Geography

Learning and Teaching Resources on Guangdong-Hong Kong-Macao Greater Bay Area (Greater Bay Area)

Population in the Greater Bay Area

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1 Introduction

Demographic changes always bring profound social and economic impacts. Demographic changes of a country or region are no longer simply population or aging problems, but crucial issues that may determine the economic and social development of that country or region. When a country or region is rapidly developing and has been able to adopt advanced technologies from other countries / regions in the world, population growth will likely bring the following changes: a growing population will result in a younger population structure, which will help speed up social and economic development. In a country or region with an aging population, problems to be addressed are not limited to issues on elderly support but also problem on social pensions in the capital market as well as reforms on the health care system and the roles and functions of the government. Therefore, it is important for a country or region to understand its population characteristics. This chapter will explore the key population characteristics, the aging problem and the current situations in human resources of the Guangdong-Hong Kong-Macao Greater Bay Area (Greater Bay Area), with reference to relevant statistics. However, due to the variations in the census methods and parameters of the three places, this chapter will focus on discussing the population characteristics of the nine Mainland cities of the Greater Bay Area (Zhujiang Delta region[1]) based on the relevant statistics.

[1] Zhujiang is the largest river in South China. It consists of three main tributaries and other tributaries of the Xijiang, Beijiang, and Dongjiang. The transport materials of these tributaries are carried by the river water to the estuary (Zhujiang Estuary) and deposited at the estuary to form a fertile delta called the “Zhujiang Delta”. After the reform and opening up, the Guangdong Provincial Government designated Guangzhou, Shenzhen, Dongguan, Foshan, Jiangmen, Zhongshan, Zhuhai, and the urban areas of Huizhou and Zhaoqing in the Zhujiang Delta as the Zhujiang Delta Economic Zone, which became the prior regions of the country’s reform and opening up. On this basis, Hong Kong and Macao Special Administrative Regions were added to extend the concept of the “Greater Zhujiang Delta Region”. In 2017, the state proposed to deepen the cooperation between Guangdong, Hong Kong and Macao and promote the construction of the "Guangdong-Hong Kong-Macao Greater Bay Area (GBA)". At present, the GBA includes the nine cities of Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Dongguan, Zhongshan, Jiangmen and Zhaoqing, and two special administrative regions of Hong Kong and Macao.

2 Major population characteristics of the Greater Bay Area

2.1 Rapid growth in de jure population

The population of the Guangdong Province is mainly concentrated in the Greater Bay Area of the Zhujiang Delta region. Compared to the western, eastern and northern parts of Guangdong Province, the Zhujiang Delta region has the largest de jure population and highest rate of population growth. According to the Bureau of Statistics of Guangdong Province, as of the end of 2017, the population of the Zhujiang Delta region totaled 61.51 million, accounting for 55.07% of the total population of the Guangdong Province. In 2017, the population of the Zhujiang Delta increased annually by 1.52 million (approximately 0.42%), which was 0.98% higher than the growth rate of de jure population in the Guangdong Province. Among the cities in the Greater Bay Area, the population of Guangzhou and Shenzhen increased by 454,900 and 691,900 respectively when compared with last year. The significant increase in number of births was a result of the implementation of the two-child policy in Guangdong Province in 2017 which was also the major reason for such a rapid growth in population in the Zhujiang Delta region. According to a survey on population changes in the Guangdong Province, the "second child" accounted for more than 50% of the total births in 2017. In 2017, the number of births in Guangdong Province reached 1.52 million, with a birth rate of approximately 13.68‰, while the number of deaths was 0.5 million, with a death rate of 4.52‰. The natural increase in population was 1.02 million, in a rate of of 9.16‰. The male population totaled 58.62 million while the female population totaled 53.06 million, yielding a sex ratio of 110.48 (for every 100 females). However, the Bureau of Statistics of Guangdong Province did not specifically publish the statistics related to the birth rate, death rate, rate of natural increase, and sex ratio of the population of the Zhujiang Delta region.

Even though Hong Kong has a large population, its population growth is slow. On the other hand, both population and population growth remain relatively stable in Macao. According to the Census and Statistics Department of Hong Kong, the total population of Hong Kong exceeded 7.41 million in 2017, with an annual increase of 32,700, and the rate of population growth was 0.8‰. Crude birth rate of Hong Kong was 7.7‰ while crude death rate was 6.9‰. According to the Statistics and Census Bureau of Macao, the population of Macao totaled

653,000 by the end of 2017, with a number of births of 6,529. The birth and death rates of Macao were 11.0‰ and 3.1‰ respectively, with a rate of natural increase of 7.9 ‰. The sex ratio was 107.5, i.e., there were 107.5 male babies for every 100 female babies.

2.2 Further concentration of de jure population in core cities[2]

In 2017, the population of the nine Mainland cities of the Greater Bay Area generally showed increasing trends, but the movement of population varied among different cities. Population movements in Guangzhou, Shenzhen, Foshan, and Dongguan was dominated by in-migration while Zhaoqing and Jiangmen showed greater number of out-migration than in-migration (Table 1). According to the National Bureau of Statistics, Guangzhou and Shenzhen ranked first and second respectively among the cities with a positive net migration in 2017. Even though the growth of de jure population in Foshan and Dongguan was lower than that of Guangzhou and Shenzhen, they still surpassed that of Suzhou and Nanjing.

Table 1: Population movements in the nine Mainland cities of the Greater Bay Area in 2016

City	In-migration		Out-migration		Net mirgration	
	From the province	From outside the province	To the province	To outside the province	Within the province	Outside the province
Shenzhen	74,087	145,998	3,943	14,685	70,144	131,313
Guangzhou	56,285	62,368	21,172	24,988	35,113	37,380
Foshan	46,454	37,456	4,857	5,482	41,597	31,974
Dongguan	16,126	27,612	3,062	3,568	13,064	24,044
Huizhou	38,752	24,674	33,481	8,985	5,271	15,689
Zhongshan	7,744	10,156	2,349	3,724	5,395	6,432
Zhuhai	6,955	11,214	3,608	5,958	3,347	5,256
Zhaoqing	19,993	4,951	28,243	5,679	-8,250	-728
Jiangmen	11,548	8,607	15,021	9,169	-3,473	-562

Source: Bureau of Statistics of Guangdong Province (2019)

[2] Concentration of population in core cities: Due to lack of statistics for Hong Kong and Macao, this part only analyses the situations in the nine Mainland cities of the Greater Bay Area.

The following are the major reasons explaining why de jure population concentrate in major cities. At this stage of rapid socio-economic development, people often value job opportunities over living environment. Therefore, people tend to migrate to cities with better job opportunities, which ultimately leads to the concentration of de jure population in core cities. According to a survey on the choice of working location for young people conducted by Nandu, respondents indicated that they valued the competitiveness of cities and working conditions over preferential policies for talent introduction. Specifically, respondents prioritised first-tier cities as their place of employment, while they also value other factors including wage, workspace and prospects for future development.

Guangzhou and Shenzhen have always been the core cities of the Greater Bay Area, and also the important cities that lead the national economic development. These two cities have provided numerous job opportunities for the younger generation, resulting in significant in-migration of young people. For large manufacturing enterprises, the cost of production in Guangzhou is relatively lower than that of other first-tier cities such as Beijing and Shanghai, therefore, their establishment in the two cities have further attracted a large number of migrants. Currently, the financial and technology industries were well-developed in Shenzhen. The government has implemented a series of relatively relaxed policies on talent and household registration, drawing a large number of outstanding talents from and outside the province to migrate to Shenzhen, which contributed directly to the net inflow of population in Shenzhen. With the development of industry 4.0, high-end manufacturing and intelligentisation (particularly Foshan and Dongguan) alongside advantages like having a pleasant climate, livable environment, and accessible transportation system, talents in high-end manufacturing will be attracted to move to Foshan and Dongguan from cities such as Jiangmen and Zhaoqing.

2.3 Urban population accounting for 80% of de jure population, and urbanisation[3] is becoming more modernised

Urban population is one of the important indicators of urban modernisation. In 2016, the de jure population of the Zhujiang Delta region totaled 59.98 million, of which urban population

[3] Due to unobvious divisions of urban and rural areas in Hong Kong and Macao, as well as lack of relevant statistics, this section only analyses the situations in the nine Mainland cities of the Greater Bay Area.

reached 50.90 million. Urban population of the region increased by 21.7 million from 29.2 million (71.59% of total population) in 2000, with an annual population growth of 1.4 million, at a rate of 3.54% (Table 2). After 2000, the Zhujiang Delta experienced even more rapid increase in urban population. The level of urbanisation of the Zhujiang Delta was 71.59% in 2000, which lagged behind Beijing (83.62%) and Shanghai (89.09%). As at the end of 2016, the level of urbanisation in the Zhujiang Delta rose to 84.85%, of which Shenzhen reached 100% and Foshan, Zhuhai and Dongguan has reached to nearly 90% (Table 3). According to the *World Development Indicators* in 2000, more developed countries generally have a level of urbanisation of approximately 84% or above. Currently, the level of urbanisation in the Zhujiang Delta is equivalent to that of countries / regions such as the United States and Canada.

Table 2: Population in the Zhujiang Delta

Year	De jure population (ten thousand)	Urban population (ten thousand)
2010	5,616.39	4,645.88
2011	5,646.51	4,687.17
2012	5,689.64	4,770.19
2013	5,715.19	4,802.55
2014	5,763.38	4,848.41
2015	5,874.27	4,969.10
2016	5,998.49	5,089.64

Source: Bureau of Statistics of Guangdong Province (2019)

Table 3: Proportion of urban population to de jure population in the nine Mainland cities in the Greater Bay Area (unit: percentage)

City	2000	2005	2010	2011	2012	2013	2014	2015	2016
Guangdong Province	55.00	60.68	66.17	66.50	67.40	67.76	68.00	68.71	69.20
Zhujiang Delta	71.59	77.32	82.72	83.01	83.84	84.03	84.12	84.59	84.85
Shenzhen	92.46	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Guangzhou	83.79	91.51	83.78	84.13	85.02	85.27	85.43	85.53	86.06
Foshan	75.06	78.39	94.09	94.86	94.87	94.88	94.89	94.94	94.95
Dongguan	60.04	73.02	88.46	88.60	88.67	88.75	88.81	88.82	89.14
Huizhou	51.66	55.01	61.84	62.19	63.90	66.00	67.00	68.15	69.05
Zhongshan	60.67	74.29	87.82	87.87	87.92	88.00	88.07	88.12	88.20
Zhuhai	85.48	87.90	87.65	87.80	87.82	87.8	87.87	88.07	88.80
Zhaoqing	32.52	38.99	42.39	42.45	42.62	43.82	44.01	45.16	46.08
Jiangmen	47.08	56.78	62.30	62.80	63.20	64.10	64.20	64.84	65.06

Source: Bureau of Statistics of Guangdong Province (2019)

2.4 Relatively full employment of working population

In 2016, the working population in the Zhujiang Delta reached 39.27 million, accounting for 62.54% of the total working population in the province. The working population increased by 1.44% (i.e. 556,700) from 38.71 million in 2015, which is 0.47% higher than that of the provincial average. Secondary production of the Zhujiang Delta had the largest working population of 18.96 million, followed by 16.9 million in tertiary production and 3.42 million in primary production (Table 4). In general, the de jure population of the Zhujiang Delta had a high employment rate and was relatively fully employed.

Table 4: Working population by production in the cities of the Zhujiang Delta region (Unit: 10,000 people)

	2015				2016			
	Primary Production	Secondary production	Tertiary production	Total	Primary Production	Secondary production	Tertiary production	Total
Guang-dong Province	1,375.15	2,546.57	2,297.58	6,219.31	1,365.43	2,543.07	2,370.72	6,279.22
Zhujiang Delta	349.15	1,893.74	1,628.37	3,871.26	341.56	1,895.86	1,689.50	3,926.93
Shenzhen	0.13	422.58	483.43	906.14	0.11	418.45	507.82	926.38
Guang-zhou	62.87	286.90	461.22	810.99	62.09	288.09	485.09	835.26
Foshan	21.63	253.23	163.55	438.41	22.06	252.06	164.70	438.81
Dong-guan	6.08	445.81	201.52	653.41	5.89	446.32	201.76	653.97
Huizhou	50.11	139.82	91.58	281.51	49.37	142.71	93.48	285.57
Zhong-shan	9.80	140.00	60.71	210.51	10.00	140.76	62.26	213.01
Zhuhai	7.33	54.73	46.87	108.92	6.15	54.71	48.69	109.55
Zhaoqing	112.16	54.81	51.47	218.44	106.48	56.82	57.00	220.31
Jiangmen	79.04	95.86	68.02	242.92	79.41	95.95	68.71	244.07

Source: Bureau of Statistics of Guangdong Province (2019)

In 2016, the employment structure of the Zhujiang Delta had the following characteristics:

- The proportion of working population in the primary production was the lowest, accounting for 8.7% of the total working population, and the working population in this production gradually declined over the years. Zhaoqing was the only city in the Zhujiang Delta region that was dominated by primary production, where the working population in the primary production of the city totaled 1.06 million. Among the nine Mainland cities of the Greater Bay Area, Zhaoqing, Jiangmen, and Guangzhou were the major cities for agricultural activities and production in the Greater Bay Area.
- Secondary production accounted for the largest proportion of the working population, consisting 48.28% of the total working population. In recent years, the manufacturing industry in the Zhujiang Delta region was evolving into industry 4.0. The development of smart factories and robotic operation slowed down the growth of the working population in the Zhujiang Delta region. In 2016, the working population in the

secondary production in the region only increased by 0.1% annually. On the other hand, Shenzhen and Dongguan were the major cities for manufacturing activities in the Greater Bay Area.

- The tertiary production accounted for 43.02% of the total working population, with a gradual increase throughout the years. In 2016, the working population in the production increased by 3.75% annually. Guangzhou and Shenzhen had the highest working population in the production, consisting of 5.08 million and 4.85 million respectively. Increase in working population in the tertiary production were documented in all cities of the Zhujiang Delta region as the production structure of the region was gradually switching from manufacturing to advanced service industry.

Hong Kong and Macao in the Greater Bay Area generally had high employment rates, which were approximately 70% and 60% respectively in 2016. (Table 5 and 6).

Table 5: Working population and employment statistics of Macao

	2000	**2010**	**2015**	**2016**
Total labour force (10,000 people)	20.26	32.4	40.4	39.7
Labor force participation rate (%)	63.1	72.0	72.5	70.9
Unemployment rate (%)	6.8	2.8	1.8	1.9

Source: Statistics and Census Service, Government of Macao Special Administrative Region (2019)

Table 6: Working population and employment statistics of Hong Kong

	2000	**2010**	**2015**	**2016**
Labour force (10,000 people)	337.4	363.1	390.3	392.0
Labor force participation rate (%)	61.4	59.6	61.1	61.1
Unemployment rate (%)	4.9	4.3	3.3	3.4

Source: Census and Statistics Department, The Government of the Hong Kong Special Administrative Region (2019)

3 Aging of population

Various methods can be employed to measure the age structure of a population. One way is to divide the age structure of a population into children and adolescents, adult and elderly. According to the statistics by the relevant departments in the Greater Bay Area, the age structure of the Greater Bay Area showed that the children and adolescents (0 to 14 years old) and elderly population (65 years old or above) accounted for a relatively small proportion, while the adult population (15 to 64 years old) had a relatively greater proportion. Please refer to Table 7 for the details on the age structures of the cities of the Greater Bay Area in 2015.

Table 7：Age structure of various cities of the Greater Bay Area in 2015

	Aged 0-14		**Aged 15-64**		**Aged 65 or above**	
City	**Population (10,000 people)**	**Proportion**	**Population (10,000 people)**	**Proportion**	**Population (10,000 people)**	**Proportion**
Guangzhou	175.27	12.98%	1,068.22	79.12%	106.62	7.90%
Shenzhen	152.53	13.40%	946.99	83.23%	38.37	3.37%
Huizhou	90.61	19.05%	353.78	74.39%	31.16	6.55%
Zhongshan	44.9	14.00%	27.56	80.27%	18.39	5.37%
Zhuhai	24.27	14.85%	128.28	78.50%	10.86	6.65%
Jiangmen	63.31	14.01%	337.16	74.60%	51.48	11.39%
Foshan	94.89	12.77%	597.71	80.44%	50.46	6.79%
Zhaoqing	80.87	19.92%	284.46	70.07%	40.63	10.01%
Dongguan	No data					
Hong Kong	82.6	11.3%	536.53	73.40%	111.84	15.3%
Macao	9.44	14.5%	48.49	74.5%	7.16	11.0%

Source: Census and Statistics Department, The Government of the Hong Kong Special Administrative Region (2019a); Statistics and Census Service, Government of Macao Special Administrative Region (2019); Bureau of Statistics of Guangdong Province (2019)

Age structure refers to the proportion of each age group within the total population. An aging population means that the ratio of the elderly population who aged 60 or 65 or above to the total population increases, and that the ratio remains at a high level persistently. According to international standards, when the proportion of the population aged 60 or above reaches 10% or when the proportion of the population aged 65 or above reaches 7%, the country or region can be regarded as an aging society (Table 8).

Table 8：International standard for the age structure of population and age structure of the Greater Bay Area

	International standard for the age structure of population			**Age structure of the Greater Bay Area (2015)**
Category	**Young**	**Adult**	**Elderly**	
Proportion of children and adolescents	> 40%	30-40%	< 30%	14.17%
Proportion of elderly population	< 4%	4%-7%	> 7%	9.38%
Aged-child ratio[4]	< 15%	15%-30%	> 30%	23.55%

Source: Census and Statistics Department, The Government of the Hong Kong Special Administrative Region (2019a); Statistics and Census Service, Government of Macao Special Administrative Region (2019); Bureau of Statistics of Guangdong Province (2019)

According to statistics, within the Greater Bay Area, populations in Hong Kong, Jiangmen, Macao and Zhaoqing are aging, where population aged 65 or above accounted for 15.3%, 11.39%, 11.0% and 10.01% of the total population for the respective cities. The gradually decreasing birth rate and number of newborns in Hong Kong and Macao in recent year were the reasons for the aging of population in the two cities. On the other hand, as life expectancy of people rises, population aged 65 or above naturally increases. Unlike the situations in Hong Kong and Macao, the aging populations in Jiangmen and Zhaoqing are mainly a result of their focus on agriculture. A large number of young people in the two cities moved to other cities in or outside the Guangdong Province for work while the elderlies stayed at home for farming. The decline in the younger working population led to the relatively larger proportion of elderly population in these cities, which further aggravated the aging of population.

[4] Aged-child ratio: Aged-child ratio refers to the ratio of the elderly population to the young population.

In the Greater Bay Area, cities are gradually having an aging society, except for Guangzhou, Jiangmen and Zhaoqing. In recent years, the rapid economic development of the Greater Bay Area has brought a large number of migrant workers. As these migrants are mainly young adults, this "demographic dividend"[5] has delayed the aging of population in the Greater Bay Area. Shenzhen has the youngest population among cities in the Greater Bay Area. According to the statistics of the Shenzhen Government, in 2017, the average age of the population in Shenzhen was only 32.5 years old. On the one hand, the production structure of Shenzhen has contributed greatly to such a phenomenon. In recent years, Shenzhen has been focusing on the development of high-tech and service industries, and has actively encouraged young entrepreneurship, attracting a large number of young people to move in. On the other hand, due to the implementation of the two-child policy, the growth rate of the children and adolescence population exceeded that of the de jure population., which ultimately slowed down the aging of population in the city.

4 Human resources in the Greater Bay Area

4.1 From "demographic dividend" to "talent dividend", urgent needs in acquiring talents

"Demographic dividend" can be divided into two stages. In the early stage, the low labour costs and adequate employment of a city are the driving force of economic development. At the later stage, to further promote socio-economic development, labour productivity has to be increased by the switch of focus in production, instead of emphasising on the quantity of labour, quality of labour should become the key. Currently, the Greater Bay Area has a low proportion of talents, therefore "demographic dividend" cannot be fully achieved and upgraded.

Talent is a dynamic concept. Different countries or regions adopt different statistical methods in the measurement of talents. If the education level of the population is used as an indicator

[5] "Demographic dividend" refers to the increase in Gross Domestic Product per capita brings about by the increase in proportion of working population to the total population.

of talents, the measurement of the population with higher level of education can be used to represent the level of regional talent development. Based on a survey on 1% of the national population, it was estimated that the proportion of population attaining higher education in the Greater Bay Area was 17.47% in 2015. In other words, 11.88 million people within the 67.97 million de jure population attained higher education. According to the report of the Central Government and the statistics of human resources, if the measurement of talents covers party and government officials, enterprise management talents, professional and technical talents, high-skilled workers, rural talents and social professionals, there were approximately 14.31 million talents in the Greater Bay Area in 2016, accounting for 21.05% of the total population (Annual Report of Guangdong, Hong Kong and Macao Bay Area Construction, 2018).

Even though talents in the Greater Bay Area accounted for approximately one-fifth of the total population, such a proportion is still significantly lower than that of the other bay areas in the world. Official figures and statistics on talents in other bay areas in the world are not available. Yet, drawing clues from the education level of the populations among bay areas in the world, the proportions of higher education population in the United States and Japan have exceeded 40%. Therefore, the quality of the population in other bay areas in the world is significantly higher than that of the Greater Bay Area.

4.2 Insufficient international talents in the Greater Bay Area

International talents are the important foundation and safeguard for the economic development of bay areas around the world. In the 1960s, the San Francisco Bay Area built its world-leading technology industry with the assistance of German scientists. At that time, the Federal Government of the United States invested a huge amount of capital to attract elites, especially overseas talents, to support the scientific research and development of the bay area. Currently, the economy of the Greater Bay Area has been rapidly developing and has begun to compete with the United States in science and technology, particularly in industries that focus on research and manufacturing. Therefore, acquiring talents has become more important. The Central Government has implemented a series of policies to encourage the return of overseas Chinese, and paid increasing efforts in drawing overseas talents so as to promote the evolution

and innovation in the regional industries. A large number of venture capital industries in Shenzhen have started to cooperate with Israel and Finland and to learn from Germany in the field of manufacturing. The development of the Greater Bay Area cannot be achieved without international talents. However, the proportion of international talents in the Greater Bay Area is still low.

The level of internationalisation of talents can generally be expressed by the proportion of international talents within the de jure population. Currently, the global average of the proportion of international talents to de jure population was approximately 3.3% while some developed countries or regions may reach 10%. However, the proportion of international talents in China was only 0.06%. The proportions of de jure population of foreigners in Shenzhen and Guangzhou were merely 0.2% and 0.36% respectively, which was lower than that in Beijing (1%) and Shanghai (0.73%). In the Greater Bay Area, even in international metropolis like Hong Kong, the proportion of international talents was only around 10%, which was far lower than that of the other bay areas or developed regions in the world, such as New York (36%), Singapore (33%) and the Silicon Valley (55%) (Sun Yue, 2017[6]).

4.3 Rising competition and uneven distribution of talents in the Greater Bay Area

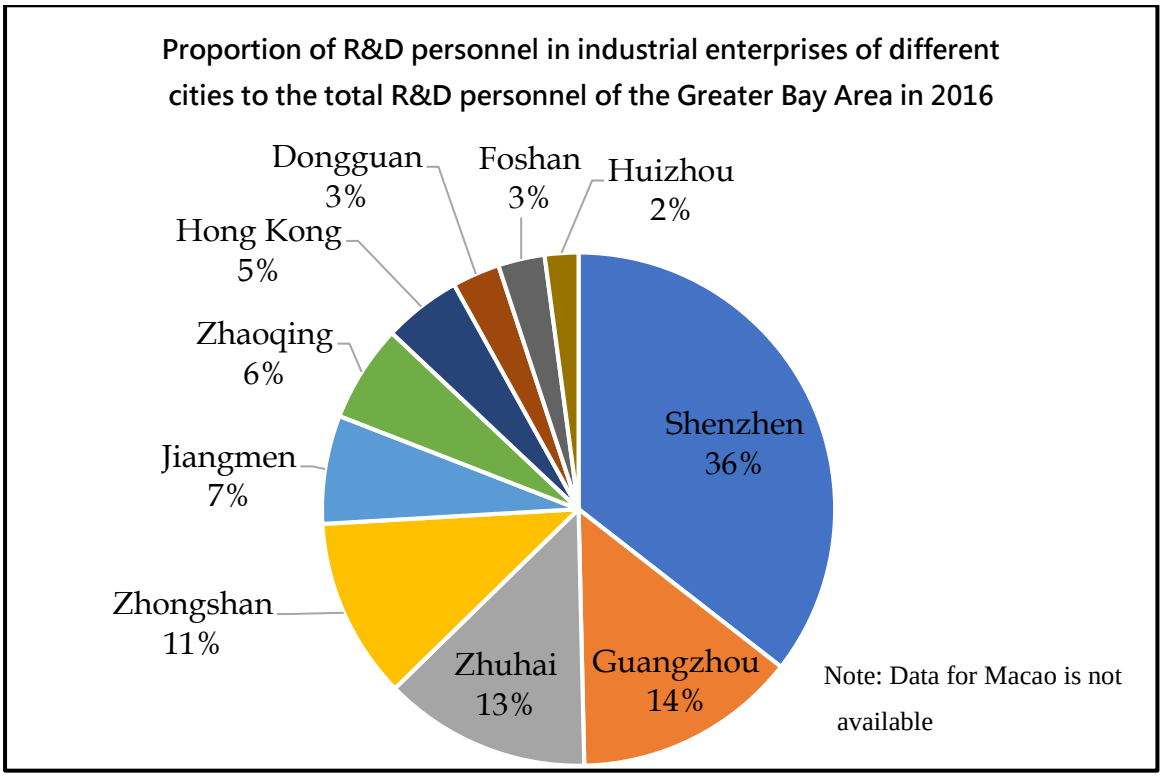
The global competition for talents has changed from competition for individual talents to competitions among cities for their general level of talent acquired. The quality, the social and cultural atmosphere, the sense of belonging of the city and the concept of development of the city are vital factors for attracting talents. Urban development cannot be achieved without talents, however, cities need to further integrate their productions, capital, services, institutions and systems in order to retain talents. Currently, the competition for talents has already started in the cities of the Greater Bay Area. Nevertheless, the acquisition of talents through the intrinsic advantages of cities and the proper utilisation of talents are the major challenges for

[6] Sun Yue: *To introduce and gather overseas talents with more efforts* published in Outlook China Volume 34, 2016

the Greater Bay Area. In the meantime, there has been an uneven distribution of talents in the Greater Bay Area.

According to the statistics on R&D[7] personnel in industrial enterprises, the number of R&D personnel in the Greater Bay Area was 570,439 in 2016, but the R&D talents of industrial enterprises were mainly concentrated in Guangzhou, Shenzhen, Zhuhai and Zhongshan, accounting for 74.08% of the total. In particular, Shenzhen had the largest proportion which is up to 36% (Figure 1). In terms of the proportion of the number of talents to de jure population, Hong Kong had the largest proportion of talents, followed by Shenzhen and Zhuhai (Figure 2).

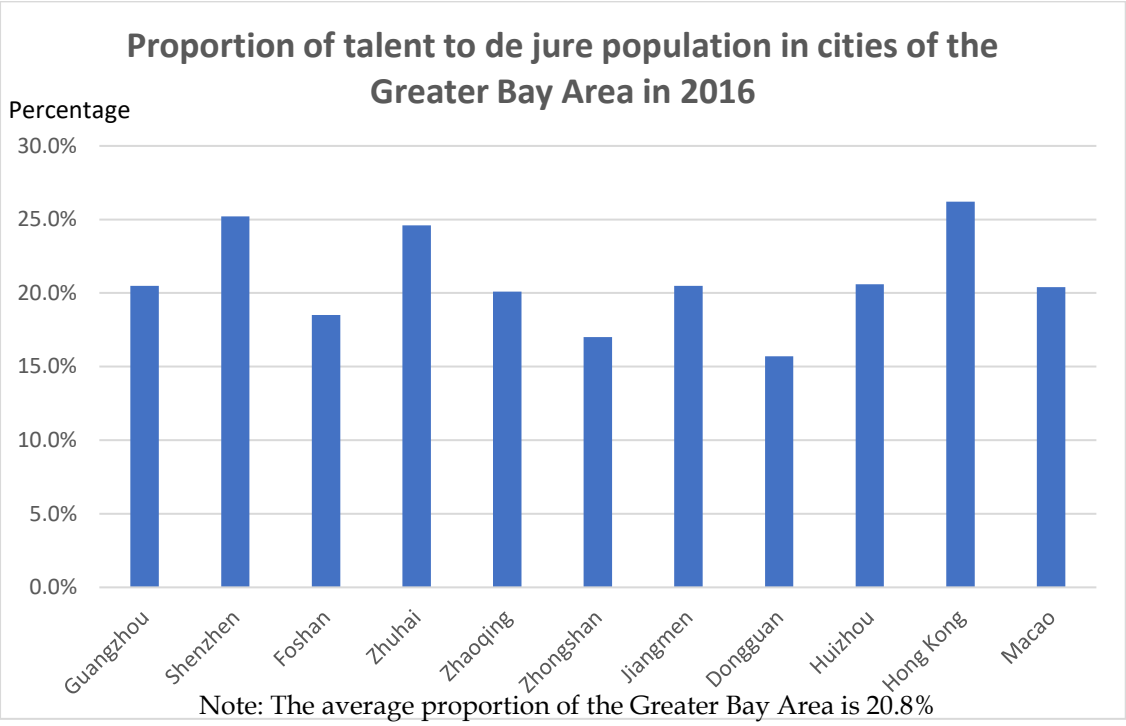
Figure 1 : Proportion of R&D personnel in industrial enterprises of different cities to the total R&D personnel of the Greater Bay Area in 2016



Source: Census and Statistics Department, The Government of the Hong Kong Special Administrative Region (2019a); Bureau of Statistics of Guangdong Province (2019)

[7] R&D: R&D (i.e. research and development) refers to the systematic and creative activities in the field of science and technology to increase knowledge (including human culture and social knowledge) and the use of knowledge to create new applications, such as basic research, applied research and experimental development. Internationally, the scale and intensity of R&D activities are usually adopted to reflect the technological strength and competitiveness of a country / region. The R&D level of a country / region reflects the political and economic strength of the country / region, while the R&D level of an enterprise shows the competitiveness of the enterprise.

Figure 2: Proportion of talent to de jure population in cities of the Greater Bay Area in 2016



Source: Census and Statistics Department, The Government of the Hong Kong Special Administrative Region (2019a); Statistics and Census Service, Government of Macao Special Administrative Region (2019); Bureau of Statistics of Guangdong Province (2019)

5 Conclusion

By the end of 2017, the de jure population of the Greater Bay Area reached 69.6 million, with an increase of around 1.6 million when compared to 2016. The China Society of Economic Reform and the National Economic Research Institute estimated that, by 2050, the population of the Greater Bay Area will reach 120 to 140 million. The huge population is both an opportunity and a challenge for the development of the Greater Bay Area.

Economic development largely depends on innovation while innovation relies on population. Compared to the other three bay areas in the world, the Greater Bay Area has an absolute advantage in terms of its population size which can help achieve demographic dividend in the future. Moreover, the economic development of the bay area is dependent on the exchange of

international talents, therefore the acquisition of talent is the key to economic development. In order to attract more talents to work in the Greater Bay Area, first-tier cities such as Guangzhou and Shenzhen should speed up the relaxation of the household registration system and take on their leading role as first-tier cities in the future. The Greater Bay Area should also establish a talent cooperation mechanism and platform to enhance the strengths and competitiveness of talents within the area. Currently, despite having rapid growth in population, a high level of working and urban population and a good population structure, the aging of population is becoming a major problem for the Greater Bay Area. In the future, the aging population will be the main demographic challenge for the Greater Bay Area. When a society is gradually aging, the quality and quantity of the younger population, the group that is most capable of becoming entrepreneurs and making innovations will drop, which will ultimately hinder the socio-economic development of that society. Therefore, the Greater Bay Area is in need to further implement various measures and policies that help attract and retain young talents in the area. The governments of Guangdong, Hong Kong and Macao should cooperate and push the establishment of a social security system for the elderlies, the development of elderly-related industries and researches on aging population. These measures can help combat the current problems by assisting the formulation of corresponding policies and measures which would ultimately promote the development of the Greater Bay Area.

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References

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