat{a}_{i1C} \geq \bar{c}) &= \Pr(\hat{y}_{iM} > \hat{a}_{i0}) \times \Pr(\hat{a}_{i1C} \geq \bar{c} | \hat{y}_{iM} > \hat{a}_{i0}) \\ &\quad + \Pr(\hat{y}_{iM} \leq \hat{a}_{i0}) \times \Pr(\hat{a}_{i1C} \geq \bar{c} | \hat{y}_{iM} \leq \hat{a}_{i0}) \\ \Pr(\hat{a}_{i1C} \geq \bar{c}) &= \Pr(\hat{y}_{iM} > \hat{a}_{i0}) \times \Pr(\hat{a}_{i1C} \geq \bar{c} | \hat{y}_{iM} > \hat{a}_{i0}) + 0. \end{aligned}$$

The second line follows because if $\hat{y}_{iM} \leq \hat{a}_{i0} < \bar{c}$, then $\hat{a}_{i1C} < \bar{c}$. When, $\hat{y}_{iM} > \hat{a}_{i0}$, \hat{a}_{i1C} is strictly increasing in σ_{ai}^2 . Since $\Pr(\hat{y}_{iM} > \hat{a}_{i0})$ does not depend on σ_{ai}^2 , $\Pr(\hat{a}_{i1C} \geq \bar{c})$ is strictly increasing in σ_{ai}^2 .

Similarly, workers' expected earnings and reservation wages are

$$E[1[\hat{a}_{i1C} \geq \bar{c}] \times (\hat{a}_{i1C} - \bar{c})]$$

where $1[\cdot]$ is an indicator for the expression being true. This can be rewritten as

$$\begin{aligned} &\Pr(\hat{y}_{iM} > \hat{a}_{i0}) \times E[1[\hat{a}_{i1C} \geq \bar{c}] \times (\hat{a}_{i1C} - \bar{c}) | \hat{y}_{iM} > \hat{a}_{i0}] \\ &\quad + \Pr(\hat{y}_{iM} \leq \hat{a}_{i0}) \times E[1[\hat{a}_{i1C} \geq \bar{c}] \times (\hat{a}_{i1C} - \bar{c}) | \hat{y}_{iM} \leq \hat{a}_{i0}] \\ &= \Pr(\hat{y}_{iM} > \hat{a}_{i0}) \times E[1[\hat{a}_{i1C} \geq \bar{c}] \times (\hat{a}_{i1C} - \bar{c}) | \hat{y}_{iM} > \hat{a}_{i0}] + 0. \end{aligned}$$

As above, the equality follows because when $\hat{y}_{iM} \leq \hat{a}_{i0}$, $\hat{a}_{i1C} < \bar{c}$. When $\hat{y}_{iM} > \hat{a}_{i0}$, \hat{a}_{i1C} is strictly increasing in σ_{ai}^2 . Since $\Pr(\hat{y}_{iM} > \hat{a}_{i0})$ does not depend on σ_{ai}^2 , the right-hand side of the equation is strictly increasing in σ_{ai}^2 .

Now I consider the effect of being hired by Employer D relative to being hired by Employer C on expected earnings and reservation wages. Given the lack of closed form solutions

to integrating the normal distribution, it is easiest to see the result by example. The distributions of \hat{a}_{i1C} and \hat{a}_{i1D} are given in Section 7.3. Let $\sigma_M^2 = 2$, $\sigma_D^2 = 1$, $\hat{a}_{i0} = 1$, and $\bar{c} = 2$. Then, expected earnings after being hired by Employers D and C are as follows for different levels of σ_{ai}^2 :

σ_{ai}^2	Earnings after D	Earnings after C	Earnings Difference: D - C
1	0.025	0.010	0.015
10	0.768	0.720	0.048
20	1.286	1.247	0.039

As σ_{ai}^2 increases from 1 to 10, the earnings and reservation wage benefit from being hired by Employer D relative to Employer C increases from 0.015 to 0.048, but it decreases to 0.039 as σ_{ai}^2 increases to 20. Thus, the earnings and reservation wage increase from being hired by Employer D relative to Employer C is not monotonic in σ_{ai}^2 .

Finally, I consider the effect of being hired by Employer D relative to Employer C on the expected probability of employment. Equation (2) provides the probabilities of employment after being hired by Employers C and D. For any \hat{a}_{i0}^1 , let \hat{a}_{i0}^2 be defined such that $\hat{a}_{i0}^1 - \bar{c} = \bar{c} - \hat{a}_{i0}^2$. Then, by the symmetry of the normal distribution

$$\Pr [\hat{a}_{i1D} \geq \bar{c} | \hat{a}_{i0}^1] - \Pr [\hat{a}_{i1C} \geq \bar{c} | \hat{a}_{i0}^1] = - (\Pr [\hat{a}_{i1D} \geq \bar{c} | \hat{a}_{i0}^2] - \Pr [\hat{a}_{i1C} \geq \bar{c} | \hat{a}_{i0}^2]).$$

Thus, if the effect of being hired by Employer D on employment is increasing in σ_{ai}^2 at $\hat{a}_{i0} = \hat{a}_{i0}^1$, then it is decreasing at $\hat{a}_{i0} = \hat{a}_{i0}^2$ and vice versa. ■

1.5 Proposition 6

Proposition 2 *Being hired by Employer D (relative to Employer C) weakly decreases workers' veteran-period probability of employment, earnings, and reservation wages when $\hat{y}_{iD} \leq \min(\hat{a}_{i0}, \hat{y}_{iM})$ and weakly increases these outcomes when $\hat{y}_{iD} \geq \max(\hat{a}_{i0}, \hat{y}_{iM})$.*

Proof. Since expected earnings, reservation wages, and employment probabilities are weakly increasing functions of \hat{a}_{i1} , all I need to show is that when $\hat{y}_{iD} \leq \min(\hat{a}_{i0}, \hat{y}_{iM})$, $\hat{a}_{i1D} \leq \hat{a}_{i1C}$ and when $\hat{y}_{iD} \geq \max(\hat{a}_{i0}, \hat{y}_{iM})$, $\hat{a}_{i1D} \geq \hat{a}_{i1C}$. The difference in expected abilities after having been hired by Employers D and C is:

$$\begin{aligned} \hat{a}_{i1D} - \hat{a}_{i1C} &= \frac{\sigma_D^2 \hat{a}_{i0} + \sigma_{ai}^2 \hat{y}_{iD}}{\sigma_D^2 + \sigma_{ai}^2} - \frac{\sigma_M^2 \hat{a}_{i0} + \sigma_{ai}^2 \hat{y}_{iM}}{\sigma_M^2 + \sigma_{ai}^2} \\ \hat{a}_{i1D} - \hat{a}_{i1C} &= \sigma_{ai}^2 \times \frac{[\sigma_D^2 (\hat{a}_{i0} - \hat{y}_{iM}) + \sigma_M^2 (\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2 (\hat{y}_{iD} - \hat{y}_{iM})]}{(\sigma_D^2 + \sigma_{ai}^2)(\sigma_M^2 + \sigma_{ai}^2)}. \end{aligned}$$

Since variances are always positive, the sign of this expression will be determined by the sign of the terms in brackets. If $\hat{y}_{iD} \leq \min(\hat{a}_{i0}, \hat{y}_{iM})$

$$\begin{aligned} & \sigma_D^2(\hat{a}_{i0} - \hat{y}_{iM}) + \sigma_M^2(\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2(\hat{y}_{iD} - \hat{y}_{iM}) \\ \leq & \sigma_D^2(\hat{a}_{i0} - \hat{y}_{iM}) + \sigma_M^2(\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2(\hat{y}_{iD} - \hat{y}_{iM}) + \sigma_D^2(\hat{y}_{iM} - \hat{y}_{iD}) \\ = & (\sigma_M^2 - \sigma_D^2)(\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2(\hat{y}_{iD} - \hat{y}_{iM}) \leq 0. \end{aligned}$$

So, $\hat{a}_{i1D} - \hat{a}_{iC} \leq 0$. If $\hat{y}_{iD} \geq \max(\hat{a}_{i0}, \hat{y}_{iM})$

$$\begin{aligned} & \sigma_D^2(\hat{a}_{i0} - \hat{y}_{iM}) + \sigma_M^2(\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2(\hat{y}_{iD} - \hat{y}_{iM}) \\ \geq & \sigma_D^2(\hat{a}_{i0} - \hat{y}_{iM}) + \sigma_M^2(\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2(\hat{y}_{iD} - \hat{y}_{iM}) + \sigma_D^2(\hat{y}_{iM} - \hat{y}_{iD}) \\ = & (\sigma_M^2 - \sigma_D^2)(\hat{y}_{iD} - \hat{a}_{i0}) + \sigma_{ai}^2(\hat{y}_{iD} - \hat{y}_{iM}) \geq 0. \end{aligned}$$

So, $\hat{a}_{i1D} - \hat{a}_{iC} \geq 0$. ■

1.6 Proposition 7

I extend the model as follows: before each period, a worker observes her period-specific outside option. With probability $\kappa > 0$, her outside option is $w_1 > 0$; with probability $1 - \kappa$, it is $w_0 = 0$. She then decides whether to accept her outside option. If she does, she exits the market. Otherwise, she remains in the market. The market clears after workers make their exit decisions. There is some randomness in hiring: after the market clears, with probability ε , each worker who has not received a job receives a wage offer of $\delta > 0$ such that $w_1 > \varepsilon\delta$. This randomness reflects the fact that some firms hire workers without reading workers' resumes. It affects the model only by ensuring that workers with outside option $w_0 = 0$ do not exit the market and thereby removes the multiplicity of equilibria.

Proposition 3 *Being hired by Employer C (relative to remaining in the market equilibrium) weakly increases all workers' probability of remaining in the market in their veteran periods and strictly increases this probability for workers with $\hat{a}_{i0} < \bar{c}$. Being hired by Employer D (relative to being hired by Employer C) increases this probability for workers with $\hat{a}_{i0} < w_1 + \bar{c}$ and decreases this probability for workers with $\hat{a}_{i0} > w_1 + \bar{c}$.*

Proof. No worker with $w_0 = 0$ will exit the market. If she exits, she receives 0, while if she remains in the market, her expected gain is at least $\varepsilon\delta$. Workers offered outside option w_1 will remain in the market if and only if their market earnings $(\hat{a}_{i1} - \bar{c})$ weakly exceed their outside option: $\hat{a}_{i1} \geq w_1 + \bar{c}$. Being hired by Employer C only affects novices with $\hat{a}_{i0} < \bar{c}$. If these workers were not hired by Employer C, they would have $\hat{a}_{i1} = \hat{a}_{i0} < \bar{c} < w_1 + \bar{c}$ and

would exit the market if offered outside option w_1 . On the other hand, if hired by Employer C, some would have sufficiently positive output signals that $\hat{a}_{i1C} > w_1 + \bar{c}$ and they would remain in the market even with outside option w_1 .

I now consider the effect of being hired by Employer D relative to Employer C. The probabilities that a worker remains in the market after being hired by Employers C and D are, respectively

$$\begin{aligned}\Pr[\hat{a}_{i1C} \geq w_1 + \bar{c} | \hat{a}_{i0}] &= \Phi\left(\frac{(\hat{a}_{i0} - w_1 - \bar{c})\sqrt{\sigma_M^2 + \sigma_{ai}^2}}{\sigma_{ai}^2}\right) \\ \Pr[\hat{a}_{i1D} \geq w_1 + \bar{c} | \hat{a}_{i0}] &= \Phi\left(\frac{(\hat{a}_{i0} - w_1 - \bar{c})\sqrt{\sigma_D^2 + \sigma_{ai}^2}}{\sigma_{ai}^2}\right)\end{aligned}$$

Since $\sigma_M^2 > \sigma_D^2$, when $\hat{a}_{i0} > w_1 + \bar{c}$, the probability of remaining in the market is higher after being hired by Employer C, while when $\hat{a}_{i0} < w_1 + \bar{c}$ the opposite is true. ■

1.7 Proof of Proposition 4

In the period after Employer C hires, there will be a larger mass of veterans with $\hat{a}_{i1} \geq \bar{c}$. Employer C directly hires novices with $\hat{a}_{i0} < \bar{c}$. Because Employer C removes novices with $\hat{a}_{i0} \geq \bar{c}$ from the market, the market hiring threshold adjusts from \bar{c} to $\tilde{c} < \bar{c}$ and novice workers with $\tilde{c} \leq \hat{a}_{i0} < \bar{c}$ are hired. Some of these novices will have $\hat{a}_{i1} \geq \bar{c}$. In the subsequent period, the mass of workers with $\hat{a}_i \geq \bar{c}$ will exceed the mass of firms with fixed costs $c_j \leq \bar{c}$, so the hiring threshold will increase to c' . Total employment increases with the mass of hiring firms. Wages fall, conditional on workers' expected abilities, from $w_{ij} = \hat{a}_i - \bar{c}$ to $w'_{ij} = \hat{a}_i - c'$.

To define the change in market surplus, I define $k \in [0, 1]$ which, in each period, indexes firms from lowest to highest hiring cost and workers from highest to lowest expected ability. That is, $k \equiv F_c(c_k) \equiv 1 - F_{\hat{a}}(\hat{a}_k)$ where $F_c(\cdot)$ and $F_{\hat{a}}(\cdot)$ are the cumulative distribution functions of c_j and \hat{a}_i , respectively. I define k_1 such that in the standard market equilibrium only workers and firms with $k \leq k_1$ are in employment relationships ($\hat{a}_{k_1} = c_{k_1} = \bar{c}$). In the period after Employer C hires, employment expands, so I define $k_2 > k_1$ such that agents with $k \leq k_2$ are in employment relationships in that period. Employer C's hiring also changes the distribution of \hat{a}_k to \hat{a}'_k . For all $c \geq \bar{c}$, Employer C increases the mass of workers with $\hat{a}_i \geq c$ in the subsequent period. That implies that $\hat{a}'_k > \hat{a}_k$ for all $k \leq k_1$.

The change in the subsequent period’s market surplus due to Employer C is

$$\begin{aligned}
& \underbrace{\int_0^{k_2} (\hat{a}'_k - c_k) dk}_{\text{After Employer C}} - \underbrace{\int_0^{k_1} (\hat{a}_k - c_k) dk}_{\text{No Employer C}} \\
= & \underbrace{\int_{k_1}^{k_2} (\hat{a}'_k - c_k) dk}_{\text{Increased Employment}} + \underbrace{\int_0^{k_1} (\hat{a}'_k - \hat{a}_k) dk}_{\text{Higher Expected Ability Workers Hired}} > 0.
\end{aligned}$$

Both terms in the second line are strictly positive. The first is the increased surplus due to employment expanding from k_1 to k_2 . It is positive because $\hat{a}'_k > c_k$ for all $k < k_2$. The second term is the increased surplus from higher expected ability workers displacing lower expected ability workers at firms with $k \leq k_1$. It is positive since $\hat{a}'_k > \hat{a}_k$ for $k \leq k_1$.

2 Appendix B

This appendix analyzes the treatments’ effects on workers’ application patterns. First, it assesses the treatments’ effects on the number and types of job applications workers sent. Then, it analyzes their effects on the probability that a given job application was successful.

Panel A of Appendix Table 6 displays the results of regressing (1) an indicator for sending at least one application in the two months after the experiment and (2) the number of applications sent in these two months on a dummy for being in either treatment group and an indicator for having prior oDesk experience. The table shows that the average treatment group worker was 24 percentage points more likely to send at least one application and sent 24 more applications than the average control group worker. Panel B displays the results of regressing the same dependent variables on a dummy for being in the detailed evaluation treatment. The regressions are limited to workers earning ratings of at least four in my treatment job. The results show that, relative to the coarse evaluation, the detailed evaluation did not affect the probability that a worker sent any application or the average number of applications she sent.

Appendix Table 7 analyzes the treatments’ effects on the types of jobs workers applied to. The first column of the table lists several objective features of jobs. Employers had to indicate whether each opening was an hourly (as opposed to fixed wage) job, its job category, and whether they had preferences for workers with certain credentials such as a given self-assessed English ability or level of oDesk feedback. I also observe the number of applicants to each job. Each characteristic is correlated with a job being more competitive. That is, when I consider the sample of applications experimental workers sent in the month before the experiment and separately regress a dummy for an application’s success on each

characteristic, controlling for worker fixed effects, each coefficient is statistically significantly negative.

Each cell in Panels A and B of Appendix Table 7 shows the results of a separate regression. Observations in these regressions are applications sent by experimental workers in the two months after the experiment. Panel A shows the results of regressing the indicated job characteristic on a dummy for being in either treatment group, controlling for a dummy for prior oDesk experience. It shows that being in a treatment group induced workers to apply to more-competitive jobs. Panel B shows the results of regressing the indicated job characteristic on a dummy for being in the detailed evaluation treatment, limiting the sample to applications sent by workers earning fours and fives in my treatment jobs. Similar to the results in the previous table, these regressions show that, relative to the coarse evaluation treatment, the detailed evaluation treatment did not change workers' application patterns.

Finally, Appendix Table 8 evaluates the treatments' effects on workers' application success. Panels A and B consider the same sample of applications as the corresponding panels in the previous table. The first three columns of Panel A display the results of regressing an indicator that an application was successful (multiplied by 100 for ease of viewing) on an indicator for being in one of the treatment groups and a dummy for having prior oDesk experience. The first column includes no worker or job controls. Because receiving a job affected both the set of workers who applied for jobs and the types of jobs workers applied to, Column 2 adds controls for the job characteristics listed in Appendix Table 7 and employer fixed effects; Column 3 additionally includes controls for worker characteristics and the wage the worker proposed for the job.¹ Once these job and worker characteristics are included, receiving a treatment job is estimated to have increased the probability that a given worker's job application was successful by approximately 10%. While this regression controls for the treatments' effects on selection into the regression on observable characteristics, this estimate will be biased if the treatments changed selection on unobservable characteristics as well. In particular, if the selection on unobservables biases the coefficient in the same direction as the selection on observables, the regression underestimates the true effect of obtaining a treatment job on application success.

The final three columns of the panel present the results of the same regressions, with the same successive controls, except that the indicator for receiving a treatment job is interacted with indicators for whether or not the worker had prior oDesk experience. The combined effect of receiving a coarse or detailed evaluation are slightly (though insignificantly) larger for inexperienced workers.

Panel B replicates Panel A, except instead of evaluating the effect of receiving any treat-

¹These are dummies for requesting a wage less than \$1 per hour, exactly \$1, between \$1 and \$2, exactly \$2, between \$2 and \$3, exactly \$3, and more than \$3.

ment job, it evaluates the effect of being in the detailed evaluation treatment (relative to the coarse evaluation treatment). The sample is limited to workers who obtained a rating of four or five in a treatment job. The results for the pooled sample of experienced and inexperienced workers suggest that the detailed evaluation had a positive effect on the probability that a worker obtained a given job she applied to, but it is very imprecise. This is similar to the positive, imprecise effect the detailed evaluation had on employment. When the effects are disaggregated by prior employment status, the regressions show that the detailed evaluation treatment had a large, significant effect on the probability that experienced workers obtained any given job, while there was no significant effect and the point estimate is actually negative for inexperienced workers. This is consistent with the results in Table 5 that show that, relative to the coarse evaluation treatment, the detailed evaluation treatment only improved the employment outcomes of experienced workers.

3 Appendix C

This appendix elaborates on some of the estimates and calculations in Section 5: Welfare Analysis.

3.1 Additional Notes on Table 6

The variable "% change experience" should not be interpreted literally as the actual percentage change in the number of workers with any oDesk experience because 23% of the treatment group already had oDesk experience. However, it provides a simple metric measuring the intensity with which the experiment affected each job category.

For the one week between the two waves of the experiment, I set the indicator for being in a week after the experiment to $\frac{608}{952}$, the fraction of hired workers in the first wave.

In approximately 2% of job category-weeks, there were no jobs created and in approximately 0.4% of job category-weeks, there were no hours worked. For these observations, I set log jobs created and log hours worked equal to zero (the log of 1). This assumption has very little impact on the results. Dropping any job category with any week with zero jobs created does not change any of the coefficients by more than 0.01, while imputing log jobs created as $\log(0.1)$ instead of $\log(1)$ does not change any of the coefficients by more than 0.002. For the hours regressions, neither dropping any job category with a week with zero hours worked nor imputing log hours worked as $\log(0.1)$ changes any of the coefficients by more than 0.001.

3.2 Average Wage in Employment Induced by the Experiment

To determine the average wage in jobs created after the experiment as a result of the experiment, I compare the wage distributions of treatment and control group workers after the experiment, adjusting for the stratification. I do this by categorizing jobs based on their wages: wages less than \$1, exactly \$1, \$1 to \$2, exactly \$2, \$2 to \$3, exactly \$3, and more than \$3 per hour. I calculate the number of additional hours the treatment group worked over the control group in each category, adjusting for the stratification. I calculate the average wage in each of these categories and use these to form a weighted average of the wage at which the extra hours were worked. Some of the new jobs obtained by treatment group workers represented aggregate employment increases while the rest replaced jobs that would have been held by lower expected-ability workers. I define the replacement jobs as the fraction $\frac{(1010-950)}{1010}$ of these new jobs with the lowest wages. This provides the average wages in the new jobs as \$2.11.

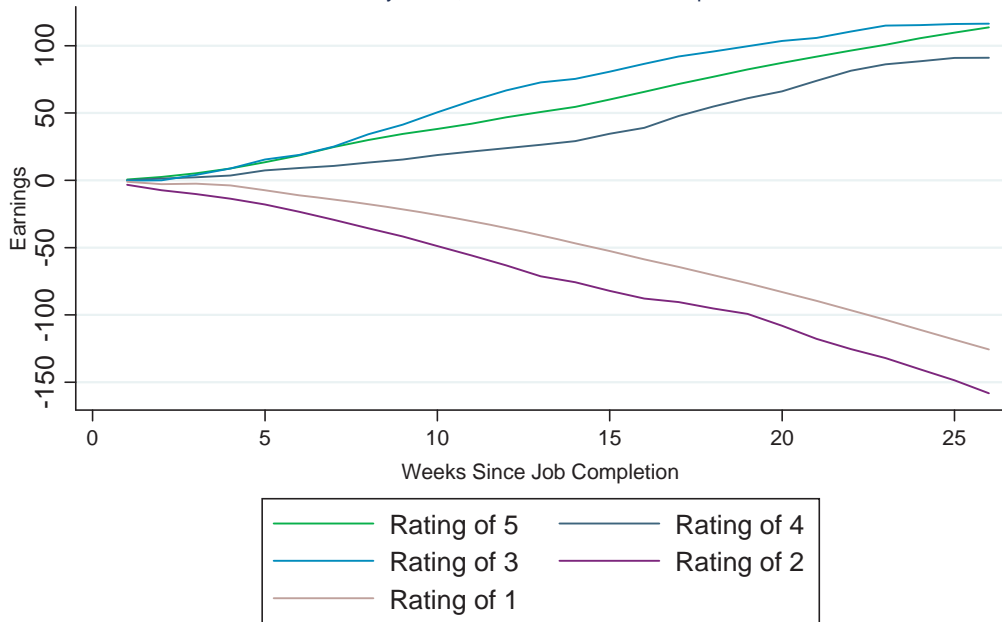
3.3 A More Conservative Opportunity Cost of Worker's Time

For the right-most column in Table 7, I calculate a more conservative opportunity cost of worker's time using the assumption that if a worker did not apply to the second job I invited her to, she would not have accepted any wage below her initial posted wage. I first categorize treatment group workers into five groups based on the wages they proposed for the initial treatment job: workers proposing wages below \$1, \$1 to \$2, exactly \$2, \$2 to \$3, and exactly \$3. Then, I calculate an average opportunity cost for each group using the fraction of workers that applied to the \$0.75, \$1, and \$2 jobs and their posted wages.

For example, 21.4% of the group proposing wages of \$3 was willing to accept a job with a \$0.75 wage, an additional 19.5% was willing to accept a job with a \$1 wage, and an additional 12.9% was willing to accept a job with a \$2 wage. I assume the remaining 46.2% was not willing to accept any wage below \$3. So, the average opportunity cost of workers offering wages of exactly \$3 was estimated to be $21.4\% \times \$0.75 + 19.5\% \times \$1 + 12.9\% \times \$2 + 46.2\% \times \$3 = \$2$.

I then calculate the average opportunity cost of the entire sample by creating a weighted average of the opportunity costs of each of the five categories. This average opportunity cost is \$1.49.

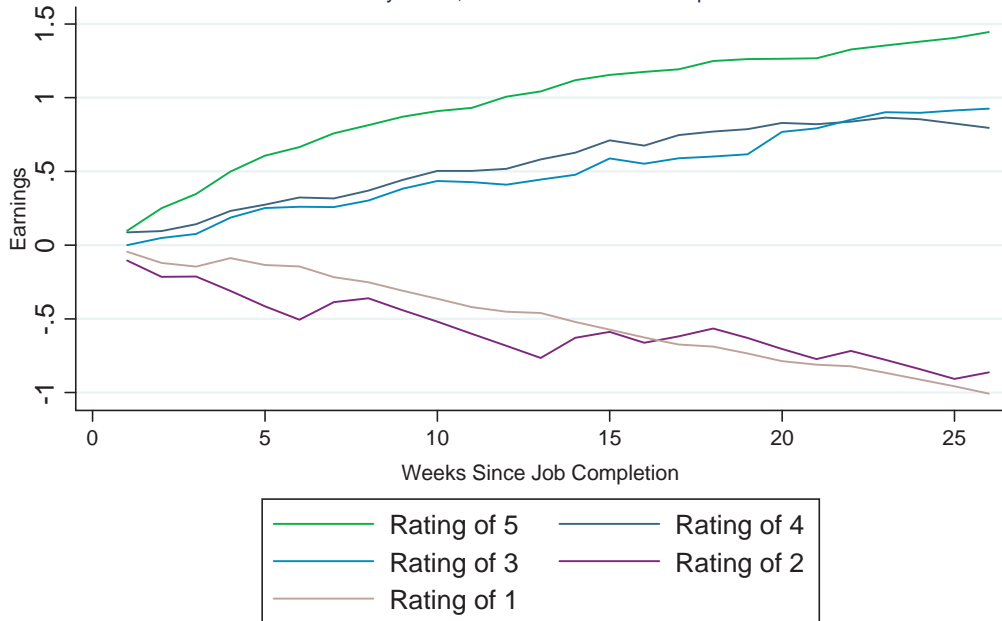
Appendix Figure 1a. Earnings by Rating in Treatment Job
By Week, Relative to Control Group



Note: Ratings are based on performance, not randomly assigned.

STATA™

Appendix Figure 1b. Total Jobs by Rating in Treatment Job
By Week, Relative to Control Group



Note: Ratings are based on performance, not randomly assigned.

STATA™

Appendix Table 1. Sample Selection

	No Previous Job	Any Previous Job	Total	Percentage
Contacted	7,136	2,826	9,962	100%
Applied	2,324	1,528	3,852	39%
Applied with Wage \leq \$3	2,298	1,469	3,767	38%
In Treatment Group	736	216	952	25% of experimental sample

Notes: The first row enumerates the workers invited to apply to the job while the second counts those who actually applied. The third row is the experimental sample: workers who applied for the job requesting a wage less than or equal to \$3. The final row counts the workers who were randomly selected to be in either treatment group. Unless otherwise indicated, percentages refer to the percentage of workers contacted.

Appendix Table 2. Regression Estimates of the Effects of the Treatments with Controls
 During the Two Months After the Experiment
 Pooled Sample of Experienced and Inexperienced Workers

	Total Jobs (1)	Any Job (2)	Hours Worked (3)	Posted Wage (4)	Earnings (5)
<u>A. Treatments Separately</u>					
Detailed Treatment	0.617** (0.127)	0.165** (0.022)	11.36** (3.42)	0.26** (0.08)	29.37** (8.74)
Coarse Treatment	0.342** (0.102)	0.126** (0.022)	7.54** (2.98)	0.15** (0.04)	9.80 (6.76)
Previous Job	0.321** (0.104)	0.199** (0.019)	20.22** (3.23)	0.20** (0.04)	40.78** (7.65)
Control Group Mean	1.029	0.308	24.25	2.19	59.27
Observations	3,767	3,767	3,767	3,767	3,767
<u>B. Treatments Combined</u>					
Treatment Job	0.480** (0.087)	0.145** (0.016)	9.45** (2.50)	0.20** (0.05)	19.59** (6.03)
Previous Job	0.321** (0.104)	0.199** (0.019)	20.21** (3.23)	0.20** (0.04)	40.76** (7.66)
Control Group Mean	1.029	0.308	24.25	2.19	59.27
Observations	3,767	3,767	3,767	3,767	3,767

Notes: Each column in Panel A displays the results of regressing the dependent variable indicated by the column on indicators for being in the detailed evaluation treatment, being in the coarse evaluation treatment, and having prior oDesk experience. Each column in Panel B displays the results of regressing the same dependent variable on indicators for being in any treatment group and having prior oDesk experience. All regressions control for the covariates listed in footnote 13. Employment outcomes are calculated for the two months after the experiment; all experimental jobs and earnings are excluded. Huber-White standard errors are in parentheses. Two asterisks indicate the coefficient is significant at the 5% level.

Appendix Table 3. The Effects of Receiving a Detailed Evaluation for Workers Earning Ratings of 4 or 5
During the Two Months After the Experiment, Including Control Variables

	Total Jobs (1)	Any Job (2)	Hours Worked (3)	Posted Wage (4)	Earnings (5)
<u>A. Main Effect of Detailed Evaluation</u>					
Detailed Treatment × No Previous Job	0.072 (0.196)	0.000 (0.043)	-4.37 (4.39)	0.18 (0.15)	4.40 (11.37)
Detailed Treatment × Previous Job	0.667 (0.527)	0.164** (0.072)	25.90 (16.17)	0.26 (0.22)	78.46** (38.03)
Coarse Evaluation Mean: No Previous Job	1.012	0.366	17.94	2.31	33.27
Coarse Evaluation Mean: Previous Job	2.358	0.568	54.29	2.43	118.41
Observations	644	644	644	644	644
<u>B. Differential Effect of Detailed Evaluation</u>					
Met Deadline × Detailed Treatment × No Previous Job	0.064 (0.198)	0.000 (0.044)	-4.50 (4.43)	0.19 (0.15)	4.11 (11.50)
Missed Deadline × Detailed Treatment × No Previous Job	-0.420 (0.534)	-0.220 (0.200)	-7.71 (8.60)	-0.66* (0.40)	-8.69 (22.77)
Met Deadline × Detailed Treatment × Previous Job	0.645 (0.546)	0.167** (0.073)	27.31 (16.76)	0.28 (0.22)	80.53** (39.42)
Missed Deadline × Detailed Treatment × Previous Job	0.215 (0.901)	0.008 (0.457)	-31.93 (39.45)	-0.42 (0.48)	-39.51 (76.45)
Coarse Evaluation Mean: No Previous Job	1.012	0.366	17.94	2.31	33.27
Coarse Evaluation Mean: Previous Job	2.358	0.568	54.29	2.43	118.41
Observations	644	644	644	644	644

Notes: Each column in Panel A displays the results of regressing the dependent variable indicated by the column on an indicator for being in the detailed evaluation treatment interacted with whether or not the worker had prior oDesk experience. The regressions also include a dummy for having prior oDesk experience and the covariates listed in footnote 13. Each column in Panel B displays the results of regressing the same dependent variable on the four variables listed in the left-most column. Two-way interactions of meeting the deadline with having or not having prior oDesk experience are included as is an indicator for having prior oDesk experience and the covariates listed in footnote 13. Only workers who obtained a rating of at least four in an experimental job are included. Employment outcomes are calculated for the two months after the experiment; all experimental jobs and earnings are excluded. Huber-White standard errors are in parentheses. One asterisk indicates the coefficient is significant at the 10% level and two asterisks indicate the coefficient is significant at the 5% level. The "Coarse Evaluation Mean" rows are limited to workers in the coarse evaluation treatment who earned a rating of at least four.

Appendix Table 4. The Effects of Receiving a Detailed Evaluation for Workers Earning Ratings of 4 or 5
 During the Two Months After the Experiment
 Pooled Sample of Experienced and Inexperienced Workers

	Total Jobs (1)	Any Job (2)	Hours Worked (3)	Posted Wage (4)	Earnings (5)
<u>A. Main Effect of Detailed Evaluation</u>					
Detailed Treatment	0.210 (0.215)	0.042 (0.039)	3.86 (5.85)	0.24* (0.13)	24.06* (14.07)
Coarse Evaluation Mean Observations	1.346 644	0.416 644	26.95 644	2.34 644	54.36 644
<u>B. Differential Effect of Detailed Evaluation</u>					
Met Deadline × Detailed Treatment	0.204 (0.219)	0.043 (0.040)	4.17 (5.93)	0.24* (0.13)	24.39* (14.27)
Missed Deadline × Detailed Treatment	-0.238 (0.388)	-0.095 (0.331)	-27.40** (13.98)	-0.28 (0.60)	-34.88** (15.51)
Coarse Evaluation Mean Observations	1.346 644	0.416 644	26.95 644	2.34 644	54.36 644

Notes: Each column in Panel A displays the results of regressing the dependent variable indicated by the column on an indicator for being in the detailed evaluation treatment. Each column in Panel B displays the results of regressing the same dependent variable on an indicator for meeting the deadline interacted with an indicator for being in the detailed evaluation treatment, an indicator for missing the deadline interacted with an indicator for being in the detailed evaluation treatment, and an indicator for meeting the deadline. Only workers who obtained a rating of at least four in an experimental job are included. Employment outcomes are calculated for the two months after the experiment; all experimental jobs and earnings are excluded. Huber-White standard errors are in parentheses. One asterisk indicates the coefficient is significant at the 10% level and two asterisks indicate the coefficient is significant at the 5% level. The "Coarse Evaluation Mean" rows present the mean of the dependent variables for workers in the coarse evaluation treatment who received a rating of at least four.

Appendix Table 5. Differential Effects of Detailed Evaluations: Instructions, Speed, and Accuracy
During the Two Months After the Experiment

	Total Jobs (1)	Any Job (2)	Hours Worked (3)	Posted Wage (4)	Earnings (5)
	<u>A. Instructions</u>				
Follow All Instructions × Detailed Treatment	0.345 (0.250)	0.064 (0.045)	2.60 (6.25)	0.36** (0.16)	26.48* (15.10)
Not Follow All Instructions × Detailed Treatment	-0.234 (0.415)	-0.032 (0.080)	8.20 (14.49)	-0.17 (0.20)	15.82 (34.57)
Follow All Instructions	0.022 (0.316)	0.024 (0.065)	4.43 (9.77)	-0.31* (0.18)	-6.95 (21.95)
	<u>B. Speed</u>				
Top Two Thirds × Detailed Treatment	0.183 (0.241)	0.029 (0.046)	-1.76 (6.80)	0.16 (0.16)	14.52 (16.02)
Bottom Third × Detailed Treatment	0.288 (0.457)	0.071 (0.074)	18.47 (11.89)	0.46** (0.23)	49.34* (29.78)
Top Two Thirds	-0.017 (0.340)	0.067 (0.059)	12.09 (7.14)	0.047 (0.13)	16.80 (16.02)
	<u>C. Accuracy</u>				
Top Two Thirds × Detailed Treatment	0.245 (0.238)	0.032 (0.046)	5.89 (6.91)	0.12 (0.10)	29.93* (16.94)
Bottom Third × Detailed Treatment	0.111 (0.467)	0.067 (0.074)	-1.44 (11.14)	0.54 (0.40)	8.97 (25.51)
Top Two Thirds	-0.274 (0.360)	0.022 (0.061)	-5.73 (10.16)	-0.02 (0.11)	-9.95 (22.29)
Coarse Evaluation Mean Observations	1.346 644	0.416 644	26.95 644	2.34 644	54.36 644

Notes: Each column in each panel presents the results of a separate regression of the dependent variable indicated by the column on the variables listed in the left-most column. Only workers who obtained a rating of at least four in an experimental job are included. Employment outcomes are calculated for the two months after the experiment; all experimental jobs and earnings are excluded. Huber-White standard errors are in parentheses. One asterisk indicates the coefficient is significant at the 10% level and two asterisks indicate the coefficient is significant at the 5% level. The "Coarse Evaluation Mean" row presents the mean of the dependent variables for workers in the coarse evaluation treatment who received a rating of at least four.

Appendix Table 6. The Effects of the Treatments on Application Patterns
During the Two Months After the Experiment

	Sent Any Application (1)	Applications Sent (2)
<u>A. Treatment Job</u>		
Treatment Job	0.238** (0.014)	23.96** (2.18)
Previous Job	0.337** (0.013)	30.37** (1.89)
Control Group Mean	0.703	25.90
Observations	3,767	3,767
<u>B. Detailed Evaluation</u>		
Detailed Treatment	-0.007 (0.016)	0.57 (5.30)
Coarse Evaluation Mean	0.963	53.12
Observations	644	644

Notes: Panel A presents the results from regressing an indicator for whether the worker sent at least one application in the two months after the experiment and the number of applications she sent on indicators for receiving a treatment job and having prior oDesk experience. Panel B presents the results of regressing the same dependent variables on an indicator for being in the detailed evaluation treatment. The regressions in Panel B only include workers who obtained a rating of at least four in an experimental job. Huber-White standard errors are in parentheses. No applications to experimental jobs are included in any regression. Two asterisks indicate the coefficient is significant at the 5% level. The "Control Group Mean" row presents the mean of the dependent variables for the entire control group; the "Coarse Evaluation Mean" row presents the mean of the dependent variables for workers in the coarse evaluation treatment who received a rating of at least four.

Appendix Table 7. The Effects of the Treatment on the Types of Jobs Applied to
During the Two Months After the Experiment

	A. Independent Variable = Indicator for Either Treatment Group	B. Independent Variable = Indicator for Detailed Evaluation Treatment	C. Mean of Dependent Variable for Control Group
Hourly Job	0.015 (0.011)	-0.005 (0.018)	0.754
Number of Applicants	14.670** (5.115)	-2.153 (9.342)	146
Data Entry	0.087** (0.019)	0.008 (0.033)	0.428
Preference for English Ability	0.020** (0.005)	-0.003 (0.007)	0.181
Preference for Number of oDesk Hours	0.014** (0.004)	-0.003 (0.005)	0.123
Preference for Level of oDesk Feedback	0.018** (0.004)	-0.002 (0.006)	0.146
Preference for Maximum Wage Below \$5	0.014** (0.003)	-0.005 (0.004)	0.094
Preference for Minimum Wage Above \$3	0.008** (0.002)	0.000 (0.003)	0.058
Observations	114,082	34,389	72,919

Notes: Each cell in Panels A and B presents the results from a separate regression of the variable in the first column on an indicator for being in either treatment group (Panel A) or an indicator for being in the detailed evaluation treatment (Panel B). Observations are applications sent in the two months after the experiment; applications to experimental jobs are excluded. The regressions in Panel A include applications sent by all experimental workers and control for whether workers have prior oDesk experience. The regressions in Panel B only include applications sent by workers who obtained a rating of at least four in an experimental job and add no controls. Standard errors are clustered by worker. Two asterisks indicate the coefficient is significant at the 5% level. Each cell in Panel C provides the mean of the variable in the first column for the control group.

Appendix Table 8. The Effects of the Treatments on Application Success
 Dependent Variable: Indicator that an Application was Successful $\times 100$

	(1)	(2)	(3)	(4)	(5)	(6)
	<u>A. Treatment Job</u>					
Treatment Job	-0.330 (0.244)	0.164 (0.187)	0.361** (0.178)			
Treatment Job \times No Previous Job				-0.477* (0.287)	0.124 (0.218)	0.407* (0.219)
Treatment Job \times Previous Job				-0.174 (0.403)	0.206 (0.306)	0.312 (0.279)
Previous Job	2.026** (0.236)	0.900** (0.180)	0.774** (0.202)	1.906** (0.290)	0.868** (0.221)	0.813** (0.236)
Control Group Mean	4.04	4.04	4.04	4.04	4.04	4.04
Observations	114,082	114,082	114,082	114,082	114,082	114,082
	<u>B. Detailed Evaluation</u>					
Detailed Treatment	0.380 (0.331)	0.331 (0.243)	0.224 (0.220)			
Detailed Treatment \times No Previous Job				-0.044 (0.312)	-0.040 (0.239)	-0.135 (0.233)
Detailed Treatment \times Previous Job				1.454* (0.832)	1.383** (0.587)	1.247** (0.510)
Previous Job	2.400** (0.462)	0.999** (0.329)	0.465 (0.386)	1.687** (0.665)	0.312 (0.405)	-0.216 (0.425)
Coarse Evaluation Mean	2.63	2.63	2.63	2.63	2.63	2.63
Observations	34,389	34,389	34,389	34,389	34,389	34,389
Job Characteristics	No	Yes	Yes	No	Yes	Yes
Employer Fixed Effects	No	Yes	Yes	No	Yes	Yes
Worker Characteristics	No	No	Yes	No	No	Yes

Notes: Each of the first three columns in Panel A presents the results of regressing an indicator for a given job application being successful multiplied by 100 on indicators for the worker being in any treatment group and having prior oDesk experience. The next three columns present the results of the same regressions where the indicator for being in any treatment group is interacted with whether or not the worker had prior oDesk experience. Each of the first three columns in Panel B presents the results of regressing the same dependent variable on indicators for the worker being in the detailed evaluation treatment and having prior oDesk experience. Similarly, the next three columns in this panel present the results of the same regressions where the indicator for being in the detailed evaluation treatment is interacted with whether or not the worker had prior oDesk experience. Observations are applications sent in the two months after the experiment; applications to experimental jobs are excluded. The regressions in Panel B only include applications sent by workers who obtained a rating of at least four in an experimental job. "Job Characteristics" are the variables in the left-most column of Appendix Table 5. "Worker Characteristics" are the characteristics listed in footnote 13. Standard errors are clustered by worker. Two asterisks indicate the coefficient is significant at the 5% level. The "Control Group Mean" row presents the mean of the dependent variable for the entire control group; the "Coarse Evaluation Mean" row presents the mean of the dependent variable for workers in the coarse evaluation treatment who received a rating of at least four.