International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Market Entry of Ride - Hailing: Leveraging Restrictive Regulation and Incentive Regulation

Lihua Wu

School of Information Management, Beijing Information Science & Technology University, Beijing 100192, China
Email: *wulihua[at]bistu.edu.cn*

Abstract: ***Focusing on the market entry system for ride-hailing service, the paper explores two kinds of regulation patterns, namely restrictive regulation and incentive regulation. Taking the ride-hailing market of Beijing city as an empirical case, the paper analyzes the selection strategy of market entry regulation for ride-hailing. The research shows that the restrictive regulation in the form of administrative licensing restrains the ride-hailing drivers and vehicles into the market, which may lead to insufficient supply of transport capacity. Comparatively, the incentive regulation in the form of business registration increases the pressure of in-process supervision due to the low market entry thresholds. Therefore, the re-assessment should be conducted in time during the initiative proposal of regulation and after the implementation of regulation. Regulation rules and measures should be adjusted dynamically according to the re-assessment effect and the "appropriate regulation" is suggested t to the ride-hailing market for the adaptive and moderate regulation.***

Keywords: Ride-hailing market, market entry, restrictive regulation, incentive regulation, appropriate regulation

1. Introduction

Sharing economy is a kind of new economic forms totally different from traditional economic models. Along with its boom and growth, the market regulation in conformity with it is also maturing and improving. As one of the most popular applications in sharing economy, ride-hailing has come into the focus of government regulators in its early age. Despite of years of exploration, there exist many issues difficult to be solved in the market regulation of ride-hailing. Especially up to this day, governments in many countries are still facing a dilemma of strategic choice for the market entry of the new business.

On the one hand, ride-hailing initiates an innovative service mode for transportation, extending and strengthening the public transit system. It also promotes the employment and the utilization efficiency of social resources greatly. According to the report released by Research Group of School of Labor and Human Resources of Renmin University of China [1], DiDi, the largest ride-hailing platform in China, has created about 12 million direct employment opportunities and more than 6.3 million indirect employment opportunities for automobile production, sales, fuel filling, maintenance, etc. So from the perspective of economic development and market demand, the government should encourage ride-hailing service and adopt a loose regulation strategy for its market entry.

On the other hand, ride-hailing has an unignorable impact on the benefits of the traditional taxi service and conflicts between the two often arise. For example, taxi drivers in Spain went on strike to protest against what they view as the unfair competition presented by Uber and Cabify, calling for placing limits on the number of licenses given to Uber and Cabify [2]. Sometimes the disapproval of ride-hailing originates from the potential passenger safety risks caused by unlicensed drivers. Uber has been denied a new 15-month license by Transport for London after a report found in at least 14,000 Uber trips, drivers had uploaded photos of themselves to the app linked to cars which they were not registered to drive [3]. Under these occasions, it seems that the government should strictly regulate the market entry of ride-hailing to protect the benefits of incumbent industry and customers' security.

It can be seen from the above that government regulation on the market entry is double-edged. The easy strategy inspires a more energetic business but may result in a disordered market. Comparatively, the tight policy institutionalizes the market but hinders the development of the business at the same time. Then, what is the best way to regulate the market entry of ride-hailing: restrictive, incentive, or leveraging the both to get a balanced view on the market development? This is what we explore in this research. The remainder of the paper is organized as follows. In Section II, we manifest two types of regulation, namely restrictive regulation and incentive regulation. In Section III, we performed an empirical study on the entry policy of ride-hailing market in Beijing City of China and review the policy in terms of the restrictive regulation and incentive regulation theory. In Section IV, we explore the tradeoff between the restrictive regulation and incentive regulation. Finally, we conclude with the research implications.

2. Restrictive Regulation and Incentive Regulation

Regulation is a manner that governments intervene in the emerging markets. Scholars identified various alternative types of regulation in their researches. Masciandaro & Quintyn [4] tested two typical government approaches, helping hand and grabbing hand, to determine the impact of the market structure on the supervisory architecture in financial industry. Wang Shoujie [5]differentiated restrictive regulation and incentive regulation in terms of the direction of regulation force when they explored the regulation in ride-hailing market. Lucas & Boudreaux [6] held public-interest based and public-choice based views when they studied the national regulation on job creation. Although these taxonomies seem different, they are essentially interlinked. Here, we adopt the taxonomy proposed by Wang

Shou-jie [5] to analyze the entry regulation strategy of ride-hailing since it clearly describes the role of government regulation in the development of new markets. Certainly, the opinions of Masciandaro & Quintyn [4] and Lucas & Boudreaux [6] are also combined into our analysis to get a more theoretical and comprehensive perspective.

2.1 Restrictive regulation

Restrictive regulation utilizes strict legal or administrative measures to regulate the market of emerging industries. The rationale of restrictive regulation is public interest or helping hand theory. In the public interest view, the purpose of regulation is to achieve certain public interest related objectives and regulation acts as a helping hand of government to mitigate market failures. Market failures arise when market practices lead to inefficient or inequitable outcomes [7]. For example, the natural monopoly, negative externalities, or information asymmetry are not naturally internalized by the invisible hand of the market. In this case, regulation is taken as an important corrective strategy to curb harmful economic activities, reduce market uncertainty and enhance social welfare.

Restrictive regulation performs authoritative and compulsory government intervention. Usually, it uses the legal instruments such as special administrative licensing to limit the market admittance. Administrative licensing is a kind of important and chartered precaution regulation. For market entry, the applicants not only need to meet the basic legal requirements, but also be subject to the additional restrictions on their identity, qualification or other entry conditions. Therefore, in terms of market development, the outcome of restriction regulation is negative. It prevents a large number of potential entrants from the new business via establishing a set of strict entry rules and hence hinders the expansion of new market to some extent.

2.2 Incentive regulation

In contrast to restrictive regulation, incentive regulation is original from the regulatory capture theory and contestable markets theory. Regulatory capture theory, going under fungible names such as 'interest group' or 'grabbing hand', reveals that government would be liable to be captured by some special interest group (e.g. industry) and give benefits only to the group. In this scenario, government regulation will be consistent with the preferences of the interest group other than the public, which proclaims the possibility of government failure. Contestable markets theory was proposed by Baumul in 1982 [8]. The theory holds that the competitive pressure caused by potential market entrants will threaten the incumbent monopoly enterprise and restrict its behaviors in the contestable situation. When the confidence level of the entry threat increases, the incumbent enterprise will be forced to choose a tenable price with zero profit and make efforts to improve the industrial efficiency [9]. Therefore, what regulators should do is not to restrict entry, but to lower barriers of entry to create a contestable market to optimize the resource allocation [10]. Integrating the thought of the above two theories, incentive regulation aims to maximize the overall welfare of interest group and the society or to realize the optimal allocation of resources by providing incentives to the regulated interest group. The incentives, e.g. introducing competition mechanism, should satisfy the private benefits of the interest group and spur it to take the best action in accordance with the goal of government regulation to achieve incentive compatibility.

In the specific case of market entry, incentive regulation implies the implementation of easy rules that encourage the regulated market actors to achieve access to a desired market. Typically, business registration is used for market entry under the incentive-based case. Different from the administrative licensing, the business registration focuses on the authenticity of information provided by market applicants. Once the information is verified to be complete, true and accurate, applicants can be permitted market admittance on the premise of meeting the basic legal requirements, e.g. over 18 years old for a ride driver applicant. In this relaxed regulation strategy, there will be a great quantity of new participants getting into the market. Therefore, incentive regulation plays a positive role in adding market energy by raising market size. Notably, the lowered entry threshold may lead to some potential risks, such as intensive competition and bad market actors. So post-supervision is particularly important to the incentive regulation.

Table 1: Comparison between restrictive regulation and incentive regulation

Feature	*Restrictive Regulation*	*Incentive Regulation*
Theoretical ground	• Public interest theory	• Regulatory capture theory • Contestable markets theory
Advantage	• Regularizing the market • Reduce market uncertainty • Enhance social welfare	• Adding the market energy • Improving resource allocation efficiency
Disadvantage	• Difficult to entry • Limiting the market capacity • Easy to breed powerful governments and rent-seeking power	• Potential trade and competition risks caused by lowered entry threshold
Typical instrument	• Administrative licensing	• Business registration
Entry requirement	• General legal requirements • Special qualification and entry rules	• General legal requirements • Integrity, authenticity and accuracy of information
Regulation focus	• Pre-regulation	• Post-supervision
Intervention strength	• Greater government engagement	• Fewer government engagement

3. Ride-hailing Market in Beijing

The ride-hailing was legalized in China in July 2016 when the first new policy document about the operation and service of ride-hailing was issued jointly by seven ministries and commissions of Chinese central government. After that, local governments in China have successively promulgated the implementation measures conforming to their local contexts under the guideline of the central new policy. Beijing, the capital of China, released its local policy named *Regulatory Rules for the Implementation of Operations and Service of Ride-hailing* (referred as *Regulatory Rules* hereinafter) in December 2016. The *Regulatory Rules* clearly define the market entry requirements for do business of ride-hailing in Beijing.

Market entry, in the light of economic regulation, is a legal system involving the establishment, verification, and confirmation of the qualification of market entities. Specific to the *Regulatory Rules* of Beijing, it covers a set of regulatory measures on the subject qualification and the entry requirements. Table 2 summarizes the market entry principles manifested by the *Regulatory Rules* of Beijing.

Table 2: Market entry rules

Market Entity	*Qualification License*	*Entry Requirements*
Platform	Business license special for ride-hailing service	•Online and offline service capability •Management systems for operation, safety and service quality •Payment and settlement agreement with bank and other payment institution
Driver	Drive license special for ride-hailing service	•Household registration of Beijing •Driving experience more than three years •No criminal record and no traffic safety violations beyond limit
Vehicle	Transport license special for ride-hailing service	•Registered license plate number of Beijing •Registered for commercial use •Meeting the requirements on wheelbase and exhaust volume of vehicle •Meeting the latest vehicle emission standards implemented by Beijing •Onboard devices for terminal service, positioning and emergency alarm

It can be seen from Table 2 that Beijing municipal government adopts a administrative permission for the market entry of ride-hailing. The market entities including ride-hailing platform, driver, and vehicle should get the corresponding license approved by the government to engage in the ride-hailing business. The regulation strategy of administrative license approval is same as that for traditional taxi service, strictly restricting the entry qualification of market entities of ride-hailing.

Apart from the administrative permission for license, there are other entry requirements for the market entities of ride-hailing. For instance, ride-hailing drivers should hold a Beijing household registration and the vehicles should have a Beijing license plate number to enter the market. Especially for vehicles, the wheelbase and exhaust volume is specified in detail respectively for the five-seat and seven-seat model. Moreover, vehicles used for ride-hailing should be registered with a commercial purpose.

4. Leveraging Restrictive and Incentive Way

Obviously, Beijing city has adopted the restrictive regulation for the market entry of the ride-hailing. Proponents of the strategy advocate that stringent entry controlling has become an indispensable regulatory means for the flourishing market due to the existence of market failures. DiDi Chuxing, a dominant Chinese ride-sharing platform, occupied more than 93% of the national market after it merged Uber's operation in China in 2016[11]. The merger weakened the market competition, leading to the monopolistic superiorities of the platform on the drivers, passengers and price [12][13]. AutoNavi Software Company, a leading digital map, navigation and location service solution provider in China, reported the use of vehicles from ride-hailing services worsened traffic–in Beijing [14]. The congestion index in Beijing has increased significantly due to the rapid growth of ride-hailing since 2015, in which the traffic flow has increased by 10%, the overall driving speed has decreased by 9%, and the traffic congestion index has increased by 20% [15]. Besides the facts above, the ride-hailing operation gives birth to new information asymmetries while it corrects part of them by using information platform to match supplies and demands [16]. A case in point is that passengers know the vehicle model, license plate number and driver's name when they use the service, but they cannot get more safety-related information about the driver and the vehicle due to the inadequate information disclosure or the lack of information check from the ride-hailing platform. For example they can't make sure whether the identity of a driver is authentic and whether a vehicle is in good condition. Therefore, the natural monopoly, negative externalities and information asymmetry were recognized in the ride-hailing market. The market failures of the market need government intervention to protect public interests [17].

Different from their counterpart, a majority of scholars held the opposite opinions against the restrictive strategy adopted in the Beijing market. They argued that the qualification regulation of ride-hailing taking the same administrative permission licenses as that of traditional taxi service violated the essential attributes of sharing economy and restricted the development of ride-hailing market [18][19]. Some entry requirements on household registration, license plate number, wheelbase and exhaust volume of vehicle were identified to be inappropriate and unnecessary since they may lead to the discrimination and unfairness in employment[19][20]and force back lots of vehicles that were supposed to enter the market [21]. Specially, the research of Cai didn't think the market failures in ride-hailing are significant since the business was born with the 'market' spontaneity and its market failures can be cured by market mechanism itself [22]. In fact, the restrictive regulation on ride-hailing has been believed to induce the problem of regulatory capture [23]. For example, the high threshold for market entry of ride-hailing resulted in the reduction of drivers and vehicles and hence the increase of price for ride-hailing service in peak hours, which enhanced the platform revenue but damaged the interests of passengers. The abuse of restrictive regulation may bring about the government failure which is more dreadful than the market failure [24]. Therefore, the restrictive regulation should be used cautiously and the incentive regulation is more encouraged for the new ride-hailing market to safeguard the innovation and competition [5].

So which is the best for ride-hailing market, restrictive strategy or incentive one? It is actually a dynamic issue. No strategy is absolutely the best, as they play different roles at different stages of market development. It can only be said at which stage they are more suitable. In the early days of the ride-hailing market, the market's self-regulation mechanism had not yet been established. Unfair competition and infringement of consumer rights are rampant in the ride-hailing market. Ride-hailing service may lead to negative externalities such as urban diseases and safety hazards. In the event of market failure, it is necessary for the government to intervene in the market to protect the public interest. At this point, restrictive regulation is the best selection. However, as the market develops and gradually matures, restrictive rules will greatly limit market vitality, resulting in insufficient market supply. The government should reduce regulatory efforts, relax regulations and correspondingly increase market supervision during and after events. Hence, the "appropriate regulation" should be adopted to put the ride-hailing market in order. The "appropriate regulation" implies two kinds of meanings: one is adaptive regulation and the other is moderate regulation. Adaptive regulation means the regulation strategy should evolve with the development of market. Moderate regulation refers to the intervention of government in ride-hailing market should be proper, avoiding excessive regulation or insufficient regulation. The "appropriate regulation" emphasizes the flexible application of restrictive and incentive strategy and provides a right way to govern ride-hailing market.

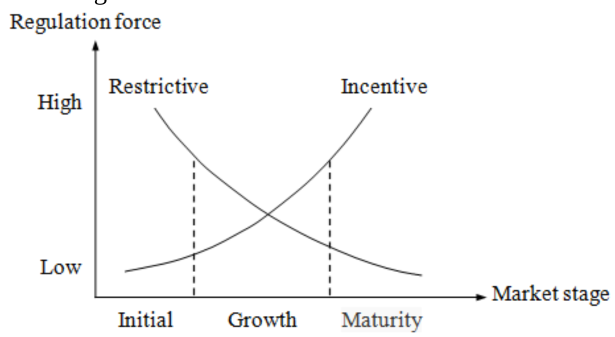

Figure 1: Regulation evolvement with market

5. Conclusion

From the perspective of economic regulation, market entry is a legal system concerning the establishment, verification and confirmation of the qualification of market entities. It includes a set of entity conditions and procedural conditions owed by natural persons, legal persons and organizations to enter the ride-hailing market to engage in ride-hailing activities.

Usually, there are two common forms of market entry regulations. One is restrictive regulation, and the other is incentive regulation. Restrictive regulations set strict admission qualifications for drivers and vehicles, while incentive regulations relax entry restrictions on market entities but with a focus on full process supervision. However, whether restrictive regulation or incentive regulation have their own drawbacks. On the one hand, a one-size administrative licensing system will exclude a considerable number of part-time ride hailing drivers and vehicles from the market, leading to insufficient supply of market transportation capacity. Taking the vehicle regulations in the *Regulatory Rules* as an example, except that private cars have to be withdrawn from the market due to their service life exceeding 8 years, a portion of private cars will have to quit from the market due to the increasing operating costs including vehicle insurance fees, taxes, maintenance fees, annual review fees, and other costs after they convert their private cars into the business vehicles. On the other hand, the incentive regulatory system, which does not establish market entry thresholds, puts particularly enormous pressure on in-process supervision. If the supervision is not in place, it will lead to disorderly competition, serious service quality and security issues in the market. Therefore, on the regulation of entry and exit in the ride-hailing market, it is necessary to balance the dual needs of market development and government regulation.

The government regulatory department has been struggling with the dilemma of releasing and banning ride-hailing services. The dilemma reflects the conflict of interests between different market entities caused by ride-hailing services. The difficulty of law enforcement, as a matter of institutional cost, is a substantive issue rather than a technical one. A comprehensive analysis of cost, benefit and risk is required for the regulatory actions taken in the market. It is also necessary to conduct timely re-assessment during the regulatory proposals and after the implementation of regulatory measures. According to the re-assessment effect, regulation measures should be adjusted and the "appropriate regulation" is suggested to the ride-hailing market.

Acknowledgement

This research is supported by the Beijing Social Science Fund Project: Research on the regulation and supervision system of car sharing market in Beijing (No.16GLB024).

References

[1] Research Group of School of Labor and Human Resources of Renmin University of China. Employment system and employment quantity calculation of DiDi platform, 2019. Retrieved from https://cloud.tencent.com/developer/news/ 492005.
[2] Zhang, D.M.. Taxi strike protest against app-based services in Spain. Xinhua net news, May 30, 2017. Retrieved on 1 June 2020 from http://www.xinhuanet.com/english/2017-05/30/c_136326151.htm.
[3] Doyle, L. Uber LOSES London licence- Court ruling could be END of Uber from TODAY. Express news, Nov 25, 2019. https://www.express.co.uk/news/uk/1208890/Uber-news-today-Uber-London-licence- update-court-ruling.
[4] Masciandaro, D. and Quintyn, M.. Helping hand or grabbing hand?: Politicians, supervision regime, financial structure and market view. The North American Journal of Economics and Finance, 2008, 19(2): 153-173.
[5] Wang, S..J.. Incentive Regulation: Strategies for Market Entry—— A Theoretical Response to the Regulation of "Tailored Taxi"[J]. Law Review, 2017, 35 (03):82-95.
[6] Lucas, D. S. & Boudreaux, C.J.. National regulation, state-level policy, and local job creation in the United States: A multilevel perspective. Research Policy, 2020, 49: 103952.
[7] Molly Cohent & Arun Sundararajant. Self-Regulation and Innovation in the Peer-to-Peer Sharing Economy, University of Chicago Law Review Online, 2017, 82(1): 8,116-133.
[8] Baumul W J. Contestable markets: an uprising in the theory of industry structure. American Economic Review, 1982, 72: 1-15.
[9] Wang Xian-jia, Han Dong, Wang Guang-min. Regulation Mechanism Design for Transmission Market based on Contestable Markets Theory. System Engineering-Theory & Practice, 2007, (6): 111-116.
[10] Huang, Xin-hua. On the Theoretical Theme of New Regulatory Economics. Journal of Yunnan Nationalities University, 2004, 21(5): 46-51.
[11] China e-Business Research Center. Report on the development of China's sharing economy in 2016. http://www.100ec.cn/ zt/upload_data/gxjjbg/gxjjfzbg.pdf, 2017-05-09.
[12] Guo Chuan-kai. A Return to Sharing Economy Attributes and the Selection of Online Car-hailing Regulation. Journal of Shandong University (Philosophy and Social Sciences). 2017, (3): 82-88.
[13] Sun Li-yan. The Rule-of-Law Approaches of Online Car-Hailing under the Negative List Management Mode. Journal of Xiamen University (Arts ＆ Social Sciences). 2018, (6): 127-137.
[14] AutoNavi Software Company. Traffic analysis report of major cities in China in 2015. http://www.cbdio.com/BigData/ 2016-01/29/content_4568077_all.htm.
[15] Zhou Wenting. National People's Congress deputies propose to demand of reasonable control of the scale of ride-hailing market. China Daily. http://cnews.chinadaily.com.cn/2017-03/10/content_28512066.htm.
[16] Chen, Y.F. The Regulatory Structure of "Internet Plus": A Case Study on "App-Based Ride and Taxi Services". The Jurist, 2017, (1): 17-31.
[17] Xiang chao. Legal Regulation of Online-Booking Taxi: Logic and Ideas. Journal of Southwest University of Political Science ＆ Law, 2017, 19(6): 53-62.
[18] Shen Kai-ju, Chen Xiao-ji. Research on government regulation of ride-hailing from the perspective of sharing economy. Hubei Social Sciences, 2017, (05):135-143.
[19] Chen Dan， Chen Yang. On Ｒegulation of Network Cars under Sharing Economy Mode. Hebei Academic Journal, 2018, 38(2): 201-205.
[20] Wu Qun-qi ， Zhang Yu-qi. The Innovation of Regulations and New Problems on the Internet Booking Taxi under the Shared Economy. West Forum, 2018, 28(1): 65-70.
[21] Zhen Li-na, Lu Yao, Shen Ying. Research on market entry system of ride-hailing. Journal of Yangtze University (Social Sciences).2018, 41(4): 70-72, 88.
[22] Cai Le-wei. The game space of new policy regulation on ride-hailing. Leadership Science, 2017, 08:25-27.
[23] Shen, Guang Ming. Regulation Strategy of Sharing Economy: based on the Subsidiary Principle. Contemporary Law Review, 2018, 32(3): 48-59.
[24] Xue Zhi-yuan. Research on the quantity regulation of ride-hailing. Theory and Reform, 2016, (6): 108-113.