Can You Gig It? Yes You Can  
(An Empirical Examination of the Gig Economy and Entrepreneurship)*

Gordon Burtch  
Carlson School of Management  
University of Minnesota

Seth Carnahan  
Ross School of Business  
University of Michigan

Brad N Greenwood  
Fox School of Business  
Temple University

Abstract  
In this study, we examine how the entry of platforms which facilitate the gig-economy influences rates of entrepreneurial entry. On one hand, such platforms may slow entrepreneurial entry by resolving the unemployment that often drives necessity based entrepreneurship. On the other, such platforms may help local entrepreneurial sectors to flourish by allowing nascent entrepreneurs to re-deploy resources strategically when getting a de novo venture off the ground. To resolve this tension, we exploit a set of natural experiments, the entry of the ride-sharing platform Uber and the entry of the on-demand delivery platform Postmates, and examine the effect on crowdfunding campaign launches at Kickstarter. Results indicate a significant negative effect on local entrepreneurship after platform entry, reflected by a decline in campaign launches; suggesting that these platforms offer viable employment for un- and under-employed individuals. Theoretical and practical implications are discussed within.

Keywords: gig economy, digital platforms, innovation, crowdfunding, entrepreneurship

* Author’s names are in alphabetical order. Each author contributed equally to this work.
Introduction
The introduction of new business models spawned by digital platforms has captured the attention of both scholars and policy makers for decades (Bakos and Bailey 1997, Parker and Van Alstyne 2005). While classic examples, such as eBay and Amazon.com (Brynjolfsson et al. 2003, Chatterjee 2001, Dellarocas and Wood 2008, Forman et al. 2008) continue to generate $100s of billions in revenue annually, new models of platform enabled businesses have recently come to the fore (e.g. AirBNB, Kickstarter, Lyft, Postmates, Uber, TaskRabbit). Collectively referred as the collaborative-, sharing-, or gig-economy; businesses of this type are anticipated to comprise a substantial portion of the economy in the coming years, with serious economic implications (Sundararajan 2014) as a result of disrupting long-standing industries (Morse 2015) and displacing incumbents (Zervas et al. 2014). However, along with industry disruption comes the expectation of eventual economic growth, innovation, and entrepreneurship (Gans et al. 2002, Ireland et al. 2003, McAfee and Brynjolfsson 2008). In this work, we contribute to this line of research by asking the following question: what is the effect of platform introduction on the rate of local entrepreneurial activity? Thus far, evidence of changes in entrepreneurial activity from the gig economy have been hard to come by. In part, this is because traditional economic measures of employment and productivity are often coarse and subject to time lags, making it difficult to capture economic changes due to recent developments in the gig economy. ((Bessen and Hunt 2007; Sundararajan 2014).2

From a theoretical perspective, both the popular press and the scholarly community provide competing views as to how gig-economy platforms may influence the decision to engage in nascent entrepreneurial activity. On the one hand, the introduction of flexible ad hoc employment may lead to greater entrepreneurial activity because it affords the nascent entrepreneur the ability to engage in low-risk experimentation and strategic optimization of their time (in order to garner the necessary resources to initiate a project or start a firm (Douglas and Shepherd 2000)). Indeed, the popular press has repeatedly

2 http://www.citylab.com/work/2013/10/rise-invisible-work/7412/
3 http://www.theguardian.com/commentisfree/2015/jul/26/will-we-get-by-gig-economy
noted that gig-economy businesses provide workers with an unprecedented degree of flexibility, allowing then to set their own schedules while earning stable pay.\textsuperscript{4,5}

On the other hand, it is equally plausible that the entry of these platforms may decrease entrepreneurial activity. As many researchers have noted, unemployment or underemployment in a local area is a significant driver of the rate at which new firms are founded (Acs and Armington 2006, Armington and Acs 2002, Fairlie 2002, Storey 1991). If this is the case, the arrival of gig-economy platforms may stifle entrepreneurial activity due to the abundance of alternate employment opportunities for potential entrepreneurs, particularly in the case of necessity based entrepreneurship (Block and Koellinger 2009).\textsuperscript{6} As necessity entrepreneurs make up a substantial proportion of the entrepreneurial population in the United States, approximately 25\% of all entrepreneurial ventures during our period of observation\textsuperscript{7,8}, the effect may be non-trivial. Put another way, with the entry of peer-to-peer businesses, reluctant entrepreneurs may see a way to gainful, satisfactory employment. As a result, they may not devote the necessary resources to creating the new venture (Iyigun and Owen 1998).

To resolve this tension we exploit a set of natural experiments: the entry of the ride-sharing platform Uber and the entry of the Postmates on-demand delivery service into local markets. We examine the relationship between the entry of these services and campaign data collected from Kickstarter, the world’s largest crowdfunding platform (Burtch et al. 2013, 2015), between 2013 and early 2015. Leveraging this econometric strategy offers us two notable benefits. First, because the rollout of Uber and Postmates is staggered both temporally and geographically, i.e. the services enter different locations at different times, we are able to exploit a difference in differences design that allows us to mitigate many of the endogeneity concerns which are present when studying entrepreneurial entry (Greenwood and Gopal 2015). Second, by using Kickstarter campaigns to estimate the rate of entrepreneurial activity, we are able

\textsuperscript{4} http://www.nationaljournal.com/next-economy/big-questions/how-airbnb-uber-are-changing-nature-work
\textsuperscript{5} http://venturebeat.com/2014/08/17/inside-the-sharing-economy-workers-find-flexibility-and-19-hour-days/
\textsuperscript{6} Necessity entrepreneurs are defined as individuals who pursue a new venture because they believe they have few other options, typically because they have been unemployed or underemployed for a lengthy span.
\textsuperscript{7} http://www.wsi.com/articles/SB10001424052702304819004579489461801538416
\textsuperscript{8} http://www.businessweek.com/smallbiz/content/mar2010/sb2010039_995571.htm
to capture early stage entrepreneurial activity that should respond more quickly to the introduction of gig economy platforms as compared to other measures like firm foundings and patent applications (Bessen and Hunt 2007, Sundararajan 2014). Results indicate that the entry of each service into a geographic region results in a sharp decrease in the rate of entrepreneurship, as reflected by the volume of crowdfunding campaign launches, both successful and unsuccessful, on Kickstarter.

This study makes three notable contributions. First, we provide initial evidence that the gig-economy provides viable employment opportunities for un- and under-employed individuals in local economies. As necessity based entrepreneurs are the most likely to be affected by the presence of alternate employment options (Block and Koellinger 2009, Iyigun and Owen 1998), this work underscores the positive benefits which stem from platform introduction and reduced barriers to entry. Second, we consider a novel measure of entrepreneurial activity: the rate and volume of crowdfunding campaign launches. Unlike more traditional measures of entrepreneurship and innovation (e.g., patenting), crowdfunding activity provides a more transparent, short term bellwether of the rate and scale of entrepreneurship and innovation, of many types, in a given geography. Finally, our work contributes to the emerging stream of information systems literature which explicitly considers public welfare externalities which stem from digital platforms (Bapna et al. 2012, Chan and Ghose 2014, Chan et al. 2015, Greenwood and Agarwal 2015, Greenwood and Wattal 2015).

Further, there are clear implications for policy which stem from this work. To the degree that the existence of many platforms in the gig economy may provide much needed jobs to the un- or under-employed, our findings speak directly to the ongoing policy debate regarding the legality of gig-economy services. Coupled with recent evidence that suggests the gig-economy can significantly improve public safety (Greenwood and Wattal 2015), a growing corpus of evidence attests to the benefits of the sharing economy for public welfare.
Manuscript Status
At this point preliminary analysis has been conducted and a working draft has been constructed. We are currently in the process of executing our extended set of falsification tests to ensure the robustness of the result. Further, we are exploring additional, potential, moderators to the effect to determine to whom the effect accrues.

References


