Benjamin Casner NBER Digitization Workshop Application

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Graduate Course
Economics PhD Candidate at The Ohio State University
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Primary Fields: Industrial Organization, Economic Theory

Dissertation: "Essays on Digital Economics and Platforms"
Committee: James Peck, Huanxing Yang, Paul J. Healy
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Research Interests:

I study theoretical industrial organization, with a focus on consumer search models and the economics of platforms. I am particularly interested in the power large platforms possess to determine the rules of markets in which buyers and sellers operate. My recent work has investigated the implications of consumers shifting their search effort to platforms such as Google or Amazon after the advent of the internet, and the implications of allowing these platforms to design consumers' search experience.

The first chapter of my dissertation examines market platforms' incentives to curate the quality of sellers, and why they might avoid screening out low-quality sellers in situations where screening costs are minimal. In my model, consumers participating in a platform's market must engage in Wolinsky (1986) style search for a seller whose product is a good match. When consumers search more intensively, competition between sellers intensifies which in turn lowers market price. The presence of low-quality sellers reduces consumers' incentive to search and so softens competition between all sellers in the platform's market, increasing equilibrium price. The platform in my market takes a percentage of seller revenue, so by softening competition it increases revenue per consumer at the expense of driving away some customers. Therefore, if the exogenous search cost on the platform is sufficiently low, then it admits a positive proportion of low-quality sellers to counteract excessive—from the viewpoint of the platform—search on the

part of consumers.

This research fits into a broader discussion of whether large platforms can be trusted to regulate themselves and when their incentives directly contradict social welfare. These incentives can be important in surprising ways. For example, I show that when these platforms can credibly recommend high-quality sellers, they have an incentive to reduce screening of low-quality sellers. This incentive stems both from the recommendation mitigating the negative effects of low-quality sellers and the presence of low-quality sellers strengthening the effect of the recommendation.

The next chapter looks at online media markets and considers the implication of media platforms such as YouTube or Twitch which attract external content creators instead of or in addition to creating their own content. I describe an environment where a platform facilitates interaction between consumers, advertisers, and content creators to explore the effects of introducing a subscription which allows consumers to avoid ads. One of the significant advantages streaming platforms have over broadcast television networks is that they have a much broader "shelf space" in which to host content, so policies which encourage additional content creators can have a significant welfare impact. This plays out in the welfare implications of the subscription. Increased advertising and a consequently high subscription price may reduce the welfare of consumers who enjoy mass market content (similar to previous papers in the literature) but the subscription increases provision of niche content which can counteract these negative effects. The effect on total social welfare depends on how much the platform increases payments to content creators after introducing the subscription.

I also consider issues outside of platform economics. My next chapter was motivated by the UK's decision to separate British Telecom's network provision division into a separate firm. Before this policy BT acted as both a wholesaler (at a regulated price) to internet service providers and directly offered internet service to consumers. As a result of the separation there is now a separate wholesale company providing "last mile" network connection between internet service providers and consumers. I compare the quality investment incentives for a monopoly network owner under vertically integrated and separate regimes. For a fixed level of quality retail prices are higher under the separated regime, meaning that more consumers will choose the outside option at that quality level. This implies that the marginal effect on demand for internet service from a quality increase is larger in a vertically separated regime (the number of

consumers who buy internet because of the quality increase is larger). Therefore, if the retail market is highly competitive a vertically separate network owner will invest more than an integrated owner. However, if the market is uncompetitive then retail prices will be high relative to the regulated wholesale price. The ability to participate on the retail market in addition to the wholesale market means that a vertically integrated owner will have higher marginal revenue from quality investment even though the number of consumers switching away from the outside option is smaller.

I am currently developing a project to help understand the recent trend of content platforms such as Twitch and YouTube moving toward a membership model (facilitating support of creators by a few highly engaged consumers giving directly) and away from a pure discovery model (support via many consumers of varying engagement watching ads). For a long time YouTube and Patreon acted as a duopoly, with YouTube serving as a discovery mechanism and Patreon allowing creators with small audiences to continue operating even though YouTube wasn't paying them as much. More recently, YouTube and Twitch have introduced channel memberships, allowing those who purchase them to avoid advertising and access subscriber-only content in exchange for a membership fee. Some of the research questions which arise from these observations include:

- What are the effects of a pure membership platform vs. a pure discovery platform on content creators' content design decisions?
- Is the semi-symbiotic relationship of a pure discovery and a pure membership platform a stable equilibrium?
    - If not, why did it take YouTube so long to introduce channel membership?
    - If so, why did YouTube introduce channel membership?
- What causes a platform to choose pure discovery vs. pure membership vs. a hybrid model?