

THE SATELLITE TOWNS OF METROPOLIS GUANGZHOU: EVOLUTION, INHERENT LINKS WITH THE CENTRAL CITY AND TENDENCIES —A CASE STUDY OF RENHE TOWN^①

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ABSTRACT: This paper focuses on three interrelated aspects of the relationship between the satellite towns (Renhe Town) and the central city of metropolis Guangzhou. The attention is initially paid to the evolution of the satellite towns. Those towns are recognized as industrial ones although different types could be identified since the founding of the People's Republic of China in 1949. Then the analysis is turned to the inherent links between Renhe and the central city. Although Renhe has absorbed some decentralized industries, the achievements of constructing satellite towns are not considered satisfactory. This is because the decentralized industries have not given an impetus to the economic growth of Renhe, the town has no close links with the central city in the aspects of finance, employment, economy and technology due to the limitation of the traditional administrative institution, and the decentralized workers are commuters taking the mother city as the sleeping place. Thirdly the problems associated with the construction of satellite towns are examined. Guangzhou is experiencing the major restructuring of industrial structure and therefore it is necessary to decentralize some industries to satellite towns. However, the limits from the central city and the satellite towns are influencing industrial decentralization and construction of satellite towns. The solutions and prospects are finally put forward.

KEY WORDS: Satellite town, town evolution, industrial reconstruction, Guangzhou

I. EVOLUTION OF SATELLITE TOWNS OF GUANGZHOU

A satellite town refers to the settlement lying within the jurisdiction of a big city, or be-

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ing less than 100km far from the city centre (within the commuting catchment areas of a city), having the close links with the city in production and livelihood. The satellite town must have three functions:(1) settling the decentralized population from the central city; (2) absorbing the decentralized industries from the central city; and (3) sharing some activities of the central city such as industry, education and housing ⁽¹⁾. Unfortunately, in practice of China, the concept of satellite towns is not clear. The satellite towns tended to be constructed according to the big cities' own understanding to the concept and needs. This paper, taking Renhe Town as an example, examines the satellite towns of metropolitan Guangzhou.

1. The Satellite Towns during the Period from 1949 to the 1960s

As early as 1949, Guangzhou was identified as a big city with a population of 1.6 million. At that time, the industry of Guangzhou was underdeveloped and the per capita output value of industry was only 208 yuan (RMB) and therefore Guangzhou was called a "typical consumer city". After the liberation(1949), under the guidance of the industrialization strategy,the industry of Guangzhou grew rapidly. But the old urban area has no much space for the expansion of industries. Thus, some new industrial areas in suburbs were developed from the First Five-Year Plan to the 1960s. Those industrial areas with some necessary living and service facilities were called the early satellite towns of Guangzhou(Fig.1) ⁽²⁾, their two characteristics could be recognized: (1) most of them were identified industrial ones because they were actually the industrial areas formed with the development and outward spread of Guangzhou's industries; (2) they were concentrated in the areas near the city proper except a few towns located in outer suburbs. This is because no attractive living and service facilities were provided in suburbs and the family members of workers would not like to migrate to suburbs so that many workers had to commute between the satellite towns and Guangzhou, and the city proper was only as the sleeping place. For example, in the Yuancun industrial area, there were nearly 40,000 workers by the early 1980s but the residents living in the area were only 20,000, which indicated that more than half of the workers lived in the city proper.

Since the middle of the 1980s, many satellite towns near the city proper have become part of the proper with the expansion of the built-up area and the adjustment of the administrative divisions. Those satellite towns far from the city proper, due to having long been the local centers or being newly-established industrial areas (e.g. Huangpu), developed independent urban facilities and therefore had relatively integrated functions and appearance of small towns. Obviously the satellite towns during this period were different from those defined by the concept mentioned above.

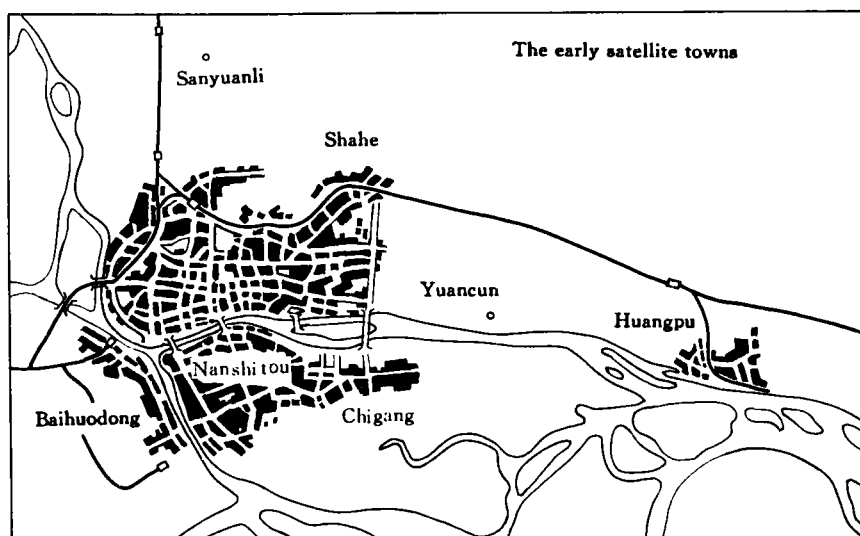
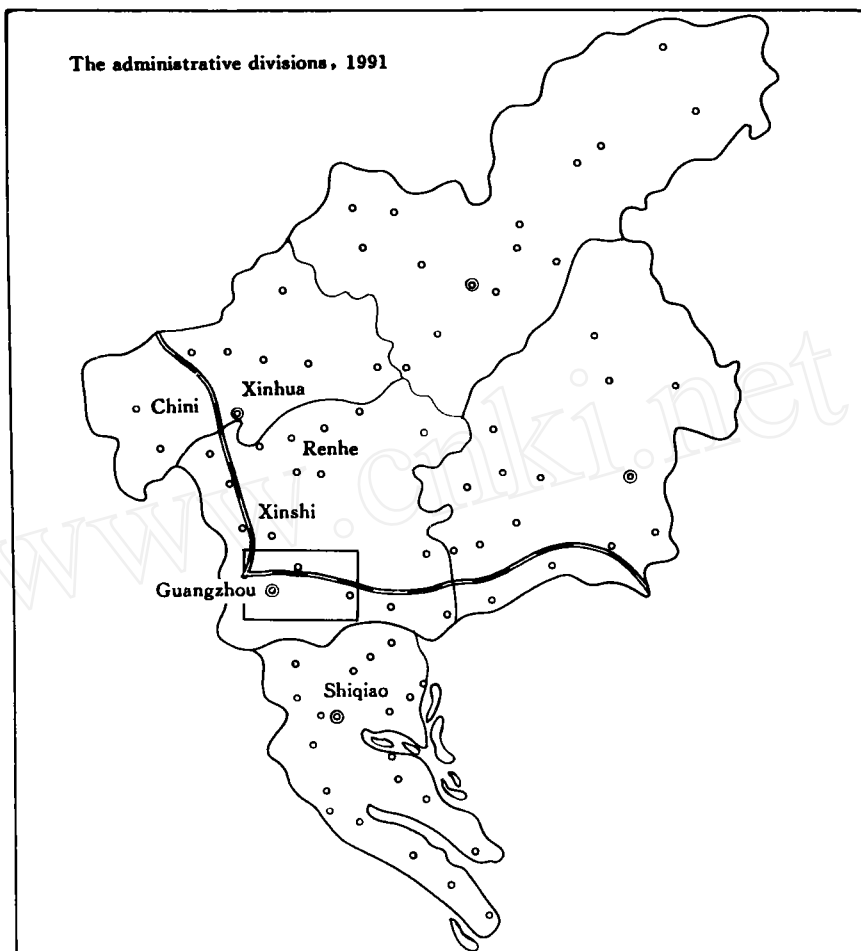


Fig.1 Satellite Towns of Guangzhou

2. The Satellite Towns since the 1970s

In 1974 Shiqiao Town of Panyu County south of Guangzhou was designated as the satellite town of Guangzhou. It is the first satellite town of Guangzhou approved by the Chinese State Council. But Shiqiao, as a satellite town, did not play a role of sharing the functions of Guangzhou, instead it developed still as a county town, namely a local centre. So, Shiqiao was a nominal satellite town. In September 1984, the revised Master Plan of Guangzhou was approved by the State Council, in which, Xinhua, the county town of Huaxian County north of Guangzhou, and Shiqiao were defined as the satellite towns of Guangzhou. However, the funds invested in the construction of the satellite towns were limited and the town planning were not integrated into the comprehensive planning of Guangzhou⁽³⁾, so that the links between the satellite towns and the central city were not close and the achievements of constructing the satellite towns were not obvious.

From 1985 to 1988, the provincial government defined 242 towns as industrial satellite towns in order to promote the growth of local economies⁽⁴⁾. Nearly all designated towns of metropolis Guangzhou were included. Although these towns are not the satellite towns approved by the State Council, they, like those two approved satellite towns, enjoy the favorable policies, have a loose relation to the central city, and are forming a structure of industry's dominating economy. And it is more important that most of those located in the metropolis have absorbed some decentralized industries. Therefore, those industrial satellite towns in the metropolis and the satellite towns approved by the State Council in the paper are mentioned in the same breath.

3. Introduction to Renhe Town

Renhe, under the administrative jurisdiction of Baiyun District, Guangzhou, is a sub-urban town of Guangzhou, lying 23km north of Guangzhou. It covered an area of 54 square kilometers and had a population of 62,748 in 1990, 5,250 of them lived in the township. In the same year 10,700 people were non-agricultural and the urbanization level reached 17.05%, having an increase of 9.6 percentage points over 1987. For a long time, agriculture dominated Renhe's economy and the township was a rural centre providing services for its surrounding areas. Since the reform of economic system and opening to the outside world in 1978, especially since Renhe was defined to be an industrial satellite town in 1988, its industry has grown rapidly. In 1990 the gross social product of the town was 314 million yuan, of which industry accounted for 47.73%, increasing by 18.23% over 1987 and agriculture amounted to 40.15%, decreasing by 23.61%. Also in 1990, the laborers engaged in industry were 9,232, sharing 33.28% of the total, but this proportion in 1987 was 27.93%. Obviously Renhe is increasingly becoming a rapidly urbanized industrial town in

the suburb, and the township has been a political, economic, commercial and cultural centre of the town with relatively clear function areas and necessary facilities.

II. THE INHERENT LINKS BETWEEN THE SATELLITE TOWN AND CENTRAL CITY

1. Economic and Technological Links

The industrial enterprises of Renhe Town mainly comprise three types: rural, joint-venture and decentralized(city-owned) enterprises. Table 1 showed the basic data of the three types of enterprises. From the table, one can see that although there were only 2 decentralized enterprises, the total output value they created in 1991 was three times as much as that by all the other enterprises. However this did not indicate that the decentralized enterprises had played an important role in promoting the economic development of Renhe because they had more contact with the city authority in organization, management and production rather than with the town government. This means that the decentralized enterprises turn over profits and taxes to the city authority rather than the town. Therefore these enterprises, except for paying a small sum of processing expenses to the villages where the factories are located and solving local employment to a limited extent, do not make much contribution to the towns' development.

Table 1 Industrial enterprises of Renhe Town (1991)

Type	Number of enterprises	Number of workers	Output value (million yuan)
Decentralized enterprises	2	5,500	500
Rural industries	212	11,468	106.81
Joint-venture enterprises	13	2,556	49.05

Source: The archives of Renhe Town.

The three kinds of enterprises differ in the major economic and technological links. The joint-venture enterprises are oriented to world market and therefore many of their raw materials come from and many of their products go to the international market. And most of their technologies are imported from foreign countries. The conditions of the decentralized enterprises are more complicated due to the introduction of market mechanism. For example, the operations of the Umbrella Firm of Guangzhou have not been guided by the central planning. Instead, it has more authority in production, circulation and distribution,

and it purchased the materials from and sold the products to the areas all over the country and exported part of its products. Rural industries comprised four branches: leather, sewing, food and sports goods, accounting for 71.22% of the total workers engaged in rural industries and 71.79% of industrial output value created by rural industries. The materials needed by these four industries mainly come from and their products are sold to the areas out of Guangzhou. These facts show that the economic and technological links between Renhe and Guangzhou are not close.

2. Financial link

In 1991 the revenue of Renhe was 3.1528 million yuan which came from two channels. The main channel was the profits and taxes turned over by rural industries (including a very small sum of processing expenses of decentralized enterprises' payment to villages), accounting for 97.5% of the total revenue, but the financial allocation from the higher responsible department only amounted to 2.54% (used for the salaries of state personnel. From the financial link of Renhe and Guangzhou, the financial allocation from Guangzhou was 80 thousand yuan but Renhe turned over 14,800 thousand yuan to Guangzhou, being 185 times of the former ⁽⁶⁾. Obviously the development funds of Renhe are mainly raised by the town itself and the support provided by the central city is limited.

3. Employment Link

In 1992, Renhe Town had a working population of 29,321, of whom, 12,451 were engaged in agriculture, 14,269 in secondary sector and 2,337 in tertiary sector and rest 264 went out of the town, the labor proportions of the three sectors in the total were 42.46%, 48.66% and 7.97% respectively. In addition, there were 3,663 migrant workers. For the balance, Renhe had a net import of 3,399 workers in 1992. It is clear that the town itself can not meet the labor demand of Renhe's economic development and has to import the workers from the outside, especially from the outside of Guangdong (accounting for 81.24% of the total migrant workers). The two decentralized firms had about 5,500 workers totally in 1991, one fourth of whom were local and the rest from Guangzhou ⁽⁶⁾. These figures showed that in the aspect of solving employment the decentralized firms only made a limited contribution to the town.

4. The Essence of Renhe as a Satellite Town of Guangzhou

Renhe Town, as a rural centre, has a history of 40 years. Renhe is well situated to Guangzhou, under the administrative jurisdiction of Guangzhou, now is rapidly urbanizing, which are favorable for the town functioning as the area of absorbing the decentralized industries of Guangzhou. Up to now although two Guangzhou's factories have been decentralized to Renhe, the achievements of Renhe as the satellite town of Guangzhou are not satisfactory. This is because the decentralized factories would not give an impetus to the economic growth of Renhe, the town has no close links with Guangzhou in the aspects of finance, employment, economy and technology, and the decentralized workers, in fact, are commuters taking the mother city as the sleeping place. Renhe is an industrializing, urbanizing and flourishing small town with loose links with Guangzhou and relatively integrated economic structure.

III. SATELLITE TOWNS: A SOLUTION TO THE PROBLEMS OF METROPOLIS GUANGZHOU

1. The Restructuring of Industrial Structure of Guangzhou

With the rapidly economic growth since the reform, the industrial structure of Guangzhou is facing a major restructuring. Table 2 shows the proportion change of the three economic sectors in gross domestic product (GDP) since 1978. From the table, it is clear that the proportion of the secondary sector in GDP decreased from 65.08% in 1978 to 41.87% in 1990, decreasing 23.21 percentage points and during the same period, the tertiary increased its share in GDP from 31.08% to 54.59%, increasing 23.51 percentage points.

Table 2 The GDP composition of Guangzhou, 1978-1990 (%)

Year	GDP	Primary	Secondary	Tertiary
1978	100	3.84	65.08	31.08
1980	100	3.53	58.95	37.52
1985	100	3.99	53.40	42.61
1986	100	3.81	51.19	45.00
1987	100	4.13	47.89	47.98
1988	100	4.09	47.35	48.56
1989	100	3.66	45.31	51.03
1990	100	3.54	41.87	54.59

Source: Statistical Yearbook of Guangzhou, 1992.

Since 1987, the GDP created by the tertiary sector exceeded that by the secondary sector, and the difference of the GDP composition between the tertiary and secondary sectors was gradually enlarged. In 1987, the gap was only 0.09 percentage points, but by 1990, it expanded to 12.27 percentage points. In 1990, the labor force engaged in the tertiary sector accounted for 45.66% in the total, being 3.1 percentage points higher than that in the secondary sector. These figures show that the tertiary sector has grown more rapidly than other sectors and is increasingly becoming the dominant sector of Guangzhou's economy. According to the experience of the western countries, the industries would be decentralized to suburbs at a large scale during the period of the restructuring of industrial structure. It seems necessary and significant to decentralize some industries to suburbs in order to guarantee the restructuring of Guangzhou's industrial structure.

2. The Limits on the Construction of Satellite Town

In theory, industrial decentralization to satellite towns, on the one hand, can promote the restructuring and solve a series of urban problems, such as environmental deterioration and lack of land, and on the other hand can give an impetus to the construction of the satellite towns. But in practice, many factors have restricted the industrial decentralization so that the construction of satellite towns are affected.

2.1 Limits from the central city

Firstly, the industries to be decentralized are mainly those occupying large area of land and having heavy pollution, such as steel, textile and some manufacturing, but they are normally the leading industries of Guangzhou and play an important role in the city's economy. In 1991, for example, seven industries (textile, oil processing, chemical, medicine, metal smelting, machine and equipment for transportation) created 45.1% of the total industrial output value. If the new industries could not be established as soon as those old ones were decentralized, the economic growth of Guangzhou would be affected, which would make the decision makers hesitate to decentralize industries.

Secondly due to the huge differences in living and service facilities between Guangzhou and suburbs (Table 3), urban people would not like to settle in the satellite towns, which, to some extent, has hindered the decentralization. From the table, although Renhe in environment and workers' income was superior to Guangzhou but in culture, education, service and commerce inferior to the central city, which resulted in the psychological resistance of urban people to the decentralization. Those who have worked in the town with the industrial decentralization still keep their residential cards of Guangzhou and commute between Renhe, the working place, and Guangzhou, the sleeping place, so that the traffic congestion

become heavier. For example, the Umbrella Firm of Guangzhou located in Renhe has about 3,000 workers, two thirds of whom migrated from Guangzhou but nearly all of them are commuters daily or weekly.

**Table 3 The comparison of noneconomic indicators
between Guangzhou and Renhe in 1991**

Indicator	Guangzhou	Renhe
Cinema/ 1,000 people	66	0.2
Percentage of students entering primary school	99.13	95
Percentage of students entering secondary school	78.37	65
Percentage of students entering high school	31.01	15
Hospital beds/ 1,000 people	7	1.3
Doctors/ 1,000 people	5	0.8
Retail shops/ 1,000 people	16	2.6
Greenland per capita (m ²)	6.2	7.0
Average transport noise (db)	73.50	60
Living space per head (m ²)	8.51	15.8
Yearly average wages of workers (yuan/ person)	4,090	4,200

Source: Statistical Yearbook of Guangzhou, 1992. The archive of Renhe Town.

Thirdly, the low rent of urban land is not enough to force the industrial decentralization. For a long time the land of China was utilized freely. In recent years although the local governments have begun to collect the land tax, the fixed tax is very low. On an average, the tax is 5 yuan per square metre per year for the central part of the built-up area and 1.5 yuan for the peripheral area⁽⁵⁾. For example the Jingxiutang Medicine Factory in 1990 paid the land tax of 16, 800 yuan but created a profit of 10.4892 billion yuan, the land tax only accounting for 1.6% of the profit^①. The land tax is so low that it could not become a stimulus to the industrial decentralization. From the above analysis, the limits from the central city will hinder the industrial decentralization. So, the decentralization might happen by the administrative force and by the city government's investment in the construction of the satellite town for the purpose to improve the service facilities, and the education and em-

①Calculated from Yearbook of Guangzhou, 1991.

ployment of the workers' children.

2.2 The limits from the satellite town (Renhe)

As mentioned above, the rapid development of Renhe has owed to the rural rather than the decentralized industries. The rural industries have more authority in production, circulation and distribution than the city-owned enterprises, and are not controlled by the economic plan of Guangzhou. These have resulted in the increasingly loose links between Renhe and Guangzhou. In addition, the decentralized industries have made limited contributions to the development of Renhe but occupied large areas of land. Furthermore the city government can only give limited financial aid to the industrial decentralization and the construction of satellite towns. Therefore the decentralization will certainly increase expenses of Renhe's improving the municipal and infrastructure facilities, thus increase the town's financial burden. In the view of these circumstances Renhe Town will not welcome the decentralized industries.

3. The Tendencies of the Satellite Towns of Metropolis Guangzhou

Guangzhou is in the period of the restructuring of industrial structure. The decentralization of the industries especially those old ones and the construction of satellite towns are necessary so that a structure of the tertiary sector dominating Guangzhou's economy can be formed.

However due to the geographical location near Guangzhou and the convenient communications, the small towns in near suburbs have developed rapidly and do not need the decentralized industries as a stimulus to the local economic growth. On the other hand the urban sprawl of Guangzhou is rapid (the built-up area of Guangzhou is expanding outward at a rate of 6-8 square kilometers per year)^①. Therefore it is inadvisable to construct satellite towns in near suburbs.

Nevertheless in the outer suburbs, the potential of constructing satellite towns is considered large. This is because: (1) economies of the outer suburbs are relatively backward and it is necessary to establish some large-scale propulsive industries to drive their economic growth; (2) compared with near suburbs, the outers are rich in land and labor force and have cheap land rent, which means that the industrial decentralization of the central city is profitable. These facts imply that the construction of satellite towns should be shifted to the outer suburbs.

^① The Planning Bureau of Guangzhou, 1993.

Two problems need to be solved in the construction of satellite towns. First, the relation of the local economy and the decentralized industries should be well handled. At present a decentralized industry, like an enclave in the satellite town, has nearly no links with the local economy so that the satellite towns are nominal. The solution to this problem is to handle the financial relations between the central city and satellite towns and between the decentralized industries and local economy, so that the decentralized industries can be integrated into the development plan of local economy. Secondly, on the basis of solving the first problem the governments of the central city and the satellite towns should allocate a sum of funds respectively to improve the conditions of the towns. The goal is to construct the satellite towns as the living and working places with comfortable environment, enough services and infrastructures, and excellent welfare to increase the town's attraction and free Guangzhouers' mind of apprehensions of moving to satellite towns.

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