Analysis of Farmers' per capita living income and consumption Expenditure

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Abstract: With the rapid development of social economy and the continuous development of new rural construction, the rural economy and society of our country have been developed well and quickly, and the living standards of farmers have also been greatly improved. Because of the economic background, social background and environmental background of the provinces and cities in China, there are some differences, which leads to the uneven living and consumption level. In order to objectively understand the overall consumption level and living conditions of rural residents in China, SPSS plays an important role in the research of economy, management, medicine and psychology. Increasing farmers' income is the key to expanding domestic demand in China. In order to better understand the income structure, consumption structure and consumption behavior of rural residents in China, this paper analyzes the income and consumption expenditure of farmers by means of SPSS analysis method in order to get a better understanding of the income structure and consumption structure of rural residents in China.

Keywords: Farmers, Living income, Consumer expenditure, Linear regression analysis.

1. Introduction

In recent years, the whole country has conscientiously implemented the scientific concept of development, with the aim of increasing agricultural production and farmers' income, strengthening the implementation of various policies and measures in favour of agriculture, and doing a good job of transferring rural labor force into employment. To overcome the adverse effects of natural disasters such as the financial crisis and severe drought, the whole city's rural economy has maintained a good situation of stable development, farmers' cash income has continued to grow, and the

standard of living and consumption has continued to improve.

China is a large agricultural country, there are still 900 million rural population, accounting for 70% of the total population of the country, farmers are the largest group in China, the promotion of rural consumption capacity is directly related to the overall situation of the national economy. From the perspective of the rural market, nearly 60% of China's population lives in rural areas. The process of rural urbanization on economic growth is very obvious, no country in the world has such a large scale of urbanization. Although the income of rural residents is lower than that of urban residents, but the base is huge, and the income of rural population is also growing steadily.

With the development of economy, the structure of peasants' income and consumption level has also changed a lot. The improvement of farmers' living standard and the increase of consumption are very important to realize the good and fast development of the national economy and correctly handle the relationship between domestic demand and external demand. But overall, the level of consumption of farmers is still low, the survey shows that some areas are less than 1/3 of the per capita consumption expenditure of urban residents. And the consumption structure is unreasonable, limited to food and other basic needs for survival, consumption in clothing decoration and so on very little. And the fundamental reason that affects the farmer's consumption level is the farmer's income.

Farmers' living expenditure mainly includes food, clothing, medical and health care, education and culture, family equipment, transportation and so on. This paper only selects four typical consumption expenditure as the representative to analyze the consumption structure of rural residents.

2. Theoretical basis of linear regression correlation

2.1 Definition

In statistics, linear regression is a regression analysis that uses the least square function called linear regression equation to model the relationship between one or more independent variables and dependent variables. This function is a linear combination of one or more model parameters called regression coefficients. The case with only one independent variable is called simple regression, and the case with more than one independent variable is called multivariate regression. In the regression analysis, only one independent variable and one dependent variable are included, and the relationship between them can be approximately represented by a straight line. This regression analysis is called univariate linear regression analysis.

2.2 Principle

Linear regression analysis generally solves the following problems: first, determining the quantitative expressions between dependent variables and several independent variables, commonly known as regression equations, and determining how closely they relate; second, by controlling the value of controllable variables,Use the regression equation to predict or control the value and accuracy of dependent variables; third, carry out independent variable analysis to find out the most significant factors, in order to distinguish between important factors and secondary factors.

Regression analysis is called linear regression analysis when it mainly studies the linear correlation between variables, otherwise it is called nonlinear regression analysis. According to the number of independent variables, it can be divided into one variable linear regression and multiple linear regression.

The requirement of the linear regression process is that the independent variables and dependent variables must be numerical variables with scale measure, and the label or classification variables must be recorded as binary dummy variables (virtual variables) or other types of opposite variables.

All observed values for dependent variables should be considered to be normal populations with independent equal variances, and there should be a certain linear relationship between dependent variables and each independent variable.

3. Regression analysis

3.1 Description of data sources

Table 1 shows the basic situation of rural households. The data are from the China Statistical Yearbook 2013.

Table 1 Basic situation of rural households

Project	1990	1995	2000	2010	2011	2012
Total income	990	2337	3146	8119	9833	10990
Cash income	676	1595	2381	7088	8638	9787
Wage income	136	352	700	2427	2959	3443
operating income	481	1116	1498	3955	4810	5313
Property income	59	38	38	168.33	185	219
Total expenditure	903	2138	2652	6991	8641	9605
Cash expenditure	639	1545	2140	6307	7984	8961

3.2 Analysis of Farmers' per capita living consumption Expenditure and Farmers' per capita income

The linear regression analysis of per capita consumption expenditure(Y) and per capitaincome of farmers(X).Variable selection and description: explained variable is

independent variable: farmer's per capita living expenditure(Y); explanatory variable is dependent variable: peasant's per capita income(X), farmer's per capita food consumption expenditure, clothing consumption expenditure, peasant's per capita household equipment consumption expenditure, Per capita expenditure on medical care and health care for farmers.The following expression is used to represent the functional relationship: linear regression analysis. The results are as follows:

The correlation analysis table Model Summary showed that the complex correlation coefficient was 0.932, and the decision correlation coefficient was 0.930, which indicated that the fitting degree of the equation was better, which indicated that the regression equation was significant.

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ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58815160	1	58815159.78	412.521	.000^a
	Residual	4277243	30	142574.779		
	Total	63092403	31			

a. Predictors: (Constant), 农民人均收入X

b. Dependent Variable: 生活消费支出Y

Fig.1 The correlation analysis table

The significant check table of regression coefficient, P0. 011 < 0. 05 of constant term, shows that there is significant difference with 0, so it should appear in regression equation. The regression equation can be obtained as follows: Y=-440.131 + 0.966X In the practical application, there are many aspects of farmers' consumption expenditure, through the linear regression model can also be more accurate judgment of the future situation of farmers' consumption.In real life, the predicted results can not be completely consistent with life, but it is of great significance to increase farmers' income and change their consumption structure.

It can be seen that the consumption structure of Chinese farmers is basically more on food, medical care and other necessities of life, but less on clothing and decoration, but the expenditure on household equipment has obviously increased compared with the past.The key to restrict farmers' consumption is the lack of farmers' income. Therefore, the country should adjust the corresponding agricultural policies, increase farmers' income, strengthen the economic base of consumption, stimulate economic growth through increasing consumption, and promote the increase of consumption through economic growth.In addition, it is necessary to foster correct consumption

concepts among rural residents, accelerate the formation of positive consumption concepts, strive to improve the quality of life on the basis of production and development, and make life more meaningful.Raising children to guard against old age "and other one-sided concepts.

4 Conclusion

In this century, with the development of the times, China's economy has gradually changed from supply constraints to demand constraints, and the importance of consumption to the economic development has become increasingly prominent, especially after the outbreak of the financial crisis in the United States.Investment, imports and exports of the rapid decline in economic power, further proof that consumer demand is the real and lasting driving force of economic growth.In recent years, boosting domestic demand remains the biggest problem.Since 60% of the effective demand comes from consumption and 80% of China's population is farmers, the most important thing to solve the problem of insufficient domestic demand is to solve the problem of rural consumption.In addition, expanding farmers' consumption can not only effectively defuse and eliminate the current relative excess production capacity, but also create employment opportunities to a greater extent, promote farmers' income and improve the quality of life in rural areas.It is the key to achieve sustained and rapid economic growth in our country.

However, due to the influence of income level, consumption environment, consumption structure, consumption concept and commodity supply structure, the consumption development of rural residents in China is still relatively backward.It is of great significance to the development of rural economy and the improvement of farmers' living standard, as well as the construction of new countryside. With the aggravation of the impact of the global financial crisis on the real economy, the national economic growth has appeared an obvious slowing trend, maintaining growth and promoting development has become the main topic of the current national economy.At the economic conference held in December 2008, the Central Committee pointed out that "increasing domestic demand is the fundamental way to ensure growth," "raising farmers' income and strengthening the agricultural foundation should be taken as an important part of expanding domestic demand," and "vigorously promoting farmers' consumption,"We will steadily develop housing and automobile consumption, focus on the development of service consumption and tourism consumption, and continue to enhance our ultimate consumption power. "Therefore, promoting farmers' consumption is an important policy measure to promote economic growth.

5. Countermeasures and suggestions for promoting stable growth of Farmers' income

Take active measures to promote the employment of rural labor force. First, we should increase investment in rural education, integrate all kinds of training resources, increase the intensity of training, and improve the pertinence and effectiveness of training. Second, we should continue to increase the work of labor export, do a good job of connecting labor services with major import areas, strengthen the work of collecting and publishing employment information, and guide farmers to go out in an orderly manner. Third, vigorously support the development of enterprises, guide and support enterprises to use migrant workers to absorb more migrant workers. Fourth, we should increase the support for farmers to start their own businesses, improve the environment for migrant workers to return to their hometowns to start their own businesses, and promote employment through entrepreneurship. Fifth, actively promote the process of urban-rural integration, vigorously develop rural secondary and tertiary industries, expand rural non-agricultural employment space, and achieve local employment nearby.

We will step up efforts to support agricultural and animal husbandry production and stabilize the prices of major agricultural products. First, we should improve the agricultural support and protection system, substantially increase investment in agriculture, continuously raise the level of subsidies to farmers, and raise the purchase prices of agricultural products such as grain, so that government support becomes an important channel for farmers to increase their income. Second, we should continue to strengthen the construction of agricultural infrastructure, further increase investment in irrigation, water conservancy, roads, communications, and ecological environment construction, effectively improve the conditions of agricultural production, and increase the comprehensive agricultural production capacity. Third, we should strengthen the construction of agricultural products market information system, set up production, supply and marketing platforms for farmers, accelerate the circulation of agricultural products, and reduce the impact on farmers' production and operation caused by the sharp fluctuations in market prices. Fourth, it is necessary to establish and improve the production and marketing information network of live pigs and the system of early warning and forecasting, so as to reasonably guide farmers' breeding; actively promote the transformation of animal husbandry production methods and improve the level of standardized and large-scale breeding; and conscientiously implement various supporting policies for pig production. To establish a protection mechanism for pig production, actively guide farmers and leading enterprises to establish a stable contractual relationship and interest association mechanism, jointly undertake market risks, thereby protecting the interests of farmers, promoting healthy

development and farmers' income.

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