

Research on the Talent Cultivation Model of Private Colleges and Universities under the Background of Guangdong-Hong Kong-Macao Greater Bay Area

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Abstract

The scale of higher education in China is constantly expanding. Among all the service providers, private colleges and universities have made great contributions in this process, especially in the Guangdong-Hong Kong-Macao Greater Bay Area (Bay Area). The development of private higher education has brought new opportunities and challenges in the Bay Area. However, there are still many differences among private institutions in the Bay Area, the development of private institutions in Guangdong is relatively slow. This article analysis well-known higher education institutions that are controlled by listed companies in Guangdong, such as China Education Holdings (00839.HK), Zhonghui Group (00382.HK), Hua University Group (01756.HK) and China Kepei (01890.HK) and compare them with private institutes in the two Special Administration Regions(SARs). This study found that the well-known private institutions in Guangdong aim at "profitability", and their annual profits will be withdrawn by investors in the form of dividends and connected transactions, while private universities in SARs are operated for "public welfare". The annual surpluses are invested in operation and scientific researches. This article discusses the development path of the construction of teachers and the improvement of the level of scientific research after the transfer of private universities in Guangdong, so that they can further improve the level of scientific research and teaching. Some achievements will be made in cultivation in the future.

Keywords

Private Higher Institutions; University Development; Guangdong-Hong Kong-Macao Greater Bay Area.

1. Introduction

On February 18, 2019, the Central Committee of the Communist Party of China and the State Council issued the outline of "Guangdong-Hong Kong-Macao Greater Bay Area Development Plan ". The outline puts forward a comprehensive plan for the development of the Guangdong-Hong Kong-Macao Greater Bay Area. The outline included nine measures including talent training, talent service, talent use, evaluation and incentives. Universities in Guangdong, Hong Kong and Macau are facing new opportunities and challenges. The new plan for the construction of the Guangdong-Hong Kong-Macao Greater Bay Area, whose roles and functions are focused on talent training, scientific research and social services (cultural inheritance and international exchanges). Universities in the Guangdong-Hong Kong-Macao Greater Bay Area should explore new developments in regional higher education Model to enhance the competitiveness of higher education in the Bay Area [1].

At present, more and more private colleges and universities in the bay area are playing more important roles. Sustainable and rapid development after reorganization has also become an important issue for private colleges and universities in Guangdong and other inland areas as well. The building of new faculty and the improvement of scientific research level are important for college employees. Training of these new employees is particularly important, due to the different political systems implemented by the Mainland, Hong Kong and Macau. There are certain differences respective higher education development systems and mechanisms. Private universities in Hong Kong, such as Hong Kong Shue Yan University, ranked 301-350 in the 2021 QS Asian University Rankings. Private universities in Macau, such as the Macau University of Science and Technology rose to 21st in the 2018 "University Rankings in China". However, the development level of private universities in Guangdong is relatively slow, and all private universities are not on the list. Private universities in Guangdong Province can benefit by following the academic standards of private universities in Hong Kong and Macau, further improve the standard of the institutions, and lay the foundation for sustainable development and even international development.

This article research on China University Group (01756.HK), China Kepei (01890.HK), Zhonghui Group (00382.HK) and China Education Holdings (00839.HK) and other private higher education institutions in Guangdong and private higher education institutions in Hong Kong and Macau. The researchers conduct a comparative study, hoping to provide feasible suggestions for the sustainable and rapid development of mainland Chinese private colleges.

2. The Status Quo of the Development of Private Universities in Guangdong

At present, there are 67 higher education institutions at undergraduate level in Guangdong Province, of which 43 are publicly run and 24 are privately run. The scale of China's private higher education has expanded rapidly, and it has played an increasingly important role in the entire higher education system. It has made a huge contribution to the development of China's education, in terms of innovation, service to society, and cultural inheritance can provide talent support and intellectual support. In recent years, the independence private colleges are becoming a major task of China's higher education reform. More and more private colleges in Guangdong have completed the transformation, and these private schools have a slightly lower recognition than public schools.

At present, most private universities are founded and run by private capital. For example, Guangdong University of Technology founded by China Kepei, ranked 114 in the domestic private university rankings in 2021 according to the alumni association. Guangzhou Huashang College of Zhonghui Group ranked 2st in the same statistics; Guangdong Baiyun College, founded by China Education Holdings, ranked 22nd in the 2021 domestic private university rankings by the Alumni Association. Guangzhou Huali College of Hua University Group ranked 64th in the 2021 domestic private university ranking statistics of the Alumni Association. Although Guangdong private schools rank high in the national private schools' rankings, Guangdong private universities do not currently rank well in the Asian or world rankings, and there is still a large gap in term of the comprehensive strength when comparing with private universities in Hong Kong and Macao.

Many private colleges and universities in Guangdong began to recruit new teachers after they were reorganized by the ministry of Education. It is relatively difficult to recruit capable teachers. At the same time, most of the new teachers in private schools are young teachers recruited through the society, and most of them are lack in training and working experience. Therefore, basically, new teachers in Guangdong rely on "learning by doing". At the same time, the faculty is not strong in scientific research, and it is difficult to achieve advancement. In

addition, most private colleges did not have enough compensation for the faculty during the transition period, especially in term of financial measures and material inputs. The faculties were relatively small, and the faculties was run on a situation of "less development, less training" [2]. This is likely to result in the weak construction of the teaching team after the setup of private schools. Failure of keep up with the construction of the teaching team will easily lead to a result of a low level of scientific research. At the same time, it is easy to be greatly hindered in the subsequent development. Therefore, further strengthen the construction of the teaching team and scientific research level of Guangdong private schools is imminent.

3. The Development Status of Private Universities in Hong Kong and Macau

The Hong Kong government has always attached great importance to the development of tertiary education and has been committed to providing young people with high-quality, diverse, flexible and multi-level access to education. In 2021, there are more than 20 self-financing universities and independent colleges in Hong Kong that have issued bachelor degree. The more prominent schools are the Hang Seng University of Hong Kong, Hong Kong Shue Yan University and The Open University of Hong Kong. On April 21, 2021, the Hang Seng University of Hong Kong ranked the top 200 in the world in "Quality Education" and "Decent Work and Economic Growth" in the latest "Global University Impact Rankings" published by The Times Higher Education (THE). The school has the Global leading Supply Chain Policy Research Institute, the Business Research Institute, the Deep Learning and Cognitive Computing Center, the Business Research Center, the Big Data Information Center, the Greater China Research Center and the Chinese Family Inheritance Research Center. Hong Kong Shue Yan University is the first private university in Hong Kong. In 2021, it ranked 301-350 in the QS Asian ranking, with 13 high quality research centers. In addition, the Open University of Hong Kong(now known as Hong Kong Metropolitan University) has established 5 research institutes and 1 research center.

The Macau SAR government also attaches great importance to the development of higher education. It started relevant preliminary research work in 2020 and set up a relevant working group through the Higher Education Commission to follow up the relevant work related to planning the medium and long-term development of higher education. At present, the Macau Special Administrative Region has 6 private universities. Among them, Macau University of Science and Technology has become the largest comprehensive university in Macau, and has two national key laboratories, namely the State Key Laboratory of Quality Research of Traditional Chinese Medicine and the State Key Laboratory of Lunar and Planetary Science. In addition, the City University of Macau is one of the four comprehensive universities in Macau that carry out "undergraduate, master, and doctoral" full-level education. In 2020, it ranked 89 in the top 100 universities in China.

Looking at the development of private universities in Hong Kong and Macau, there are many universities in Hong Kong and Macau that rank among the top in the world. Private universities in the two special administration regions are comparable to the "985" "211" universities in China, and the overall education level is relatively high. The comprehensive strength of private universities in Guangdong is comparable to private universities in Hong Kong and Macau. However, there is still huge gap in research and lectures. Private universities in Guangdong should learn from private universities in Hong Kong and Macau, actively improve their own strength, and prepare for the development.

4. Comparison of Income and Cost of Private Colleges in Guangdong, Hong Kong and Macao

4.1. Comparison of Income Structure

4.1.1. Guangdong Private Colleges' Income Mainly Comes from Tuition

Hua University Group (01756.HK) is based in Guangdong Province and is a leading private higher education and vocational education institution in South China. 99% of its students come from the province. The group's schools include: Huali College, Huali Vocational College, Huali Technician College. According to the 2020 annual report of Hua University Group, as of August 31, 2020, the total income of the group is 789,433,000 yuan, including income (tuition and accommodation), other income and financial income, and other income involves government subsidies 11,789 thousand yuan. As shown in [Figure 1](#), the total tuition income of Hua University Group for the 2019-2020 academic year reached 732,721,000 yuan. As shown in [Figure 2](#), the proportion of tuition fees to the total income is about 93%. Therefore, for Hua University Group in the year of 2019-2020, the total income of the school year is mainly derived from tuition, and the rest of the income accounts for a relatively low proportion.

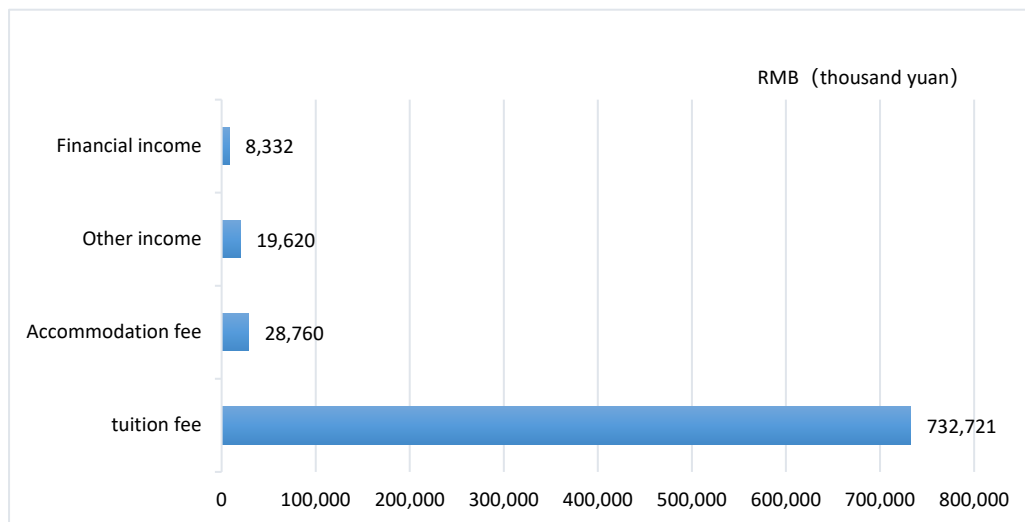


Figure 1. Hua University Group's total income structure for the 2019-2020 academic year
Data source: Compiled and calculated by Hua University Group's 2020 Annual Report

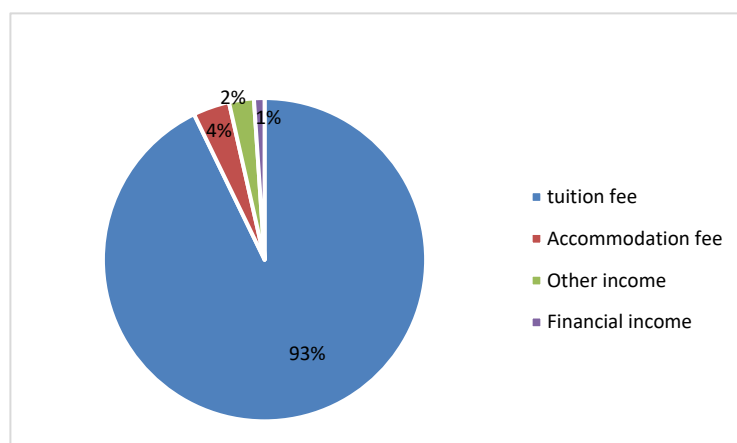


Figure 2. Hua University Group's total income ratio in the 2019-2020 academic year
Data source: Compiled and calculated by Hua University Group's 2020 Annual Report

As shown in Figure 3, according to the 2020 annual report of Hua University Group, Hua University (undergraduate) academic year tuition income is 416,456,000 yuan, Huali Vocational College (junior college) academic year tuition income is 223,196,000 yuan, and higher education tuition income accounts for 87.30% of the total tuition income. Therefore, as a higher education institution, Hua University Group mainly comes from tuition fee.

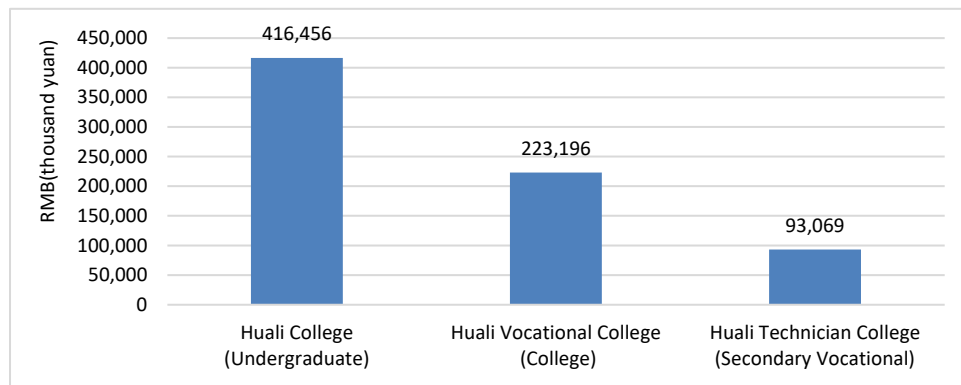


Figure 3. Hua University Group's tuition income structure for the 2019-2020 academic year
Data source: Compiled and calculated by Hua University Group's 2020 Annual Report

China Kepei (01890.HK) is a leading private higher education operator in South China. The group was listed in Hong Kong on January 25, 2019. Its market value has grown steadily, and currently reaches more than 10 billion yuan. The group's institutions include: Guangdong University of Technology (Undergraduate), Zhaoqing School (secondary vocational school), Harbin College, Huaibei Institute of Technology and Ma'anshan College (the latter three are not incorporated into the 2020 annual report). According to the calculation of China Kepei's 2020 annual report, as of December 31, 2020, the group's total income amounted to 996,179 thousand yuan, including income (tuition and accommodation fees), other education service fee income, other income and income. As shown in Figures 4 and Figures 5, the total tuition fees reached 824,303 thousand yuan, and the proportion of tuition fees to the total income was about 83%. It can be seen that China's total income in 2020 is mainly derived from tuition fees, and the rest of the income is relatively low.

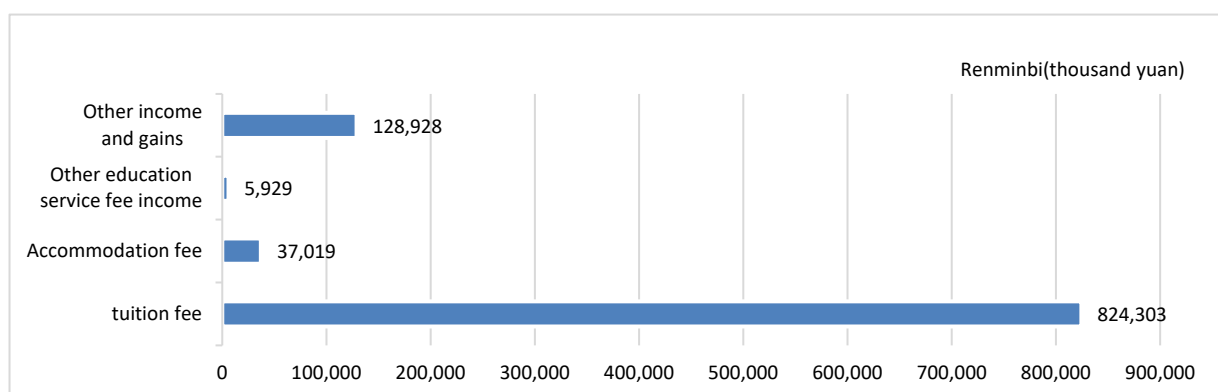


Figure 4. China Kepei's total revenue structure in 2020
Data source: Compiled and calculated by China Kepei 2020 Annual Report

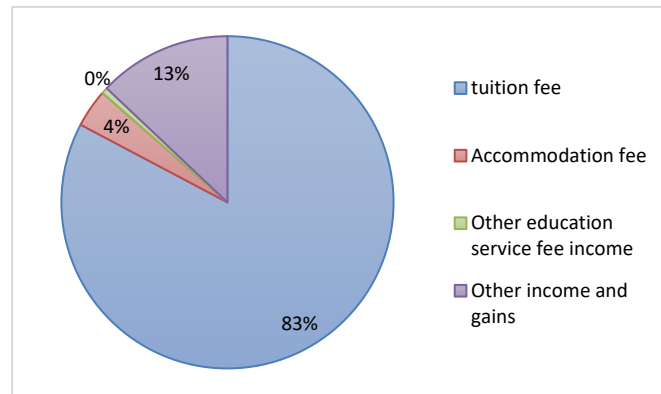


Figure 5. China Kepei's total revenue ratio in 2020

Data source: Compiled and calculated by China Kepei 2020 Annual Report

According to the calculation of China Kepei's 2020 annual report, China Kepei's higher education tuition income for the 2020 academic year is 752,334,000 yuan. As shown in [Figure 6](#), higher education tuition income accounts for about 91% of the total tuition income. Therefore, China Kepei tuition fees the source of income is mainly higher education rather than secondary vocational education.

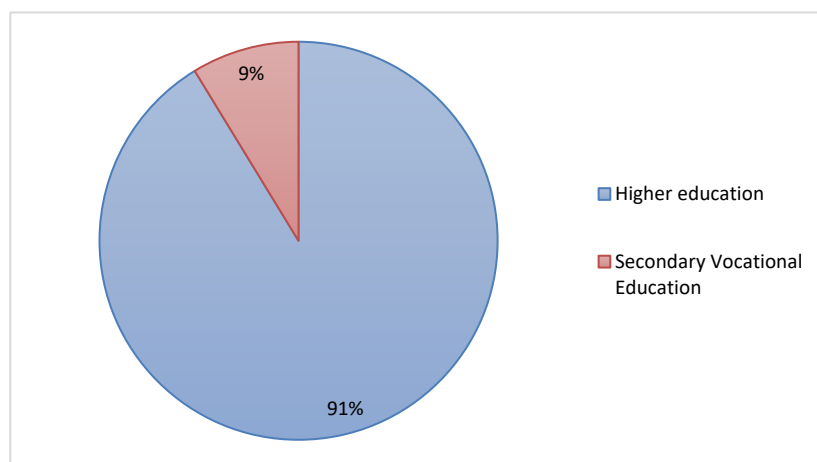


Figure 6. China Kepei's tuition income ratio in 2020

Data source: compiled and calculated from public information

Zhonghui Group (00382.HK) is the largest private business higher education group in the Guangdong-Hong Kong-Macao Greater Bay Area. The group's self-built schools include Huashang College (undergraduate level) and Huashang Vocational College (higher vocational college level) in Guangzhou. At the same time, the company has also deployed the Australian International Business School (GBCA), Australia's Zhonghui College (EIA) and Singapore's Zhonghui College (EIS) overseas in an asset-light manner. According to the calculation of the 2020 annual report of Zhonghui Group, as of August 31, 2020, the total income of the group is as high as 848,350 thousand yuan, including income (tuition, accommodation and joint course fees), other income and investment income. As shown in [Figure 7](#), the total tuition fee reached 762,744 thousand yuan, and the tuition fee accounted for about 89.91% of the total income. Therefore, the total income of Zhonghui Group in 2020 is mainly derived from tuition fees.

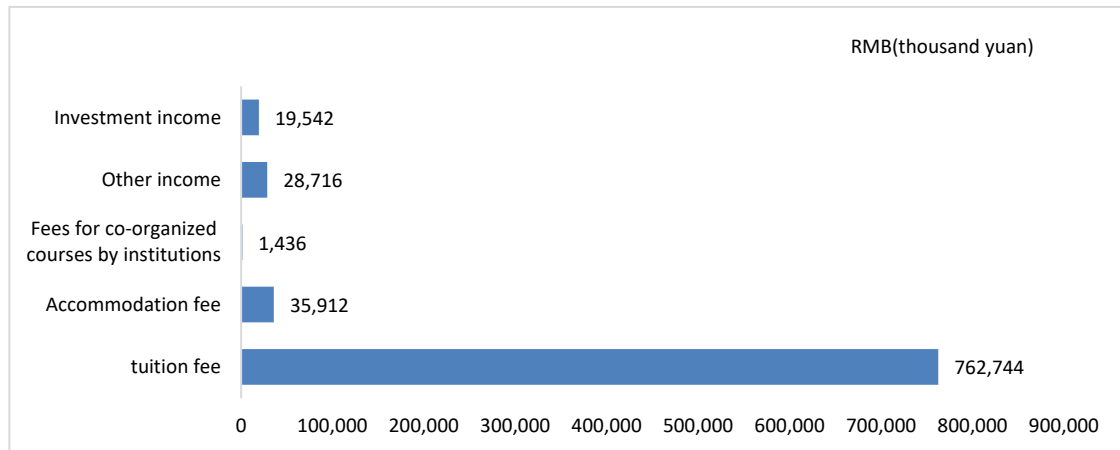


Figure 7. Zhonghui Group's total income structure for the 2019-2020 academic year
Data source: Compiled and calculated from the 2020 annual report of Zhonghui Group

According to the 2020 financial report of Zhonghui Group, its income in 2020 (including tuition fees, accommodation fees, and fees for courses jointly organized by institutions) reached 800,092,000 yuan, of which, as shown in Figure 8, Zhonghui Group's 2019-2020 academic year The income in China reached 788,770,000-yuan, accounting for 98.58% of the income. Therefore, although Zhonghui Group is exploring overseas markets and actively acquiring overseas universities, its main source of income is still tuition fee.

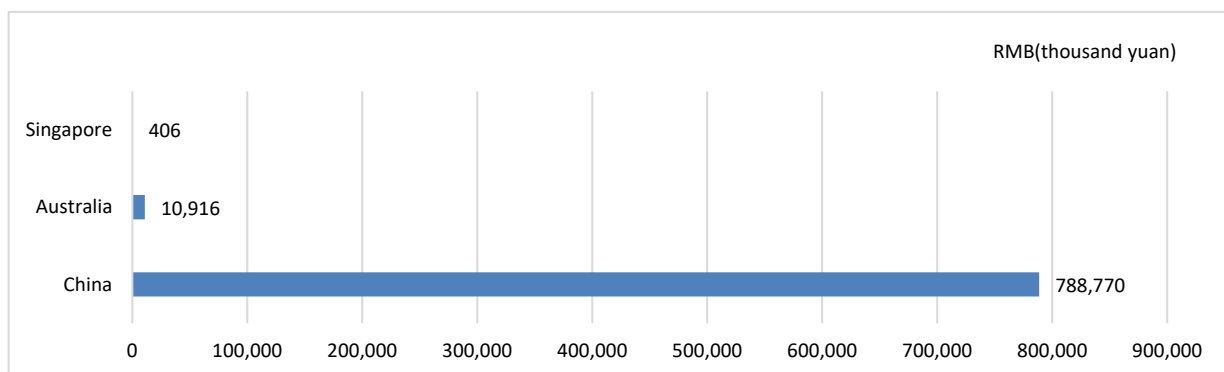


Figure 8. Zhonghui Group's income structure for the 2019-2020 academic year
Data source: Compiled and calculated from the 2020 annual report of Zhonghui Group

China Education Holdings (00839.HK) is a world-leading higher and vocational education group with business all over China. The group operates three business divisions. The group includes: Higher Education Division (Jiangxi University of Science and Technology, Guangdong Baiyun University, Chongqing Translation College, Guangzhou Songtian College, Shandong Quancheng College and Songtian Vocational College); Division of Vocational Education (Xi'an Railway Institute, Zhengzhou Urban Rail School, Baiyun Technician College); Division of International Education (King's College in Australia; University of Richmond in the UK).

According to the calculation of the 2020 annual report of China Education Holdings, as of August 31, 2020, the total income of the group is as high as 2,809,720,000,000 yuan, including income (tuition, accommodation and supporting service fees), other income and investment income. As shown in Figure 9, the total tuition fees reached 2,452,790 thousand yuan, accounting for about 87.30% of the total income. Therefore, the total income of China Education Holdings in 2020 is mainly derived from tuition fees, and the rest of the income accounts for a relatively low proportion.

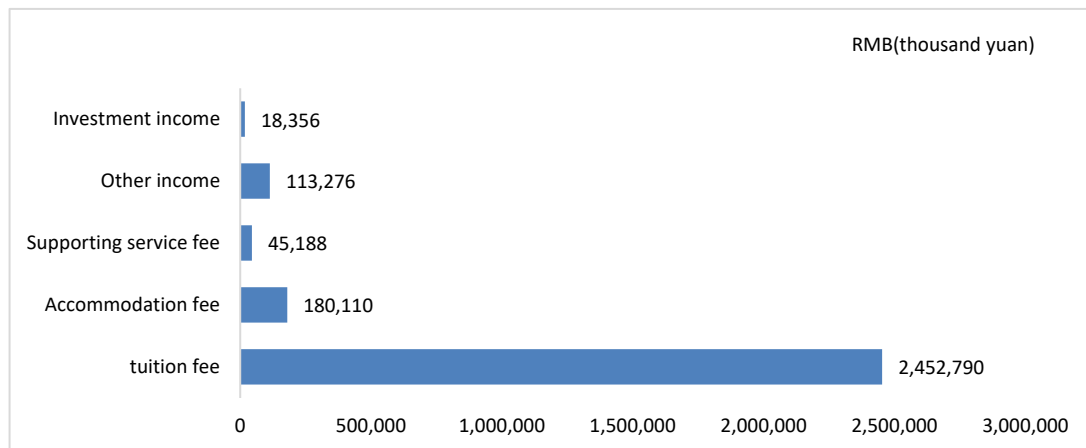


Figure 9. Total revenue structure of China Education Holdings in the 2019-2020 academic year

Data source: Compiled and calculated from the 2020 annual report of China Education Holdings

According to the 2020 financial report of China Education Holdings, its income in 2020 (including tuition, accommodation and supporting service fees) will reach 2,678,088,000 yuan. The segment reached 17,444,000-yuan, accounting for 65.14% of the income. It can be seen that the main source of income of China Education Holdings is the higher education tuition fee.

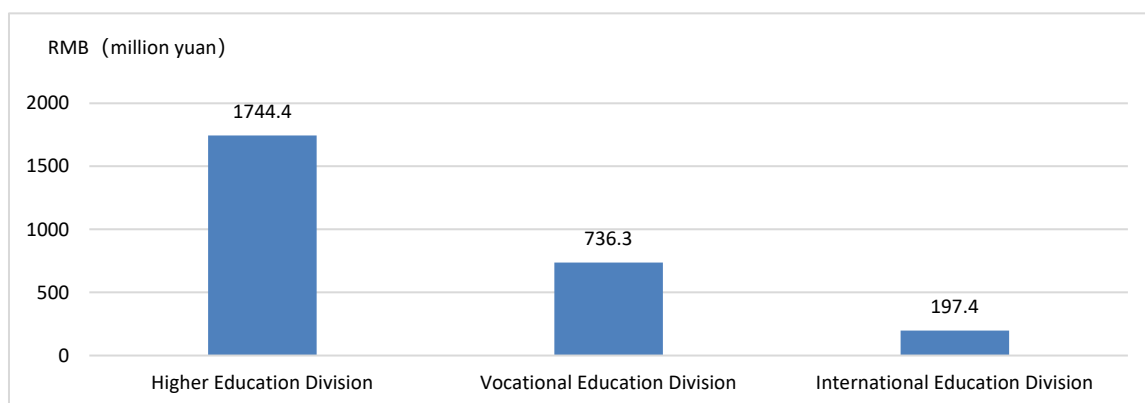


Figure 10. Figure 1 of the income structure of China Education Holdings in the 2019-2020 academic year

Data source: Compiled and calculated from the 2020 annual report of China Education Holdings

According to the 2020 financial report of China Education Holdings, its income in 2020 (including tuition fees, accommodation fees and supporting service fees) reached 2,678,088,000 yuan, of which, as shown in [Figure 11](#), China Education Holdings' revenue in China for the 2019-2020 academic year Reached RMB 2,480,681,000, accounting for 92.63% of revenue. It can be seen that although China Education Holdings is exploring overseas markets, its main source is higher education tuition fee in China.

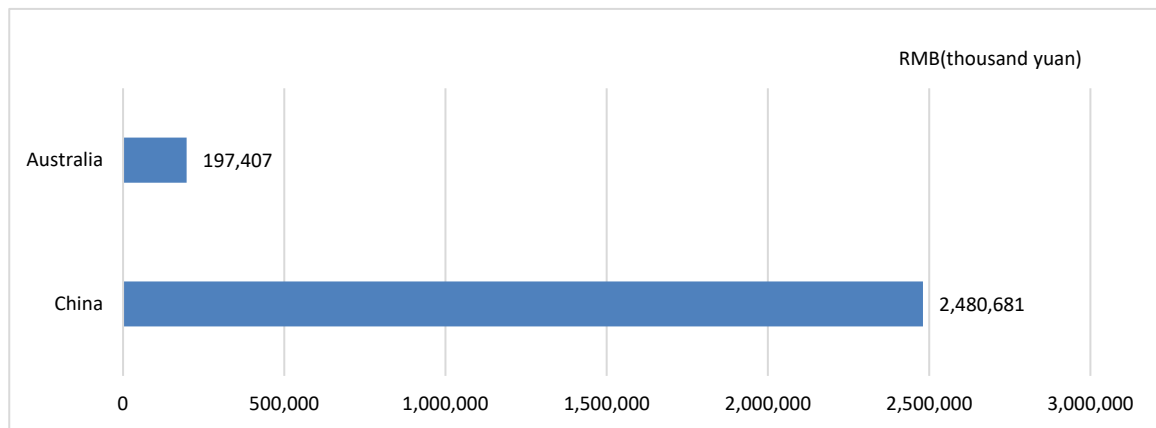


Figure 11. Figure 2 of the income structure of China Education Holdings in the 2019-2020 academic year

Data source: Compiled and calculated from the 2020 annual report of China Education Holdings

The Open University of Hong Kong (OUHK) was founded in 1989 and currently has about 10,000 full-time undergraduates, 1,900 postgraduates, and 8,700 part-time students. It has successfully developed into a modern university and has been self-funded the OUHK is the highest among self-financing institutions, which fully affirms the university's efforts and outstanding achievements in professional education. The Open University's 2020 annual report shows that its total operating income (including tuition, consultant fees and miscellaneous income) for the 2019-2020 academic year is 1,821,177,000 yuan, and the total income is 2,202,033,000 yuan. As shown in [Figure 12](#), the tuition income is as high as 1,710,027,000 yuan, accounting for about 93.90% of total operating income and 77.66% of total income. It can be seen that the main source of income of the Open University of Hong Kong is tuition income.

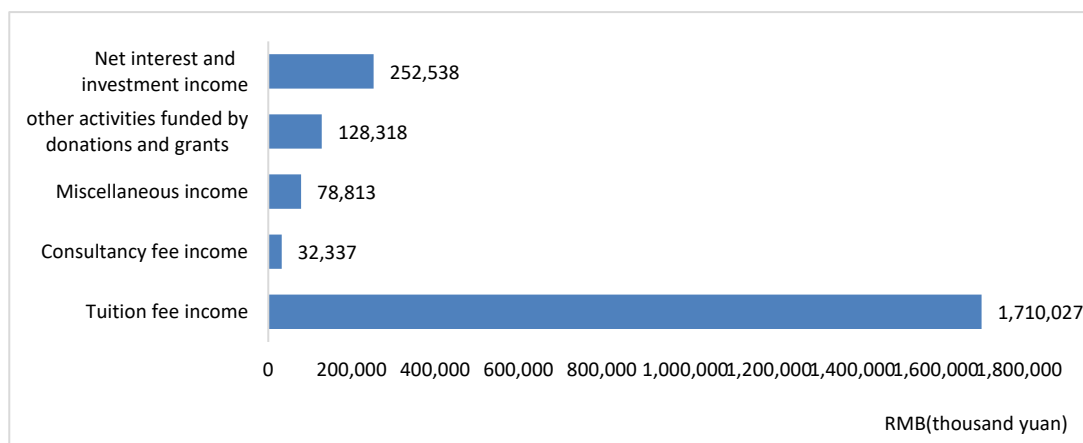


Figure 12. The total income structure of the Open University of Hong Kong for the 2019-2020 academic year

Data source: Compiled and calculated from the 2020 Annual Report of The Open University of Hong Kong

The history of the Hang Seng University of Hong Kong (Hengda) can be traced back to 1980. The Ho Sun Heng Charity Foundation, Ho Tim Charity Foundation, Dah Chong Trading, the founders of several Hang Seng Banks and Hang Seng Bank generously donated funds to establish the Hang Seng College of Commerce (Hengshang). It offers a wide range of four-year honors bachelor's degree programs and master's degree programs, some of which are the first

in Hong Kong. According to the 2020 annual report of Hong Kong's Hang Seng University, its total income for the 2019-2020 academic year reached 6,980,000,000 yuan. As shown in [Figure 13](#), 69% of its total income source is tuition, and the total tuition fee is approximately 48,162,000,000yuan.

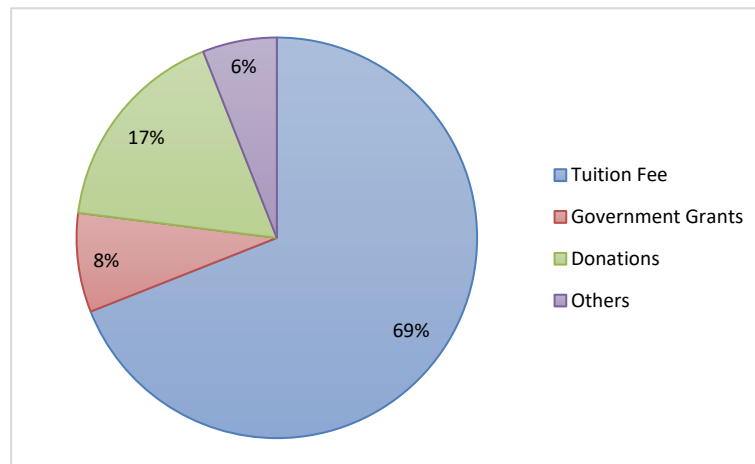


Figure 13. The income structure of the Hang Seng University of Hong Kong in 2020
Data source: Compiled and calculated from the 2020 annual report of the Hang Seng University of Hong Kong

In summary, taking the four listed higher education institutions in Guangdong as an example, their main source of income is tuition, and they involve secondary vocational education (not the main source of income). Higher education tuition fee is the main source of income. At the same time, although some of the above education group own foreign colleges and universities the main business and income are still concentrated in domestic private higher education institutions. On the other hand, the income of the Open University of Hong Kong and the Hang Seng University of Hong Kong is mainly derived from tuition as well.

4.1.2. The Tuition and Tuition Income of Private Universities in Guangdong are Relatively Low

Table 1. Comparison of average tuition fees of some universities in Guangdong and Hong Kong

Higher Education Group	Its undergraduate colleges (Guangdong)	Tuition fee/RMB (yuan)
Hua University Group (01756.HK)	Huali College	25,500-29,500
China Kepei (01890.HK)	Guangdong Institute of Technology	26,800
Zhonghui Group (00382.HK)	Huashang College	24,315
China Education Holdings (00839.HK)	Guangdong Baiyun University	20,000-30,000
	Guangzhou Songtian College	26,000-28,000
The Open University of Hong Kong	-	92,459
Hang Seng University of Hong Kong	-	84,082

Data source: compiled and calculated from public information

Among them: Huashang College is the 2020 average tuition fee announced by Zhonghui Group; China Science Education and China Education Holdings are undergraduate courses; Huali College is a four to five-year undergraduate course; The Open University of Hong Kong is a full-time undergraduate course tuition fee; Hong Kong The average tuition fee published by Hang Seng University in its annual report.

As shown in [Table 1](#), the corresponding tuition fees for 2020, the Open University of Hong Kong and the Hang Seng University of Hong Kong are 92,459 yuan and 84,082 yuan respectively. The tuition fees of the colleges and universities in Guangdong did not exceed 30,000 yuan. The above tuition data mainly refers to the tuition fees of undergraduate and above. The tuition level of the above-mentioned private universities in Guangdong is lower than that of the above two private universities in Hong Kong.

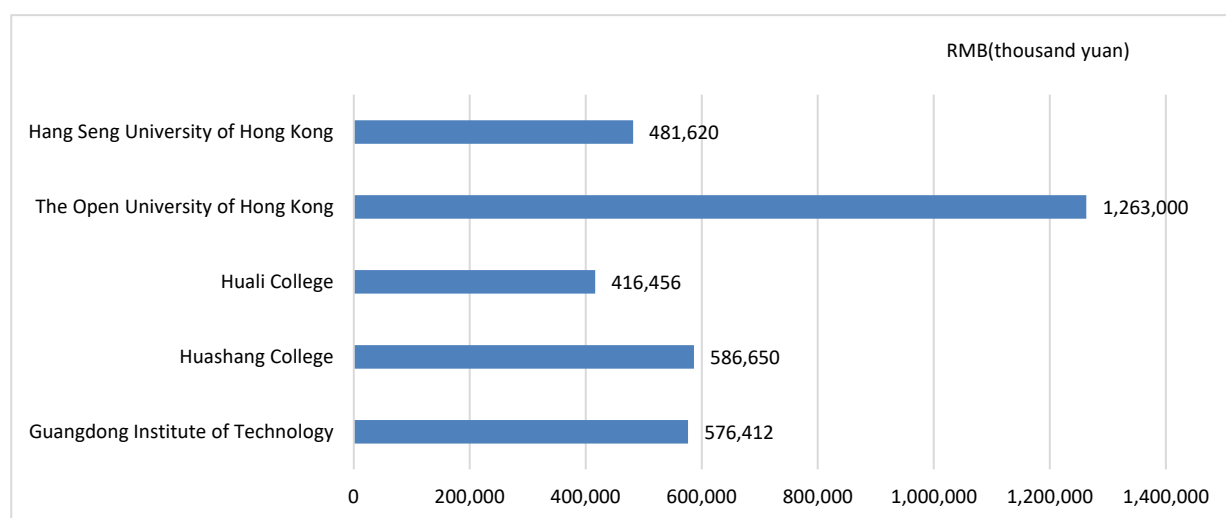


Figure 14. Comparison of higher education tuition income of some universities in Guangdong and Hong Kong

Note: Guangdong Polytechnic Institute is the tuition income of undergraduate courses, the Open University of Hong Kong is the tuition income of face-to-face courses, and the Hang Seng University, Huashang College and Huali College of Hong Kong are the total tuition income. The above income is mainly for the higher tuition income of undergraduate and above.

Data source: compiled and calculated from public information

Most of the schools under the above four higher education institutions have completed the re-organization process, and whether they can develop smoothly after re-organization is also a more important issue. Compared with private universities in Guangdong, the average tuition income of private universities in Hong Kong is higher, as shown in [Figure 14](#) shows that the total income of higher education in 2020 in Guangdong private undergraduate colleges is lower than that of the Open University of Hong Kong. There is a large gap. The overall income level is like that of Hong Kong Hang Seng University. However, according to the 2020 annual report of Hong Kong Hang Seng University, there are only 5,728 students, while Guangdong Polytechnic University has 29,262 undergraduate students, 24,127 students from Huashang College, 17,765 students from Huali College. It can be seen that the above two private universities in Hong Kong have higher education income. The overall income is higher than the above-mentioned private undergraduate colleges in Guangdong.

4.2. Comparison of Cost Structure

As shown in [Table 2](#), according to the 2020 annual report of Hua University Group, the employee expenditure for the 2019-2020 academic year is 151,595,000 yuan as of August 31,

2020. As shown in [Table 3](#), the cost of income of Hua University Group is 308,902 thousand yuan employee expenses accounted for 49.08% of the cost of income and 31.68% of the total cost of expenditure. So, the proportion is relatively low; as shown in [Table 2](#), Hua University Group's per capita expenditure for employees in the 2019-2020 academic year is about 92.44 thousand yuan. According to China Kepei's 2020 annual report, the annual cost of sales is approximately RMB 261.2 million, of which staff costs are RMB 125.2 million as of December 31, 2020. As shown in [Table 3](#), staff costs account for approximately RMB 261.2 million. 47.93% of the cost of sales, accounting for 28.82% of the total cost of expenditures. As shown in [Table 2](#), the per capita staff cost of China Kepei in 2020 is only 45.51 thousand yuan, and the average staff cost level is relatively low.

Table 2. Comparison of employees/employees of some higher education institutions in Guangdong

	Number of employees	Annual income per employee (thousand yuan)	Employee expenses/staff costs (thousand yuan)
Hua University Group	1,640	92.44	151,595
China Cope	2,751	45.51	125,200
Zhonghui Group	2800	95.54	267,523
China Education Holdings	8833	86.08	760,331

Note: Except for China Kepei's data as of December 31, 2020, the rest of the group's data as of August 31, 2020.

Data source: compiled and calculated from public data

Table 3. Comparison Table of Some Costs of Some Higher Education Institutions in Guangdong

	Revenue cost/sales cost/operating cost (thousand yuan)	Employee/staff costs as a percentage of revenue/cost of sales	Employee/staff cost total cost expenditure (thousand yuan)
Hua University Group	308,902	49.08%	31.68%
China Cope	261,194	47.93%	28.82%
Zhonghui Group	403,848	66.24%	49.51%
China Education Holdings	1,077,101	70.59%	36.55%

Note: Except for China Kepei's data as of December 31, 2020, the rest of the group's data as of August 31, 2020; Cost of revenue/cost of sales includes employee/staff costs.

Data source: compiled and calculated from public data

According to the 2020 annual report of Zhonghui Group, the total cost and expenditure reached 540,380 thousand yuan as of August 31, 2020. As shown in [Table 3](#), the operating cost reached 403,848 thousand yuan, and the staff cost was about 267.5 million yuan. According to the

calculation, staff costs accounted for 66.24% of operating costs and 49.51% of total costs, which is a relatively low proportion. As shown in [Table 2](#), the per capita cost of employees of Zhonghui Group in 2020 is about 95.54 thousand yuan. As shown in [Table 3](#), according to the 2020 annual report of China Education Holdings, its annual cost of revenue is 1,077,101 thousand yuan, of which staff costs are 760,331,000 yuan, accounting for 70.59% of the revenue cost and 36.55% of the total cost of revenue and expenditure so the proportion is low; as shown in [Table 2](#), its per capita staff cost for the 2019-2020 academic year is 86.08 thousand yuan.

In summary, the employee/staff costs of the above four higher education groups account for no more than 50% of the total cost and expenditure, which is relatively low overall; the ratio of their employees/staff costs to the cost of revenue/cost of sales is between 47%-71%. The overall proportion is not high; in addition, the employees of the above-mentioned four listed companies are mainly teachers' organizations, and the average annual cost of employees doesn't exceed 96,000 yuan.

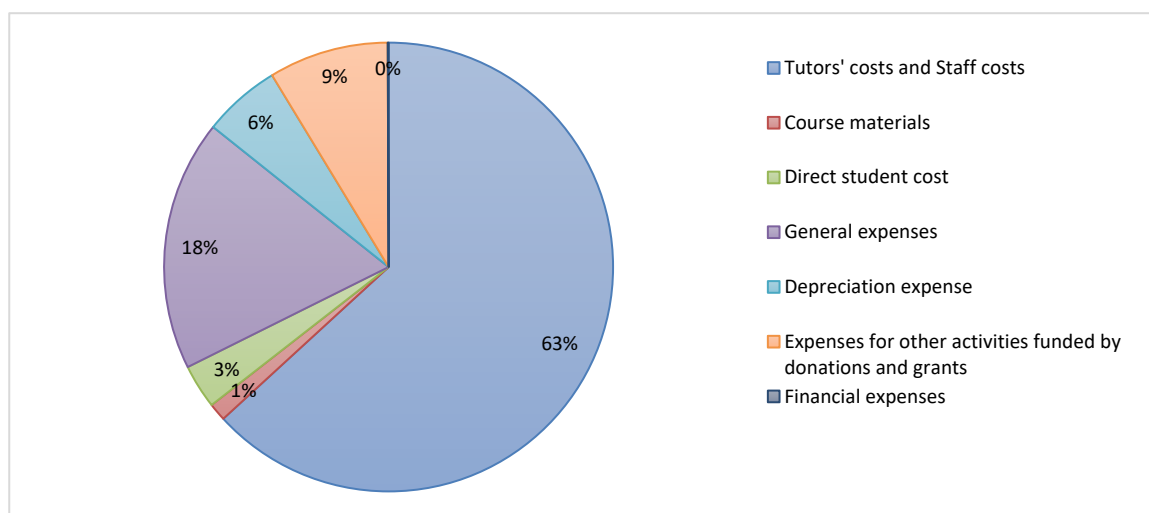


Figure 15. The total cost and expenditure structure of the Open University of Hong Kong for the 2019-2020 academic year

Source: Compiled and calculated from the 2020 Annual Report of The Open University of Hong Kong

According to the calculation of the 2020 annual report of the Open University of Hong Kong, the total operating expenses of the university for the 2019-2020 academic year totaled 1,544,544 thousand yuan as of August 31, 2020, including: course materials, tutor costs, direct student costs, part of faculty costs and part of general expenses ; total cost expenditure is 1,691,541,000 yuan, while tutor costs and faculty costs are 1,068,699,000 yuan, accounting for 69.19% of total operating expenses, which is relatively high. As shown in [Figure 15](#), the total cost of mentors and faculty accounts for approximately 63% of the above total costs and the expenditure is relatively high. According to the 2020 annual report of the Open University of Hong Kong, its teaching staff costs accounted for 44.0% of the total faculty costs in 2019-2020, which is a relatively high proportion. In addition, the total number of full-time faculty members is 929, and the per capita cost of faculty members for 2019-2020 is approximately RMB 1,150 thousand.

According to the statistics of the Hang Seng University in Hong Kong's 2020 annual report, its total annual cost for the 2019-2020 academic year reached 4,734,000,000 yuan. as shown in [Figure 16](#), it accounts for about 58% of the total cost, which is about 274.6 million yuan. According to the 2020 annual report of the Hang Seng University of Hong Kong, there are 193 academic staff, 385 administrative and academic support staff, of which 98.2% are professors,

and there are 578 people in total. The per capita cost is about 475.09 thousand yuan and the overall level is relatively high.

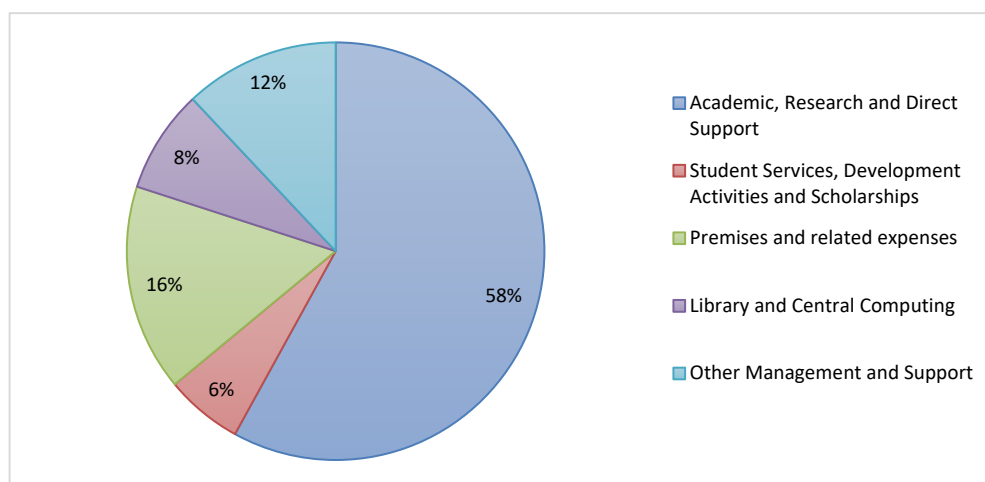


Figure 16. The total cost structure of the Hang Seng University of Hong Kong for the 2019-2020 academic year

Source: Compiled and calculated based on the 2020 annual report of the Hang Seng University of Hong Kong

In summary, the investment in faculty and staff costs, scientific research funding and academic support of Hua University Group, China Kepei, Zhonghui Group and China Education Holdings is lower than that of the Open University of Hong Kong and Hang Seng University of Hong Kong, while the Open University of Hong Kong and Hong Kong The Hang Seng University of Hong Kong has a strong support for academic research, and the overall per capita income of faculty and staff is also higher than the aforementioned Guangdong Higher Education Group. The success of education and teaching reform and talent training model is inseparable from the leading role of teachers. Therefore, if Guangdong private undergraduate colleges and universities want to achieve the improvement of teaching quality and scientific research level, they must pay full attention to the role of teachers, especially young teachers, and increase scientific research funding. The level of teaching incentives includes both material incentives and spiritual incentives, and striving to further develop the enthusiasm and initiative of young teachers.

5. Comparison of Teachers and Scientific Research Level of Private Universities in Guangdong, Hong Kong and Macao

5.1. Comparison of Teachers' Level

The faculty is important for the development of private colleges and universities. It is significant for the sustainable development of independent colleges after the re-organization. An excellent evaluation system and attractive incentive mechanism have become important means to attract and stabilize outstanding talents. Therefore, the improvement of teacher evaluation and incentive mechanism is the key to promoting stable talents and smooth development of independent colleges in my country [3].

In terms of faculty building, private universities in Hong Kong and Macau have relatively high levels of faculty. For example, the Hang Seng University of Hong Kong, according to the 2020 annual report of the Hang Seng University of Hong Kong, has a professor-level staff of 98.2%; the Open University of Hong Kong, according to the 2020 annual report of the Open University of Hong Kong, the total faculty salary is 11,603,000,000yuan, and the ratio of faculty cost to

total expenditure is as high as 69.9%. In addition, Macau University of Science and Technology has a well-educated, highly accomplished, and experienced international faculty, and most of the faculty and research staff have doctoral degrees. They have work or study experience in world-class universities or research institutions. In addition to the existing faculty, the Macau University of Science and Technology has specially appointed a group of famous teachers to teach undergraduates and graduate students, including academicians of the Chinese Academy of Sciences, academicians of the Chinese Academy of Engineering, and the Central Research Institute of Taiwan Academician, Academician of the American Academy of Sciences, World Highly Cited Scientist and other top scholars.

Compared to Guangdong, such as the Guangdong University of Technology under China Kepei, there are more than 1,700 faculty members, but fewer than 700 masters and doctoral degrees, which is less than 50% of the total faculty and staff, and the educational structure of teachers is low; such as Zhonghui Group The Guangzhou Huashang College, under its subsidiary, has a total of more than 1,300 faculty members, among which there are more than 390 teachers with senior professional titles, accounting for only 32.79%, and only 74.72% of teachers with master's and doctorate degrees. For example, Guangdong Baiyun College, a subsidiary of China Education Holdings, has more than 1,000 employees, of whom only 35% are teachers with senior professional and technical positions such as full professors and associate professors, and only 65% of staff have doctoral and master's degrees.

It can be seen that there is a significant gap between the faculty of private universities in Guangdong and private universities in Hong Kong and Macau. Private universities in Hong Kong and Macau have invested heavily in faculty construction, while the above-mentioned private universities in Guangdong need to be improved in terms of faculty construction. In addition, the faculty of Hong Kong and Macao universities is relatively strong. The teachers in private universities in Guangdong generally have an irrational structure. At the same time, most of the salary and benefits have not reached the level that can effectively stimulate the enthusiasm and initiative of teachers. There are also many "young scholars". "The use of private universities as a "springboard" has led to the emergence of problems such as high teacher mobility, and it is often difficult to form a high-quality and stable teaching and research team. In addition, compared with private universities in Hong Kong and Macau, private universities in Guangdong have less faculty resources. Teachers' self-improvement needs are more difficult to meet and lack a sense of stability will tend to reduce their enthusiasm for work. At the same time, they will find other ways to focus on teaching and scientific research. Therefore, it is not conducive to the construction of High-level teaching and scientific research teams in private universities.

5.2. Comparison of Scientific Research Level

The level of scientific research is one of the important indicators for society and the country to measure the comprehensive strength of a university. Normally, a good level of scientific research means a good academic reputation and talent training ability of the university. Private universities in Hong Kong and Macau attach great importance to scientific research and obtain a lot of scientific research results.

Private universities in Hong Kong and Macau have a relatively high level of scientific research standard. For example, the Hang Seng University of Hong Kong encourages all academic staff to carry out research that meets the needs of universities and other stakeholders. According to their official website, there are two more research institutes and four research centers on campus; the Open University of Hong Kong has 5 research institutes and 2 research centers; for example, Macau University of Science and Technology has 4 research institutes, 5 research institutes, and 7 laboratories, two of which are national key laboratories for quality of traditional Chinese medicine. For State Key Laboratory, the State Key Laboratory of Lunar and Planetary Science; for example, the City University of Macau has 13 research

institutes/institutes/centers with distinctive characteristics. The scientific research team continues to undertake scientific research projects commissioned by the National Natural Science Foundation of China, the Macao Foundation, the Policy Research Office of the Macao Special Administrative Region Government, the Macao Special Administrative Region Government Talent Development Committee, the Macao Education and Youth Development Bureau, and the Macao Trade and Investment Promotion Agency.

In contrast, the current overall scientific research strength of private colleges and universities in Guangdong is still very weak. Due to the short running time of private colleges and the existence of some irregularities at the beginning of the school, it is not conducive to private undergraduate colleges to introduce High-level and High-level scientific research and talent and acquisition of High-level scientific research topics [4]. The imperfection of the scientific research system also makes its teachers lack of motivation to engage in scientific research, and some schools may be under the pressure of profitability. The combination of part-time and full-time in the introduction of teachers can easily lead to poor teacher treatment and welfare, and the lower stability of the teaching team and further affect the quality of teaching, but also difficult to cultivate teachers' scientific research ability [5]. In contrast, private universities in Hong Kong and Macau have invested more in faculty building and scientific research development, and their overall development level is higher than that of private universities in Guangdong.

6. Conclusions and Recommendations

Through the above-mentioned comparative study of the private higher education institutions in Guangdong and private universities in Hong Kong and Macau, it can be seen that the main source of income for private universities in Guangdong, Hong Kong and Macau is tuition income, while the overall income of private universities in Guangdong is lower than that of private universities in Hong Kong and Macau. Private universities in Guangdong's tuition fees have a relatively larger impact on income. If income needs to be increased, then Guangdong private universities need to increase tuition and international enrollment. It is recommended that relevant departments strongly support Guangdong private schools to run international projects such as the "2+2" project, while allowing private Schools go overseas (such as Southeast Asia) to recruit students. In addition, in order to continue to develop well after the transfer of private schools, they need to improve their own school rankings. This means that improving the level of the teaching staff and the level of scientific research. Guangdong private schools are relatively backward in terms of faculty and scientific research level construction. The cost of investment in them is lower than that of private universities in Hong Kong and Macau. They cannot effectively improve the school's scientific research level. This will easily lead to difficulties in further rapid development after transfer. Private colleges and universities should move closer to private universities in Hong Kong and Macau, strengthen the construction of the faculty and scientific research level, and further increase the visibility, so that they have the opportunity to recruit better students. Therefore, it is particularly important to strengthen the construction of the faculty of private universities in Guangdong and especially pay attention to the training of teachers' scientific research level. This research gives the following suggestions:

6.1. Introduce High-level Talents to Lead the "Young Scholar"

The introduction of High-level talents can help private colleges and universities improve the teaching and scientific research capabilities of their faculty. Private colleges and universities should further increase the recruitment salary and benefits to ensure the quantity and quality of High-level talents introduced, and further increase the reputation of the colleges, to recruit better students. In addition, "green peppers" are an important force in the construction of the faculty of colleges and universities. Private universities should further encourage "green

peppers" to participate in scientific research activities and adopt more incentives to strengthen their sense of identity and belonging. However, "green peppers" often lack teaching and research. Experience, and the new generation model of the older generation can speed up the construction of the teaching team. It is recommended that private colleges and universities, while introducing High-level talents, actively encourage High-level talents to lead the "green peppers" to gradually explore, and continuously improve the teaching and scientific research level of the teaching team.

6.2. Increasing the Capital and Scientific Research Funding

The research results show that private universities in Hong Kong and Macau invest more in teachers and scientific research funds, while the aforementioned Guangdong Higher Education Group invests less. The level of faculty and scientific research is relatively poor compared to private universities in Hong Kong and Macau. Private universities in Guangdong should be on par with private universities in Hong Kong and Macau to increase the investment of masters and scientific research funds, establish appropriate teaching and scientific research incentives, create a good scientific research environment, continuously improve the overall level of the faculty of the colleges and universities, and optimize the talent team. The ranking list further enhances the number and quality of students.

6.3. Encourage "Young Scholar" to Lead Students to Practice

Since the age of "young scholar" is not much older than college students, and they are often more integrated with students, private colleges and universities should appropriately encourage "young scholar" to lead students to participate in teaching, practice and scientific research, and promote the friendly development of teacher-student relations. It can help students better absorb and use relevant knowledge, improve students' practice and learning level, and the level of student development is particularly important for private colleges after the transfer, especially for private colleges that need to apply for master's and doctoral programs in the future. The quality of students can represent the overall level of the school to a certain extent.

References

- [1] Xu Changqing: The role and role of universities in the construction of the Guangdong-Hong Kong-Macao Greater Bay Area: Interview with Professor Chen Fanchang, President of Hong Kong University of Science and Technology, Journal of National Academy of Education Administration, 2018, 4(12), p. 17-24+ 95.
- [2] Wang Yitao, Liu Hong: Difficulties, paths and countermeasures for the transfer of public independent colleges, Fudan Education Forum, 2021, 19(03), p.81-88.
- [3] Li Wenjing, Sheng Nannan, Liu Jun: Problems and solutions in teacher evaluation and incentive mechanism of independent colleges, Journal of Jiamusi Vocational College. 2021, p.37(01).
- [4] Wan Yao, Zhu Ruiting: The predicament and solution of the scientific research development of private undergraduate colleges and universities, Journal of Zhejiang Shuren University (Humanities and Social Sciences), 2020, 20(01), p.25-31.
- [5] Xuan Lina, He Maobing, Qian Junping: Research on the Cultivation of Scientific Research Ability of Teachers in Private Colleges and Universities--Taking Private Colleges and Universities in Guangdong Province as an Example, Journal of Zhangjiakou Vocational College of Technology, 2012, 25 (04), p. 23-25.