Growth of Tax Revenue in Macao since the Return

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Abstract: Since the return in 1999, the tax revenue of the Macao region, which is dominated by the gaming industry and provides an important source of income for the government, has proliferated and promoted the economic development of Macao. However, the rapid decline of the Macau gaming industry in 2015 caused a rethinking of Macao's economic development. Based on the analysis of the basic economic characteristics of Macao's tax revenue changes since the regression, the stepwise regression method is used to extract the influencing variables of Macao's tax revenue and the intrinsic influence mechanism of tax revenue is deeply explored through multiple regression models. The study believes Macao should stabilize the gaming industry and develop diversified industries. What's more, it is important to catch up on the opportunity of the Guangdong-Hong Kong-Macao Greater Bay Area to develop and promote tax integration, strengthen the role of government regulation, and optimize fiscal reserves to promote the sustainable development of Macao's economic taxation.

Keywords: tax revenue; GDP; betting duty

Since its return to the motherland in 1999, Macao has opened up mainland China’s free travel to Hong Kong and Macao, participated in the “Belt and Road Initiative”, “Guangdong-Macao Free Trade Zone Cooperation” and the “Guangdong-Hong Kong-Macao Greater Bay Area” and other constructions, expanded foreign cooperation and moderately diversified development, and in the economy, Considerable results have been achieved in construction. Throughout the 20 years of tax data in Macao, various indicators of tax revenue have experienced cyclical fluctuations, and the disadvantages of the industrial structure dominated by the gaming industry have become prominent. Taxation, as the main source of government fiscal revenue and the main means of macroeconomic policy control, is closely related to the stable and sustainable development of a country or region's economy. At the same time, multiple factors affect the tax growth of a region. Tax growth is closely related to the region's gross regional product, comprehensive consumer price index, fiscal expenditure, and tax structure. Based on the tax data of Macao in the past 20 years since its return to the motherland, this article analyzes the characteristics of Macao's tax revenue changes, establishes a multiple regression model, and conducts classic econometric analysis to deeply explore the economic development status and existing problems of Macao, aiming to create a better future for Macao. A good tax environment in the region promotes sustainable economic development.

1. Analysis of the current situation of Macao’s tax revenue growth since its return to the motherland

1. The total tax revenue has expanded and its proportion in fiscal revenue has gradually increased.

Since the return, Macao’s total tax revenue has shown an overall increasing trend. During the period from 1999 to 2014, tax revenue increased from 64.83 billion patacas to 1538.64 billion patacas, an increase of 23.73 times. In 2015, the mainland economy entered a new normal, and Macau's gaming industry revenue declined, with year-on-year decreases of 31.85% and 4.55% respectively in 2015 and 2016. In 2017, Macau's tax revenue rebounded, but the total revenue was only 1174.20 billion patacas, a decrease of 364.43 billion patacas compared to 2014, but still an increase of 17.11 times compared with 1999. As the total amount of tax revenue in Macao expands, the proportion of tax revenue in fiscal revenue continues to grow. As shown in Figure 1, it increased from 38.26% in 1999 to 92.92% in 2017, an expansion of 2.43 times. It can be seen that the huge

total scale of Macao's tax revenue is a strong guarantee for government fiscal revenue.

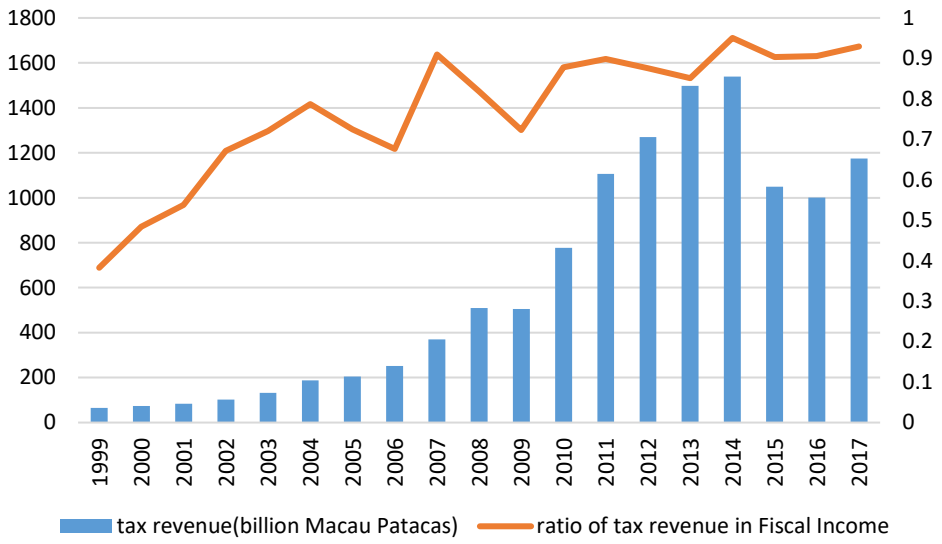

Figure 1 Trend chart of Macao's tax revenue and its proportion in fiscal revenue from 1998 to 2017

2. The overall growth rate of tax revenue is higher than the GDP growth rate, showing cyclical fluctuations

Figure 2 shows the trend of Macao's tax revenue growth rate and GDP growth rate from 1999 to 2017. From 1999 to 2012, both showed a positive growth trend, and the tax revenue growth rate was overall higher than the GDP growth rate. Among them, the growth rate of GDP in 2005 was higher than the growth rate of tax revenue, which was mainly affected by the signing of the CEPA (Mainland and Macao Closer Economic Partnership Arrangement) agreement in 2004. The agreement stipulates that the mainland will implement zero tariffs on 273 items of imported goods originating in Macao, which to a certain extent has weakened the source of Macao's tax revenue. However, the implementation of zero tariffs has led to more frequent economic exchanges between the mainland and Macao. Trade liberalization has stimulated Macao's economic development and overall led to an increase in tax revenue. Therefore, the growth rate of tax revenue was temporarily lower than the GDP growth rate and then gradually increased. Affected by the global financial crisis in 2009, Macau's financial industry entered a stage of low growth. Macau's real economy, which is dominated by the service industry, declined. The GDP growth rate was only 2.21%, and the tax revenue growth rate was -0.93%, which was the first time since 1999. There is negative growth. During the financial crisis, the central government actively took countermeasures to help Hong Kong and Macao overcome the difficulties. Macao also gradually expanded its opening up to the outside world and signed 5 CEPA supplementary agreements, the Guangdong Agreement, and the Trade in Services Agreement with the mainland from 2009 to 2015 [①]. With the full support of the mainland government, Macau's economy is gradually recovering. However, in 2015, with the transformation and upgrading of the mainland's economy, Macau's economy also entered a period of deep adjustment. On the one hand, the "Huangshan Road Run" and the "Gold Incident" brought a financial trust crisis to the Macau gaming industry. On the other hand, the mainland's anti-corruption and anti-money laundering policies, the prominent shortcomings of the VIP room system in Macau's gaming industry, and the increase in "bad debts" have led to increased operating pressure on gaming intermediaries. Macau's gaming industry revenue began to show a downward trend in June 2014 and continued to show

[①] Mainland China and Hong Kong and Macao Closer Economic Partnership Arrangement (CEPA) http://tga.mofcom.gov.cn/article/zt_cepanew/)

negative growth in 2015. The Macau economy, supported by the gaming industry, has shrunk significantly, with a GDP growth rate of -18.06% and a severe decline in tax revenue, with a growth rate of -31.85%, both of which are the lowest growth rates in history.

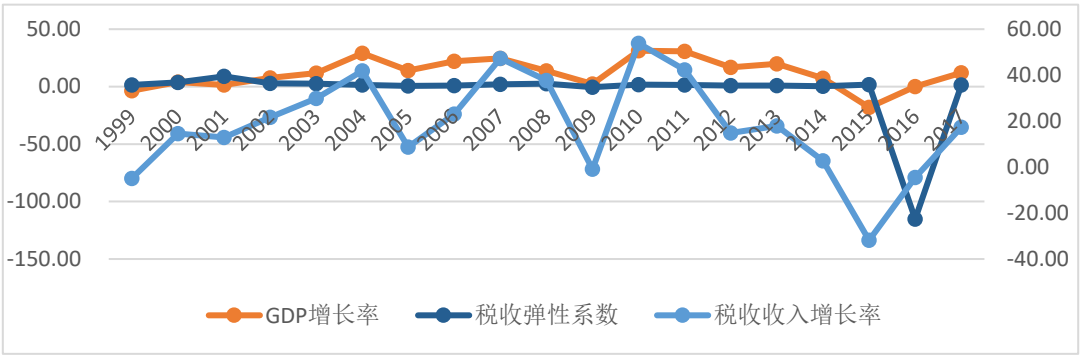

Figure 2 Line chart of Macao's tax revenue growth rate and GDP growth rate from 1999 to 2017

3. The tax elasticity coefficient fluctuates greatly

The tax elasticity coefficient is an indicator in taxation that measures the relationship between taxation and the national economy. It reflects the sensitivity of taxation to economic growth. It is usually expressed by ET, where it $ET = \frac{(\Delta T/T)}{(\Delta Y/Y)}$ is the ratio of the change rate of tax revenue to the change rate of GDP. Taxation comes from economic development and has a certain inhibitory effect on economic development. The economics community generally believes that ET a value of 0.8-1.2 is more reasonable. As China's tax collection and management methods continue to improve, it is generally believed that 1.0-2.0 is more reasonable[②]. The overall tax revenue elasticity of Macao fluctuated greatly from 1999 to 2017. The ET value in 1999 was 1.4, reaching the highest value in 2001 at 8.94. The annual ET values from 2000 to 2003 were all greater than 2.0, and then gradually adjusted and declined. In particular, the decrease in tax revenue in 2015 and 2016 caused ET the value to plummet to -115.21 in 2016, a drop of as much as 66.46%. Generally speaking, except for 2005 and 2009, the values from 1999 to 2011 ET are all greater than 1, that is, the growth rate of tax revenue is higher than the growth rate of GDP. From 2011 to 2014, Macao's tax revenue grew steadily, ET with values less than 1. It can be seen that the overall tax revenue in Macao is relatively sensitive to the level of economic development.

4. The macro tax burden level has increased with some decreases and is at a relatively reasonable level.

Macro tax burden refers to the proportion of a country's total tax revenue in gross domestic product or gross national income. It reflects the cyclicality between tax revenue growth and economic growth. There are generally three calculations: small caliber, medium caliber, and large caliber. Standard, this article uses a small-caliber calculation standard (tax revenue/GDP) to express the macro tax burden level. As can be seen from Figure 2, before 2011, the gap between the tax revenue growth rate and GDP growth rate was large. After 2011, the gap between the two gradually narrowed, and the two curves overlapped. Combined with Figure 3, Macao's macro tax burden level has increased from 12.5% in 1999 to 37.56% in 2011 since the handover and has since gradually declined to 28.94% in 2017. In 2017, the national small-scale macro tax burden level was 17.59 %. The macro tax burden level in Macao was higher than the national average level, but it was

② Tax elasticity coefficient https://baike.baidu.com/item/%E7%A8%8E%E6%94%B6%E5%BC%B9%E6%80%A7%E7%B3%BB%E6%95%B0/4019279?fr=aladdin

relatively reasonable. It is generally believed that the surplus of material products created by economic and social development is the basis for the generation of tax revenue. Therefore, most developed regions have a higher proportion of tax revenue in GDP, while this indicator is lower in developing countries.[③]

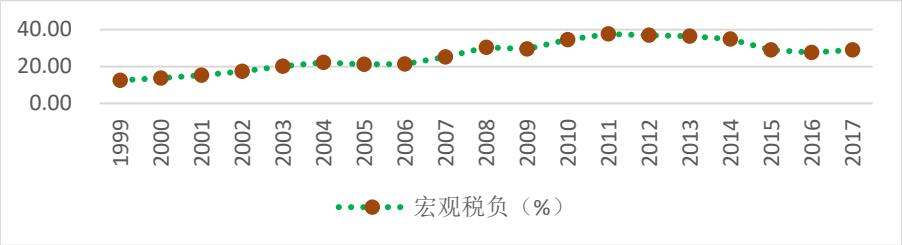

Figure 3 Macao's tax revenue as a proportion of fiscal revenue and macro tax burden level from 1999 to 2017

5. Mainly direct taxes, with gambling tax accounting for the largest proportion

Macau implements an independent tax system that mainly includes direct taxes. Its direct taxes mainly include gaming tax, professional tax, income supplementary tax and housing tax. Indirect taxes mainly include business tax, consumption tax, stamp duty, and motor vehicle tax. According to the nature and particularity of tax types, ignoring small taxes such as inheritance and gift tax, and property transfer tax, this article divides the main tax types in Macao into four categories, namely income tax, behavioral property tax, turnover tax, and gaming tax, of which income tax is except Income taxes other than gaming tax. As can be seen from Table 1, Macao's direct tax and indirect tax revenue have continued to grow since the return of Macao, and the gap between the two in total tax revenue has gradually widened. The ratio of direct taxes to indirect taxes reached its highest value of 31.26 times in 2010, and then the gap continued to decrease, reaching only 20.17 times in 2017. It can be seen that the proportion of indirect taxes in Macao's tax revenue has continued to increase since 2010. From the perspective of specific tax categories, the Macau gaming tax accounted for the largest proportion of tax revenue from 1999 to 2017, increasing from 73.53% in 1999 to 90.46% in 2009. After that, the proportion declined slightly, to 85.03% in 2017; At the same time, the proportion of income tax, behavioral property tax, and turnover tax showed a downward trend before 2011 and increased after 2011.

Table 1 Analysis of Macao's tax system from 1998 to 2017

year	Direct tax (Thousands of patacas)	Indirect tax (Thousands of patacas)	Direct tax/Indirect tax	Gambling tax percentage	Income tax ratio (professional tax + income supplementary tax)	Behavioral property tax ratio (stamp tax + house tax + motor vehicle tax)	Turnover tax ratio ratio (consumption tax + business tax)
1999	5987000	496000	12.07	73.53	13.37	9.18	2.87
2000	6895000	533000	12.94	76.02	9.77	8.38	2.78
2001	7547420	840790	8.98	75.02	9.74	10.82	3.07
2002	8876230	926040	9.59	76.09	7.76	9.20	2.15
2003	11342380	987610	11.48	79.78	5.35	7.60	1.69

[③]https://baike.baidu.com/item/%E5%AE%8F%E8%A7%82%E7%A8%8E%E8%B4%9F/447183?fr=aladdin

2004	16124460	1297280	12.43	81.02	4.78	6.95	1.36
2005	18069110	1494860	12.09	84.74	4.91	7.39	1.35
2006	21715410	1402630	15.48	82.48	5.53	5.83	1.06
2007	33020260	2059070	16.04	86.19	8.25	5.30	0.86
2008	42990830	1883480	22.83	84.74	5.55	3.29	0.50
2009	45190320	1491400	30.30	90.46	5.29	2.77	0.43
2010	68849210	2202290	31.26	88.50	4.04	2.64	0.33
2011	98394960	3342170	29.44	90.13	3.33	2.53	0.37
2012	111960000	4960000	22.57	89.27	3.37	3.32	0.42
2013	132390000	5520000	23.98	89.69	3.21	3.25	0.31
2014	136020000	5670000	23.99	88.85	4.01	3.24	0.30
2015	93420000	4220000	22.14	85.42	7.44	3.63	0.49
2016	88460000	4080000	21.68	84.30	7.53	3.91	0.45
2017	103260000	5120000	20.17	85.03	6.62	4.10	0.45

Note: The data comes from the Statistics and Census Bureau of Macao.

From the above analysis, it can be seen that since the handover, Macau’s tax revenue, which is mainly composed of gaming tax, has grown rapidly. From the perspective of growth rate, tax elasticity coefficient and macro tax burden indicators, Macao's tax revenue growth rate is faster than GDP growth rate. The overall macro tax burden level is reasonable but the tax elasticity fluctuates greatly. The tax structure that relies heavily on gaming tax is obviously not conducive to the long-term stable development of Macau's tax revenue. This article uses the stepwise regression method to extract the relevant variables that affect Macau's tax revenue, and establishes a multiple regression model to explore the impact mechanism of each variable on Macau's tax revenue. , and then provide policy suggestions for the long-term stable development of Macao’s tax revenue.

2. Empirical analysis of Macao’s tax revenue growth

1. Variable selection and data analysis

Judging from the existing research results, there are many factors that affect taxation, which are mainly divided into three categories. The first is economic factors. An [1] (2009) proposed that taxation is mainly affected by price changes, economic structure, economic effects, and taxation. Impact of policy changes. Romer et al. [2] (2010) found through empirical analysis that for every 1% increase in the tax share of GDP, the actual GDP output will decrease by 3%. Mertens and Ravn [3] (2013) believe that the tax multiplier is larger than most estimates of the government expenditure multiplier and that reducing personal income tax is conducive to job creation and can stimulate consumption in the short term. Secondly, there are management factors. Lu [4] (2011) believes that tax growth dividends and indirect tax double taxation

mechanisms promote the rapid growth of tax revenue. Zhou et al.[5] (2012) believe that the taxation efforts of taxation agencies have led to the growth of tax revenue. Li[6](2013) proposed that improving tax collection and administration efficiency is an important condition and path choice for reducing China's nominal tax rate and " tax pain index ". Finally, there is the tax structure factor. Li[7](2013) conducted an empirical analysis of China's tax data from 1994 to 2012 and concluded that turnover tax contributed more than 55% to China's tax growth, and income tax and other tax categories contributed to more than 55% of tax revenue growth. The contribution of rapid growth is smaller. Hu[8](2015) pointed out that the rapid development and structural adjustment of the industrial, commercial, and service industries with high tax contribution rates have caused the tax growth rate to be higher than the GDP growth rate. Lu[9] et al. (2013) used impulse response functions and VAR models to study the relationship between China's GDP per capita growth rate, tax burden, and tax structure from 1994 to 2011, and found that economic growth can promote the increase in total tax revenue, and tax burden has an impact on Economic growth has a lag effect, and tax burden can promote economic growth. Based on the research of previous scholars and combined with the actual development characteristics of Macao, this article selects the following indicators that affect changes in tax revenue.

1.1 Gross regional product (GDP)

Taxation is revenue collected by the state from taxpayers in accordance with the law by virtue of its political rights. It is a redistribution of national income. It is an important component of government fiscal revenue and plays an important regulatory role in economic operation and resource allocation. The increase in the GDP of a country or region will lead to an increase in overall social wealth, which will lead to an increase in tax revenue. That is, tax revenue comes from an increase in the overall economic level. Therefore, this article selects GDP as the main variable affecting tax revenue growth.

1.2 Composite Consumer Price Index

The Comprehensive Consumer Price Index is an index that reflects the impact of consumer price changes on the overall household in Hong Kong and Macao SAR. It is specifically divided into Category A, Category B and Category C consumer price indexes, which can reflect the overall level of consumer price inflation. It is generally believed that changes in the consumer price index will directly affect the actual purchasing power of residents, which will in turn affect the consumption level of the entire society and the accumulation of surplus product value, thereby affecting income tax revenue.

1.3 Financial expenditures

Fiscal expenditure and taxation are the two main means by which the government conducts fiscal activities and implements fiscal policies under market economy conditions. Generally speaking, tax revenue is the compensation for the fiscal cost paid by the government to provide public goods and is intrinsically linked to fiscal expenditure. The scale of fiscal expenditure will indirectly affect the collection and management of tax revenue and the total amount of tax revenue in future years.

1.4 Tax structure

The so-called taxation structure refers to the distribution of various taxes constituting the tax system in social reproduction and the proportional relationship between them④, which is determined by the specific conditions and economic

④https://baike.baidu.com/item/%E7%A8%8E%E5%88%B6%E7%BB%93%E6%9E%84/9899615?fr=aladdin

development laws of a country or region. Unlike mainland my country, Macao is dominated by direct taxes, and direct taxes are mainly gambling taxes. In order to highlight the particularity of gambling taxes, this article uses the ratio of gambling taxes to tax revenue to express the tax system structure.

1.5 Industrial Structure

Macao's economic development is mainly based on the secondary industry and the tertiary industry. The composition of the industrial structure will affect a country's economic development level, and in turn affect tax revenue. This article uses the proportion of the added value of the tertiary industry and the added value of the secondary industry as an indicator to measure changes in industrial structure.

The stepwise regression method is used to screen variables. The basic idea of stepwise regression is to introduce new variables one by one. Each time a new variable is introduced, consider whether to eliminate the selected variables until no more new variables are introduced. This method not only ensures that the equation can retain significant variables, but also eliminates non-significant variables. It is mainly based on forward regression, combined with the backward elimination method, which can usually achieve better fitting results. Therefore, it is widely used in economic modeling and forecasting. The stepwise regression method is used to successively establish a regression model of tax revenue on five indicators: GDP, fiscal expenditure, price index, tax structure and industrial structure. Under the condition of eliminating multicollinearity, a total of three indicators of GDP, tax structure and industrial structure are finally extracted. explanatory variables. The descriptive statistical analysis of variables is as follows:

Table 2 Descriptive Statistics of Variables

Variable name	Meaning	Mean	SD	Min	Max
Tax revenue(Y)	State tax income	62633	50862.6	6483	153864
Gross regional product (X1)	The value of all final products and services produced in a country or region	206281	138693.1	51872	442070
Tax structure (X2)	Gambling tax as a share of tax revenue	84	5.32	73.53	90.46
Industrial Structure (X3)	The added value of the tertiary industry/the added value of the secondary industry	13	6.5	6.01	25.79

Note: The data comes from the Statistics and Census Bureau of Macao.

2. Model selection and establishment

In order to eliminate the influence of heteroscedasticity on time series data, the logarithm of each variable is taken. Further use EViews software to analyze the relationship between the explained variable and each explanatory variable to determine the mathematical form of the model, and draw a scatter plot as shown below.

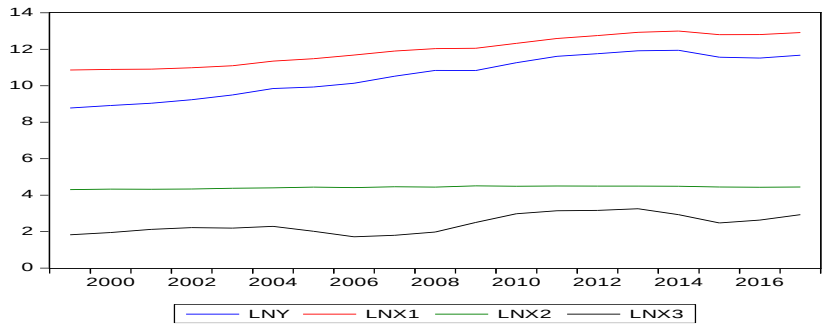

Figure 4 Relationship between LNY $_t$ and LNX1 $_t$, LNX2 $_t$, LNX3 $_t$

It can be seen from the figure that $LNYt$ there is a linear relationship with the overall population, so a multiple linear regression equation is established in the following form: $LNXit(1 \le i \le 3)$

$$LNY_t = \beta_0 + \beta_2 LNX\,2_t + \mu i$$

$$LNYt = \beta_1 + \beta 1 LNX1t + \mu i$$

$$LNYt = \beta_2 + \beta 1 LNX3t + \mu i$$

$$LNYt = \beta_3 + \sum_{i=1}^{3} \beta i \times LNXi\,t + \mu i$$

3. Regression equation

Using the classic econometric multiple regression model. The regression results between variables are obtained as follows:

Table 3 Econometric model estimation results

Variable	(1)	(2)	(3)	(4)
LNX1$_t$	1.3897***			1.098***
	(0.0449)			(0.05546)
LNX2$_t$		15***		3.3439***
		(1.8)		(0.5638)
LNX3$_t$			1.7271***	0.1098*
			(0.325)	(0.062)
CONS	-0.6061**	-55.82***	6.3791**	-17.638***
	(0.5384)	(7.9679)	(0.8046)	(2.0596)
N	19	19	19	19
R^2	0.9826	0.8033	0.6242	0.9952

Note: *, **, and *** indicate significant at the 10%, 5%, and 1% levels respectively.

Multiple regression equation:

$$LNY_t = 1.098LNX\,1_t + 3.3439LNX\,2_t + 0.1098LNX\,3_t + 17.638$$

$$\overline{R^2} = 0.9952,\ F = 1031.707, \mathrm{DW} = 2.219 \qquad \mathrm{n} = 19$$

3. Model testing

1. Economic significance test

It can be seen from the regression equation that, assuming other variables remain unchanged, the elasticities of tax revenue with respect to GDP, the proportion of gaming tax in tax revenue, and the industrial structure are 1.098, 3.3439, and 0.1098 respectively, that is, GDP, the proportion of gaming tax in tax revenue, and industrial structure For every 1% increase in the index, tax revenue will increase by 1.098%, 3.3439%, and 0.1098% on average. Observing the coefficients of the respective variables, we can see that the coefficient value of variable X2 is the largest and the coefficient value of X3 is the smallest. The variable coefficient, the elasticity, reflects the sensitivity of tax revenue to this variable. According to basic economic theory and the actual situation of Macao's economic development, Macao's tax revenue is extremely dependent on gaming tax, so Macao's tax revenue is most sensitive to changes in the proportion of gaming tax. The elasticity value is 3.3439, which is much higher than the impact of GDP and industrial structure index on tax revenue. Impact. With the moderate development of Macao's industrial diversification, the industrial structure will be further adjusted. However, the adjustment of the industrial structure will first affect the level of economic development and then affect taxation, so the coefficient of variable X1 is greater than X3.

2. Statistical test

Goodness of fit is $R^2 = 0.9952$, the modified coefficient of determination is $\overline{R^2} = 0.9942$, indicating that the model fits the sample well, and the explanatory variables explain most of the differences in the explained variables.

F statistic: For $H_0 : \beta_1 = \beta_2 = \beta_3 = 0$ a given significance level $\alpha = 0.05$, check the critical value of the F statistic distribution table with degrees of freedom of K-1=3 and n-k=15 is $F_\alpha(3.15) = 3.287$. Since $F = 1031.707 > 3.287$, the null hypothesis should be rejected, the regression equation is significant.

3. Test of econometric significance

It can be seen from Table 3 that the combination of LNY and LNX1 has the best goodness of fit in the regression equation, while the goodness of fit of the regression equations of LNY, LNX2, and LNX3 is relatively low, among which LNY has the lowest goodness of fit for the regression equation of LNX3. Overall, after introducing variables X2 and X3, the overall goodness of fit of the model is improved to 0.9952, indicating that the introduction of X2 and X3 improves the regression effect of the model. Since each variable in the regression analysis is selected using the stepwise regression method, it can be considered that there is no multicollinearity among the variables. At the same time, the DW value is 2.219. Looking at the critical value table, it is found that dl = 0.967, du = 1.685, du<DW<4-du, that is, there is no autocorrelation, and the model passes the test of econometric significance.

4. Conclusion and recommendations

Through multiple regression analysis, it can be seen that GDP, gaming tax proportion and industrial structure are the main factors affecting the growth of Macau's tax revenue. Among them, the elasticity of tax revenue with respect to GDP is

1.098, which is consistent with the result in Figure 2 that the growth rate of Macao's tax revenue is generally higher than the GDP growth rate. Tax revenue is most sensitive to the proportion of gaming tax, which is consistent with the fact that the growth of Macau's tax revenue relies heavily on gaming tax. In addition, tax revenue is the least sensitive to changes in the industrial structure index, but it still has a positive impact on tax revenue. Considering that the current construction of the Guangdong-Hong Kong-Macao Greater Bay Area has become an important national strategic plan, Macao should be based on the "one center, one platform" construction plan, optimize the industrial development structure, gradually weaken the situation that Macao's development relies heavily on the gaming industry, and create A livable, leisure and cultural city with the gaming industry as the main industry and diversified development of other industries to achieve a win-win situation of taxation and economic development.

1. Stabilize the gaming industry and develop diversified industries

Since the handover in 1999, Macao's industrial structure has been single, and tax revenue and economic development have relied heavily on the gaming industry. The empirical analysis of this article also shows that the growth of tax revenue is most sensitive to the proportion of gaming tax in tax revenue. From 2014 to 2015, Macau's tax revenue declined for 16 consecutive months, which had a serious impact on tax revenue and economic development. Judging from Macau's tax data, Macau's tax revenue mainly comes from the gaming industry. Macau is highly dependent on the gaming industry, and its economic aggregate has shown an unstable trend in recent years with the development and fluctuation of the gaming industry. Therefore, Macao should focus on the development of non-gaming industries, form a model in which the gaming industry drives the joint development of other industries, focus on the development of non-gaming industries such as wholesale and retail, hotels, restaurants, construction, and finance; strengthen the development of emerging industries such as conventions and exhibitions, traditional Chinese medicine, and cultural creativity. The development of industries and featured financial industries.

2. Flexibly adjust tax policies to seize development opportunities in the Bay Area

The economy determines the size of taxes, and taxes react to the economy. At present, the construction of the Guangdong-Hong Kong-Macao Greater Bay Area has become an important layout at the national strategic level, which is both an opportunity and a challenge for Macao's economic development. For a long time, direct taxes, mainly gaming taxes, have constituted the main source of tax revenue in Macao. In the process of building the Bay Area, Macao should actively promote the efficient and free flow of production factors, human capital, and market interconnection among the three places across the Taiwan Strait. In addition, the Macau government should strengthen tax cooperation with the mainland to reduce tax burden differences to avoid double taxation; at the same time, adjust tax preferential policies to promote the free development of economy and trade between Macau and the mainland, such as increasing R&D expenses to encourage Macau enterprises to conduct innovative research and development Super deduction strength. Expand the scope of zero-tariff preferential treatment for goods from Hong Kong and Macao until tariffs are eliminated, thereby eliminating tariff barriers to trade in the Guangdong-Hong Kong-Macao Greater Bay Area and achieving liberalization of trade in goods.

3. Strengthen government macro-control and optimize fiscal reserve investment

As China's economic development enters a new normal, Macao's economy has shifted from rapid growth to stable growth, leading industries have entered a period of adjustment from a period of rapid development, and the development model has shifted from pursuing quantity to optimizing structure. Judging from the tax data in the 20 years since Macao's return, the

total tax revenue in Macao has generally shown a steady growth trend, and the macro tax burden has also remained at a reasonable level. However, in 2008 and 2015, the growth rate of tax revenue was lower than the GDP growth rate, and tax elasticity fluctuated greatly, which to a certain extent reflects the greater correlation between taxation and the economy. Therefore, to maintain tax elasticity within a certain normal range, on the one hand, it is necessary to give full play to the "automatic stabilizer" role of taxation in stabilizing economic development. On the other hand, the Macao regional government needs to implement macro-control. The Macao government should adhere to the " Macao Basic Law " We must adhere to the principle of living within our means, implement sound fiscal and financial policies, and make good fiscal revenue and expenditure budgets. The Macao government should calculate the tax burden rate of each industry sub-sector, and estimate the tax revenue for the next year based on annual changes in industrial structure and industry composition. In years when tax revenue grows rapidly, a certain fiscal surplus is set to prepare for fiscal expenditure needs caused by reduced tax revenue. In times of economic depression, relevant tax reduction policies are implemented to stimulate economic development.

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