Early Draft

Occupational Licensing of Uber Drivers

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* Hicks and Kleiner were not under contract with Uber for the study.

We thank participants at a seminar at the Upjohn Institute for Employment Research for their comments on an earlier version of the analysis.

Two of the most rapidly growing segments of the labor market are the expansion of employment in the gig economy and occupational regulations by government in the labor market (Katz and Krueger, 2016, Kleiner and Krueger, 2013). The ride-sharing firm Uber is faced with both issues as part of its business model. The firm has come to exemplify the technology "revolution" and labor market outcomes embodied in the gig economy by providing ride-sharing services. The firm had more than 80 percent of the total ride-sharing (cab-substitute market) in the U.S. in 2016 (DMR Statistics 2017). The creation of a sophisticated app allowed this process of matching to be done in an efficient and profitable manner for the company. By 2017 the company had more than 734,000 active drivers in the U.S. and more than 1,500,000 drivers worldwide. The economic value of the company was estimated to be almost $70b in 2017 according to the *Wall Street Journal* (June, 2, 2017).

Occupational licensure is the legal process by which governments (mostly U.S states but also local governments and the federal government) identify the legal qualifications required to work in a trade or profession, after which only regulated practitioners are allowed by law to receive pay for doing tasks in the occupation. This form of labor market regulation has rapidly become one of the most significant factors affecting labor markets in the United States (Kleiner and Krueger 2010, 2013). Over the past several decades, the share of U.S. workers holding an occupational license has grown sharply. Estimates from a recent White House report suggest that over 1,100 occupations are regulated in at least one state, but fewer than 60 are licensed in all 50 states, showing substantial differences in which occupations states and local governments choose to regulate (U.S. Executive Office of the President 2015). As of 2015, about 25 percent of the U.S. workforce had attained an occupational license, with the vast majority doing so at the state level (U.S. Bureau of Labor Statistics 2016, Kleiner and Volotnikov, 2017). In contrast, in 1950

only 5 percent of U.S. workers were licensed at the state level (Kleiner and Krueger 2013). For Uber these regulations may impose constraints on the number of drivers in their system.

In this study, we examine the effect of occupational licensing of Uber drivers on the composition of the workforce, pricing, and the quality and safety of the ride. The paper proceeds as follows. Section 2 provides background on occupational licensing and Uber including recent trends and reviews previous work, and then presents a theoretical model of regulation in the ride-sharing business. Section 3 describes our data and empirical strategy. Section 4 presents our results and their implications, and Section 5 summarizes and concludes.

Our findings show that tougher licensing of Uber drivers results in more intensive use of the Uber app by "partners". In order to examine a variety of cities and other jurisdictions operating under different rules, we focus on the New York/New Jersey, and Seattle. Finally, we examine whether occupational licensing of Uber drivers influences the satisfaction of riders using the Uber service and the safety of the ride, using information derived from the Uber drivers' app devices. Our results suggest some influence of occupational licensing on reducing satisfaction, but also a reduction in hard breaking and sudden starts.