

## **Research on the Administrative Regulatory Model of Road Traffic: Taking "Online Car-Hailing Services" as an Example**

### CHENG Li<sup>[a],\*</sup>

<sup>[a]</sup> Inner Mongolia Police Vocational College, Hohhot, Inner Mongolia, China.

\*Corresponding author.

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### Abstract

With the rise of the Internet Plus concept, the sharing economy has integrated into the transportation services, and the online car-hailing industry has developed rapidly. While meeting the diversified transportation needs of the public, it has also led to conflicts and controversies with traditional taxis in terms of laws and policies. The emergence of new things inevitably breaks through the closed and inefficient existing systems. Faced with innovation, it is normal for regulatory measures to lag behind. Regulatory authorities should lower the barriers to entry, allow multiple market entities to compete fully, and should not adopt a one-size-fits-all approach to regulate online car-hailing services. Instead, they should encourage innovation, change their regulatory mindset, and transform their regulatory approaches to standardize and guide the industry, thus achieving a reasonable management of the emerging sector.

**Key words:** Transportation; Online Car-Hailing; Regulation

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# I.1 Analysis of the Characteristics of the "Online Car-Hailing" Industry

As we all know, "online car-hailing" refers to a service that utilizes mobile Internet technology to reserve cars through dedicated platforms. Similar to taxis, "online carhailing" provides passengers with pre-booked, point-topoint transportation services charged based on mileage. Therefore, in determining whether the same regulatory approach should be applied to "online car-hailing" as with traditional taxis, an analysis should start from its nature, business model, and operational methods.<sup>2</sup> By identifying the differences between "online car-hailing" and the

## 1. ANALYSIS OF THE CURRENT GOVERNMENT REGULATION OF THE "ONLINE CAR-HAILING" INDUSTRY

In 2015, the most widely discussed topic in the Internet

<sup>&</sup>lt;sup>1</sup> Refer to Article 64 of the "Road Transport Regulations" and Article 48 of the "Regulations on the Management of Taxi Operation Services".

<sup>&</sup>lt;sup>2</sup> Refer to the Notice on Strictly Prohibiting Car Rental Companies from Facilitating Illegal Operations, issued by the Beijing Municipal Commission of Communications [2014] No. 483.

traditional taxi industry,<sup>3</sup> a clear understanding can be gained regarding whether it should be regulated and how the regulatory approach should be transformed.

### 1.2 Reasons for the Popularity of "Online Car-Hailing"

With the innovation of "Internet Plus Transportation" services, China's transportation industry has entered a new development stage. Compared to the traditional taxi industry, the emergence of "online car-hailing" services has brought the public more comfortable and convenient services. The reasons for the emergence of "online car-hailing" can be mainly attributed to the following two aspects:

# **1.2.1 "Online car-hailing" addresses the information asymmetry in the traditional taxi industry**

Information symmetry is the most significant difference between "online car-hailing" and traditional taxis. In the context of the Internet era, real-time information transmission effectively solves the shortcomings and constraints of traditional taxi consumption. For example, when a passenger needs to use "online car-hailing" services, they first publish their travel information through a mobile phone. The driver receives the information in real-time through their terminal device and responds to the passenger. As a result, not only does it improve market efficiency and reduce the driver's empty driving rate, but it also reduces passenger waiting time. Secondly, before the transaction is made between the passenger and the driver, the passenger already knows the price for the ride, effectively avoiding behaviors such as detours and price gouging that often occur in traditional taxis. Furthermore, information such as the identities of both parties and the travel route is sent in real-time to the "online car-hailing" company to address the safety concerns associated with traditional taxis. Finally, after completing the transaction, passengers have the right to evaluate the quality of the driver's service through the software, encouraging drivers to provide high-quality service. Consequently, the premise conditions for regulating the quantity and price of traditional taxis no longer exist.

# **1.2.2 "Online Car-Hailing" Disrupts the Monopoly of the Traditional Taxi Industry**

Currently, in most areas of China, taxi licenses are circulated through government bidding or auctions. With the implementation of the franchise system, companies are also introduced to manage the taxi industry. The total number of taxis is controlled through quantity regulation, making the operating rights of taxis a "scarce resource."

This inevitably gives rise to monopolistic operations, and in some areas, there may even be exclusive monopolistic interest groups. Taxi drivers have occasionally resorted to collective strikes to impede government efforts to increase the number of taxis. Due to the control of the taxi industry's total quantity, the government has stopped approving new taxi operating licenses, preventing new investors from entering the industry. As a result, valuable resources are excluded, and existing taxi companies are not concerned about losing market share. This inefficient allocation of resources leads to a decline in production efficiency. Relying on government-controlled quantity, taxi companies do not need to invest significant amounts of capital, have limited involvement in operations, and lack effective mechanisms for introducing incentives. Therefore, the emergence of "online car-hailing" services has disrupted the monopoly status of traditional taxis by utilizing internet platforms to provide personalized services to users, effectively alleviating the problem of difficulties in hailing taxis for the public.

# **1.2.3** The Emergence of "Online Car-Hailing" Services Meets the Public's Transportation Needs

With the development of the economy, residents' incomes have continuously increased, leading to a significant rise in the proportion and frequency of people taking taxis. In cities like Beijing, although there are public transportation options such as subways and buses, during peak commuting hours in the mornings and evenings, the transportation capacity still cannot meet the demands of the population. Congestion and overcrowding are widespread issues. Additionally, Beijing has implemented measures such as controlling and allocating the number of private cars and implementing license plate restrictions, as well as charging fees for temporary parking. These actions have reduced the number of private cars on the roads. At the same time, the number of taxis has not increased, and the lack of competition within the industry has resulted in suboptimal utilization of transportation capacity, leading to an imbalance in supply and demand. The popularity of "online car-hailing" services can be attributed, to a large extent, to the fact that they achieve a "win-win" situation where both parties benefit and meet their respective needs.

### 1.3 Operational Mechanism of "Online Car-Hailing" Services

The widespread adoption of smartphones and mobile internet is a crucial factor behind the rise of "online car-hailing" services. As smartphones become more affordable and mobile internet rapidly develops, the network environment has improved gradually. Mobile networks have evolved from 2G to 4G, providing favorable conditions for the development of mobile apps. The comprehensive development of mobile internet has brought revolutionary changes to the transportation sector, leading to the emergence of "online car-hailing" software platforms.

<sup>&</sup>lt;sup>3</sup> Refer to Article 14 of the "Beijing Municipal Regulations on Taxi Management": For unauthorized operation of taxi services, the competent transportation administrative department shall temporarily confiscate the vehicles, order the cessation of business activities, confiscate illegal gains, and impose fines of 10,000 to 20,000 yuan per vehicle.

Currently, the main companies operating "online carhailing" services in China are Didi Chuxing and Kuaidi Zhuanche. Their business models primarily involve setting up corresponding "online car-hailing" platforms to integrate passenger and driver information. Specifically, passengers submit their ride requests to the platform, which then assigns the requests to drivers, facilitating real-time matching between passengers and drivers to provide services.



### Figure 1 Operational Mechanism of an Online Car-Hailing Platform

Depending on the specific operational mechanisms of different "online car-hailing" companies, they can be classified into several categories:

### 1.3.1 Online Car-Hailing Platform + Company-Owned Rental Vehicles + Full-time Drivers/Driver Service Companies

In September 2007, Shenzhou Rental Car was established in Beijing, primarily providing consumers with short-term rentals, long-term rentals, and financing leasing services. On January 28, 2015, Shenzhou Rental Car extended its business to the online car-hailing field and established Shenzhou Zhuanche, which focuses on providing highquality services for the upscale business travel market. Shenzhou Zhuanche's business was developed based on Shenzhou Rental Car, so the vehicles used by Shenzhou Zhuanche are all company-owned rental vehicles. In general, the operational mechanism of Shenzhou Zhuanche is as shown in the diagram below:



### Figure 2

#### Shenzhou Zhuanche Operational Mechanism

## **1.3.2 Platform for Hire Vehicles + Leasing Companies** + **Driver Dispatch Companies**

On August 19, 2014, DiDi company launched "DiDi Special Car" service to provide high-quality services for upscale business individuals. Currently, this service is available in major cities such as Beijing, Guangzhou, Shenzhen, Shanghai, Hangzhou, Xiamen, and Zhengzhou. Unlike Shenzhou Zhuanche, DiDi Special Car platform provides real-time and scheduled personalized high-end business travel information to leasing companies and driver dispatch companies. Regarding vehicle selection, DiDi Special Car adopts a cooperative and franchising model. DiDi Special Car cleverly utilizes the wide availability but low utilization rate of domestic car rental resources by partnering with operating leasing companies. This approach not only significantly increases the utilization of idle vehicles for partner companies but also saves substantial costs for vehicle procurement and maintenance for DiDi itself. It eliminates the risks of excessive vehicle use or scrapping in the later stage and effectively reduces the investment threshold. The operational mechanism of DiDi Special Car is shown in the following diagram:



Figure 3 Operational Mechanism of Didi Chuxing

### **1.3.3 Online Car-Hailing Platform + Private Vehicles + Private Vehicle Owners**

Uber was founded in Silicon Valley, USA in 2009 and is considered the pioneer of global on-demand ridehailing software. Over the past six years, Uber has become a technology company operating in more than 300 cities across 60 countries and regions. In February 2014, Uber officially entered the Chinese market with an event held in Shanghai. Unlike Shenzhou Zhuanche and Didi Zhuanche, Uber manages privately owned vehicles through its technology platform. Private vehicle owners serve as drivers and engage in operations through the Uber network platform.

Becoming an Uber driver is relatively straightforward. Firstly, Uber requires that the registered vehicle must have a local license plate for the selected region and the vehicle should be a new car purchased within the last five years with a bare car price of over 100,000 RMB. Afterwards, drivers can simply fill out the basic information on the official website and wait for approval. If the application passes the review within 24 hours, the individual becomes an Uber driver. The operational mechanism of Uber is illustrated in the diagram below:



Figure 4 Operational Mechanism of Uber

## 2. ANALYSIS OF THE NECESSITY FOR GOVERNMENT REGULATION OF "ONLINE CAR-HAILING"

Firstly, the vehicles under the "online car-hailing" platforms meet the characteristics of commercial vehicles. From the analysis of the operational mechanisms of "online car-hailing" services mentioned earlier, although the platforms provide information matching services and appear to separate drivers and vehicles, they essentially provide integrated passenger transportation services, which fall within the scope of regulation under the "Road Traffic Safety Law" and the "Road Transport Management Regulations." Therefore, they should be subject to regulatory oversight.

Secondly, the information security of "online carhailing" platforms cannot be guaranteed. Compared to the traditional taxi industry, "online car-hailing" platforms primarily operate based on information matching transactions. As seen from the analysis of the characteristics of the "online car-hailing" industry, passengers must go through the platforms to access their services. During this process, the platforms store a large amount of user information, and any data breach could potentially involve issues of personal privacy and security.

Furthermore, there are safety risks for both passengers and drivers. On June 28, 2015, a "online car-hailing" driver in Chengdu, named Huang, was robbed and dragged to death by a passenger named Li during a ride. On May 29, 2015, a female passenger named Ayin (alias) was raped by a driver named Zheng while using an "online car-hailing" service in Guangzhou. On July 22, 2015, a conflict over fare issues between a "online car-hailing" driver named Yang and a passenger named Cao resulted in the murder of Yang by Cao. The question of "who is responsible for the safety of 'online car-hailing'" became a major concern. In addition, concerning traffic accidents, although some major "online car-hailing" companies have direct cooperation with domestic insurance companies and purchase different types of insurance, there are still uncertainties regarding whether private vehicles have the same insurance coverage. The introduction of insurance by Didi Chuxing, for example, only focuses on the rental car business, while it remains unclear if private vehicles have the same insurance coverage. From the perspective of insurance companies, whether passengers can obtain compensation after an accident mainly depends on the nature of the "online car-hailing" service. For rental cars, since they are registered as commercial vehicles, they must purchase carrier liability insurance before operating, ensuring that insurance companies will provide compensation in the event of an accident. However, for private vehicles affiliated with "online car-hailing" platforms, due to the involvement of illegal operations, the various liability insurances purchased beforehand may face rejection by insurance companies on the grounds that the vehicle owner changed the usage nature of the vehicle without permission, thus refusing compensation claims.

## 3. SPECIFIC REGULATORY MODELS FOR "ONLINE CAR-HAILING" IN CHINA

"Online car-hailing" services are engaged in passenger transportation, which falls under the transportation industry. According to the relevant provisions of China's "Road Transport Regulations" and "Regulations on the Operation of Taxi Services," conducting road transportation operations without obtaining the necessary permits is considered illegal. On the evening of January 8, 2015, the Ministry of Transport published a statement on its official website, clearly stating that "online carhailing" services should provide differentiated services in competition with traditional passenger transportation services, but private vehicles are prohibited from participating in "online car-hailing" platforms. In response to the Ministry of Transport's stance, some local law enforcement agencies began cracking down on illegal "online car-hailing" activities. However, different regions have adopted varying regulatory approaches. Overall, two main models have emerged, with Beijing and Shanghai as representatives:

### 3.1 Beijing Model: Prohibition of Private Vehicles and Leased Vehicles From Engaging in "Online Car-Hailing" Services

Firstly, according to the relevant provisions of the "Decision of the State Council on Setting up Administrative Licensing for Administrative Examination and Approval Projects that Require Retention" and the "Beijing Municipal Regulations on the Management of Taxi Services," taxi services that provide passenger transportation and charge fees must obtain corresponding qualifications and permits. Secondly, according to the "Beijing Municipal Regulations on the Administration of Car Rentals," companies providing rental vehicles are prohibited from providing drivers to lessees, and lessees do not have the right to sublease vehicles. Furthermore, in a notice issued by the Beijing Municipal Transportation Committee on August 1, 2014, titled "Notice on Prohibiting Car Rental Companies from Facilitating Illegal Operations," it was reiterated that vehicles used for car rentals by car rental companies must be owned by the operators of the car rental companies, and car rental companies are prohibited from providing facilities for those engaging in illegal operations under the guise of car rentals. The "Beijing Municipal Regulations on the Management of Taxi Services" also stipulate the relevant fines. Currently, most regions in the country have adopted a similar regulatory model to Beijing, prohibiting private vehicles from participating in "online car-hailing" platforms or operating through affiliation with leasing companies.

### 3.2 Shanghai Model: "Four-Party Agreement"

On October 8, 2015, the Shanghai Municipal Transportation Commission issued the "Shanghai Taxi Operation Qualification Certificate" to the Didi Chuxing platform. Didi Chuxing obtained the operational qualification for the online car-hailing platform, becoming the first platform in the country to receive such certification. Shanghai became the first city in the pilot program for "online car-hailing" regulatory models to implement this system. Unlike the Beijing model, Shanghai has adopted an open attitude towards "online car-hailing," opening up a new chapter for the legalization of these services.

According to reports, the Shanghai government has led the transportation department, online car-hailing platforms, drivers, and operating vehicles to sign a "fourparty agreement." This agreement allows "online carhailing" services under leasing companies to operate legally if they meet the requirements of comprehensive insurance coverage, driver training, and platform qualifications. Although there is no unified consensus on whether private vehicles can engage in "online carhailing" services, based on Shanghai's current stance, any vehicle that meets the operational conditions can join the platform, and the legality of private vehicles providing "online car-hailing" services has not been completely denied.

Looking at the plan introduced by Shanghai, it adopts a governance model of "government regulating the platform, and the platform managing the vehicles." Although it focuses more on mid-term and post-event supervision, it also establishes corresponding entry thresholds. For the government, "online car-hailing" platforms not only need to have relevant corporate qualifications but also obtain internet qualifications and relevant telecommunications business operation permits. The information and data held by the platforms must be accessible to regulatory platforms, and the servers of the "online car-hailing" platforms must be located within mainland China.

In terms of self-regulation by the "online car-hailing" platforms themselves, there are three aspects to consider. Firstly, vehicle regulations: setting access thresholds for vehicles, with clear requirements for vehicle grade, model, age, accident records, and more. Vehicles must be covered by comprehensive motor vehicle insurance and third-party liability insurance purchased by the platform. Vehicles that reach the income limit must fulfill tax obligations according to the law. Vehicles need to be monitored and inspected by the platform's backend for operational services. Secondly, personnel regulations: "online car-hailing" companies conduct entry audits for personnel involved in providing services, setting age, driving experience, and driving record thresholds. They establish training systems and provide unified training before onboarding to ensure that drivers have a grasp of safe driving techniques and possess sufficient safety awareness. Thirdly, service regulations: "online car-hailing" companies conduct strict safety checks on personnel engaged in providing services. They establish uniform requirements for service standards, establish passenger complaint channels, and effectively protect the safety and interests of passengers.

The regulatory approach of the Shanghai model sees a shift in government enforcement from managing vehicles to managing platforms. Against the backdrop of the "Internet Plus Transportation" era, this model sets an example for innovative law enforcement methods and changes in regulatory thinking.

From the attitudes of Beijing and Shanghai towards "online car-hailing," it can be seen that the Beijing model is more aligned with the management measures of the Ministry of Transportation and tends to adopt a management approach similar to traditional taxis, setting strict licensing requirements in the access mechanism. In my opinion, this regulatory approach fails to recognize the differences between "online car-hailing" and traditional taxis, potentially turning "online car-hailing" into a second taxi industry and stifling the development of emerging business models.

Firstly, "online car-hailing" services are not simply traditional taxis plus internet services; they are new network information services in the context of the internet. They should not be regulated with the traditional mindset applied to the taxi industry. Secondly, setting strict access mechanisms and using them as thresholds for controlling the number of "online car-hailing" operations is not reasonable. For traditional taxis, the quantity control measures are implemented to avoid problems of oversupply and wasted public road resources due to empty cruising. However, for "online car-hailing," the premise of providing operational services is based on pre-booking. Vehicles only hit the road when there are reservations. Compared to traditional taxis, this actually provides passengers with more convenient services with lower empty cruising rates.

Compared to Beijing, I personally prefer the Shanghai model. Firstly, Shanghai adopts an inclusive attitude towards guiding the healthy development of "online carhailing" and became the first city in the country to issue the first qualification certificate specifically for "online car-hailing" platforms, encouraging the development of this new industry. Secondly, Shanghai has shifted its regulatory approach from focusing on managing vehicles and individuals to managing platforms. The regulation has shifted from pre-approval to mid-term and post-event supervision. Especially, clear measures have been taken to ensure the safety of both passengers and drivers.

## 4. SPECIFIC MEASURES TO TRANSFORM "ONLINE CAR-HAILING" REGULATORY MEASURES

With the rapid development of Internet+Transportation, establishing modern regulatory concepts and transforming regulatory approaches are essential elements for promoting the modernization of China's national governance system and governance capacity. Although various regions have implemented corresponding regulatory measures for "online car-hailing," there are still many shortcomings that need to be addressed. It is necessary to further improve the regulation while encouraging innovation.

### 4.1 Strengthen Post-Event Supervision and Assign Legal Regulatory Obligations to "Online Car-Hailing" Platforms

Undoubtedly, necessary pre-event regulatory measures are beneficial for preventing problems, maintaining market order, and preventing illegal activities. However, regulation is a double-edged sword, and excessive preevent regulation can significantly hinder the emergence and development of emerging transportation industries, as well as constrain the innovation of information technology in the Internet era, thereby hampering the healthy development of the entire market economy.

Currently, China is in the era of a market economy, advocating for free market competition. Therefore, the government should not excessively intervene in the "online car-hailing" industry but should focus on harnessing the self-regulatory role of the market itself. Regarding issues such as passenger safety that may arise in the operation of "online car-hailing," more regulatory power should be entrusted to the platforms to adopt the principle of "government regulating the platform, and the platform regulating the vehicles and drivers." This approach can avoid premature government intervention that stifles the development of new industries.

Therefore, we should emphasize the decisive role of the market in resource allocation and the self-regulatory function of "online car-hailing" platforms and companies. It is necessary to establish a post-event regulatory model, which is determined by the characteristics of the Internet itself. The Internet era is an era of information, and the "online car-hailing" industry is primarily an informationbased economy. In the regulation of "online car-hailing," the government faces various platforms and a large number of vehicles and drivers. Due to the vast amount of information, the government cannot effectively regulate every service information in advance. Moreover, most of the information obtained by the government is incomplete online information, resulting in limited effectiveness of pre-event regulation.

Currently, the governance measures implemented by "online car-hailing" platforms far exceed government regulation. Therefore, the government should assume a supportive role and grant more governance rights to the platforms, without excessive intervention. When the platforms fail to achieve effective governance, the government can then intervene with corresponding measures. There are several reasons for this approach: Firstly, platform governance falls within the scope of market regulation, and the government does not need to intervene excessively. Secondly, the platform can promptly access a large amount of driver information for better management, thereby protecting the legitimate rights and interests of passengers. Thirdly, the platform governance approach emphasizes diversification and innovation. For example, after completing an order, "online car-hailing" drivers are subject to passenger service evaluations, which serves as effective public supervision.

### 4.2 Strengthening Collaborative Regulatory Measures Across Departments

From the current perspective of "online car-hailing" regulation, multiple regulatory departments are involved,

such as transportation, industry and commerce, taxation, and public security. Therefore, it is crucial to enhance cross-departmental cooperation in regulatory measures. Firstly, horizontally, in order to prevent passing the buck and ineffective regulation, it is important to merge functionally similar regulatory departments under the background of the current administrative reform. For departments that cannot be merged, establish information sharing and exchange platforms to establish daily regulatory cooperation mechanisms across departments. Secondly, vertically, due to the specific nature of the Internet, "online car-hailing" platforms provide vehicle services that are cross-regional in nature. There are cases where vehicles from one region operate in another region. Therefore, in terms of jurisdiction over "online carhailing," a two-tier jurisdiction system can be adopted, with the service location as the primary jurisdiction and the vehicle registration location as the secondary jurisdiction. This strengthens cross-regional regulatory cooperation and strives to achieve a unified regulatory system for the interconnected and interactive nature of "online car-hailing."

### 4.3 Strengthening the Obligation of "Online Car-Hailing" Platforms to Protect the Information of Service Users and Clarifying the Platform's Legal Responsibilities

Currently, both drivers and passengers need to provide personal information through "online car-hailing" platforms to access the service. The platforms should assume more guarantee responsibilities. With rights come obligations. As platforms generate revenue through "online car-hailing" services, they should bear corresponding compensation or even legal responsibilities for information leaks, ensuring that both drivers and passengers receive appropriate protection and eliminating concerns.

### 4.4 Strengthening Platform Credit System Construction and Improving Credit Supervision Measures

Strengthening platform credit system construction and improving credit regulatory measures:

Trust is the foundation of society and commerce. Credit regulation contributes to maintaining a healthy order in the development of the "Internet + transportation" industry. As an emerging information matching platform, "online car-hailing" platforms have higher requirements for the creditworthiness of drivers and passengers compared to traditional taxi services. Credit regulation is therefore crucial in maintaining order in the "Internet + transportation" industry. Therefore, companies should establish credit records related to "online car-hailing" services and implement classification-based regulation of vehicles and drivers through recording and monitoring daily supervision results. For example, "online carhailing" platforms can establish a corresponding credit evaluation system (including driver service attitude, vehicle operating conditions, customer complaint records, etc.) to classify and manage drivers based on evaluation indicators. Incentives, warnings, penalties, and elimination can be used to manage drivers, with unqualified drivers being expelled from the platform through a blacklist system or even having their operating rights revoked. This will create a market environment of survival of the fittest and healthy competition, providing passengers with highquality and safe services.

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