

Dynamic Panel Analysis of the Impact of Consumption Environment on Rural Residents' Consumption Growth

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Abstract: From the actual situation of the current consumption of residents, consumption growth is influenced by many factors, among which the more important factor is the consumption environment, so it can be said that the study and analysis of the consumption environment can greatly promote and enhance the understanding of the consumption growth of rural residents. Based on the in-depth analysis of the current situation of rural residents' consumption, this paper expounds and analyzes in detail the impact of consumption environment on rural residents' consumption growth, and makes a more in-depth dynamic analysis, hoping to play a positive role in promoting the development of rural economy to a certain extent.

1. Introduction

The consumption of residents is a very important content in the process of social economic development, and the growth of rural residents' consumption is the key factor to study the phenomenon of social economic development. From the actual research results, the current income level of rural residents is showing a clear upward trend, but in consumption growth, but is declining year by year. In other words, consumption growth and income levels show a clear inverse relationship. At present, there is still a big gap in the consumption growth level of our country compared with the western developed countries, among which the main influencing factor lies in the consumption environment, which can be said to be the key to influence and restrict the consumption growth. Therefore, the in-depth analysis of the impact of consumption environment on the consumption growth of rural residents will play a very positive theoretical and practical role in correctly grasping the current economic development trend and improving the sustainability of rural economic development.

With the continuous development of economic globalization, the competition among countries is becoming more and more fierce, so if we want to be invincible in the fierce international competition, we should actively renew and change the traditional concept of economic development and develop economy in the way of keeping pace with the times[1]. Before, our country adopts the method of increasing import and export trade, but this way can not meet the overall requirements of current social and economic development with the change of economic form, and has also deviated from the trend of social development. Because from the current economic situation, there is still a big gap between the level of economic development of our country and the developed countries, especially the consumption of rural residents, more obvious deficiencies. Therefore, in such a situation, promoting consumption growth becomes the key to solving the problem. However, consumption growth, especially among rural residents, is also related to many factors, among which the consumption environment is the most important, and the consumption environment itself is also influenced by the political environment, the social environment and the market economy and the consumption concept, which are the result of the common influence of various factors.

At the same time, with the continuous maturity of the world economy, various theories of economic development have gradually become more and more perfect, and consumption theory has been developed under such circumstances. As far as the actual consumption situation is concerned,

the consumption growth of rural residents is largely restricted by the consumption environment, so the consumption environment is different, the consumption growth of rural residents will show different differences, and the growth effect will be different. Therefore, in the process of studying the growth of rural residents' consumption, the improvement of social infrastructure, the construction of social security system and so on are all the key issues that should be paid attention to[2]. But how will the change of consumption environment affect the consumption growth of rural residents? These are problems that need to be solved. This paper makes a comprehensive and detailed study on the change of consumption environment and the consumption growth of rural residents in the way of dynamic panel analysis.

2. The Model Setting of the Dynamic Panel Study on the Consumption Growth of Rural Residents

Dynamic panel analysis is an effective way to analyze and study the consumption environment and the consumption growth of rural residents, but if we want to ensure that the research results are as accurate as possible, we need to set the model. Assuming that rural residents consume under discrete-time conditions, this is also a research scenario often used to study changes in the consumer environment[3]. The consumption level of consumers, the income and the income of rural residents can be expressed in different symbols, so as to sum up the corresponding changes in the process of practical research and analysis. In addition, in the process of model setting, we should also focus on risk aversion, while consumption habits and inter-period utility discount rate are also more important content. Finally, after dynamic research and analysis, the final result of this problem can be expressed as

$$\max E_0 \left[\sum_{t=0}^{\infty} (1+\rho)^{-t} \mu \left(\bar{C}_t \right) \right] \quad (1)$$

$\{c_t\}$

Assuming that the consumption environment and the consumption growth of rural residents follow the normal distribution law, the distribution results can be expressed as

$$E_{t-1} \left[-\theta \Delta \ln \bar{C}_t \right] = \exp \left\{ -\theta E_{t-1} \left[\Delta \ln \bar{C}_t \right] + \frac{1}{2} \text{var}_{t-1} \left[-\theta \Delta \ln \bar{C}_t \right] \right\} \quad (2)$$

From the above analysis results, it can be seen that the rural residents' consumption growth is affected by the consumption and the consumption, and there is a correlation between consumption and expenditure, which are the key issues that should be considered in the process of studying the consumption environment.

3. Dynamic Panel Analysis of the Impact of Consumption Environment on the Consumption Growth of Rural Residents

Variable selection can not be ignored in the process of dynamic panel analysis, it can be said that the science of variable selection, to a large extent, determines the impact of consumption environment on rural residents consumption growth research results. Therefore, in the selection of variables, we should try to ensure the authority and accuracy of data sources. And in the selection of data, the data should be comprehensive analysis and collation, the data is obviously unreasonable, should be appropriate adjustments to make it as far as possible to meet the corresponding research standards. Through the analysis of the current consumption data of rural residents, it can be seen that the rural economy is running well, and the income level of rural residents is increasing year by year[4]. In addition, only a small proportion of rural residents consume credit. Therefore, in the process of dynamic panel analysis, for the construction and development of infrastructure, this paper uses highw1 to denote highway density, railw1 to denote railway density, and the selected data are also derived from the annual economic data of the people's bank of china, and its authority and accuracy are beyond doubt.

4. Analysis of Research Results of Dynamic Panel

4.1. Stable Consumption Data for Rural Residents

From the actual situation of data collection and selection, in different periods, the consumption data of rural residents will fluctuate greatly with the passage of time and the change of consumption environment, so when determining the dynamic panel analysis module, the data will show more obvious instability, and the distribution situation is also irregular. Through the analysis model determined before, in the process of dynamic analysis of the consumption data of rural residents, the consumption data is very easy to appear the situation of high correlation, and then show the "pseudo-regressive" analysis results, but there is still a certain gap between the analysis results and the actual situation. Therefore, in order to avoid the above phenomenon in the actual construction of the analysis model, the stationarity of these data should be tested to ensure that the data dynamic panel analysis results are more accurate.

Variable	Obs	Mean	Std.Dev.	Min	Max
$\Delta \ln C_t$	435	0.073697	0.06786	-0.26479	0.538106
$\Delta \ln y_t$	435	0.081994	0.029618	-0.07936	0.189557
$(\Delta \ln C_t)^2$	435	0.013058	0.019513	1.18E-06	0.274071
r	466	1.454393	0.492071	0.097613	2.851195
$\Delta \ln credit$	340	0.158927	0.346209	-2.53176	3.215636
$\Delta \ln highw$	435	0.097578	0.285371	-7.16201	2.761807
$\Delta \ln railw$	429	0.044977	0.172253	-0.65308	2.374193
$\Delta \ln insur$	404	0.162576	0.097041	-0.9483	0.85527
$\Delta \ln bed$	374	0.038375	0.065183	-0.19725	0.401843

Figure 1 Related data

In addition, in the process of the actual dynamic panel analysis, the rural residents' consumption growth will appear more obvious fluctuation phenomenon, which requires the first-order difference processing of the data when studying the consumption impact and the rural residents' consumption growth impact, which is also often used in the dynamic panel analysis process. After differential processing, the consumption data of rural residents can be tested and processed by using the above analysis model[5]. If the data after the dynamic panel analysis is stable, then the analysis result will be more accurate, but if the final dynamic panel analysis result is not stable, the occurrence probability of "pseudo regression" is greater than zero, which will lead to the deviation of the analysis result, which does not accord with the influence law of the actual consumption environment.

4.2. A Descriptive Analysis of the Impact on the Consumption Growth of Rural Residents

Through the comprehensive statistical analysis of the difference results of the selected data, the consumption growth of rural residents shows a certain correlation with the consumption environment in the consumption data series, and it can be seen in the dynamic analysis results that if the consumption income of rural residents is taken as the research variable, it will not have a certain impact on the final statistical results. There is a clear mathematical correlation between the square of rural residents' consumption growth and consumption growth[6]. This analysis shows that the consumption growth rate of rural residents should be regarded as a major variable when studying the consumption environment and the consumption growth of rural residents.

In recent years, as the country's emphasis on rural economic development has gradually increased, the level of infrastructure construction has also achieved a significant improvement compared with the previous level, and the construction of transportation facilities has reached an unprecedented level, so the level of economic development has also been greatly improved, and the gap between rural and urban areas has been further narrowed.

5. Conclusion

To sum up, among the many research methods, dynamic panel analysis is a more scientific analysis method. From the above analysis, it can be seen that in the process of rural residents' consumption growth, it will be influenced by many factors from the outside, and the consumption environment is undoubtedly the most important factor. Combining with the results of dynamic panel analysis, we should correctly understand the development law of rural residents' consumption growth, grasp the trend of consumption development, and then formulate targeted economic development goals according to the actual situation, coordinate regional economic development as a whole, eliminate economic barriers, and promote the continuous development of social economy in a better direction.

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