Empirical Analysis of the Factors Influencing China's Tax Revenue based on the Econometric Model

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Abstract

In recent years, my country's economy has developed at a high speed or even super speed, and tax revenue is also growing steadily. Taxation is also a very important factor affecting my country's economic development. Based on the main factors affecting tax revenue, this article selects and collects tax revenue, gross domestic product (GDP), national fiscal expenditure, total retail sales of social consumer goods (SRC , Social Retail Sales of Consumer Goods) , total imports (IMP , Import and Export Product) consumer price index (CPI), total fixed asset investment data for empirical analysis, to establish a multiple linear regression model, which can help us better predict the relationship between tax revenue growth rate and economic growth rate . We adopt OLS by using Eviews9.0 softwareMethods Estimating the parameters of the model can more accurately evaluate the accuracy and reliability of the model.

Keywords

Tax Revenue; Gross Domestic Product; National Fiscal Expenditure; Total Retail Sales of Social Consumer Goods; Total Imports; Consumer Price Index; Total Fixed Asset Investment; Eviews Measurement Analysis.

1. Introduction

1.1. Research Background and Significance

1.1.1. Research Background

(1) Policy Background

Taxation is a kind of fiscal revenue obtained by the government through compulsory means to meet the public needs of the society. It can not only adjust the allocation of resources, but also adjust the total demand, adjust the economic structure, and monitor economic activities. Under the condition of market economy, the more the economy develops, the more important the taxation becomes. Economic development is the basis of taxation. It can not only promote economic growth, but also provide the necessary financial support for the government. In addition, it can change and adjust the distribution of interests among various economic entities, thereby exerting a great influence on economic development. significant impact. Taxation is an important financial policy, which can not only adjust the interests of all parties, but also profoundly affect the economic development of a country. Therefore, in order to ensure the long-term stability and sustainable development of the economy, we must establish a reasonable tax system.

(2) Real background

At the beginning of the 21st century, with the rapid rise of technology and the Internet, China's economic development is imminent, and it is facing enormous pressure and challenges. In order to achieve sustainable prosperity, governments must strengthen the management of finances and require them to serve both the interests of the country and the progress of society. Taxation has been proven to be an effective means of wealth management and plays a very important role in economic development. It not only helps to maintain the stability of the country's

economy, but also helps to promote the country's economic growth. Taxes not only become the necessary funds raised by the government, but also can re-change and re-adjust the distribution of benefits among different economic entities. Therefore, it is an inevitable and indispensable way to deeply explore the various factors that affect tax revenue. It plays a vital role in promoting the economic growth of the country.

1.1.2. Research Significance

(1) The scale of China's economy has a decisive influence on the world, and the rapid development of China's economy is also inseparable from taxation. In 2018 , China's national economy has made amazing achievements. The GDP exceeded 90.0309 trillion yuan. In the first half of the year, the total revenue of the national basic public budget exceeded 8.665 trillion yuan, which was a substantial increase compared with the first half of last year, especially the tax revenue. It reached 7681 billion yuan, which shows China's status and role on the international stage. Through this example, we can see that the increase in tax revenue provides a strong impetus for economic growth and fosters new momentum for economic development.

(2) In today's globalization context, the distribution of social wealth is no longer a zero-sum game, but there are many complex interaction mechanisms. According to the point of view of modern economics, when the tax exceeds a certain level, as the tax continues to rise, the government's income continues to decline. From this point of view, it is of great practical significance to study the influencing factors of taxation growth. In order to better understand this complex interaction mechanism, and to better grasp the impact of taxation as a whole, we must conduct in-depth research with the help of systematic model theory.

2. Relevant Model Setting and Relevant Data Description

2.1. Analysis of Influencing Factors

2.1.1. Gross Domestic Product (GDP)

Gross domestic product is the economic value created by labor. It is the core indicator of the national economic accounting and an important indicator to measure the overall economic status of a country. It restricts the tax system structure and has a high degree of correlation between the two. This correlation mainly shows that the level of economic development determines the proportion of tax participation in the distribution of social products and determines the choice of tax system structure. From a macroeconomic point of view, overall economic growth is the fundamental source of tax growth, and GDP is an important indicator of economic growth. Therefore, GDP is an important factor affecting tax revenue.

2.1.2. State Fiscal Expenditure Level

Fiscal expenditures are aimed at maintaining economic stability and promoting the development of a market economy to meet public needs. It is a form of fiscal revenue that the government realizes by collecting taxes, which can effectively improve economic conditions and promote social development. In general, the higher the level of fiscal expenditure, the higher the level of taxation.

2.1.3. Total Imports (IMP , Import and Export Product)

The total amount of imports refers to the total amount of goods that actually enter my country's borders, reflecting the total scale of a country's foreign trade. The total amount of imports in international trade not only represents the level of national wealth, but also reflects the level of national well-being. It not only promotes the continuous improvement of national wealth, but also promotes the continuous improvement of national well-being. In the import link, imported goods are subject to tariffs, value-added tax in the import link, and consumption tax in the import link for goods subject to consumption tax. These are important components of tax revenue.

2.1.4. Total Retail Sales of Social Consumer Goods (SRC , Social Retail Sales of Consumer Goods)

The total retail sales of social consumer goods refers to the sum of the retail sales of consumer goods to urban and rural residents and social groups from various economic types of wholesale and retail trade, catering, manufacturing and other industries, and the retail sales of farmers to non-agricultural residents. my country's tax system is dominated by turnover tax. The calculation of turnover tax is related to the sales of goods. The total retail sales of social consumer goods can reflect the degree of realization of the purchasing power of the whole society. It is highly correlated with value-added tax, so it will affect tax revenue to a certain extent.

2.1.5. Consumer Price Index (CPI)

CPI is an important reference to measure the state of market supply and demand, and it plays a vital role in the effectiveness of the macroeconomic policies adopted by the government. Generally speaking, the larger the CPI value, the higher the tax revenue, which means that the government can implement fiscal policy more effectively, thereby increasing fiscal revenue.

2.1.6. Total Investment in Fixed Assets

With the continuous increase of investment in the whole society, the output will also be improved, which will help to promote the continuous growth of consumption and investment, which will lead to a substantial increase in tax revenue.

2.2. Selection of Explanatory Variables and Explained Variables

Taxation comes from the economy, so the level and quality of economic development will have a fundamental impact on taxation. In order to fully reflect the growth of tax revenue in my country, based on the theoretical analysis and data availability of previous scholars, this article is based on the empirical point of view, and tax revenue is selected as the explained variable of the model. The explanatory variables of the model are GDP, National fiscal expenditure level, total retail sales of social consumer goods, total imports, consumer price index, and total investment in fixed assets.

2.3. Data Collection and Aggregation

This paper selects the annual data of China's tax revenue and GDP, national fiscal expenditure, total retail sales of consumer goods, total imports, consumer price index and total fixed asset investment from 1990 to 2019. The sample data all come from the database of the National Bureau of Statistics.

Collect and select all the data to summarize, and get all the data results shown in Table 1.

Table 1. Statistical data of China's tax revenue and its economic influencing factors from 1990 to 2019

years	tax income Y (100 million yuan)	gross domestic product X1 (100 million yuan)	State fiscal expenditure level X2 (100 million yuan)	Total imports X3 (100 million yuan)	The total retail sales of social consumer goods X4 (100 million yuan)	Consumer Price Index X5 (%)	Total investment in fixed assets X6 (100 million yuan)
1990	2821.86	18872.9	3083.59	2574.28	8300.1	216.4	4517.00
1991	2990.17	22005.6	3386.62	3398.65	9415.6	223.8	5594.50
1992	3296.91	27194.5	3742.20	4443.33	10993.7	238.1	8080.10
1993	4255.30	35673.2	4642.30	5986.21	14240.1	273.1	13072.30
1994	5126.88	48637.5	5792.62	9960.06	18544.0	339.0	17042.10
1995	6038.04	61339.9	6823.72	11048.13	23463.9	396.9	20019.30
1996	6909.82	71813.6	7937.55	11557.43	28120.4	429.9	22974.00
1997	8234.04	79715.0	9233.56	11806.56	30922.9	441.9	24941.10
1998	9262.80	85195.5	10798.18	11626.14	32955.6	438.4	28406.20
1999	10682.58	90564.4	13187.67	13736.46	35122.0	432.2	29854.70
2000	12581.51	100280.1	15886.50	18638.81	38447.1	434.0	32917.70
2001	15301.38	110863.1	18902.58	20159.18	42240.4	437.0	37213.50
2002	17636.45	121717.4	22053.15	20159.18	47124.6	433.5	43499.90
2003	20017.31	137422.0	24649.95	34195.56	51303.9	438.7	53841.20
2004	24165.68	161840.2	28486.89	46435.76	58004.1	455.8	66235.00
2005	28778.54	187318.9	33930.28	54273.68	66491.7	464.0	80993.60
2006	34804.35	219438.5	40422.73	63376.86	76827.2	471.0	97583.10
2007	45621.97	270092.3	49781.35	73296.93	90638.4	493.6	118323.20
2008	54223.79	319244.6	62592.66	79526.53	110994.6	522.7	144586.80
2009	59521.59	348517.7	76299.93	68618.37	128331.3	519.0	181760.40
2010	73210.79	412119.3	89874.16	94699.50	152083.1	536.1	218833.60
2011	89738.39	487940.2	109247.79	113161.39	179803.8	565.0	238782.10
2012	100614.28	538580.0	125952.97	114800.96	205517.3	579.7	281683.80
2013	110530.70	592963.2	140212.10	121037.46	232252.6	594.8	329318.30
2014	119175.31	643563.1	151785.56	120358.03	259487.3	606.7	373636.90
2015	124922.20	688858.2	175877.77	104336.10	286587.8	615.2	405927.70
2016	130360.73	746395.1	187755.21	104967.17	315806.2	627.5	434363.50
2017	144369.87	832035.9	203085.49	124789.80	347326.7	637.5	461283.70
2018	156402.86	919281.1	220904.13	140881.30	377783.1	650.9	488499.40
2019	158000.46	986515.2	238858.37	143253.70	408017.2	669.8	513608.30

Note: The above data are all from the database of the National Bureau of Statistics, in which the consumer price index is calculated based on 100 in 1978 as the basis for other years.

2.4. Setting of Model Form

Y stands for tax revenue.

X1 represents gross domestic product.

X2 represents the level of national fiscal expenditure.

X3 represents the total amount of imports.

X4 represents the total retail sales of social consumer goods.

X5 represents the consumer price index.

X6 represents the total investment in fixed assets.

2.4.1. Watch for Trend Changes

Enter the command line in the command bar: PLOT Y X1 X2 X3 X4 X6.

Since the dimensions and quantitative levels of X5 and other variables are different, they are not placed in the same trend chart and can be observed separately. The trend charts of all other variables are shown in Figure 1:
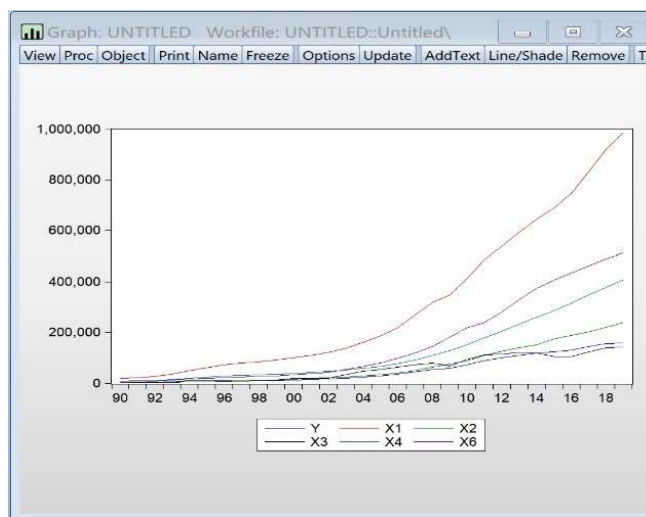

Figure 1. Trend Change Chart

It can be seen from Figure 1 that the differences in China's tax revenue and its influencing factors are relatively obvious, but their changing directions have certain similarities, and there may be a certain correlation between them.

2.4.2. Observe the Scatter Plot

Enter the data of the dependent variable and the independent variable into the Eviews9.0 software according to the Excel table, and enter the command line in the command bar: SCAT X1 Y ; SCAT X2 Y ; SCAT X3 Y ; SCAT X4 Y ; SCAT X5 Y ; SCAT X6 Y can be Get the scatter diagram between the explained variable Y and the explanatory variables X1 , X2 , X3 , X4 , X5 , X6 (as shown in Figure 2). It is found from the scatter diagram that there is a significant linear relationship between them, so choose Build multiple linear regression models.
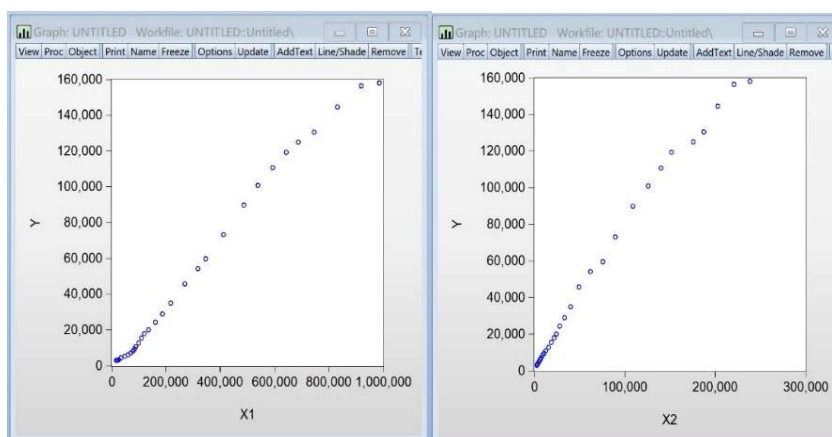

Figure 2. Scatterplot

According to the above analysis, this paper preliminarily establishes the following multiple linear regression model of factors affecting tax revenue:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Among them, a is a constant item; β_1 to β_6 are corresponding parameters to be estimated, also known as regression coefficients, and ε is an unobservable random error item, which has nothing to do with the six explanatory variables.

3. Empirical Analysis

3.1. Model Parameter Estimation and Testing

3.1.1. Model Parameter Estimation and Regression Analysis

In order to estimate the parameters of the model, according to the collected statistical data, the ordinary least squares regression was carried out on the data by using Eviews9.0 software.

Enter the command line in the command bar: LS YC X1 X2 X3 X4 X5 X6.

The result obtained is shown in Figure 3:

Dependent Variable: Y
Method: Least Squares
Date: 06/12/23   Time: 21:43
Sample: 1990 2019
Included observations: 30

Variable	Coefficien...	Std. Error	t-Statistic	Prob.
C	284.0022	2448.002	0.116014	0.9086
X1	0.013872	0.076425	0.181519	0.8576
X2	0.539946	0.198055	2.726243	0.0120
X3	0.199332	0.084129	2.369359	0.0266
X4	-0.228704	0.167679	-1.363942	0.1858
X5	3.909825	8.316725	0.470116	0.6427
X6	0.157999	0.045436	3.477390	0.0020

R-squared	0.998992	Mean dependent var	52653.22
Adjusted R-squared	0.998730	S.D. dependent var	53294.66
S.E. of regression	1899.588	Akaike info criterion	18.13763
Sum squared resid	82994017	Schwarz criterion	18.46457
Log likelihood	-265.0644	Hannan-Quinn criter.	18.24222
F-statistic	3800.645	Durbin-Watson stat	1.413031
Prob(F-statistic)	0.000000		

Figure 3. Multiple regression estimation results

As can be seen from Figure 4 , the report format is:

$$\hat{Y} = 284.0022 + 0.0139 X_1 + 0.5399 X_2 + 0.1993 X_3 - 0.2287 X_4 + 3.9098 X_5 + 0.1580 X_6$$
$$(\,2448.002\,)\,(\,0.0764\,)\,(\,0.1981\,)\,(\,0.0841\,)\,(\,0.1677\,)\,(\,8.3167\,)\,(\,0.0454\,)$$
$$t = (\,0.1160\,)\,(\,0.1815\,)\,(\,2.7262\,)\,(\,2.3694\,)\,(\,-1.3639\,)\,(\,0.4701\,)\,(\,3.4774\,)$$
$$R^2 = 0.9990 = 0.9987 \ F = 3800.6450 \ D.W. = 1.4130 \ n = 30 \ \overline{R^2}$$

3.1.2. Model Testing

(1)Economic significance test

The partial regression coefficient of 0.0139 indicates the marginal impact of GDP on China's tax revenue, that is, on the premise that other influencing factors remain unchanged, the tax revenue will increase by 0.0139 units for every 1 unit increase in the coefficient of GDP ; similarly, On the premise that other influencing factors remain unchanged, the tax revenue will increase by 0.5399 units for every unit increase in the national fiscal expenditure level; the tax revenue will increase by 0.1933 units for every unit increase in total imports ; 1 unit, the tax revenue will decrease by 0.2287 units; every 1 percentage point increase in the consumer price

index , the tax revenue will increase by 3.9098 percentage points; every 1 unit increase in the total fixed asset investment , the tax revenue will increase by 0.1580 units.

That is, my country's tax revenue is positively correlated with GDP, national fiscal expenditure, total imports, consumer price index, and total investment in fixed assets; it is negatively correlated with total retail sales of consumer goods, but with the increase of total retail sales of consumer goods , my country's tax revenue should increase, and the two should be positively correlated, so this is obviously not in line with economic significance.

Except that the total retail sales of social consumer goods do not conform to the real economic significance, the GDP, the national fiscal expenditure level, the total import volume, the consumer price index and the total fixed asset investment are all positively correlated with the tax revenue, which conforms to the real economic significance.

(2)Statistical inference test

① Goodness of fit test

The modified coefficient of determination = 0.9987 , indicating that the six explanatory variables of GDP, national fiscal expenditure level, total imports, total retail sales of social consumer goods, consumer price index and total fixed asset investment can explain 99.87 % of China's tax revenue. . $\overline{R^2}$.

$$R^2=0.9990 \, , \overline{R^2}$$

② F test (significance test of regression equation)

Given a significance level of $\alpha=0.05$, F= 3800.6450 , and corresponding p=0.0000<α , the null hypothesis is rejected, indicating that the regression equation is significant, indicating that the combined impact of the six explanatory variables on China's tax revenue is statistically significant Passed, the six explanatory variables combined have a significant impact on the explained variable, and the linear relationship of the model is significant.

③ t test (significance test of explanatory variables)

Given a significance level of $\alpha=0.05$, and the respective t- test p- values of the six explanatory variables are 0.8576 , 0.0120 , 0.0266 , 0.1858 , 0.6427 , 0.0020 , the following conclusions are drawn:

The p -value of the t test of the gross domestic product X1 is greater than α , accepting the null hypothesis, indicating that the significance test of the regression parameter of the explanatory variable has not passed, indicating that when other explanatory variables remain unchanged, the explanatory variable has no significant effect on China's tax revenue Influence;

The p -value of the t test of the national fiscal expenditure level X2 is less than α , rejecting the null hypothesis, indicating that the significance test of the regression parameter of the explanatory variable has passed, indicating that when other explanatory variables remain unchanged, the explanatory variable has a significant impact on China's tax revenue;

The p -value of the t -test of the total imports X3 is less than α , rejecting the null hypothesis, indicating that the significance test of the regression parameter of the explanatory variable is passed, indicating that when other explanatory variables remain unchanged, the explanatory variable has a significant impact on China's tax revenue;

The p -value of the t test of the total retail sales of consumer goods X4 is greater than α , accepting the null hypothesis, indicating that the significance test of the regression parameter of the explanatory variable has not passed, indicating that when other explanatory variables remain unchanged, the explanatory variable has no significant effect on China's tax revenue Influence;

The p- value of the t -test of consumer price index X5 is greater than α , accepting the null hypothesis, indicating that the significance test of the regression parameter of the explanatory variable has not passed, indicating that when other explanatory variables remain unchanged, the explanatory variable has no significant effect on China's tax revenue Influence;

The p value of the t test of the total investment in fixed assets X6 is less than α , rejecting the null hypothesis, indicating that the significance test of the regression parameter of the explanatory variable passed, indicating that when other explanatory variables remain unchanged, the explanatory variable has a significant effect on China's tax revenue Influence;

Since the sign of the parameter estimate of the explanatory variable total retail sales of social consumer goods does not conform to the real economic significance, there may be multicollinearity, and an econometric test is carried out on it.

3.1.3. Econometric Test

①Multicollinearity test

From an economic point of view, the sign of the estimated value of the parameter X4 of the total retail sales of consumer goods is inconsistent with the setting of economic theory analysis, indicating that the total retail sales of consumer goods increases, and the taxes paid by citizens increase, but the tax revenue of our country decreases instead. This result is obviously not true . Reasonably, this suggests that the model is likely to suffer from severe multicollinearity.

Simple correlation coefficient method:

In order to confirm whether there is multicollinearity in the model, the correlation coefficient between each explanatory variable is calculated, and the correlation coefficient test is carried out by using the COR command in the Eviews9.0 software , and the correlation coefficient matrix can be obtained (as shown in Figure 4):

View Proc Object	Print Name Freeze	Sample Sheet Stats Spec						
							Correlation	
		Y	X1	X2	X3	X4	X5	X6
		Y	X1	X2	X3	X4	X5	X6
Y	Y	1.000000	0.996652	0.995412	0.963359	0.992661	0.880325	0.996747
X1	X1	0.996652	1.000000	0.997976	0.954022	0.997894	0.884186	0.996507
X2	X2	0.995412	0.997976	1.000000	0.938877	0.999119	0.863430	0.998434
X3	X3	0.963359	0.954022	0.938877	1.000000	0.933678	0.901466	0.942757
X4	X4	0.992661	0.997894	0.999119	0.933678	1.000000	0.868522	0.997041
X5	X5	0.880325	0.884186	0.863430	0.901466	0.868522	1.000000	0.868608
X6	X6	0.996747	0.996507	0.998434	0.942757	0.997041	0.868608	1.000000

Figure 4. Correlation coefficient matrix

It can be seen from the correlation coefficient matrix that the correlation coefficients between each explanatory variable are relatively high, and the absolute values of the correlation coefficients are all greater than 0.8 , which proves that there is indeed serious multicollinearity.

Auxiliary regression model method:

Take each X variable as the explained variable to regress the remaining X variables, respectively establish auxiliary models for each explanatory variable, observe the auxiliary regression models and correct the coefficient of determination, and the results of the established six auxiliary regression models are shown in Table 2:
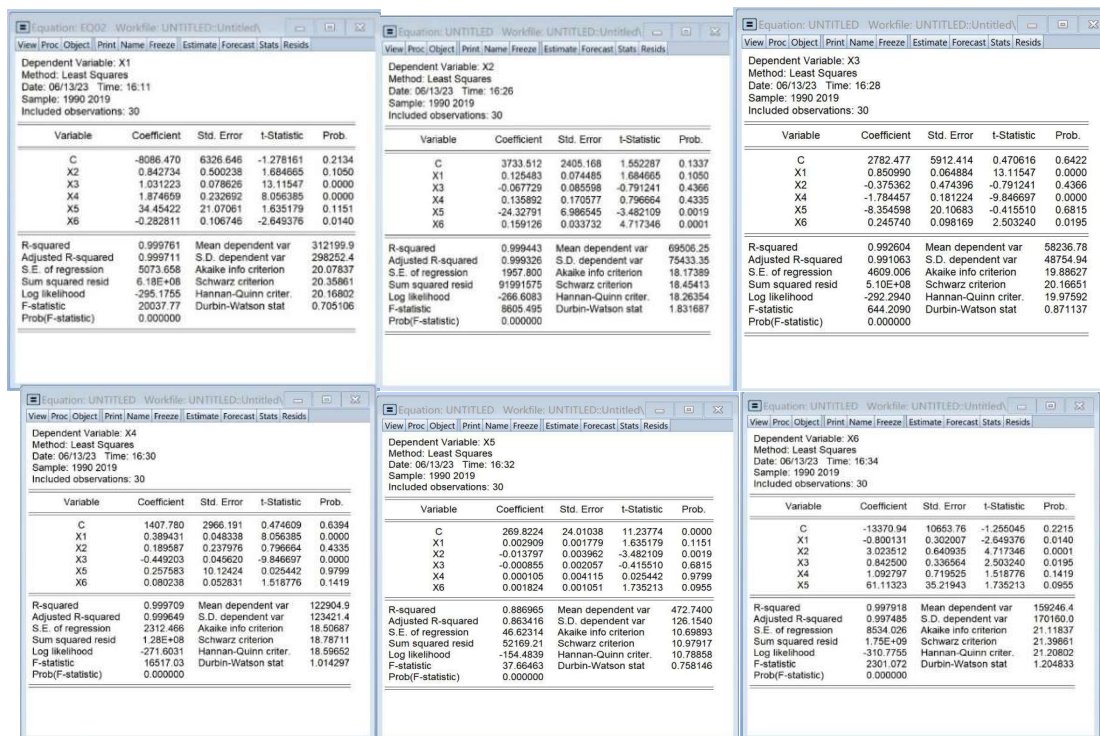
Figure 5. The auxiliary regression models

Observing the auxiliary regression models of the above six pictures and the corrected coefficient of determination, the results of the six auxiliary regression models established are shown in Table 2:

Table 2. Auxiliary regression model results

Auxiliary regression model	X1	X2	X3	X4	X5	X6	F test
X1=f(X2,X3,X4,X5,X6)		0.8427 (1.6847)	1.0312 (13.1155)	1.8747 (8.0564)	34.4542 (1.6352)	-0.2828 (-2.6494)	20037.77
X2=f(X1,X3,X4,X5,X6)	0.1255 (1.6847)		-0.0677 (-0.7912)	0.1359 (0.7967)	-24.3279 (-3.4821)	0.1591 (4.7173)	8605.495
X3=f(X1,X2,X4,X5,X6)	0.8510 (13.1155)	-0.3754 (-0.7912)		-1.7845 (-9.8467)	-8.3550 (-0.4155)	0.2457 (2.5032)	644.2090
X4=f(X1,X3,X2,X5,X6)	0.3894 (8.0564)	0.1896 (0.7967)	-0.4492 (-9.8467)		0.2576 (0.0254)	0.0802 (1.5188)	16517.03
X5=f(X1,X3,X4,X2,X6)	0.0029 (1.6352)	-0.0138 (-3.4821)	-0.0009 (-0.4155)	0.0001 (0.0254)		0.0018 (1.7352)	37.6646
X6=f(X1,X3,X4,X5,X2)	-0.8001 (-2.6494)	3.0235 (4.7173)	0.8425 (2.5032)	1.0928 (1.5188)	61.1132 (1.7352)		2301.072

The F statistic of each of the above auxiliary regression equations is very significant, and its accompanying probability p is equal to 0 and less than the significance level $\alpha=0.05$. It can be considered that the original equation has serious multicollinearity, and the corresponding original explanatory variables can be approximated by The other explanatory variables are expressed linearly.

Variance inflation factor method:

According to the auxiliary regression method described above, the coefficient of determination and the variance inflation factor were calculated. In Eviews9.0 , directly calculate the variance

inflation factor of the explanatory variable. As shown in Figure 6, the Centered VIF is the variance inflation factor.

Figure 6. VIF menu calculation results

Experience has shown that if the variance inflation factor VIF_j

For regression equations with multiple collinearity, in order to obtain better analysis results, it is necessary to try to eliminate or weaken the adverse effects of collinearity. Therefore, we correct for multicollinearity in this equation.

Correction for multicollinearity.

Correction of Equation Using Stepwise Regression.

Using the Eviews9.0 software command (COR Y X1 X2 X3 X4 X5 X6) to get the correlation coefficient matrix between the explained variable Y and the explanatory variable (as shown in Figure 7), it can be found that X6 is the explanation most closely related to the explained variable variable. In this way, a one-variable regression equation can be established.

Figure 7. Correlation coefficient matrix

Introduce X1 , X2 , X3 , X4 , and X5 into the unary regression equations respectively, and estimate five binary regression equations. The estimated results are shown in Table 3 . It can be seen from the table that the t- test of the two explanatory variables X6 and X3 in the regression equation Y=f (X6 , X3) can pass significantly, and this binary regression equation should be retained.

Taking Y=f(X6,X3) as the basic regression equation, respectively introducing X1 , X2 , X4 , and X5 to establish 4 ternary regression equations, it was found that these 4 ternary regression equations could not guarantee the significance test of all explanatory variables pass.

Therefore, X1 , X2 , X4 , and X5 are explanatory variables that cause multicollinearity. After the above-mentioned step-by-step testing process, the final model is optimal with Y=f (X6,X3) , and the multiple regression model for China's tax revenue is finally determined as :

That is: =-602.0355+0.2326X3+0.2493X6 $\hat{Y}$

(645.8739) (0.0241) (0.0069)

t = (-0.9321) (9.6567) (36.1218)

R^2=0.9985 $\overline{R^2}$

The interpretation of the estimated value of the coefficient is as follows: when other influencing factors remain unchanged, if the total import volume increases by 1 unit, China's tax revenue will increase by 0.2326 units; if the total investment in fixed assets increases by 1 unit, China's Tax revenue increased by 0.2493 units.

Table 3. stepwise regression model result information

Model	X1	X2	X3	X4	X5	X6	R^2	$\overline{R^2}$
Y=f(X6)						0.3122 (65.4408)	0.9935	0.9933
Y=f(X6,X1)	0.0869 (3.0263)					0.1606 (3.1949)	0.9952	0.9948
Y=f(X6,X2)		0.0511 (0.2612)				0.2896 (3.3392)	0.9935	0.9930
Y=f(X6,X3)			0.2326 (9.6567)			0.2493 (36.1218)	0.9985	0.9984
Y=f(X6,X4)				-0.0830 (-0.9690)		0.3722 (5.9913)	0.9937	0,9933
Y=f(X6,x5)					25.0228 (2.0317)	0.2961 (32.4243)	0.9944	0.9939
Y=f(X6,X3,X1)	0.0102 (0.5451)		0.2245 (7.8394)			0.2337 (7.9379)	0.9986	0.9984
Y=f(X6,X3,X2)		0.1693 (1.8943)	0.2383 (10.2688)			0.1729 (4.2251)	0.9987	0.9986
Y=f(X6,X3,X4)			0.2349 (9.2994)	0.0158 (0.3643)		0.2373 (7.0390)	0.9985	0.9984
Y=f(X6,X3,X5)			0.2460 (8.8320)		-6.9552 (-0.9600)	0.2502 (35.8886)	0.9986	0.9984

4. Conclusion and Policy Recommendations

4.1. Conclusions Drawn in This Paper

The model finally corrected the problems of multicollinearity and autocorrelation, improved the accuracy of the model, and made the model as a whole, significantly improved, and the degree of fitting enhanced.

The model results obtained through the above analysis show that the level of national fiscal expenditure, total retail sales of social commodities, total imports, and total investment in fixed assets do have a significant impact on tax revenue:

1) The level of national fiscal expenditure is positively correlated with tax revenue, indicating that the increase in fiscal expenditure will indeed increase tax revenue. Stimulating the increase of tax revenue, fiscal expenditure has played a very important role. The direction of fiscal expenditure will also stimulate economic growth in terms of infrastructure construction and employment, and economic growth will drive the growth of tax revenue.

After in-depth research, we can conclude that China's socialist market economic system still needs to be strengthened and improved. The government should give full play to the functions of macro-control and must ensure sufficient financial support, among which the contribution of tax revenue is particularly important.

2) There is a positive correlation between the total retail sales of social commodities and tax revenue, indicating that the total retail sales of social commodities will also affect tax revenue, which also reflects the fact that China's tertiary industry is in a stage of rapid development. my country's tax system structure is dominated by turnover tax. The calculation of turnover tax is based on the sales of commodities, and has a high correlation with value-added tax, which will affect tax revenue to a certain extent.

3) There is a positive correlation between total imports and tax revenue, indicating that an increase in total imports will also lead to an increase in tax revenue. Imported goods are subject to tariffs and value-added tax at the import link, and goods subject to consumption tax are also subject to consumption tax at the import link. According to the China Statistical Yearbook, China's tax revenue in 2019 was 12,492.220 billion yuan, value-added tax and consumption tax on imported goods were 1,253.335 billion yuan, accounting for 10.03% of tax revenue , and tariffs were 256.084 billion yuan, accounting for 2.05% of tax revenue.

4) There is a positive correlation between total investment in fixed assets and tax revenue, that is, for every percentage point increase in total investment in fixed assets, tax revenue will increase by 0.021225 percentage points accordingly. Investment in fixed assets is an important means of reproduction of social fixed assets. Therefore, it can be said that the data of fixed asset investment can provide effective reference for the government, so as to better control the pace of economic growth and promote sustainable economic growth. The investment of fixed capital is very important to promote the healthy development of society. It can help us use the most cutting-edge science and technology to cultivate more development fields, and help optimize our economic structure and enhance our competitiveness. better meet our needs. By expanding investment in infrastructure, the sustainability of the national economy can be significantly promoted, and more socioeconomic benefits can be brought to the government's fiscal policy. Increased investment in fixed assets can effectively promote the development of social production, thereby providing a good foundation for tax increases.

4.2. Policy Recommendations

Based on the conclusions drawn from the above analysis, we give the following suggestions for tax policy to continuously improve our country's tax system.

1) Implement a comprehensive and classified personal income tax system

With the continuous development of the social economy, people's living standards continue to improve, but the current personal income tax system is not well adapted to economic development, so gradually improve the personal income tax system, amend the pre-tax deduction items of personal income tax, and increase the pre-tax deduction Standardize and standardize preferential tax policies: in order to give full play to the role of personal income tax in adjusting the distribution of social resources, continuously improve people's consumption level and ability, and then promote economic development.

2) In terms of tariffs

According to the model analysis, there is a positive correlation between total imports and tax revenue, that is, with the increase of total imports, tax revenue will also increase. Therefore, tariff revenue has become an important pillar of my country's economic development. It not only helps to enhance the country's economic strength, but also helps to provide the government with more financial resources, so as to better realize its functions. Therefore, striving for customs revenue is still an important part of my country's current tariff policy.

The implementation of import tariffs is crucial to the economic development of our country. Therefore, the implementation of effective Import tariff policy is of great significance to promote the development of national economy.

3) With the continuous advancement of China's economic reform, economic growth is not only reflected in taxation, but also accompanied by major changes in the economic structure. In addition to increasing GDP, it is also necessary to optimize and upgrade the economic structure. This change in economic structure not only involves a change in the ownership structure, but more importantly, a major change in the structure of the tertiary industry, thereby increasing GDP and laying a solid foundation for taxation growth.

4) In terms of stimulating investment demand, we should focus on how to start private investment. For example, consider encouraging the development of industries to realize " consumption-type " value-added tax, promote the upgrading of production equipment of enterprises, improve the competitiveness of enterprises, and provide enterprises with a relatively fair competitive environment ; Tax wage standards or have the option to realize wages according to the facts, improve the level of corporate profitability.

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