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A Lie on Sharing Economy: Solutions for Uber Drivers' Dilemma When Self-Driving Cars Arrive

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Research Idea

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Abstract

Self-driving cars have been started to be quickly manufactured and tested for real driving on the road by various companies such as Tesla, Mercedes-Benz, General Motors, Google, and Uber. Uber's involvement in developing self-driving technology is not a secret – its autonomous vehicle pilot program has been widely mentioned and discussed. However, it seems that people forget one thing when they read the news about the launch of driverless taxi by Uber: Uber is also a leading company in sharing economy that provides a technology platform to collaborate with its 'registered partners'—who are human drivers and will be replaced by self-driving technology soon. What is the solution for Uber drivers' dilemma – stay or prepare to leave ridesharing business? This research proposes to provide a research model to answer this question with the 'real' factors that will make customers choose ridesharing service with human drivers. A two-step approach with detailed survey on customers as well as semi-structured interview on drivers will be conducted. It is expected that this research will help current Uber drivers know their positions in the dynamic market. People who are facing the similar dilemma (i.e. will soon be substituted by future technologies) will also learn how to survive in the competitive business environment.

Keywords: Uber Drivers' Dilemma, Self-driving Cars, Automobile Vehicles, Sharing Economy.

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Research Idea

Sharing economy, or collaborated consumption, has become a popular trend across different industries in the recent decades. Several peer-to-peer activities of sharing, obtaining, and sending the access to good and services occur via IT-enabled platforms in sharing economy (Hamari et al., 2016). For example, Couchsurfing and Airbnb help travelers interact with local hosts by paying lower fees than staying at traditional hotels. Airbnb, specifically, has highly facilitated shared accommodation but significantly reduced hotel revenue (Zervas et al., 2016). The impacts of new technologies in sharing economy on traditional industries have therefore become a popular topic for discussion. Cusumano (2015) provided several truths on the emergence of sharing economy and warned the traditional companies that they must figure out their own competitive advantages and use them to compete with the new web-based start-ups. Unlike Zervas et al. (2016), Fang et al. (2016) showed a positive role of Airbnb in solving the unemployment problem in tourism industry. Similarly, Wallsten (2015) found positive impact that Uber has caused taxi drivers to improve service quality or they will face decrease on daily revenue. The issues on beating or setting regulations for sharing economy are another popular research stream. Cannon & Summers (2015), Koopman et al. (2015), and many other scholars have involved and contributed several findings on this general topic.

The technology of self-driving cars, the vehicles that can sense its environment and navigating without human control (Gehrig, 1999), has been developing for years. Several first-movers in the automobile manufacturing industry such as Tesla, Mercedes-Benz, General Motors, and Toyota have put lots of efforts on developing the technology (Borenstein et al., 2017; Greenblatt, 2016). Interestingly, some companies in Silicon Valley such as Google and Uber play key roles in creating sustainable self-driving models as well (Borenstein et al., 2017). Engineers in these companies are now hardly working on developing a manufacturing model for the autonomous vehicles by continuously testing drives in both factory and real world (Tussyadiah et al., 2017). At the same time, researchers in business-related areas are now focusing on getting a good business model on selling and promoting this new technology. Topics such as technology adoption (e.g. Tussyadiah et al., 2017; Hsu, 2016; Zmud et al., 2016), ethics and law (e.g. Borenstein et al., 2017; Greenblatt, 2016), and social interaction (e.g. Brown, 2017) have been discussed to try to draw a big picture on the business model of self-driving cars. Uber, one of the leading companies in autonomous vehicles developing, has been often mentioned in the above research streams due to its adventurous implementation of self-driving testing in Pittsburg and San Francisco (e.g. Brown, 2017; Dudley et al., 2017; Tussyadiah et al., 2017). However, it seems that people forget one thing when they read the news about the launch of driverless taxi by Uber: Uber is also a leading company in sharing economy that provides a technology platform to collaborate with its 'registered partners'—who are human drivers and will be replaced by self-driving technology soon (Dudley et al., 2017).

Uber's involvement in developing self-driving technology is not a secret – its autonomous vehicle pilot program has been widely mentioned and discussed (Pendleton et al., 2017; Tussyadiah et al., 2017). People's primary focus is now about how to raise the technology adoption on self-driving cars or how to get the first adopter on this popular technology (Umberger, 2016). No matter how researchers collected and analyzed data, they usually concluded that people's perception on risk, safety, or security would be the main issue on adoption (Kohl et al., 2017; Lee et al., 2017; Kohl et al., 2016). The embarrassing situation of drivers was, however, significantly neglected by the academia. Richardson et al. (2016)'s study is the precious one that focuses on drivers' opinion; nevertheless, they discussed on 'highly automated driving' (autonomous vehicle with drivers) instead of 'fully automated driving' (no drivers, which self-driving means). Eadicicco (2017), a professional column writer of Times, published an article with several Uber drivers' opinions: They are concerned but still confident with the evidence of people's relatively low trust on autonomous vehicles at this moment. But what if researchers find the way to raise the adoption rate? If safety and cost would be no longer an issue to take a ride on self-driving cars, will customers be still stick to the ride-sharing service with human drivers?

Here comes Uber drivers' dilemma: Do they need to continue to offer and enhance the service to get higher customer satisfaction? Or is it the time to think about learning something else to prepare for possible unemployment? Unlike companies in innovator's dilemma (Christensen, 2013), Uber drivers have no control on creating new service. However, it was also proved that information asymmetries exist between Uber managers and local drivers (Rosenblat & Stark, 2016). In other words, drivers may enhance or maintain service quality on their own wills under the general rule set by managers. The research purpose of this study is to know the real factors on choosing between human-driving or self-driving cars from customer's perspective. Specifically, two research questions will be discussed in this study:

• If safety, security, and cost are no longer an issue for adopting autonomous vehicles, what are the factors that will make customers choose ridesharing service with human drivers?

• What is the solution for Uber drivers' dilemma – stay or prepare to leave ridesharing business?

Researchers will conduct a two-step approach to examine the questions: A survey on college students who are familiar with ridesharing service would be the first trial to know the important factors on choosing automobile service regardless of cost and safety in customer's perspective. After gathering comments from customers, researchers will be able to build a research framework with several answered impact factors to solve the above questions. The second part will consist of a qualitative study based on the proposed model. A semi-structured interview will be implemented on current Uber drivers in a US college town to collect their thoughts. It is expected that this research will help current Uber drivers know their positions in the dynamic market. People who are facing the similar dilemma (i.e. will soon be substituted by future technologies) will also learn how to survive in the competitive business environment.

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