

**Drawing on the World-Class Bay Area Endogenous Logic to Fully Integrate the Existing Resources
Stand on the Track of the World-Class Bay Area**

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Abstract: Throughout the world's three well-known Bay Areas (New York, San Francisco, and Tokyo), the Bay Area has long been a leading growth pole for the global economy and a leader in technological change. This article first elaborates on the concept of the Bay Area, in-depth discussion and analysis of the existing world-class Bay Area bio-logic experience, combined with the CPC Central Committee, the State Council issued the " Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area " (hereinafter referred to as "Outline"), proposed construction The dynamic and internationally competitive first-class Bay Area and world-class city clusters provide a model for high-quality development.

1.Introduction

Ever since the reform and opening up of China, especially the return of Hong Kong and Macao to the motherland, cooperation among Guangdong, Hong Kong and Macao has continuously deepened and become more concrete. The Greater Bay Area, with a marked increase in its economic strength and regional competitiveness, already possesses the fundamental conditions for developing into an international first-class bay area and a world-class city cluster.

The development of the Greater Bay Area is not only a new attempt to break new ground in pursuing opening up on all fronts in a new era, but also a further step in taking forward the practice of “one country, two systems”.

Here, it has gathered the advantages in distinctive geographical advantages、 Strength of the robust economic、 、 High concentration of key factors of innovation、 Advanced level of internationalization and Solid cooperation foundations. So how to drawing on the world-class Bay area endogenous logic to fully integrate the existing resources stand on the track of the world-class Bay Areaa is worthy of in-depth discussion.

2. The concept and characteristics of the Bay Area

Bay Area refers to an area composed of a bay or a number of connected bays, harbors and adjacent islands. According to World Bank data, There are 60% of the world's economic aggregate is concentrated in the estuary, 75% of large cities, 70% of industrial capital and population are concentrated in the coastal zone 100 kilometers from the coast.

3. International Bay Area VS Guangdong-Hong Kong-Macao Greater Bay Area

3.1 Analysis of the experience of the International Bay Area

3.1.1 San Francisco Bay Area

The San Francisco Bay Area is a metropolitan area in the northern part of California on the west coast of the United States. It is one of the most important cultural and cultural centers in the world. In the southeast direction between the two cities of San Francisco and San Jose, there is a narrow area about 40 kilometers long, which is the world famous Silicon Valley. As a global innovation sacred place and technology center, with the formation and development of Silicon Valley, the San Francisco Bay Area has also been stepped into the throne of the world's "Technology Bay Area".

Located in the northern part of California, the San Francisco Bay Area consists of 101 established cities in 9 counties. At present, it has developed into five major regional patterns: San Francisco, Peninsula, South Bay, East Bay, and North Bay. Among them, the South Bay of Silicon Valley, the western financial center of San Francisco and the East Bay of Auckland Port are the industrial clusters.

Gold was once the hottest resource endowment before Silicon Valley became the label for the San Francisco Bay Area. As early as the mid-19th century, a "gold rush" spread from California prompted people to flock from all over the United States and promoted the early development of the Bay Area. At this time, the Bay Area is a crazy "golden township".

But in fact, what really made the Bay Area "glow and heat" was the addition of the new technological revolution at the end of the last century. In the middle and late 20th century, with the rise of Silicon Valley within a few tens of kilometers south of San Francisco, the technology economy occupied half of the Bay Area and became the biggest thrust for the development of the Bay Area at this stage.

Today, the influence of Silicon Valley is far more than just within the Bay Area. The "Silicon Valley" model has become a development paradigm for many cities.

In summary, we can conclude that the San Francisco Bay Area has transformed from "Golden Township" to "Technology Bay Area". Even if it has a leading global technological advantage or a unique educational

resource, its economic prosperity depends far more than just The power of science and technology, and more importantly, the mechanism behind the advancement of science and technology.

3.1.2 New York Bay Area

The New York Bay Area, also known as the New York Metropolitan Area, is made up of 31 states, including New York State and Connecticut, with an area of approximately 33,400 square kilometers. As one of the most attractive regions in the United States and the world, the New York Bay Area has gradually developed since the 1880s. When it comes to the New York Bay Area, everyone will think of many labels, such as: "Highly developed shipping industry", "Eastern education in the United States", "extraordinary population attraction" and so on, but the most impressive is its unique business card as a "financial Bay Area". So, why is the New York Bay Area a world-class "Financial Bay Area"?

The New York Bay Area is famous for its Wall Street in Manhattan. The reason why Manhattan can become an international financial center is inseparable from precise industrial positioning and urban planning.

Grasping the timing of industrial transformation - "Right timing"

Manhattan includes the old city and the middle city. The old city of Manhattan is still dominated by office areas. There are few commercial and service facilities, and the employment population is more than 300,000. The traffic pressure is high, and the industry is gradually hollowing out. "The phenomenon. To this end, the New York City government has expanded the area of Manhattan, and has also conducted special research on the tertiary industry to develop a plan that is more adaptive to the sustainable development of the New York economy. At the same time, vigorously building a public transportation network to limit the development of private cars has greatly eased the traffic pressure in the old city. At the same time, Midtown Manhattan has realized the organic combination of business office and supporting functions in planning and construction. For example, the Rockefeller Center in the region is not only the headquarters of many famous international companies such as Time Warner and GM, but also a famous commercial and entertainment venue. Its shopping center leads the international trend. In addition, Midtown concentrates more than 50% of theaters and public entertainment centers in New York, such as the Lincoln Center and Carnegie Hall. Perfect recreational facilities play an important role in keeping Manhattan alive.

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The geographical position is unique - "geographical position "

The New York Bay Area has an excellent natural deep-water port, New York Harbor. In addition to bringing in a large number of products, immigrants from all over the world enter New York City through the New York Harbor. These immigrants and their descendants have become the best human resources for the development of New York. On the other hand, New York on the east coast is closer to Europe, making it easier to connect with financial centers such as London.

Talent resources are very rich - "support of the people"

All the actions are implemented in the end, and ultimately they are inseparable from the support of talents. The higher education institutions in the New York Bay Area are gathered, and the overall education level is relatively high, which provides a good talent resource for the development of the Bay Area.

So it boiled down to these: in the development of the financial industry, the three factors of "Right timing, geographical position, and support of the people" are the indispensable advantages of the New York Bay Area.

3.1.3 Tokyo Bay Area

Tokyo Bay Area in Japan is a metropolitan area developed by Tokyo Bay, including Tokyo, Saitama Prefecture, Chiba Prefecture, and Kanagawa Prefecture, covering an area of 13,562 square kilometers. In the past 100 years, the Tokyo Bay Area has formed industrial belts including steel, non-ferrous metallurgy, petrochemical, machinery, electronics, automotive and other industries, as well as financial, research and development, culture and large-scale commercial and entertainment facilities. Financial consumer center. In the past 100 years, the Tokyo Bay Area has formed industrial belts including steel, non-ferrous metallurgy, petrochemical, machinery, electronics, automotive and other industries, as well as financial, research and development, culture and large-scale commercial and entertainment facilities. Financial consumer center.

Unlike the San Francisco Bay Area and the New York Bay Area, which are formed naturally, the advanced planning and precision implementation of the Tokyo Bay Area is more obvious. In addition, the Tokyo Bay Area is also known as the "Industrial Bay Area".

So, how does the Tokyo Bay Area achieve a step-by-step expansion in the direction of industrial development?

Take the "industrial decentralization" strategy implemented in Tokyo in the 1960s as an example: At this stage, Tokyo moved the general manufacturing industry to form and develop into the industrial belts and industrial zones of Keihin and Jingye. The central city of Tokyo has strengthened its high-end service functions, focusing on high value-added, high-growth service industries, luxury goods manufacturing and publishing and printing. After the implementation of the "industrial decentralization" strategy, Tokyo has gradually formed an industrial

structure dominated by high-end industries such as foreign trade, financial services, precision machinery, and high-tech industries from the general industrial manufacturing and heavy chemical industries in the traditional industrialization period. The "industrial decentralization" strategy not only solved the problem of over-expansion in Tokyo, but also promoted the development of industries in the peripheral areas.

Therefore, the characteristics of the Tokyo Bay Area are professional division of labor, strengths and weaknesses, and misplaced development. This is also inseparable from its precise and long-term planning logic.

3.2 Innovation comparison between Guangdong-Hong Kong-Macao Greater Bay Area and the other three major Greater Bay Areas

There is a saying goes that innovation is the first driving force, and it is an important force to promote the development of a country and a nation. Patents are an important measure of innovation and reflect the ability of a country or region to innovate. The report uses patents as an important measure to measure the innovation capability of Guangdong, Hong Kong and Macau, and uses the innovation dimension as an important evaluation indicator to analyze the patent data of the Guangdong, Hong Kong and Macau Bay Area for the past five years (2013-2017), compared with the San Francisco Bay Area, The Bay Area of New York and the Bay Area of Tokyo to analyze the advantages of innovation institutions and industries in the Greater Bay Area of Guangdong, Hong Kong and Macao, the status quo of innovation capabilities, and the shortcomings and advantages, In order to find a reference for the construction of a world-class Bay Area in Guangdong-Hong Kong-Macao Greater Bay Area.

3.2.1 Total number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area

The data show that from 2013 to 2017, the total number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area increased from 71,037 to 258,009, showing a continuous upward trend, but fluctuating in the annual growth rate, and the growth rate in 2013-2017 was 15.01%, 45.85%, 49.67%, 24.92%, and 33.19%. From the analysis of annual growth rate, the average annual growth rate of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area in the past five years was 33.10%, the highest increase was in 2015, reaching 49.67%. From an incremental perspective, in 2017, Guangdong-Hong Kong-Macao Greater Bay Area reached its highest value in the past five years, with a total increase of nearly 64,300.

Total invention patents: Guangdong-Hong Kong-Macao Greater Bay Area:

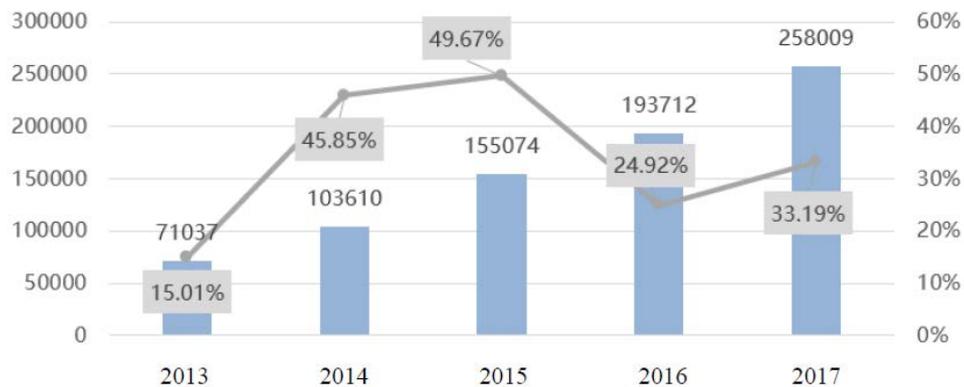


Fig. 1 The information comes from the " Guangdong-Hong Kong-Macao Greater Bay Area (2018)"

3.2.2 Comparison of the number of invention patents in the four major bays

According to the data analysis in the past five years, the total number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area is on the rise. The San Francisco Bay Area and the New York Bay Area are in an upward trend in the first two years, and have been in a downward trend in the past three years. The Tokyo Bay Area has continued for nearly four years. Downtrend. In 2017, the growth rate of Guangdong-Hong Kong-Macao Greater Bay Area was 33.19%, Tokyo Bay Area was -0.38%, San Francisco Bay Area was -1.86%, and New York Bay Area was -3.73%. It also showed that Guangdong-Hong Kong-Macao Greater Bay Area had total invention patents. The amount of exposure to other Sanwan District is gradually widened: the total number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area reached 258,000 in 2017, and the Tokyo Bay Area, San Francisco Bay Area and New York Bay Area were 139,100, 54,400 and 3.96 respectively. Ten thousand pieces.

Total invention patents: comparison of the world's four major bays:

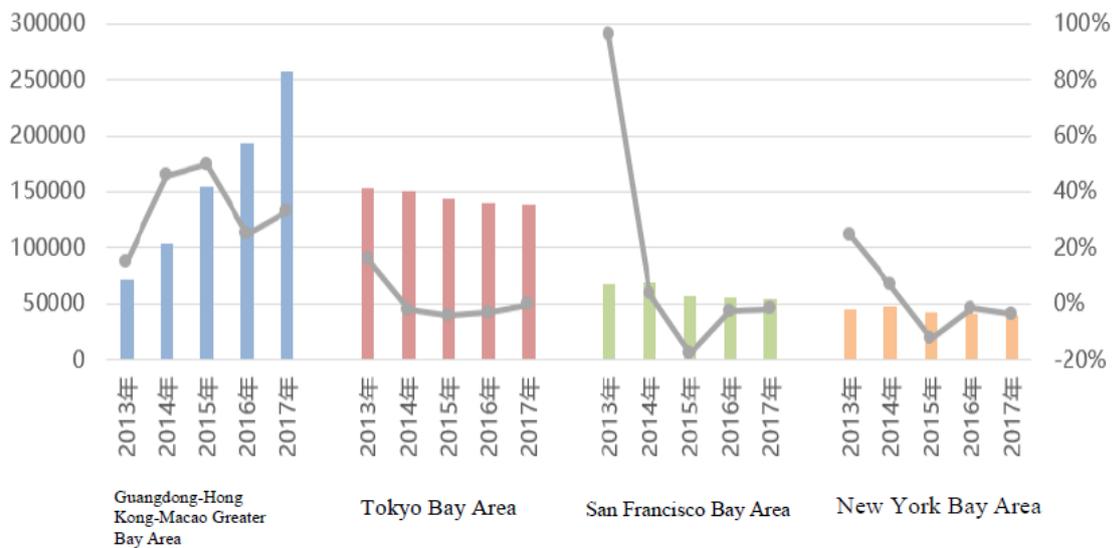


Fig. 2 The information comes from the " Guangdong-Hong Kong-Macao Greater Bay Area (2018)"

From 2013 to 2017, the total number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area exceeded that of the New York Bay Area. In 2013, the total number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area was about 1.6 times that of the New York Bay Area, and 3.7 times in 2015, reaching in 2017. 6.5 times.

The invention patents of Guangdong-Hong Kong-Macao Greater Bay Area in the past five years are mainly based on H (electricity), accounting for 32.33%, followed by G (physical), accounting for 25.22%, and the least proportion of D (textile), papermaking). The invention patents in the Tokyo Bay Area for the past five years are also dominated by H, accounting for 29.00%; the San Francisco Bay Area is dominated by Class G (physical), accounting for 39.72%; the New York Bay Area is dominated by Class A (human necessities), accounting for 25.91%. According to the proportion of the eight types of invention patents, the smallest standard deviation (0.091) is the New York Bay Area, that is, the number of invention patents in the New York Bay Area is more balanced in the distribution of each category, and the standard deviation is the largest (0.146). In the San Francisco Bay Area, its invention patents are concentrated in G and H. The standard deviation of Guangdong, Hong Kong, Macau and the Bay Area is about 0.102.

Total number of invention patents: proportion of industry classification in each bay area:

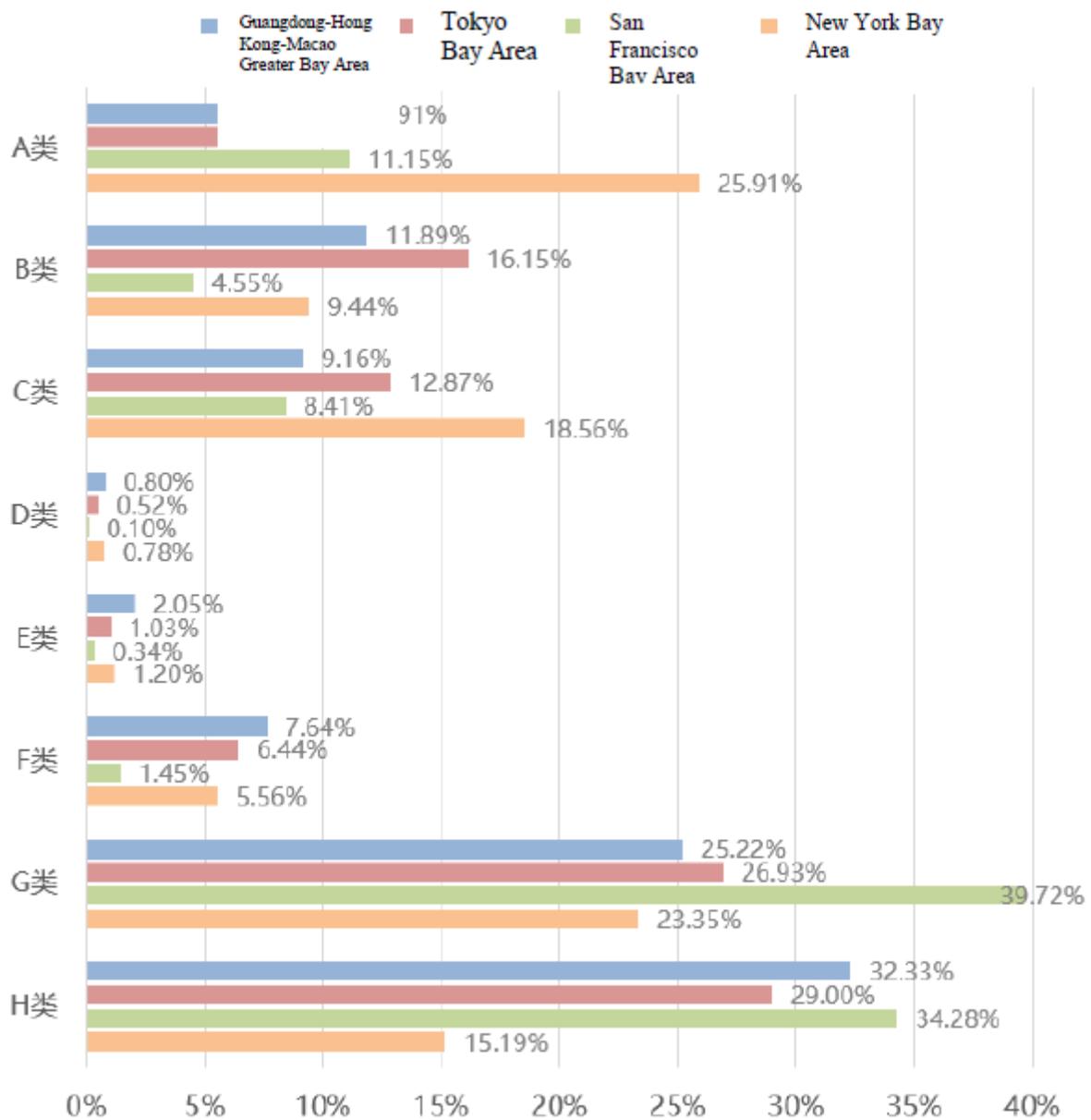


Fig. 3 The information comes from the " Guangdong-Hong Kong-Macao Greater Bay Area (2018)"

3.2.3 Patent application

The introduction of a patent refers to the number of times a patent is cited. The number of times cited refers to the number of times the observed patent is subsequently cited. The number of times cited refers to the quality of the patent. The number of times cited is often high.

In terms of the number of patents granted, in the past five years, the number of patents in Guangdong, Hong Kong and Macau, despite the number of invention patents surpassing the San Francisco Bay Area, Tokyo Bay Area, and New York Bay Area, is less than the other Bay Areas.

The data show that the number of invention patents in Guangdong-Hong Kong-Macao Greater Bay Area was lower than that of the San Francisco Bay Area from 2013 to 2017, with 2013, 2014 and 2016 being more obvious. In 2013, the number of invention patents in Guangdong, Hong Kong and Macau's Greater Bay Area District was 22.82% of the San Francisco Bay Area. In 2015, the gap narrowed to 39.52%, and in 2016 it fell again to 22.81%; in 2017, the gap narrowed again to 43.61%.

Number of patents cited: comparison of Guangdong, Hong Kong, Macau and San Francisco Bay Area:

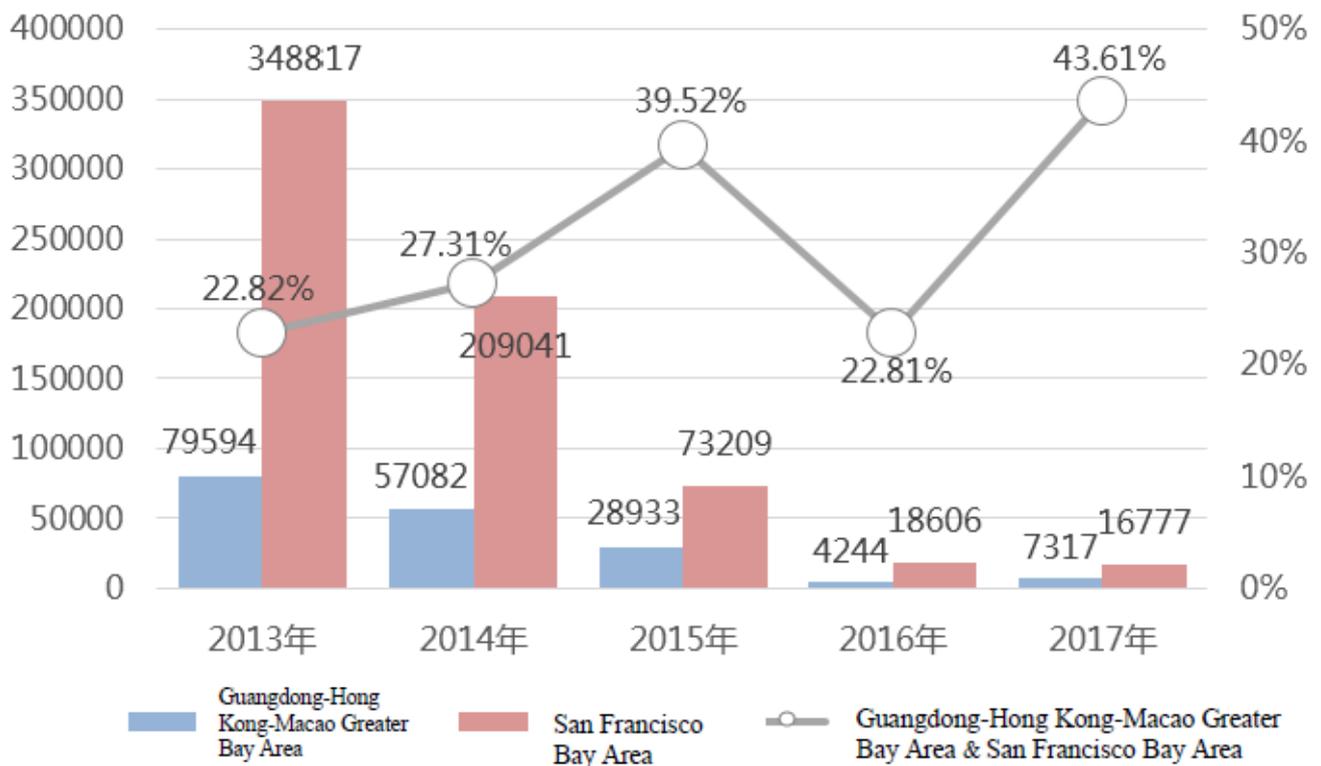


Fig. 4 The information comes from the " Guangdong-Hong Kong-Macao Greater Bay Area (2018)"

In 2013-2017, the number of invention patents in Guangdong, Hong Kong and Macau's Greater Bay Area was lower than that in the Tokyo Bay Area. In 2013, the number of invention patents in Guangdong, Hong Kong and Macau's Greater Bay Area was 22.94% in Tokyo Bay Area, and the gap in 2016 increased to 7.79%. In 2017, the gap narrowed to 46.76%.

² Data reference Guangzhou Daily Data and Digital Institute (<http://www.gzgddi.com/>)

Number of patents cited: comparison of Guangdong, Hong Kong, Macau and the Tokyo Bay Area:

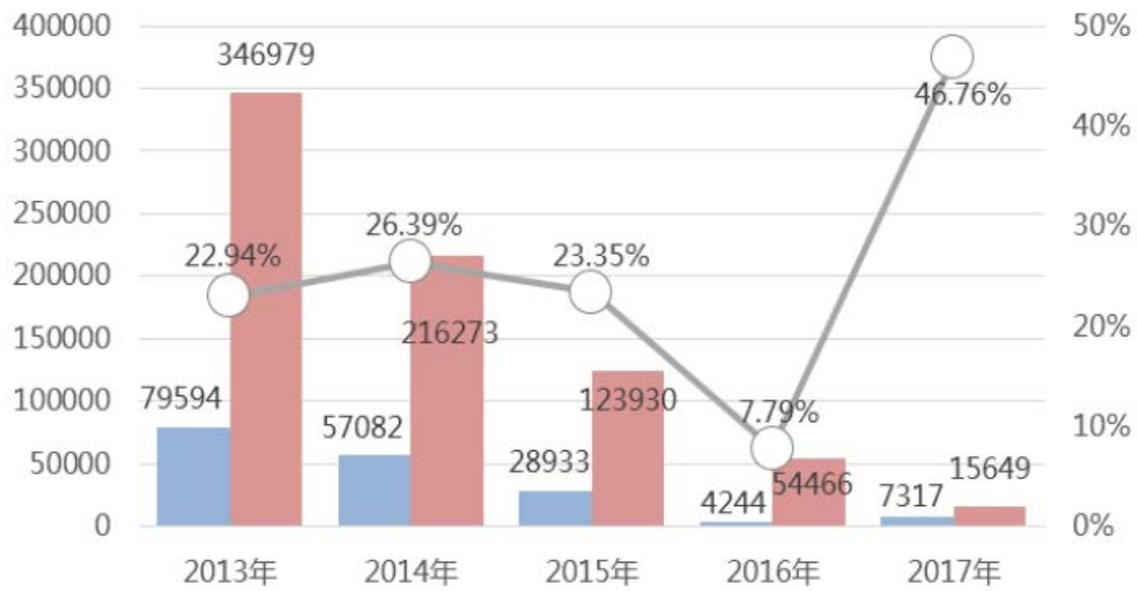


Fig. 5 The information comes from the "Guangdong-Hong Kong-Macao Greater Bay Area (2018)"

From 2013 to 2017, the number of invention patents in Guangdong, Hong Kong and Macau's Greater Bay Area was lower than that of the New York Bay Area. In 2013, the number of invention patents in Guangdong, Hong Kong and Macau's Greater Bay Area District was 46.37% in the Bay Area of New York. In 2016, the gap became 14.95%, and the gap in 2017 narrowed to 84.34%.

Number of patents cited: comparison of Guangdong, Hong Kong, Macau and the New York Bay Area:

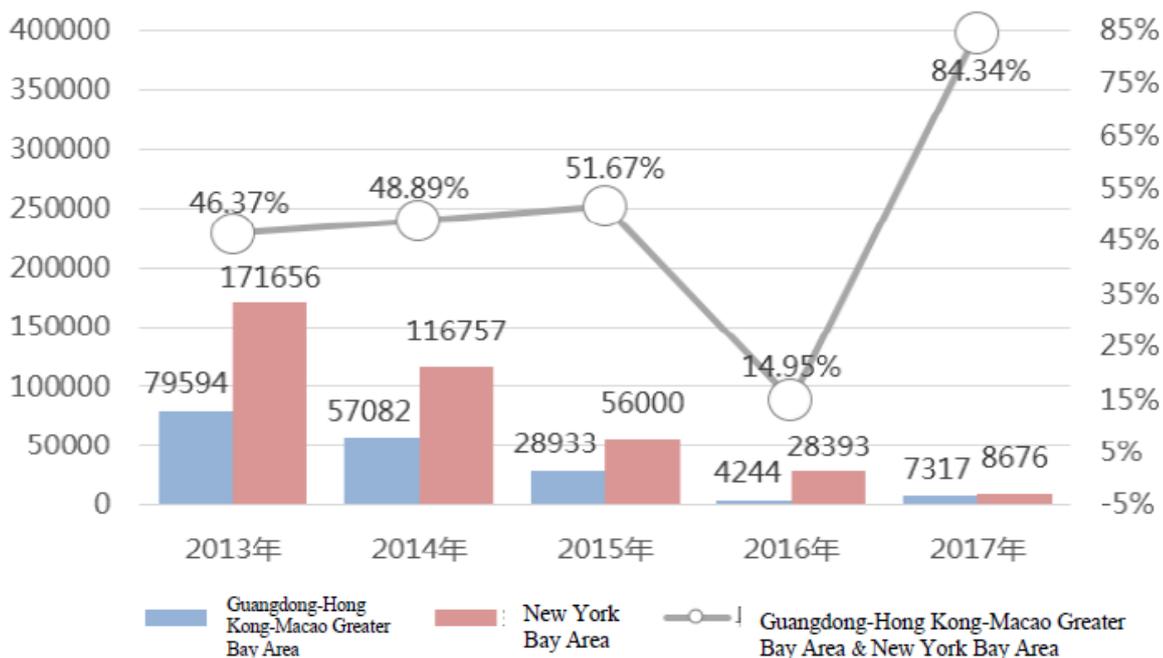


Fig. 6 The information comes from the "Guangdong-Hong Kong-Macao Greater Bay Area (2018)"

4. Conclusion and Suggestions:

1. Introduce international scientific and technological talents, build an international talent sharing database, and provide talent information for needs;
2. Rationally integrate existing resources, clarify the location of different locations, form complementary advantages, and establish multi-regional collaborative innovation and development and policy coordination mechanisms;
3. Build a database of market innovation needs, combine the needs and concepts of cross-border market innovation, and build a bridge between the government and enterprises;
4. Improve market rules, form their own systems, and form a good market-government relationship;
5. Promote the international financial development hub and introduce the circulation of insurance, securities and other factors;
6. Research and develop a suitable three-zone customs zone policy.

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