Urban Parking Problem Analysis and Solving Countermeasures: Taking Xi’an as the Example

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Abstract

In recent years, our country economy fast development, city automobile capacity likes mushroom growth. At the same time, stops the berth insufficient supply, but stops the order not to be able to obtain cities and so on standard to stop the difficult question along with the automobile expense market rapid development even more obvious. In this paper, Xi’an, for example, analysis of parking in Xi’an is the root cause of the number of motor vehicles and parking spaces in the imbalance between supply and demand and the public wrong parking concept and manner, while parking management system is not so difficult parking problems become more difficult to solve based on the relevant management practices, combined with the practical basis of the rational planning of parking facilities that increase the intensity of management penalties and innovative parking management measures.

Keywords: Difficult to Stop; Adverse Effects; Countermeasures

1. INTRODUCTION

The automobile is the industry civilization great product, is crystallization which the human thought progresses. Not only it was reflecting society's vicissitude, is manifesting a country's rate of economic development and the national expends the strength. Along with the economical rapid development, the automobile expense and impetus a series of industries already became the giant power which drew domestically one need. Now, not only the automobile is one kind of transportation vehicle, is the economic potentiality and the status symbol. Not only does it cause people's journey to be more convenient that caused the people to experience the driving pleasure. The number of urban and rural cars is increasing, making parking difficult to become troubled most car owners of the primary problem; coupled with urban population density, the problem in the city is particularly acute. At the same time, parking is not just difficult to stop the car owners and it is more directly lead to the city's difficult planning, difficult to manage.

Xi’an is a collection of cultural ancient capital and international metropolis in a big city that has more than 800 permanent residents, floating population is more than millions a year. Because travel is an essential part of people daily life activities, the greatest characteristic of large cities is the traffic, so the large population also means that the vehicle. With bus, taxi, truck, motorcycle parking, compared to car parking difficult problem is relatively outstanding. Many cities in our country at present can only provide a third car ownership of parking space, city car number and the number of parking garages "supply and demand balance" has been a serious imbalance. According to estimates, the average parking time is the time of driving motor vehicles of 6~8 times, static traffic relative dynamic traffic is particularly important.

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From this view, to solve the problem of urban parking is imminent. But this is not the simple expansion, increased parking spaces will be able to solve the problem, from planning to construction, from the integration of resources to implement the management problems at all levels that must be planning and coordination, overall planning.

2. "Parking Difficult" Caused by the Adverse Effects

2.1 Leading to urban traffic congestion or increase the degree of congestion

Xi'an downtown business circle, economic prosperity, traffic flow from the huge flow of people in the holidays and rush hour traffic congestion is most likely to occur. In addition, pedestrians, non-motorized vehicles, motorcycles, high flexibility, the driver is often unable to wait it will not be able to do so, the car parking lot is often "hard to find the daughter," the most direct consequence is the vehicle slowed down, causing traffic congestion; In the traffic gap in the shuttle, resulting in vehicles on the road without rules, because of this, the motor vehicle dilemma more heavy traffic congestion. Xi'an due to vehicle parked at random, especially at night free parking in the parking problem is also very serious, for a long time, the north-south axis has been the vehicle stop random phenomenon, often lead to large area of segment were congestion point that directly reduce the efficiency of the traffic.

2.2 Cause all kinds of potential safety hazard

As a result of the parking spot scarcity, causes to lock, to occupy the lawn peacefully privately, occupies the road to stop up undesirable tendencies and so on road often to occur, some vehicle owners consider only oneself stop conveniently, often a vehicle takes a half berth, let afterwards vehicle owner stop is not does not stop is not good, thus caused the neighborhood dispute, the vehicles blows scratches, serious when also could initiate the violence conflict, as a result of fought for the parking berth to have the argument, subsequently attacked brutally perhaps destroys the human vehicles the event to appear repeatedly that has affected the social order and the harmony seriously. In public places, disorderly parking to lead to other traffic, some owners as convenience at the entrance to the parking lot parking at random, moreover parked the car in the channel or on the sidewalks, parking for parking the car is very difficult and also forces pedestrians, bicycles, electric cars into motor traffic, increased the frequency of the traffic accident. Residents to buy cars mainly for the convenience of travel, and parking problems directly lead to driving more waste of time is not only a waste of money that motor vehicles from the convenience of transportation into the burden of a headache.

2.3 Damage the image of the city

Many monuments and attractions as well as a strong academic atmosphere to Xi'an have a profound cultural heritage, Xi'an as a cultural ancient capital has been attracting tourists all over the world. The parking disorder caused by the chaos stop the phenomenon of disorder not only lead to interference in the normal order of the city, environmental quality has been damaged, it is a direct impact on the city appearance of Xi'an, it is easy to leave "dirty, chaotic, poor" impression.
3. "Parking Difficult" Causes

3.1 The number of motor vehicles has grown rapidly

In recent years, with the economic development and the disposable income of residents increased, motor vehicle ownership has increased year by year. The original urban planning and construction of this number is expected not enough parking lot with very few, so far, many communities have not equipped with parking spaces. Parking number and the number of motor vehicle ownership does not match the direct result of the current "parking difficult" and "chaos parking" phenomenon. From the international standards, the city's motor vehicle parking spaces and the total number of parking spaces should be a minimum ratio of 1: 1.2. Currently, the amount of motorized parking in Xi’an and parking the total number of 1: 0.29, far less than the international experience, the lack of serious parking facilities. Moreover, the construction of parking facilities in Xi’an obviously lagged behind the growth rate of cars. The ratio of parking spaces to motor vehicles is seriously unbalanced. The parking spaces in the daytime and night are far less than the parking demand.

3.2 Low utilization rate of existing parking facilities

Parking facilities not only embodied in administrative institutions, low utilization rate even opening to the public yard and the road outside the public parking lot, because of the difference of parking fees coupled with the vehicle, how easy it is to take also in the same area, the ground parking lot utilization is much higher than the underground parking lot utilization and inside road parking utilization is much higher than the road outside the utilization situation of the parking lot. As a result, on the one hand, parking contradictions still sharp, on the other hand, a large number of idle is not a vicious cycle of the rational use of parking spaces.

3.3 Parking facilities planning lag behind

The rapid growth of motor vehicle ownership has brought tremendous traffic pressure to urban traffic, and the cities have already felt that the relevant departments have invested heavily in dredging road traffic so that dynamic traffic is relatively relieved. But often the lack of attention to static traffic (parking), a single investment channels, investment debts too much, resulting in the growth of parking spaces far behind the growth in motor vehicle ownership, resulting in urban parking problems more difficult. In addition, authorities at all levels of the fragmented phenomenon common occurrence. In general, the administrative functions of the construction and management of city parking places planning should be determined by the urban construction, public security, industry and commerce, price and so on several units to share, so inevitably exist in the work piece segmentation, mutual communication, shuffle the phenomenon of wrangling, difficult to form effective force, reduces the efficiency, eventually led to the "parking".

3.4 Parking management system is not smooth

Our country carried out the potency at present highest is in 1988 the ministry of construction and Ministry of Public Security unites the formulation "Parking Lot Construction And Management Temporary provisions", this stipulation has not been able to adapt the current reality, had to appear an level high urgently, the binding force strong "Parking Law". Xi’an still lacked a department responsible for the work to carry on the system to the whole city.
static state transportation development the strategic research, and to city parking implementation unified coordination management, the whole city formed the unified parking industrial policy, the profession standard and the technical standard with difficulty, with difficulty regulated the parking demand which grew day by day.

3.5 Parking management information is low

Our country in the parking information management and parking guidance research and construction system is only in its infancy, the existing parking information management and guidance system cannot meet the parking demand management in Xi'an city, the city has yet to establish a comprehensive unified parking information management and parking guidance system. At present, Xi'an city has the parking guidance system in South Street, North Street, Hamlet and other downtown area, but all induced systems are independent, the coverage is small, it is difficult to give full play of information effect, also caused the city's existing parking information resources sharing, lack of management and reasonable use, the use of parking information content is simply in the parking lot.

4. Some Foreign Countries to Solve the "Parking Difficult" Approach

4.1 USA

It is understood that the United States to solve the problem of parking the city, mainly by "with construction." The so-called "built with" is in the construction of the building at the same time, must be in accordance with the corresponding standard parking spaces, parking problems is the root of the problem is that the number of parking spaces is not enough, so this parking berth as a rigid index approach can be very good To ensure the number of parking spaces, parking problems difficult to solve a great role. In addition, the United States, most shopping malls have their own parking lot, shopping malls closed, these venues will be vacant for external rental, the general price is not too high, especially for nearby residents; some layer of real estate residents will own space Trimmed into parking spaces, external rental.

4.2 Japan

The Japanese government involves the parking laws alone there are more than five of the six. According to Japanese law, individual or unit must be issued with fixed when buying a car parking Spaces, the fixed parking both their own can also be a long-term loan, however, space must be from the unit or residence within the range of 500 meters to 2000 meters, or traffic administration will refuse to give new car license plate. In addition, the Japanese government also attaches great importance to encourage lead investors to build private parking lot, entitled to duty exemption or reduction for commercial parking lot.

4.3 UK

In London, the old liberated areas, you can see a lot of double channel on the road during the day, in the middle of the road on both sides of the yellow line, painting has always been the car parking line oblique direction, and marked with parking time limit. To the specified time of the night, these parking spaces will be filled with all kinds of household vehicles, leaving only the side of the road on the side of the building for vehicle traffic. At the same time, the traffic in Britain is strictly punished with a great reputation in the world famous.
5. Solutions to the Difficulty of Parking

5.1 Encourage the development of public traffic

"Throttle" policy implementation, from the side outside after transfer to encourage citizens to park your car in the heart of the city bus travel, thereby reducing the use of private cars, ease parking caused by making a difficult problem while using flow control method to reduce the number of vehicles, such as strict implementation of license plate tail number prevailing rules and principles of working days. The limit line, reasonably adjust the rush-hour traffic, in order to reduce the frequency of traffic jams. At the same time, take the time to pay the congestion charge policy, the commuting time to enter the peak section of the private cars traffic needs to pay fair congestion fees, the fees collected will be used to improve the public transport, thus achieve the purpose of reduce car use, alleviate the problem of peak parking.

5.2 Conformity resources, comprehensive utilization

Berth sharing is the use of parking peak demand period, the different sections of different land use, but the distance is close to the building shared the same parking lot, in order to reduce the berth demand, improve the berth utilization. In order to improve the efficiency of the existing parking lots, some administrative units or well-off areas should be encouraged to open idle internal parking spaces at low charges so as to help the units to generate revenue and ensure that resources are not wasted. With reference to the United Kingdom to solve the parking problem approach, Xi'an can also use residential areas around the non-major roads at night roadside parking policy to improve road utilization.

5.3 Multivariate development, expand the number of parking space

Parking lot planning is the important basis of urban parking facilities construction, including public parking lot planning and index set. So we need according to the situation of urban development and circumstance, which hinder timely revised to the planning and indexes, parking garages and parking demand match, through the supply of parking garages, to guide development and use of motor vehicles.

5.4 Establish and improve the parking management system

It improve the conversion, the new building parking spaces with the construction of standards to increase support for the inspection of parking facilities that has been diverted for other purposes, developers should be required to restore the use of parking spaces within a deadline. To establish the relevant parking policy or static management of scientific management, to allow the establishment of car park property management companies to ensure that each of the completed parking spaces can make the best use of its coverage to ensure that all vehicles within the radius of admission park. Especially for some temporary parking management, appropriate restrictions should be taken to avoid some owners take a long time shortage of parking resources.

6. Conclusion

In the key areas and large shopping malls, hospitals, parks, integrated transport hubs and other parking areas often promote the establishment of multi-functional, scientific and intelligent
high-tech parking management system, the use of modern electronic communication technology, the establishment of parking guidance system, integrated management information platform. To establish emergency linkage mechanism between large parking lot, parking information, timely integration of related scientific allocation and scheduling parking space, through the Internet, radio, mobile communication and information display area parking release parking space and parking guidance information, where there is a parking space, where prices are lower, the owner may at any time the query, thus reducing the invalid traffic vehicles by looking for parking Spaces, improve the utilization rate of parking Spaces to reduce the difficulty of parking, reduce the resulting congestion and illegal, in order to make full use of existing resources of urban parking.

References


