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Empirical Analysis of the Role of Urbanization in Driving the Growth of Rural Residents' Consumption

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Abstract Urbanization is a powerful engine for the growth of rural residents' consumption in China. This paper selects the cross-sectional data concerning 31 provinces (municipalities) in China during 2005–2012, and builds the panel data model of influence of urbanization on rural residents' consumption in China for empirical analysis. The results show that there is a significant positive correlation between urbanization and rural residents' consumption level. From the mechanism, urbanization drives the growth of rural residents' consumption by improving rural residents' income level and changing rural residents' consumption concept. However, the uncertainties of rural residents' income inhibit the growth of rural residents' consumption. Therefore, it is necessary to accelerate the development of urbanization, broaden farmers' income channels, improve the consumer environment and accelerate the reform of the household registration system to further activate the rural consumer market.

Key words Urbanization, Rural residents' consumption, Fixed effects, Migrant workers

1 Introduction

Insufficient domestic demand has been a major problem in China's economic development, and the major market for expanding domestic demand is in rural areas. From the income potential, China's rural population was 642.22 million in 2012, accounting for 47.43% of the total population. If the per capita net incomes of rural residents double to 15833.2 yuan (15833.2 yuan in 2012), then the 600 million rural population will increase the purchasing power by about 5.08 trillion. From the total consumption of the whole society, the total consumption of residents nationwide was 19.04238 trillion yuan in 2012, but the consumption of rural residents accounts for only 22.22%. Chinese rural consumer market has plenty of space and potential. The Chinese scholars have conducted extensive researches on the impact of urbanization on rural residents' consumption. Some scholars believe that urbanization is conducive to expanding the rural residents' consumption. Jiang Nanping *et al.* (2011) and Jiang Ling (2013) believe that the development of urbanization can promote the consumption level of rural residents. Hu Ridong and Su Zhi (2007) maintain that the cumulative effect of urbanization the growth of rural residents' consumption is greater than the cumulative effect of urban residents' consumption. However, the study of Huang Xiazhu (2014) suggests that the development of urbanization plays a prominent role in promoting rural residents' consumption. Some scholars have put forward different views. As early as 2000, Qi Hongqian and Liu Li pointed out that under China's current urbanization patterns, farmers' identity remains unchanged and their income can not be guaranteed. This urbanization can not expand domestic

consumption by increasing the income of farmers. Wei Xiang (2011) points out that if China does not solve the problem of urbanization for migrant workers, promoting urbanization will form a huge urban "slum". Based on the existing research results, it can be found that most of the literature on the study of relationship between urbanization and rural residents' consumption, only considers the income effect of rural residents' consumer behavior and ignores the "ratchet effect" and "demonstration effect" of consumer behavior. In the process of building the model, this paper adds in the consumption level of rural residents in lag period 1 to reflect the "ratchet effect" as well as the current consumption level of urban residents to describe the "demonstration effect" of urban residents' consumption patterns on rural residents' consumer behavior.

2 Indicator selection, data description and model setting

2.1 Indicator selection (i) Rural residents' consumption indicator (NX). The majority of scholars use "per capita consumption expenditure of rural households" from China *Statistical Yearbook* to measure the rural residents' consumption level. Therefore, this paper also uses per capita consumption expenditure of rural households to represent. (ii) Urbanization indicator (CZH). Taking into account the characteristics of China's household registration system, the new urban residents in the urbanization process are mostly the farmers whose registered permanent residence is not changed, so the urbanization rate calculated by the urban population is lower than the actual level of urbanization. Therefore, the level of urbanization in this paper is represented by permanent urban population/total population. (iii) Rural residents' income indicator (NS). This paper selects per capita net income of rural households in various provinces (cities). (iv) Urban residents' consumption indicator (CX). This paper follows the method

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adopted by most scholars in the existing literature in using "per capita net income of urban households" to measure urban residents' consumption level.

2.2 Data sources and processing This paper selects the related data about 31 provinces (municipalities) in China during 2005–2012 for empirical test, and the variable data are from *Statistical Yearbook* of various regions and *China Statistical Yearbook* during 2005–2012. In order to eliminate the impact of price factor on the conclusions, with 2005 as the base year, this paper calculates the rural residents' consumer price index and urban residents' consumer price index, and deflates the per capita consumption expenditure of rural households, net income of rural residents and per capita net income of urban households in various regions. This paper takes the natural logarithm of four variables (deflated rural residents' consumption level, urbanization rate, rural residents' income and urban residents' consumption level), written as LNX , $LCZH$, LNS and LCX , respectively.

2.3 Model setting According to the absolute income hypothesis of Keynes, the residents' consumer demand is "over-sensitive" to income, that is, income is a major factor determining consumption. Duesenberry (1948) believes that the residents' consumption is subject to ratchet effect and demonstration effect. Based on the above analysis, we can build the model of factors influencing rural residents' consumption as follows:

$$LNX_{it} = \alpha_0 + \beta_1 LNS_{it} + \beta_2 LCX_{it} + \beta_3 LNX_{it-1} + \mu_{it} \quad (1)$$

where i is the cross-section, representing the 31 provinces (municipalities); t is time, from 2005 to 2012; μ_{it} is the random disturbance term when the cross-section is in t ; α_0 is the constant term; β_1 is the coefficient of each independent variable.

In order to study the impact of urbanization on rural residents' consumption, we add variable urbanization rate $LCZH$ in the above formula, and the improved model is as follows:

$$LNX_{it} = \alpha_0 + \beta_1 LNS_{it} + \beta_2 LCX_{it} + \beta_3 LNX_{it-1} + \beta_4 LCZH_{it} + \mu_{it} \quad (2)$$

The development of urbanization can increase the income level of rural residents and indirectly affect the consumption level of rural residents. In this paper, we introduce the interaction terms of urbanization and per capita income of rural households to study the mechanism of the impact of urbanization on rural residents' consumption. And we get the dynamic panel data model as follows:

$$LNX_{it} = \alpha_0 + \beta_1 LNS_{it} + \beta_2 LCX_{it} + \beta_3 LNX_{it-1} + \beta_4 LCZH_{it} \times LNS_{it} + \mu_{it} \quad (3)$$

3 Empirical analysis of urbanization and rural residents' consumption

Through the F statistic test and Hausman test in Table 1, we choose the individual fixed effects model. According to the estimation model previously established, we use the cross-sectional data of 31 provinces (municipalities) to estimate the impact of urbanization on rural residents' consumption. The regression results are shown in Table 1. From Table 1, it is found that the probability corresponding to Hausman statistic is less than 1%, indicating

that the test results reject the random effect model and null hypothesis, so it is necessary to establish individual fixed effects model. Model 1 shows that rural residents' per capita consumption coefficient in lag 1 and per capita net income coefficient are 0.5719 and 0.3602, respectively, significant at the 1% level, suggesting that the improvement of rural residents' consumption level hinges in a large measure on income level and consumption habits, and there is a strong ratchet effect in rural residents' consumption. The contribution rate of urban residents' consumption level to rural residents' consumption level is 0.1864, and urban residents' consumption expenditure is significantly and positively correlated with rural residents' consumption expenditure. It indicates that the increase in urban residents' consumption expenditure will have a demonstration effect on rural residents' consumption. In Model 2, we add the impact of urbanization ($LCZH$), and the marginal contribution of urbanization to the growth of rural residents' consumption is 0.2362, significant at the 1% level, indicating that the development of urbanization can effectively drive the rural residents' consumption growth. The regression coefficient of urban residents' consumption to rural residents' consumption declines from 0.1864 to 0.1672, mainly because in the process of urbanization, the agricultural population is difficult to integrate into urban society and the urbanization process lags behind. Therefore, in the process of urbanization, it is necessary to promote the urban citizenship of agricultural population transferred, enhance household registration system reform and improve the equalization of basic public services for urban and rural residents, which will help to stimulate consumption enthusiasm of farmers and eventually form a huge space for consumption and economic growth. The regression results of interaction term $LCZH * LNS$ added in Model 3 show that the coefficient value of $LCZH * LNS$ is 0.0301, significant at the 1% level, indicating that the urbanization development helps to improve farmers' income and per capita consumption levels of rural residents. By comparing Model 2 and 3, it can be found that the contribution rate of urbanization development to rural residents' consumption level is 0.2362, while the contribution rate of urbanization to rural residents' consumption by increasing farmers' income is only 0.0301, indicating that urbanization development can increase the rural residents' income, but this effect is not obvious.

4 Conclusions and policy recommendations

4.1 Conclusions In this paper, we use the panel data about China's 31 provinces (municipalities) during 2005–2012 and employ the individual fixed effects estimation method to examine the relationship between urbanization and rural residents' consumption. (i) Model 1 shows that rural residents' per capita consumption coefficient in lag 1 and per capita net income coefficient are 0.5719 and 0.3602, respectively, significant at the 1% level, suggesting that the improvement of rural residents' consumption level hinges in a large measure on income level and consumption habits, and there is a strong ratchet effect in rural residents' con-

sumption. (ii) In Model 2, we add the impact of urbanization (*LCZH*), and the marginal contribution of urbanization to the growth of rural residents' consumption is 0.2362, significant at the 1% level, indicating that the development of urbanization can effectively drive the rural residents' consumption growth. But in the process of urbanization, the rural residents' consumer demand

caused by the demonstration effect of urban residents' consumption will be reduced. (iii) The regression results of interaction term *LCZH * LNS* added in Model 3 indicate that urbanization development can increase the rural residents' income, but this effect is not obvious.

Table 1 The empirical test results of 31 provinces (municipalities) in China (explained variable: *LNX*)

Explanatory variables	Model 1		Model 2		Model 3	
	The estimated coefficient	T statistic	The estimated coefficient	T statistic	The estimated coefficient	T statistic
−1.191 7***	−3.680 5	−0.459 0*	−1.916 8	−0.539 6**	−2.072 4	
<i>LCX</i>	0.186 4***	2.943 1	0.167 2***	2.614 5	0.141 4**	2.219 5
<i>LNS</i>	0.360 2***	5.620 8	0.340 6***	4.434 9	0.390 1***	5.453 3
<i>LNX_{t-1}</i>	0.571 9***	10.186 3	0.546 0***	9.769 1	0.535 7***	10.025 8
<i>LCZH</i>			0.236 2***	5.497 7		
<i>LCZH * LNS</i>					0.0301 ***	5.4228
Hausman statistic	72.334 1 (0.000 0)		97.724 8 (0.000 0)		100.557 6 (0.000 0)	
Estimation method	Individual fixed effects method		Individual fixed effects method		Individual fixed effects method	
Adjusted <i>R</i> ²	0.994 7		0.994 9		0.994 9	
<i>F</i> value	1 229.295		1 234.075		1 233.967	

Note: The content in () in Hausman statistic represents the probability; * * *, * * and * mean that the variable is significant at the levels 1% , 5% and 10% , respectively.

4.2 Policy recommendations

4.2.1 Broadening the income channels for farmers and gradually improving the imbalance in urban and rural development. (i) It is necessary to coordinate urban and rural development, intensively use land, promote agricultural production scale and mechanization, and improve the level of agricultural modernization and farmers' income. (ii) It is necessary to establish and improve the rural land circulation system. The perfect rural land circulation system is not only conducive to the non-farm transfer of farmers, thus speeding up the process of urbanization, but also conducive to promoting large-scale agricultural land operation and increasing farmers' property income. (iii) It is necessary to further reform the taxation and financial system and narrow the income gap between urban and rural areas.

4.2.2 Improving consumer environment for residents and actively guiding the upgrading and transformation of rural residents' consumption structure. (i) It is necessary to improve rural residents' consumption environment, and expand the commercial distribution services in rural areas, to support a variety of modern consumer goods to flow to rural market and improve the quality of life of rural residents. (ii) It is necessary to promote the upgrading of rural residents' consumption structure and focus on the development of transportation and communication, education, culture, entertainment services, medical care and other services, to meet the rural residents' diverse consumer demand.

4.2.3 Accelerating the reform of household registration system and improving the urban citizenship of agricultural population transferred. (i) It is necessary to improve the household registration system for rural population transferred to city and regulate the migration and flow of rural population to city. (ii) It is necessary to implement differentiated household registration system, loose

the control over domiciliary transfer to cities and towns, remove administrative barriers to free population flow, and establish coordinated urban-rural labor employment market. (iii) It is necessary to gradually establish the unified urban and rural social security system and focus on solving the problem of urban citizenship of agricultural population transferred.

4.2.4 Giving play to the leading role of county and improving the quality of development of rural urbanization. In the urbanization process, it is necessary to rely on the county to develop some small and medium-sized cities with certain scale and agglomeration effects, which can not only help to form coordinated urban system but also help to give play to the leading role of county, thereby effectively improving the developing quality of rural urbanization, enhancing the rational flow of migrant workers and effectively reducing the obstacles to farmers' consumption.

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strengthen trust of the society and public in the brand^[10].

3.2.5 Improving convenience of applying trade market system. It is recommended to prevent overflow of counterfeits of Japanese brands in foreign countries, increase participating countries of *Anti-Counterfeiting Trade Agreement (ACTA)*, improve international rules, promote bilateral and multilateral countries, push forward the outlawing system, and strengthen supervision of overseas brand market application and site survey of counterfeits. Besides, it is recommended to improve convenience of flexible use of trade marks, strengthen use of trade marks, protection of famous trade marks, and take necessary measures for registration application system. To facilitate users, including system operators improving brand use trade mark system, strengthening trade mark system, review system, we should strengthen researches and take necessary measures.

3.2.6 Effectively combining strong and weak brands to launch joint attack. Using influence power of strong brands to extend brands and increase scope of brands is a basic objective of brand combination strategy and also an essential strategy of many enterprises to raise their influence power. However, it should be noted that any brand extension is limited, excessive extension will lead to loss of diversified advantage. Even, extension of some brands may weaken or destroy the brand image due to some imagination. Of course, the role of a brand in brand combination is not fixed but can be mutually converted, and it is different in different market environment. Therefore, it is required to take full advantage of strong brands to obtain reputation, develop and strengthen weak brands, and realize win-win objective^[11].

In the context of cultural difference, trade friction and dispute are issues to be considered. In the globalization context, we should expand cultural exchange and promote brand development. International cultural exchange is of great significance and should be developed further. In this sense, we should enhance mutual understanding, promote establishment of mutual trust, reduce trade frictions, stabilize mutual existence, establish friendly international relations, and develop domestic economy in peaceful and safe international context, to promote brand building and boost our soft power. Besides, it is recommended to know different culture, convey domestic culture to other countries, redefine ourselves, activate self society, and realize significance of cultural exchange.

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Although different regions and nations have different characteristics, they also have common features which are favorable for overcoming unstable factors in international relations and ensuring rich and colorful international culture.

After the World War II, rapid growth of Japan's economy shocks the whole world. In this process, Japan's brand strategy plays a great role. Through optimally combining software of oriental clan and hardware of western countries, Japanese enterprises have established the unique culture of justice tempered with mercy and soft outside but hard inside. These bring Japan's soft power with vitality, forming community of survival and existence together and promoting tremendous development of Japan's national economy. With more than one century of hardships, Japan's brand strategy provides great reference for other countries. China also needs learning experience of Japan, to provide valuable reference for better construction of China's economy and better cooperation with world economy, as well as for boosting our national strength.

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