

Regulating Ride Hailing Market: Evidence from the Policy Analysis of National-level Government in China

Lihua Wu¹, Jing Li²

¹School of Information Management, Beijing Information Science & Technology University, Beijing 100192, China

Email: wulihua@bistu.edu.cn (corresponding author)

²Business School, Beijing Normal University, Beijing 100875, China

Email: lij@bnu.edu.cn

Sponsoring Information: 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).

Abstract: This paper conducts a text analysis on the policy documents issued by the national-level governments to find the policy layout and the regulation trends in the field of ride hailing in China. The study is carried out from the four dimensions: policy quantity, policy content, policy maker and policy instrument under a comprehensive research framework. The research finds that China has established the preliminary regulation system on the ride hailing market at national-level, and the regulation covers multiple facets including comprehensive and instructive guideline, market entry and exit, service standard and competence, information technology, contingency management, consumer protection, and financial subsidy. Also, the research shows that the cooperation among multiple policymakers plays an important role in the formulation of inter-department policies. At present, the authority-based policy instrument dominates the market but the information-based and finance-based tools will be used widely to stimulate the development of the ride-hailing market.

Keywords: Ride hailing; Government regulation; Policy analysis; Sharing economy

1. Introduction

Sharing economy has experienced exponential growth in recent years due to its benefits such as promoting the reuse of social idle resources, reducing the environmental pressures, facilitating people's lives and initiating new ways for economic development. However, sharing economy also gives rise to many new problems and challenges. On the one hand, sharing economy lowers the threshold for a large number of non-professional labors to enter markets to provide goods and services, which may create a lot of regulatory ambiguity and rule vacuum zones (Tang, 2015). On the other side, sharing economy has resulted in intense conflicts of interests with traditional industries (Shen, 2018). For example, incumbent taxi drivers were reported to participate in organized strikes to protest against competition from private cars using taxi apps in the urban transportation industry (Ma, 2015). Furthermore, problems including operation safety and consumer protection, price regulation and labor protection, personal privacy and information security protection, as well as online financial settlement and payment are also need be solved to ensure the healthy development of sharing economy (Chen, 2017; Xiang, 2017). The dilemmas of sharing economy are looking towards some form of regulations.

The regulation of sharing economy is multi-layered. It can be regulated by government, industry or self-regulated by sharing economy firms themselves. The government regulation is undoubtedly the most authoritative and effective one among all the three levels. China's regulation of sharing economy began with the ride hailing market. Ride hailing is a kind of car sharing service which provides the non-cruising online booking taxi service through matching supply and demand information based on mobile internet technology. It is the earliest and the most active form of sharing economy in China. The penetration rate of ride hailing users to Internet users increased from 32.3% to 47.4% from 2016 to 2019, and the passenger size was more than 40 million which reached 37.1% proportion in the total taxi passenger volume in 2019 in China (China State Information Center, 2020). In order to understand the current state and the regulation framework of sharing economy in China, this paper carries out a policy analysis in the field of ride hailing in terms of policy documents issued by the central government of China. The paper is organized as follows. Part II introduces the research methodology and research framework. Part III analyzes the policy documents issued by China's central government from multiple facets. Part IV summarizes with the research conclusions and regulation suggestions.

2. Research Framework

2.1 Research methodology

The policy document is the specific reflection of the behavior and expectation in a certain field of the government. It is the important basis of policy analysis. Policy text analysis is a knowledge creation process oriented to the practical application of public administration area. It has become a main method to conduct quantitative research on

policy due to its objectivity and efficiency (Wang, Wang, & Chen, 2019). This paper uses the text analysis method to conduct a case study on the government policy implemented in the ride hailing market in China so as to identify the orientation and strategic trend of government regulation and to review and evaluate the regulation in this field.

2.2 Data collection

Policy documents used in the case study were all collected from the official websites of the China's central government and its directly affiliated ministries. These documents represent the policy layout in the national level. They are the guideline and the basis for the policy-making of local government. So the central-level documents lead the direction and the logic of market regulation. This is why we select the policy documents of the central government rather than the local government as the source of case study.

To guarantee the typicality and the accuracy of the collected policy documents, the following screening principles are adopted. One is all documents gathered are directly related to ride hailing, requiring explicit reference to keywords such as ride hailing, care hailing, ride sharing in the document title or full text. The other is the collected documents should have the complete information including document title, full text, index number, issuing agency, issuing date, etc. Therefore, the documents for policy interpretation are not included though they contain the referred keywords. Since the first policy about the ride hailing in China was released in July 2016, the time period of data collection is from the July 1, 2016 to April 30, 2020. Finally, 20 policy documents released by the central government were remained as the research target after manual confirmation and expert review.

2.3 Research framework

The policy research framework is recognized as three categories: vertical process framework, horizontal network framework and multidimensional context framework (Ouyang, 2019). The vertical process framework is prone to analyze the policy process in terms of time sequence. The horizontal network framework mainly considers the policy subsystem, a collection of policy participants who influence and control the policy process. The multidimensional context framework integrates the former two, namely policy process and policy network, for comprehensive analysis. We adopt the multidimensional context framework here to gain a combined diagnosis of the policy regulation for the ride hailing market. In our framework, the vertical analysis is carried out on the policy quantity and policy content which go forward over time. The horizontal analysis focuses on the two parts including policy maker and policy instrument. Besides, the influence of external environmental on policymaking is taken into account to characterize the economic and social attributes of the policy. The research framework is shown in Figure 1.

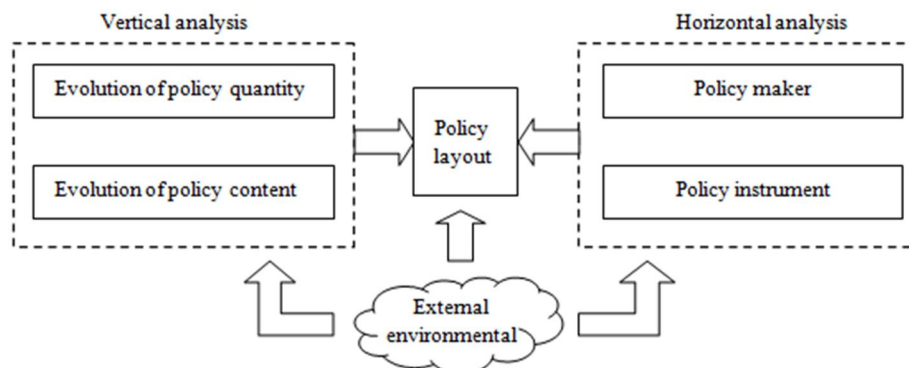


Figure 1: Research framework

3. Policy Analysis

3.1 Policy quantity

Since the ride hailing service emerged in China around 2012, the market regulation has been in a vacuum. The first regulatory document, *Interim Regulatory Measures for Operations and Service of Ride Hailing* (referred as *Interim Regulatory Measures hereinafter*), was jointly issued by seven central departments in July 2016, which marked the start of ride hailing regulation in China. As a young policy field, the development of the policy can't be divided into several different stages yet. But we can actually find some clues from the frequency distribution of policies released over time.

According to Figure 2, a series of regulatory documents were released subsequently to fill the policy gap in the field of ride hailing in 2016. Therefore, the number of policy documents increased rapidly in this period, which manifested the initial outbreak of government regulation. However, the policy quantity shrank fast in the next year. This may be caused by two reasons. One is the government was waiting for the implementation effect of the policy released in 2016 and was cautious about the release of new documents. The other is the urgent policies have been put in place in

2016, so there are no many necessary documents need be drafted in 2017. The policy quantity is relatively stable during the following three years. Basically, the policies were promulgated in terms of the development demand of the ride hailing market at present. It reflects the policy layout mode of the central government, which is step-by-step and initiates on-demand.

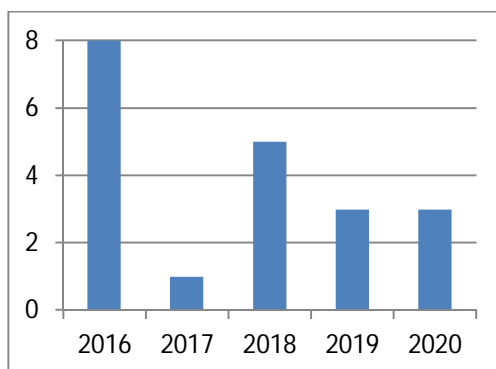


Figure 2: Number of policy documents over time

3.2 Policy content

The released policies focus on seven regulation areas: comprehensive and instructive guideline, market entry and exit, service standard and competence, information technology, contingency management, consumer protection, and financial subsidy, as shown in Table 1.

Table 1: Policy content

Year Content	2016	2017	2018	2019	2020
Comprehensive & Instructive guideline	<ul style="list-style-type: none"> Interim Regulatory Measures including service licensing requirements , operation behavior norm, market supervision, legal responsibility and scrapping standard of vehicle 	<ul style="list-style-type: none"> Encouraging development of ride sharing 	<ul style="list-style-type: none"> Instructions on accelerating healthy development of market 	<ul style="list-style-type: none"> Revision of Interim Regulatory Measures 	---
Market entry & exit	<ul style="list-style-type: none"> rules for drivers' professional qualification management Workflow for vehicle entry and exit 	---	---	---	---
Service standard & competence	<ul style="list-style-type: none"> credentials form of service license Industry standard of operation and service Technical requirements for vehicle timing Workflow of online service competence identification for platform 	---	<ul style="list-style-type: none"> Reputation assessment of service quality 	---	---
Information technology	<ul style="list-style-type: none"> General technical requirements of information interaction platform for service supervision 	---	<ul style="list-style-type: none"> Operation management measures of information interaction platform for service supervision 	---	---
Contingency management	---	---	<ul style="list-style-type: none"> Joint supervision during and after contingency Security management 	---	<ul style="list-style-type: none"> Requirements for epidemic prevention and control
Consumer protection	---	---	---	<ul style="list-style-type: none"> deposit management and refund pricing mechanism 	---
Financial subsidy	---	---	---	---	<ul style="list-style-type: none"> Secured loan for starting a ride hailing business Financial subsidy for new energy vehicle

Comprehensive and instructive guideline: Some policies cover several topics or even complete rules and measures for ride hailing regulation. For example, Interim Regulatory Measures mentioned earlier is a prime example. It sets the market entry criteria, operation behavior norm, market supervision, legal responsibility and scrapping standard for ride hailing platform, drive or/and vehicle. Its revised edition formulated in 2019 appropriately loosens the conditions for foreign capital entering the market. As it should be, there are other policies, such as those issued in 2017 and 2018, only show the tendency and supporting attitude of the government towards the ride hailing market, without detailed clauses.

Market entry and exit: The ride hailing platform, drive and vehicle are the three main participants in the ride hailing market. Each of them must have the professional qualifications to enter the market. The Interim Regulatory Measures lays down the entry requirement for business license. However, how to manage the professional qualification of market actors? And what's the workflow for actors entering and withdrawing from the market? The policy documents about market entry and exit answer these questions.

Service standard and competence: This is a very important area of ride hailing regulation. The policies of this area elaborate the implementation details related to ride hailing service from the operational level to the strategic level. For example, concrete form of service license, technical requirement for vehicle timing, and workflow to affirm the online service competence of platforms all belong to the operational-level problems while the industry standard of operation and service and the reputation assessment of service quality are strategic management issues. These policies are the supplements and specifying of the Interim Regulatory Measures.

Information technology: Ride hailing is a kind of technology-driven business model. Information technology enhances the efficiency of business operation and market supervision. The central government has constructed the national online information interaction platform for ride hailing supervision. The general technical requirements and operational administration measures of information interaction platform were shaped to ensure the data sharing between the ride hailing platforms and the government departments for industry supervision.

Contingency management: The policies of contingency management are concentrated on lowering the social and economic impact caused by external events. For instance, several accidents resulting in the physical casualties of passengers took place during the ride-hailing trips in 2018, which gave rise to the special demands for new policies. The central government in China launched an urgent response on multiple fronts including the policies about joint supervision during and after contingency and security management. After the outbreak of COVID-19, the government has claimed the requirements for the strict implementation of the epidemic prevention and control during ride-hailing trips. Although these policies were bred by the external events and environment, they actually imply the inner necessity of promoting the healthy development of the ride-hailing market.

Consumer protection: In addition to physical safety, consumer protection also involves economic benefits. The central government worked out the policies about pricing and consumers' deposit management. The policies ask the relevant departments and ride hailing platforms to rationalize the price formation mechanism, making the dynamic adjustment of the price more reasonable. At the same time, the cooperation between the ride hailing platform and banks is encouraged to guarantee the convenient and fast return of consumers' deposit.

Financial subsidy: The government's financial subsidy isn't specialized for ride hailing market but covers it. The formulation of subsidy policy is influenced by the development demands of economy and business markets. For example, the policies issued in 2020 are to promote the market application of new energy vehicles and stimulate the resumption of work after the epidemic risk reduced.

3.3 Policy maker

According to statistical analysis, there are 16 central-level departments to participate in the formulation and promulgation of policies related to ride hailing. The Ministry of Transport issued 10 policy documents independently and totally took part in the formulation of 17 documents out of 20 documents. Thus it is very clear that the Ministry of Transport has played a leading role in the construction of relevant policies and administration of the ride hailing market.

In addition, Figure 3 shows that there are 10 policy documents, amounting to the fifty percent, jointly made by at least two departments. It proves that the regulation of ride hailing is a cross-department administration issue and need the cooperation and coordination among multiple departments. Some policies, e.g. Interim Regulatory Measures, even were collectively released by seven departments, aligning an intensive integration of workflows across different departments.

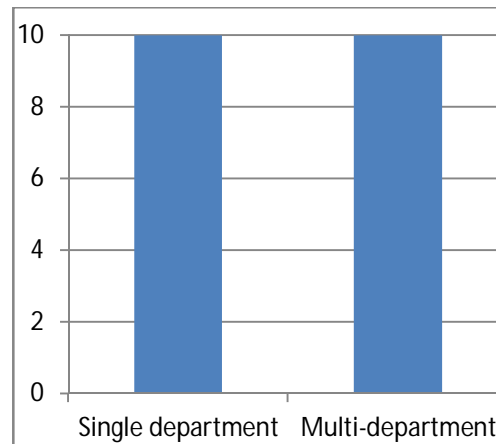


Figure 3: Policy volume of single department and multi-department

3.4 Policy instrument

Policy instrument is an important means for the government to turn policy intention into implementation to realize the policy objective and government's responsibility. According to the different resources used by the government, the policy instrument is categorized into four groups: authority-based, information-based, finance-based and organization-based (Woolthuis, Lankhuizen, & Gilsing, 2005). Aligning with the four categories, all instruments are used by the ride hailing policies except the organization-based one. The adoption of the policy instrument is illustrated in Figure 4.

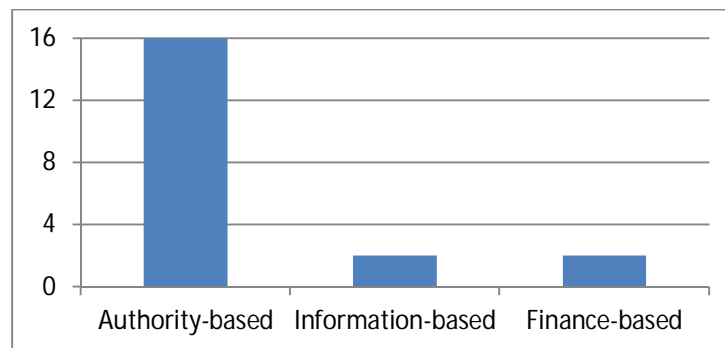


Figure 4: Category of policy instrument

Authority-based instrument is used widely to regulate the ride hailing market at present. This kind of instrument establish the mandatory rules for market participants to obey, fully embodies the power of the government to implement public administration. Although authority-based instrument is likely to suffer from the loss of efficiency, it may be the best way under certain conditions, e.g. market failures in the early stage of a new industry. Compared with the authority-based instrument, information-based and finance-based instruments are incentive. For example, financial subsidies encourage rather than order market actors to take measures. They are a kind of policy forms combining the government intervention with market mechanism. Currently, the information-based and finance-based instruments are seldom employed in the ride hailing market.

4. Conclusion

On the basis of the policy analysis above, it can be concluded that the market regulation of ride hailing in China witnessing positive changes from scratch. Policies addressed to market entry and exit, business operation and service, information and technology, contingency management and consumer protection, as well as financial subsidy have taken preliminary shapes. The close cooperation for policy-making has also been established among multiple departments at the central-level. Moreover, the authority-based, information-based and finance-based policy instruments were properly used against problems appearing in the ride hailing market.

However, being a young policy field, the regulation of ride hailing still need be improved in several ways. First, the information disclosure mechanism should be established. Of all the market actors including government, ride hailing platform, drive and passenger, the former two grasp a large amount of information and gains market dominance while the driver and the passenger is in a weak position for information acquirement and access. Information imbalance may

lead to unfair market manipulation and the vulnerable sides of information are exposed to the market risks. The government should make its best efforts to promote the transparency and availability of information so that drivers and passengers can make favorable choices based on the information obtained. Second, the emphasis of policy instrument should be gradually transferred from authority-based to information-based and finance-based. At present, authority-based instrument is the dominant way for ride-hailing regulation. However, the proportion of incentive policy instrument should be enhanced with the increase of market maturity. At the same time, a more reasonable and preferable combination should be constructed through the coordination and complementation of three types of policy instruments. Finally, the industry organization and ride hailing platforms should be introduced into the regulation system. The current regulator of the ride hailing market is the government at all levels. The role of industry and platform is ignored. In fact, the industry and platform have dual identities. They are the side regulated, but they are the regulator too. The self-regulation of industry and platform will undoubtedly make the market regulation more intensive and effective.

References

- Chen, Y. F. (2017). The Regulatory Structure of “Internet Plus”: A Case Study on “App-Based Ride and Taxi Services”. *The Jurist*, (1), 17-31.
- China State Information Center (2020), China's share economy development report 2020. [Online] Available: <http://www.sic.gov.cn/News/568/10429.htm> (June 1, 2020)
- Ma, C.(2015). *Taxi strike spreads to more cities*. China Daily news, January 14, 2015. [Online] Available: http://www.chinadaily.com.cn/china/2015-01/14/content_19316226.htm (May 30, 2020)
- Ouyang, J. G. (2019). The Policy Gene, Policy Circumstance, and Policy Treatment as an Analytical Framework. *Chinese Public Administration*, (11), 86-91.
- Shen, G.M. (2018). Regulation Strategy of Sharing Economy: based on the Subsidiary Principle. *Contemporary Law Review*, 32(3), 48-59.
- Tang, Q.L.(2015). Regulation Mode for “Special Car” in Sharing Economy. *China Legal Science*, (4), 286-302.
- Wang, J, Wang, X.X. & Chen, X.B.(2019). Research on the Science & Technology Resource Management Policy Based on Textual Analysis: A Case Study of Hubei. *Information Studies: Theory & Application*, 42(5), 82-86.
- Woolthuis, R. K., Lankhuizen, M., & Gilsing, V. (2005). A system failure framework for innovation policy design. *Technovation*, 25(6), 609-619.
- Xiang, C. (2017). Legal Regulation of Online-Booking Taxi: Logic and Ideas. *Journal of Southwest University of Political Science and Law*, 19(6), 53-62.