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An Analysis on Social Ecological Changes and Development Paths after Macao Sovereignty Returned to China

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Abstract

This paper analyzes the social and ecological changes of Macao's sovereignty before and after China's return from the aspects of population and land, economic structure and social structure. The authors believe that the tension between population and land is a fundamental issue in Macao's social ecology. After the return of Macao sovereignty to China, Macao residents increased rapidly, and land use growth was slow. The economic structure of Macao is relatively simple. Although Macao is trying to explore industrial diversification, the economic structure of its gaming industry is hard to change. After the return of sovereignty, the changes in the educational structure and employment structure of Macao reflect the social stratification and niche of different families and groups in Macao. In the past about 20 years since the return of Macao sovereignty to China, there have been some changes in human-land relations and urban space, industrial adjustment and economic structure, cultural education, and labor employment. These changes have had a profound impact on the future social development of Macao. Due to the scarcity of land resources and the urgent need for low-rent housing, the issue of rational development and utilization of Macao's land has become the focus of the Macao people. Before the moderate diversification of the economy and the diversification of local employment, Macao's long-term stability and prosperity have developed a long way. The natural ecology of human-land relations, the economic ecology of gambling and related services, and the multi-ecological interweaving of the social and cultural ecology of education and employment bias have added new features to Macao's public administration and social governance. In the future development of Macao, it is necessary to take effective measures in the areas of politics, economy, population, and education on the basis of changes in the international and domestic environment to promote social stability and prosperity in Macao.

Keywords: Macao Sovereignty Return to China, Social Ecology, Social Change, Public Management, Social Governance

1. Main literature review

There are many changes in politics, economy, society, and culture, and many related research results have been made in the past about 20 years since the return of Macao sovereignty to China. Felix Neto (2001) reported that Chinese students are engaged in 87 dangerous activities in Macao, the average risk level judgment of materials

The second article of a series of papers on social ecology and social change after Macao's sovereignty return to China.

and technology, and compared with the survey results of African, American and European samples, that these results can pass the particularly high crime rate in Macao and local The rude display of the media to explain.

Coc Meng Chiang(2005) reviewed how the Macao government helped the real estate market solve the problem of oversupply of real estate in the early 1990s, and considered the housing sector to be one of the most important local public revenue sources in Macao. From the perspective of network scale, Kwok Kit(2011) examined the factors affecting the quality of social networks and believed that the level of social participation, trust, and social identity was positively correlated with the quality of social networks. From the perspective of political economy, Dicky Wai Leung Lai (2010) explored the development of social security in Macao from 1998 to 2008, provided empirical support for the political-economic interpretation of East Asian social policy, and enhanced the understanding of the nature of social policy in the region.He(2014) also compared the impact of Macao's social policy on its capitalist social structure with six welfare effects.

Yim King Penny Wan(2012) described the global casino and casino travel boom and investigated the social, economic and environmental consequences of casino gaming in Macao since the liberalization of casino licenses in 2002. He(2013) assessed the sustainability of Macao's tourism industry by assessing the economic, sociocultural and environmental impacts of tourism in 2002-2009, visitor satisfaction and the level of community involvement in local tourism planning, and considered Macao to urgently need integration of all major Overall plan for tourism development for stakeholder interests.

Bill K.P. Chou(2012) holds that the background to the establishment of a legality legitimacy crisis since the transfer of the Macao government's autonomy, which should be traced back to the administrative problems of the colonial era. He (2015) also believes that Macao's major social organizations perform political and social functions of political mobilization and participation, provide social services on behalf of the government, and act as agents of the Chinese government to implement the united front, strengthen the coordination policy of social forces and the tools of the Macao government to win supporters.

Anise M. S. Wu(2013) believes that the favorable attitude towards superstition and technology, the poor control of the perceived behavior of gambling rejection, and the high gambling intention increase the vulnerability to excessive gambling participation. Carlos, Siu Lam(2015) researches the nature of informal learning in Macao and inquires as to how front-line employees develop, experience, and share the knowledge gained through this process. Glenn McCartney(2015) examined the corporate mission statements of Macao's casino concessionaires with regards to social message content as well as social outcomes to date within Macao's various tourism stakeholders, puts forward that it is further amplified by Macao's small landmass, limited workforce pool, increasing tourism arrivals and a vast dependency on imports, creating a constant battle for resources and added pressure on its community and natural environment. Xi Yan (2016) reveals the sociolinguistics imagination of the homogeneous language community in Macao, and illustrates how the Macao people negotiate and construct discourse in the tension between "one country" and "two systems", and believe that Macao can explain local and national How tensions work in the language and produce a broader resonance outside the location of the survey.

Li Sheng(2017a) illustrates and analyzes the dynamic relationship between economic regulation and urban politics on a rapidly growing urban island facing various governance challenges,he holds that the root causes of the Macao Special Administrative Region (SAR) government's inability to regulate the city's major economic issues should be partly attributed to the city's 500 years of Portuguese colonial rule. He (2017b) also discusses on the urban governance and political culture of Macao, and believe the sustainable development of the former Portuguese colonies was largely hampered by residents' political communication, opaque urban governance, lack of middle class and negative attitudes supporting the establishment of social groups.

Ying-ho Kwong(2017) learned about contemporary politics in Macao by providing a casino-sponsored community association perspective and provided an interesting case study on the democratization of local government, arguing that the existence of a ruling coalition reorganization is essential for the post-colonial Macao government to maintain its regime's continued existence. Tycoons use community associations to build

cooperative networks, defend government policies, achieve political mobilization, and more importantly, protect existing hybrid systems. In addition, KampengLei(2018) and Liao Yang(2018) also discussed related issues.

However, from the perspective of social ecology, it is rare to analyze the results of social changes since the return of Macao sovereignty to China (Hsin-Huang Michael Hsiao,2014) Using statistical data from various sources and historical history in sociology - a comparative analysis of the Dharma, Hao Zhidong (2015) examined the changes in national and class politics before and after the return of Macao in 1999. Using data from 2003 and 2007, Davis K.C. Fong (2011) analyzed the social cost of Macao gambling before and after the liberalization of the gaming industry from the perspective of the welfare economy. He believed that the sharp increase in social costs in Macao is the history of the increase in gambling supply and the previously underdeveloped monopoly system caused by the impact.

In summary, the existing literature on Macao society focuses on social costs and social security, social policy and social security, social interaction and social trust, public administration and social organization, social culture and social language, urban governance and In areas such as political ecology, less focus is on the issue of social and ecological changes caused by tensions between Macao's population and land. Therefore, this paper starts with the problem of the tight relationship between population and land in Macao and analyzes the social changes caused by Macao's "land" conditions and the "land" problem. So that we can better observe and analyze Macao society.

2. Macao's population and land changes with the return of sovereignty to China

The Population issues and the land issues are important areas of socio-ecological research. The relationship between the population and land of Macao is, in fact, a key issue that cannot be avoided in the sustainable development of Macao society.

(1) Population and land before the return of Macao sovereignty to China

According to related research, the population of Macao since 1561 has changed differently in different historical periods. From five or six hundred people in 1561 to 10,000 in 1578, it was stable at 20,000 in 1580-1621 and increased to 40,000 in 1640. It was reduced to 5,500 in 1743, but it began again in 1750. It rose from 20,000 to 37,000 in 1835, to 13,000 in 1839, to more than 80,000 in 1860, to 59,959 in 1878, and to 74,866 in 1910. (Zheng Tianxiang,1994)

According to the 13th census of Macao, on August 30, 1991, the resident population of Macao was 355,693, and there were 47,000 inhabitants, totaling 400,000. In terms of nationality, 68.2% of the population of Macao is Chinese, Portuguese is 27.9%, and British is 1.8%. However, since many Chinese at the time held Portuguese or British passports, the proportion of local Chinese should be more than 68.2%. From the perspective of language use, the daily language of 3 years old and above is 86.3% for Guangzhou dialect, 1.1% for Mandarin, and 9.2% for other Chinese dialects, accounting for 96.6%.In addition, about 11,000 of the Portuguese are native Portuguese. In terms of population distribution and population density, 96.3% of Macao's population is distributed in the Macao peninsula, with populations of 2.0% and 0.9% in Taipa and Coloane, respectively, and 0.8% of floating residents. In the Macao peninsula, Huadi Matang District has the largest population, accounting for 35.5%; followed by St. Anthony's Church District, accounting for 30.5%; while the remaining Wangdetang District, Fengshuntang District, and Lobby Area together account for 30.3 %.It is worth noting that the population density of Macao is 19,761 people per square kilometer, 51,127 people in the Macao peninsula, and the population density of St. Anthony is the largest, reaching 98,776; the population density of Taipa and Coloane is 1,748 and 437 respectively(Huang Hanqiang and Wu Zhiliang,1994).

Macao is the site of the Pearl River Estuary, and its land area has been increased through continuous land reclamation. From 1866 to 1991, the Macao Peninsula experienced about four large-scale reclamation activities, namely the North Bay and Shallow Bay reclamation from 1866 to 1910, and the inner harbor reclamation from 1919 to 1924, new port and South Bay reclamation from 1923 to 1938, the new port since the 1980s and the black sand ring reclamation. The area of Macao expanded from 10.94 square kilometers in 1910 to 180,000

square kilometers in 1991, of which the Macao Peninsula increased from 3.35 square kilometers to 6.7 square kilometers, and Taipa Island and Coloane also ranged from 1.98 square kilometers to 5.6 square kilometers. Increased to 4.1 square kilometers and 7.2 square kilometers(Huang Hanqiang and Wu Zhiliang,1994).

(2) Population and land change after the return of Macao sovereignty to China

Macao sovereignty officially returned to China on December 20, 1999. In the past 20 years, there have been many changes in the population and land of the Macao Special Administrative Region. Due to the small number of Macao people and limited development space, reclamation and expansion of geospatial space is also the only way to resolve the narrow land after Macao's sovereignty returns to China. It can be said that the continuous expansion of the land area in Macao in recent years is actually the result of land reclamation in the Cotai area. During the 25 years from 1991 to 2015, the total area of Macao increased by 12.4 square kilometers, of which the area of the reclamation area increased by 4.3 square kilometers.

Table 1. Changes of land area in Macao from 1991 to 2017 (unit: : km²)

year	Total area	Macao Peninsula						Ilhas Islands			Cotai reclamation zone
		subtotal	St ^o . António	S. Lázaro	S. Lourenço	Sé	N. Sr ^a . Fátima	subtotal	Taip a	Coloane	
1991	18.0	6.7	1.1	0.6	0.9	1.4	2.7	11.3	4.1	7.2	1.6
2001	25.8	8.5	1.1	0.6	0.9	2.9	3.0	13.8	6.2	7.6	3.5
2006	28.6	9.3	1.1	0.6	1.0	3.4	3.2	14.1	6.5	7.6	5.2
2011	29.9	9.3	1.1	0.6	1.0	3.4	3.2	15.0	7.4	7.6	5.6
2015	30.4	9.3	1.1	0.6	1.0	3.4	3.2	15.2	7.6	7.6	5.9
2017	30.8	9.3	1.1	0.6	1.0	3.4	3.2	15.5	7.9	7.6	6.0

Source: data compiled from the statistical yearbook of Macao in the past year, but excluding the new campus of the University of Macau.

The data in Table 1 shows that the land area in Macao has increased by 1.71 times since the return of the year (ending 2017), compared with 1991 before the reunification, mainly due to the increase in the area of the lobby area, Taipa and Huadi Matang district. At the same time, the area of the Cotai reclamation area has also increased by 3.75 times.

Table 2. Changes in Macao's environment from 2005 to 2017

Subject/year	2005	2010	2013	2014	2015	2017
Total land area (km ²)	28.2	29.7	30.3	30.3	30.4	30.8
Lane length of public roads (km)	368.2	413.4	421.3	424.1	427.0	427.5
Population density ('000/km ²)	16.8	18.1	19.5	20.5	21.1	21.1
Motor vehicle density (No./km)	414	476	541	566	584	565
Total volume of drinking water treated ('000 m ³)	59620	76755	87124	93321	94808	97232
Water consumption per day ('000 m ³)	153	184	215	229	233	242
Waste water treated per day ('000 m ³)	153	188	215	217	193	211
Domestic waste (t) ^a	162131	164780	207811	218987	229004	255653

Source: Macao Statistical Yearbook (2017), Macao Bureau of Statistics and Census, August 2018, PP. 29-30.

From the data in Table 2, it can be found that during the 13 years from 2005 to 2017, the total land area of Macao increased by 2.6 square kilometers, but the population density and car density increased by 4.3 persons and 151 cars per square kilometer respectively; By 1.63 times, the average daily water consumption and sewage treatment volume increased by 1.58 times and 1.38 times, respectively, and household waste also increased by 1.58 times. This shows that since the return of Macao sovereignty to China for about 20 years, with the increase of the population density of Macao, the relationship between Macao's population and the natural environment

has become tense. Not only the contradiction between population and land is prominent, but also the environmental carrying pressure is increasing. The area tends to decrease, and the number of households in various types of houses increases. See Table 3 for details.

Table 3. Population density, living area and household changes in Macao from 2006 to 2017

Subject year	Total area (’000 / km ²)	Macao Peninsula (’000 / km ²)	Taipa (’000 / km ²)	Coloane (’000 / km ²)	Per capita living space (square feet)	Total number of households (thousand households)						Average number of members
							1 Person	2 Person	3 Person	4 Person	5 or more than 5 Person	
2006	17.4	—	—	—	—	161.9	—	—	—	—	—	—
2007	18.0	48.6	10.2	0.5	217	171.1	25.1	36.8	39.6	44.4	25.2	2.93
2008	18.9	50.1	10.8	0.5	221	177.3	25.4	38.8	42.4	45.0	25.7	2.88
2009	18.4	50.2	10.8	0.5	225	177.9	25.1	39.8	42.8	45.7	24.6	2.86
2010	18.1	49.1	11.1	0.5	216	169.7	26.5	38.0	40.6	41.4	23.2	3.04
2011	18.4	50.1	10.6	0.6	217	172.6	24.8	42.5	40.2	41.5	23.6	3.05
2012	19.0	50.9	11.1	0.6	218	178.6	26.3	42.7	44.5	41.1	24.0	3.03
2013	19.5	53.4	11.6	0.9	218	185.2	25.0	44.9	45.9	42.6	26.8	3.07
2014	20.5	54.9	12.7	1.8	218	189.6	27.2	44.9	47.8	41.9	27.9	3.07
2015	21.1	55.9	13.4	2.6	216	192.7	27.3	45.1	48.3	44.1	28.0	3.09
2016	21.4	56.1	13.6	3.5	218	189.2	27.5	45.2	47.1	41.6	27.7	3.06
2017	21.1	55.7	13.0	3.5	220	191.5	27.7	47.2	48.1	41.6	26.8	3.03

Source: According to the data of Macao Data 2007-2018, Macao Bureau of Statistics and Census, PP. 5-6.

Under this circumstance, the Central Government announced the "Macao Special Administrative Region Map of the People's Republic of China" on the 15th anniversary of the return of Macao's sovereignty to China, clarifying the customary waters and new land boundaries of Macao, in order to alleviate tension relation between the population and the land in Macao, and promoting the transformation and development of Macao's economy and society and provided a good ecological environment.

3. Economic and social changes after the return of Macao sovereignty to China

Economic and social changes caused by changes in human-land relations are another important area of social-ecological research. In the past 20 years since the return of Macao sovereignty to China, many important changes have taken place in its economy and society.

(1) The economic structure and its changes after the return of Macao sovereignty to China

For a long time, Macao's economic structure is relatively simple, and the economic structure of the gaming industry is difficult to change.

Table 4. The development of the gambling industry in Macao from 2004 to 2015 (Unit: million Macao pataca)

year	number of gambling enterprises (room)	Profit				expenditure					total value added	Total capital available for fixed capital
		total	Gambling service	interest income	other revenue	total	employee expenditure	operating expenses	Shopping ar commissio expenses	Non- operating expenditure *		
2004	8	4406.6463	4363.3412	2.3021	41.0030	2284.8031	191.4014	432.8142	1623.8539	36.7337	2351.0970	310.6888
2005	8	4973.3460	4738.9679	13.6412	220.7369	2388.5528	310.3231	435.0532	1573.5900	69.5865	2951.0811	254.0592
2006	10	5836.8773	5803.7192	33.1581	—	3059.1503	498.1534	725.5074	1715.2509	120.2386	3365.1756	358.6429
2007	10	8521.1411	8497.6062	23.5349	—	4465.8588	871.9995	976.6871	2393.6893	223.4829	5126.3863	790.1350
2008	10	11117.4152	11110.12477	16.1675	—	5798.1566	1074.2144	1033.7751	3348.1713	341.9958	6719.2570	92.2329
2009	10	12157.9486	12140.3031	17.6455	—	6332.0548	1022.0575	1034.6012	3932.7338	342.6623	7175.0463	294.7728
2010	10	190672	190621	51	—	91272	10706	11886	65436	3244	113336	1099
2011	10	270252	270113	139	—	124377	12268	14203	94757	3149	161128	2241
2012	10	306822	306487	335	440	137511	14325	17561	102516	6218	186432	3188
2013	10	363071	362750	321	564	156653	16177	21173	115737	7132	225868	4346
2014	10	354049	353637	412	—	150894	18970	24551	103836	3536	225247	2645

2015 10 233229 232951 278 — 101866 19933 21244 56991 3697 154736 2751

Source: According to the Macau Gambling Survey 2004-2015, non-operating expenditure includes interest, depreciation, fines and so on.

According to the data in Table 4, the number of gaming companies in Macau has stabilized at ten since 2006, and the revenue from gaming services has continued to decline since 2014, but its revenue is still nearly 40 times that of 10 years ago (2006), and it is 2004. It is 53 times, and its expenditure is 33 times and 44 times respectively. This situation indicates that the gaming industry still has a very strong position in its economic and social development after the return of Macao's sovereignty to China, and the profitability of the Macao gaming industry has also been rising in recent years. See Table 5 for details.

Table 5. Development of gambling enterprises in Macao from 2010 to 2014 (Unit: million Macao pataca)

Subject	year	2010	2011	2012	2013	2014
	enterprise(room)		10	10	10	10
Gaming and related services revenue		190621	270113	306487	362745	353637
purchase, commission and customer rebate		65436	94757	102516	115737	103836
operating costs		11886	14203	17561	21167	24551
employee expenditure		10706	12403	14325	16178	18970
total value added		113336	161128	186432	225870	225247
cross fixed capital formation		1099	2241	3188	2153	2645
profit		102630	148726	172108	209692	206277
profit ratio (%)		53.8	55.1	56.2	57.8	58.3

Source: Macao gambling industry survey (2105), Macao Statistics and Census Bureau, p.4.

In 2014, the total revenue of the gaming industry in Macao was 354.06 billion patacas, a decrease of 2.5% year-on-year. This is the first time that the Macao gaming industry has recorded a decline since the survey was launched in 2004; The total added value of Macao's economic contribution was 225.25 billion patacas, a slight decrease of 0.3% year-on-year. (Macao Statistics and Census Bureau,2015)In addition, according to statistics from the Macao Gaming Inspection and Coordination Bureau, there were 33 lucky gaming casinos operating in Macao at the end of 2015, maintaining the 2014 level; the number of table games at the end of 2015 was 5,957, up 4.3% year-on-year; the number of slot machines increased 12.0%, a total of 14478 units(Macao Statistics and Census Bureau,2016).

It is worth noting that during the decade from 2005 to 2014, the Macao secondary industry decreased by 9.6 percentage points, while the tertiary industry increased by 15.8 percentage points during the same period. See Table 6 for details.

Table 6. Macao's local industrial structure from 2005 to 2015 (unit : %)

Subject year	The secondary industry				The service sector				
	total	manufacturing industry	Distribution of electricity, gas, and water	Construction business	total	Wholesale, retail, maintenance, hotel and catering industries	Transportation, warehousing & communications	Finance, insurance, real estate, leasing and business services	Public administration, social services, and personal services (including the gambling industry)
2005	14.8	4.3	1.8	8.7	88.7	11.9	4.7	22.2	49.9
2006	18.7	3.9	1.6	13.2	85.1	11.3	4.2	23.1	46.5
2007	17.7	2.8	1.1	13.8	86.0	11.7	3.7	22.8	47.9
2008	17.3 ^r	2.1 ^r	1.2 ^r	14.0 ^r	82.7 ^r	11.9 ^r	3.4 ^r	23.0	44.4 ^r
2009	11.0	1.5	1.3	8.3	89.0	13.9	3.7	23.2	48.2
2010	7.4	0.9	1.1	5.5	92.6	15.0	3.7	19.4	54.5
2011	6.4	0.6	0.8	4.9	93.6	15.6	3.3	17.8	56.9
2012	4.1	0.5	0.5	3.1	95.9	10.1	1.9	13.4	70.5
2013	3.7	0.4	0.5	2.8	96.3	10.0	1.8	14.4	70.1
2014	5.2	0.4	0.5	4.3	94.8	10.3	2.0	16.7	65.7

Source: According to the “Macao Information” in 2009, 2011, 2013 and 2016. *r* indicates its official revision number.

According to the data in Table 6, from 2005 to 2014, the manufacturing industry in Macao's industrial structure has decreased by nearly ten times, the construction industry has decreased by half, and the production and distribution of water, electricity, and gas have also decreased by 3.6 times. Public administration, social services, and personal services, including the gaming industry, accounted for more than half of the entire tertiary industry in the three industries. From 2009 to 2014, Macao's gaming and gaming intermediary industry accounted for 32.1%, 41.1%, 44.7%, 62.9%, 63.1% and 58.3% of the industrial structure in Macao, reaching its all-time high in 2013. After 2014, the gross profit of gaming companies showed an inflection point, falling for 26 months. It was only until August 2016 that it fell to a limit (gross income of 18.83 billion patacas), an increase of 1.1% over the same period of the previous year. (Macao Statistics and Census Bureau,2014,2017; Kuan Wangan,2016.)

Since the opening of the Macao gambling rights in February 2002, the gaming industry has outperformed Macao's economic development. From the 19.54 billion patacas in 2001 before the opening of the gambling rights, it climbed all the way to 305.235 billion patacas in 2012, breaking through 3000 for the first time. In the year 2013, it reached the highest level in history (361.86 billion patacas). At the same time, the development of other Macao business enterprises has been relatively slow. Although Macao's foreign trade increased in 2001-2015, the volume of import and export increased by 0.58 times and 4.42 times respectively in the past 15 years, but the trade deficit increased by 106.13 times. In addition, the gross weight of sea, land and air transport in Macao has dropped from 473,900 tons in 2001 to 249,900 tons in 2013. Although it rebounded in 2015, it has only reached half of the highest level in 2004 (632,500 tons). It is about 308,300 tons, and it has dropped 0.65 times in 15 years. In terms of construction and real estate, the expenditure on public works in Macao in 2015 was 7.904 billion patacas, an increase of 14.8 times compared with the expenditure of 533.8 million patacas in 2001. In 2015, the number of private projects and the sales of building units increased by 2.53 times compared with 3.17 times in 2004.^②

Observed from the changes in the number of companies in Macao, the number of newly established companies and dissolution companies in 2001 was 883 and 90 respectively and has increased year by year. By the end of 2015, the number of newly established companies and dissolution companies in Macao reached 5,023 and 595 respectively. During the year, it increased by 5.69 times and 6.61 times respectively, while its power consumption was only 3.13 times, reflecting the small proportion of industrial processing enterprises in the economic structure of Macao. Since the 1980s, the Macao economy has formed four pillar industries of gambling, construction real estate, financial insurance and processing, and manufacturing (accounting for 5% of local GDP).

Since the return of Macao's sovereignty to China, the processing industry has shrunk significantly. The wholesale and retail, hotel, catering and other business services industries have developed rapidly, replacing the processing industry and becoming a new pillar industry. Gaming, construction real estate, and financial insurance continue to maintain the pillar industries status. The data shows that the value-added of the gaming industry in Macao from 1999 to 2012 increased by 20.4% annually, higher than the GDP growth rate of 6.5%, the GDP ratio increased from 22.3% to 45.9%; the value-added of the business services industry increased by 19% annually. Higher than GDP growth rate of 5.1%, GDP ratio increased from 8.8% to 15.6%; construction industry added value increased by 11.2% annually, financial and insurance industry added value increased by 9.2% annually, and the value added in 2012 accounted for GDP They were 11.9% and 5.7% respectively. (People Network,2014.)

It is worth noting that the unemployment rate in Macao was the highest in 2001 before the opening of the gambling rights, reaching 6.4%. After the opening of the gambling rights in 2002, the unemployment rate in Macao was lower year by year, and remained basically at 1.8% after 2013 (1.7% in 2014), while the number of foreign employees increased in the same period. In 2001, there were 25,925 external employees in Macao and exceeded 110,000 in 2012. It reached 181,600 in 2015. In the past 15 years, the number of employees in Macao has increased seven-fold. (People Network,2014.)

As early as 2001, the Macao SAR Government put forward the keynote of "taking the tourism betting industry as the leader and the service industry as the main body to promote the coordinated development of other industries." The national "Eleventh Five-Year Plan" and "Twelfth Five-Year Plan" clearly proposed to promote Macao. Moderate and diversified economic development." The national "Twelfth Five-Year Plan" clearly stated that it supports Macao to accelerate the development of leisure tourism, exhibition business, Chinese medicine, education services, cultural and creative industries. Macao's convention and exhibition industry have gradually developed since 2013. In 2015, it reached 1,263, and the number of visitors increased from 2.0336 million in 2013 to 2,156,100 in 2015. In the three years, it increased by 122,500, with an average annual increase of 40.8 thousand people.

In addition, in recent years, the SAR Government has continuously increased its support, formulated and promulgated the "Macao Cultural Industry Development Policy Framework", clarified the development path, specific development strategies and implementation measures of the Macao cultural and creative industries; continued financial support, since 2010, through various special funded support programs, more than 2,000 non-profit-making organizations and private cultural activities were funded, with a funding of nearly 100 million MOP, strengthening the protection and inheritance of Macao's cultural heritage, strengthening local cultural characteristics and promoting local cultural creation. (People Network,2014)

In general, the economic structure of Macao after the reunification has undergone new changes. After the opening of the gambling rights, the gaming industry is dominated by the gaming industry, and the processing industry is shrinking. Wholesale, retail, hotels, restaurants and other business services and leisure tourism and exhibition business The rapid development of new formats, such as cultural creativity, will help increase employment opportunities and jobs, and maintain the unemployment rate of 1.7% to 1.8% when the number of external employees increases year by year.

(2) Macao's social structure and its changes after the return of sovereignty to China

Firstly, there have been some new changes in the population of Macao after the reunification. Although the labor force of 15-64 years old is basically stable at around 80%, in the decade of 2006-2015, the growth rate of young people under 15 years old has decreased. 2.8 percentage points, the elderly over 64 years old increased by two percentage points, and the aging index increased by 27.8%.

The population structure usually includes the natural structure, social structure and geographical structure of the population. The natural structure of the population is usually reflected in the age, sex, birth rate, mortality, natural growth rate, marriage rate, and aging index of the population. And the ratio of dependency; the social structure of the population usually include the hierarchical structure of the population, the ethnic structure, the language structure, the occupational structure, the cultural and educational structure, etc. It is the reflection of the current socio-economic development level of a country or region on the demographic structure; The geographical structure of the population reflects the spatial distribution of the population of a country or region.

In the decade from 2006 to 2015, Macao's natural population growth rate increased by 2.9 points, the birth rate increased by nearly three thousand points, and the mortality rate was basically flat at 3.1 thousand points. The sex ratio of newborn babies increased 0.6%; the number of marriages and divorces per 1,000 people increased by 1.6 and 0.6 respectively in ten years; from the geographical structure, the population density of Macao increased by 4,100 people per square kilometer from 2007 to 2015; However, the population density of the Macao Peninsula has grown the fastest, with an increase of 7,300 people per square kilometer in nine years; an increase of 3,200 people per square kilometer in Taipa; and an increase of 2,100 people per square kilometer in the outlying islands. See Table 7 for details.

Table 7. Natural structure and regional structure of Macao population from 2007 to 2017

subject		year										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-year population('000)	total	538.1	549.2	542.2	540.6	557.4	582	607.5	636.2	646.8	644.9	653.1
	male	265.7	269.5	261.2	258.5	268	280.3	295.2	314	317	305.5	307.0
	female	272.4	279.7	281.0	282.1	289.3	301.7	312.3	322.2	329.8	339.4	346.1
Age structure (%)	0-14	13.5	12.8	12.7	12.4	11.8	11.6	11.3	11.4	11.9	12.5	12.7
	15-64	79.5	80.0	79.5	80.2	80.8	80.8	80.7	80.2	79.1	77.7	76.7
	65 and over	7.1	7.2	7.7	7.4	7.3	7.7	8.0	8.4	9.0	9.8	10.5
Population growth rate (%)		4.7	2.0	-1.3	1.4	3.1	4.3	4.3	4.6	1.6	-0.3	1.3
Aging ratio (%)		52.4	56.2	60.3	59.6	62	66.2	70.8	73.8	75.6	78.9	83
Dependency ratio (%)		25.9	25.1	25.7	24.6	23.7	23.8	24	24.7	26.4	28.7	30.3
Vital statistics	Crude birth rate(‰)	8.6	8.5	8.8	9.5	10.6	12.9	11.1	11.8	11.0	11.0	10.1
	Crude mortality rate(‰)	2.9	3.2	3.1	3.3	3.4	3.2	3.2	3.1	3.1	3.4	3.3
	Rate of natural increase(‰)	5.7	5.4	5.7	6.2	7.3	9.6	7.9	8.7	7.9	7.5	6.8
	Infant mortality rate(‰)	2.4	3.2	2.1	2.9	2.9	2.5	2.0	2.0	1.6	1.7	2.3
	Sex rate at birth(Males per 100)	106.7	110.4	108.9	108.1	109.7	113.8	114.5	109.7	109.2	109.4	107.5

	females)											
	Marriages per 1000 population (case)	3.9	5.0	5.6	5.8	6.5	6.7	7.0	6.6	5.8	6.0	6.0
	Divorces per 1000 population (case)	1.3	1.2	1.4	1.7	1.8	2.2	2.0	2.1	1.8	1.9	2.3
Population density(‘000/Km ²)	total	18.0	18.9	18.4	18.1	18.4	19	19.5	20.5	21.5	21.4	21.1
	Macao Peninsula	48.6	50.1	50.2	49.1	50.1	51.9	53.4	54.9	55.9	56.1	55.7
	Taipa	10.2	10.8	10.8	11.1	10.6	11.1	11.6	12.7	13.4	13.6	13.0
	Coloane	0.5	0.5	0.5	0.5	0.6	0.5	0.9	1.8	2.6	3.5	3.5

Source: according to the relevant data of the 2008-2018 annual Macao data.

From 1999 to 2016, live pigs, deaths, marriages, foreign workers, and legal immigrants from mainland China during the 17 years in Macao showed a significant increase, while the number of illegal immigrants repatriated decreased by nearly half. See Table 8 for details.

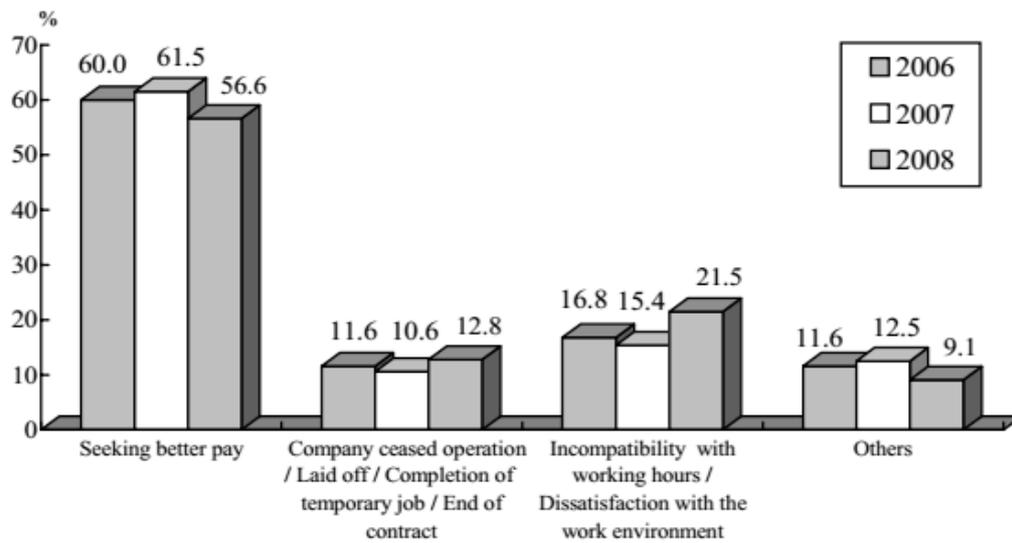
Table 8. Macao population increase, labor force, and immigration status in 1999- 2017 (unit: person)

year	Live birth	mortality	Fetus mortality	marriage	Individuals granted right of abode	Non-resident Workers (end-period)	Chinese immigrants	illegal immigrants-repatriated
1999	4148	1374	15	1367	973	9988	4984	3434
2004	3308	1533	10	1737	7279	15553	6885	403
2009	4764	1664	13	3035	9489	74905	3121	1524
2014	7360	1939	20	4085	2278	170346	5889	1409
2015	7055	2002	9	3719	1784	181646	8468	1778
2016	7146	2248	18	3891	1447	177638	6327	1290
2017	6529	2120	20	3883	1527	179456	4206	913

Source: Macao population statistics(all relevant years). Among them, the number of marriages is the case.

The data in Tables 7 and 9 show that the natural structure and geographical structure of the Macao population after the return have undergone significant changes, and this change has been inflicted around 2005-2006. This should be related to the adjustment of the public policy of the Macao SAR government after the reunification.

Secondly, the post-return Macao education structure and the changes in its employment structure reflect the social stratification and niche of different families and groups in Macao. Generally speaking, in a society with a higher degree of openness, people's initial employment and transfer employment are basically related to their ability level (mainly reflected by the educational situation), and vice versa.



Source: *SURVERY ON JOB CHANGING OF THE EMPLOYED (2008)*, Government of Macao Special Administrative Region Statistics and Census Service, April 2009, page 2.

Graph 1. Main reasons for changing jobs (2006-2008)

The data in Figure 1 shows that the main reason for the labor exchange in Macao in 2006-2008 was to find better job benefits. Among the reasons for the transfer of Macao from 2006 to 2008, the top priority was the issue of work, which was more pronounced in 2007 (61.5%), while the factors of treatment in 2008 were reduced, while working hours and work The environment increased by 6.1% over the same period of the previous year.

From the age point of view, young people aged 14-24 are the most heavily transferred, indicating that they are not satisfied with their first-time occupations and employment, so the frequency of transfer is large, and it is on the rise. See Table 9 for details.

Table 9. The proportion of employment population conversion work in all age groups in Macao (2006-2008) (%)

Age structure	Year	2006	2007	2008
	14—24		14.4	17.7
25—34		11.6	11.3	10.7
35—44		9.9	8.7	9.0
45—54		7.3	8.8	9.5
≥55		2.7	4.2	9.2

Source: *SURVERY ON JOB CHANGING OF THE EMPLOYED (2008)*, Government of Macao Special Administrative Region Statistics and Census Service, April 2009, page 2.

In addition, the status of work in the same industry and in different industries can also reflect the degree of social openness of a country or region to a certain extent.

Table 10. Turnover of employees in related industries in Macao in 2008

Employee mobility	Recreational, Cultural, Gaming & Other Service		Hotels, Restaurants & Similar Activities		Wholesale & Retail Trade	
	No.	% of Inflow	No.	% of Inflow	No.	% of Inflow
No. Of Employed	78900	...	41300	...	39600	...
Inflow	16200	100.0	8000	100.0	4300	100.0
Cross-industry	8200	50.6	3600	45.0	2400	55.8
Intra-industry	8000	49.4	4400	55.0	1900	44.2
outflow	2400	...	4100	...	4800	...

...Not applicable

Source: *SURVERY ON JOB CHANGING OF THE EMPLOYED (2008)*, Government of Macao Special Administrative Region Statistics and Census Service, April 2009, page4.

The data in Table 10 shows that the turnover rate of the entertainment and gaming, shopping and catering, wholesale and retail trades in Macao in 2008 was about 50%, but the cross-industry of entertainment, gaming and other services and wholesale and retail trades. The transfer is not only higher than that of the same industry but also higher than the cross-industry transfer of the hotel and catering industry. It shows that the hotel and catering industry prefers management, management, and professional technology. The wholesale and retail industry may be allowed to enter. The lower thresholds make it easier to attract cross-industry inflows, while the peers and inter-bank transfer of cultural gaming and other service industries are basically flat.

According to the human resources needs and salary surveys of different industries in Macao, the average pay gap between local employees and foreign employees in Macao is more obvious. The average salary of local employees is generally higher than that of foreign employees. For example, in June 2017, the average salary of local employees in the wholesale and retail business in Macao was 14,340 patacas, and the average salary of foreign employees was 10,640 patacas; the average salary of local employees in the transportation, communications and warehousing industry was 22,870 patacas, and the average salary of foreign employees was 18,870 patacas, the average salary of local employees in the public sewage treatment industry is 18,870 patacas, the average salary of foreign employees is 16,570 patacas, the average salary of local employees in the security services industry is 15,130 patacas, and the average salary of foreign employees is 11,550 patacas. (Macao Special Administrative Region Statistics and Census Bureau,2017)

In March 2018, the average salary of local employees in Macao's banking industry (excluding bonuses and bonuses) was 26,530 patacas, and the average salary of foreign employees was 27,440 patacas(Macao Special Administrative Region Statistics and Census Bureau,2018a) ; the average salary of local employees in the hotel industry was 210,000 patacas, the average salary of foreign employees was 14710 patacas; the average salary of local employees in the catering industry was 10,640 patacas, the average salary of foreign employees was 8,320 patacas; the average salary of local employees in manufacturing was 12,720 patacas, the average salary of foreign employees is 9,930 patacas; the average salary of local employees in the water and electricity supply industry is 33,540 patacas, the average salary of foreign employees is 20,290 patacas; the average salary of local employees in child care services is 15,410 patacas, the average salary of foreign employees The average salary of local employees in the elderly service industry is 19,830 patacas, the average salary of foreign employees is 11,440 patacas, the average salary of local employees in the insurance industry is 27,010 patacas, and the average salary of foreign employees is 31,750 patacas. The average salary of local employees is 17130 patacas, and the average salary of foreign employees is 10770 patacas. (Macao Special Administrative Region Statistics and Census Bureau,2018b)

The average salary of local employees in the gaming industry in June 2018 was 23,890 patacas, and the average salary of foreign employees was 19,120 patacas. (Macao Special Administrative Region Statistics and Census Bureau,2018c) With the exception of the banking and insurance industries, local employees in the rest of the industry are paid more than foreign employees. To a certain extent, this reflects the social niche and social

stratification of labor and employment structure, education and initial employment, and wage income since the return of Macao.

Thirdly, the changes in Macao's human development index after the reunification reflect some extent the changes in Macao's social structure.

The Human Development Index is a comprehensive measure of the development of a human being in a country or region. It is expressed by the weighted average of the life expectancy index, the education index, and the income index (per capita GDP calculated by the purchasing power evaluation method) of the country or region. The closer the composite index is to 1, the greater the humanistic development index of this country or region, and the higher its economic and social development. In general, the Macao human development index has been higher since the reunification, especially the life index and income index have reached the level of developed countries or regions in the world. See Table 11 for details.

Table 11. Macao humanities development index(2004-2016)

Year Subj	2004	2005	2006	2007	2008 ^r	2009 ^r	2010	2011	2012	2013	2014	2015	2016
LEI	0.937	0.935	0.942	0.950	0.983	0.987	0.989	0.983	0.963	0.963	0.968	0.972	0.974
EI	0.886 ^r	0.880 ^r	0.879	0.882	0.653	0.653	0.681	0.712	0.737	0.737	0.770 ^r	0.770 ^r	0.771
II	0.899	0.988 ^r	1.009	1.000	0.857	0.867	0.902	0.934	1.000	1.000	1.000	1.000	1.000
HDI	0.907 ^r	0.934 ^r	0.943	0.944	0.819	0.824	0.847	0.868	0.892	0.892	0.907 ^r	0.908 ^r	0.909

Instructions: LEI is "life expectancy index", EI is "education index", II is income index", HDI is "human development index".

Source: according to the data of "*Macao in Figures*" 2005-2018, ^r is the official revision number.

According to the data in Table 11, the humanity development index of Macao has maintained a fairly high level of life index and income index in the past 12 years, except for the relatively low education index. Among them, the 2014 Macao Human Development Index is the same as the 18th ranked Israel in the world. In 2013, it ranks with the 14th in the world. In 2012, it ranks 21st in the world rankings in Finland and Slovenia. Human development index.

(3) The impact of Macao's economic and social changes after the return of sovereignty to China

In the past about 20 years since the return of Macao sovereignty to China, social changes have taken place in terms of human-land relations and urban space, industrial adjustment and economic structure, cultural education, and labor employment. This change has a far-reaching impact on Macao's future social development.

First of all, the population of Macao has increased year by year, but the land area of the road reclamation area has been limited. The tension between man and land is still an important issue for the stable and harmonious development of Macao society. Due to the scarcity of land resources and the just-needed demand for cheap housing, the issue of the rational development and utilization of Macao's land has become the focus of attention of the Macao people. Around the Macao government's withdrawal of the idle land that has expired but has not yet been exploited, the *Macao Daily News* and other major newspapers in Macao often heard that Macao citizens and associations expressed their views and their different demands through parliament or "delivery" and members' questions and deliberations.

The concern of Macao people, associations and parliamentarians about Macao's "idle land issue" is, in fact, a realistic reflection of the tense relationship between population and land in Macao. In the case that the polarization between the rich and the poor in Macao is becoming more apparent and the price of luxury houses in Macao is high, the general public has mostly focused on the issue of social housing construction. The problems of land development, utilization and social housing construction in Macao due to the tight relationship between population and land will be one of the central issues of concern to Macao people, associations and parliamentarians in the current and future period.

Secondly, the opening of the gambling rights in 2002 was indispensable to the economic development of Macao in the early days of the revitalization. However, in the past ten years, the gaming industry and its related service industries have become the only ones in Macao, making it difficult for other industries to develop really. The Macao economy is moderately diversified, and There is obviously a long way to go before the diversity of local employment.

The Macao gaming industry and its related service industries have occupied the absolute central position of Macao's local GDP and taxation for more than ten years. It not only affects the diversified development of Macao's industries but also has a negative impact on Macao's social culture. "Although the number of inbound tourists from Macao in 2005 increased from less than 9 million before the return to 18 million, the average per capita consumption of tourists was only 1,633 patacas, while in Hong Kong, which is a tourist destination city, the number of tourists was 21.8 million, but per capita consumption has reached HK\$4211, which is 2.5 times that of Macao. There is not much place to buy things in Macao. This is a big problem."(Zhao Lingmin, 2006.)

For quite a long time, the legend of "Macao people don't gamble" has been circulating in the Macao, but this situation is changing quietly. Some people think that "the situation of Macao residents going to casino gambling is actually more common."(Anonymous,2016)In other words, there are actually dealers, elders, blue-collars and social gambling in Macao. "A survey conducted by the University of Macao in 2003 showed that 20.2% of the 320,000 Macao residents aged 15 to 64 were gambling in the casino in the past year. The average monthly gambling amount was \$87, of which sick gamblers. The proportion is about 1.78%. According to this proportion, there are about 5,700 pathological gamblers in Macao every year."(Anonymous,2016)Some people even think that it is too harsh for Macao to prohibit gambling practitioners from entering the casino outside of work. What are the reasons? It seems to be self-evident.

Under the temptation of decent work and high income, the employment mentality of local residents in Macao also yearns for the gaming industry and its related service industries."Opening the recent Macao newspaper, you will often see the full-page advertisement of 'Recruiting the dealer, monthly salary of 18,000 patacas'. The advertisement will be published the next day, and there will be a long-term applicant in the casino. There are junior high school students and university graduates. The other corner of the newspaper is the recruitment of police and teachers, with a monthly salary of 8,000 patacas."(Zhao Lingmin, 2006.)The huge taxation and employment bias brought about by the strong development of the gaming industry and its related service industries after the return of Macao actually curbed the diversified development of Macao's industry to a certain extent, and it is difficult to achieve effective diversification of its economy. Moreover, in the annual "send money" (government finance formed by gambling taxation), the dependence of Macao residents on "waiting, relying on, and wanting" is cultivated. The role of the "double-edged sword" in Macao's gaming and related services industry cannot be ignored.

Thirdly, the natural ecology of Macao's human-land relationship, the unique economic ecology of gambling and related service industries, and the multi-ecological interweaving of education and employment-biased social and cultural ecology have increased the public administration and social governance of the Macao SAR government. A new difficulty. In addition to building a "sunshine government" and scientific governance, effectively improving administrative efficiency, and promoting the transformation of "government governance" to service-oriented government management, we must also truly implement people-oriented, people-oriented, and truly achieve "government governance" to the government "good governance" and the "good governance" jump.

In the past about 20 years since the return of Macao sovereignty to China, Macao people have expressed their interests in peaceful and rational processions or "delivery." The activities of the "May 1st" or "October 1st" parade and "delivery letter" expressions are basically regularized every year.

Table 12. People's parade and appeals expression in Macao during May 1 (2006-2016)

year	Number of procession groups	Participation in the procession(unit: person)	Appeal content
2006	8	Over 3000	Expelling black workers and reducing foreign labor.
2007	5	No specific number	Livelihood, employment, and other issues
2008	No specific number	About 800	Livelihood, employment, and other issues
2009	No specific number	No specific number	unclear
2010	Multiple (unspecified)	No specific number	Livelihood, employment, and other issues
2011	8	About 2300	Livelihood, employment, and other issues
2012	No specific number	No specific number	unclear
2013	7	About1900	Livelihood, employment, and other issues
2014	18	1000	Livelihood, employment, and other issues
2015	13	About18000	Livelihood, employment, and other issues
2016	11	About 600, 141 cars and two motorcycles are involved.	Fighting corruption, protecting local workers' employment, demanding a salary increase, raising family members and ending real estate hegemony.

Source: Macao Yearbook web chronology. <http://yearbook.gcs.gov.mo/zh-hant/>; In 2016, refer to the Macao police net.

The statistics in Table 12 show that in addition to the incomplete information in 2008, 2009, 2010 and 2012, there are more groups and numbers of people in Macao during the May 1st period, and their appeals are mainly concentrated on people's livelihood and employment. People's livelihood involves social housing, pension, security, medical and health care, and employment is mainly focused on reducing foreign employees and increasing local employees. However, people's livelihood is a systematic project that requires overall planning and coordination. The employment problem essentially reflects social stratification and social mobility. It involves education guidance, social advocacy, policy guidance, and the willingness of both parties to work. It is far from simple addition and subtraction. The numbers of internal and external employees are so simple. All of these have put forward more and higher requirements for the "good governance" and "good governance" of the Macao SAR government.

4. The stable development path of Macao society in the social, ecological change

In the past about 20 years since the return of Macao sovereignty to China, the population, land, economy, and society have undergone varying degrees of change, that is, the social ecology since the return of Macao has changed. If Macao's prosperity, stability, and long-term stability are to be achieved in a situation where population, land, economy, and society have changed, it may be necessary to focus on the following three areas:

(1) Resolutely implement the "one country, two systems" policy and the central government's institutional arrangements and policies for the Macao Special Administrative Region, promote regional integration and innovation and development in Macao and Guangdong and Hong Kong, and use the country's "One Belt, One Road" strategy to play China and The advantages of the Portuguese-speaking countries' economic and cultural exchange platform, jumping out of Macao to see Macao, jumping out of the gambling to see Macao, jumping out of China to see Macao, placing Macao in the macroscopic scene of economic globalization to rethink its positioning.

At present, China's central government gives high expectations to Macao and regards Macao as a successful example of implementing "one country, two systems."The text of the first five-year development plan of Macao has been promulgated and implemented. The central government has given Macao the customary management of waters and the jurisdiction of the new land. On the morning of October 11, 2016, Premier Li Keqiang attended the "China-Portuguese-speaking countries economy and trade." At the opening ceremony of the 5th Ministerial Conference of the Cooperation Forum, China stated that it would adopt 18 new measures in five areas, including capacity, development, humanities, ocean and Macao platforms, to further strengthen Macao's cooperation with Chinese-speaking countries in China. status. This is a rare opportunity for Macao, and it is also

a golden opportunity for Macao to re-position itself and achieve innovation and development. The Macao SAR government should be more active and proactive in integrating the construction of the Guangdong-Hong Kong-Macao-Aowan area proposed by the central government and the “Belt and Road” economic belt advocated by China.

(2) Moderately control the size of Macao's population, prevent Macao's population from growing too fast in a short period of time, and guide Macao residents from a dense population by building social housing and supporting public service facilities in areas with relatively low population density such as Coloane and Taipa. The Macao Peninsula area has moved to an island area with a relatively small population density to ease the pressure on Macao's environment and promote the rational spatial layout of the Macao population. It also helps the relative differentiation between the residential area and the tourist area of the old city of Macao, avoiding the arrival of tourists to Macao. Local residents bring too much interference and inconvenience.

At present, Macao itself is positioned as a world tourism and leisure city. However, the scenic spots in Macao are mainly concentrated in the Macao Peninsula. The population density of the Macao Peninsula is large. The residents live in or near the scenic spots. The arrival of a large number of tourists has intensified the crowding of road traffic and shopping consumption and reduced the local residents, and The comfort and leisure of foreign tourists increase the time cost, transportation cost and even economic cost, which makes the marginal benefit brought by tourism greatly reduced or even zero. This is not only inconsistent with Macao's development orientation, but it may also damage Macao's tourism image and reputation. Therefore, the construction of social housing and its supporting public service facilities to evacuate the population density of the Macao Peninsula and realize the relative and moderate separation of the Macao tourist area and the Macao residential area is the only way to build a tourism and leisure city in Macao. The virtuous cycle of Macao's social ecology and natural ecology restores the basic path of the environmental carrying capacity of the Macao Peninsula.

(3) Accelerate the moderate diversification of Macao's economy and change the situation of Macao's economy over-reliance on gambling and related service industries. On the one hand, it is necessary to increase the stay time of foreign tourists in Macao and increase their consumption level during their stay in Australia. Macao can provide enough consumer market to foreign tourists, completely change the foreign tourists to Macao after entering the casino, less or not into the mall, only buy handwritten letters, no he can buy the dilemma.

Specifically, there are two main ways to extend the time for visitors to stay in Australia and to expand their consumption levels. First, the visa time for the modification of the Hong Kong and Macao Pass will be changed from one sign to one line, two lines, three lines or four lines, that is, increasing the number of mainland residents. The number of visits to Australia can be piloted in Guangdong and Fujian provinces adjacent to the provinces of Guangdong; the second is to extend the time for foreign tourists to visit Macao, and to make a one-day tour of Macao for two-day and three-day tours. It is necessary to expand the tourist and shopping areas of Macao and try to extend the relevant industrial chain of tourism to the outlying islands of Macao. To broaden the tourism and shopping market in Macao, it is proposed to open up the tax-free shops in Portuguese-speaking countries in the outlying islands of Macao, enrich the types of tourism and shopping in Macao, and completely change the phenomenon of single-traffic shopping in Macao with only hand-lettering, so as to enhance the tourism consumption of Macao's foreign tourists. Level.

(4) Further increase investment in Macao education, especially higher education and vocational education. If necessary, leverage the universities outside Macao to train professionals needed for Macao's economic and social development, and promote the benign operation of education, employment, and social stratification and mobility.

In recent years, Macao people have expressed their concerns about the employment situation in Macao by investing in education (such as the Macao Foundation donating 100 million patacas to help Jinan University,

etc.) and the employment and foreign employees to express their appeals or "delivery." In essence, it reflects the dissatisfaction of some Macao people in education and employment.

To solve these problems, on the one hand, it is necessary to fully open up the Macao job market, so that local residents and foreign employees can openly and fairly compete in the Macao job market, and open up the vertical flow channels of Macao society as much as possible, so that Macao society will be more open, inclusive and energetic. On the other hand, it is necessary to improve the enrollment rate of higher education or vocational education in Macao and to leverage domestic universities to train Macao talents when necessary.

5. Conclusion

Through the above analysis, this paper should draw the following conclusions:

First, the issue of the relationship between population and land in Macao is a key issue that cannot be avoided in the sustainable development of Macao society. The problems of land development and utilization and social housing construction in Macao due to the tension between people and land will be one of the central issues of concern to Macao people, associations, and parliamentarians in the current and future period.

Second, the huge taxation and employment bias brought about by the strong development of the gaming industry and its related service industry after the return of Macao actually curbed the diversified development of Macao's industry to a certain extent.

Third, in recent years, Macao residents have increased their demands for people's livelihood, including social housing, pension, security, healthcare, etc. In employment, they mainly focus on reducing foreign employees and increasing local employees. This puts more and higher demands on the "good governance" and "good governance" of the Macao SAR government.

Fourth, the stable development path of Macao society in the social-ecological change needs to promote regional integration and innovation and development of Macao and Guangdong and Hong Kong, and actively integrate into the national "Belt and Road" strategy, and control the population size to promote economic diversification and talents. Comprehensive development in education and other aspects.

Note:

① Social ecology studies a state in which human society interacts with the natural environment. It generally has three different research perspectives: one is the sociological study of social ecology, focusing on the changes in land use and its patterns and the spatial combination of human society. In terms of the relationship between social culture and the natural environment; the second is the biological study of social ecology, analyzing human social behavior; the third is the ecological study of social ecology, from the perspective of human and nature, analyzing the interaction between human society and the natural environment. Process, results and their impact. Nowadays, people are increasingly inclined to conduct comprehensive interdisciplinary research on social ecology.

② Comprehensive reference to *the statistics of the Macao Economic Quarterly* for the first and second quarters from 2001 to 2016.

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