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The Greater Bay Area, the "Greater Growth Pole"

The Guangdong-Hong Kong-Macao Greater Bay Area (GBA) includes Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Dongguan, Zhongshan, Jiangmen, Zhaoqing, the Hong Kong Special Administrative Region (HKSAR), and the Macao Special Administrative Region (SAR) (The State Council Information Office of the People's Republic of China, 2019), which is one of the most popular regional development schemes in mainland China in recent years. The GBA-like regional development discussion was conceived much earlier in academia (Yang, 2005). With the development of the GBA policy, a growing number of scholars have studied the GBA from different perspectives. This report will review regional cooperation in the GBA using two theories: cross-boundary governance and institutional innovation. Furthermore, the report will introduce the growth pole theory to describe how the GBA can better achieve regional development and contribute to the development of China. In the first part of this report, the GBA policy will be revisited using theories of cross-boundary governance and institutional innovation. In the second part, the report uses the growth pole theory to argue why the GBA is a growth pole. In the third part, the report will discuss how to make the GBA develop into a greater growth pole.

2 Reviewing the GBA-------HONG Yifei

2.1 Cross-boundary governance in the GBA

Cross-boundary governance is the process by which governments, non-governmental organisations (NGOs), the private sector, citizens, and other stakeholders act collectively on

regional public affairs through negotiation, consultation, and partnership to maximise the regional public interest (Chen & Yang, 2012). Yang (2005) supposes that a cross-boundary area has emerged because of the economic integration between the Pearl River Delta (PRD) region, Macau SAR and HKSAR, under the administration of Guangdong Province. The GBA, as a state-led regional development policy, is a specific manifestation of cross-boundary governance.

2.1.1 Multilevel Governance

Although the idea of the GBA had not yet been coined at that time, Yang (2005) has already pointed out the existence of multilevel governance in the cross-boundary governance of the region. Yang (2006) points out that there are six relevant governments at different levels, including the central government in Beijing, the Guangdong Provincial government, the Shenzhen municipal government, the Zhuhai municipal government, the Macao SAR government, and the HKSAR government in the construction of the Hong Kong-Zhuhai-Macao Bridge. From an administrative point of view, the GBA contains two special administrative cities, two sub-provincial cities, and seven other cities, presenting a multilevel governance structure. Taking the evolution of the GBA employment policies as an example, multilevel governments have developed policies to help Hong Kong and Macau residents to be better employed in the GBA (see Figure 1). Things like removing employment permits, tax relief, and social security require coordination and instructions from central government to be achieved. And different local governments, as well as the SAR governments, have issued policies to promote innovation and employment. For instance, in 2020, the HKSAR government announced the GBA Youth Employment Scheme (GBAYES) programme, in order to motivate and support young people to work and develop their professions in mainland cities of the GBA.



Figure 1: Policies related to employment of Hong Kong and Macau residents in the GBA

2.1.2 Multiple Stakeholders

There are multiple stakeholders in cross-boundary governance, not only at all levels of government, but also in enterprises, NGOs, and so on. In the case study of youth employment in the GBA, enterprise is a very important stakeholder in the HKSAR government led the GBAYES programme. On the one hand, enterprises need to comply with the requirements of the GBAYES for enterprises, and on the other hand, they can also receive appropriate subsidies from the government. In the study on the Hong Kong-Zhuhai-Macao Bridge, Yang (2006) finds power struggles between Hong Kong businesses, NGOs, and other interested parties in the construction of the bridge. Although the HKSAR government has come to support the bridge, skepticism was most notably promoted by Hutchison Whampoa, the dominant firm in Hong Kong's port facilities. The opposition of Hutchison Corporation, the dominant firm in Hong Kong's port facilities, has been one of the biggest obstacles to the bridge, because they assumed that the construction of the bridge would affect the company's interests (Yang, 2006). At the same time, there are many different NGOs involved in the discussion on the construction of the bridge, with some supporting different proposals and some opposing its construction.

2.2 Institutional Innovation

Different institutions promote institutional innovation in the GBA. Because of the "One Country, Two Systems", the institutional designs are differentiated within the GBA. The research based on the case of the institutional reform of construction project management in Qianhai shows that institutional differences between mainland and Hong Kong systems propelled changes to the system and practices in Qianhai and beyond (Li et al., 2020). Researchers point out that the institutional logic in mainland China is bureaucratic state logic, while Hong Kong is dominated by market and professional logic. For example, for mainland construction authorities, they are responsible for the safety and quality of the work and control the risks to the safety and quality of the works through technical reviews. But, for construction authorities in HKSAR, they avoid interfering with the market as much as possible and monitor and control engineering quality risks through professional forces. Finally, the Qianhai Authority has decided to try out the Hong Kong construction model and implement a comprehensive construction market innovation pilot. This study illustrates that the two systems are not a problem but can be turned into a driver for innovation. Thus, various institutions encourage institutional innovation. As a result, the logic of institutional innovation that emerges from the GBA's various systems will likewise contribute to China's development. China's Belt and Road Initiative will bring Chinese systems into contact with a wider range of systems and cultures, resulting in inevitable clashes and tensions. Cooperation inside the GBA will provide ideas for how China may collaborate with other nations with diverse systems, bridging institutional gaps and promoting regional cooperation.

3 Growth Pole Theory-----ZHAO Yi

3.1 Growth Pole Theory

Hong Kong has become the most important part of China's economy since 1997, and its economic strength dazzled the whole country at the beginning of the reform and opening. Taking advantage of Hong Kong's economic and institutional advantages to promote the development of the coastal areas of Guangdong is a development strategy proposed by the central government at the beginning of the century. Thus, Hong Kong has played a greater regional economic growth pole since the

construction of the Shenzhen Special Economic Zone. As the regional cooperation planning implemented by the country in the new era of the GBA, the spatial effect of the refinement of its planned regional units will be manifested in the formation and development of urban agglomerations, urban circle patterns and new urban systems with their own characteristics and endogenous growth mechanisms. Therefore, it is necessary to gain an in-depth understanding of this realistic situation through growth pole theory.

3.1.1 The conception of growth pole

The growth pole was put forward by French economist François Perroux in the 1950s. He acclaims economic growth is unbalanced in a certain region, and some growth poles with different intensities will appear in a region firstly, and then spread outward through different channels, ultimately affecting the economic growth of the entire region (Perroux, 1950). Therefore, the growth pole theory discussed by Perroux is related to the leading industry and emphasizing the role of leading enterprises or industries. On the other hand, Boudeville attaches importance to the study of regional economy development and emphasizes the geographical location of growth poles. He closely integrates growth poles with the existing urban system and believes that growth poles are such poles where economic activities are geographically concentrated, then pointing out that "growth poles are the deployment of expanding industrial complexes in urban areas and guide the further development of economic activities within their sphere of influence" (Boudeville, 1966). His insights extend growth poles from economic space to geographic space. With the continuous improvement and development of growth pole theory, the concept of growth pole is linked with polarized space and the relationship between cities and towns, that is, the "pole" is in the town or the regional center near it (Yang, 2005).

3.1.2 The policy proposition of growth pole theory

The policy implication of the growth pole theory is to focus the limited production factors into a few key sectors or locations with strong innovation capabilities, high growth rates. And then making it a growth pole which will form a potential difference with the surrounding regional

economy and guide the development of the entire regional economy through the transmission force and spillover effect in the market system. In this process of unbalanced economic growth, innovation will play an important role. At this aspect, the role of government is to encourage and promote the formation, development, and innovation of leading industries through economic plans and key investments, and to improve the comprehensive environment where the growth poles are located. Specifically, some measures can be adopted, such as introducing foreign capital, providing subsidies and concessions, opening new industrial parks, developing new minerals and energy infrastructure, and encouraging technological innovation.

3.2 An Overall Empirical Analysis of the Growth Pole in the GBA

The GBA is in China's coastal areas and consists of the Pearl River Delta urban belt and Hong Kong SAR and Macau SAR. It is a unique regional growth pole built under the background of "One Country, Two Systems". This report mainly analyzes the evolution and development of the growth pole of the GBA from economic aggregate and growth rate based on the statistical data released by the government.

Table 1 Proportion of GDP of each city in the GBA to the national GDP (%)

Time	2000	2005	2008	2010	2011	2012	2015	2018	2019	2020
GBA	23.4%	18.74%	15.55%	13.86%	13.18%	12.87%	12.46%	12.06%	11.73%	11.36%
Guangzhou	2.51%	2.82%	2.76%	2.7%	2.63%	2.61%	2.67%	2.54%	2.40%	2.47%
Shenzhen	2.2%	2.70%	2.59%	2.41%	2.44%	2.49%	2.59%	2.69%	2.73%	2.73%
Zhuhai	0.33%	0.35%	0.33%	0.3%	0.30%	0.29%	0.30%	0.32%	0.35%	0.34%
Foshan	1.06%	1.33%	1.46%	1.42%	1.32%	1.27%	1.18%	1.10%	1.09%	1.07%
Dongguan	0.83%	1.19%	1.23%	1.07%	1.00%	0.96%	0.93%	0.92%	0.96%	0.95%
Zhongshan	0.35%	0.48%	0.48%	0.47%	0.47%	0.47%	0.44%	0.40%	0.31%	0.31%
Jiangmen	0.51%	0.44%	0.42%	0.4%	0.39%	0.36%	0.33%	0.32%	0.32%	0.32%
Huizhou	0.44%	0.44%	0.43%	0.44%	0.44%	0.46%	0.46%	0.46%	0.42%	0.42%
Zhaoqing	0.25%	0.24%	0.25%	0.27%	0.28%	0.28%	0.29%	0.24%	0.23%	0.23%
Macau	0.57%	0.55%	0.49%	0.48%	0.50%	0.52%	0.41%	0.41%	0.39%	0.17%
Hong Kong	14.33%	8.20%	5.11%	3.91%	3.40%	3.15%	2.85%	2.65%	2.54%	2.36%

(Source: the government statistical yearbooks)

Table 2 GDP growth rate (%) of each city in the GBA urban agglomeration

Time	2000	2005	2008	2010	2011	2012	2015	2018	2019	2020
National	8.40%	11.30%	9.60%	10.60%	9.50%	7.80%	7.04%	6.75%	5.95%	2.35%
Guangzhou	11.20%	12.90%	12.30%	13.20%	11.30%	10.50%	8.40%	6.20%	3.37%	2.70%
Shenzhen	9.00%	15.10%	12.10%	12.20%	10.00%	10.00%	8.90%	7.60%	11.17%	3.10%
Zhuhai	9.10%	13.40%	9.00%	12.90%	11.30%	7.00%	10.00%	8.00%	17.88%	3.00%
Foshan	9.90%	19.40%	15.20%	14.30%	11.40%	8.20%	8.50%	6.30%	8.20%	1.60%
Dongguan	16.40%	19.40%	14.00%	10.30%	8.00%	6.10%	8.00%	7.40%	14.54%	1.10%
Zhongshan	10.30%	23.20%	10.50%	13.90%	13.10%	11.00%	8.40%	5.90%	-14.6%	1.50%
Jiangmen	10.70%	12.80%	10.80%	14.50%	13.00%	8.10%	8.40%	7.80%	8.49%	2.20%
Huizhou	10.70%	15.80%	11.50%	18.00%	14.60%	12.60%	9.00%	6.00%	1.81%	1.50%
Zhaoqing	9.40%	14.40%	14.20%	17.50%	14.70%	11.00%	8.20%	6.60%	2.13%	3.00%
Macau	5.75%	8.08%	3.39%	25.12%	21.62%	9.24%	-21.5%	6.46%	-4.71%	-54.0%
Hong Kong	7.66%	7.39%	2.13%	6.77%	4.81%	1.70%	2.39%	2.85%	-1.25%	-6.08%

(Source: the government statistical yearbooks)

The growth pole group is the core area of the urban agglomeration, which can be measured from the two indicators of economic aggregate (Table 1) and growth rate (Table 2). According to relevant economic data, this paper considers Hong Kong, Guangzhou, Shenzhen, Foshan, and Dongguan constitute the growth pole in the GBA urban agglomeration. Compared with other cities, Hong Kong was undoubtedly the leader of GBA at first, and its force mainly moved from south to north, driving the growth of cities such as Shenzhen and Guangzhou. After other growth poles are formed, they each drive the growth of surrounding cities. With the continuous development of mainland's economy, Hong Kong and Macau have gradually transformed the regional economic development into an economic growth pattern with complementary advantages and mutual promotion.



Figure 2 Timeline of Growth Pole Development in the GBA

3.3 New Opportunities for GBA Economic Growth Pole Development: An Analysis Based on Growth Pole Theory

The regional collaborative development of the GBA is a regional collaborative planning from the integration of the PRD and has gradually developed into a regional collaborative construction plan open to Hong Kong and Macau. The government has vigorously promoted the cross-border flow of production factors through a series of regional trade and investment agreements and realized the circulation of development factors such as funds, technology, information, and talents in the region. So, these measures can build the economic growth pole of the GBA and make it an important engine to promote the economic development of the country and surrounding regions.

3.3.1 Relationship between the GBA Development Plan and Economic Growth

The social and political institution has a dual effect. One is the efficiency effect, the system can coordinate productive activities to reduce transaction costs, such as traffic rules can make driving easier. And the second is the distribution effect. The system defines the ownership of rights. Like property rights, the ownership of assets means different benefits and costs to different people and organizations, those who take ownership will have a lasting advantage over those who do not. Policies and plans have a similar dual effect, and they can be viewed as rules that are easier to change than institutions. (Khan, 2018; Bi & Shen, 2021)

The GBA Development Plan is an institutional and policy arrangement for the central government to support the regional economic development of the GBA, taking Hong Kong-Shenzhen, Guangzhou-Foshan, and Macau-Zhuhai as regional poles to deepen the cooperation between Hong Kong, Shenzhen, Macau, and Zhuhai to enhance the overall strength and global influence, leading the GBA to deeply participate in international cooperation.

3.3.2 Different institutional tensions under the background of "one country, two systems" promote regional development

The GBA development plan proposes to organically combine the adherence to the principle of "one country" and respect for the differences of "two systems", and then making good use of the benefits of "two systems". Different social arrangements are formed under different institutional logics. When different institutional logics interact, institutional differences may produce a series of conflicts and tensions which allow actors to recognize the existence of diverse institutional systems, and they are exposed to possible options other than the current system, thus providing support for the conception and implementation of new institutional arrangements. (Li et al, 2020)

Therefore, the development and construction of regional integration under the background of multiple institutions makes the regional cooperation mechanism of the GBA obviously different from the cooperation between countries and regions and the regional integration construction under the same institutional background within the country. It can make full use of the advantages of diverse institutions, learn from different institutional experiences in the region, and thus become an innovation engine in contemporary China, and provide an inherent advantage for the GBA to build a better regional economic growth pole.

4 How the GBA can become a better growth pole------Xu Yun

4.1 After Hong Kong and Macau joined

From the PRD to the GBA, the accession of Hong Kong and Macau has brought a new dynamism. This is not only reflected in, the expansion of the whole region and the increase in economic volume, but also in the overall economic dynamism and institutional innovation of the GBA.

The table (Figure 3) shows the density and depth of insurance in different cities within the GBA. Hong Kong's development level far exceeds that of Guangdong Province, and Macau's insurance density leaves Guangdong Province in the dust. The entry of Hong Kong and Macao will greatly strengthen the growth pole effect of the GBA and will create a diffusion effect on South China, where the insurance industry will spread from to the hinterland and play a facilitating and driving role in its economic development.

2017	Insurance density (RMB/ per person)	Insurance depth (%)		
Hong Kong	57287.53	18.38		
Maucao	29927.64	4.98		
Guangdong province	3878.00	4.80		
Guangzhou	7730.01	5.21		
Shenzhen	8219.00	5.00		
Zhuhai	6886.59	4.74		
Foshan	5676.06	4.55		
Huizhou	3007.24	3.75		
Dongguan	5626.32	5.65		
Zhongshan	5978.27	5.65		
Jiangmen	2920.21	4.95		
Zhaoqing	1497.46	2.80		

Figure 3 insurance market in the GBA

Since the Hong Kong government launched the "Guangdong Scheme" in 2013, especially in November 2019, Hong Kong has exempted Hong Kong residents from the requirement of proof of working years to purchase a home in the GBA. Driven by these policies, a large amount of demand for senior care in Hong Kong and Macau has flooded into the PRD and greatly stimulated the renewal of production in the senior care industry. Firstly, the number of enterprises providing senior care services in Guangdong Province has increased significantly, and many Hong Kong and Macau senior care service brands, technologies and capital have been introduced. Secondly, the positive externality effect has contributed to the marginal social benefits of senior care services in the three regions being higher than the marginal private benefits of a single provider. Third, improve the interface between public services and social security. This move is also seen as an exploratory experiment of "cross-border elderly care", exploring the way for the country to strengthen cross-border cooperation.

4.2 Problems of the GBA

As a growth pole, the GBA has many advantages. There are still some problems to be solved on the way to become a better growth pole.

GDP per capita is low. The GBA's economic volume (Figure 4) leads the nation, approaching 15% of total GDP, showing the characteristics of a growth pole and a strong economic agglomeration when compared to the world's four largest bay areas. However, looking at the GDP per capita (Figure 5), the GBA ranks at the bottom, less than one-fifth of the New York Bay Area, with a clear gap. In terms of economic efficiency, the GBA needs further improvement.



Figure 4 GDP share of the four major bay areas in their country (2018)

(Source:wind)



Figure 5 GDP per capita in the four major bay areas VS GDP per capita in their own countries

(Source: wind)

Industrial planning is not clear. In the past, the PRD region has long had the problem of industrial homogenization, with a high degree of similarity in leading industries and industrial structures. And at present, the level of industrial cooperation between the PRD and Hong Kong and Macao is limited, and there is even a situation where competition is greater than cooperation. On the one hand (there is a divergence of interests in the GBA), the hollowing out of manufacturing industries in Hong Kong and Macao, the main power source of economic growth in the PRD region is no longer associated with Hong Kong, and a fundamental change in the comparison of strengths has occurred, leading to a gradual weakening of the cooperative relationship between the two. On the other hand, the increasingly developed service sector in the PRD region is gradually posing a direct challenge to the service sector in Hong Kong and Macau. Taking port competition as an example (Figure 6), in 2000, Hong Kong's cargo throughput was much larger than that of Guangzhou and Shenzhen ports, however, by 2018, Shenzhen ports were basically on par with Hong Kong ports, while Guangzhou ports were much larger than Hong Kong ports.

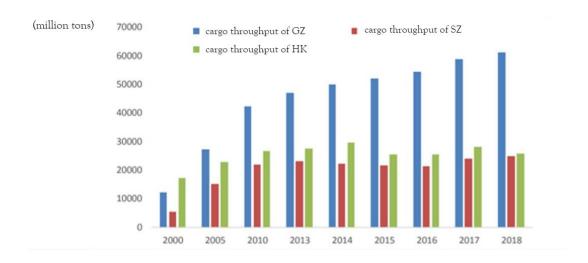


Figure 6 Port cargo throughput of Guangzhou, Shenzhen, and Hong Kong

(Source: Guangdong Statistical Yearbook, Hong Kong Statistical Yearbook)

In recent years, it has been greatly affected by various shocks, and the economic stability is not high enough. After the amendment storm started in the first quarter of 2019, Hong Kong's GDP growth rate slipped below 3% (Figure 7), and the outbreak of the epidemic in 2020 made Hong Kong worse, and the economic downward trend further intensified, and by the second quarter, Shenzhen's economy had shown signs of rapid recovery When Hong Kong is still hovering at a low level, the gap with Shenzhen in terms of economic growth continues to widen.

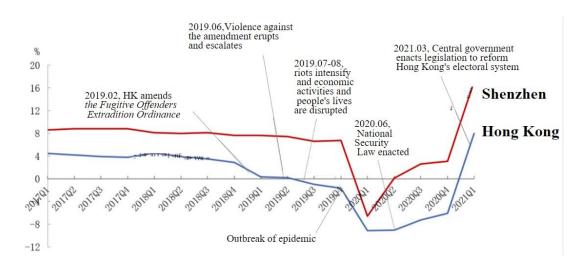


Figure 7 Hong Kong's economic growth since 2017 and comparison with Shenzhen

4.3 A better growth pole

Looking back at the historical development from PRD to the GBA, it is essentially the interregional industrial linkage that has greatly stimulated the economic growth potential. For the GBA to further upgrade its economy and benchmark itself against the world-class Bay Area, it cannot rely entirely on mere industrial transfer as it did before but has to establish a closer synergy mechanism.

Optimize industrial structure and promote industrial integration. First, realize the docking and integration of service industries. Hong Kong should mainly solidify its position as an international financial center, while Macau should shift from relying on the gaming industry to developing a special financial industry and transfusing innovative technology, testing and certification, and cultural and creative industries to the Guangdong region. Second, the PRD region should take advantage of the GBA's financial advantages to transform from traditional industries to smart manufacturing and provide higher-end and more advanced products. Third, strengthen the industrial synergy between Hong Kong, Macau, and PRD. Hong Kong and Macau have many universities and strong capital strength, while Shenzhen is the innovation center of China and Guangzhou and Dongguan have developed manufacturing industries. These advantages can well form an industrial chain and constitute an industrial network. For example, the core technology of DJI's drone comes from the Hong Kong University of Science and Technology, and the company grows in Shenzhen, where the business innovation atmosphere is more intense, and the two places synergistically promote the landing of scientific and technological achievements.

Promote the flow of talent elements and promote industry with talent. The synergy of the GBA should not stop at the industrial level. The development of the new economy will rely less and less on industrial clustering, and high-end talent elements will become the vane of new industrial changes and urban opportunities. adequate flow of talent within the GBA can further enhance the rational allocation of talent elements, minimize talent spillover, and give full play to talent advantages... In addition, the GBA region is well positioned to carry out joint construction of industry-university-research bases and cooperate in nurturing emerging industries and scientific and technological innovation talents. the GBA has the promise to become a globally competitive

international high-end talent concentration area, providing the basis for further enhancing industrial synergy and economic development.

Utilize the GBA's characteristics to reduce dependence on the U.S. market. The GBA currently relies too much on the U.S. market for its foreign exports and is vulnerable to U.S.-China trade frictions. In the future, the GBA companies should take the initiative to expand into more diversified international markets. On the one hand, they can open the markets of countries along the Belt and Road strategy. On the other hand, they can take advantage of Macau's connection with Portuguese-speaking countries to develop a trade platform between the GBA and Portuguese-speaking countries.

5 Discussion ------ Xu Yun

The GBA policy is a huge upgrade of the PRD policy, which not only adds Hong Kong and Macau geographically, spanning multiple administrative regions, but also opens the door to cross-boundary governance and institutional innovation. In recent years, the GBA has rightly become China's economic growth pole. The GBA has benefited from central governmental support and the collision of multiple institutional environments, making it an even more powerful innovation engine. To attract new industries with talent clusters, the GBA will need to further optimize its industrial structure, promote industrial integration, and push this synergistic mechanism to the talent level. The GBA should lessen its reliance on the US market, improve China's role as a growth pole, and cooperate with its neighbors to become Asia's growth pole.

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