

# Research on the Impact of the Development Level of Endowment Insurance on Urban Residents' Consumption

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**Abstract:** The insufficient consumption demand of residents is closely related to changes in the population structure and the pension insurance system. In recent years, the growth rate of China's economy has gradually slowed down. According to statistical data, the proportion of the elderly population in China has shown a trend of increasing year by year. One of the problems existing in the development process of China is the insufficient effective domestic demand, low consumption levels, high savings, and aging population are important factors restricting consumption levels. Pension insurance affects people's disposable income and savings behavior through the role of adjusting income redistribution, thereby affecting people's consumption behavior. The marginal consumption propensity of pension insurance fund expenditure is smaller than the impact of current disposable income on urban residents' consumption, indicating that income level is an important factor affecting urban residents' current consumption. Improving the social security system, broadening the channels for maintaining and increasing the value of pensions, expanding residents' income sources, reducing residents' preventive savings, and improving residents' consumption levels are the only ways to maintain rapid economic growth.

**Keywords:** Development Level ; Endowment Insurance; Urban Residents; Consumption

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## 1. INTRODUCTION

China's pension insurance system was established in 1951 and has been undergoing continuous development and transformation since then, providing people with a more comprehensive and complete pension insurance system, and providing retirees with a more stable and secure basic life. Currently, the pension insurance system implemented in China is a "partial accumulation system". Nowadays, pension insurance can improve social welfare, making it increasingly popular to receive a certain amount of income to maintain basic living in old age. Therefore, the number of people participating in pension insurance is also increasing year by year.

According to China's statistical data, as of 2017, the total number of people participating in old-age insurance in China was 915.483 million. Most scholars believe that this situation is related to the social security system reform in the 1980s. Compared to before the reform, after the reform, residents faced increased uncertainty factors, and residents made preventive savings for future pension security, medical security, and child education expenditures, resulting in the current situation of high savings and low consumption among Chinese residents. This is related to China's imperfect social security system. Feldstein introduced an extended life cycle model and proposed that there is a dual effect of social security on savings, namely, asset substitution effect and retirement effect.

He used time series data from 1929-1971 (excluding 1941-1946) in the United States to predict the total social security benefits, and then studied the impact of social security on savings. In his 1974 and 1996 studies, he believed that the social security system reduced private savings by 30-50%. Social security has significantly reduced the amount of savings and total capital accumulation, which has a significant promoting effect on household consumption. Zou Hong, Yu

Kaizhi, and Li Aolei (2013) analyzed the impact of urban household social insurance participation and contribution rates on urban household consumption in Guangdong Province from 2002 to 2009. The study found that the consumption expenditure of insured households has increased compared to uninsured households, and urban household consumption will decrease with the increase in the social security contribution rate.

From the perspective of family type, the social security contribution rate of non-state sector, low-income and elderly families have a lower inhibitory effect on consumption than that of state-owned sector, high-income and young families. From the perspective of social security types, the contribution rate of pension insurance will increase by 1%, and consumption will decrease by 2.58%. The medical insurance contribution rate will increase by 1%, and consumption will increase by 2.1%. The issue of aging in China is becoming increasingly prominent. Compared to the working population in China, the growth of the elderly population aged 65 and above is higher than the growth of the working population. According to statistical data, in 2001, the number of people aged 65 and over in China had reached 90.62 million. In 2018, the elderly dependency ratio in China had reached 16.77%, while the child dependency ratio had reached 23.7%.

## 2. THE PROPOSED METHODOLOGY

### 2.1 Theory of Economic Phenomena

The degree of aging in China is gradually increasing, and the pressure on China's development, whether in rural areas or urban areas, to provide for the elderly is increasing. However, the impact of per capita savings deposits of urban residents on household consumption in the previous period is not significant. Through the robustness test, it is found that: first, there is a positive correlation between the per capita medical expenditure and consumption of urban residents, which reflects that China's urban medical insurance reform has

achieved good results. Secondly, expanding the coverage rate of old-age insurance can improve the consumption level of urban residents, but increasing the payment rate of old-age insurance also leads to a decrease in current consumption of urban residents. Since the current coverage of China's pension insurance expenditure is mainly for urban retirees, we choose per capita consumption (CS) of urban residents as the explanatory variable, and per capita pension expenditure (SS) of retired employees as the main explanatory variable. We also consider that factors affecting consumption level include income level, family wealth, unemployment and inflation levels, interest rates, and population structure.

Empirical evidence shows that the increase in disposable income and pension insurance funds of urban residents will stimulate the increase in household consumption. Current disposable income is the main factor affecting household consumption. Social pension insurance income can promote residents' consumption to a certain extent. There is a negative correlation between savings and consumption. Although pension income has a significant impact on household consumption, the impact coefficient is still small. Since the reform in 1997, although the level of old-age insurance in China has increased significantly, its coverage rate is still relatively low. In 2002, China included urban flexible employment personnel into basic old-age insurance.

The implementation of the old-age insurance system has ensured the basic livelihood of retired employees to a certain extent, reduced uncertainty about future expected income, and played an important role in increasing consumer demand and economic growth. However, with the continuous growth of the elderly population, the imbalance in income and expenditure of pension insurance funds can also affect social development and individual social welfare. Therefore, it is important to study the impact of pension insurance systems on residents' consumption in the context of population aging. Due to the significant reform of the old-age insurance system in China in 1997 and 2005, to avoid the exogenous impact of large policy changes on variables, this article selects the macro panel data of urban households in 31 provinces in China from 2006 to 2015 (the data is sourced from the China Statistical Yearbook and the database of Guoyan.com).

Although existing research and analysis mostly use micro data from household surveys, which can obtain the consumption status of individual individuals, the data obtained from sampling surveys lack certain accuracy, and it is difficult to solve the data problem of individuals over a long period of time. Due to the long-time span of the data and the impact of inflation during the period, to examine the true relationship between the variables, the nominal urban per capita consumption, per capita pension expenditure for urban retired employees, and per capita disposable income of urban residents were adjusted using a price index based on the year 1990.

## 2.2 Empirical analysis of the Effect of Endowment Insurance on Urban Residents' Consumption

To eliminate heteroscedasticity in the data, the logarithms of the data excluding the impact of price are recorded as LNCST and LNSST, respectively. The disposable income of residents is the most important factor in their consumption. China should continue to adhere to the strategy of revitalizing the country through science and education and strengthening the country through talent, continuously improving the quality and skills of the people, vigorously developing industries,

promoting industrial optimization and upgrading, accelerating China's economic growth, improving the people's income level, increasing residents' disposable income, reducing dependence on pension insurance, and improving residents' consumption level. Improve the social security system and increase the coverage of old-age insurance. Firstly, it is necessary to implement the government's responsibility status and further develop urban old-age insurance. Because China has only established a new type of rural old-age insurance in recent years, and the number of people participating in old-age insurance is relatively small, it is necessary to continuously improve the new type of rural old-age insurance.

Combining this system with the national financial policy allows for a reasonable distribution of social wealth among individuals, giving play to the income redistribution role of pension insurance, and narrowing the income gap between urban and rural areas. Short panels are used for analysis, and issues such as autocorrelation are not considered in the model. Before regression, the data is logarithmized to stabilize the data and eliminate the impact of factors such as heteroscedasticity. In panel data analysis, it is necessary to test the model settings and determine the empirical analysis form of the model. Therefore, first, the model is mixed regression. Secondly, fixed effect regression was performed, with a P value of 0 in the F-test, indicating that fixed effect regression was superior to mixed effect regression. Thirdly, the model is tested for random effects. The LM test rejects the "original hypothesis that there is no individual random effect", indicating that the random effect is superior to mixed OLS regression. The line test determines the empirical analysis form of the model.

Therefore, first, the model is mixed regression. Secondly, fixed effect regression was performed, with a P value of 0 in the F-test, indicating that fixed effect regression was superior to mixed effect regression. Thirdly, a random effect test is conducted on the model, and the LM test rejects the "original hypothesis that there is no individual random effect", indicating that the random effect is superior to mixed OLS regression. In China, due to the current limited financial investment in basic pension insurance and the generally low pension income of residents, the promotion effect of pension insurance on residents' consumption is still limited. Therefore, strengthening the appropriate preference of financial investment for old-age insurance and continuing to expand the coverage of old-age insurance are important means to improve China's social security mechanism and solve the plight of old-age insurance in China.

Delay the retirement time of residents. The proportion of the elderly population in China is constantly increasing, while the proportion of labor force is constantly shrinking. As the main driving force for consumption, delaying retirement can not only increase the labor force, but also reduce preventive savings, increasing people's disposable income, and has an important role in increasing household consumption. To increase investment in education, cultivate innovative and technical talents, continuously improve the education system of high schools, and enhance the strength of education teachers, we should make full use of China's educational resources to attract talents. The variable of endowment insurance contribution rate is not significant in the empirical analysis, and there is a negative correlation between the endowment insurance contribution rate and urban residents' consumption, that is, increasing the endowment insurance contribution rate will inhibit residents' current consumption. This does not violate the life cycle theory. The reason is that

China's old-age insurance contribution rate is relatively high, even higher than that of some developed countries. Therefore, increasing the old-age insurance contribution rate will squeeze out some households' disposable income in the current period, prompting residents to reduce current consumption.

### 3. CONCLUSION

This paper studies the impact of pension insurance expenditure on household consumption using a cointegration and error correction model. The model results reveal to some extent the impact mechanism between pension insurance and household consumption. At present, the implementation of China's pension insurance system has a relatively significant positive impact on China's residents' consumption, and it is necessary to enhance China's residents' consumption demand. Firstly, China can draw on the experience of foreign countries as appropriate and gradually adopt the form of paying social security taxes to raise funds to increase the effective supply of pension expenditure. Secondly, the state can issue a moderate amount of special treasury bond to increase financial investment in basic pension insurance. Thirdly, strengthen the operation and management of pension insurance funds to maintain and increase the value of operating funds.

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