

UPASS Project Member Published Research Findings on Management Science

UPASS Project Member, Dr. Xiqun (Michael) Chen, published the research article entitled “[A Balancing Act of Regulating On-Demand Ride Services](#)” on [Management Science](#), with his research collaborators.

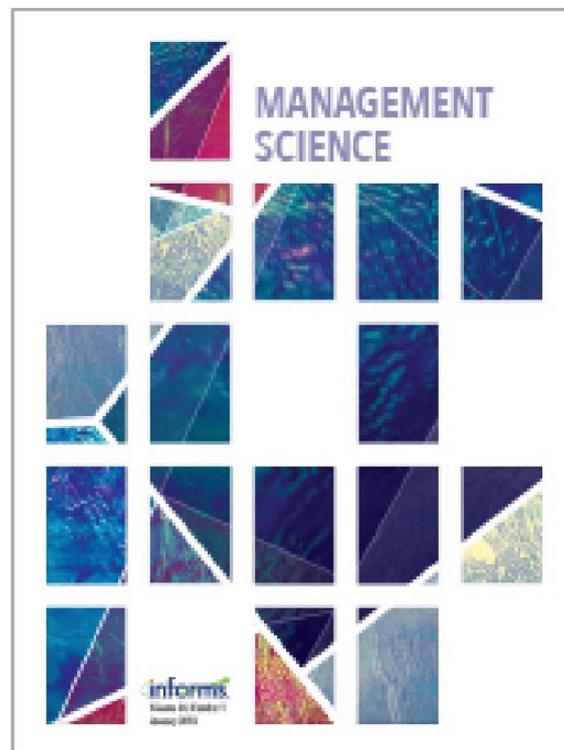


Fig. 1. Management Science: INFORMS flagship journal.

This research is motivated by a regulatory policy implemented by the Chinese government in 2017 and a similar policy approved by the New York City Council in 2018 that regulate the “maximum” number of registered Uber/DiDi drivers. This paper is the first to develop a

multi-stakeholder modeling framework for evaluating the impact of regulatory policies of on-demand ride services on competing objectives associated with different stakeholders (Fig. 2).

Government's options and concerns	Laissez Faire	Complete Ban	Regulatory Control
Consumer Welfare			
Support of Taxi drivers			
Job Creation			
Support of Startup (DiDi)			
Economic Value Creation for DiDi drivers			
Congestion/Pollution			

 Good Performance

 Medium Performance

 Bad Performance

Fig. 2. Government's three options against multiple objectives.

By analyzing a two-period dynamic game that involves these stakeholders (i.e., consumers, taxi drivers, on-demand ride service company, and independent drivers), it is found that, without government intervention, the on-demand ride service platform can drive the traditional taxi industry out of the market when taxi fares are high and when the number of DiDi drivers is high (Fig. 3). Relative to no regulations and a

complete ban policy, a carefully designed regulatory policy can strike a better balance of multiple competing objectives.

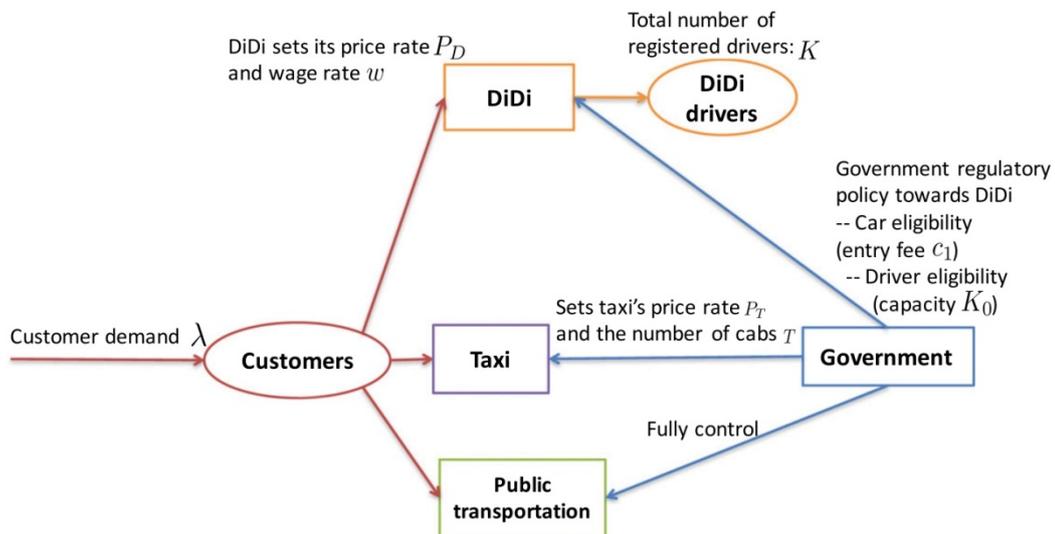


Fig. 3. A Multi-stakeholder ecosystem of transportation services in China

The study's key findings are as follows. First, compared with *laissez-faire* (i.e., no regulation), the study analytical results suggest that a regulatory policy can help the taxi industry to survive in the market. Second, by imposing an entry fee, the number of registered DiDi drivers decreases, and DiDi increases the wage rate so that each registered DiDi driver earns more under this regulatory policy. Third, compared with a complete ban policy, this regulatory policy strikes a balance among different competing performance measures: taxi industry survival, DiDi's profit, DiDi drivers' earnings, and consumer welfare.

Finally, it is worth mentioning that this study also received UCLA Business School, Anderson Review's recognition, and was shared on Twitter.



Fig. 4 UCLA Anderson Review share the research findings on Twitter.