The Condition of the Turking Class:
Are Online Employers Fair and Honest?

John J. Horton
Harvard University
383 Pforzheimer Mail Center
56 Linnaean Street
Cambridge, MA 02138
john.joseph.horton@gmail.com

ABSTRACT
Online labor markets give people in poor countries direct access to buyers in rich countries. Economic theory and empirical evidence strongly suggest that this kind of access improves human welfare. However, critics claim that abuses are endemic in these markets and that employers exploit unprotected, vulnerable workers. I investigate part of this claim using a randomized, paired survey in which I ask workers in an online labor market (Amazon Mechanical Turk) how they perceive online employers and employers in their host country in terms of honesty and fairness. I find that, on average, workers perceive the collection of online employers as slightly fairer and more honest than offline employers, though the effect is not significant. Views are more polarized in the online employer case, with more respondents having very positive views of the online collection of employers.

Categories and Subject Descriptors
J.4 [Social and Behavioral Sciences]: Economics; K.4.1 [Public Policy Issues]: Use/abuse of power; K.4.2 [Social Issues]: Employment

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Economics, Experimentation

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Crowdsourcing, Ethics, Experimentation, Mechanical Turk

1. INTRODUCTION
Work conducted over the Internet by workers participating in online labor markets has begun to attract mainstream attention and much of this attention has been negative. Most of the criticism targets low-skilled, low-paying piece-work sites like Amazon’s Mechanical Turk (AMT), though other sites like oDesk and Elance are also drawing scrutiny. Harvard Law Professor and co-founder of the Berkman Center for Internet & Society Jonathan Zittrain recently published an article Newsweek titled “Work the New Digital Sweatshops.” At a recent conference on digital labor at the New School, the words “expropriation” or “exploitation” were on nearly every page of the program. Critics worry that buyers are circumventing labor laws and exploiting workers. Aside from low pay, critics argue that workers do not know the (potentially unethical) purpose of their work and have no ability to organize or appeal the decisions of capricious employers. They also worry that much of the work is of dubious social value, with many buyers using workers to generate spam and write bogus product reviews.

Despite these perceived downsides of online labor markets, they have a tremendous and potentially transformative upside, which is that the markets give people in poor countries access to buyers in rich countries. If this form of increased virtual labor mobility has effects similar to those of increased real labor mobility, then the emergence of online labor markets should be lauded and supported; the welfare gains from liberalizing restrictions on labor mobility are truly enormous. Clemens et al. consider the effect relocation to the US would have on the real wages of workers from different countries. For the median country (Bolivia), wages would increase by a factor of 2.7, and for the highest country (Nigeria), wages would increase by a factor of 8.4. Even with current strict limits on migration, the World Bank estimates that in 2008 remittances to developing countries were over $305 billion, which exceeds both private capital flows and official development aid.

The comparative advantages of the world’s poor are that they (either individually or collectively through political institutions) are willing to accept environmental degradation, dangerous working conditions and very low pay. In light of this unpleasant truth, the relative virtues of digital work are obvious: it poses no physical danger to workers, has virtually no environmental impact and it does not require robust host country institutions or local entrepreneurial talent. Workers can set their own hours and are not exposed to the elements, dangerous working conditions, the vagaries of agriculture or tyrannical bosses. Unlike labor market access gained through physical migration, workers do not have to live apart from their families or dissipate their earnings by paying developed country prices for shelter, food and clothing.

We have discussed both the perceived costs and the potential
2. THE EXPERIMENT

In AMT, the decision whether to pay a worker is left wholly up to the buyer; nothing stops a buyer from expropriating the product of workers. Given that the rules tilt heavily in favor of buyers, one might presume that employers in AMT would regularly cheat their workers. If this is true, then AMT workers would have dim views of the honesty and fairness of online employers vis-à-vis offline employers who operate in the shadow of formal sanctions for unethical behavior. To test this proposition, I conducted a simple experiment in which subjects recruited from AMT were asked to answer one of the following questions:

- What percentage (between 0 and 100) of Employers in your home country would you estimate treat workers honestly and fairly?
- What percentage (between 0 and 100) of Mechanical Turk Requesters would you estimate treat workers honestly and fairly?

Subjects were randomly assigned to a question and only saw that particular question. In other words, subjects asked about home country bosses were not asked about requesters and vice versa. I launched the experiment on December 23rd and left it open for 7 days. In total, 200 subjects participated. I paid 12 cents per response, which gave an hourly average wage of $5.68 and my total expenditure was $26.40. Consistent with Amazon’s guidance on what constitutes a “good” feedback score, the HIT was limited to AMT workers with a 95% approval rating. Exactly 200 subjects completed the HIT, but only 192 responses were usable. 

When asked for their home country, 111 reported being from the US, 58 reported being from India and 23 reported being from some other country.

2.1 Results

A histogram of worker responses by question type, with a bin width of 5, is shown in Figure 1. In each panel, the mean response is indicated with a vertical line, and 90% and 95% confidence intervals are shown with red shaded bands around the mean. We can see that (1) means are quite similar and (2) that response in the online case (bottom panel) appear more polarized, with a greater number of subjects in the online case having very positive views of the requesters.

The author’s website contains the raw data from AMT, the code that cleans the data and all code used for the analysis and plots. The main cause was workers offering a range rather than a point estimate.

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Figure 1: Worker attitudes about online and offline employers

We can compare mean responses in the two groups using a linear regression of the reported percentage of honest and fair employers, perc, on an indicator for whether the subject was asked about online employers, AMT, = 1 or offline, host country employers, AMT, = 0. The fitted regression line, with robust standard errors, is:

\[
perc = \frac{5.208 \cdot AMT}{3.58} + \frac{64.375}{2.36}
\]

with \( R^2 = 0.011 \) and \( N = 192 \). We can see that the mean percentage was a little more than 64% and for online employers slightly more than 69%. The difference is not statistically significant.

Confirming the graphical evidence that more workers have very positive views of online employers compared to offline employers, a regression of an indicator for whether the subject perceived that more than 80% of employers were honest and fair yields a positive and highly significant coefficient on the group assignment indicator, AMT:

\[
1\{perc > 0.80\} = 0.219 \cdot AMT + 0.219
\]

with \( R^2 = 0.05426 \) and \( N = 192 \).

There are several caveats to the findings. Experimenter effects could matter: subjects might exaggerate how honest and fair they find AMT employers, because this question was asked by an AMT employer. An unavoidable limitation is that subjects are not a random sample of AMT workers—perhaps the ones who have bad experiences quit. The 95% cutoff might preclude the participation of a large number of disgruntled workers, though this seems unlikely: in past experiments, I have found very little difference in uptake under different cutoffs, suggesting most workers have high scores.
3. DISCUSSION
The critique of online markets goes beyond the perceived fairness of employers. Furthermore, worker perceptions of fairness are not measures of actual fairness. That being said, the experiment offers evidence that AMT workers view their chances of being treated fairly online as being as good or better than what they can obtain offline. Contrary to our prior expectations, rampant exploitation is a mis-characterization.

Future research should investigate other claims related to online markets: how prevalent are dubious tasks? Do workers get repetitive stress injuries, as is often suggested? Do workers feel they are gaining skills? Answers to these questions could help clarify the trade-offs inherent in different policy proposals. Online work is currently a small phenomena compared to the global trade in services, but it will become far larger and will eventually attract more policy-oriented attention. Given the welfare consequences of online work, it would be a tragedy if supposition and conjecture about easily and cheaply answerable empirical questions determined our digital policy.

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5. REFERENCES
[1] M. Clemens, C. Montenegro, L. Pritchett, D. Paraguay, and T. Floor. The place premium: wage differences for identical workers across the US border. World Bank Policy Research Working Paper No. 4671, 2008.
[2] L. Irani. Agency and exploitation in mechanical turk. In Internet as Playground and Factory Conference. New School, New York, NY, Nov 13, 2009.
[3] H. Wickham. ggplot2: An implementation of the grammar of graphics. R package version 0.7, URL: http://CRAN.R-project.org/package=ggplot2, 2008.
[4] J. Zittrain. Ubiquitous human computing. Philosophical Transactions of the Royal Society, pages 3813–3821, 2008.