Research on the Interactive Relationship between Fiscal Expenditure, New Urbanization and Urban-rural Sharing of Public Resources

-- Empirical Analysis based on VAR Model

Qian Li, Fan Jiang

School of Economics and Management, Chongqing University of Posts and Telecommunications, Chongqing 400065, China

Abstract

Based on the relevant data of China from 2005 to 2019, an index system was constructed, and the entropy method was used to calculate and evaluate the level of fiscal expenditure, new urbanization and Urban-rural sharing of public resources. The VAR model with fiscal expenditure, new urbanization and Urban-rural sharing of public resources as variables is constructed to study the dynamic interactive relationship among them. The results show that new urbanization can improve the level of Urban-rural sharing of public resources, but the effect is not obvious and has a time lag. The Urban-rural sharing of public resources plays a significant role in promoting the level of new urbanization. Fiscal expenditure has a long-term impact on new urbanization and Urban-rural sharing of public resources, and continuous fiscal expenditure can improve the development level of both.

Keywords

Fiscal Expenditure; New Urbanization; Urban-rural Sharing of Public Resources; Time Series; VAR Model.

1. Introduction

New-type urbanization is the only way to modernize, and it is an effective way to solve the problem of unbalanced and insufficient development in my country. It is committed to realizing the integration of urban and rural infrastructure and equalization of public services, emphasizing that people are the core and quality is the main body of evaluation [1]. Urban-rural sharing of public resources is to share public resources in the fields of science and technology, education, culture, medical and health care between urban and rural areas, and promote the balanced allocation of resources between urban and rural areas, so as to improve the quality of life and well-being of residents [2]. Urban-rural sharing of public resources is an important way to promote the integrated development of urban and rural areas, and one of the main points of new urbanization is the integrated development of urban and rural areas. Therefore, promoting Urban-rural sharing of public resources will be beneficial to the construction of new urbanization in my country. As the main source of funds for my country's new-type urbanization construction, fiscal expenditures should examine their impact on new-type urbanization and Urban-rural sharing of public resources, examine the interaction between new-type urbanization and Urban-rural sharing of public resources, and explore to achieve a balanced allocation of urban and rural resources and promote The path and countermeasures of Urban-rural integration development undoubtedly have important practical significance.

2. Literature Review

For the study of fiscal expenditure and new urbanization, domestic and foreign scholars have conducted empirical research on the relationship between the two using various econometric models such as panel threshold model[3], ARDL model[4], and dynamic panel model[5]. Rashid uses the ARDL model to test the long-term relationship between variables such as urbanization and financial development when there is a sudden change in structure, and points out that there is a feedback hypothesis between urbanization and financial development[4]. By constructing a spatial Dubin model, Chen Xiangman found that the expansion of the proportion of consumer spending is not conducive to new-type urbanization, and has a negative impact on the quality and efficiency of new-type urbanization in the eastern and central regions of my country[6]. From the perspective of expanding domestic demand, Meng Yuzhu explores the dynamic effects between fiscal expenditure, urbanization and household consumption, and proposes to expand government fiscal expenditure to develop urbanization and improve household consumption in the long run[7].

Regarding the relationship between fiscal expenditure, new urbanization and public service level, Mazurova proposed that the transfer payment of government expenditure can effectively solve the problem of balanced allocation of public resources[8]. Tajudeen and Behera believed that fiscal expenditure and public medical resource security have a mutually reinforcing influence effect[9][10]. By exploring the relationship between income decentralization, public services and poverty alleviation, Sanogo found that increasing local income has a positive impact on access to public services and poverty reduction[11]. Halaskova assesses the government's fiscal spending on public services, pointing out that countries with high economic levels have a higher proportion of fiscal spending on social security and health care[12]. Lu emphasized that urbanization can be accelerated by improving the efficiency of public service delivery[13]. Xu Yingzhi's research believes that new urbanization and local financial capacity have a threshold effect on the supply of public services[14]. Cheng Lan defines the factors that promote the equalization of basic public services based on different urbanization perspectives[15]. Cheng Jinghao, through the research on the relationship between the flow of talents, the level of financial expenditure and the level of basic public services, proposed that various public expenditures should be balanced, the level of basic public services should be improved, and the flow of high-quality talents should be promoted[16]. In essence, public services are part of public resources, and the sharing of public resources between urban and rural areas can promote the equalization of public services[17].

To sum up, scholars have paid more attention to the empirical relationship between fiscal expenditure and new-type urbanization. Some researches involve the field of public services, but focus on the research on the interaction between public resource sharing, government fiscal expenditure and new-type urbanization. less. This paper intends to construct an index system of public resources sharing between urban and rural areas and the level of new urbanization, and quantitatively analyze the status of urban and rural resource sharing and urbanization in my country from 2005 to 2019; on this basis, use the VAR model to analyze fiscal expenditure, new urbanization and public The dynamic relationship between the sharing of resources between urban and rural areas is to identify the path and countermeasures to promote the balanced development of urban and rural integration and the improvement of urban and rural social economy in my country.

3. Model Design and Variable Selection

3.1. Empirical Model

This paper intends to establish a vector autoregression (VAR) model to investigate the relationship between fiscal expenditure, new urbanization and Urban-rural sharing of public resources, and conduct an empirical analysis. The VAR model was proposed by SIMS, a Nobel Prize winner in 2011. It is used to investigate the dynamic interaction between multiple variables. The structure is mainly determined by the number of variables and their order. Accordingly, the p-order VAR model of this study can be expressed as:

$$\begin{bmatrix} y_{1t} \\ y_{2t} \\ \vdots \\ y_{nt} \end{bmatrix} = \begin{bmatrix} c_1 \\ c_2 \\ \vdots \\ c_n \end{bmatrix} + \sum_{i=1}^{p} \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \cdots & a_{nn} \end{bmatrix} \begin{bmatrix} y_{1t-i} \\ y_{2t-i} \\ \vdots \\ y_{nt-i} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \\ \vdots \\ \varepsilon_{nt} \end{bmatrix}, \quad t = 1,2,3\ldots T \tag{1}$$

Set up:

$$Y_t = \begin{bmatrix} y_{1t} \\ y_{2t} \\ \vdots \\ y_{nt} \end{bmatrix}, \quad c = \begin{bmatrix} c_1 \\ c_2 \\ \vdots \\ c_n \end{bmatrix}, A_i = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \cdots & a_{nn} \end{bmatrix}, \varepsilon_t = \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \\ \vdots \\ \varepsilon_{nt} \end{bmatrix} \tag{2}$$

The formula (2) can be simplified as:

$$Y_t = c + \sum_{i=1}^{p} A_i Y_{t-i} + \varepsilon_t, \quad t = 1,2,3\ldots T \tag{3}$$

Among them, Y_t represents the n-dimensional endogenous variable vector, c is the intercept vector, ϵ_t is the random disturbance term, p represents the lag order, the number of samples is T, and the matrix A_i is the coefficient matrix to be estimated. Some basic VAR models can be obtained by formula (3), but because these models contain lagged endogenous variable values, they appear to be asymptotically uncorrelated with ϵ_t. Correspondingly, each VAR formula can be evaluated by means of OLS, and the obtained parameter estimates are the same as the original model[18].

3.2. Indicator Selection

In order to test the dynamic interaction between fiscal expenditure, new urbanization and Urban-rural sharing of public resources, based on the establishment of a VAR time series model of related data, the annual data from 2005 to 2019 were used for analysis. Based on the index selection principles of rationality, authenticity, representativeness and effectiveness, we construct relevant measurement index systems on fiscal expenditure, new urbanization and Urban-rural sharing of public resources, and use the entropy method to assign weights to each index. Missing values were imputed using the trend method. The specific variable index system and its weight are shown in Table 1.

Table 1. Index system of each variable and its weight

variable	dimension	index	attribute	weight
Financial expenditure	Education	Per capita education financial expenditure (yuan)	+	0.1238
	Technology	Per capita scientific and technological financial expenditure (yuan)	+	0.1257

	Culture and Sports	Per capita cultural, sports and media financial expenditure (yuan)	+	0.1187
	Medical hygiene	Per capita medical and health expenditure (yuan)	+	0.1236
	Social Security	Per capita social security and employment fiscal expenditure (yuan)	+	0.1301
	Ecosystem	Financial expenditure on environmental protection per capita (yuan)	+	0.1246
	Urban and rural communities	Fiscal expenditure on community affairs per capita in urban and rural areas (yuan)	+	0.1258
	Public Service	Fiscal expenditure on general public services per capita (yuan)	+	0.1277
New urbanization level	Population （0.1832）	Proportion of urban population (%)	+	0.0909
		Urban population density (person/km^2)	+	0.0923
	Economy（0.2720）	GDP per capita (yuan)	+	0.0906
		The proportion of output value of secondary and tertiary industries (%)	+	0.0909
		Urban per capita disposable income (yuan)	+	0.0905
	Society（0.2704）	Urban and rural per capita income ratio (%)	-	0.0896
		Urban and rural per capita consumption expenditure ratio (%)	-	0.0901
		Urban road area per capita (m^2)	+	0.0908
	Ecology（0.2744）	Green coverage rate of built-up area (%)	+	0.0916
		Harmless treatment rate of domestic waste (%)	+	0.0916
		Urban sewage treatment rate (%)	+	0.0913
Urban and rural sharing level of public resources	Education（0.1667）	Number of primary and secondary schools (institutions)	+	0.0547
		Teacher-student ratio in primary and secondary schools (%)	+	0.0561
		Years of education per capita (years)	+	0.0560
	Technology （0.1672）	Number of scientific research institutions (institutions)	+	0.0563
		Number of scientific researchers per 10,000 people (person)	+	0.0557
		Number of domestic patent authorizations per 10,000 people (items)	+	0.0552
	Culture (0.1667）	Number of public libraries (pieces)	+	0.0554
		Number of books in public libraries per capita (books)	+	0.0552
		Population coverage of radio and television programs (%)	+	0.0560
	Medical hygiene（0.1663）	Number of medical institutions (number)	+	0.0559
		Number of health personnel per 10,000 people (bit)	+	0.0554
		Ten thousand people have hospital beds	+	0.0551
	Social Security（0.1661）	Medical Insurance Coverage (%)	+	0.0549
		Unemployment Insurance Coverage (%)	+	0.0555
		Pension insurance coverage rate (%)	+	0.0556
	Infrastructure （0.1670）	Internet penetration rate (%)	+	0.0558
		Number of public transport operations per 10,000 people (vehicles)	+	0.0553
		Per capita park green space (m^2)	+	0.0559

Among them, fiscal expenditure refers specifically to the per capita fiscal expenditure of the state finance for social public resources, that is, service guarantee, including eight parts: general public services, education, science and technology, culture and media, medical and health care, social security, ecological environment, and urban and rural community affairs. Before 2007, there was no classified statistics on the fiscal expenditure of the state finance in the fields of public services, education and medical care, ecological environment, etc. Therefore, the fiscal expenditure from 2005 to 2007 was divided into social cultural and educational expenses, scientific research expenditure, pension and social welfare and other The costs are summed up, and the original data comes from the EPS database and the China Macroeconomic Database.

For the level of new urbanization, refer to the evaluation indicators constructed by relevant researchers[19][20][21], and evaluate it from the four dimensions of population, economy, society and ecology. The original data comes from the National Bureau of Statistics and China Environmental Protection Database.

For the measurement of the Urban-rural sharing level of public resources, referring to the related scholars' measurement of the Urban-rural sharing level of social public resources[17] and the measurement of the equalization level of basic public services[22][23], the Urban-rural sharing level of public resources was constructed from the six aspects of education, science, culture and health, social security and infrastructure. indicator system. The original data comes from the National Bureau of Statistics, the 2006-2020 China Education Statistical Yearbook, the 2006-2020 China Science and Technology Statistical Yearbook, and the EPS database.

In order to eliminate the multicollinearity and heteroscedasticity problems of the above time series data, Eviews7.2 was used as a tool to perform logarithmic processing on all variables. The three variables of fiscal expenditure, new urbanization, and Urban-rural sharing of public resources were recorded as $ln\,PFE$, $ln\,URB$ and $ln\,PRS$. The descriptive statistics of each variable are shown in Table 2.

Table 2. Descriptive statistics of variables

Variable	Meaning	Number	mean	standard deviation	min	max
$ln\,PFE$	Financial expenditure	15	8.4264	0.6459	7.2093	9.2593
$ln\,URB$	New urbanization level	15	-0.9102	1.0897	-4.2545	-0.0050
$ln\,PRS$	Urban and rural sharing level of public resources	15	-0.8511	0.6552	-2.2000	-0.1177

4. Empirical Analysis

4.1. Correlation Analysis

4.1.1. ADF Stationarity Test

The data used for empirical analysis need to meet the premise requirements of stationarity. Therefore, this paper firstly performs ADF stationarity test on the three variable data. From the results in Table 3, it can be seen that the three groups of data $ln\,PFE$, $ln\,URB$ and $ln\,PRS$ are in At the 1% significance level, the series stationarity requirements have been met, and the next step of empirical analysis can be carried out.

Table 3. ADF stationarity test results

Variable	ADF	1% threshold	5% threshold	10% threshold	p	conclusion
$ln\,PFE$	-4.5497	-3.750	-3.000	-2.630	0.0059	steady
$ln\,URB$	-7.5174	-3.750	-3.000	-2.630	0.0000	steady
$ln\,PRS$	-9.6319	-3.750	-3.000	-2.630	0.0000	steady

4.1.2. VAR Model

Before constructing the model, the selection of the optimal lag order is required. If the lag order is too large, the degree of freedom will decrease, and if the lag order is too small, the autocorrelation problem of the error term will occur. In this paper, the information criterion and the maximum likelihood ratio (LR) test method are used to determine the optimal lag order. It can be seen from Table 4 that when the lag order is 3, * is the most, indicating that according to FPE, AIC, SC and other criteria, the result of the endogenous variable lag order of 3 is the best, that is, the output result of the VAR model is the most reasonable at this time.

Table 4. Determination of optimal lag order

Lag	LogL	LR	FPE	AIC	SC	HQ
0	34.8853	NA	1.49E-06	-4.905423	-4.77505	-4.93222
1	83.7972	67.72427*	3.41E-09	-11.04573	-10.5242	-11.15292
2	97.2653	12.43204	2.36e-09*	-11.73312*	-10.82051*	-11.92070*

Note: * indicates the lag order selected under this standard

According to the above analysis results, the VAR(2) model can be constructed:

$$
\begin{bmatrix} \ln PRS \\ \ln URB \\ \ln PFE \end{bmatrix} =
\begin{bmatrix} -0.8349 \\ 0.6508 \\ 0.5162 \end{bmatrix} +
\begin{bmatrix} 0.6863 & 0.4677 & -0.0284 \\ 0.9014 & 0.0439 & 0.6823 \\ -0.4949 & 0.7419 & 1.1248 \end{bmatrix}
\begin{bmatrix} \ln PRS_{t-1} \\ \ln URB_{t-1} \\ \ln PFE_{t-1} \end{bmatrix}
$$
$$
+ \begin{bmatrix} -0.4018 & 0.0284 & 0.1130 \\ -0.0691 & 0.0326 & 0.6333 \\ -0.2248 & -0.0359 & -0.1859 \end{bmatrix}
\begin{bmatrix} \ln PRS_{t-2} \\ \ln URB_{t-2} \\ \ln PFE_{t-2} \end{bmatrix} +
\begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \\ \varepsilon_{3t} \end{bmatrix}
\tag{4}
$$

4.2. Stability and Cointegration Tests

4.2.1. AR Root Stability Test

If all the reciprocals of the root moduli of the estimated VAR model are within the unit circle, the model is stable. The unstable VAR model is difficult to carry out reasonable and effective impulse response analysis, and will affect the validity of variance decomposition results. The VAR(2) model established in this paper with three variables, $\ln PFE$, $\ln URB$ and $\ln PRS$, the reciprocals of the six root moduli are all within the unit circle (Fig 1), indicating that the model is stable and has reliable performance. Analyze the results.
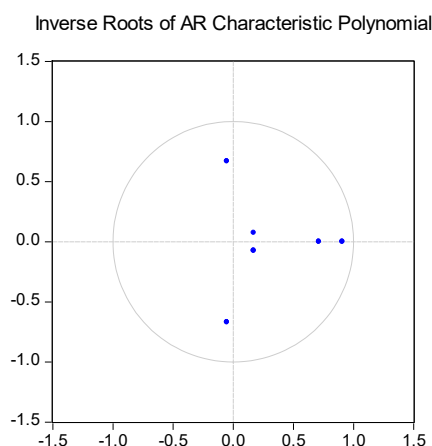

Figure 1. AR root modulus reciprocal test diagram

4.2.2. Johansen Cointegration Test

Variables that can maintain a long-term equilibrium state in a linear combination with stationary characteristics can form a cointegration equation. According to the above ADF unit root test, it can be seen that $ln\,PFE$, $ln\,URB$ and $ln\,PRS$ time series all have stationary characteristics and meet the conditions of cointegration test. In this paper, the Johansen cointegration test is selected, and the trace statistics and the largest eigenvalue are used to test the cointegration relationship of the above three variables (Table 5). The results show that at the 5% significance level, both the trace statistic test and the largest eigenvalue test show that there is at least one cointegration relationship, that is, there is a long-term equilibrium relationship between variables.

Table 5. Johansen cointegration test results

Null hypothesis	Trace statistic test result			Maximum eigenvalue test result		
	Eigenvalue	Trace statistic	P-value	Eigenvalue	Largest Eigenvalue	P-value
0	0.874566	38.57846	0.0038	0.874566	26.98763	0.0067
At most 1	0.541911	11.59083	0.1776	0.541911	10.14899	0.2023
Up to 2	0.104981	1.441838	0.2298	0.104981	1.441838	0.2298

4.3. Granger Causality Test

In order to explain the causal relationship between variables, the Granger causality test is required. This test is to test whether the lag value (past information) of a variable has predictive ability for the information of the explained variable, that is, whether the previous change of a variable can effectively cause the change of the explained variable. The test result is not The causal relationship in real economic activities, the results are shown in Table 6.

Table 6. Granger causality test results

Equation	Excluded	chi2	df	Prob > chi2	conclusion
$ln\,PRS$	$ln\,URB$	3.1903	2	0.203	$ln\,URB$ is not a Granger reason of Granger $ln\,PRS$
$ln\,PRS$	$ln\,PFE$	0.3590	2	0.836	$ln\,PFE$ is not a Granger reason of Granger $ln\,PRS$
$ln\,URB$	$ln\,PRS$	11.276	2	0.004	$ln\,PRS$ is the Granger reason of $ln\,URB$
$ln\,URB$	$ln\,PFE$	11.457	2	0.003	$ln\,PFE$ is the Granger reason of $ln\,URB$
$ln\,PFE$	$ln\,PRS$	6.7162	2	0.035	$ln\,PRS$ is the Granger reason of $ln\,PFE$
$ln\,PFE$	$ln\,URB$	22.008	2	0.000	$ln\,URB$ is the Granger reason of$ln\,PFE$

From Table 6, it can be seen that, first of all, the Urban-rural sharing of public resources is the Granger cause of new urbanization at the 1% significance level, while new urbanization is not the Granger cause of Urban-rural sharing of public resources, indicating the impact of new urbanization on Urban-rural sharing of public resources. It is not significant, and it cannot directly promote the development of Urban-rural sharing of public resources by improving the level of urbanization, but it is conducive to the development of regional urbanization by improving the level of Urban-rural sharing of public resources. Secondly, the financial expenditure is not a Granger reason for the Urban-rural sharing of public resources at the significant level of 1%, indicating that for the development of Urban-rural sharing of public resources, financial investment alone cannot achieve obvious results, which further reflects the level of Urban-rural sharing of public resources. The improvement of the price may be affected by other more factors such as sharing mechanism, technological innovation and so on. Thirdly, fiscal expenditure and new-type urbanization are Granger reasons for each other at a significant level of 1%, indicating that fiscal expenditure has a strong influence on the development of regional urbanization, and new-type urbanization can negatively affect public

financial investment. There is a strong causal relationship between them. It can be seen that the Urban-rural sharing of public resources is a one-way causal relationship between new urbanization and fiscal expenditure, and a two-way causal relationship between new urbanization and fiscal expenditure.

4.4. Impulse Response Analysis

Due to the existence of stochastic disturbance terms, the relationship between endogenous variables will show time fluctuation, and the differential and dynamic interaction characteristics between variables can be analyzed with the help of impulse response function. It can be seen from the aforementioned model stability analysis that the VAR(2) model constructed in this paper is stable and can be analyzed by impulse response to obtain effective results. According to the impulse response function and its principle, the impulse response diagram is obtained (Figure 2). Among them, the horizontal axis represents the lag period, and the vertical axis represents the response degree of endogenous variables to the shock.

The first row in the figure represents the impulse response of $ln\,PRS$ to $ln\,PRS$, $ln\,URB$ and $ln\,PFE$. It can be seen that the new-type urbanization has a positive impact on the Urban-rural sharing of public resources. When the new-type urbanization is given a positive impact of one standard deviation in this period, the Urban-rural sharing of public resources begins to increase gradually, and then slowly decreases after reaching a peak in the second period. . In addition, the impact of fiscal expenditure on the sharing of public resources between urban and rural areas was not reflected in the first period, and then increased negatively, fell after the third period, and turned positive in the fifth period, indicating that fiscal expenditure has a negative impact on urban and rural public resources. Shared facilitation needs to be realized over the long term. Combined with the results of the Granger causality test, the impact of new urbanization and fiscal expenditure on the sharing of public resources between urban and rural areas is generally small in the long run.
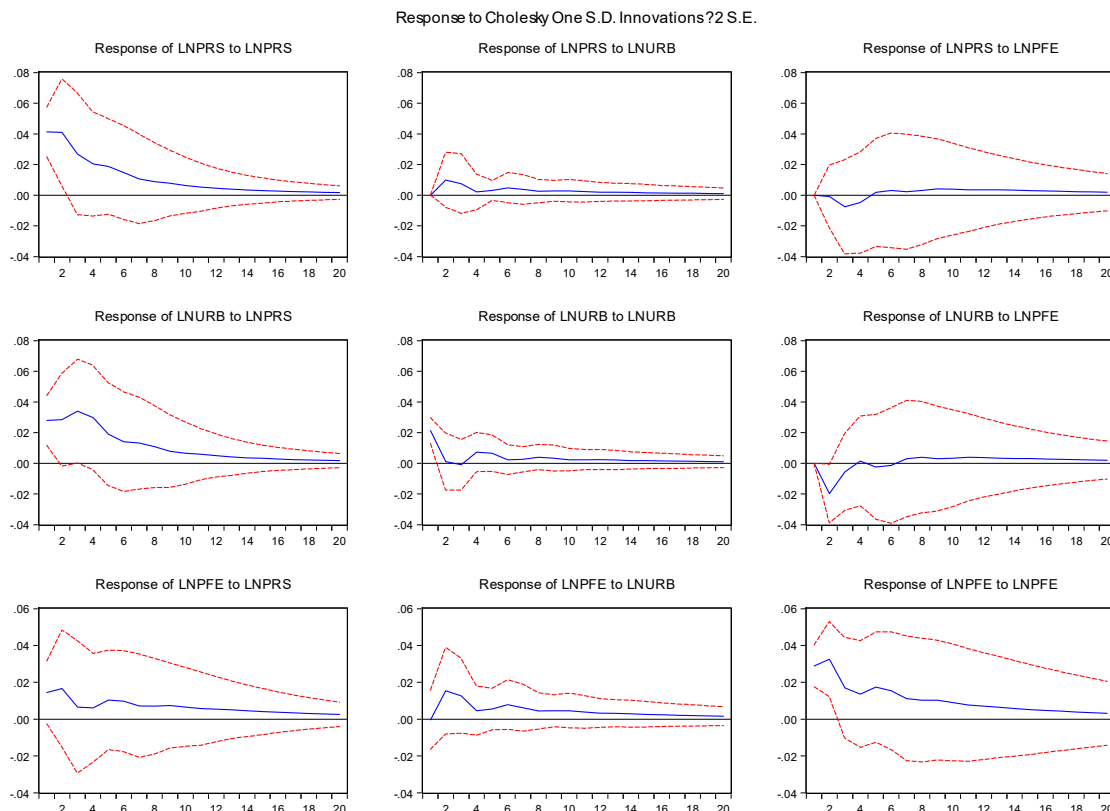

Figure 2. Impulse response analysis diagram

The second row represents the impulse responses of $\ln URB$ to $\ln PRS$, $\ln URB$ and $\ln PFE$. It can be seen from the figure that the new urbanization has a large positive response immediately to the random disturbance of a unit of Urban-rural sharing of public resources, rising to a peak in the third period, and then falling back. Combined with the results of the Granger causality test, the early impact of Urban-rural sharing of public resources can cause The fluctuation of new urbanization. The impact of fiscal expenditure on new-type urbanization is similar to the impact on Urban-rural sharing of public resources, both of which are negative in the short term, and then gradually turn into positive effects. In comparison, the impact of fiscal expenditure on new-type urbanization bigger, but still weaker overall.

The third row represents the impulse responses of $\ln PFE$ to $\ln PRS$, $\ln URB$ and $\ln PFE$. It can be seen from the figure that both urban and rural sharing of public resources and new urbanization have a positive impact on fiscal expenditure. The only difference is that the impact period of the two is different. The impact effect of Urban-rural sharing of public resources reaches the maximum in the first period, and then gradually decreases; while the impact effect of new urbanization tends to 0 in the first period, and reaches the maximum in the second period. stagnation. In the long run, the positive impact of the two on fiscal expenditure lasts for a long time and will not disappear for a long time.

4.5. Variance Decomposition

The variance decomposition reflects the relative importance of each random perturbation in the model that affects the endogenous variables. By decomposing the variance of Urban-rural sharing of public resources, new urbanization, and fiscal expenditure, the variance contribution rate among the three can be clarified, and the relevant results are shown in Figure 3.

It can be seen from Figure 3 that the Urban-rural sharing of public resources has the greatest response to its own changes. When making three-period estimates forward, 95% of the forecast variance still comes from the Urban-rural sharing of public resources itself, the impact of new urbanization and fiscal expenditures. Very small, this result validates the Granger causality test and impulse response analysis results. For the variance decomposition of new-type urbanization, the new-type urbanization has the greatest degree of response to changes in Urban-rural sharing of public resources, which remains at about 80% after the fifth period, while its own changes gradually decrease over time, and stabilizes at 80% after the fourth period. It is about 11%, indicating that the new urbanization is stable, and the impact of the urbanization level in the early stage has little effect on the current level. For the variance decomposition of fiscal expenditures, 70% of the changes in fiscal expenditures after three periods still come from their own changes, and the degree of impact of Urban-rural sharing of public resources on fiscal expenditures is basically stable at around 19% in the long run.
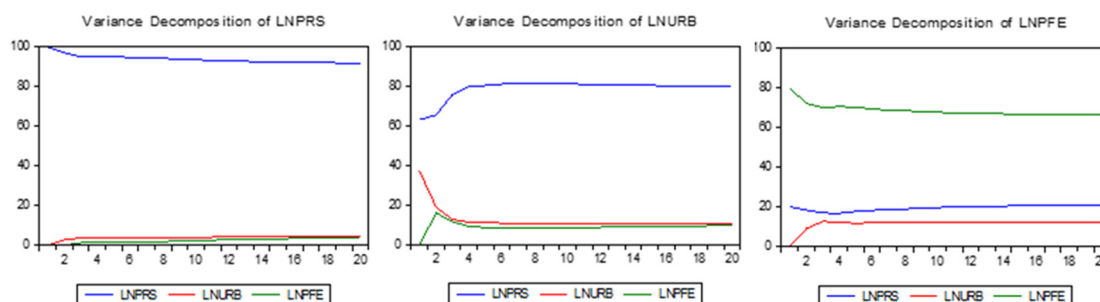

Figure 3. Variance decomposition diagram

Combining the variance analysis principle and variance decomposition diagram, it can be seen that the variance contribution rate of new-type urbanization and fiscal expenditure is not large, the Urban-rural sharing of public resources has a significant variance contribution rate to the

new-type urbanization, and the new-type urbanization and fiscal expenditure have a significant contribution to the Urban-rural sharing of public resources. The variance contribution rate is small.

5. Conclusions and Recommendations

5.1. Research Conclusions

Based on the relevant data from 2005 to 2019 in my country, this paper constructs a VAR model with financial expenditure, new urbanization and Urban-rural sharing of public resources as variables, and explores the dynamic interaction between the three. The results show:

(1) For the Urban-rural sharing of public resources, the development of new urbanization can promote the improvement of the level of Urban-rural sharing of public resources. The level of new urbanization that lags behind by one stage will increase by 1 unit, which will increase the level of Urban-rural sharing of public resources by 0.4677 units. unit. However, fiscal expenditure has a time lag in the improvement of the Urban-rural sharing level of public resources. An increase of 1 unit of fiscal expenditure in the two-phase lag can increase the Urban-rural sharing level of public resources by 0.1130 units. The above results show that actively promoting the development of regional urbanization and increasing fiscal expenditure will be conducive to the improvement of the level of urban and rural sharing of public resources. However, the Urban-rural sharing of public resources is more influenced by its own, indicating that promoting the Urban-rural sharing of public resources and realizing the balanced allocation of urban and rural resources has a long cycle and heavy tasks, and needs to rely on the self-evolution of the Urban-rural sharing system.

(2) For the development of new-type urbanization, fiscal expenditure has a promoting effect. Each increase of 1 unit of fiscal expenditure in the first and second lag periods will increase the level of new-type urbanization by 0.6823 and 0.6333 units respectively, which indicates that fiscal expenditure It has a long-term role in promoting the development of new urbanization. In addition, Urban-rural sharing of public resources can also greatly promote the development of new-type urbanization. The Urban-rural sharing of public resources that is lagging behind in the first phase will increase by 1 unit, which will promote the level of new-type urbanization by 0.9018 units, which shows that vigorously promoting Urban-rural sharing of public resources will extremely Dadi promotes the development of new urbanization. To promote the development of regional urbanization, we should focus on increasing fiscal expenditure, allocating urban and rural resources in a balanced manner, and narrowing the economic and social gap between urban and rural areas.

(3) In terms of fiscal expenditures, the improvement of the level of Urban-rural sharing of public resources can reduce fiscal expenditures. Once a good resource sharing mechanism is formed within urban and rural areas, with a high level of resource sharing, it will be able to generate greater social benefits by itself. Thereby reducing external capital investment, that is, reducing national and local financial expenditures. However, the impact of new-type urbanization is lagging behind. The improvement of the level of new-type urbanization in the early stage depends on fiscal expenditure. When the new-type urbanization reaches a certain level, fiscal expenditure can also be effectively reduced. Accordingly, the development of new-type urbanization requires a large amount of fiscal expenditure. Increasing fiscal expenditure will promote the further development of new-type urbanization, improve the level of urban and rural sharing of public resources, achieve balanced allocation of urban and rural resources, and deepen urban and rural economic and social development.

5.2. Policy Recommendations

(1) Improve the sharing environment, optimize the sharing structure, and effectively enhance the level of urban and rural sharing. The improvement of the level of Urban-rural sharing of public resources depends on its own influence. Therefore, to improve the level of sharing, one must improve the sharing environment in urban and rural areas, strengthen the construction of shared infrastructure, ensure the supply of shared resources, and promulgate sharing system policies; the second must be optimized Urban-rural sharing structure, constantly adjust the internal structure between urban and rural sharing subjects, exert their synergistic effect, and maximize the efficiency and benefit of urban and rural resource sharing. At the same time, continue to make financial investment to promote the improvement of the level of urban and rural sharing of public resources.

(2) Increase financial investment, balance resource allocation, and continue to promote the development of new urbanization. The development of new urbanization and the sharing of public resources between urban and rural areas complement each other and complement each other. In addition, increasing financial investment and ensuring the supply of funds will have a long-term promoting effect on the development of urbanization. In addition, we should pay attention to the sustainability of urbanization development, adhere to a systematic and comprehensive awareness, and promote the development of a long-term and effective new urbanization strategy.

(3) Improve the fiscal expenditure system, improve the transfer payment system, and dynamically optimize the allocation of resources. Fiscal expenditures can promote the sharing of public resources between urban and rural areas and new urbanization. We will increase fiscal expenditure to ensure the supply of funds for people's livelihood projects such as education, medical care, elderly care, and ecological environment, improve the transfer payment system, promote the optimization of the structure of fiscal expenditure, and narrow the economic and social gap between urban and rural areas. At the same time, improve the utilization efficiency of financial funds, improve government functions, and ensure that financial expenditures play an active role in the sharing of public resources in urban and rural areas and in ensuring people's livelihood services. With financial supply as the guarantee, we will promote the development of urbanization and the balanced allocation of urban and rural resources.

References

[1] Wang Min, Lv Han. New-type urbanization, peasant citizenization and public service supply [J]. Journal of Harbin University of Commerce (Social Science Edition), 2020(04): 94–105.

[2] Li Shengzhu, Zhao Zhiying. Research on the measurement of networked urban and rural sharing of social public resources in China [J]. Research World, 2020(06): 32–37.

[3] Deng Qianjin, He Aiping. Urbanization, Local Fiscal Expenditure Scale and Urban-rural Income Gap: An Empirical Test Based on Panel Threshold Model [J]. Journal of Management, 2016, 29(02): 35–42.

[4] Sbia R, Shahbaz M, Ozturk I. Economic growth, financial development, urbanisation and electricity consumption nexus in UAE[J]. Economic Research-Ekonomska Istrazivanja, 2017, 30:527–49.

[5] Zheng Qiang, Yang Guo, Su Yan. People's Livelihood Fiscal Expenditure and New Urbanization: Theory and Empirical Research [J]. Ecological Economy, 2020, 36(08): 88–94.

[6] Chen Xiangman, Chen Yao. The Influence of Local Public Financial Expenditure Structure on New Urbanization --Analysis Based on Spatial Durbin Model [J]. Contemporary Finance and Economics, 2021 (04): 39–52.

[7] Meng Yuzhu, Li Bo, Pan Wenfu. Fiscal Expenditure, Urbanization and Resident Consumption: Rethinking on Expanding Domestic Demand [J]. Journal of Capital University of Economics and Business, 2021, 23(01): 10–23.

[8] Mazurova B, Kollar J. Unproductive Government Expenditure in Context of Fiscal Policy[M]. Sgem 2016, Bk 2: Political Sciences, Law, Finance, Economics and Tourism Conference Proceedings, Vol I, Sofia: Stef92 Technology Ltd, 2016, 761–72.

[9] Tajudeen OS, Tajudeen IA, Dauda RO. Quantifying Impacts of Macroeconomic and Non-economic Factors on Public Health Expenditure: A Structural Time Series Model[J]. African Development Review-Revue Africaine De Developpement, 2018,30:200–18.

[10] Behera DK, Dash U. Effects of economic growth towards government health financing of Indian states: an assessment from a fiscal space perspective[J]. Journal of Asian Public Policy, 2019,12: 206 –27.

[11] Sanogo T. Does fiscal decentralization enhance citizens' access to public services and reduce poverty? Evidence from Côte d'Ivoire municipalities in a conflict setting[J]. World Development, 2019, 113:204–21.

[12] Halaskova R. Approaches to Evaluate Government Expenditures on Services in EU Countries[M]. Ostrava: Vsb-Tech Univ Ostrava, 2019.

[13] Lu J, Li B, Li H. The influence of land finance and public service supply on peri-urbanization: Evidence from the counties in China[J]. Habitat International, 2019, 92:102039.

[14] Xu Yingzhi, Zhao Yongping. New-type urbanization, local financial capacity and public service supply [J]. Journal of Social Sciences of Jilin University, 2015, 55(05): 24-35+171-172.

[15] Cheng Lan, Wen Yuchen. Research on the measurement and influencing factors of equalization of basic public services from different perspectives of urbanization [J]. Review of Economics and Management, 2018, 34(06): 106–115.

[16] Cheng Jinghao. Talent Flow, Fiscal Expenditure and Basic Public Service Level [J]. Economic Research Reference, 2020(14): 38–48.

[17] Zhao Zhiying, Li Shengzhu, Li Qian. Research on the Coupling and Coordinated Development of Urban and Rural Sharing, Networking and Urbanization of China's Public Resources [J]. Research World, 2021(06): 1–9.

[18] Zhou Li, Zhang Ning. Statistical test on the correlation between new urbanization, fiscal expenditure and Urban-rural income gap [J]. Statistics and Decision-Making, 2021, 37(06): 87–89.

[19] Liao Zhongju, Zhang Zhiying. Measurement and Comparison of Interprovincial New Urbanization Development Level [J]. Statistics and Decision-Making, 2020, 36(20): 168–171.

[20] Wang Yongjing, Li Hui. Digital Inclusive Finance, New Urbanization and Urban-rural Income Gap [J]. Statistics and Decision-Making, 2021, 37(06): 157–161.

[21] Ma Changfa, Zhu Xiaoxu. Research on the Interaction between New-type Urbanization and Rural Revitalization in Western China [J]. Ecological Economy, 2021, 37(05): 99–105.

[22] Han Zenglin, Li Bin, Zhang Kunling. Equalization of basic public services in China's urban and rural areas and its spatial pattern analysis [J]. Geographical Research, 2015, 34(11): 2035-2048.

[23] Yu Xinghou, Hu Cui. Spatial and temporal characteristics and influencing factors of the coordinated development of new urbanization and public services: Empirical evidence based on spatial panel data of the Yangtze River Economic Belt [J]. Journal of Chongqing University of Technology (Social Sciences), 2019, 33(07):31-45.