

# Study on the Correlation between the Upgrading of Chinese Residents' Consumption Structure and the Optimization of Industrial Structure

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**Abstract.** Based on the identity of consumption structure and industrial structure, this paper analyzes the influence of consumption structure on industrial structure through the middle variable of income elasticity of demand. Then establishes econometric model to quantitatively analyze the impact of industrial structure on the consumption structure by using the measurement software stata14. Finally, it puts forward some countermeasures and suggestions to promote the upgrading of consumption structure and optimization of industrial structure in our country.

## Introduction

With the development of science and technology in our country and the invention and application of a series of new technologies, the transaction cost of production and business of enterprises is reduced. With the increase of consumer goods in society, consumer demand for consumer goods can be more satisfied and gradually developed from a lower level to a higher level, which will have a great impact on residents' consumption concepts and consumption patterns. With the upgrading of residents' consumption in our country, the industrial structure of our country is also gradually changing. The optimization of industrial structure is reflected in the field of household consumption, that is, the type of consumption gradually changes from meeting the needs of people's survival to meeting the needs of people's development and enjoyment. The optimization of the industrial structure and the transformation of the mode of economic development have become an important task for sustained and steady economic growth in China. Therefore, we need to clarify the relationship between consumption structure and industrial structure in order to promote sound and rapid economic growth.

The relationship between the upgrading of consumption and the upgrading of industrial structure has always been the focus of scholars' research. Fu Jialong (1997) thought that the changes in consumer demand structure is the fundamental cause of changes in industrial structure. Ma Bojun (2003) stated that the optimization of consumption structure is a measure of the optimization of industrial structure standards. Using the input-output tables of 2000 and 2005, Shi Qi et al. (2009) made an assessment of the impact of industrial structure through the input-output analysis on the characteristics of the upgrading of consumption structure. The conclusion is that the upgrading of consumption is important to the changes in China's industrial structure. Its influence can explain the changes in the industrial structure of 29.64%. Chen Jinling (2011) analyzed the relationship between consumption structure and industrial structure of rural residents in China using the Vector Error Correction (VEC) model. The empirical analysis of the existing literature on the structure of consumption and industrial structure mostly from the perspective of the impact of consumption structure on the industrial structure, and analysis of the interaction between the consumption structure and the industrial structure is less. Based on the identity of consumption structure and industrial structure, this paper explores the interaction between the upgrading of consumption structure and the optimization of industrial structure, and gives some countermeasures to promote the upgrading of consumption structure and industrial structure in China.

## **The Influence of Resident Consumption Structure Upgrade on the Industrial Structure Optimization**

In general, the impact of consumption structure on the industrial structure will be achieved through some intermediate variables. The following analysis is from the perspective of income elasticity of demand. The income elasticity of demand is the elasticity of demand to income, which means that in a certain period of time, the degree of consumer reaction to changes in the amount of consumer's income measured by the elasticity coefficient. The consumption preferences of different consumers vary widely, so the consumption structure of each resident is not the same, which results in different income elasticity of demand for each kind of consumer goods. The demand for products with higher income elasticity of demand will rapidly increase or decrease with the increase or decrease of the income of consumers and the changes will be larger. The demand for products with lower income elasticity of demand will not change as the income of consumers. With the increase or decrease of the rapid growth or decrease, the final change is smaller. With the rapid economic development in our country and the continuous growth of residents' income, the consumption demand of enjoying consumer goods and developing consumer goods in urban and rural areas in our country increases year by year. Obviously, the demand income elasticity of such consumer goods is high. It will expand the scale of production of such products. On the contrary, the consumption demand of consumer goods that our urban and rural residents meet the basic needs of life is declining year by year. For those products whose income elasticity of demand is relatively low or even less than zero, the manufacturers will conscientiously reduce the production scale. In that way, manufacturers will shift their means of production and economic resources to products with high income elasticity of demand and change their product mix. As a result, the product industry with low income elasticity of demand for production will gradually shrink. Relevant employees and capital investment will decrease gradually so such industries will gradually lag behind and be eliminated. The demand for products with higher income elasticity of demand will gradually increase. The production factors slowly flowing to these industries and such industries will gradually rise and prosperity. Through this process, the new and old industries will be replaced and the industrial structure in China will be optimized.

## An Empirical Analysis of the Impact of Industrial Structure Change on Consumption Structure Change

Table 1 Consumption Expenditure and Growth Rates of Urban and Rural Residents Output Value and Growth Rate of Three Industries

year	House hold Consumption Expenditure [billion ]	House hold consu mption growth rate [%]	The primar y industr y output[ billion]	The primar y industr y output growth rate [%]	The second ary industr y output [billion ]	The second ary industr y output growth rate [%]	The Tertiar y industr y output[ billion]	The Tertiar y industr y outputg rowth rate[%]
1995	2236	21.9	12020	26.9	28536	27.8	20574	23.5
1996	2641	18.1	13878	15.5	33666	18	24029	16.8
1997	2834	7.3	14265	2.8	37354	11	27811	15.7
1998	2972	4.9	14618	2.5	38809	3.9	31457	13.1
1999	3143	5.8	14548	-0.5	40828	5.2	34812	10.7
2000	3721	18.4	14716	1.2	45326	11	39734	14.1
2001	3987	7.1	15501	5.3	49262	8.7	45507	14.5
2002	4301	7.9	16189	4.4	53624	8.9	51189	12.5
2003	4606	7.1	16968	4.8	62121	15.8	57476	12.3
2004	5138	11.6	20902	23.2	73530	18.4	66283	15.3
2005	5771	12.3	21804	4.3	87127	18.5	76965	16.1
2006	6416	11.2	23313	6.9	103164	18.4	91180	18.5
2007	7572	18	27783	19.2	125145	21.3	115091	26.2
2008	8707	15	32747	17.9	148098	18.3	135907	18.1
2009	9514	9.3	34154	4.3	157850	6.6	153625	13
2010	10919	14.8	39355	15.2	188805	19.6	180743	17.7
2011	13134	20.3	46153	17.3	223390	18.3	214580	18.7
2012	14699	11.9	50893	10.3	240200	7.5	243030	13.3
2013	16190	10.1	55322	8.7	256810	6.9	275887	13.5
2014	17806	10	58336	5.4	271765	5.8	306038	10.9

According to the data in Table 1, using stata14 to calculate the relationship between the consumption expenditure of our residents and the output value of the three industries can be obtained. If HCE represents household consumption expenditure, GDP<sub>i</sub> represents the output value of i industry, HCE1 represents the growth rate of household consumption expenditure, and GDP<sub>ii</sub> represents the growth rate of i-industry output value, the following regression model can be obtained:

$$\text{LnHCE} = -0.738 + 0.412\text{LnGDP}_1 - 0.338\text{LnGDP}_2 + 0.81\text{LnGDP}_3 \quad (1)$$

$$\text{LnHCE1} = 1.64 + 0.186\text{GDP}_{11} + 0.203\text{GDP}_{22} + 0.378\text{GDP}_{33} \quad (2)$$

From Eq.1, it can be seen that the consumer spending is positively related to the output value of the primary and tertiary industries while negatively related to the output value of the secondary industry. For each additional billion yuan output value of the primary and secondary industries, household consumption expenditures will increase by 0.412 billion yuan and 0.81 billion yuan respectively. From this we can see that the impact of the output value of the tertiary industry on the consumption expenditure of residents is greater than that of the primary output value, which can reflect the importance of upgrading the industrial structure to stimulating consumption. The output

value of the secondary industry is negatively related to the consumption expenditure of residents. It can be presumed that the secondary industry is mainly driven by investment and the investment will have a crowding-out effect on consumption. From Eq.2, we can see that the growth rate of household consumption is positively related to the growth rate of the output value of primary industry, secondary industry and tertiary industry. For every percentage point increase in the output value of primary industry, secondary industry and tertiary industry, the resident consumption will increase by 0.186, 0.203 and 0.378 respectively. It can be seen that the correlation between the output value of the tertiary industry and the consumption of residents is obviously greater than the output value of the primary and secondary industries. This further shows that accelerating the development of the tertiary industry and promoting the upgrading of the industrial structure play an important role in promoting consumption and economic growth.

### **Suggestions on Promoting the Consumption Structure Upgrading and Industrial Structure Optimization in China**

First of all, we must raise the overall income level of urban and rural residents and gradually reduce the income gap among residents. Residents' consumption is based on the premise of residents' income. When the income level rises, the residents' spending power will increase. At the same time, it will lead to the increase of consumption funds and the upgrading of the consumption structure. Therefore, raising the overall income level of urban and rural residents is the simplest direct and effective way to promote the upgrading of consumption structure. There are some specific points such as establishing a long-term mechanism to increase incomes of urban and rural residents, actively expanding employment, standardizing labor market order, encouraging laborers to start their own businesses and find jobs. Secondly, the agricultural structure should be moderately adjusted to meet the consumption needs of urban residents. With the continuous improvement of the consumption level of our residents, residents gradually begin to focus on consumer goods brands, health, personality, novelty and other personalized features or cultural taste. This requires that agricultural production should closely follow the changes in consumer demand in the market and make reasonable adjustments to the structure of agricultural production. In the meantime, modern material conditions should be applied to agriculture, agriculture should be advanced with modern management concepts, and a number of new peasants should be cultivated through the construction of a new socialist countryside. Last but not least, we must actively develop the tertiary industry to adapt to the consumption structure of urban and rural residents. The increasing expenditure on household equipment and services, transportation and communications, cultural and entertainment, healthcare shows that the consumption of residents is shifting toward enjoying and developing consumption. This shows that the development of the tertiary industry needs speeding up, especially industries that are adapted to enjoyment and developmental changes in the consumption structure of urban and rural residents, such as cultural, sports and entertainment industries, healthcare, financial services and residential services. Some specific measure must be taken such as accelerating the development of leisure and entertainment, tourism, developing domestic service industry which is closely related to residents' life, promoting the information services, modern financial industry and other emerging industries.

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