

# Safety Risks and Countermeasures to Management of Online Car-hailing

Yuwei Zhang<sup>1, a</sup>

<sup>1</sup>People's Public Security University of China, Beijing, Daxing 100076, China.

<sup>a</sup>yuwei.zhang.ppsuc@gmail.com

## Abstract

China is the largest market of online car-hailing in the world, and the first country to recognize the legal status of online car-hailing in the whole country. Generally speaking, since the legalization of the online car-hailing two years ago, the industry has developed on the normative road, but its risk is still high, and new forms of risks keep rising. The concept of online car-hailing is briefly defined, and the four characteristics of online car-hailing are concluded: high degree of internetization, extensional non-specific object, simplification of admittance, and digital supervision. According to the characteristics of the situation in the new period, the five major security risks of the online car-hailing are summed up and the reasons for the risks are analyzed, then the countermeasures are put forward in light of the actual needs of the actual supervision of the online car-hailing, providing ideas and methods for the supervision of online car-hailing in the new environment.

## Keywords

Online car-hailing; Safety risks; Management countermeasures; Access.

## 1. Introduction

The Chinese government proposed the "Internet+" plan in 2015, emphasized the development of the sharing economy, since then, various online car-hailing platforms are multiplying, and the online car-hailing industry has entered a period of rapid development, the scale of online car-hailing users has grown rapidly. In 2016, China first recognized the legal status of the online car-hailing in the world. With the improvement of people's quality of life, the way of mass travel has been changing, and traditional urban traffic has gradually failed to meet the needs of the masses. As a new mode of transportation service under the sharing economy model, it revitalizes the social idle vehicle resources and changed the way of mass travel and facilitates the lives of the people, and has far-reaching significance for cities with heavy traffic pressures. However, while the sharing economy models bring new developments to traditional industries, the lack of management brings a series of security risks to society and participants. The online car-hailing has been legal for nearly two years, its risks still exist, and the public is more concerned about the future development of the online car-hailing. This paper attempts to analyze the concept and characteristics of the online car-hailing, summarizes the risk of the online car-hailing, finally explores the management strategies of the online car-hailing, and provides ideas and methods for the supervision of the online car-hailing in the new environment.

## 2. Overview of Online Car-hailing

(1) The concept of online car-hailing

The online car-hailing belongs to the taxi service, but it is obviously different from traditional taxi. Our country defines online car-hailing as "the business activity of building service platform,

integrating supply and demand information, using qualified vehicles and drivers to provide non-cruise taxi service based on Internet technology ". It integrates the information of idle traffic resources such as vehicles and drivers through the Internet, establishes the relationship between idle resources and demanders through the platform; eliminates information asymmetry, achieves the optimal allocation of resources and intelligent transportation travel.

## (2) Characteristics of the online car-hailing

### 1. High Internet.

Through the Internet, big data and other technologies, the online car-hailing platform has realized the connection between passengers and drivers through the online car-hailing client. The passengers select destination, the travel path calculation, the travel forecasting fee, the arrangement of the driver's order, payment, evaluation, driver's salary settlement, etc. are all completed through the Internet. Through the cloud, supply and demand information is integrated, passenger transport efficiency is improved, travel pressure is eased, and the service evaluation mechanism is used to improve the service level of the network car, and they are advantages compared with the traditional taxi industry.

### 2. The extended objects are not specific.

Ordinary taxis only involve the services of passengers and drivers, while the online car-hailing involve passengers, drivers and platform companies in the service. In practice, some private car drivers connect their private cars with car rental companies and labor dispatching companies; form a "four-side agreement" model among shared platform companies, car rental companies, labor dispatch companies and drivers. In addition, the formation of the passenger main body, the diversity of the network main body riding sharing has led to complex legal relationships.

### 3. Access simplicity.

As a product of the "Internet+" era, the online car-hailing is temporarily lacking effective supervision; therefore, the access simplicity is a prominent feature of the online car-hailing. The access simplicity of the online car-hailing is reflected in two aspects: first, the entry barriers for the online car-hailing practitioners and the vehicles are low; second, the entry barriers for online car-hailing platform enterprises are low. Taking the Didi platform as an example, the applicant only needs to provide identity information and vehicle related information, as well as the driver's license and driving license, after successful auditing by the platform, the driver can become a network driver without any contract documents with the platform. From the reality point of view, as long as the network car platform has the corresponding technical capabilities, it can provide online car-hailing service.

### 4. Information supervision.

First of all, the platform collects and analyzes the evaluation of each passenger and driver; the evaluation results are open to both passengers and drivers, the whole process is completed quickly by APP through the Internet, compared with the traditional taxi industry, passengers only need to use their fingers to complete the evaluation process, so the post-event management cost of the online car-hailing is very low compared with the traditional taxi industry, which is more conducive to improving service quality. Secondly, compared with the traditional taxis, the network car records the relevant data in real time, through the analysis of these data, the security management activities of the online car-hailing will be greatly simplified.

## 3. Security Risks of the Online Car-hailing

The characteristics of the online car-hailing determine the objective inevitability of security risks; the security risks of the online car-hailing mainly include the following five types:

### (1) Personal safety risks

The online car-hailing has emerged within a few years, and news reports about the violation of personal safety by the online car-hailing driver and passengers are endless. The personal safety risks of the online car-hailing are manifested in various forms, including harassment, insults, assaults, slander, and even rape and killing of drivers and passengers. During the riding, passengers may be harassed by a small number of low-quality online car-hailing drivers, especially women, the elderly, students or passengers who are alone in the car; it is difficult for them to resist the driver, vulnerable to damage in the confined space of the vehicle.

#### (2) Property security risks

Since the advent of the online car-hailing service, cases of robbery against the online car-hailing have occurred from time to time. From a large number of real cases, both drivers and passengers may become targets of robbery. Most of the online car-hailing seem to be a relatively safe private car, compared with taxis with isolation barriers, people generally do not have the wariness to protect property security, this will make drivers and passengers who attempt to plan illegal activities, carry out activities to steal property, and even openly rob.

#### (3) Traffic safety risks

The traffic safety problems of the online car-hailing are obviously different from the taxi. Compared with the traditional taxi industry, due to the Internet characteristics of the car hailing mechanism of the online car-hailing, the online car-hailing driver often checks the car-hailing information on the app platform on the Internet during the driving process, handles the order problem, and views the route plan. According to the research report of the China Consumers Association, some drivers of online car-hailing have a low awareness of safe driving, and there are many unsafe behaviors. 20.1% of the experiencers reflect the drivers call during the driving process, and 16.5% of the experiencers reflect the drivers play with a mobile phone in driving process, this number is quite amazing.

#### (4) Information leakage risks

Personal privacy disclosures are common in the development process of Internet-related industries, Due to the highly Internet-based nature of online car-hailing; the risk of information leakage cannot be ignored. The online car-hailing platform holds a large number of personal sensitive privacy information and travel information of drivers and passengers, and involves various pieces of information such as passenger travel time, route, destination, and contact information. In the era of big data, using these sensitive private data information for deep mining will gain more personal privacy information such as passengers' home addresses, work units, etc., and personal privacy is difficult to guarantee.

#### (5) Access management risks

Access management risks are mainly the black industry security risk faced by the online car-hailing. The so-called network black industry chain refers to the gang-style criminal behavior with computer network as the tool. The black industry is not well known to the public, and its activities are generally carried out underground, but its harmfulness is no less than the traditional crimes and can gradually erode an industry. The black industry of the car-hailing is mainly concentrated in the "black taxi" and scalping two aspects.

## 4. Management Countermeasures of the Online Car-hailing

The emergence of the network car conforms to the development tide of the sharing economy in the Internet era; it is the embodiment of the development concept of innovation, coordination, green, openness and sharing, it is necessary to encourage the innovation and standard development of the online car-hailing, rather than restrict its development. At present, there are still many problems in the online car-hailing industry, and the legal norms in management are still insufficient, it is necessary to take appropriate measures to eliminate the impact of

various risk factors, strengthen the management of the online car-hailing, and promote the online car-hailing industry to become more standardized as soon as possible.

(1) Bring online car-hailing into special industry management.

At present, the online car-hailing is mainly managed by the transportation department, and involves public security, industry and commerce, price, development and other departments. Now the online car-hailing platform has integrated multiple functions such as traditional taxi, ride, car rental, and driving service, it is not a single appointment for a taxi, and there are more hidden dangers in public security, once a vicious incident occurs, it will promptly ignite public opinion, and it is imperative to establish a sound standardized management system. According to the above risk analysis, the online car-hailing industry is easy to be used for illegal and criminal activities, considering that some areas have already integrated the taxi industry into local special industry management, the online car-hailing is included in the special industry management, which is operational, but the attribute differences between online car-hailing are different from the general taxi industry. Under the new situation, the management of special industries for online car-hailing can be considered from the following three aspects.

1. Strictly check the access of the online car-hailing drivers

Through the analysis of the risk of the online car-hailing, the quality level of the online car-hailing driver is an important factor affecting the safety of passengers. The qualifications of the online car-hailing driver should be reviewed from the following two points: first, the online car-hailing drivers should be strictly examined. First of all, the online car-hailing drivers should have more than 3 years of safe driving experience; secondly, the relevant background qualification examination of the driver, the content of the examination should include the criminal record, the review of the violation record, by setting the corresponding safe driving standards, drivers who have more violations in the record shall refuse the application according to the standard. Second, the online car-hailing car platform should report the information of the driver who passed the examination to the public security department for record, and the supervision department should conduct random checks.

2. Innovate the concept of special industry supervision for the online car-hailing

The car-hailing is a product of the Internet era; the supervision of the online car-hailing need to conform to the trend of the times and innovate the supervision mode. The ideal car-hailing supervision mode should be that the online car-hailing platform companies supervised by government, platform companies supervise online car-hailing and driver, establish a new path of "government + enterprise" online car-hailing supervision in line with the "Internet +" development direction. China's online car-hailing management can refer to the California model, the government issued the online car-hailing and the driver's operating conditions and qualifications, the online car-hailing service platforms implement, the network platforms regularly report online car-hailing, driver information and all operations service data to management department, which forms a new "government + enterprise" supervision path, namely use "government manage platform, platform manage vehicle" to manage online car-hailing.

3. Focus on cracking down on the black industry chain

The registration service provided by the black industry of online car-hailing does not conform to the relevant provisions of the state, resulting in huge potential safety hazards. Information leakage is the main reason for the existence of a large number of black vehicles; hackers make "clone" registration documents through the local vehicle data, and help register vehicles with local vehicle models and licenses. On the one hand, the information leakage of motor vehicles is that the information system of traffic control department has security loopholes or is attacked by hackers; people with ulterior motives can steal relevant vehicle information. The government should strengthen the confidentiality management of relevant information, strictly

check and fill the loopholes in the system, and examine the possibility of internal leaks; moreover, it should attach importance to cracking down on the registration of licensed vehicles, and unite the platform of online licensed vehicles, crack down the vehicles operating on the road, but also on the source of the black vehicles.

(2) Innovate safety management method of the online car-hailing

On the way to driving a vehicle, the driver's call can cause the driver to overlook the front, it is called "blind driving" and "blind driving" has already ranked first in current road traffic accidents. Through the above analysis of the traffic safety risks of the online car-hailing, due to the inherent characteristics of the online car-hailing, the behavior of watching the phone is significantly higher than the traditional taxi industry. It should be stipulated that the driver of the online car-hailing should not have the ability to make calls during driving, if there is any violation, the platform should impose a penalty for temporary driving.

(3) Properly solve the passenger information leakage caused by the online car-hailing

At present, China has detailed regulations and strict management for information security protection in the online car-hailing platform. The traditional taxi industry passengers are almost anonymous, while the online car-hailing drivers directly grasp the passengers' relevant information by dialing the telephone, because the passengers of online car-hailing are high-value business target active groups, if there are criminals who collect these information records for interest and sell, passengers' privacy is also not guaranteed. The author believes that for the online car-hailing driver can use a unique number, and cooperate with the three major communication companies, the passenger contact information take the encryption method.

(4) Define the legal responsibility of the online car-hailing

The technical characteristics of the online car-hailing platform itself make its legal status unclear. The online car-hailing platform is generated under the support of big data and Internet technology: the processing capability of information is its core competitiveness. The intermediary of the passenger and the driver is the online car-hailing platform. The passengers release their own path and position through the online car-hailing platform App; the driver obtains the passengers' path and position by grabbing the order, in this process, the platform is only responsible for providing relevant information to both the passenger and the driver. The online car-hailing platform is the only provider of information, which obtains revenue by relying on the provision of information and additional services. In the conclusion of the passenger contract, the online car-hailing platform actually plays a major role in the matchmaking process; the whole process is related to the online car-hailing platform, if there is no platform passenger contract, the passenger contract cannot be achieved.

## References

- [1] Han Juan. Research on Related Crimes in the Field of "Online Car-hailing" [J]. Legal System and Society, 2017 (28).
- [2] Liu Xinli. Risk Management [M]. Beijing: Peking University Press, 2006.
- [3] Hou Denghua. The Supervision under Quartet Agreement Operating Mode of Internet Private Hire Vehicles[J]. Law Science Magazine, 2016, (37).
- [4] Hou Denghua. Legitimacy and Supervision System of Internet Private Hire Vehicles[J]. Journal of University of Science and Technology Beijing (Social Sciences Edition), 2015 ( 6).
- [5] Cui Yimin. The Dilemma and Outlet of Journal of Lanzhou Institute of Education[J]. Journal of Lanzhou Institute of Education, 2017(33).

- [6] Xiong Yixin, Xie Huimin. Discussion On the Concept and Management Scope of China's Special Industry[J]. Journal of People's Public Security University of China (Social Sciences Edition), 1998 (2).
- [7] He Yanchen, Wang Qin. Analysis of the Legal Status of the Online Car-hailing Platform[J]. Shanghai business, 2018 (01).
- [8] Zhu Haiping. Research on the Legal Relationship of Employment of "Online Car-hailing" [J]. Fujian Law, 2016 (3).
- [9] Li Xiaoyu. Electronic File Management and Privacy Protection Of Online Car-hailing Platform[J]. Shanxi Archives, 2017(6).
- [10] Wang Jiyun. Research on Legal Issues of Government Regulation in Taxi Market[D]. Beijing Jiaotong University, 2017.
- [11] Zhang Yihang. Research on Public Security Management under the New Deal of Network Cars[J]. Journal of Jiangsu Police Officer Academy, 2017, 32(3).
- [12] Hou Lin. Analysis on Crime Chain and Its Development Trend behind Internet Data Leakage[J]. Wireless Interconnect Technology, 2015 (20).
- [13] GB/T 23694—2009 Risk Management Term [S].
- [14] Dai Yihang. Research on Security Risk Identification[D]. Chinese People's Public Security University, 2017.
- [15] Edelman B G, Geradin D. Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies like Airbnb and Uber? [J]. Social Science Electronic Publishing, 2016.
- [16] Witt A, Suzor N, Wikström P. Regulating ride-sharing in the peer economy [J]. Social Science Electronic Publishing, 2016, 1(2).
- [17] China Business Research Institute. 2018 China Online Car-hailing Market and Forecast: The transaction volume in 2022 will exceed 500 billion yuan [EB/OL].
- [18] [Http://www.askci.com/news/chanye/20180403/111818120937.shtml](http://www.askci.com/news/chanye/20180403/111818120937.shtml), 2018-4-3.
- [19] General Office of the State Council. State Council General Office's Guidance on Deepening Reform and Promoting the Healthy Fvelopment of the Taxi Industry
- [20] [Http://www.gov.cn/zhengce/content/2016-07/28/content\\_5095567.htm](http://www.gov.cn/zhengce/content/2016-07/28/content_5095567.htm), 2016-07-28.
- [21] [19] China Consumers Association. 2016 Online Car-hailing Service Experience Report [EB/OL].
- [22] [Http://www.cca.cn/zhuanti/car/index.aspx](http://www.cca.cn/zhuanti/car/index.aspx) 2016-10-25.
- [23] [20] iiMedia Research (Ai Media Consulting). Ai Media Report | 2017-2018 China Online Car-hailing Market Research Report [EB/OL].
- [24] [Http://www.iimedia.cn/61042.html](http://www.iimedia.cn/61042.html) 2018-4-3.