

# Study on Urban Traffic Management Mode in Hong Kong

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**Abstract:** In this paper, Hong Kong public transport planning and public transport management system as the object of study, and focuses on the urban planning of Hong Kong. Hong Kong uses high and new technology to optimize the road system, and the government uses various policy measures to regulate the relative demand for public transport.

**Keywords:** Urban traffic; Urban development; Traffic management

## 1. Introduction

Almost all cities in the world have traffic jams, and New York, London, Paris and Tokyo have the same situation. China is currently in the process of rapid development of urbanization in the city, then the city traffic problems will inevitably become a focus of attention, has become a major factor restricting the development of the city and the people's living standards. In Beijing, for example, according to 10 million people travel every day, if every day to travel more than half an hour because of traffic jams, then the direct economic loss is 5 million hours a day. And the loss of up to 27 million 500 thousand yuan per day, then that is up to \$10 billion 38 million per year. This does not include any other implicit or indirect losses resulting therefrom. Therefore, to solve the problem of urban traffic has become a very important part in the development of economy.

Hong Kong is one of the largest cities in the world. According to statistics released by the Hong Kong SAR Government in February 16, 2009, the data show that: by the end of 2008, the population of Hong Kong was 7 million 8 thousand and 900, of which the resident population was 679 million 20 thousand, and the floating population was about 218 thousand and 700. In addition, there are about 15 million 10 thousand of the tourism population each year. Its population density of 6420 people per square kilometer, the average urban population density of 210 thousand people / sq km.

In 2009, the population of Hong Kong was about 7 million 30 thousand, with a total GDP of \$210 billion 730 million and a per capita GDP of \$30088. The traffic demand caused by economic activity is bound to be enormous. Cut by the end of 2009, the total length of urban roads in Hong Kong is 2050 km, and the total length of the road for every thousand people is only about 0.292 km, and most lanes less than 20 meters wide. According to common sense, in such a high population density, and the density of economic activity is so large,

the traffic is bound to appear crowded phenomenon. But, surprisingly, the city of Hong Kong traffic unimpeded. It is very convenient for people to travel, even though the average speed of vehicles on the main roads in the rush hour has remained at about 22 km. The reason why the traffic in Hong Kong is so clear is that the government has implemented a large number of other measures in addition to taking effective measures to control the total amount of vehicles. For example, one-way traffic, computer intersection signal control and local restrictions along the parking.

Therefore, it is very significant to study the urban traffic management mode of Hong Kong.

## 2. Efficient and Orderly Operation of Public Transport System

Countries around the world are basically a loss of public transport system, but Hong Kong has miraculously achieved profitability. Hong Kong bus services run by private or public institutions, and the government does not directly intervene, nor provide direct funding. Hong Kong bus travel sharing rate of 89%, which reached the highest level in the world.

Hong Kong is small and densely populated, which requires Hong Kong to use the least amount of traffic on the road with the least amount of traffic. Therefore, public transport has become the only choice in Hong Kong. Hong Kong 's traffic is good, the key lies in the full use of public transport. Before the mouth, Hong Kong residents travel to use public transport ratio of about 90%. June 2010 Hong Kong average daily public transport passengers over 114 million 480 thousand passengers, an increase of 3.8%, while rail transport accounted for about 38.2% of the share, and is still rising trend year by year.

The major public transport in Hong Kong includes railways, buses, minibuses, taxis and ferries. The following are the main railway, buses, minibuses and

taxis. The ferry has a small share of public transport in Hong Kong, so there is no introduction.

### 2.1. The Subway as a Traffic Artery

The subway system in Hong Kong is the most characteristic and the most popular means of transportation. In December 2, 2007, the subway and the nine iron car operation formally merged, Hong Kong Metro Company was renamed Mtr Corporation". The combined railway system has a total length of 168.1 km, and consists of a total of 9 urban stations consisting of a total of 80 stations.

Railway is the artery of traffic in Hong Kong. In Hong Kong, the railway was identified as a "high capacity trunk transportation vehicle". Railway is not only environmentally friendly, but also has a high transport efficiency, so it is in the most advanced position, but also the future direction of Hong Kong 's transport. By 2016, 12 new railways will be built in Hong Kong. After the completion of the new railway, the distance between most of the residential area and the railway station is very short. It is estimated that 70% of the people of Hong Kong do not have to travel on other vehicles.

Hong Kong subway is the main reason for the high efficiency, there are two reasons: first, the implementation of the separation of the two powers of independent business model. Two is to strengthen the construction of enterprise culture. Hong Kong continues to improve the scientific and technological level and management level of the public transport system, and provide quality services to meet customer needs.

The mode of independent management. All the subways in Hong Kong are operated by a public utility company, owned by the government of Hong Kong, rather than by the government. Because the subway company accounted for more than 50% of the operating expenses in labor, the cost of rent and nearly 20% of the development income strict control, coupled with the continued growth in operating income and profits, so now the annual profit of more than 1 billion 200 million Hong Kong dollars. Since the beginning of 1990s, the company began to use its operating profit and debt service. As of 1994, the company has paid a debt of HK \$16 billion, and plans to pay off by 2051. Hong Kong subway both by the government and the public oversight, but also in the absence of administrative intervention in the environment, which became the world's number one profitable subway [1].

Improve the scientific and technological level and management level of public transport system. Hong Kong subway can achieve such outstanding business performance, which is consistent with their service, mutual respect for each other, according to the value of the three convictions. Hong Kong subway passenger service on the equipment and facilities allocation,

staffing and train operation arrangement, the operation standard and specification, passenger behavior and other aspects of a service index reflects these three beliefs. On the other hand, it is because they use the scientific and technological knowledge and advanced management tools, and to ensure the provision of quality services.

### 2.2. Bus Service System

Buses are characterized as "medium capacity vehicles"". Under the framework of railway priority, the bus is mainly for the provision of railway services, and services for the absence of a railway location.

In Hong Kong, buses are operated mainly by government - sponsored bus companies and are distributed by the government. The company is known as a franchised bus company. According to the relevant laws of the public bus, the franchised bus companies operating in accordance with the principles of business, and not government subsidies, and in fares, routes and road trips, and other business plan highly controlled by the government <sup>[3]</sup>.

### 2.3. Provide Personalized Bus Service Taxi

Taxi is characterized as "personalized public transport service". As of June 2010, the total number of registered taxis in 18138, the total number of licensed vehicles, so the taxi provides a total of 8.8% of the traffic flow in the territory of the province of the city of Hong Kong. Although the taxi can provide personal services to the immediate destination, but the utilization rate of the traffic is not high, so the government will only have sufficient passenger demand and road space will issue a new license. In addition to the issuance of a taxi licence on Lantau Island in 1997, the city and the new territories have not issued a licence for 10 years. The total number of taxis in Hong Kong has remained at 18 thousand.

### 3. Strict Restrictions on Private Transport

As of June 2010, Hong Kong 7 million 30 thousand population of only 438 thousand private cars, which is only the end of the year by the end of the year only increased by 170 thousand vehicles, and this is only the end of, an increase of only 50 thousand vehicles by the end of 260 thousand. From the data of 1981-2002, we can see that although the number of private cars in Hong Kong has increased, the proportion of private cars has decreased slightly (see Table 1).

In order to ensure unimpeded traffic, Hong Kong strict control of private cars, which take possession and use of high taxes, high taxes and high vehicle tire tax for the first time to buy three ways to control the vehicle. The government's strict control over private cars in Hong Kong is mainly based on expensive first registration tax (see Table 2).

**Table.1. Ownership of Private Cars**

Year	Number of private cars/ten thousand	Proportion of vehicle occupants/%	Percentage of private car travel/%	Urban driving speed/(km/h)
1981	19	12.9	11.5	20.6
1992	24	13	11.5	24.4
2002	34	13.5	11.1	25.6

**Table.2. Hong Kong Private car First Registration Tax**

First registration tax /ten thousand	First registration tax /ten thousand			
	Hong Kong	Singapore	Japan	Britain
15	35%	110%	4.50%	17.50%
15	65%	110%	4.50%	17.50%
20	85%	110%	4.50%	17.50%
50	100%	110%	4.50%	17.50%

## 4. Enlightenment

### 4.1. Attach Great Importance to the Role of Market mechanism in Public Transport

In the arrangement of public transport enterprises, Hong Kong not only pay attention to the realization of social functions of public transport, but also ensure the economic benefits of public transport enterprises. The continuous improvement of economic efficiency has reduced the burden of the government, and has created favorable conditions for the sustainable development of public transport.

Attach importance to and encourage private enterprises to participate in public transport services. Whether it is a franchised bus company or a private car park. Although the subway company is a wholly owned enterprise, it is necessary to operate independently in accordance with market economy.

The government only makes laws, policies and regulations from the macro level. The impact of the private sector, government regulations and public pressure on the public transport system in Hong Kong has been an exciting example of the three.

### 4.2. The Public Transport into the Framework of Urban Planning to Consider and Arrange

The development of city and city is very large and complex system engineering, and the traffic system is the system of city economic artery, which is to maintain the vitality of the city and plays a vital role to enhance the efficiency of city system. Therefore, the planning and design of the transportation system must take into account the development of the city, and urban planning must also consider the carrying capacity of the transport system. Hong Kong in this side and many of the practice is worth learning and reference.

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