Gender Discrimination in the Gig Economy: Evidence from Online Auctions for Freelancing
(Job Market Paper)

I study gender discrimination and its effect on efficiency in an online auction-based platform for five different kinds of freelance jobs: cleaning, moving, gardening, repairs, and delivery. I build an equilibrium model of demand and supply for freelance jobs. Workers bid prices for each job they are interested in, and the employer (who posts the job on the platform) makes a discrete choice from the offers tendered. Employers may be biased towards a gender either because of their innate preference for gender (taste-based discrimination), or because gender signals worker quality (statistical discrimination) or both.

I provide a microeconomic foundation that nests these two sources of discrimination by combining the canonical Phelps model of statistical discrimination into a random utility framework. Distinguishing between taste and statistical discrimination is challenging because the same level of discrimination can stem from different sets of the two sources. However, I can identify the source of discrimination from the model by estimating the true quality of a worker that is unobserved by employers. Statistical discrimination is dominant if quality differences are significant and explain the hiring differentials. Otherwise, the observed discrimination is taste-based.

I use rich and novel data from an online platform for freelancing jobs that includes information about the posted job and worker characteristics that include gender, bids and performance. I combine past, present, and future reviews and ratings given to a worker to construct a measure of true quality of the worker. The novelty of my approach is that I observe all these measures of performance, whereas employers only observe past performances at best. I rely on this gap between these two measures (observed and true) of quality to infer statistical discrimination. The identification of gender-specific cost distribution of workers in the platform follows from the identification results in empirical auctions.

I find that taste-based discrimination is the primary form of discrimination in most jobs, except for moving. In counterfactual simulations, I analyze two policy changes: (a) removing gender information so both taste-based and statistical discrimination are ruled out and (b) providing full information about worker quality so only statistical discrimination is ruled out.

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