

Correlation Analysis of Fiscal Revenue and Housing Sales Price Based on Multiple Linear Regression Model

Wei Zheng, Xinyi Li, Nanxing Guan, Kun Zhang #

School of Mathematics and Statistics, Chuxiong Normal University, Chuxiong, 675000, China

*Email: 289885264@qq.com

Abstract

This paper selects seven indicators of financial revenue and housing sales price in recent 19 years in China, and uses SPSS and Excel to carry out descriptive statistics, independent sample t-test, correlation analysis and regression analysis to comprehensively study the correlation between financial revenue and housing sales price in China, and establishes the relationship between financial revenue and housing sales price. When the average selling price of commercial housing increases by one unit, the fiscal revenue will increase by 27.855 points.

Key Words: *Financial Revenue; Housing Sales Price; Correlation Analysis; Multiple Linear Regression Model*

1 INTRODUCTION

Fiscal revenue is an important part of national income distribution. Through participating in the initial distribution and redistribution of national income, fiscal performs its functions of resource allocation, income distribution and economic stability. From the perspective of financial function, the financial revenue index reflects the financial guarantee degree of the government for social and economic development. In order to realize the functions of social and economic management, the government must master a certain number of social products. Fiscal revenue is an important means for the government to raise funds, meet public needs and support social and economic development. Fiscal revenue not only promotes the adjustment and optimization of social economic structure by adjusting every link of social production process, but also improves the financial basis for the government to directly support social and economic development ^[1].

Since the reform and opening up, China's economic level has developed rapidly, people's living standards have been improving, which has led to the development of many industries. Since the 21st century, China's real estate industry has developed rapidly, the demand for urban housing has increased dramatically, the housing sales have become extremely popular, and the housing sales prices across the country are also rising ^[2]. With the development of the real estate market, it also drives the development of related industries, and the government's land sales revenue and tax revenue are also increasing, which makes the financial revenue of our country continue to increase, so housing sales has become one of the important sources of financial revenue in China.

2 BASIC INFORMATION AND DATA SOURCE

2.1 Research Background

Since the housing reform in 1998, China's housing industry has achieved long-term development. The development of housing industry has also driven the development of related industries, including construction industry, steel industry and the tertiary industry. In general, the contribution of real estate industry to China's economic growth cannot be underestimated. However, while promoting the growth of real estate market and national economy, the price of real estate has changed a lot ^[3]. Due to the huge enthusiasm of investment and consumption, the price of real

estate in China has gone up all the way, which has reached the point that ordinary people can't bear. The central government has also issued relevant policies to curb the excessive growth of housing prices, but the effect is very small.

2.2 Research Method

In this paper, SPSS and excel are used to analyze the data of fiscal revenue and housing sales price by descriptive statistical analysis, correlation analysis, independent sample t-test and regression analysis. Statistical methods are used to analyze the correlation and linear relationship of each data in the past 20 years. Based on the results of the analysis, a multiple linear regression model is established to study fiscal revenue and the correlation between housing sales price.

2.3 Meaning of Indicators

Fiscal revenue: fiscal revenue refers to the funds raised by the state as a social manager and owner of state-owned assets by virtue of political power. It is the main form for the state to participate in the distribution of national income and the financial guarantee for the government to perform its functions ^[1].

According to the current government budget system of our country, the financial revenue of our country is divided into public financial revenue, government fund revenue, state-owned capital operation revenue and social insurance fund revenue.

Selling price of housing: the selling price of housing refers to the price of housing and the land it occupies, that is, the price of housing equals the price of land plus the price of buildings ^[3-4].

2.4 Data Sources

According to China Statistical Yearbook found some relevant indicators related to the fiscal revenue of housing in China from 1999 to 2018. The main data indicators related to the housing sales price are the average sales price of commercial housing, the average price of residential commercial housing, the average sales price of villas, high-end apartments, the average sales price of office building commercial housing, the average sales price of commercial business housing and other commodities The average selling price of the house and the construction area of the house are convenient for listing and calculation. In this study, we choose simple correlation analysis to study fiscal revenue (y), Construction area of residential buildings (x), The average selling price of commercial housing (x_1), Average price of residential commercial housing (x_2), Average selling price of villas and high-end apartments (x_3), Average selling price of commercial housing in office building (x_4), Average selling price of commercial business Housing (x_5), Average selling price of other commercial housing (x_6) The correlation among the seven indicators. As there is no data in 1999 in some indicators, we only select 19 groups of data, and summarize the data found in the National Statistical Yearbook, forming the following table 1. Input the data into SPSS software for analysis, and finally establish a suitable regression model, and make statistical and economic analysis to get the results Conclusion.

TABLE 1 INDEX DATA OF FISCAL REVENUE AND HOUSING

Particular Year	y	x	x_1	x_2	x_3	x_4	x_5	x_6
2000	13395	652234.26	2112	1948	4288	4751	3260	1864
2001	16386	660662.10	2170	2017	4348	4588	3274	2033
2002	18904	669297.10	2250	2092	4154	4336	3489	1919
2003	21715	689041.20	2359	2197	4145	4196	3675	2241
2004	26396	673163.29	2778	2608	5576	5744	3884	2235
2005	31649	614991	3168	2937	5834	6923	5022	2829
2006	38760	574909.86	3367	3119	6585	8053	5247	3131

2007	51322	480772.89	3864	3645	7471	8667	5774	3351
2008	60736	418294.63	4307	3981	8573	9516	6053	3482
2009	68518	364354.38	4681	4459	9662	10608	6871	3671
2010	83102	315629.8	5032	4725	10934	11406	7747	4099
2011	103874	265565.3	5357	4993	10994	12327	8488	4182
2012	117254	239769.6	5791	5430	11460	12306	9021	4306
2013	129210	217580.48	6237	5850	12591	12997	9777	4907
2014	140370	205286.68	6324	5933	12965	11826	9817	5177
2015	152269	193730.96	6793	6473	15157	12914	9566	4845
2016	159605	182767.05	7476	7203	15911	14332	9786	4832
2017	172593	180634.32	7892	7614	14965	13543	10323	5364
2018	183360	181236.44	8737	8544	16242	14385	11150	5351

3 DATA ANALYSIS

3.1 Line Chart

Draw a line chart about 2000-2018 by Excel. According to figure 1, since 2000, China's financial revenue has increased year by year, and the growth rate from 2000 to 2005 is relatively slow. Since 2006, the growth rate of China's financial revenue has shown a rapid trend. From 2000, China's financial revenue was 1339.5 billion yuan to 2018 It was 18336 billion yuan, an increase of nearly 14 times. From the growth of fiscal revenue, we can draw a conclusion that the current fiscal revenue in China is increasing, indicating that the residential sales industry has also been developed to a certain extent, increasing the tax revenue and further increasing the fiscal revenue in China.

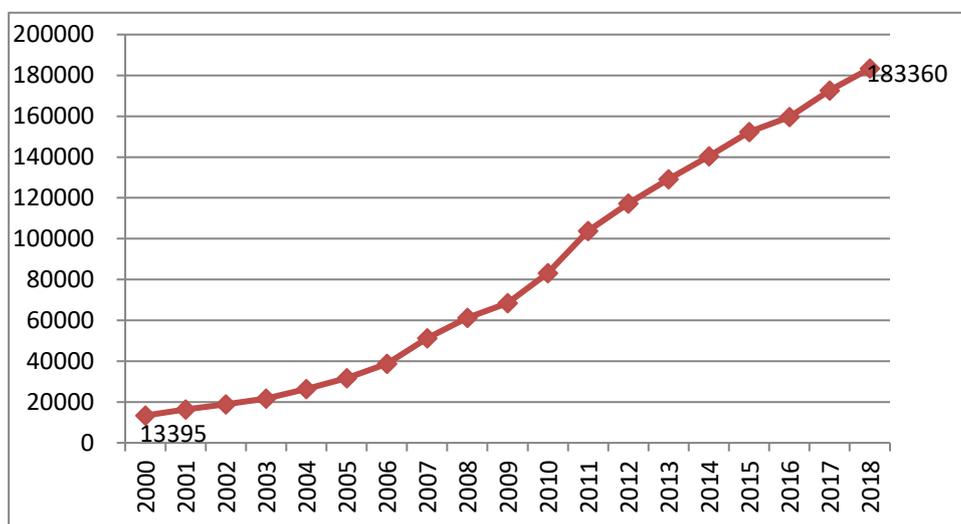


FIG.1 LINE CHART OF FISCAL REVENUE (UNIT: 100 MILLION YUAN)

3.2 Descriptive Statistics

Descriptive statistics refers to activities that use tabulation, classification, graphics and calculation of general data to describe data characteristics^[5]. Descriptive statistical analysis needs to make a statistical description of the relevant data of all variables in the survey. The commonly used descriptive analysis includes frequency analysis, descriptive analysis, exploratory analysis, contingency table analysis distribution and some basic statistical graphs. SPSS is used to make descriptive analysis of six variables.

TABLE 2 DESCRIPTION STATISTICS

	Number of Cases	Minimum Value	Maximum	Average Value	Standard Deviation
y	19	13395.00	183360.00	83684.8421	58887.72474
x	19	180634.32	689041.20	410162.6258	204621.42497
x1	19	2112.00	8737.00	4746.7368	2097.24864
x2	19	1948.00	8544.00	4492.7895	2049.11888
x3	19	4145.00	16242.00	9530.6842	4303.90004
x4	19	4196.00	14385.00	9593.6842	3649.09723
x5	19	3260.00	11150.00	6950.3684	2746.48335
x6	19	1864.00	5364.00	3660.8421	1235.76806
Number of valid cases (listed)	19				

According to table 2, we can get different indicators, corresponding case number, maximum value, minimum value, average value and standard deviation. For example, the case of fiscal revenue (y) is 19, the minimum value is 13395.00, the maximum value is 183360.00, the average value is 83684.8421, the standard deviation is 58887.72474, and there are six other descriptive statistics of indicators.

3.3 Independent Sample T Test

Independent sample t-test is one of the common methods in hypothesis test. Like all hypotheses, it is based on the principle of "small probability proof method" in statistics. Through independent sample t-test, we can realize the behavior comparison of two independent samples, and the independent sample t-test process also belongs to the system of mean comparison [6-8].

In this study, we choose to do t-test for independent samples of fiscal revenue. We divide the data of 19 years into two categories: the first category from 2000 to 2009 and the second category from 2000 to 2018. We use independent sample t-test to analyze whether there is significant difference between the two periods of fiscal revenue.

TABLE 3 BASIC STATISTICS OF DATA

	ZB	Number of Cases	Average Value	Standard Deviation	Mean Value of Standard Error
y	1	10	34837.5000	19525.18011	6174.40409
	2	9	137959.6667	32818.10246	10939.36749

According to table 3, we can get the information that among the samples participating in the analysis, the sample capacity in the first period is 10, the sample mean value is 34837.5000, the standard deviation is 19525.18011, the standard error mean value is 6174.40409; the sample capacity in the second period is 9, the sample mean value is 137959.6667, the standard deviation is 32818.10246, and the standard error mean value is 10939.36749.

From table 4, it can be found that the value of F statistic is 2.599, and the corresponding confidence level is 0.125, indicating that there is no significant difference between the variance of the two samples. The method used is equal variance t test of the two samples. The value of t-statistic is - 8.431, the confidence interval of degree of freedom is 17%, the critical confidence level is 0.000, less than 5%, which indicates that there is a significant difference between China's fiscal revenue from 2000 to 2009 and 2010 to 2018.

TABLE 4 T TEST RESULTS OF INDEPENDENT SAMPLES

		Levin's test of Variance Equivalence		T-test of mean equivalence						
		F	Significance	t	Freedom	Significance (double tail)	Average Difference	Standard Error Difference	95% Confidence Interval of Difference	
									Lower Limit	Upper Limit
y	Assumed equal variance	2.599	.125	-8.431	17	.000	-103122.16667	12231.40225	-128928.16967	-77316.16366
	Do not assume equal variance			-8.209	12.758	.000	-103122.16667	12561.56944	-130312.18371	-75932.14962

3.4 Correlation Analysis

Correlation analysis is an important method to study the relationship between variables. Correlation is a kind of uncertain random relation. It does not consider the causality between variables, but only studies the correlation of variables, including simple correlation analysis, partial correlation analysis and distance analysis [9-12].

In this study, we choose simple correlation analysis to study fiscal revenue (y), Construction area of residential buildings (x), The average selling price of commercial housing (x_1), Average price of residential commercial housing (x_2), Average selling price of villas and high-end apartments (x_3), Average selling price of commercial housing in office building (x_4), Average selling price of commercial business Housing (x_5), Average selling price of other commercial housing (x_6) The correlation among the seven indicators.

TABLE 5 RELEVANT ANALYSIS RESULTS

		y	x	x1	x2	x3	x4	x5	x6
y	Pearson correlation	1	-.956**	.992**	.990**	.987**	.948**	.980**	.969**
	Significance (double tail)		.000	.000	.000	.000	.000	.000	.000
	Number of cases	19	19	19	19	19	19	19	19
x	Pearson correlation	-.956**	1	-.951**	-.943**	-.968**	-.981**	-.982**	-.974**
	Significance (double tail)	.000		.000	.000	.000	.000	.000	.000
	Number of cases	19	19	19	19	19	19	19	19
x1	Pearson correlation	.992**	-.951**	1	1.000**	.989**	.961**	.981**	.971**
	Significance (double tail)	.000	.000		.000	.000	.000	.000	.000
	Number of cases	19	19	19	19	19	19	19	19
x2	Pearson correlation	.990**	-.943**	1.000**	1	.986**	.954**	.974**	.964**
	Significance (double tail)	.000	.000	.000		.000	.000	.000	.000
	Number of cases	19	19	19	19	19	19	19	19
x3	Pearson correlation	.987**	-.968**	.989**	.986**	1	.972**	.979**	.971**
	Significance (double tail)	.000	.000	.000	.000		.000	.000	.000
	Number of cases	19	19	19	19	19	19	19	19
x4	Pearson correlation	.948**	-.981**	.961**	.954**	.972**	1	.980**	.972**

	Significance (double tail)	.000	.000	.000	.000	.000		.000	.000
	Number of cases	19	19	19	19	19	19	19	19
x5	Pearson correlation	.980**	-.982**	.981**	.974**	.979**	.980**	1	.992**
	Significance (double tail)	.000	.000	.000	.000	.000	.000		.000
	Number of cases	19	19	19	19	19	19	19	19
x6	Pearson correlation	.969**	-.974**	.971**	.964**	.971**	.972**	.992**	1
	Significance (double tail)	.000	.000	.000	.000	.000	.000	.000	
	Number of cases	19	19	19	19	19	19	19	19

**At 0.01 level (double tail), the correlation was significant.

According to table 5 of the result analysis, there is a strong correlation between each variable, and it is significant at the significance level of 0.01, Including dependent variable financial revenue (y) And average selling price of commercial housing (x_1), Average price of residential commercial housing (x_2), Average selling price of villas and high-end apartments (x_3), Average selling price of commercial housing in office building (x_4), Average selling price of commercial business Housing (x_5), Average selling price of other commercial housing (x_6) There is a strong positive correlation, Construction area of residential buildings (x) There is a strong negative correlation with the other five indicators.

3.5 Simple Linear Regression Analysis

Simple linear regression analysis is the simplest analysis method in regression analysis. Its characteristic is that it only involves one independent variable. It is mainly used to deal with the linear relationship between a dependent variable and an independent variable, establish the model between variables, and make evaluation and prediction according to the model.

TABLE 6 MODEL FITTING

Model	R	R-Square	R After Adjustment	Standard Astimate Error
1	.956 ^a	.915	.910	17701.30317

a. Forecast variable: (constant), x

b. Dependent variable:y

Table 6 shows the model fit of financial revenue and construction area of residential buildings. From the table, we can get the following values: zero point nine one five, the adjusted value is zero point nine one zero, all in Zero point nine Therefore, the fitting of the model is better.

TABLE 7 ANALYSIS OF VARIANCE

Model		Sum of Squares	Freedom	Mean Square	F	Significance
1	Regression	57093039978.815	1	57093039978.815	182.210	.000 ^b
	Residual	5326714273.712	17	313336133.748		
	Total	62419754252.526	18			

a. Dependent variable:y

b. Forecast variable: (constant), x

Table 7 shows the variance analysis table, which reflects the significance of the model as a whole. In the usual model test significance, we usually compare it with 0.05. If the significance is less than 0.05, the model as a whole is significant. If the significance is greater than 0.05, the model as a whole is not significant. According to the data given in the table above, we can get that the significance is 0.000, less than 0.05, so the model we built is significant.

TABLE 8 COEFFICIENT TABLE

Model		Non-Standardized Coefficient		Standardization Coefficient	t	Significance
		B	Standard Error	Beta		
1	(constant)	196576.100	9297.041		21.144	.000
	x	-.275	.020	-.956	-13.499	.000

a. Dependent variable:y

According to table 8, we can get the simple linear regression model of fiscal revenue and construction area of residential buildings as follows:

$$y = 196576.1 - 0.275x$$

From the model, we can see that when the construction area of residential buildings increases by 1 unit, the fiscal revenue will decrease by 0.0275 points.

TABLE 9 RESIDUAL STATISTICS

	Minimum Value	Maximum	Average Value	Standard Deviation	Number of Cases
Predicted value	6927.5977	146859.1406	83684.8421	56319.05143	19
Residual	-27774.89063	36666.57813	.00000	17202.57454	19
Standard forecast	-1.363	1.122	.000	1.000	19
Standardized residual	-1.569	2.071	.000	.972	19

a. Dependent variable:y

Table 9 shows the correlation statistics of the forecast value and residual value of standardized and standardized financial revenue.

3.6 Multiple Regression Analysis

Multiple linear regression analysis is also a common regression analysis method. Multiple linear regression analysis involves multiple independent variables. It is used to deal with the linear relationship between one dependent variable and multiple independent variables, and establish the linear model between variables ^[13].

Multiple linear regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + \varepsilon \quad (1)$$

Where β_0 is called the regression constant, $\beta_1, \beta_2, \dots, \beta_p$ Called regression coefficient, ε is the random error term.

The random error term ε ($i=1, \dots, n$) content ^[2]:

$$E(\varepsilon_i) = 0, \quad Cov(\varepsilon_i, \varepsilon_j) = \begin{cases} \sigma^2, & i = j \\ 0, & i \neq j \end{cases} \quad (2)$$

The least square method is often used to estimate the parameters of multiple linear regression analysis. The estimated parameters are:

$$\hat{\beta} = (X^T X)^{-1} X^T Y \quad (3)$$

Selection and elimination of independent variables:

In the multivariate regression analysis, we choose the stepwise regression method. The basic idea of stepwise regression method is to have in and out. The specific method is to introduce independent variables into the regression equation one by one. After each independent variable is introduced, the selected independent variables should be tested one by one. When the introduced independent variables become not significant, they should be eliminated [14]. It is a step of stepwise regression to introduce or remove an independent variable from the regression equation, and every step should be tested with F to ensure that only significant independent variables are included in the regression equation before each new independent variable is introduced [15]. This process is repeated until no significant independent variable is introduced into the regression equation and no insignificant independent variable is removed from the regression equation.

In the study, stepwise regression was used to select variables.

TABLE 10 INPUT / REMOVED VARIABLES

Model	Variables Entered	Removed Variables	Method
1	x1	.	Step by step (condition: probability of F to be input $\leq .050$, probability of F to be removed $\geq .100$).

a. Dependent Variable:y

Table 10 shows the situation of variables entering or exiting the regression model. Because we use the stepwise regression method, the variables entering the model in turn and the criteria of variables entering and eliminating are shown in this study. From the table we get a model.

TABLE 11 MODEL FITTING TABLE B

Model	R	R-Square	R after Adjustment	Standard Estimate Error
1	.992 ^a	.984	.983	7630.26375

a. Forecast variable: (constant), x1

b. Dependent variable:y

Table 11 shows the fitting of one model formed by the entry of variables. It can be found that the R^2 of the model is 0.984, and the modified R^2 is also above 0.9, so the fitting of the model is good.

TABLE 12 ANALYSIS OF VARIANCE

Model		Sum of squares	Freedom	Mean Square	F	Significance
1	regression	61429998530.285	1	61429998530.285	1055.119	.000 ^b
	residual	989755722.241	17	58220924.838		
	total	62419754252.526	18			

a. Dependent Variable: y

b. Forecast Variable: (Constant), x1

Table 12 shows the variance decomposition results of the model with variable entry, which can be drawn from the saliency of 0. The model is very significant.

TABLE 13 COEFFICIENT TABLE

Model	Non standardized coefficient		Standardization coefficient	t	Significance	Collinearity statistics	Collinearity statistics	
	B	Standard error	Beta			tolerance		
1	(constant)	-48535.791	4430.947		-10.954	.000		
	x1	27.855	.858	.992	32.483	.000	1.000	1.000

a. Dependent variable: y

Table 13 shows the constant term and independent variable coefficient forming the model with the entry of variables. It can be found that the significance of the constant term of the model is 0.000, so the constant term is very significant, and the significance of the coefficient of the independent variable is 0.000, so the coefficient of the variable is very significant. Therefore, it can be concluded that the model is very significant in general. According to table 4, we can also get that the tolerance value of x_1 in collinearity statistics is 1, less than 10, so there is collinearity between x_1 and y .

TABLE 14 EXCLUDED VARIABLES A

Model	Enter beta	t	Significance	Partial correlation	Collinearity statistics			
					Tolerance	VIF	Minimum tolerance	
1	x2	-1.647 ^b	-1.810	.089	-.412	.001	1006.374	.001
	x3	.281 ^b	1.408	.178	.332	.022	45.245	.022
	x4	-.073 ^b	-.648	.526	-.160	.077	13.052	.077
	x5	.198 ^b	1.300	.212	.309	.039	25.909	.039
	x6	.108 ^b	.838	.414	.205	.057	17.473	.057

a. Dependent variable: y

b. Forecast variables in the model: (constant), x1

Table 14 shows the variables being eliminated by stepwise regression method, and the variables finally eliminated are the average price of residential commercial housing, the average sales price of villa, high-end apartment, the average sales price of office building commercial housing, the average sales price of commercial business housing and the average sales price of other commercial housing.

According to the above analysis, the expression of the final model is as follows:

$$y = -48535.791 - 27.855x_1$$

It is concluded that the final model has a good fit, the modified determinable coefficient is close to 1, and the model is significant as a whole zero. The significance of the coefficient of independent variable in the model is less than zero point zero five.

4 CONCLUSIONS AND SUGGESTIONS

According to the final multiple linear regression model, we can find that there is a significant relationship between the financial revenue and the average selling price of commercial housing, and its effect is positive. When the average selling price of commercial housing increases by one unit, the financial revenue will increase twenty-seven point eight five five Points. There is no significant relationship between the average price of residential commercial housing, the average sales price of villas, high-end apartments, office buildings, commercial buildings and other

commercial houses.

After the above research, from a macro perspective, we have a general understanding of the correlation between China's fiscal revenue and housing sales price, which will have a certain reference and guidance for the future tax collection on housing sales price. For example, according to the conclusion of simple linear regression analysis, we can draw the conclusion that in order to improve the national fiscal revenue, we should Reduce the construction area of residential housing; if through the conclusion of multiple regression analysis, we can draw that if we want to increase the national financial revenue, we should mainly increase the average sales price of commercial housing. Although the increase of national financial revenue is very important for the comprehensive national strength of the country, in order to reduce the burden of the people, the state should take measures to adjust and control the average price of housing sales to reduce the burden of housing purchase.

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REFERENCES

- [1] Zhao Shuhuan, Wang Zhenyu. Interpretation of China's main statistical indicators (Second Edition) [M]. Beijing: China Statistics Press, 2013.
- [2] Li Danqi, Jiang Minxing, Dai Ling. Empirical Study on the effect of housing price rise on the upgrading of consumption structure [J]. Business economy research, 2019 (11): 34-39.
- [3] Li Chunfeng, Liu Jianjiang, Chen Xianyi. Study on the crowding out effect of rising house prices on the consumption of urban residents in China [J]. Statistical research, 2014,31 (12): 32-40.
- [4] Yang Weizhong, Zhang Tian, Wang Guoping. SPSS statistical analysis and industry application case explanation (Fourth Edition) [M]. Beijing: Tsinghua University Press, July 74, 2010.
- [5] Tang Niansheng, Li Huiqiong. Applied regression analysis [M]. Beijing: Science Press, 2014.
- [6] Yubilianto. Return to education and financial value of investment in higher education in Indonesia[J]. Journal of Economic Structures: The Official Journal of the Pan-Pacific Association of Input-Output Studies (PAPAIOS),2020, 9 (1):9-49.
- [7] Dauda Gbolagade Adebisi, Olusola Joel Oyeleke. Fiscal Deficit Episode in Nigeria: What Is the Percentage of Error Correction between Public Revenue and Expenditure? 2020,11(02):533-540.
- [8] Marco Mele, Angelo Quarto, Cristiana Abbafati. On the Fiscal Policy in Malaysia: An Econometrical Analysis Between the Revenue-and Expenditure. 2020, 11(1): 361-372.
- [9] Elmira Emsia, Cagay Coskuner. Economic Growth Prediction Using Optimized Support Vector Machines [J]. Computational Economics, 2016, 48 (3):453-462.
- [10] Ruey Yau, C. James Hueng. Nowcasting GDP Growth for Small Open Economies with a Mixed-Frequency Structural Model [J]. Computational Economics,2019,54(1):177-198.
- [11] Ratnadip Adhikari, R.K.Agrawal. A linear hybrid methodology for improving accuracy of time series forecasting [J]. Neural Computing and Applications,2014,25(2):269-281.
- [12] Yu kun Wang, Li Zhang, We-me Ho. The Priority of Exploiting Fiscal Revenue or Lessening Public Expenditure: Evidence from China. 2020, 6(1):54-65.
- [13] Grant Backlund, James P. Hobert. A note on the convergence rate of MCMC for robust Bayesian multivariate linear regression with proper priors[J]. Computational and Mathematical Methods,2020,2(3).
- [14] Yuping Zeng, He He, Jun Zhou, Mei Zhang, Hengjian Huang, Zhenmei An. The association and discordance between glycosylated hemoglobin A1c and glycosylated albumin, assessed using a blend of multiple linear regression and random forest regression[J]. Clinica Chimica Acta,2020,506:44-49.
- [15] Tianyi Zhao,Jiaming Wang,Meng Xu,Kuishan Li. An online predictive control method with the temperature based multivariable linear regression model for a typical chiller plant system[J]. Building Simulation, 2020, 13 (2):335-348.

AUTHORS

Wei Zheng, borned in 1988, master's degree, lecturer, research direction: applied statistics.