

China and Bicycle: the End of the Story?

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Since 2000, the number of cars has increased dramatically in Chinese cities. There are fewer and fewer bicycle lanes and it's more and more dangerous to ride a bicycle. In Chinese cities, the bike is denigrated. City planners consider it to be a slow, out-of-date means of transportation. In 1980, Chinese cities were short-distance commuter cities with a high population density and with highly diversified economic and social activities in the building environment and the Neighbourhood community. This was due to work unit system. Following economic reforms, cities have changed and commuting distances have become further and further. Bicycles are more and more a means of transportation for the poorest. But this trend could soon come to a halt.

Recently a senior minister criticized Beijing city for making it harder for cyclists to get around, saying that the country should work to keep its title as the "kingdom of bicycles". In this article/paper/discussion we will look at the evolution of bicycle use and urban planning since 1980 in Chinese cities and urban planning. We will conclude with a discussion about the possibilities of the bicycle maintaining a high percentage of transport means in Chinese cities through urban and transportation planning.

Bicycle: the Vehicle of Socialism

According to Chinese custom, when you marry, you should own a sewing machine, a radio and a bike. Bike ownership was rationed. Work units would distribute rationing tickets. During maoist era, demand was higher than production. A first bike was quite easy to get for a household, getting a second one, depended mainly on your hierarchical position in your work unit.

Chinese cities were built and organised around work units. The work unit assigned employees living quarters and provided housing, canteens, nurseries, etc. Work units were the principle entity for implementing communist party policy. Personal mobility was concentrated inside the work unit. This meant that most of the daily commutes were short distances that were done on foot or with bicycle.

During the socialist period, cities were allotted to production. Consumption was constrained. The bicycle was a cheap means of transport that suited economic, political, social and urban organisation.

1980s : Reforms and the Bicycle Boom

Beginning in late 1970's, Chinese leadership began reforming the economy from a central planned economy to a more market-oriented economy. Deng Xiaoping was the great architect of these reforms. The first objective was to improve people's living conditions after the Cultural Revolution. Living space per urban inhabitant was around 3,8 m².

The market economy was considered by Deng Xiaoping as the best tool to enhance Chinese daily life. During this period, Chinese bicycle production rocketed (see figure n° 1). Brands like Phoenix (*Fenghuang*), Forever, Flying Pigeon (*Feige*) et Red Flag (*Yongjiu*) emerged.

Production was destined for the domestic market. In 1987, rationing tickets were abolished. Bicycle prices stayed low and household income increased rapidly. In 1989, bicycle ownership in lower income urban households was 1,7 (Figure n°2). Modal share of bicycle ownership was generally higher than 33 % and sometimes higher than 50 % (figure n°3).

1990s : Export Development and Early Motorization

Joint venture agreements in bicycle industries have been permitted since 1985. These companies have been producing primarily for a foreign market (USA, EU, and Northern Asia). Most exported products are mountain bikes. During 1990s world bicycle production was around 1 billion units. 40 % were produced in China. Chinese production depends less and less on domestic market which is gradually getting smaller (figure n°2).

Bicycle use has also been decreasing also in cities because of

the urban transformation and development of motorised vehicles (figure n°4). With housing and land use reforms, commuter distances have been growing quickly throughout the decade. The reconstruction of city centres and suburban development has caused urban population density to diminish. The link between the work unit and employees has weakened. Diversity of activities in the city centres have also reduced also.

Cities constructed during the 1990's left a lot more room to automobiles. As the vehicle fleet increased with taxis and company cars, streets become more and more devoted to this transport mode. Riding a bicycle became more and more dangerous. 40 % of road mortality in urban area is bicycle users. For planners, the bicycle is old-fashioned, takes up too much room on streets and does not project a good image for Chinese metropolises. This is why many cities have tried to ban the bicycle in city centres.

2000s : Congestion and Bicycle Renaissance in China ?

At the beginning of 2000's, car sales dramatically increased. In big cities, Chinese people discovered congested traffic on daily basis. Public transport was too underdeveloped to resolve to this problem. In consequence, cities undertook the development of urban rail networks. Most of the time, the bicycle is more likely to be considered as a cause of congested traffic and not a solution to them. In Chinese streets, we can observe three types of bicycle use:

- People who live close to their job prefer bicycle use to public transport. Some of them have bought electric bikes to commute farther distances. The number of electric bikes is increasing quickly in cities like Shanghai where they are authorized.
- To feed mass transit. Many people use bikes to avoid walking distances of more than 400 meters.
- Low income households for whom the bicycle is the only means of transport. Some of the floating population use tricycles as a work tool.

When faced with the increased car traffic, energy bills and pollution, Chinese authorities began taking interest again in the bicycle. The first sign came from a senior Minister in June 2006. Qiu Baoxin criticized the Beijing city administration for its policy concerning the bicycle. He said that the country should retain its title as the kingdom of bicycles "at all costs". This point of view could be the turning point for a better consideration of the bicycle in Chinese cities and maybe a bicycle renaissance.

Figure n°1: Chinese Bicycle Production (1950-2003)

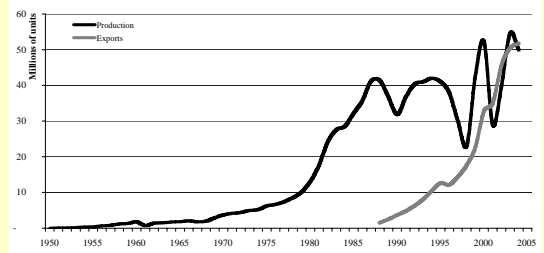


Figure n°2: Bicycle ownership in China (1980-2003)



Figure n°3: Modal shares in Chinese cities during 80s

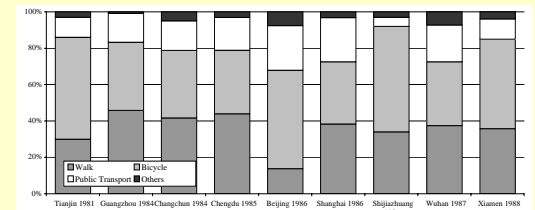


Figure n°4: Modal shares in Chinese cities during 90s

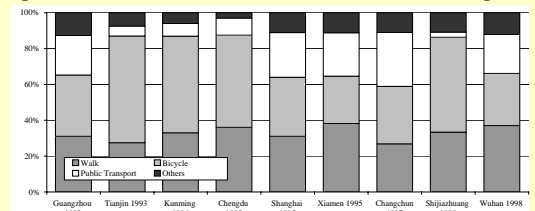
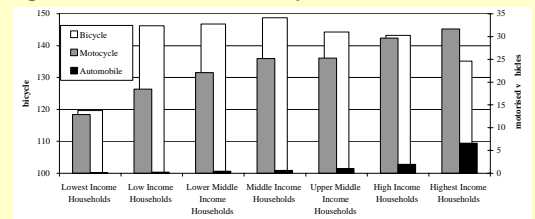


Figure n°5: Vehicle ownership for urban households



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