

THE FORMATION, EVOLUTION AND OPTIMAZATION OF TERRITORIAL STRUCTURE IN THE SOUTHERN CHINA

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ABSTRACT: With the change of geopolitical pattern of the world, pacific rim area increases economic cooperation, instead of military antagonism. After reform and open to outside world, the southern China takes in an amount of investment from Hongkong, Macao and Taiwan, taking advantage of superior geo environment and thus forms a topical model of core periphery in the southern China. The core periphery model in the southern China is territorially made of three parts: core area — Hong Kong, Macao and Taiwan; peripheral area — Zhujiang delta; second core area — parts of Hunan Province, Jiangxi Province, Fujian Province and Hainan Province and Guangxi Zhuang Autonomous Region. Its evolutionary stage of this model can be divided into four stages: (1) the stage of polarization of core area; (2) the stage of the second core area strongly controlled by core area; (3) the transitional stage of the second area; (4) the stage of the southern China space integrity. Taking the core periphrial model in the southern China as an integrity of interrelational and rational division, its whole functional organized system is “input product assemble output”, core area is mainly then as the managed and transported center, the second area plays a product and productive control function and becomes center of manufacturing, study and development, peripheral area constructs as the center of material and raw material and the base of agricultural and side line products. Based on the analysis of the formative structure, evolutionary law and the design of territorial function, we suggest the way of territorial optimization as follows: (1) establishing the large hinterland which takes Xijiang basin as its core; (2) construct the high and renewed technological corridor; (3) constructing stable and varied material and raw material base; (4) reinforcing the organization and adjustment and managment between core area, peripheral area and second peripheral area. (5) constucting the varied corridor among core area, the second area and peripheral area.

KEY WORDS: the southern China; territorial structure formation and evolution; territorial optimization

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1 THE BACKGROUND AND CONDITION OF TERRITORIAL STRUCTURE FORMATION IN THE SOUTHERN CHINA

1.1 The Change of Geopolitical Pattern — a Pre- requisite to the Formation of Territorial Structure in the southern China

After World War II, the world geopolitical pat-

tern headed by Russian and the United States was formed. During the 1960s, with a series of changes in international politics, military and economy, such as the third world power's emerge, anti colonialist movement as well as Sino-Russian relation broken, the multipolar geopolitical pattern was established basically. In the 1980s, with the collapse of Russia and drastic change in East Europe, the geopolitical pattern took a great changes. This change has two basic

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characteristics. Firstly it keeps the framework of two geopolitical world—ocean trade world and Eurasian continent world, between them are broken belt where two or many opponents (nation or nation group) competed with military, politics and economy. Secondly, with the world antagonism relaxing and economy, culture and people occurring frequently, peace and development becoming the main theme of the two world, broken belt gradually merges in development.

The southern China (here including Hong Kong, Macao, Taiwan, Hainan and Guangdong Province and part of Hunan, Jiangxi, Fujian provinces and Guangxi Zhuang Autonomous Region) is located in the mixed area of Eurasian continent world, ocean trade world and broken belt. With the change of the world geopolitical pattern, China carried out the reform and open policies in the late 1970s, boldly established special economic zones in the southern China, opened 14 coastal cities to the outside world in the 1980s and also established duty free zones in coastal areas. Meanwhile, with the hostile relationship between mainland and Taiwan of China relaxing, trades between two sides increase quickly. In 1997, with Hong Kong successfully returning and politics gradually integrating, the southern China specialized and united in economy quickly. From 1978 to 1995, the proportion of bilateral trade volume to Hong Kong totally rose from 9.27% to 34.81%, becoming the greatest trade partner of the mainland. From 1979 to 1995, the Hong Kong's investment in the mainland had reached US\$ 778 × 10⁸, taking up 57.6% of the mainland total foreign investment from the outside, and there are 110 000 to invest enterprises Hong Kong investment in mainland, accounting for two thirds of the foreign funded total in the mainland.

1.2 Advantageous GeorEnvironment Basic Condition of the Formation of Territorial Structure in the Southern China

The southern China is situated in the coastal area of the mainland, has vast hinterland, facing South-

east Asian countries, adjacent to Hong Kong and Macao. It has superior location to connect with the world and to take part in international industrial division. In view of physical geography, Hong Kong and Macao are situated in the mouth of the Zhujiang (Pearl) River, connecting with the Zhujiang River delta. With regard to human history geography, they have many common historic and relative relation. From the view of transportation and communication, the infrastructure such as Beijing- Kowloon railway, Guangzhou- Kowloon railway and Hong Kong - Guangdong - Macao highway and information highway enable the southern China to connect with Hong Kong and Macao together. Due to economic sustained rapid growth and obviously economic gradient and industrial gap with the mainland, Hong Kong, Macao and Taiwan can completely be the economic growth pole of the southern China and take the lead in economic development of this area, and furthermore, these areas and the southern China would merge and readjust functionally and territorially to establish a new economic territorial organization and division form.

1.3 Hong Kong and Macao's Investment — a Basic Motive Force to Model Territorial Structure in the Southern China

Since China's reform and opening up to the outside world, its foreign direct investment (FDI) has increased rapidly. By 1994, it had reached US\$ 33 800 million. China had ranked the second in inflow of FDI, only behind the United States. Hong Kong and Macao are the main sources of the mainland's investment, but their investment has a great regional difference. According to analysis, their investment gives priority to 11 provinces(autonomous regions), especially to Guangdong, Jiangsu, Shandong, Fujian, Hainan, etc, making up 60.95% of the total investment in the mailand, Guangdong and Hainan accounting for 36.20%. The Zhujiang River delta had become the concentrated investment area of Hong Kong and Macao. Their tremendous investments have

exerted a great influence on economy, society and culture in the southern China and become a basic dynamic for modelling the territorial structure in the southern China. With these investment as ties, a regional division between Hong Kong and the mainland was established, called 'front shop back factory', which means that Hong Kong undertook opening up international market, capital, management, products design and production organization, while the mainland provided land and labor forces and produced goods. This division took advantage of both Hong Kong and the mainland, bringing more trades as well as flow of goods and people. Hong Kong and Macao's investment also has become a motive power for forming Guangzhou-Hong Kong-Macao megalopolis continuous region.

1.4 Culture Becoming an Important Tie for Territorial Connection

Though there exists great difference of social system and opinion of value in the southern China, the mainland, Taiwan, Hong Kong and Macao live under the same culture, with national and cultural ties, as well as with increasing economic closed connection. Oriented by market, on the basis of common interests and cultural identification, they combined the capital, technology, management and market of all countries and area together mainly by nongovernmental way, thus, enhancing the regional integration and development in the southern China.

2 THE FORMATION AND EVOLUTION OF TERRITORIAL STRUCTURE IN THE SOUTHERN CHINA

2.1 Structure Formation

The core-peripheral model in the southern China territorially consists of three parts: core area includes Hong Kong, Macao and Taiwan, Hong Kong is the innercore in the core area. Taiwan would be a potential area to function in the core area in the future, but

it will depend on the relationship between Taiwan and mainland. Second core area and peripheral area are outside of the core area. Second core area, mainly including the Zhujiang River delta, is a directly radioactive area of the core area. Peripheral area, mainly including part of Hunan, Jiangxi, Fujian and Hainan provinces, the Guangxizhuang Autonomous Region and other areas in Guangdong Province except the Zhujiang River delta is influenced greatly by the core area, but not stronger than that in the second core area.

Core area: Hong Kong, Macao and Taiwan cover an area of 37 100 km². In 1994, per capita GDP (Gross Domestic Product) reached more than US \$ 10 000, Hong Kong US\$ 21 562, Taiwan US\$ 11 236, Macao US\$ 15 885. In the 1960s- the 1970s the agriculture and industry were dominant. In the late 1980s, economy was transformed toward hi-tech industry. With abundant capital, this area has economic strength to expand, it is a 'head sheep' of economy of this area.

Second core area: It is driven and radiated by the core area's economy. Since 1978, taking its advantage of man and geo-environment relationship, it had absorbed much capital from Hong Kong and Macao, and joint venture enterprises developed rapidly. During 1980- 1993, the Zhujiang River delta's total foreign investment had reached to US\$ 2000 million, accounting for 68% of Guangdong total and 17% of China total, annual growth rate was 37.8%, which was 16% higher than the average level of China and also much higher than the average growth rate in developing countries. In the foreign investment, Hong Kong is the most important capital sources, which took up 74% of the total foreign investment in China in the past 15 years. Driven by this investment, the Zhujiang River delta's economy developed with an annual growth rate of 17.8%, meanwhile industrial structure transferred from agriculture dominance to added profit industry. The proportion of primary industry decreased from 71% in 1978 to 8.1% in 1995, meanwhile, the proportion of secondary and tertiary industries increased from 29% in 1978 to

91.9% in 1995. The ratio of primary, secondary and tertiary industries was 1: 50.2: 41.7. Territoially, with quick urbanization, the number and density of city in the Zhujiang River delta increased rapidly. According to statistics, in 1994, the Zhujiang River delta had 28 cities and 595 towns, the density of city and town reached 143 per thousand square kilometers, becoming concentrated city area in China.

Peripheral area: Due to being far from the core area, it is influenced considerably less by the core area. But in the long run, the influence from the core area can't be ignored. According to the studies, in recent years, the investment in Guangdong from Hong Kong and Macao obviously decreased, while that to Jiangsu, Shandong and Hainan increased a lot that in Guangxi, Qianjing, Shanghai, Hubei, Hunan, Zhejiang, Jiangxi, Beijing increased to some extent. Therefore, investment in peripheral area will increase. With the upgrade of the core area and the second core area as well as the industrial transfer from the core area to the peripheral area, the peripheral area will be labor-intensive relay area and even become the supplied base of materials, raw materials and labor forces.

2.2 The Evolution of the Model

Based on the practical condition of the southern China from the core periphery theory, the evolution of the model of core periphery in the southern China can be divided into four stages.

2.2.1 *The stage of polarization of core area (after World War II- 1978)*

The main character of this stage is that labor forces, capital and technology moved from the peripheral area to the core area, and the polarization greatly promoted the core area's development. After the initial stage of World War II is the stage of the formation of manufacturing industry. In order to attract capital and labor forces from the mainland to establish industrial districts and develop infrastructure, Hong Kong's authority once opened boundary area to allow the mainland people to go and come freely,

which resulted in the fast growth of Hong Kong's population, from 0.5 million to 1.8 million in two years (by the end of 1947). Though in 1949 Hong Kong passed "regulations of immigration control", in the 1960s- the 1970s, Hong Kong authority in concealed way, allowed younger and stronger labor forces to flow into Hong Kong to satisfy the demand for labor forces, resulting in the rapid development of manufacturing industry.

The mainland's capital flows southward Hong Kong provided the all round material basis for the light industry development of Hong Kong and the transfer of economic structure. Not longer after the War of Resistance Against Japan, China's Civil War broke out. With China's War of Liberation going on successfully, English-funded, foreign-funded and Chinese-funded enterprises migrated from the southern China and East China to Hong Kong. Meanwhile, technicians, managers and skillful workers poured into Hong Kong, which provided vitality for Hong Kong's declining economy. Because light and textile industry from the mainland properly met the needs of the necessity of international market, Hong Kong rapidly realized the change towards industrial economy. Afterwards the manufacturing industry's taking off and foreign trade's development as well as real estate's thriving needed much funds, meanwhile, with a guide of laissez-faire and free port and non-interference policies, Hong Kong attracted an amount of capital from overseas. Driven by capital, labor forces etc, Hong Kong gradually became the center of international finance, trade and information. With the economic influences on surrounding areas stronger, it had become the growth pole of the southern China.

2.2.2 *The stage of second core area strongly controlled by core area (the late 1970s- the early 1990s)*

In this stage, the core area strongly controlled and influenced the second core area by controlling effect, advisory effect, psychological effect, modernization effect and production effect. Owing to close connection in man and geoenvironment relation, the controlling process between Hong Kong and the

southern China was very strong. It shows as follows:

1) Hong Kong is decision making source places, completely controlled what to produce, how much to produce and where to produce. 2) Hong Kong as a contractor considered less environmental problems in the Zhujiang River basin as a subcontractor. In most cases, Hong Kong subtracted some polluted businesses to the Zhujiang River, while the local government of the delta ignored environmental problems in order to attract the capital from the core area at the early stage of economic development. 3) The Zhujiang River delta and the other area of southern China as a peripheral area distributed randomly the contractor factories, which resulted in great waste of land resources. 4) The capitalist constitution in the core area diffused outward area, resulting in great renovation in the peripheral. At present, we can consider the reform mainly taking estate as its core, as a result of waking up the peripheral area or constitutional radiation from the core area. We should say that the capitalist constitutional culture and industrial culture enable the living mode and ideology to change greatly in second and peripheral area.

2.2.3 *The transitional stage of the second core area (the early 1990s– the middle 1990s)*

Driven by the core area, the second core area had a rapid economy growth, people's income increase, a large industry scale and formed comparative a perfect industrial system. But since the 1990s, influenced by world and China's economic situation and problems arose by long-term extensive economic growth, the second core area was going through economic transition, it mainly shows as follows: 1) The rate of economic growth go down to appropriate range (10% – 15%). 2) The primitive capital accumulation converts in the direction of survival of the fittest. 3) The Second core area put forward higher industrial walls of entry. It made efforts to introduce Hi-tech and tech-intensive industry and limited pollution and tech-intensive enterprises. At the same time, some of labor-intensive industry such as textile, garment, shoes, foodstuff, plastics, toy etc, transferred to west and north of Guangdong Province, Jiangxi

Province, Hunan Province and the Guangxi Zhuang Autonomous Region. For instance, Shenzhen and Dongguan's garment industry transferred to Hunan and Jiangxi. Traditional sugar industry in the Zhujiang River delta transferred to Zhanjiang area and silk industry to Zhaoqing and Shaoguan.

2.2.4 *The stage of space integrity (since 1997)*

In the late 1990s, Hong Kong and Macao's returning back and the mainland's deep reform and opening up to outside world laid a political foundation for space unification. Common developing commodity economy and diversified economy laid a basis of economy for regional unification. The geographical integration and original relation of history and culture, under new political and economic situation, enhances the regional unification. In 1998, the cooperated meeting between Hong Kong and Guangdong was established. It showed the new development of territorial unification. After the meeting, the cooperation showed three changes: from limited nongovernment cooperation to overall cooperation pushed by the government under guide by "one country two systems"; from spontaneous, disperse cooperation completely oriented by market to the combination of market and government mainly oriented by market; from the model 'front shop back factory' based on the transfer Hong Kong's labor-intensive manufacturing industry to the pattern of division based on the core of technological renovation and resource's optimum arrangement. At present, the initial stage of territorial unification beginning the cooperation in infrastructure has come into operated stage and perhaps would come into integrated stage in few years with the Zhujiang River delta overtaking Hong Kong in economy and technology.

2.3 Function Design

It can be estimated that the economic growth in the southern China will continue in next century with the transfer of world economic core toward Asian Pacific area. The core-peripheral structure is a whole, with significance to the Asian Pacific area. From the

overall, to establish rationally regional organization and division may benefit for displaying advantages for each area and improve the interests of efficiency of whole structure, so that it strengthens the regional development. The core - peripheral regional organized system is 'input-produce-assemble-output'. The core area mainly plays a part in management, transport and finance center of Asiarr Pacific area and enable it to become concentrated places of transnational firms or subfirms and ties between China and other countries. Second core area plays a function in product and productive control and tries to become the center of manufacturing study and development in the southern China and manages a transported center connecting core area and mainland. Peripheral area should be constructed into a center of material and raw material and a base of agricultural and sideline product.

3 THE WAY OF TERRITORIAL OPTIMIZATION

3.1 To Establish the Large Hinterland Taking Xijiang River Basin as Its Core

The hinterland of Hong Kong — the Zhujiang River delta's growth pole with direct hinterland including the part of heighboring provinces of Hunan, Jiangxi, Fujian and Guangxi Zhuang Autonomous Region, which was smaller than that of the Changjiang River delta. With southwest China establishing seaout mouth in Beihai and Guangxi government stressing the south development of the province, it will become more limited. Such a limited hinterland neither benefits for core area's development nor display the function of economic diffusion, radiation and driving to the surrounding areas.

The key to establish the large hinterland is to pay more attention to the Xijiang River basin's development. The Xijiang River called 'golden gateway', the upper and middle reaches of the river has advantages of minerals, hydropower, forests and land resources, the lower reaches of the river — Hong Kong

and the Zhujiang River delta area, rich in funds, talents, technique and management, therefore, the upper and middle reaches of the river have a good complement with the lower reaches of the river in resources. Light industry, mainly agricultural processing and heavy industry such as metallurgy, machinery, rubber, timber in the upper and middle river reaches of the river have a good complement in market with the export-oriented industry, tertiary industry and light industry in the Zhujiang River delta. Therefore, from the Xijiang River basin's entirety, it has basic conditions for establishing perfect industrial system. The way to establish large hinterland mainly includes the following aspects. 1) We should make a high standard comprehensive plan, taking the Xijiang River economic development as a main axis of the core area's economic diffusion to the surrounding area in the southern China and putting it under the southern China economic planning and national comprehensive developing planning. 2) Taking the river basin as a developing unit, to establish interprovince's coordinated organization. 3) To accelerate dredging channel to raise shipping capacity. 4) To construct Nanning—Guigang—Guiping—Wuzhou—Zhaoqing—Guangzhou express highway as soon as possible.

3.2 To Construct the High and Renewed Technological Corridor

Hitech is of significance to modern economy. The key to optimization of territorial structure in the southern China is whether there exists High tech dynamics and scales or not. At present, Hong Kong and Guangdong are commonly facing the problems of industrial upgrade, so they have strong aspiration to high and renewed technology. Along with Guangzhou—Shenzhen—Hong Kong axis, there are Shenzhen scientific technological park and Tianhe High tech district and Dongguan provincial High tech district, Fushan, Zhujiang and Huizhou High-tech ones are next to them. All the developing districts rely on large and medium sized cities and connect through advanced transport network. Shenzhen and Guangzhou

have advantages of scientific study and talents, while Hong Kong has advantages of fund and Management. Therefore, based on economic technological connection and cooperation in enterprises, taking Guangzhou- Shenzhen- Hong Kong highway as an axis, we have good conditions to establish this high renewable technological industry corridor.

Cooperation in Guangzhou- Shenzhen- Hong Kong high and renewed industrial corridor can take diversified forms, main cooperation models are as follows. 1) Under the guidance of multi-government, we should make a choice of place with good geographical location, good physical feature and convenient transportation to establish multi-cooperated high and renewed high-tech developing area and enable it to become renovation area and dynamic area of the corridor with more favorable policies to concentrate the talents and capital from home and abroad. 2) Under the multi-government's cooperation, we should make full use of existed high-tech district to enhance the strategic alliance of all high-tech district, especially, should promote newest technological alliance, meanwhile, take the chances of transnational corporation's core shift to Southeast Asia to look for cross-cooperated strategic alliance.

3.3 To Construct Stable and Varied Material and Raw Material Bases

Hong Kong and the Zhujiang River delta have similarity in industrial structure, even in product structure and technological structure, both weak in material and raw material. This would have much influence on the stable development of the region. On the other hand, developing resource in peripheral area will efficiently enlarge the economic radiation of the core area to accelerate the development of peripheral areas.

We think three different levels of material and raw material bases should be established. 1) To establish marine resources' developing bases in the South China Sea mainly with oil and gas resources. At present, the east of the South China Sea has be-

come the first oil base with output more than 10 million tons per year and ranking the fourth, next to Daqing, Shengli and Liaohe oilfields in China. It laid resources foundation for developing fundamental raw materials industry mainly with petrochemical industry as its core. Taking advantages of coastal ports, convenient land and sea transportation and concentrated cities as well as good economic foundation in the southern China, the area would inevitably establish the main material base which is the nearest to the core area. 2) To establish the mineral resources and agriculture side line product's bases in the Xijiang River basin. The Xijiang River basin is abundant in ferrous and non-ferrous metals. In terms of non-ferrous metals, Yunfu pyrite ranks the second in the world, Pingguo lead ore in Guangxi Province, manganese and bentonite ranks the first, Talc and limestone the second in China. With various mineral species and rich reserves as well as concentrated producing area, it is easy to be exploited. With the convenience of water supply, electric supply and transportation, the area inevitably would be built up into the bases of non-ferrous metal and building materials. 3) To establish ferrous, non-ferrous and hydropower bases in north Guangdong Province. North Guangdong province has over one thousand mining areas of all kinds, is called "non-ferrous town". Its metallurgy has some advantages. Therefore, it is necessary to build it as material bases of core area and second core area.

3.4 To Reinforce the Organization and Adjustment and Management Between Core Areas, Second Core Area and Peripheral Areas

There exist frequent elements flow and industrial gradient transfer between core areas, second core area and peripheral areas, and even there exist some problems, such as environmental administration and so on. Therefore, based on the core-peripheral model, we should reinforce the organization and adjustment and management of boundary areas. From 1998, a joint conference was established between

Hong Kong and Guangdong Province, a meet will be held with high official attendance of both sides every year. But, there is no such organization between second core area and peripheral areas, so we suggest that: 1) establish multisides economic technological adjustment committee between Fujian, Hunan, Jiangxi, Guangdong to coordinate the economic development two-sides or multisides and contiguous area, and enable the core area and peripheral areas to become the relay of core area; 2) establish the developing committee of the Xijiang River basin to coordinate the whole development of the Xijiang River basin. By this way, we can enlarge the regional united dynamics to promote the unification between the core area and peripheral areas.

3.5 To Construct the Varied Corridor Among the Core Area, Second Core Areas and Peripheral Areas

The corridor is of significance for energy's transmission from the core area to peripheral areas. Beijing-Guangzhou, Beijing-Kowloon railways are the main corridor for the core area, second core areas and peripheral areas' connection and also the main carrier of passenger traffic and goods traffic. But at present, Beijing-Guangzhou railway transportation has already overloaded with traffic 'bottled neck' in Pingshi in the juncture of Guangdong and Hunan, which caused one third industrial product in Guangdong Province not to transport to inland and limited the development of the province. The highway systems of Guangdong-Hunan, Guangdong-Fujian, Guangdong-Guangxi, and Jiangxi-Guangdong aren't good and there is no a high-grade highway. It has been proved that highway system around a few hundred kilometer shows some advantages such as speed, nimbleness and so on and can enhance the development along the highway. Therefore, as we con-

struct the railway corridor, we should strengthen the construction of highway system between Guangdong and Hunan, Guangdong and Fujian, Guangdong and Guangxi. Concretely, as improving Beijing-Guangzhou, Beijing-Kowloon railways' technique, and increasing load capacity, we should actively construct Meizhou-Longyan-Shaoguan-Guangzhou-Longyan and Jiujiang-Tongling railways. Meanwhile, to construct Yuling-Wuzhou-Zhaoqing railway and Guilin-Wuzhou-Zhuhai railway and speed up Beijing-Zhuhai express highway's construction; national road 105, 106, 107, 321, 205 will be constructed as high-grade highways gradually, thus forming the closed connection, and achieving the mutual into development between the core area, second core areas and peripheral areas.

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