A Comparative Analysis of the Differences in People's Livelihood Satisfaction in Guangdong, Hong Kong and Macao

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ABSTRACT. Based on the analysis of the spatial differences in people's livelihood satisfaction in 11 cities in Guangdong, Hong Kong and Macao, this paper understands the characteristics of the people's livelihood needs of various cities in the Bay Area, promotes the construction of people's livelihood work, improves the relevance of government governance work, and contributes to the development of the Bay Area. The regionalized characteristics of the survey data on people's livelihood satisfaction in 11 cities in Guangdong, Hong Kong and Macao bay area were studied in depth. This is a differential analysis of the three aspects of residents' life, public service and environmental improvement. Finally, it is concluded that the Great Bay Area of Guangdong, Hong Kong and Macao does not fully reflect the Eastlin paradox, enhances the income level of residents, fully provides the supporting facilities for residents, and strives to improve the environmental level, which is still a key factor in the improvement of people's livelihood in the Great Bay Area.

KEYWORDS: Guangdong, Hong Kong, Macao, Great Bay Area; Differences; Comparative Analysis.

1. Introduction

Based on the data on people's livelihood satisfaction in 11 cities in Guangdong, Hong Kong and Macao, this paper analyzes the spatial distribution of people's livelihood satisfaction in different parts of the Bay Area, compares the spatial distribution characteristics of people's livelihood satisfaction in different regions of the Bay Area, and describes the regional nature of people's livelihood satisfaction in Guangdong, Hong Kong and Macao Bay Area from the measurement and qualitative description, providing theoretical reference and decision support for the coordinated development of the Bay Area and the improvement of people's livelihood level.

To sum up, China's overall people's livelihood satisfaction at this stage also exists "Easterlin Paradox", but people's livelihood satisfaction and income level has a deeper relationship. Based on this background, this paper shows the spatial

differences between the cities by comparing the satisfaction of people's livelihood with 11 cities in Guangdong Province, Hong Kong and Macao, revealing their respective characteristics, which is of practical significance to the economic development of the Great Bay Area and provides a reference for coordinating the development of the Bay Area and improving the level of people's livelihood.

2. Research Design

2.1 The Source of the Data.

The satisfaction of people's livelihood not only reflects the people's life satisfaction, but also the primary goal of government hard work, so scholars from all over the world have studied and discussed it in depth, and R. Easterlin, a professor of economics at the University of Southern California, put forward the Easterlin paradox in 1974 that the impact of income growth on residents' satisfaction is not always positively related.

China's overall people's livelihood satisfaction at this stage also exists "Easterlin paradox", but people's livelihood satisfaction and income level has a deeper relationship. Based on this background, this paper shows the spatial differences between the cities by comparing the satisfaction of people's livelihood with 11 cities in Guangdong, Hong Kong and Macao, revealing their respective characteristics, which is of practical significance to the economic development of the Great Bay Area and provides a reference for coordinating the development of the Bay Area and improving the level of people's livelihood.

2.2 Overview of the cities of Guangdong, Hong Kong and Macao.

Guangdong, Hong Kong and Macao Bay Area area and population profile: Guangdong, Hong Kong and Macao Bay Area is located on the southeast coast of China, by Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Dongguan, Zhongshan, Jiangmen, Zhaoqing, Hong Kong and Macao, a total of 11 cities, is the country to build a world-class city group and participate in global competition important space carrier, Guangdong, Hong Kong and Macao Bay Area is the world's fourth largest Bay Area.

Guangdong, Hong Kong, Macao and the Gulf region's economic size: In 2017, the total GDP of Guangdong, Hong Kong and Macao Bay Area exceeded RMB10215.8 billion, of which Hong Kong accounted for 233.5 billion yuan, Hong Kong, Shenzhen and Guangzhou accounted for more than 66% of the total output value of Guangdong.

Table 1 The Area and population of Guangdong, Hong Kong and Macao

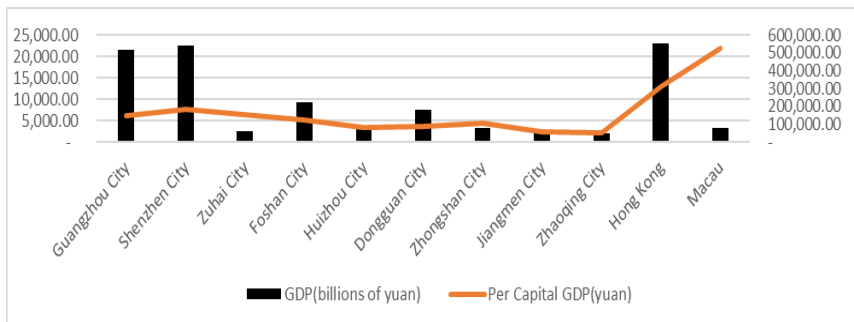| City of China	Territy(km2)	Popluation(million)
Guangzhou City	7,249.20	7.249
Shenzhen City	1,997.50	12.528
Zhuhai City	11,736.50	1.765
Foshan City	3,797.70	3.797
Huizhou City	11,347.40	4.778
Dongguan City	2,460.10	2.460
Zhongshan City	1,783.70	3.260
Jiangmen City	9,506.90	4.562
Zhaoqing City	14,891.20	4.115
Hong Kong	11,064.40	7.413
Macau	30.80	0.653

Figure. 1 Comparison of Economic Data from Guangdong, Hong Kong and Macao

Employment situation in Guangdong, Hong Kong and Macao: In 2017, the total number of employed persons in the urban clusters of Guangdong, Hong Kong and Macao was over 44 million, and the unemployment rate in each city remained at a low level of 2.0%-3.1%. Shenzhen and Guangzhou account for 41 percent of the total, while Macau has the lowest unemployment rate at just 2 percent.
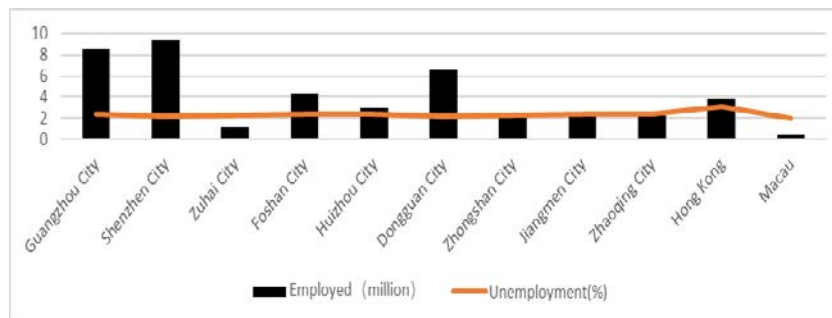

Figure. 2 Comparison of Employment Situation in Guangdong, Hong Kong and Macao

Guangdong, Hong Kong, Macao and the Gulf Region Import and Export Trade: In 2017, the total value of imports and exports of Guangdong, Hong Kong and Macao Bay Area exceeded US$2028.4 billion, of which Hong Kong's import and export volume was US$1056.3 billion, accounting for 52%, followed by Shenzhen's US$414.1 billion.
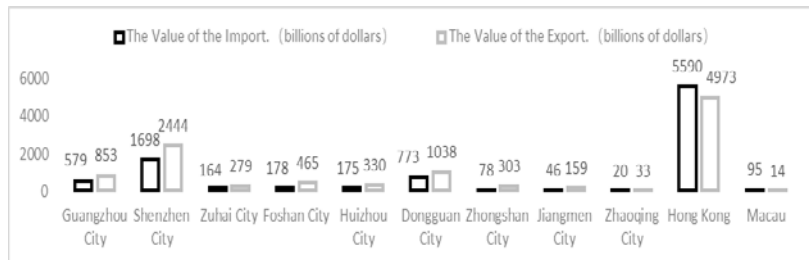

Figure. 3 Comparison of Import and Export Trade Between Guangdong, Hong Kong and Macao

To sum up, the 11 cities in Guangdong, Hong Kong and Macao bay area have their own characteristics, and Guangdong, Hong Kong and Macao are geographically close, people are closely related and closely related. Since the reunification, cooperation between Guangdong, Hong Kong and Macao has been further strengthened, with complementary and development of common advantages. At present, relevant policies and regulations at the national level have been continuously improved and implemented to further promote the deepening of cooperation in the Bay Area, to better develop the potential of Guangdong, Hong Kong, Macao and the Great Bay Area, and ultimately to enhance people's sense of well-being and belonging.

3. Analysis of differences in people's livelihood satisfaction in Guangdong, Hong Kong and Macao

3.1 Aspects of the lives of the inhabitants

In this paper, the main focus on the living conditions of residents and living conditions, the employment and unemployment of residents by table 1 data. Among the bay areas, Shenzhen had the highest number of employees at 9.43 million, followed by Guangzhou and Dongguan with 8.62 million and 6.6 million, respectively, while Macau had the lowest unemployment rate at just 2 per cent, the highest performance, while Hong Kong had the highest unemployment rate at 3.1 percent.

Table 2 Employment and Unemployment of the Population

	Guangzhou City	Shenzhen City	Zuhai City	Foshan City	Huizhou City	Dongguan City	Zhongshan City	Jiangmen City	Zhaoqing City	Hong Kong	Macau
Employed（million）	8.62	9.43	1.12	4.35	2.89	6.6	2.12	2.45	2.21	3.82	0.38
Unemployment(%)	2.4	2.2	2.3	2.4	2.4	2.2	2.3	2.4	2.4	3.1	2

At present, because there are considerable introduction policies for talents everywhere, nine cities in Guangdong have relaxed the conditions for talents to settle down, such as Guangzhou's new policy on age, education and points to enter the household restrictions have been put in place, such as the introduction of talent into the household age limit relaxed 5 years old, bachelor's, master's and doctor's degree from 35, 40, 45 years old adjusted to 40, 45, 50 years old. Guangdong, the country's first points into the household policy, has begun to cancel the points into the household policy, such as Zhongshan City, Jiangmen City, Dongguan City, Foshan City and Zhuhai City have cancelled points into the household, Hong Kong launched the "science and technology talent entry program" for the import of overseas and mainland scientific research personnel to implement rapid processing arrangements, qualified people with master's or doctoral degrees do not need work experience, work visa approval only takes two weeks to complete.

According to Guangfa Securities, the per capita living area in Shenzhen in 2016 was 21.12 square meters, and the 13th session of the Guangzhou Municipal People's Political Consultative Conference held in 2017 said: If the resident population is calculated at 17.4 million, the per capita living area is more than 35 square meters. Due to the lack of authority in data collection in other regions, only parts are listed.

The average price of commercial housing in Guangdong, Hong Kong and Macao bay area is RMB31803/m2 (the exchange rate of Hong Kong and Macao is the same as above), while the average price of housing in Hong Kong and Macao is the highest, at RMB138,214/m2 and RMB84795.6/m2, respectively. In terms of housing prices, the average price of commercial housing in Jiangmen city and Zhaoqing city alone in Guangdong, Hong Kong and Macao is not higher than the national average price of commercial housing (7900 yuan per square meter), and the average price of commercial housing in Hong Kong, Macao, Shenzhen and Guangzhou is far higher than the average price of commercial housing in China.
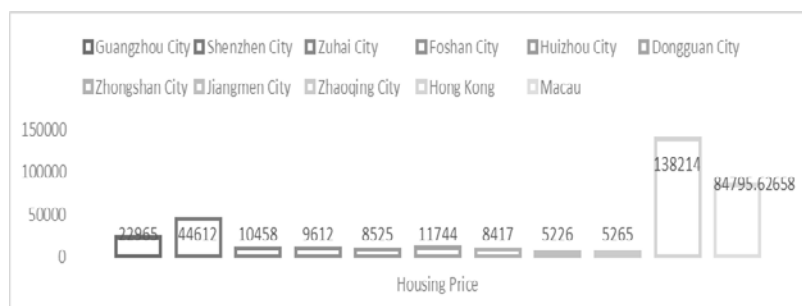

Figure. 4 Comparison of House Prices in Guangdong, Hong Kong and Macao

Due to the high level of housing prices, for the introduction of talent to produce a certain degree of resistance, for talent to buy a house in various regions have relevant preferential policies, such as: Shenzhen identified as outstanding talent can choose 6 million yuan incentive subsidy, or an area of 200 square meters or about 10 years rent-free housing; Guangzhou's top talent can enjoy 10 million housing subsidies or 200 square meters of apartments. These policies further reduce the residents rigid purchase pressure, although there is a higher threshold, but for the talent just need housing demand for help is still very large, this move further for the settled talent to solve the worries, so that it better into the Bay Area economic construction.

3.2 Public Services.

Based on the analysis of the differences in public services, this paper focuses on the similarity and similarity of 11 cities in the Great Bay Area in the three aspects of culture, education, health care and social security. Cultural education mainly observes the ratio of teachers and students in secondary education, the ratio of high school graduates to undergraduate degree and the number of libraries.
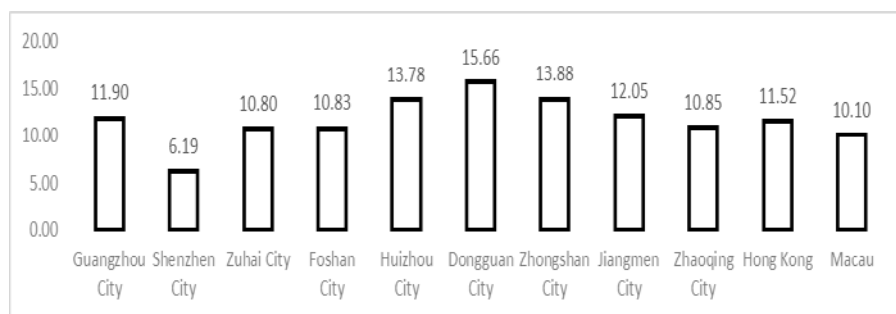

Figure. 5 Teacher-Students Ratio in Secondary Education in Guangdong, Hong Kong and Macao

According to Figure. 5, the ratio of teachers and students in secondary education in 11 cities in Guangdong, Hong Kong and Macao Bay Area shows that Shenzhen has the best teacher-student ratio, with about 6.2 students paired with a teacher, followed closely by Macau, with one teacher for 10 students and the most significant teacher-student ratio for a teacher in Dongguan City for 15.7 students, with tight educational resources. According to the information released by the Ministry of Education, the ratio of teachers to students in high schools nationwide is 13.4, and the ratio of teachers to students in junior high schools is 12.52. The average teacher-student ratio of secondary schools in 11 cities in Guangdong, Hong Kong and Macao is 11.6, which is better than the national average.
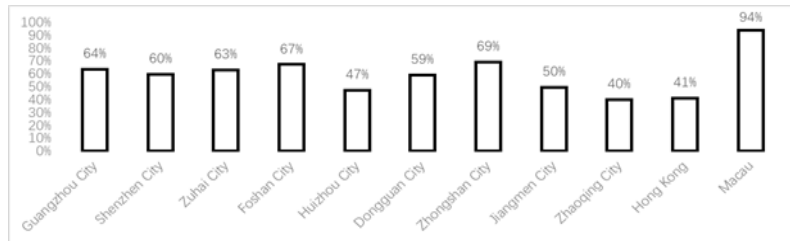
Figure. 6 The Rate of Promotion of High School Graduates in Guangdong, Hong Kong and Macao

As can be seen from Figure. 6, Macau has the highest undergraduate rate of 94%, far higher than the average of Guangdong, Hong Kong and Macao Bay Area (59%), Zhaoqing City has the lowest rate of promotion, only 40% of high school students into undergraduate studies. Although Hong Kong's high school graduation rate is 41%, the mainland's undergraduate rate consists of one and two books, and the average quality of teaching in colleges and universities is lower than that of Hong Kong, with the eight largest institutions in Hong Kong at the same level as the mainland's 985 and 211 levels, according to the QS and other world university rankings. In Guangdong, 1.3% and 2.7% of the institutions of higher learning were upgraded to the 985 and 211 projects respectively, and about 128,000 places in Hong Kong were available to 60,000 candidates in Hong Kong, a rate close to 20%. The side reflects the high quality of education resources in Hong Kong's universities, with five universities in the 2018 QS rankings making it into the top 100 in the world, surpassing London as the only city in the world with five top 100 universities. In terms of educational resources, the Guangdong, Hong Kong and Macao Great Bay Area can enhance co-operation to promote the level of talent construction in Guangdong, Hong Kong and Macao, and these talents assume that most of them can remain in the Development of the Great Bay Area, which will be a very valuable talent resource.
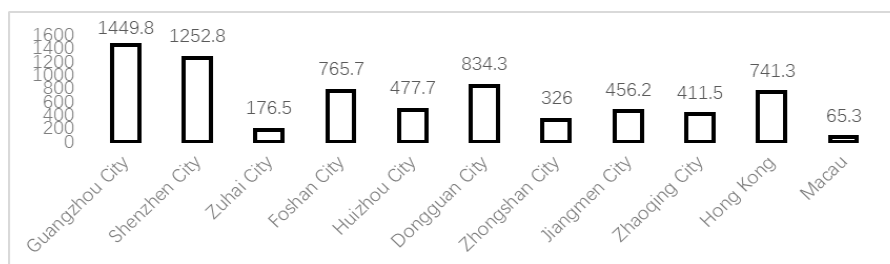

Figure. 7 The Ratio of Libraries and Residents in The Great Bay Area of Guangdong, Hong Kong and Macao

As can be seen from Figure.7, the number of libraries in Shenzhen is up to 638, thanks to the planning of the City of Shenzhen Libraries, Zhuhai has the lowest number of libraries, only three, while public libraries for the number of residents, Macao's performance is the best, every 0.9 million people to enjoy a public library, and Foshan City Library resources are scarce, for every 1.276 million residents to enjoy a public library. According to the 2016 Library Annual Report, there are 3,139 public libraries in China, compared with 1,613 libraries in Guangdong, Hong Kong and Macao, accounting for 51% of the total number of libraries in the country, indicating that the public library resources in Guangdong, Hong Kong and Macao Bay Area are very rich, and residents can easily borrow and use books.

In medical and health care, this paper mainly from the number of hospital beds per thousand people, the number of practicing (assistant) doctors and the number of registered nurses, in order to balance the corresponding city's medical carrying capacity and level of medical resources, but also reflect the city's medical scale and sustainable development level. Because the objectivity of using the household registration population decreases from the actual medical experience of the residents, in order to embody the principle of objectivity, the number of people used is the number of permanent residents.
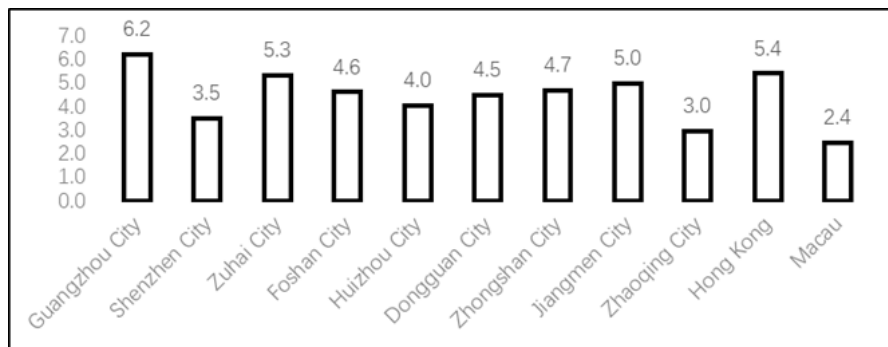

Figure. 8 Number of Hospital Beds in The Great Bay Area of Guangdong, Hong Kong and Macao

According to Figure. 8 of the 11 cities in Guangdong, Hong Kong and Macao, Guangzhou has the most abundant number of hospital beds, with 6.2 hospital beds per 1,000 people, followed closely by Hong Kong, with 5.4 hospital beds per 1,000 people, compared with Macau's worst performance, with only 2.4 hospital beds per 1,000 people, possibly due to the small size of The city of Macau and the shortage of hospital beds.
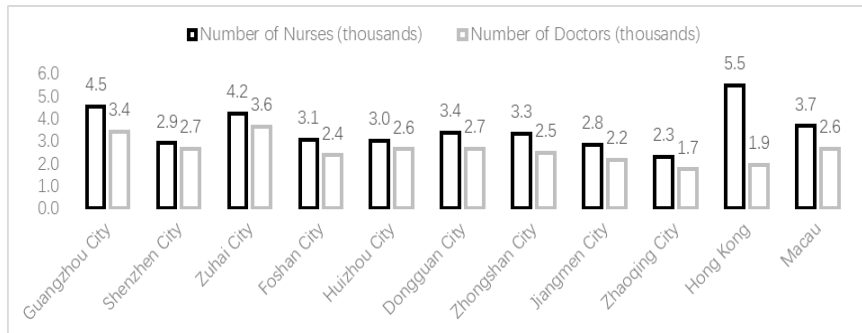
Figure. 9 Number of Doctors and Nurses in Guangdong, Hong Kong and Macao

According to Figure.9, zhuhai has a maximum of 3.6 practicing physicians per 1,000 people, followed by Guangzhou and Shenzhen at 3.4 and 2.7, respectively. The number of practicing physicians per 1,000 people in Zhaoqing City performed poorly by only 1.7. The maximum number of registered nurses per 1,000 people in Hong Kong is 5.5, while the poor performance of Zhaoqing City is only 2.3 per 1,000 registered nurses. The national average for this data in 2017 was 2.4 medical practitioners per 1,000 population and 2.7 registered nurses per 1,000 population, with the average level of Guangdong, Hong Kong, Macao and the Great Bay Area exceeding the national average.

In terms of social security, this paper mainly weighs the social security capacity of cities in Guangdong, Hong Kong, Macao and the Bay Area from the aspects of pension level growth/CPI growth rate and social security expenditure/government re-current expenditure.
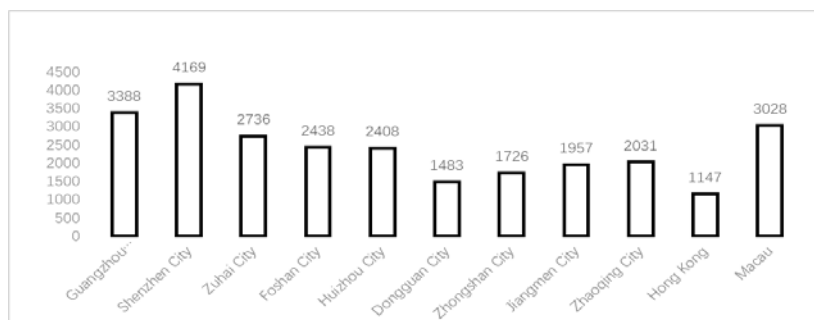

Figure. 10 Pension Levels in Guangdong, Hong Kong and Macao

As can be seen from Figure. 10, Shenzhen (4169), Guangzhou (3388) and Macau (3028) have the most generous pension levels, Hong Kong is shown here as the amount of fruit, not the amount of mandatory provident fund, may be lower than the

actual level. Although the pension level in Macao ranks third, the fee paid during the working period is only 75 yuan per month, far lower than the average social security fee paid by the mainland region, for example, according to Shenzhen's 2017 minimum wage of 2130 yuan, of which individuals pay 8% of the social security fee, Shenzhen should pay 170 yuan per month as social security expenses. In terms of comprehensive social security pressure and treatment, coupled with old-age pension, cash sharing and other other subsidies, Macao elderly residents can receive about 5087 yuan a month of social assistance, Macao residents' pension level is the best performance.
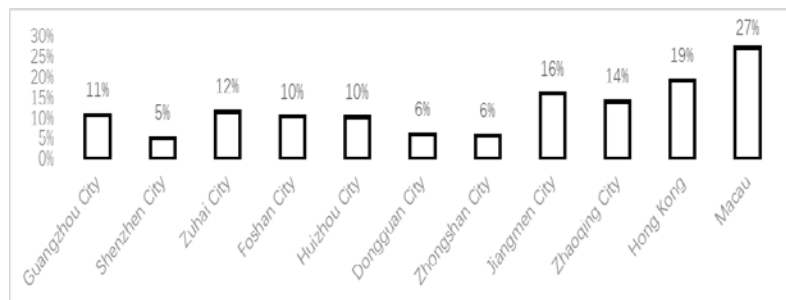

Figure. 11 Social Security Expenditure/Government Re-Current Expenditure in Guangdong, Hong Kong and Macao

According to Figure.11, In terms of the proportion of social security expenditure to government re-current expenditure in Guangdong, Hong Kong and Macao, Macao performed best at 27%, followed by Hong Kong at 19%, far exceeding the national expenditure ratio of 12%, while Shenzhen's social security expenditure ratio was the lowest 5% in the Bay Area cities, while Shenzhen's fiscal expenditure budget. For the city of Guangzhou more than 2 times, but the social security expenditure and Guangzhou City's social security expenditure is comparable, so, Guangdong, Hong Kong, Macao and the Bay Area of the social security system, or Macao and Hong Kong to do the most perfect, social security expenditure as a proportion of government expenditure is more appropriate, the Great Bay Area cities should learn from each other, for the residents of the Great Bay Area to provide better social security services.

3.3 Environmental improvement.

In the analysis of the differences in environmental improvement, this paper focuses on air quality, waste disposal and water quality standards. Because air quality is closely related to the quality of life of residents, affecting residents travel and morning exercise, for residents with respiratory and other diseases have a greater impact. Water quality standards related to the daily drinking water problems of residents, only water quality standards can meet the most basic drinking water

safety and security. Waste disposal is also related to people's lives, assuming that waste sorting can be reasonably recycled will greatly promote the circular economic development of society, which is of great significance to the sustainable development of society.
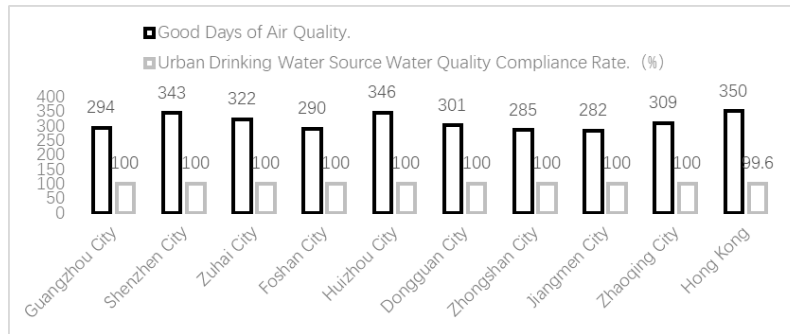

Figure. 12 The Number of Days of Good Air Quality in Guangdong, Hong Kong and Macao

From Figure. 12, it can be found that Macau's air quality in Guangdong, Hong Kong and Macao Bay Area in the best performance of 350 days of good air quality, Huizhou followed by 346 days, and Jiangmen performance of the worst 283 days of good air quality above, because Hong Kong data are not collected, so only compared with the Bay Area of 10 cities air quality. In 2017, the air quality level in Guangdong Province was the fifth highest in the country, and in specific cities, the air quality level in Shenzhen was the second highest in the national capital and vice-provincial capital city, and the air quality level in Guangdong, Hong Kong and Macao bay area was the best in the country.

In terms of urban drinking water compliance rate, nine cities in Guangdong, Hong Kong, Macao and the Great Bay Area are 100% up to standard, while 80% of Hong Kong's water supply comes from the mainland, check the east bank section water quality of the Dongjiang main stream and the Dongjiang water quality test report received by the Hong Kong Wood Lake original water pumping station shows that the water quality of the water supply reached 100%. The test methods and regions in Macao are different, with detailed breakdowns, and some information is listed here for reference. Overall, the water quality compliance rate in Guangdong, Hong Kong and Macao is fully compliant.

4. Conclusions.

To sum up, Guangdong, Hong Kong and Macao Bay Area is based on four central cities to drive the coordinated development of other cities, the four core cities function positioning is clear, each city combined with specific circumstances, in the upstream and downstream supply industry chain and industrial ecosystem to play

their own advantages in order to seek greater breakthrough. Guangdong, Hong Kong and Macao Bay Area does not fully reflect the Eastlin paradox, enhance the income level of residents, fully provide residential facilities, and strive to improve the environmental level, is still a key factor in the promotion of people's livelihood in the Great Bay Area.

Acknowledgement

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