

MARKETING COLLOQUIA

FALL 2018

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Date: Thursday, October 18, 2018

Where: 741 JMHH

When: 12:00 PM to 1:20 PM

SEARCH, SELECTIVITY, AND MARKET THICKNESS IN TWO-SIDED MARKETS

ABSTRACT: This paper investigates search and matching in online marketplaces, emphasizing how user behavior responds to the presence of others on the platform, which I call “market thickness”. Unlike standard settings in which firms typically benefit from increasing their customer base, in two-sided markets, changes in market thickness can induce complex effects in matching due to the endogenous adjustment of search and selectivity. I study search and matching behavior in the setting of an online dating application. Motivated by the observed correlation between individual’s selectivity and the number of potential matches and competitors in this market, this paper causally measures the impact of market thickness on behavior and explores its implications for platform design. I design and implement a field experiment that generates engineered variation in the beliefs of platform participants about the number of potential matches (market size) and number of competitors. Consistent with intuition and observational patterns, the experiment shows that individuals become more selective when they believe they have more potential matches, and less selective when they believe they have more competition. The effect of changes in selectivity on matching is however an equilibrium outcome. I therefore use the exogenous variation generated by the experiment to identify the parameters of a microfounded model, which then allows me to estimate the equilibrium and evaluate platform-design-linked counterfactuals. I find that in some types of markets, increasing platform membership for both sides of market (e.g. increasing both men and women) leads to fewer matches, and increasing one side of the market (e.g. the number of women) may not significantly improve match quality for the other side of the market (men). However, platforms may be able to mitigate the negative effects of increasing either both sides or one side of the market through policies that influence selectivity.