

UNDERSTANDING THE RISK PERCEPTION AND UBER DRIVERS' WORK BEHAVIOR

Michael D. Aguilera, School of Business Administration and Public Policy, California State University Dominguez Hills, Carson, California, 90747, michaelaguilera95@gmail.com

Xuefei (Nancy) Deng, School of Business Administration and Public Policy, California State University Dominguez Hills, Carson, California, 90747, ndeng@csudh.edu

ABSTRACT

Digital technologies have created a brand-new workforce, gig workers such as Uber drivers. This paper seeks to understand how the surge pricing algorithm influences the work behaviors of Uber drivers and what risks Uber drivers are exposed to. Data are collected from interviews and survey of Uber drivers in the Greater Los Angeles metropolitan area. Based on literature reviews and data analysis, this study proposes a typology of work-related risks in ridesharing gig work from workers' perspective. The research finding brings awareness to gig workers' wellbeing and provide useful insights into improving their work environment in the emerging gig economy.

Keywords: Gig Economy, Gig Workers, Pricing Algorithm, Risks, Uber

EXTENDED ABSTRACT

Digital technologies have enabled and created a brand-new workforce, gig workers such as Uber drivers and Airbnb hosts. The rise of digital platforms such as Uber and Airbnb have led to the creation of new part time jobs, side hustles, and in some cases, full-time work. The individuals that work in these positions are called Gig Workers. Jobs that stem from these platforms are referred to "Gig Jobs" or "Gig Work". These jobs are a part of the "Gig Economy", which is a labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs [Oxford].

The gig economy is one of the largest and fastest growing workforces in the economy. More than one third (36 percent) of U.S. workers are in the gig economy [3]. It is projected that by 2023, more than half (52%) of the U.S. workforce will either be gig economy workers or have worked independently at some point in their career [8]. Many individuals come to these jobs for their flexibility and the ability to enhance existing income [7].

A large appeal of driving for Uber is the ability to create your own schedule and be your own boss. Uber operates in a market with large fluctuations in demand and a variable supply of driver- partners [6]. In order to minimize wait time for riders when the availability of drivers is limited, Uber employs a "surge pricing" algorithm to equilibrate supply and demand [6]. The algorithm manipulates ride fare to encourage riders to pick up passengers [6].

Unlike traditional part-time workers, gig workers are not considered employees of a company and are usually labeled as "Independent contractors". This means they are not entitled to certain federal working protections (social security, discrimination laws), have no managerial oversight, and are taxed differently because of their independent contractor status.

While a level of risk exists in most job positions, how does the lack of employee classification and use of technology increase risks and create “hidden risks” for gig workers? A car crash is an example of a normal risk in Uber driving. People are aware that driving a car can lead to an accident.

An example of a hidden risk is Gamification. This is when an app uses video game techniques to push workers to keep working [9]. Much like a video game, they use clever milestone achievements and graphics to encourage drivers to take another ride [9]. If drivers aren’t mandated to take a 10-minute break because of their independent contractor status [9], what is the risk of a driver working longer shifts without taking a break? How can this lead to mental stress and increase the chances of an accident? We want to explore more hidden risks like this in our research. We also want to explore how Uber’s surge pricing algorithm may influence drivers in a precarious way.

Gig workers have a unique risk position in the job market. As mentioned previously, the lack of employee classification and digital nature of the platform raises questions about their work-life quality. In this study, we intend to propose a typology of work-related risks in gig work from workers’ perspective. We adopt the definition of risk perception as calculation or consideration of the likelihood and severity of consequences of an incident, consistent with Bohm and Harris [1]. Our proposed typology of the gig work risks is based on our review of extant studies and interviews with Uber drivers.

First, we define **digital risk** as information misrepresentation or information asymmetry imposed by technology design of Uber platform. Digital risks can be associated with all the technical aspects of the platform, including the pricing algorithm and the rating system. While many of these technological facets are used to improve the quality of the riding experience and business purposes, they can also affect gig workers negatively. For example, Uber’s surge pricing algorithm is used when demand for rides is high to incentive drivers to work. However, Uber’s system is a black-box: they do not provide data about supply or demand [4]. Moreover, research has shown that gig economy companies such as Uber use data and algorithms to exploit psychological weaknesses of their drivers by using their data collection about driver behaviors and their control over the Uber App interface to lead the drivers to make driving decisions in the direction the Uber company desired [4]

This lack of transparency has raised concerns on whether Uber manipulates pricing, however, evidence suggests Uber’s surge pricing is set algorithmically [4]. Rideshare platforms often claim freedom and flexibility as perks of working for their firm [4]. Our own research subjects even listed “Make your own hours”, “make good money on tips on top of the standard pay” and “ability to go to school” as pros of working for Uber.

Second, we define **physical risk** as driver fatigue resulted from long driving hours and potential harms to drivers caused by riders. Despite claims of flexibility, the surge pricing algorithm may influence drivers to work when they otherwise wouldn’t. Friday and Saturday nights are sometimes seen as a forced choice for many drivers [7] in order to make higher wages as a result of the surge pricing algorithm. When companies anticipate that a period will have a large increase in use, they also offer “guarantees,” in which, relying on surge pricing, they guarantee drivers a certain hourly rate provided their driving meets a given set of criteria [7]. These periods are often during holidays and bar hours [7] which fall during the late hours of the evening. This exposes drivers to potential physical harm and sexual assault due to an increased likelihood of intoxicated passengers during the evening. Our female subjects expressed concerns of assault: “As a girl you feel taken aback, you feel vulnerable. Pick and

choose your battles, carries pepper spray on their door in case of emergency, tries to be as alert and prepared as possible.”

Unfortunately, because of the digital nature of these platforms, drivers are often ill-equipped to deal with emergencies or forms of assault. One female driver pointed out, “when you rate the passenger, there is no sexual harassment option”. This combined with the lack of managerial oversight create great risk for the driver. Uber tries to combat this by giving a rating to passengers, but “Sometimes people order Ubers for their friends or people they know” so the system isn’t always effective.

Third, we define **economic risk** as economic loss due to damages to the driver’s car by riders or damages from a car accident during driving to search for fares. Aside of the risk of verbal or sexual harassment, there’s the significant economic risk factors at play. As one Uber driver explained: “People also mess up your car, leave trash, smell bad, but you don’t know the kind of rider until you pick them up”. Many Uber drivers have expressed fears of encountering drunk drivers or pedestrians while driving during the evening [7].

Fourth, we define **socio-psychological risk** as mental anxiety and stress resulted from driving and interactions with riders. This risk arises when drivers feel frustrated not being able to meet their ride and income goals in a day, or drivers experience emotional stress from dealing with unpleasant, frustrated riders. For example, one driver explained during the interview, “People can really give you a low score for anything. They could put in the wrong address and get upset when I drive them to that address and I can’t do anything about it.”

Finally, we define **employment risk** as uncertainty and potential harms resulted from the lack of employee classification and legal protection for gig workers. For example, Uber drivers have no first-party protections in place while they drive around searching for fares and insurance industry experts disagree with Uber about the adequacy of Uber drivers’ existing insurance coverage [5]. Scholars from both law and technology fields have called for legal interventions to reflect a deeper understanding of the acts and practices of digital platforms, and to prevent the gig economy firms from abusing their position and disadvantaging the gig workers [2].

These subject interviews along relevant literature have allowed us to analyze the potential risks associated with gig jobs of ridesharing. Our additional analysis of survey data will provide further insights on the relationship between driver’s work behavior and Uber’s surge pricing algorithm. Prior research [5] warned the gig workers who chose to drive for Uber: “Drive on your own risk.” Our study contributes to this line of research by identifying and classifying the types of risks associated with the gig work of ridesharing. The research finding will bring awareness to gig workers’ wellbeing and provide useful insights into improving their work environment in the emerging gig economy.

REFERENCES

- [1] Bohm, J., & Harris, D. (2010). Risk perception and risk-taking behavior of construction site dumper drivers. *International journal of occupational safety and ergonomics*, 16(1), 55-67.
- [2] Calo, R., & Rosenblat, A. (2017). The taking economy: Uber, information, and power. *Colum. L. Rev.*, 117, 1623.
- [3] Chappelow, J. (2019), *Gig Economy*, Investopedia.com
- [4] Chen, Le, et al. *Peeking Beneath the Hood of Uber*. Northeastern University, 2015.
- [5] Davis, J. (2015). Drive at your own risk: Uber's misrepresentations to UberX drivers about insurance coverage violate California's unfair competition law. *Boston College Law Review*, 56(3), 1097
- [6] Hall, Jonathan, et al. *The Effects of Uber's Surge Pricing: A Case Study 2015*.
- [7] Malin, B. J. and Chandler, C. (2017), *Free to Work Anxiously: Splintering Precarity Among Drivers for Uber and Lyft*. *Communication, Culture & Critique*, 10: 382-400. doi:10.1111/cccr.12157
- [8] MBO Partners (2018), "The State of Independence in America. 2018: The New Normal"
- [9] Scheiber, N. (2017), *How Uber uses psychological tricks to push its drivers' buttons*. *The New York Times*, April 2, 2017.