

Research on the restricting factors and countermeasures of the development of Shared parking Spaces

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Abstract: The problem of "difficult parking" in cities is widespread. Sharing parking Spaces can increase the supply of parking Spaces to a certain extent and alleviate the problem of difficult parking in cities. Although in theory, Shared parking space has a broad development space in China, but the specific implementation, still facing many factors. Therefore, based on the analysis of the development status of China's Shared parking Spaces, this paper tries to discuss the main factors restricting the development of China's Shared parking Spaces, and on this basis, puts forward corresponding countermeasures, which will play a positive role in promoting the development of Shared parking Spaces.

Keywords: Shared parking Spaces; Sharing economy; Restrictive factors; countermeasures.

1. INTRODUCTION

"Shared parking space" was first put forward by Mary s. Smith, an American scholar, in 1983. In China, the concept of "sharing economy" has become popular in recent years. In China, with the rapid development of economy and the improvement of people's material living standards, the automobile has become a necessary means of transportation for families. According to the national bureau of statistics, China's private car ownership increased from 45.74 million in 2009 to 205.74 million in 2018, an increase of nearly 160 million in a decade. And according to the national development and reform commission, according to the ratio of cars and parking space is obvious imbalance, "parking" has become the common fault of the many cities, mainly embodied in rush hour office buildings around a hard to find, night ordinary parking difficult, community residents and holiday large business circle near the parking space is full. In order to solve the problem of "difficult to stop", the government put forward many mistake parking support, encourage Shared parking policy initiatives, such as the Beijing motor vehicle parking management way "in article 18 specify" encourages units and individuals traffic parking "" encourage units and residential area" will be open to the public parking lot, Shanghai, zhengzhou, xiamen and other cities have also launched relevant encourage mistake parking management methods and measures, this to a certain extent, can help the city integration of space resources, increase the supply of parking Spaces, parking resources rational allocation. "Shared parking Spaces" can improve the utilization efficiency of parking Spaces without adding new parking lots by renting out the parking Spaces that were temporarily idle, which has a large development space in China.

2. THE DEVELOPMENT STATUS OF "SHARED PARKING SPACES" IN CHINA

Compared with foreign countries, the development of Shared parking Spaces in China lags behind, and only in recent years have various apps appeared. Among them, the more have more downloads ETCP parking, PP, hui parking, sharing, etc., but even from the downloads are relatively more ETCP parking, its nearly 33 million registered owners, according to official data with private car ownership in China 205.74 million data gap is very big still, the promotion of Shared parking needs to be improved. At present, the various parking software or give priority to in order to look for parking, is not Shared parking, peak parking platform, and no bigger platform and capital involved in most, marketing insufficient, regional development is relatively obvious, the APP's business model is not the same, there are advantages and disadvantages of each, the following loads more ETCP parking, PP, hui park, Shared parking, for example, their advantages and disadvantages as shown in table 1-1:

Table 1-1 compares the advantages and disadvantages of some parking software

APP name	Advantages	disadvantages
ETCP parking	Mobile phones pay parking fees automatically, covering 240 cities across the country, with more than 8,100 cooperative parking lots, providing convenient services such as refueling, violation inspection and car washing	It only shows the tension of parking Spaces and cannot display specific data in real time
PP parking	It displays the total number of parking Spaces and empty parking Spaces in the parking lot. It has the function of searching for cars in the park and can query free parking information	Cooperative parking is limited
Wisdom parking	Provide parking navigation, reservation and other functions	Many cities are not yet covered, and customers report overcharging
Shared parking	Use parking Spaces to share and activate parking space resources, display real-time information of nearby parking lots and remaining parking Spaces, reserve parking Spaces and automatically recognize license plates	Limited coverage cities

In short, although the development of Shared parking Spaces in China has the support of local governments, the actual development is relatively slow. In order to solve the problem of "difficult parking" in a real sense, many factors are still restricting the development.

3. ANALYSIS OF THE RESTRICTIVE FACTORS AND THEIR REASONS FOR THE DEVELOPMENT OF "SHARED PARKING SPACE"

3.1 The technology is not perfect, and the customer experience needs to be improved

Each big parking APP till now, due to the imperfection of the objective technical, location information and data cannot be achieved real-time parking information updates, easy to cause the user must, for example, a user according to the APP, often can only find a parking lot, but can't find specific parking space, lead to find parking time increased, the customer experience is poorer, or the parking information cannot be updated in real time, the user in accordance with the navigation destination discovered no parking Spaces, parking lot and platform data has not been updated, the user need again looking for a parking space, causing the deterioration of trust. In addition, the timing of some platforms may be inaccurate, and charging too much will also reduce the customer experience.

3.2 Poor acceptance of households and increased difficulty of property service

For residents who do not have parking Spaces in residential areas, the original parking space is insufficient. If foreign vehicles are allowed to enter the parking space, the number of parking Spaces will be more limited, and their recognition will not be high. For residents with existing parking Spaces, although sharing parking Spaces can bring some benefits, there is also the risk of default of the other side. If the other side fails to drive away on time when they need to park, their car will have nowhere to park, so their acceptability will be affected. In addition, the entry of foreign vehicles may cause security risks, such as the increase of scraping rate, which will cause difficulties in property management. If most residents do not agree, the industry committee will not pass, and the Shared parking Spaces in the community will not be truly activated.

3.3 The profit distribution mechanism is immature, and there is insufficient incentive for all parties to participate

From the perspective of the income distribution mechanism of the Shared parking space platform, many platforms adopt the practice of sharing benefits among parking space owners, property management companies and platforms. In terms of parking Lord, Shared parking can bring some benefits, but earnings after all is limited, and there is the other party if not timely drive away, his car is facing the risk of nowhere to park, and part of the platform Shared parking is equipped with the special locks is subject to himself, if still need to find someone to repair the damage problem, it is for parking the extra burden, easy to cause the lower participation enthusiasm. For property management companies, although sharing parking Spaces can increase part of the income, the difficulty of management will also increase with the increase of foreign vehicles, and congestion is more likely to occur inside the community, and compensation is needed in case of accidents, which is also an important factor leading to the low enthusiasm of property participation. The parking space owner and the property side of the double concerns, will also lead to platform promotion facing difficulties.

3.4 The existing legal system is not perfect and supervision is not perfect

The government did not publish relevant laws to regulate the development of Shared parking, only some cities have put forward relevant guidelines or regulations, among them, Beijing, Shanghai and guangzhou are encouraged to share parking, recommended units parking mistake opening to the outside world, but how to regulate the behavior of platform, users and property of the three parties, constraints on their behavior, the government has not issued relevant laws and regulations to specification. For example, there may be problems such as difficulty in returning the deposit on the bike-sharing platform, leakage of users' whereabouts, and infringement of consumers' rights and interests by the platform due to inaccurate timing. There are still no relevant laws and regulations to regulate the industry behavior.

4. COUNTERMEASURES AND SUGGESTIONS TO PROMOTE THE FURTHER DEVELOPMENT OF SHARED PARKING SPACES

4.1 Raise the technical level of the platform and make technical improvements

The platform should be improved in three aspects. Firstly, the accuracy of information should be improved. Real-time feedback should be provided on the platform for parking conditions and charging conditions of parking lots, so as to avoid inaccurate information leading to poor user

experience. Secondly, for the convenience of the user can quickly find a parking space, the platform should provide a more accurate location information, many apps are using gold map navigation system, specific parking space, but not accurate to suggest platform to build the corresponding parking lot navigation system, especially the large parking lot, in order to reduce the user to find parking in the parking lot of time. In addition, when the platform cooperates with the parking lot, information such as the location and size of specific parking Spaces should be incorporated into the system to prevent the mismatch between some car models and parking Spaces.

4.2 Further strengthen the security measures of parking lots

For many residents, the Shared parking mode may lead to the increase of exotic vehicles in the community, resulting in the loss of personal safety and property safety, the property management of the community should strengthen security measures, such as increasing monitoring facilities, strengthening patrols, reasonable drainage during peak hours, etc., to ensure the personal and property safety of residents in the community. In addition, the property management should strengthen the parking guidance in the parking lot according to the actual situation, so as to avoid the external vehicles not familiar with the road conditions and unable to find a parking space for a long time, increasing the risk of scraping.

4.3 Improve the pricing model and try to balance the interests of all parties

For the existing pricing model, the initiative is often held by the platform, the participation and pricing power of the parking space owner and property is not high, if the profit is too low, their enthusiasm will not be high, and the difficulty of platform promotion will increase. It is suggested that in the early stage of promotion, the platform should give profit to the parking space owner and the property owner as far as possible to occupy the market share. For users who do not park overtime in accordance with the agreement, the platform can charge more liquidated damages, on the one hand to compensate the owner of the parking space, on the other hand to show punishment, to prevent users from breaking the contract and causing unnecessary disputes. In addition, the platform should also try its best to develop more services, such as car washing, refueling, violation inspection, sales of automotive supplies and other services closely related to car owners, so as to improve customer stickiness and at the same time find more sustainable business models and broaden the business scope.

4.4 The government should increase support and improve legal protection

The government should use administrative means to encourage government organs, state-owned enterprises and public institutions to take the lead in realizing the wrong peak opening of idle parking Spaces, and increase the efforts to explore and exhaust them. The government should inform the units that have many vacant parking Spaces but refuse to open them to the public during peak hours, encourage citizens to participate in parking sharing, and improve their awareness of using Shared parking Spaces. In addition, the government should speed up the introduction of relevant policies and measures, specifically aiming at the specific problems in the field of Shared parking that may involve consumer rights protection and the standardized development of the platform, formulate corresponding legal norms, clarify relevant reward and punishment measures, and provide institutional guarantee.

5. CONCLUSION

As an emerging industry, Shared parking is restricted by various factors at present, but with the further development of technology, the further standardization of regulatory measures, the further maturity of relevant market mechanisms and the further implementation of government policies, its future development space is relatively broad.

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