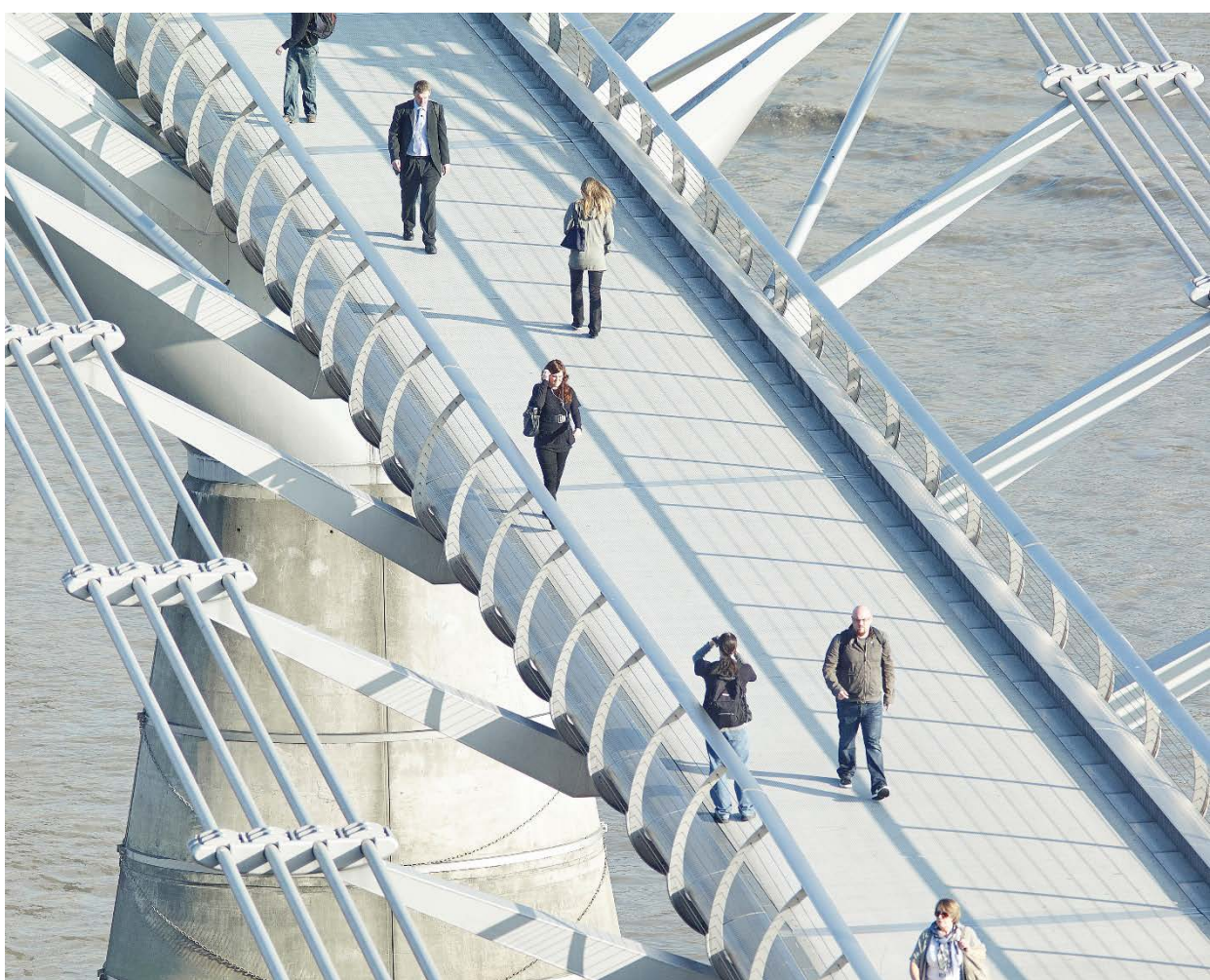


New Opportunities for the Guangdong-Hong Kong- Macau Greater Bay Area



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On the occasion of the 20th anniversary of the return of Hong Kong to China, during President Xi Jinping's visit to Hong Kong, the National Development and Reform Commission (NDRC), the People's Government of Guangdong Province, the Hong Kong SAR and the Macau SAR, jointly signed the *Framework Agreement on Deepening Guangdong-Hong Kong-Macau Cooperation in the Development of the Greater Bay Area*.

Earlier this March, Premier Li Keqiang proposed "to promote and deepen the cooperation between Chinese mainland, Hong Kong and Macau, and to formulate a plan for the development of a city cluster in the Guangdong-Hong Kong-Macau Bay Area, give full play to the distinctive strengths of Hong Kong and Macau, and elevate their positions and roles in China's economic development and opening up." It is reported that the Development Plan for the City Cluster in Greater Bay Area is formulated by the National Development and Reform Commission (NDRC) and other departments and will be announced in the near future.

Hong Kong's Chief Executive Carrie Lam highlighted in her first Policy Address that the Hong Kong SAR Government will actively participate in taking forward the development of the Bay Area, so as to create favourable conditions for diversifying Hong Kong's industries, in particular for promoting innovation and technology development. Moreover, the SAR Government will further facilitate measures for Hong Kong people to study, work, and start up and operate business, live and retire in the Bay Area, thereby facilitating the flow of people, goods, capital and information between Hong Kong and other cities in the Bay Area. The SAR Government has renamed the Steering Committee on Co-operation with the Mainland as the Steering Committee on Taking Forward Bay Area Development and Mainland Co-operation, highlighting its significance.

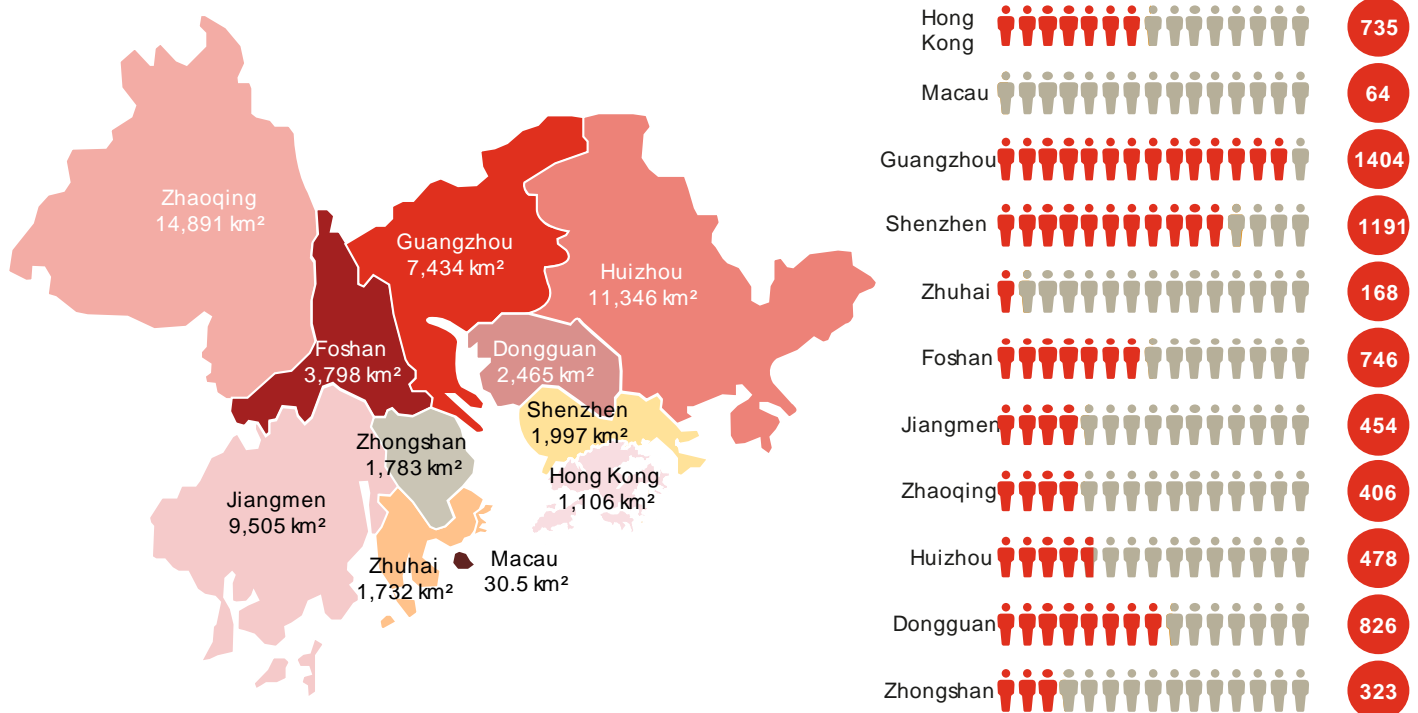
The central government attaches great importance to the development of the Guangdong-Hong Kong-Macau Greater Bay Area ("the Greater Bay Area"). The development plan is not only a local and regional strategy between the two special administrative regions and several mainland cities, it is also a long-term plan at the national level. So, what are the new opportunities and improvements that such an important plan would bring?

Aiming for top global GDP ranking

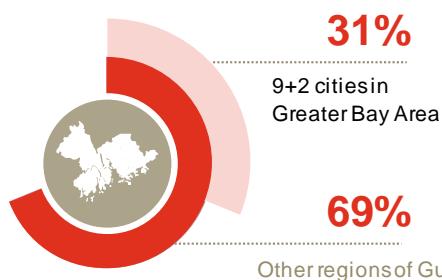


Guangdong Province has always led other provinces in terms of total economic size in China. In 2016, its GDP reached RMB 7.95 trillion, accounting for nearly 11% of the national economic aggregate of RMB 74.41 trillion. The GDP of Hong Kong and Macau were about RMB 2.23 trillion and RMB 311.9 billion respectively. Total GDP of Guangdong, Hong Kong and Macau regions was about RMB 10.49 trillion, equivalent to 14% of the national economic aggregate. This is comparable to the world's tenth largest economy - Canada; and the total population of the three places is close to 120 million, almost the same size as Mexico or Japan, the world's 10th and 11th most populous country. Therefore, Guangdong, Hong Kong and Macau taken together can be "as rich as a country" in terms of total economic size and population.

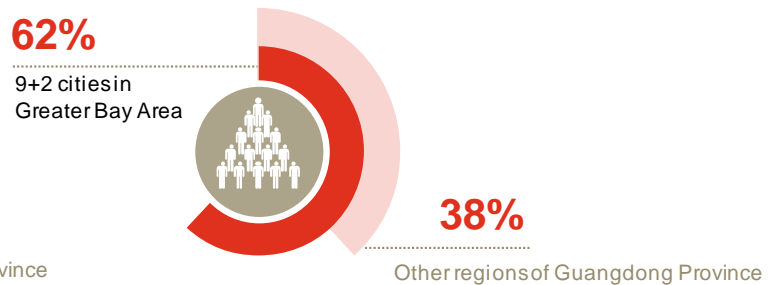
Area and population (10,000) of the 9+2 cities in Greater Bay Area, 2016



Total area of the 9+2 cities accounts for 31% of Guangdong Province



Total population of the 9+2 cities accounts for 62% of Guangdong Province



Source: Municipal bureaus of statistics, Wind Info, PwC Summary

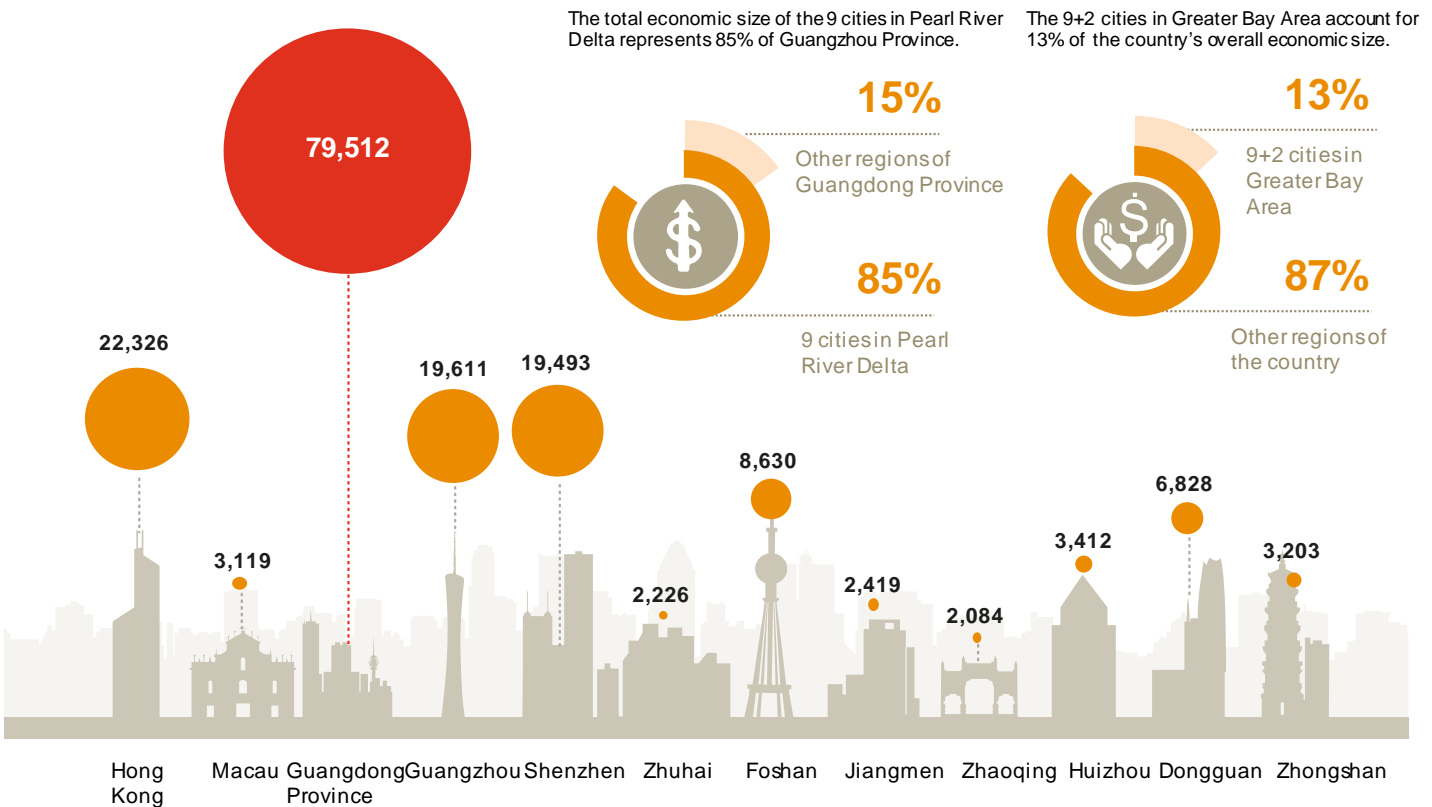
According to estimates by China Centre for International Economic Exchanges, one of the country's top think tank, by 2020, the total economic output of the Greater Bay Area will be comparable to that of the Tokyo Bay; by 2030 the Greater Bay Area's GDP is expected to amount to RMB 30.4 trillion (USD 4.62 trillion), surpassing the economic size of Tokyo Bay Area (RMB 21.3 trillion, USD 3.24 trillion) and the New York Bay Area (RMB 14.4 trillion, USD 2.18 trillion), to become the world's largest bay in terms of economic scale.

The core of the Greater Bay Area is the 11 (9+2) cities with a total population of about 68 million, namely Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Dongguan, Zhongshan, Jiangmen Zhaoqing, and the two special administrative regions, Hong Kong and Macao.

The total economic size and population of the 9 cities in the Pearl River Delta accounts for 85% and 52% that of Guangdong Province, respectively. The ranking of the 11 cities by total economic size in 2016 are as follows:

1)	Hong Kong	RMB 2,232.6 billion
2)	Guangzhou	RMB 1,961.1 billion
3)	Shenzhen	RMB 1,949.3 billion
4)	Foshan	RMB 863 billion
5)	Dongguan	RMB 682.8 billion
6)	Huizhou	RMB 341.2 billion
7)	Zhongshan	RMB 320.3 billion
8)	Macao	RMB 311.9 billion
9)	Jiangmen	RMB 241.9 billion
10)	Zhuhai	RMB 222.6 billion
11)	Zhaoqing	RMB 208.4 billion

GDP of the Greater Bay Area 9+2 cities and Guangdong Province, 2016 (RMB 100 million)



Source: Municipal bureaus of statistics, Wind Info; Factiva (exchange rate: closing price of HKD and MOP against RMB on 31 December 2016); PwC Analysis

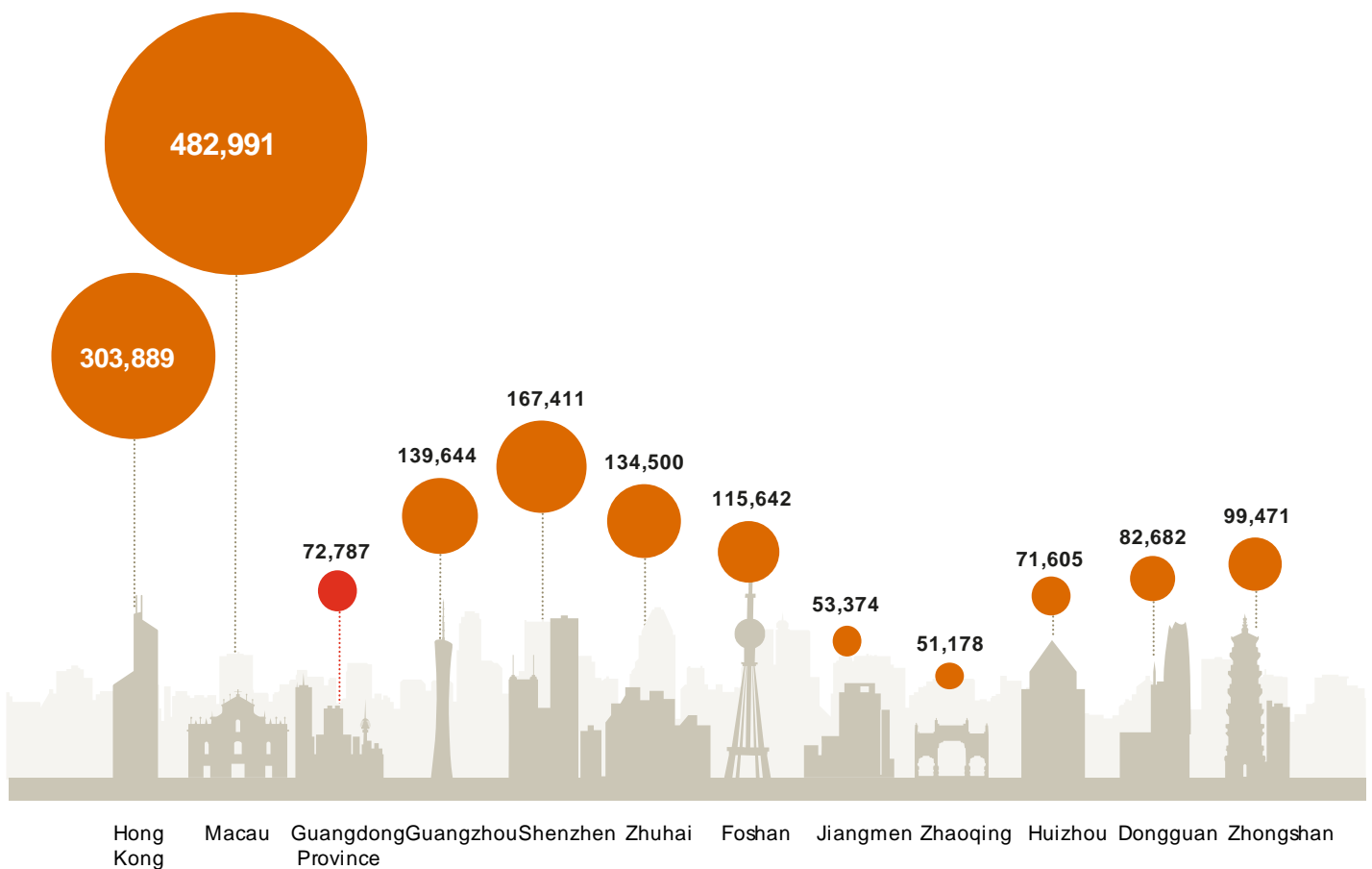
The 11 cities in the Greater Bay Area are divided into three levels by economic scale: Hong Kong, Guangzhou and Shenzhen are in level 1, they have a total GDP of more than or close to RMB 2 trillion, not inferior to any province ranks middle in the national level. For example, in 2016, Shaanxi Province ranked 15th nationwide with a total economic output of RMB 1.90 trillion. Level 2 includes Foshan and Dongguan, their GDP were between the range of RMB 650 billion and RMB 850 billion in 2016, equivalent to that of the Tibet Autonomous Region, which has a smaller economic scale; the annual GDP of other six cities were between RMB 200 billion to RMB 300 billion, falling into level 3. The total economic output of Huizhou, Zhongshan and Macao was close to RMB 973.4 billion, while Jiangmen, Zhuhai and Zhaoqing amounted to RMB 672.2 billion.

The overall economy size of the three large cities in level 1 is ten times that of the last three cities.

The 11 cities are in different stages of growth regarding GDP per capita. However, this brings opportunities for development if we see things from another angle. For example, GDP per capita of Macau, the highest of the 11 cities, is almost ten times that of Zhaoqing.

As is shown, GDP per capita of Macao and Hong Kong are equivalent to that of a developed country, while Zhaoqing and Jiangmen, though have higher GDP per capita above the national average, are still considered as 'developing countries', far behind Shenzhen and Guangzhou.

GDP per capita in Greater Bay Area, 2016 (RMB/person)

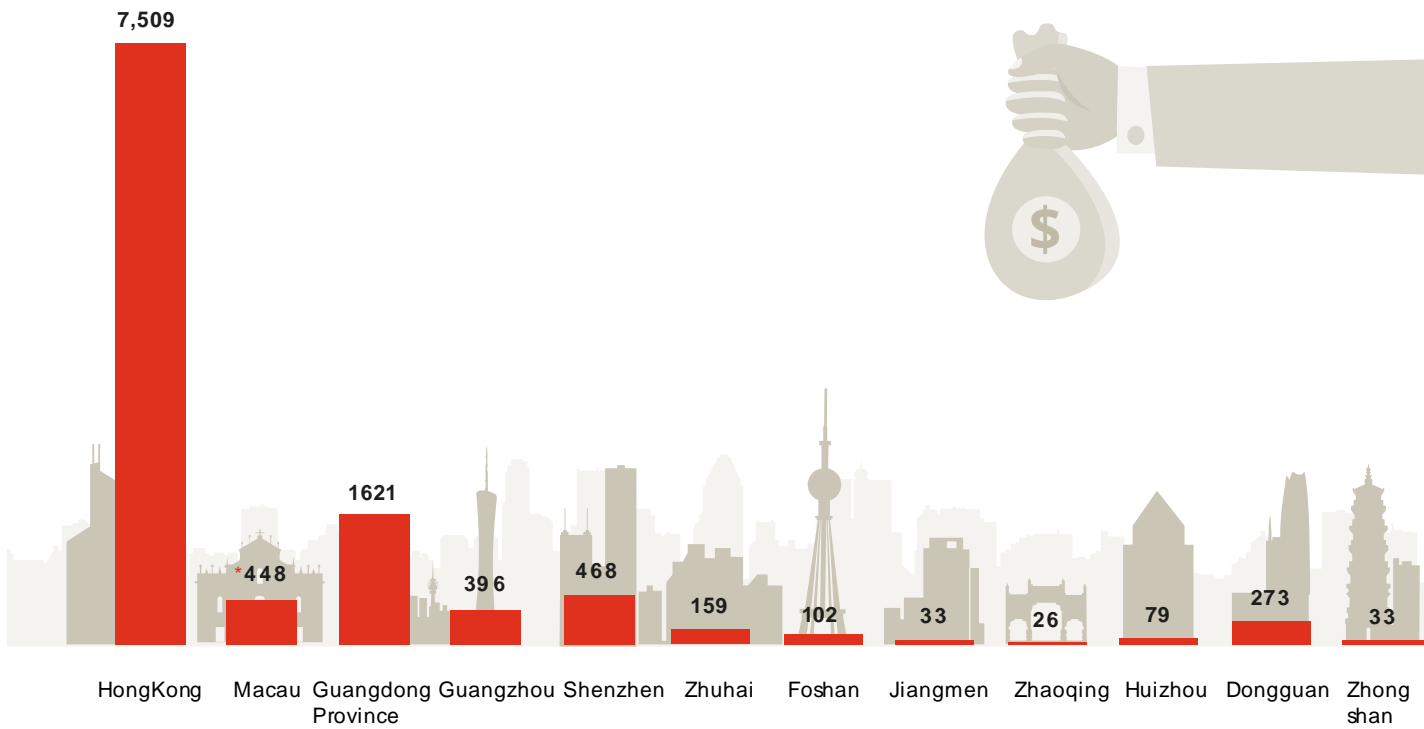


Source: Municipal bureaus of statistics, Wind Info; Factiva (exchange rate: closing price of HKD and MOP against RMB on 30 December 2016); PwC Analysis

Geographically, the 11 cities are divided into three parts: coastal areas in the west, the east and the northern land. The eastern part has great advantages both in terms of population and economic scale. Shenzhen, Dongguan, Huizhou and Hong Kong SAR, four cities in the eastern coast, claim 48% of the population and 56% of the economic scale of the Greater Bay Area. By contrast, Zhuhai, Zhongshan Jiangmen and Macau SAR in the western coast, represent 15% of the population and 12% of the economic scale of the Greater Bay area. Guangzhou, Foshan and Zhaoqing, which are located in the northern part, account for 37% of the population and 12% of the economic scale.

Moreover, due to the large differences in the economic development, the 11 cities vary greatly in the amount of foreign direct investment. Hong Kong is the world's leading free port and financial centre backed by the motherland. Therefore, a large number of foreign capital gathered here over the years. Compared with Hong Kong, Macau has a smaller population and economic scale, yet its foreign direct investments exceeds Guangzhou's, and is similar to Shenzhen. To promote equitable and vigorous growth in the region, surplus foreign direct investments from Hong Kong and Macau can be diverted to other cities in the Greater Bay Area through certain institutional reforms.

Foreign direct investments in Greater Bay Area (RMB 100 million)



* Statistics of foreign direct investments in Macau were updated to 2015 when published.

Source: Municipal bureaus of statistics, Wind Info; Factiva (exchange rate: closing price of HKD and MOP against RMB on 30 December 2016); PwC analysis

Competitive Industries, Bright Prospect for Development



The Greater Bay Area is not only economically large, but also has a number of dominant industries with distinct competitiveness globally or nationally. These are the key factors driving the regional economic development plan. Looking at the number of large enterprises, we will know the truly competitive industries, while from the number of the small and medium sized enterprises, other advancing industries can be easily deduced.

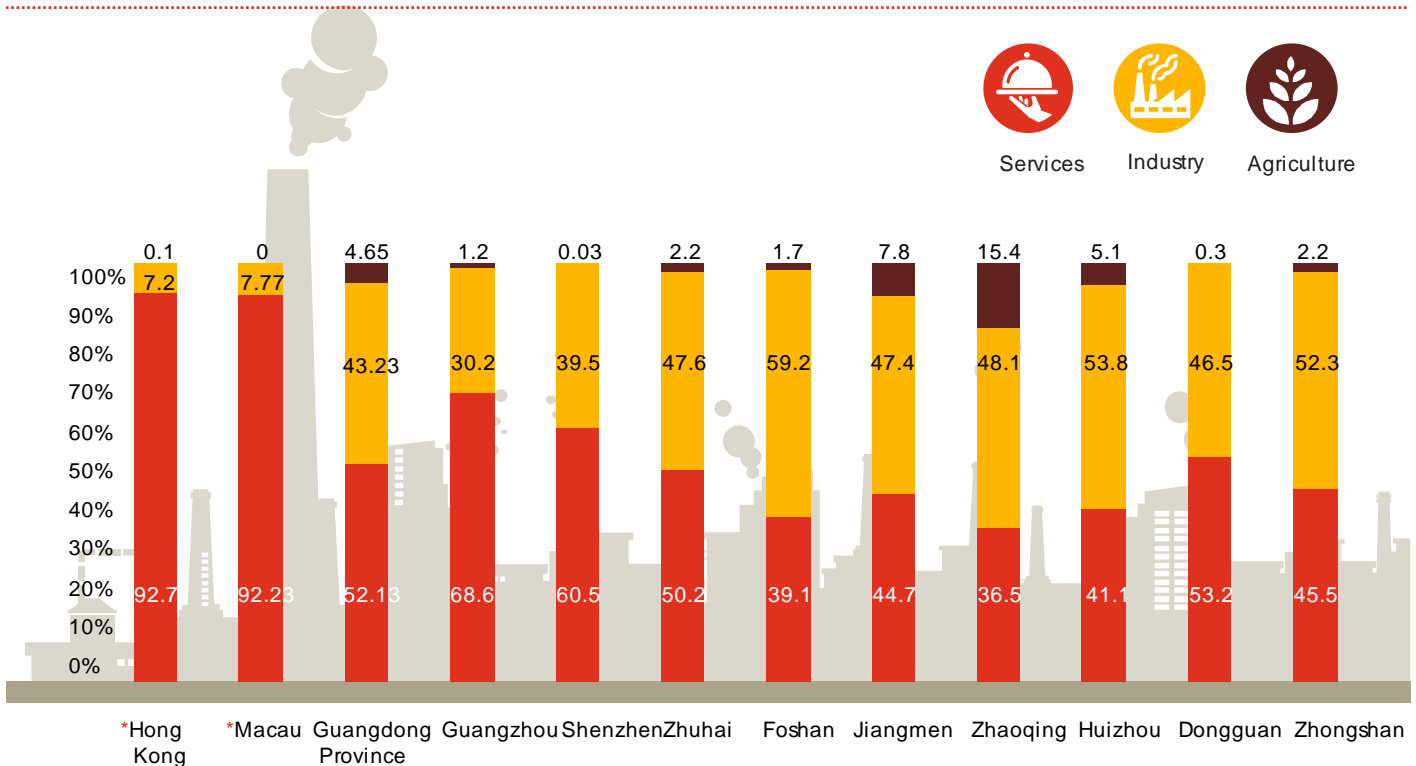
Based on three-sector theory, the proportions of primary, secondary and tertiary industry of Guangdong Province in 2016 were 4.6%, 43.2% and 52.1%, compared to that of the national average which were 4.8%, 38.7% and 56.5% respectively.

Hong Kong and Macau are exceptions, as the service industry accounts for 90% and there are almost no primary industries. Among the 9 cities in Pearl River Delta, Guangzhou has the highest proportion of services of 68.6%, Shenzhen 60.5%, followed by Dongguan 53.2% and Zhuhai 50.1%. Other cities have higher proportion of secondary industry other than services. Besides, Agriculture accounts for a higher proportion in Zhaoqing, which is 15.4%, while Jiangmen 7.8% and Huizhou 5.1%.

The manufacturing value added (MVA) in Guangdong Province amounted to RMB 2.88 trillion in 2016 with computer, communications and other electronic equipment production leading other sectors with MVA worth RMB 762 billion.

While eight sectors have reported a total output value of more than 100 billion yuan, electrical machinery and equipment manufacturing with the output value of RMB 282.5 billion comes in second. Clothing and apparel, coupled with textile industry, achieved the output value of nearly RMB 167 billion, slightly more than automobile manufacturing, ranked third.

Industry composition in Greater Bay Area, 2016



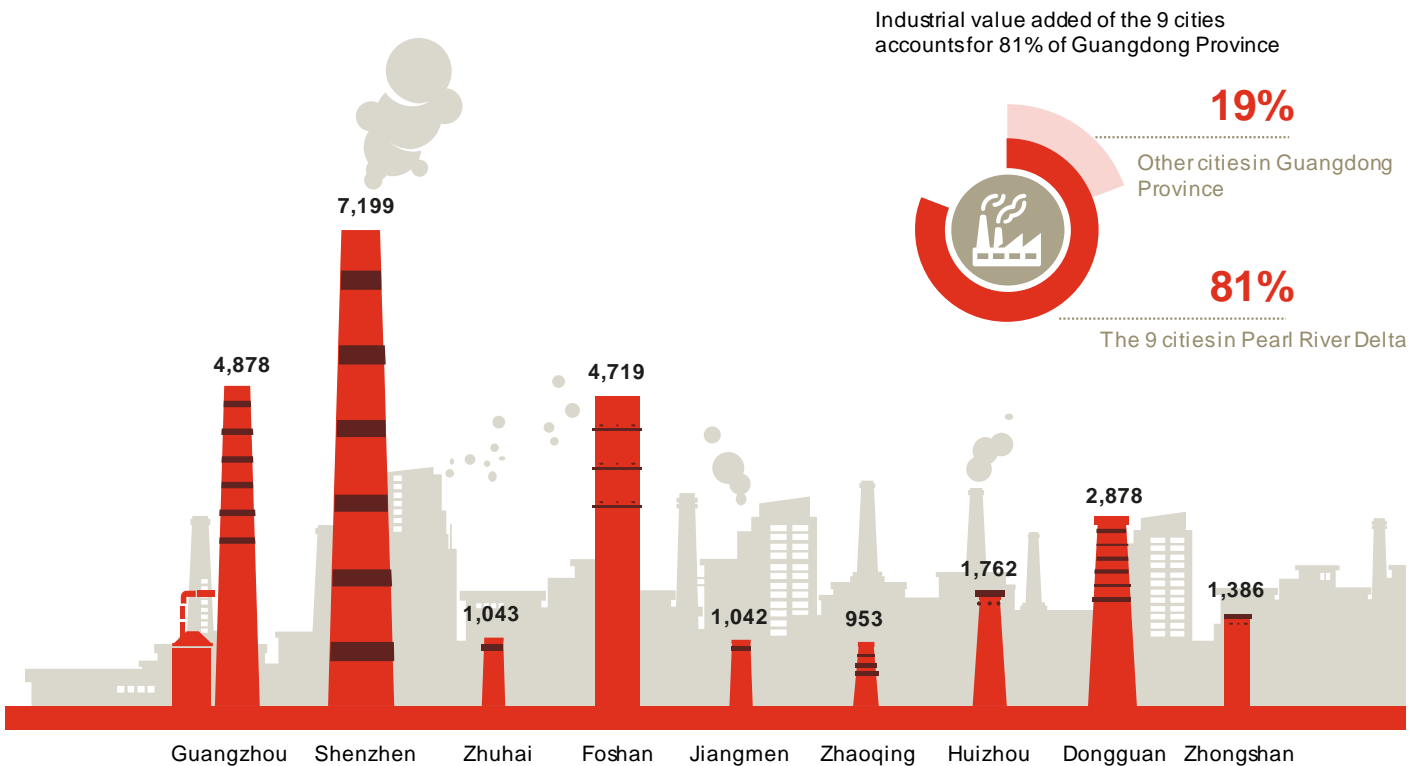
*Statistics of Hong Kong and Macau were updated to 2015 when published.
Source: Municipal bureaus of statistics, Wind Info, PwC Analysis

Guangdong Province's Top 8 manufacturing segments in terms of scale, 2016

Top 8 manufacturing segments in terms of scale	Industrial value added (unit: RMB 10,000)	% of manufacturing
Computer, communications and other electronic equipment	76,200,185	26.47%
Electrical machinery and equipment	28,236,674	9.81%
Automobile	16,645,145	5.78%
Metalware	14,176,171	4.92%
Chemical materials and products	14,123,693	4.91%
Nonmetallic minerals	13,118,959	4.56%
Rubber and plastics	12,392,492	4.30%
Textile and apparel	10,448,079	3.63%
Manufacturing aggregate	287,918,581	100%
Total of Guangdong Province	319,173,876	N/A

Source: Statistics Bureau of Guangdong Province; PwC Summary

Industrial value added of the 9 cities in Pearl River Delta, 2016 (RMB 100 million)



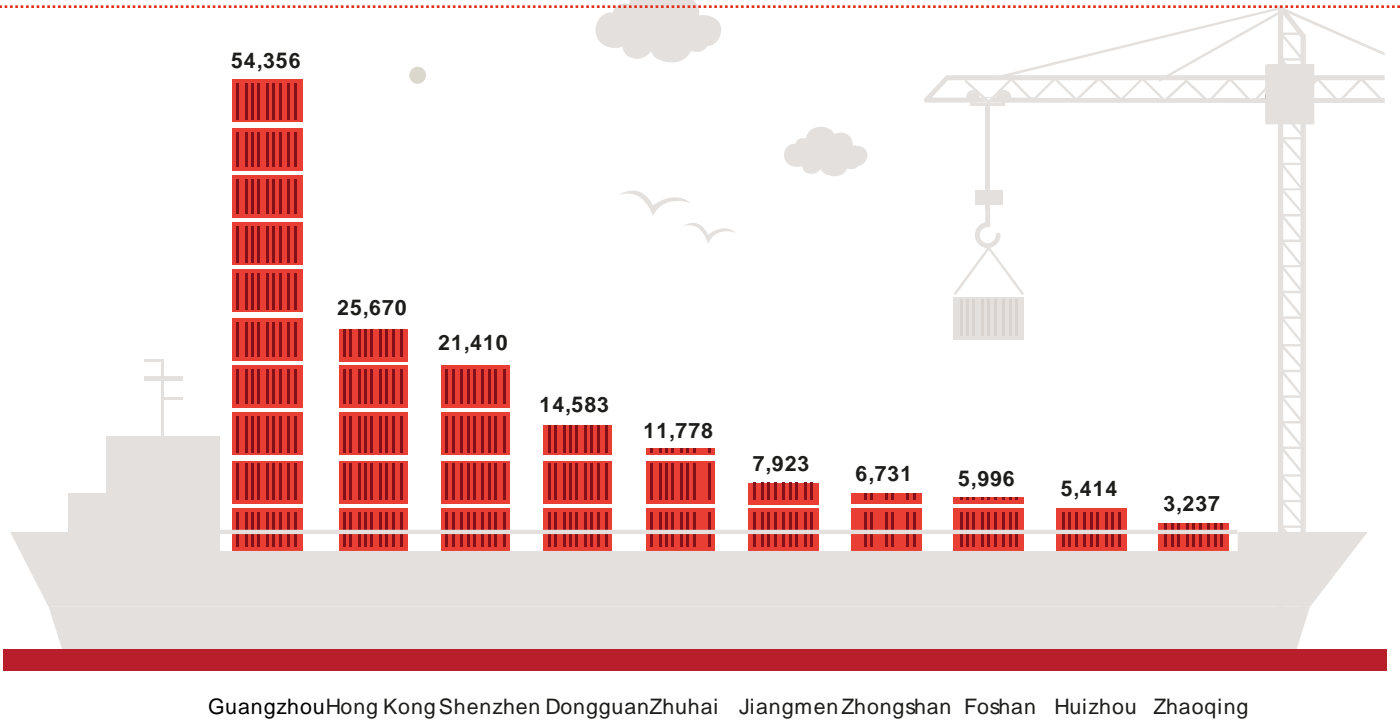
Source: Statistics Bureau of Guangdong Province, municipal bureaus of statistics, PwC Summary

Although some segments have added values of less than RMB 100 billion, they have occupied a large market share and have great influence in the global or national market. For example, in 2016, the added value of furniture manufacturing was close to RMB 50 billion, together with RMB 23 billion from relevant timber processing and products made of wood, bamboo, cane, palm fibre and straw, reaching a sum of RMB 73 billion. However, furniture in Guangdong Province accounted for about 30% of the country's total production and 35% of the total export, maintaining its leading position in this realm for years. According to the Planning on Guangdong Furniture Export in the Next Five Years (2015-2019), by 2019, the value from its furniture export will be USD 27.5 billion, 40% increase from USD 19.65 billion in 2010.

Among the 9 cities in the Pearl River Delta, Shenzhen has the largest manufacturing sector with the industrial added value of RMB 719.9 billion; followed by Guangzhou and Foshan with RMB 487.8 billion and RMB 471.9 billion respectively. More than 80% of the manufacturing industry in Guangdong Province is concentrated in the 9 cities of the Pearl River Delta. Although this is unfavourable to the overall balance of Guangdong's regional economy, the cities are endowed with unique advantages of complete infrastructure including airports and large ports.



Cargo handling capacity of large ports in the 9+2 cities (10,000 tons)



Source: Regional bureaus of statistics, Hong Kong Marine Department, PwC Summary

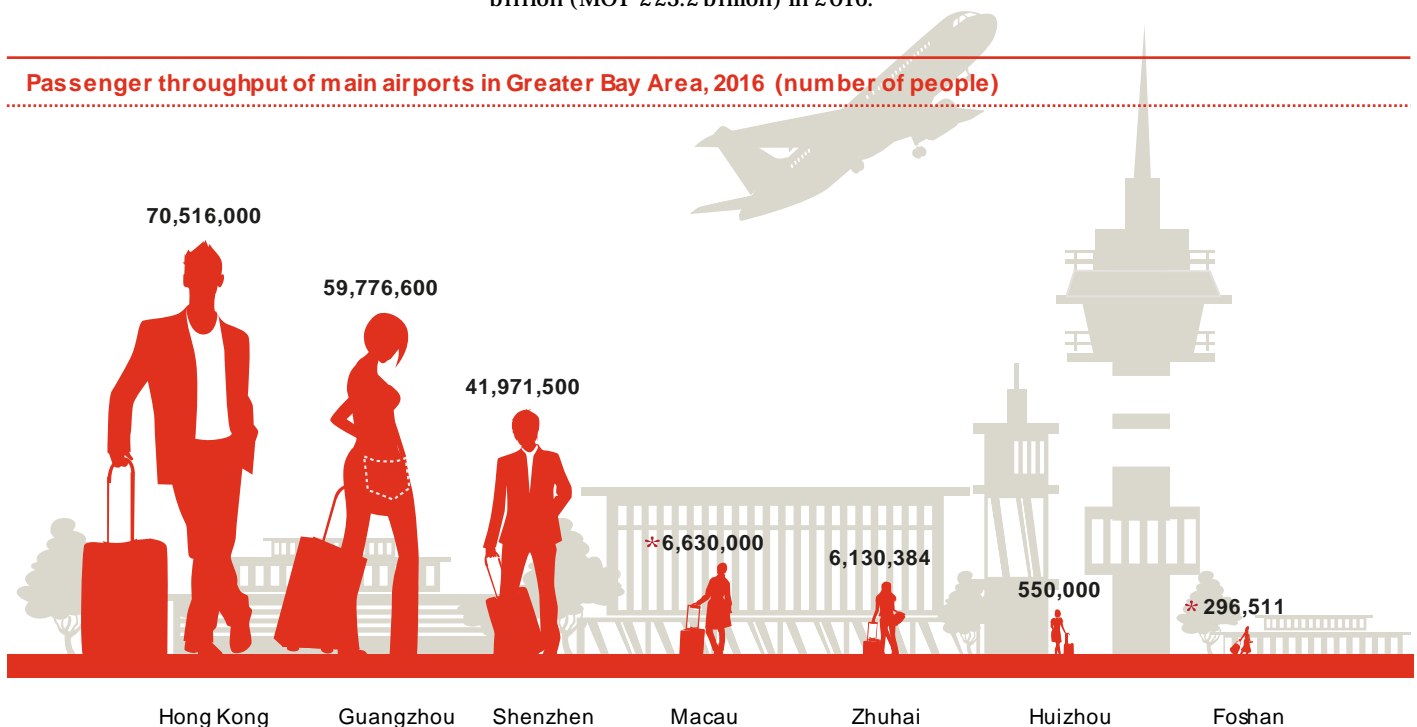
Apart from the obvious advantages in many areas of the manufacturing industry, the Greater Bay Area has a very prosperous tourism industry characterised by big market size and large numbers of visitors, which shows a bright prospect. For instance, in 2016, airport throughputs in Hong Kong, Guangzhou and Shenzhen were up to 70.52 million, 59.78 million and 41.97 million respectively. Although some passengers were only there to transfer, the amount of them was still huge, which provides great business opportunities and limitless tourism potential.

Relying on the unique characteristics of Hong Kong and Macao, the Greater Bay Area is in the leading position regarding the number of tourists and tourism income.

According to the 2015/2016 annual report by Hong Kong Tourism Board, total arrivals in Hong Kong reached 59.31 million in 2015, including 26.69 million overnight arrivals and 32.62 million same-day arrivals. Total tourism expenditure associated with inbound tourism reached RMB 2,804.1 billion (HKD 332.29 billion) while overnight visitors' per capita spending was RMB 6,104 (HKD 7,234). However, the number of visitors to Hong Kong in 2016 decreased slightly compared with 2015. Statistics from the government of Macau have shown that, there were 30.95 million inbound tourists in 2016, of which 15.7 million were overnight visitors; in 2016, the total consumption of tourists and consumption per capita reached RMB 43.1 billion (MOP 52.66 billion) and RMB 1,391 (MOP 1,701) respectively. Majority of the visitors were from mainland China, accounting for 66.1% of the total. At the same time, Macau's tourism-related lottery industry generated a revenue of RMB 182.6 billion (MOP 223.2 billion) in 2016.

Taking the 11 cities in the Greater Bay Area as a whole, there were more than 400 million domestic and foreign tourists in 2016. The overall tourism revenue reached RMB 1.06 trillion. If the lottery industry in Macau was included, the overall tourism revenue was close to RMB 1.24 trillion. The 9 cities in the Pearl River Delta received more than 300 million domestic and foreign tourists in 2016, generating a total revenue of RMB 732.8 billion. Take a look at those cities one by one, the number of visitors and tourism revenue of Hong Kong, Guangzhou, Shenzhen and Macau, are much higher than other cities.

Passenger throughput of main airports in Greater Bay Area, 2016 (number of people)



*Statistics on Foshan and Macau airports were updated to 2015 when published.
Source: Airports, bureaus of statistics, aviation administrations; PwC Summary

Tourism in 2016	Hong Kong	Macau	9 cities in Guangdong	Guangzhou	Shenzhen	Zhuhai	Foshan	Dongguan	Huizhou	Zhongshan	Jiangmen	Zhaoqing
Inbound tourists (in 10,000)	5,931	3,095	3,210	862	1,171	492	N/A	400	N/A	62	223	N/A
Domestic tourists (in 10,000)	N/A	N/A	28,522	5,079	4,525	3,409	4,570	3,392	4,713	1,056	1,778	N/A
Total revenue from tourism (RMB100 million)	2,825	412	7,328	3,217	1,417	317	625	445	364	247	410	286

Note: For Foshan and Huizhou, there were no separate data regarding inbound and domestic tourists, therefore we classified the total to the domestic tourists; only total revenue was available in Zhaoqing; total tourism revenue of Shenzhen was estimated based on historical data of the past three years and the annual growth rate.

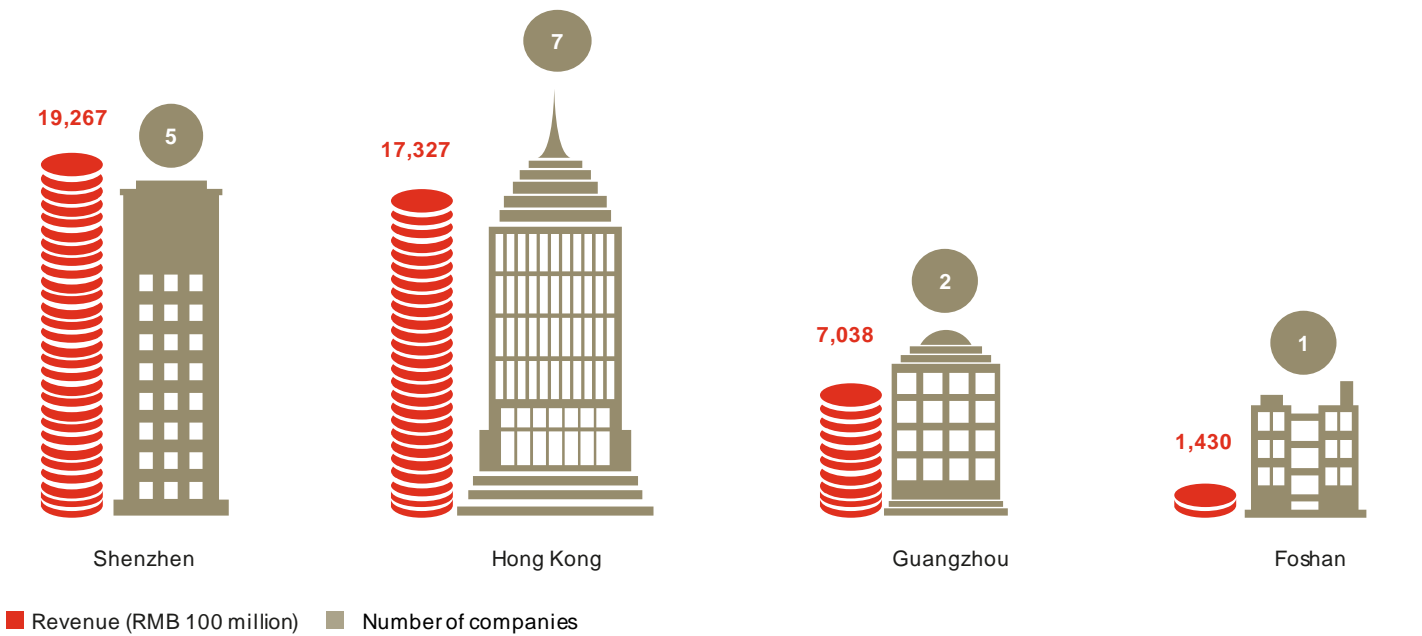
Source: Statistics Bureau of Guangdong Province, Municipal bureaus of statistics, PwC analysis

Concentration of Enterprises, Leading in Finance and Technology



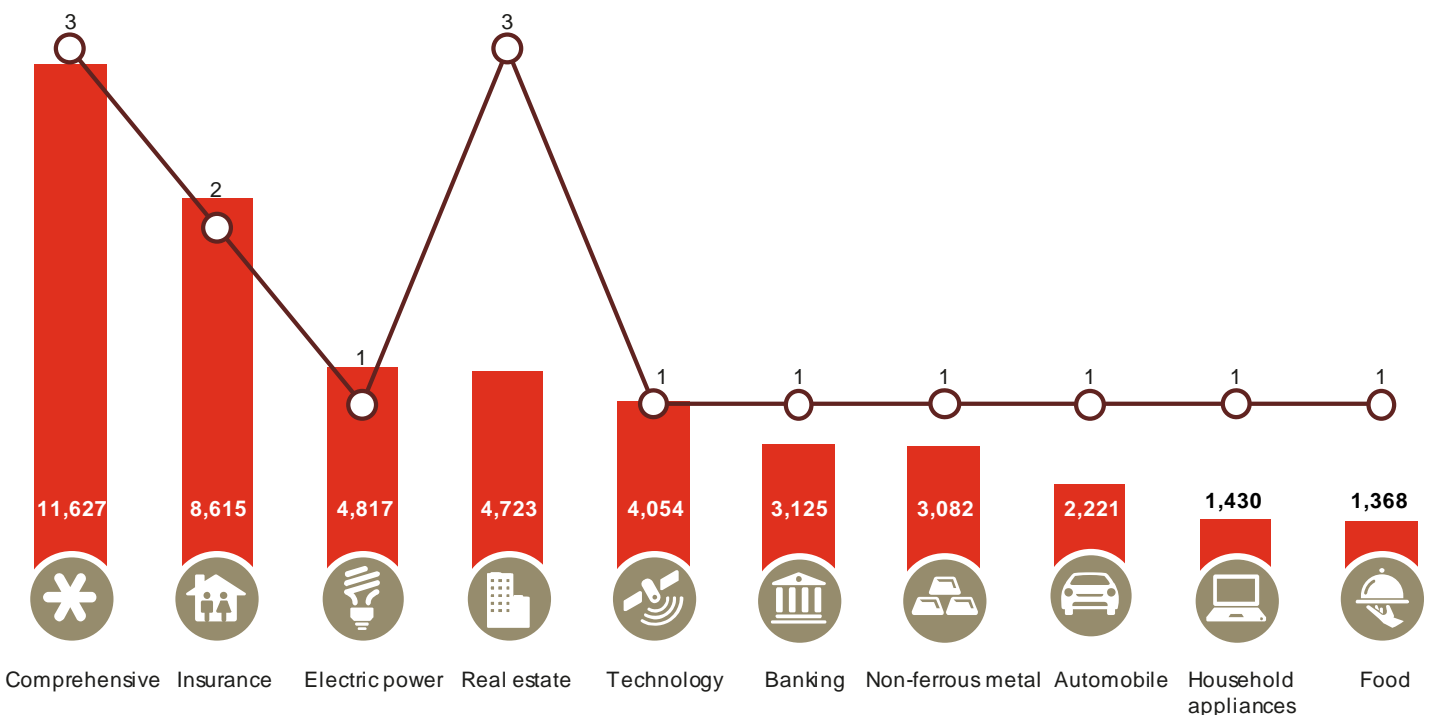
In addition to manufacturing and tourism industries, the Greater Bay Area leads the nation in insurance, finance, technology, real estate development, automobile and home appliance manufacturing, etc., and some of the industries even outpace their global counterparts. The strength of these industries is reflected in the development scale of local enterprises. For example, 15 enterprises from the Greater Bay Area were listed in the Fortune 500 of 2016, with a total revenue amounting to RMB 6.45 trillion. Hong Kong has seven Fortune 500 companies, the most compared to other cities in the Greater Bay Area. Shenzhen has five enterprises on the Fortune 500 list and their total revenue ranks the first in the region. There are two Fortune 500 companies in Guangzhou and one in Foshan.

Revenue of Fortune 500 companies in Greater Bay Area, 2016 (by location of headquarters)



Source: Fortune; Factiva (exchange rate: closing price of USD against RMB on 31 March 2016); PwC Analysis

Revenue of Fortune 500 companies in Greater Bay Area, 2016 (by industry)



Comprehensive companies: Jardine Matheson, Noble Group, China Resources

Source: Fortune; Factiva (exchange rate: closing price of USD against RMB on 31 March 2016); PwC Analysis

■ Revenue (RMB 100 million) —○— Number of companies

Apart from Fortune 500 companies, Forbes Global 2000 companies headquartered in the Greater Bay Area reflect more information. Hong Kong, followed by Shenzhen, has the largest number of enterprises in terms of higher market value. As a rising star, Shenzhen shows solid overall economic strength. However, compared with Hong Kong and Shenzhen, other cities in the Greater Bay Area fall far behind regarding the number of large enterprises.

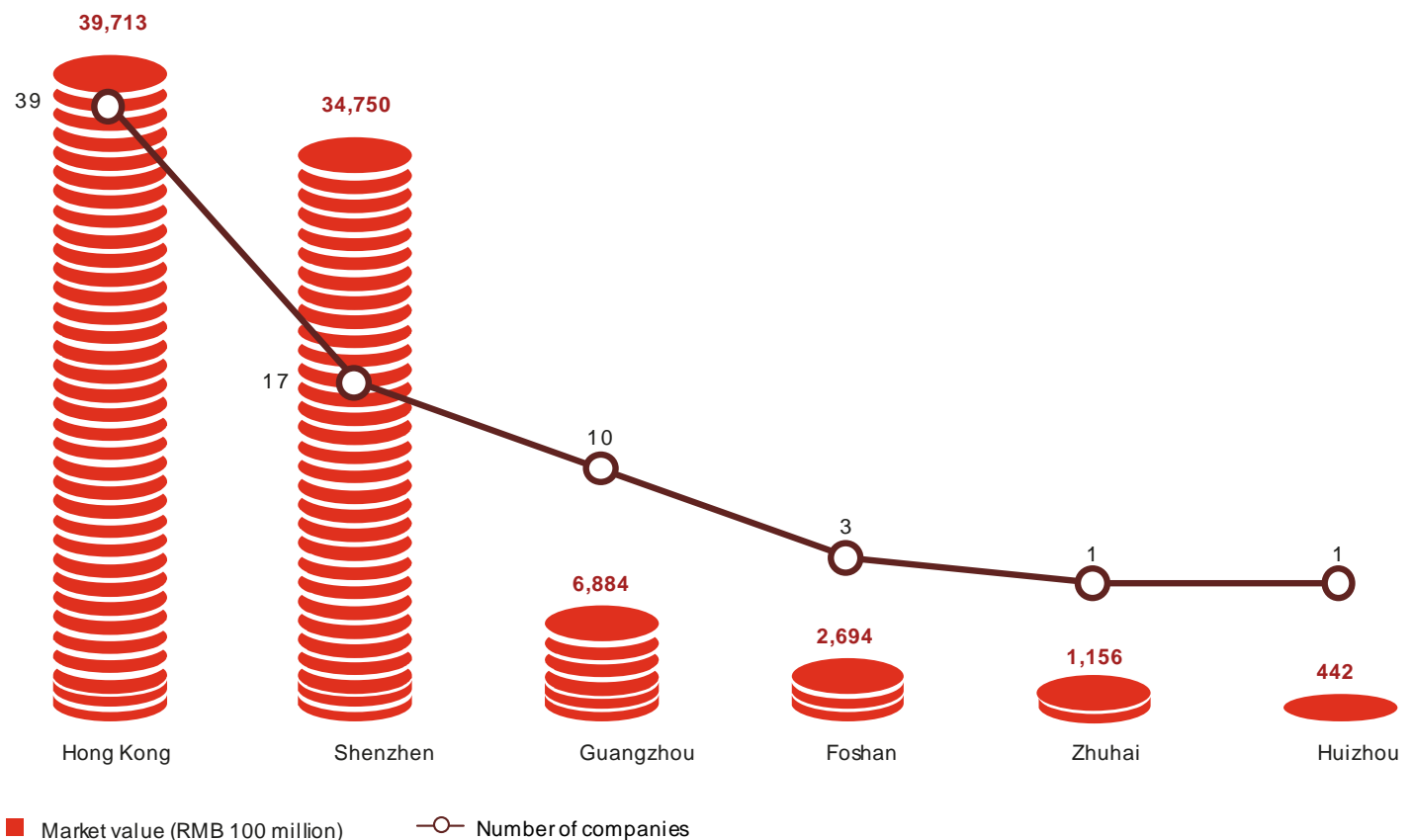
In general, industries in the Greater Bay Area, which possess the largest number of Fortune 500 and Forbes Global 2000 companies and superior overall strength, are real estate development, finance and insurance, as well as technology and the Internet.

In respect of real estate development, Hong Kong enterprises have started early and accumulated a lot of experience. Coupled with their active exploration into the mainland market in recent years, they have been flourishing in the market; in addition, a number of real estate enterprises in Guangzhou and Shenzhen have achieved great performance nationwide due to the rise of the mainland market. The real estate industry of the Greater Bay Area as a whole has an outstanding performance. These enterprises set up their headquarters in the Greater Bay Area and have contributed greatly to the development of local economy. Though the majority of their business are operated throughout the country, they are not the core force to support and enhance the economic transformation and upgrading of the area.

Finance and insurance are Hong Kong's traditional areas of strength. According to The Global Financial Centre's Index (GFCI) released by Z/Yen Group, a British think tank, Hong Kong is the world's fourth largest international financial centre and Shenzhen ranked 22nd in 2017.

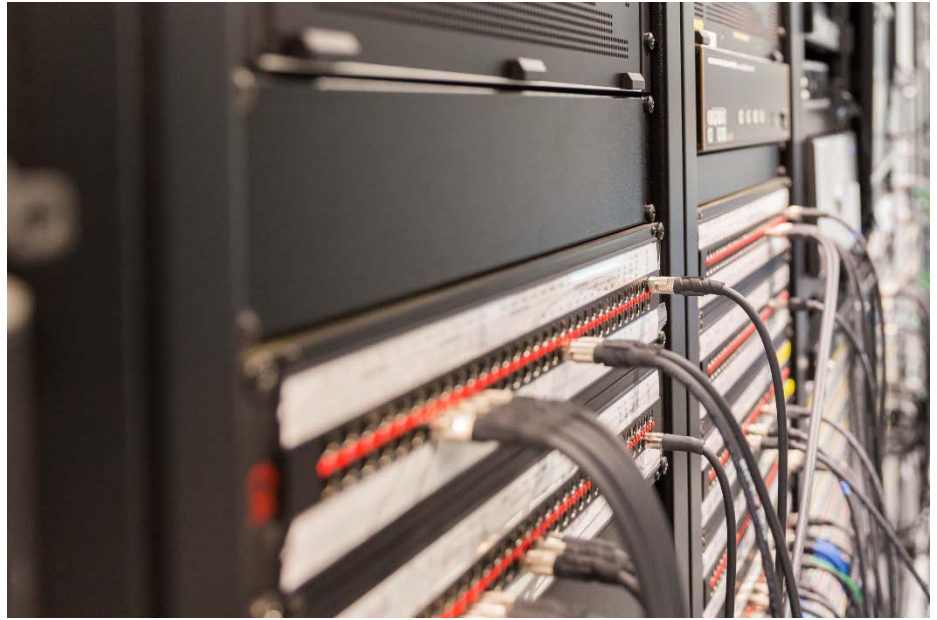
Being the hub of a number of strong financial and insurance enterprises, securities trading in Hong Kong and Shenzhen are also in the forefront of the world in terms of market value. In the future, financial cooperation in the Greater Bay Area, perhaps Hong Kong and Shenzhen alone, will result in great strength, scale and potential. And the prospects will be beyond imagination.

Market value of Forbes Global 2000 companies in Greater Bay Area, 2016 (by location of headquarters)

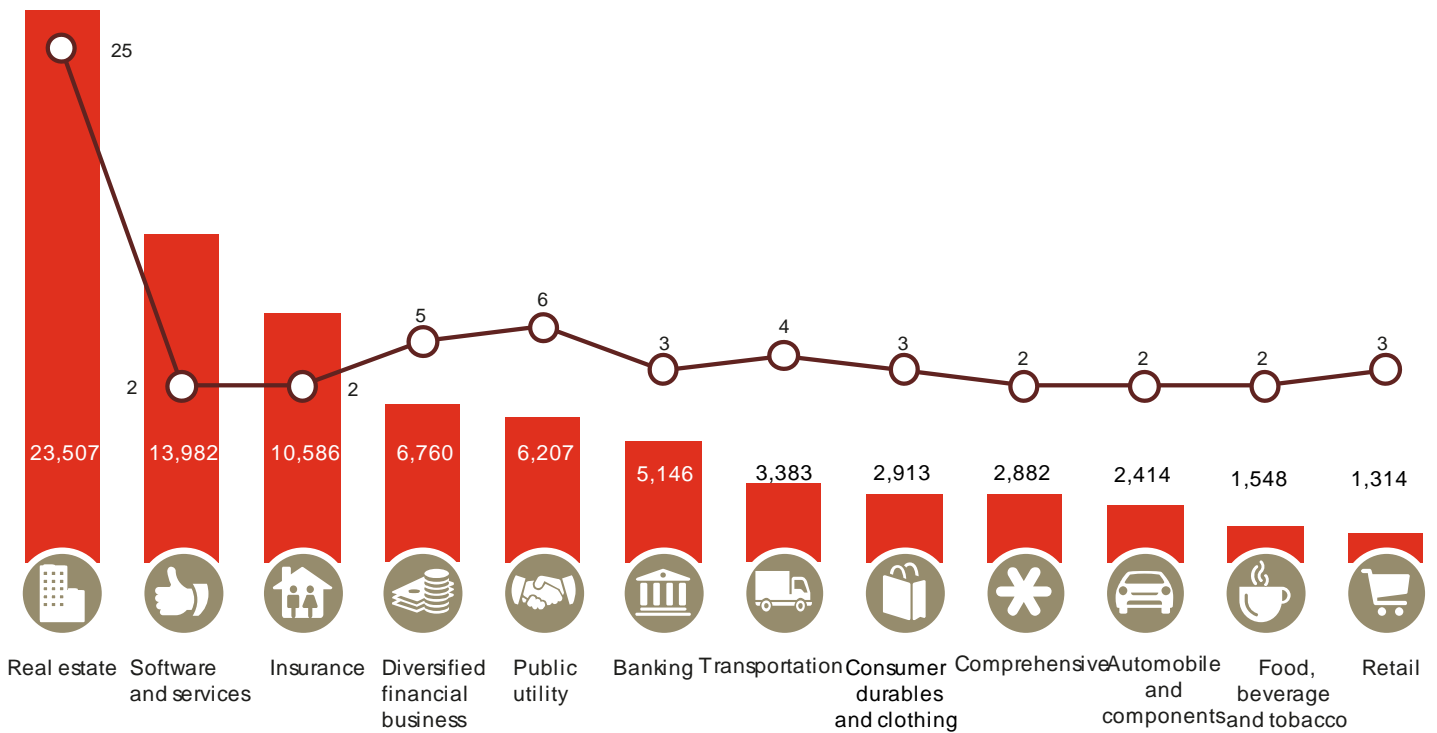


Source: Forbes, Wind Info, PwC Analysis; Factiva (exchange rate: closing price of USD against RMB on 22 April 2016)

As the representative of the region in science and technology, the Internet, computers, communications and other electronic equipment manufacturing enterprises in Shenzhen not only defeat their domestic counterparts, but also leading the world in many areas. As mentioned, Guangdong has been a key manufacturing base to the world's computers, communications and other electronic equipment. Take one of the leading companies Huawei as an example, not only is it a driving force pushing the manufacturing industry to a higher level, but also narrowing the gap regarding innovation, research and development with other multinational corporation. With the rapid development of China's Internet, famous companies like Tencent and others are leading the world in many areas.



Top 12 Fortune Global 2000 companies in Greater Bay Area in terms of market value, 2016 (by industry)



Comprehensive companies: Jardine Matheson, Noble Group

■ Market value (RMB 100 million) —○— Number of companies

Source: Forbes, Wind Info, PwC Analysis; Factiva(exchange rate: closing price of USD against RMB at 22 April 2016)

Great Plan Generates Great Opportunity



NDRC, the People's Government of Guangdong Province, the Hong Kong SAR and the Macau SAR, jointly signed on 1 July the *Framework Agreement on Deepening Guangdong-Hong Kong-Macau Cooperation in the Development of the Greater Bay Area*, which stipulates that priorities for future cooperation mainly include: 1. Promoting the interconnection of infrastructure facilities; 2. Further improving market integration; 3. Building an international technological innovation centre; 4. Constructing a modern industrial system featuring synergistic development; 5. Jointly establishing a superior life circle suitable for living, business and tourism.

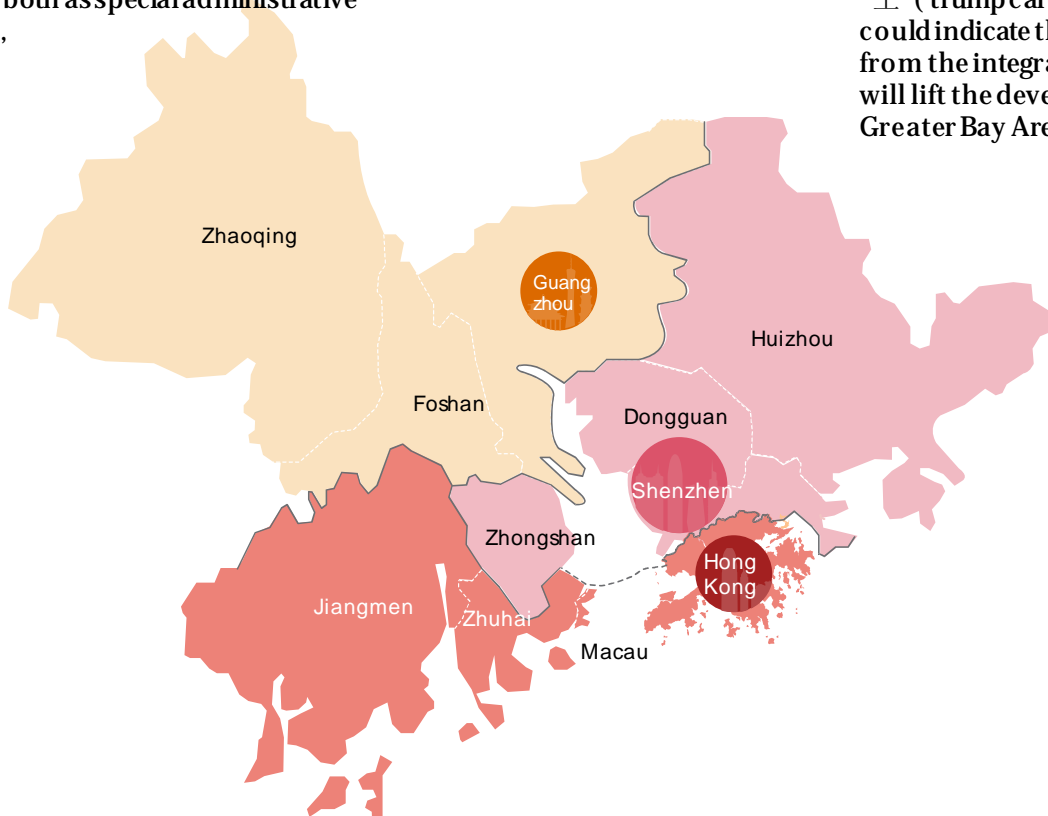
The agreement, undoubtedly, is of great importance for guiding the plan for the future development of the Greater Bay Area. It is expected that more detailed action plan will be introduced in the *Plan for the Development of the City Cluster in the Guangdong-Hong Kong-Macau Greater Bay Area*, which is now under research and formulation. Besides, based on the above research, we believe that the following aspects should be considered and focused on:

“三” shaped world-class city cluster with Hong Kong, Shenzhen and Guangzhou as three core cities

After years of development of the Greater Bay Area, the core position of Hong Kong, Shenzhen and Guangzhou is more prominent, and their economic strength is evenly matched. On this basis, cities in the Greater Bay Area have been forming a “三” shaped world-class city cluster with close cooperation, and a even better strategic positioning will be achieved in the future. The “三” shaped city cluster is an outstanding feature even in the world, for there are no such big three cities so close to each other at home and abroad. More specifically, the “三” shaped city cluster refers to: 1) Hong Kong as the core, including Macau, Zhuhai and Jiangmen. Since Hong Kong and Macau, both as special administrative regions,

have always been closely connected. Zhuhai is close to Macau, while Jiangmen occupied large area, so the completion of Hong Kong-Zhuhai-Macau Bridge will greatly shorten the traffic time. 2) Shenzhen as the core, including Huizhou, Dongguan and Zhongshan. The opening of Shenzhen-Zhongshan Bridge in the future will vastly facilitate the integration of the two cities. 3) Guangzhou as the core, including Foshan and Zhaoqing. The size and population of Guangzhou outpace those of Hong Kong and Shenzhen, so it would be suffice for Guangzhou to only connect Foshan and Zhaoqing.

The city cluster's advantage is to keep the existing development pattern while maintaining the special characteristics of each one of the cities, highlight the leadership of Hong Kong, Shenzhen and Guangzhou as three core cities, and promote the development of other cities, so as to make the Greater Bay Area a world-class city cluster as early as possible. In the meantime, we should take advantage of the opportunity for planning the development of the Greater Bay Area---enhancing the in-depth and close cooperation between Hong Kong and Shenzhen, Hong Kong and Guangzhou. As a matter of fact, in Chinese, “三” can easily be turned into “王” (‘trump card’ in English), which could indicate that the great power from the integration of the three cities will lift the development of the Greater Bay Area up to a higher level.





Seamless connection between infrastructure facilities and public services, rapid flow of production factors

With the completion of a series of infrastructure projects, the Greater Bay Area will enjoy greatly improved traffic convenience in the future; however, improvements are still needed in many areas. For example, “The failure to achieve smooth connection in the areas of education, medical care, finance and social security hindered the rational allocation of resources within the Greater Bay Area,” said well-known scholar Zheng Yongnian, adding that “The Greater Bay Area is not a patch on the EU in terms of integration, such as the labour market, staff mobility, customs pass management, and scientific research cooperation.”

These issues are worth pondering, and these factors may seriously hamper future development of the Greater Bay Area if we do not properly handle them. All parties concerned should take the opportunity and jointly formulate the development plan.

In the future, if the Greater Bay Area still can't be comparable to the EU after internal integration, and the situation of “separate development, redundant construction and low degree of integration between cities” continues, the results will be foreseen because the difference in the principle of “one country, two systems” in China.

Therefore, apart from the close connection of infrastructure facilities, it is worth noting of the ways to connect public services among cities, so as to accelerate the rapid flow of production factors as quickly as possible over the next few years, and to finally establish an integrated single market in the Greater Bay Area.

Attractive shopping and lottery services, an integrated single tourist destination

As mentioned above, the 11 cities in the Greater Bay Area received more than 400 million domestic and foreign tourists, and registered an overall tourism revenue of more than RMB one trillion in 2016. But the major cities were almost independent from one another in terms of tourism destination. So we can say that an integrated single market has not yet established. For example, according to the official statistics released by Hong Kong and Macau, same-day tourists in the local accounted for half of the total number of tourists (which, of course, included some tourists from Mainland China heading to and returning from the Pearl River Delta on the same day). In order to achieve an increased tourism revenue, we need to attract tourists to stay overnight or even several nights in the local or within the Greater Bay Area. If faster interconnection among cities through infrastructure facilities can be achieved in the future, people could reach major tourist sites of the 11 cities within two to three hours or even less, thus forming an integrated market, available to the tourists staying five to seven days.

This will attract more domestic and foreign tourists and they will stay a few more days in the Greater Bay Area. Therefore, tourism revenue will be substantially increased.

Except for faster interconnection among cities through infrastructure facilities, we need to avoid homogeneous competition among the tourist sites, enhance complementarity and optimise tourist experience. In addition, we can establish a Tourism Development Commission, led by the central government or NDRC or the National Tourism Administration, so as to promote a unified and coordinated integration of tourist market.

Meanwhile, 11 municipal governments should regularly promote exchanges of ideas among the major tourism enterprises; plan and carry out business with an aim to promote tourism integration; encourage qualified large enterprises to operate a cross Hong Kong, Macau and Guangdong; engage in M&A and restructure; and leverage market forces to facilitate the tourism integration.

In addition, there are abundant tourism resources in the Greater Bay Area, such as lottery in Macau, and its distinctive southern European architecture; the renowned “Shopping Paradise” Hong Kong, its gorgeous night scene and metropolitan scenery; Diaolou (watchtower) in Jiangmen; local cuisine in Guangzhou and Zhuhai the so-called ‘Garden City’. All these are very attractive to domestic and foreign tourists. What's more, cities in the Greater Bay Area are adjacent to the coast, and many precipitous mountains stand in the region, so the governments can jointly formulate policies to improve the air and water quality in the Greater Bay Area and develop unique ecotourism. In addition to improving the living environment, diversified tourism should also be developed in the region, and the one-hour life circle will be achieved in the future thanks to the convenient traffic.

Promoting the competitiveness of the manufacturing sector, cultivating high value-added industries

As mentioned before, the Greater Bay Area, with large economic size, is one of the most developed places in China, but they also face the challenge of sustainable development. Many areas of the manufacturing sector are still at the lower end of the value chain, and the proportion of businesses with high added value is small.

For example, the Pearl River Delta is an important manufacturing base for mobile phones and accessories in the world. *The Operation of Electronic Information Industry in 2016*, issued by the Ministry of Industry and Information, indicated

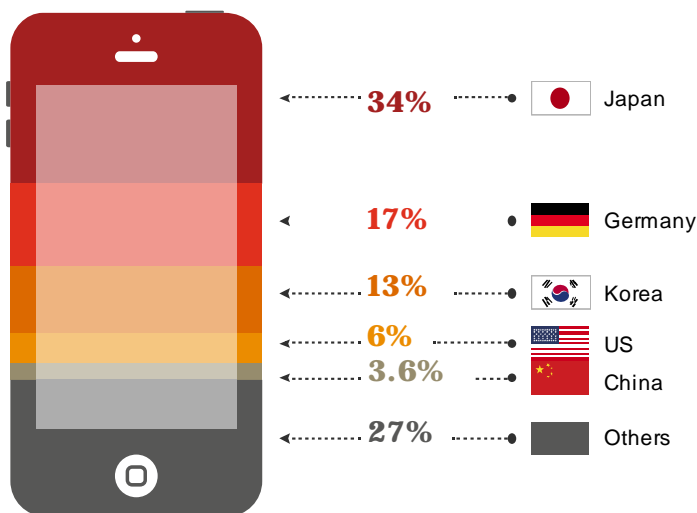
that the output of mobile phones produced in China for 2016 amounted to 2.1 billion, and the output of Guangdong reached 0.96 billion. There are not only many local mobile phone brands in the Pearl River Delta, but also many OEMs for international brands. However, enterprises in the region generally lack core technology, so the internationally-renowned local brands are rare to see and the whole sector stays in the end of the value chain with little profit being made.

If a scientific program in line with the market development rules can be formulated, the transformation and upgrading of the mobile phone industry will be accelerated.

The program is expected to cultivate several internationally-renowned local mobile phone brands and master more core technologies. One practical program that may work is that the local governments coordinate the major enterprises and establish a fund, together with financial institutions, so as to acquire overseas mature core technologies or world-famous brands. On the other hand, local governments can make investments to mobilise the enterprises and research institutions (including universities) in the Greater Bay Area, or even gather domestic and foreign top research forces to one platform, in a bid to crack down on some key technologies, hence promoting the development of the local mobile phone sector.

There are many other advantageous manufacturing sectors other than mobile phone in the Greater Bay Area. Nevertheless, only a few brands can boast their advanced technology, high added value, and an international reputation. Therefore, how to achieve transformation and an upgrading of more sectors is not only related to the future economic prosperity of the region, but also a major problem to be solved at the national level. Guangdong has been the frontier of national reform and opening up. If the upgrading and transformation regarding the manufacturing industry can be achieved in the process of developing the Greater Bay Area, it will definitely be of great interests for now and future.

Research shows, Chinese iPhone manufacturer gets only 3.6% of the profit, which is quite low.



Source: Wall Street Journal

Enhancing cooperation while reducing competition to build a world-class financial and technological innovation centre

In an era of economic globalisation, it is an imperative to develop world-leading industries to stay ahead of competition. The finance (including insurance), the Internet and the technology sector in the Greater Bay Area may be the only ones that are globally competitive. If cooperation among Guangdong, Hong Kong and Macau can be strengthened, the position of the Greater Bay Area, as the world-leading financial centre and internet and technology innovation centre, will be enhanced and secured.

Hong Kong has evident advantage in finance, mainly due to its social and economic systems and the rapid economic development of Mainland China. Shenzhen, however, has

advanced Internet and technology, as the city is in the forefront of reform and opening up, as well as a rapid progress in the finance sector. Therefore, it is vital to enhance cooperation and reduce competition in respect of finance amongst the three cities. This is exactly why the plan for the development of the Greater Bay Area is formulated with the involvement from the central government.

Moreover, as finance and technology are two highly developed sectors, they are much more in need of professionals from all over the world. Hong Kong, with low individual income tax, good English

environment and superior medical and education services, is easy to attract world-class talents compared to other cities in the Greater Bay Area. Consequently, it is extremely important to encourage international high-end talents to settle in the region to enjoy free flow of work without any restraint. Additionally, flow of high-end talents may be attracted by simplified tax policies. Guangdong, Hong Kong and Macau belong to different tax zones, so the three local governments can jointly develop tax preferential policies regarding corporate operation and flow of talents to encourage the exchange of high-end talents.

Development of smart city and promotion of high quality domestic products

- 1. Development of smart city:** Similar to other countries in the world, China is in search of ideal smart cities. Compared with the rest of the country, the 9+2 cities are better developed and have greater demands. Smart cities utilise high technologies for a wide range of areas, including e-commerce, environmental protection, new energy, innovative transportation and road usage models, sharing economy, big data, block chain and so on. The development of smart cities can bring about development of various industries. Take Shenzhen and Hong Kong for example, technology companies, technical talents and large sum of capitals can provide sufficient resources to all smart cities in the Greater Bay Area. Governments of the 9+2 cities are encouraged to discuss with and collect opinions from hi-tech company leaders in the region, in a bid to jointly build ideal smart cities.
- 2. Promotion of high quality domestic products:** There are many high-quality industrial products in the Greater Bay Area. Hong Kong can serve as the inspector implementing quality testing in accordance with the worldwide standards, give ratings to products from the area, and utilise its international trading network to promote those products to the world.
- 3. Cross-region elderly care:** The issue of aging population is escalating in China. It is a shared concern for the Greater Bay Area and other cities across the country. To deal with the issue, the 9+2 cities should take lessons from foreign cases and formulate a forward-looking policy at early stage. For example, cities in the Greater Bay area with relatively low cost of living can attract retirees from other cities to move in, or even attract elderly citizens of higher-level from all over the country for long or seasonal residence. Zhaoxing, Zhongshan, Zhuhai and some other cities in the Greater Bay Area have ideal living environment, low cost of living, making them suitable for the development of high-end elderly care services.
- 4. Combination of the Chinese and Western medicine:** Hong Kong has a world recognised pharmaceutical testing standards, and the Pearl River Delta has plantations for traditional Chinese medicine. Cooperation between the two places could promote a set of internationally-recognised standards for traditional Chinese medicine. In addition, Guangdong's bone-setting practices is well-known throughout the country, which boast excellent treatment. This technique can surely make up for the lack of Western orthopaedic doctors. It is recommended to jointly build a Chinese medicine hospital or school for bone-setting practices, gather the masters to train more traditional bone-setting doctors, and introduce this superb Chinese medical treatment to the world. The medical and pharmaceutical industry can also coordinate with tourism and elderly care industries, so as to promote the development of multiple service industries in the Greater Bay Area.

Population aged above 65 and its percentage of the whole population of 9+2 cities

City	Population aged above 65 (in 10,000)	Percentage
Hong Kong	119	16.2%
Macau	6.34	9.8%
Shenzhen	38.37	3.37%
Huizhou	31.16	6.55%
Zhuhai	10.86	6.65%
Guangzhou	106.62	7.90%
Zhongshan	18.39	5.73%
Foshan	50.46	6.79%
Jiangmen	51.48	11.39%

Source: Official statistics, government portal website, PwC Analysis

Appendix

Economic data overview of the Greater Bay Area

Locality	Hong Kong	Macau	Guangdong Province	Guangzhou	Shenzhen	Zhuhai	Foshan	Jiangmen	Zhaoqing	Huizhou	Dongguan	Zhongshan
Size (square kilometre)	1,106.30	30.50	179,700.00*	7,434.40*	1,997.30*	1,732.33*	3,797.72*	9,505.42*	14,891.00*	11,346.00*	2,460.00**	1,783.67
Total population (in 10,000) permanent residents	734.67	64.49	10,999.00	1,404.35	1,190.84	167.53	746.27	454.40	405.96	477.50	826.14	323.00
GDP(RMB 100 million)	22,325.77	3,119.39	79,512.05	19,610.94	19,492.60	2,226.37	8,630.00	2,418.78	2,084.02	3,412.17	6,827.67	3,202.78
GDP per capita (RMB/person)	303,889.14	482,991.38	72,787.00	139,644.25	167,411.00	134,500.00	115,641.79	53,374.00	51,178.00	71,605.00	82,682.00	99,471.00
Export value (location of commodity operation) (RMB 100 million)	32,184.05	87.49	41,587.66	5,431.92	16,488.64	1,897.11	3,262.45	N/A	N/A	2,074.94	6,887.79	1,851.49
Import value (location of commodity operation) (RMB 100 million)	35,953.00	621.37	24,767.33	3,546.02	11,174.17	999.76	1,075.89	N/A	N/A	1,129.23	5,097.54	499.15
Trade dependence	3.05	0.23	0.83	0.46	1.42	1.30	0.50	N/A	N/A	0.94	1.76	0.73
Foreign direct investments actually used (RMB 100 million)	7,508.75	448.11*	1,621.46	395.92	467.52	159.38	102.22	33.06	25.69	79.38	272.64	32.92
Total retail of consumer goods (RMB 100 million)	3,916.25	500.82	34,739.10	8,706.49	5,512.76	1,016.13	3,017.76	1,159.06	731.98	1,227.88	2,470.78	1,205.84
Tertiary industrial structure	0.1:7.93*	0:8.92*	5:43:52	1:30:69	0.03:40:60	2:48:50	2:59:39	8:47:45	15:48:37	5:54:41	0.3:47:53	2:52:46
Industrial value added (RMB 100 million)	N/A	52.79	31,917.39	4,877.85	7,199.47	1,043.23	4,718.72	1,041.82	952.73	1,762.18	2,878.23	1,385.88

*: Data of 2015

** : Data of 2014

Source: Statistics Bureau of Guangdong Province, municipal bureaus of statistics, Wind Info, PwC Analysis;
Exchange rate: closing price of HKD and MOP against RMB on 30 December 2016

Key infrastructure projects in Hong Kong and Macau

Project	Name	Estimated investment	Focus	Progress	Time of completion	
Hong Kong	Bridge	Hong Kong–Zhuhai–Macau Bridge	Over RMB 89.7 billion (HKD 100 billion)	Boost the economic development of Hong Kong, Macau and the western region of Pearl River Delta and reduce cost and time of communications between Hong Kong and western region of Pearl River Delta	On 7 July 2017, the main project was completed	Expected opening date: 26 December 2017
	Railway	Guangzhou–Shenzhen–Hong Kong Express Rail Link–Hong Kong section	Guangzhou–Shenzhen section: RMB 20.5 billion; Hong Kong section: RMB 80.7 billion (HKD 90 billion)	The total length is 26 km. Upon completion, travel time from Hong Kong to Beijing and Shanghai will be shortened to about 10 hours and 8 hours, respectively.	Guangzhou–Shenzhen section of the Guangzhou–Shenzhen–Hong Kong Express Rail Link opened in December 2011. Hong Kong section is currently under construction.	Estimated to be completed in Q3 2018. 90% of the main project has been completed.
	Airport	Three-runway system	More than RMB 126.9 billion (HKD 141.5 billion)	The dual runway system is about to be saturated and therefore needs to be expanded.	Started in 2016	Estimated to be completed in 2024
Macau	Road	Guangzhou–Macau New Channel	N/A	Seamless transfer between Macao LRT and Guangzhou–Zhuhai Intercity Mass Rapid Transit. It covers the north of the Canal Dos Patos, Gongbei Subdistrict, Xiangzhou District, Zhuhai, the east of Yuehai International Garden, the west of Macao border and the south of Zhuhai Railway Station, covering more than 40,000 square meters, with a building area of 65,000 square meters. The highest of the joint inspection buildings in Zhuhai and Macao reaches 19 floors	Estimated to start in Q3 2017	N/A
	Ferry Terminal	Taipa Ferry Terminal	RMB 3.3 billion (MOP 3.8 billion)	It will help to expand the new shipping network of Macau and Pearl River Delta cities	Construction began in 2005 and was scheduled to be completed in 2007	Expected to be completed by the end of 2017 as the construction scale expands

Key infrastructure projects in Hong Kong and Macau

Project	Name	Focus
Airport	"5+4" backbone airport	Guangdong Province will focus on building "5 + 4" backbone airport, namely, to build the five airports in the Pearl River Delta region including Guangzhou Baiyu International Airport, Shenzhen Bao'an International Airport, The Pearl River Delta New Trunk Line Airport, Zhuhai Jinwan Airport and Huizhou Airport, and four airports in the east, west and north of Guangdong, including Jieyang Chaoshan Airport, Zhanjiang Airport, Meixian Airport and Shaoguan Airport.
High-Speed Railway	"Five vertical and two horizontal" high-speed railway network	The total length of railway operation in the province will reach 5,500 km. The focus is to build a "five vertical and two horizontal" backbone network covering 2,000 kilometres of high-speed railway in operation, and to make high-speed railways available in all cities of the province and connect to neighbouring provinces (districts) on land.
Port	Large port with throughput over 100 million tons	Develop a cluster port with port groups in the Pearl River Delta as the core and those at the east and the west of Guangdong as wings to build the "21st Century Maritime Silk Road" national gateway. Ports with throughput over 100 million tons in the province have increased to eight, and the annual capacity of port goods has reached two billion tons.

Key projects of the 9 cities of Guangdong Province for the 13th Five-Year Plan

	Project	Estimated investment (RMB 10,000)	Investments during the 13th Five-Year Plan period (RMB 10,000)	Number of projects	Focus
Guangzhou	Airports and supporting facilities		7,861,654	17	Expansion and facilities development of Baiyun Airport, project of business aviation service base, process transformation, integrated information building, etc.
	Navigation project	3,344,439	2,810,615	18	The third and fourth phases of the Nansha port area of Guangzhou port, the first-phase project of Nansha port complex, etc.
	Railway project	36,400	31,340	9	Jiangmen-Shenzhen section of Shenzhen-Maoming Railway, Guangzhou-Shantou High-Speed Railway
	Intercity railway project	27,979,900	16,989,300	15	Guangzhou-Foshan-Jiangmen-Zhuhai Intercity Railway, Intercity Rail Transit in Pear River Delta from Xintang via Baiyun Airport to Guangzhou north section
	Rail transit project	41,898,008	23,165,640	26	Guangzhou-Foshan section of Guangzhou-Foshan rail transit, multiple railways and extensions
	Nansha new cruise terminal	1,700,000		1	Expected to be in operation in 2019, which will be able to accommodate the world's largest cruises and with the completion of supporting facilities, it will be the Guangzhou's maritime international gateway.
Shenzhen	Integrated transportation	107,920,000	46,600,000	173	Longgang modern trams and other rail transit projects, Shenzhen-Huizhou highway expansion projects, etc.
Zhuhai	Integrated transportation	4,000,000		1	Guangzhou-Foshan-Jiangmen-Zhuhai Intercity Railway
Jiangmen	Highway		6,450,000		Jiangmen section of Guangzhou-Zhongshan-Jiangmen Highway and Zhangshan-Kaiping Highway, Jiangmen Avenue, Taishan-Kaiping Expressway
	Rail transit				Jiangmen-Maoming section of Shenzhen-Maoming Railway (to be completed), Jiangmen-Shenzhen section (to be activated), Guangzhou-Foshan-Jiangmen-Zhuhai intercity railway, Nansha port railway
	Transportation hub		760,000		Jiangmen Station of Integrated transport hub of Pearl River Delta West and public transit hub of Binjiang new city, High-tech district, Longwan, etc.
	Airports and supporting facilities		110,000		Taishan and Enping general aviation airports
Zhaoqing	Road		11,000,000		Urbanisation of China National Highway 321, first phase of Guangzhou-Foshan-Zhaoqing Highway, Zhaoqing section of Shantou-Kunming Highway, etc.
Huizhou	Airport				Main airport in the Pear River Delta that serves millions of people from Huizhou, Shanwei, Heyuan and east Shenzhen, and functions as Shenzhen's second airport
	Highway	3,073,804	2,851,104	7	Huizhou section of Hunan-Huizhou Highway
	Railway				Newly built large railway hub-Huicheng South Station and Huizhou North Station
Dongguan	Road		12,562,800		Second channel of Songshan lake, River-Crossing channel of Wanjiang, Shenzhen-Dongguan-Huizhou cross-border road
	Bridge	1,118,000			Humen 2nd Bridge (construction started in 2013, estimated to operate in 2019)
	Intercity railway				Guangzhou-Dongguan-Shenzhen Intercity Railway, Dongguan-Huizhou Intercity Railway, Foshan-Dongguan Intercity Railway, Zhongshan-Humen-Longgang Intercity Railway and Dongguan-Shenzhen Rapid Transit
Zhongshan	Infrastructure	15,748,000	10,593,000	45	Zhongshan section of Shenzhen-Zhongshan Highway, Zhongshan-Kaiping Highway, Zhongshan-Jiangmen Highway, etc.
Guangdong Province	Estimated total investment*	245,563,005*	141,785,453	312	

* Investments during the 13th Five-Year Plan period are included in the total investment where the estimated investment is not disclosed.

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SG-20170711-1-C2