Application for NBER Digitization Workshop

Lucy Hu

UC–Berkeley, Haas School of Business

545 Student Services #1900

Berkeley, CA 94720-1900

(510) 725-9994

lucy\_hu@haas.berkeley.edu

I am a PhD candidate in Business and Public Policy at Haas School of Business, Berkeley and I am very interested in attending the NBER Digitization Tutorial. My research focuses on crowdfunding and social networks. I pursued coursework in Microeconomic Theory, Econometrics, Applied Econometrics, Corporate Strategy and Technology, Political Economy, Contract Theory, Economics of Institutions, Psychology and Economics, Labor Economics, Industrial Organization, and Corporate Finance. I advanced to candidacy in June 2012.

My dissertation studies the role of peer effects in crowdfunding. I am using a set of field experiments on an online crowdfunding platform to estimate the causal impact of peer effects in project funding decisions. The main issue in crowdfunding is as with any new project or product, quality is difficult to determine prior to consumption. Funders hold a prior on quality, which they can update with information from their peers. This information can be purely about the existence of a project but it can also be about the peer’s funding decisions and hence signals of the peer’s assessment of the project’s quality. This peer effect may be an important driver of demand because the crowdfunding market is a large market with many choices where the consumers (funders) have very little knowledge about the quality of the good and learning is costly. Thus, it is important to know how peer effects influence an individual’s decision to fund a project. This will affect how project creators target their fundraising efforts, and inform how these crowdfunding platforms should best utilize the social network.

I first try to disentangle pure information transfer from the peer effect by manipulating where the information is coming from. Using a model of cheap talk, I test whether potential funders will be more likely to fund a project when given a revealed preference endorsement vs. a stated preference endorsement. Then using a model of signaling, I test whether endorsement from a friend results in higher likelihood of funding a project than endorsement from a stranger.

Second, I will try to open up the black box that is peer effects and explore the reasons why a peer’s funding decision would affect one’s own choices. Broadly, there are two reasons why peer effects may matter: social learning vs. social utility. I use a canonical social learning model where a peer makes a funding action based on a private signal, and this action can be used by a potential funder to make an informational inference before making his own funding decision. Then social utility can be modeled as an increase in the utility of a potential funder from funding a project his peer already funded that is separate from any learning. To separately identify the two channels, I turn off the informational inference component of a peer’s funding decision so that there is no social learning in order to measure the effect of social utility. Then I turn the informational inference component back on to measure the full peer effect. The difference between just social utility and the full peer effect is social learning. These results quantify a key aspect of crowdfunding and a major determinant of funding success, namely what is the power of the crowd. This understanding of the casual impact of peer effects and its mechanism of action will be able to help entrepreneurs better harness their social network to increase crowdfunding success. The expected completion is May 2015.

In another project, I am looking at how social influence affects funding patterns in crowdfunding. I am trying to tease out the causal effect of previous contributions on subsequent funding decisions. Some questions I am trying to explore are does a very large or very small contribution matter for later funding decisions? What about the variance of previous contributions? Also, does anonymity, in terms of just the contribution amount or both the identity and the contribution amount, affect subsequent funding?

One of the main concerns with the study of social influence is homophily between funders that contribute to the same project at similar times so a naïve study of whether large donations occur after a previous large donation is not identified. Thus, in order to causally estimate the effect of previous contributions, I use a feature of the crowdfunding platform I am studying where only a set number of previous funders can be easily seen and every new funder displaces the oldest one in the set. Thus, the nth and n+1th funders observe different sets of information. For example, it is possible the nth funder observes a really large donation but the n+1th funder does not. It is plausible that there is not that much difference between the nth and n+1th funder. Thus, any difference in funding patterns between them can be attributed to observation of previous contributions. This allows for the causal identification of social influence on online crowdfunding patterns.