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An Empirical Study On Residents' Consumption Changes Based On The Development Of Commercial Annuity

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ABSTRACT

The relationship between the level of pension insurance development and the consumption of Chinese residents is a topic of constant debate. However, few scholars have analyzed residents' consumption behavior based on the level of commercial annuity development. Using China's 2010-2018 inter-provincial panel data, this article builds a dynamic panel regression model to explore the impact of the development of commercial annuities on household consumption and its structure. In addition, the paper also compares the impact of the protection levels of basic pension insurance and commercial annuity on household consumption. The results show that the per capita disposable income of residents is still the main factor that promotes residents' consumption. The improvement of commercial annuity and basic endowment insurance will help to promote residents' consumption, and the effect of commercial annuity's promotion on residents' consumption is more significant. In promoting the optimization and upgrading of consumption structure, commercial annuity insurance plays a more significant role than residents' income level and basic pension insurance. Based on the regression results, this article suggests that efforts should be made to increase the income level of residents and promote consumption from the root cause. At the same time, it is necessary to improve the commercial pension insurance system as soon as possible and steadily promote the coordinated development of the "three pillars" pension insurance system.

Keywords: Commercial Annuity; Residents' Consumption: Consumption Structure; System GMM.

INTRODUCTION

In recent years, China's domestic economic growth has slowed down. How to effectively play the role of domestic demand in driving economic growth is worth thinking about. According to statistics from the International Monetary Fund (IMF), China's savings rate in 2017 was 47%, which was much higher than the world average of 26.5%., which shows the problem of "high savings, low consumption" still troubles the Chinese economy. Therefore, seeking a panacea to stimulate domestic demand and promote the transformation and upgrading of residents' consumption is essential for the healthy and rapid development of China's macro economy.

Judging from foreign experience, a sound social security system can help alleviate the uncertainty of residents' future income, reduce preventive savings, and promote residents' consumption. As an important part of the social security system, basic pension insurance helps residents to balance their life-long welfare through the mandatory system, which in turn has an impact on residents' consumption decisions in various periods. Beginning in the 1970s, foreign scholars began to discuss the relationship between basic pension insurance and household consumption from a theoretical level, and a wealth of research results have been formed for decades.

In recent years, based on the current situation of weak domestic demand in China, many Chinese scholars have begun to conduct empirical tests on the relationship between the two variables. Due to differences in theoretical foundations, models, and institutional factors, the research results have not yet been unified. China's pension insurance currently implements the internationally popular "three-pillar" system, namely the first pillar of basic pension insurance, the second pillar of enterprise (occupational) annuity and the third pillar of personal supplementary commercial pension insurance. Compared with developed countries, the construction time of China's modern pension insurance system is relatively short. The current "three-pillar" pension insurance system is not perfect. The second pillar of enterprise annuity and the third pillar of personal commercial pension insurance account for a relatively low proportion. Therefore, commercial annuity insurance has broad development space in China. We cannot help asking whether the development of commercial annuity insurance will have a positive impact on household consumption.

From previous studies, when domestic scholars discuss the impact of the current pension insurance system on residents' consumption, most of them are still discussing the basic pension insurance of the first pillar. Due to the limitation of data and other factors, few scholars have studied the effect of commercial pension insurance on consumption. In view of this, this article attempts to discuss the changes in household consumption and its structure from the perspective of the level of commercial annuity development, and compares the effects of basic pension insurance and commercial annuities in alleviating resident uncertainty and promoting consumption. This research will not only provide suggestions on the improvement and development of the "three pillars" pension security system in China, but also effectively guide the pension security system to give full play to the effect of stimulating domestic consumer demand.

LITERATURE REVIEW

Regarding the impact of the insurance security system on residents' consumption, most domestic and foreign studies have explored from the perspective of social insurance (mainly basic pension insurance). Due to differences in research angles, institutional factors, and empirical methods, there is no consensus on the specific impact direction of pension insurance on consumption (Feldstein, 1974; Barro, 1974; He, et al., 2011; Bai, et al., 2012; Zhao and Li, 2017). On the one hand, participating in endowment insurance can alleviate the uncertainty of residents' future income and expenditure, thereby reducing preventive savings and promoting consumption. On the other hand, it is necessary to pay a certain fee to purchase and maintain the pension insurance, which brings certain liquidity restrictions to some families.

Because some families have target savings intentions, pension insurance may play a role in restraining current consumption. However, there is less research on the relationship between life insurance, annuity insurance and household consumption. Foreign scholars first discussed the

relationship between commercial insurance and household consumption. Strain(1959) analyzed from the perspective of average propensity to consume. He believed that when there was no effective insurance mechanism in the society, residents tended to save part of their income in order to cope with the uncertainty of future income and expenditure, which would keep the average propensity to consume at a low level. Therefore, purchasing commercial insurance can help increase the average propensity to consume. Arrow(1963) explained the role of insurance. He mentioned that in a risky society, consumers often purchased commercial insurance in order to ensure that their consumption plans were not affected by uncertainty. In addition, Borch(1962) focused on the role of life insurance in alleviating the uncertainty of the future income and expenditure of the insured. He believed that purchasing life insurance could reduce the uncertainty of consumers' future income and promote the effect of residents' current consumption.

Domestic research on the relationship between commercial insurance and consumer consumption is relatively lagging. Since the beginning of this century, domestic scholars have begun to conduct empirical analysis of residents' consumption behavior from the perspective of commercial insurance. Wang(2005) conducted a Granger causality test on China's time series data from 1984 to 2003, and found that there was no Granger causality between the growth of personal insurance and the growth of per capita consumption.

The reason may be the low coverage rate of commercial insurance in China. Zhang(2010) used time series data to establish a VEC model to empirically test the relationship between life insurance and consumption, and found that life insurance had a long-term impact on residents' consumption. Regarding the mechanism of life insurance products affecting consumption, Li, et al.(2012) analyzed from two perspectives of annuity and non-annuity products, and verified that life insurance could significantly promote household consumption. In recent years, domestic scholars tend to use panel data for analysis. Shi and Sun(2014) used China’s 2002-2012 inter-provincial panel data to explore the role of life insurance in reducing uncertainty and promoting current consumption of residents. Nan, et al.(2020) discussed the impact of commercial insurance on household consumption based on inter-provincial panel data, and attributed the mechanism of promoting consumption to the reduction of uncertainty.

Judging from the scope of existing insurance, some scholars have tested the impact of commercial insurance and life insurance on consumption, but few have targeted to the commercial annuity insurance. In view of the shortcomings of previous research, the innovations of this article are as follows: (1) This article attempts to analyze the consumption behavior of residents from the perspective of the level of commercial annuity development. (2) This article also conducts a comparative study on the impact of basic pension insurance and commercial annuity on residents' consumption.

RESEARCH METHODOLOGY DESIGN

Model Setting

Regarding the explanation of residents' consumption behavior, Keynes first discussed it from the perspective of absolute income theory. He believed that the consumption level of residents was directly proportional to the absolute income level of the current period. Subsequently, the relative income and permanent income hypotheses expanded the description of the nature of income. Ando and Modigliani(1963) believed that consumption is related to the life cycle of an individual and

proposed the life cycle theory. Under the framework of life cycle theory, an individual's lifetime income is in a "camel shape", the early and late period of the career is at a low point, and the middle period tends to peak, it is concluded that the population age structure will also affect the savings rate. In the 1970s, Feldstein introduced pension insurance factors into the consumption function, and proposed the extended life cycle theory, laying a theoretical foundation for the impact of pension insurance on consumption. In addition, this article also controls the factors of consumption habits and uneven income distribution between urban and rural areas.

In order to explore the impact of commercial annuity insurance on household consumption, the dynamic panel model constructed in this paper based on major consumption theories is as follows:

$$Cons_{it}=\beta_0+\lambda Cons_{it-1}+\beta_1 Annu_{it}+\varphi X_{it}^{'}+u_i+\varepsilon_{it} \quad (1)$$

In addition, this article also discusses the impact of commercial annuity insurance on the consumption structure of residents. The corresponding panel regression model is as follows:

$$Ec_{it}=\beta_0+\lambda Cons_{it-1}+\beta_1 Annu_{it}+\varphi X_{it}^{'}+u_i+\varepsilon_{it} \quad (2)$$

Among them,$Cons_{it}$is resident consumption,$Ec_{it}$is the Engel's coefficient,$Annu_{it}$is commercial annuity protection level, and$X_{it}'$is other control variables, including resident income level, population structure, basic pension insurance level, unequal distribution of urban and rural income, etc.,$u_{it}$is an unobservable regional fixed effect, and$\varepsilon_{it}$is random Errors.

Variable Selection and Processing

Core Variables

The explained variable is the consumption level of residents. This paper uses the indicator of per capita consumption expenditure of urban and rural residents as its substitute variable. Per capita consumption of urban and rural residents = per capita consumption of urban residents * proportion of urban population + per capita consumption of rural residents * proportion of rural population. For consumption structure, this paper adopts Engel's coefficient as its substitute variable. The Engel's coefficient is the proportion of total food expenditure in total consumption expenditure. We believe that the lower the Engel's coefficient, the more funds residents spend on developmental consumption and the more optimized the consumption structure.

The core explanatory variable is the level of commercial annuity protection. Limited to the availability of data, this article takes the ratio of commercial annuity payments to the total population and the ratio of commercial annuity payments to GDP as substitute variables for the level of commercial annuity protection. Since the purchase of commercial annuity insurance can reduce the uncertainty of residents in the future, thereby reducing precautionary savings, this article predicts that the impact of commercial annuity on residents' consumption is positive. Similarly, it is predicted that commercial annuity insurance will help improve the consumption structure.

Control Variables

According to the existing literature research, this article mainly controls the following variables: (1) Resident income level. This article adopts the per capita disposable income of urban and rural residents, and the calculation method is consistent with that of the consumption variable.

According to the absolute income theory, we predict that the impact of residents' income on consumption is positive. (2) The level of basic pension insurance protection. In the existing literature, the replacement variables of basic pension insurance are per capita basic pension insurance expenditure, pension insurance coverage rate, contribution rate, pension insurance expenditure/GDP, and basic pension insurance wealth.

In order to maintain consistency with the commercial annuity expenditure level variables, this paper also uses the ratio of basic pension insurance fund expenditure to the total population and the ratio of basic pension insurance fund expenditure to GDP. This article predicts that basic pension insurance will enhance the expansion of household consumption. (3) Population age structure.

This article adopts the total dependency ratio, which reflects the degree of family life burden (Zhao and Li, 2014). The child dependency ratio is the ratio of the total population under 15 to the size of the population aged 15 to 65, and the elderly dependency ratio is the ratio of the total population over 65 to the size of the population aged 15 to 65. Regarding the impact of population support burden on residents' consumption, some scholars believe that the increase in the dependency ratio of children and the elderly will increase the uncertainty of future income and expenditure, thereby restraining current consumption (Zhao and Li, 2017), and some scholars have reached the opposite conclusion (Zhao, et al., 2017), so this article does not make specific predictions here.

(4) Consumption habits. From economic theory, it can be seen that residents' consumption behavior is inertial, and there is a certain degree of correlation between previous consumption and current consumption. Here, one-period lagging consumption is used as a proxy variable of consumption habits, and it is predicted that lagging consumption is positively correlated with current consumption. (5) Uneven income distribution between urban and rural areas.

Based on the current situation of China's urban-rural dual economy, when analyzing the overall urban-rural data, variables reflecting China's dual economic structure are added. This article adopts the approach of Zhao, et al. (2017), adding the ratio of per capita disposable income of urban residents to per capita net income of rural residents. It is predicted that the widening of the urban-rural income gap is not conducive to the increase in consumption.

Table 1. Variable Description

Variables	labels	Definitions
Cons	Consumption level of urban and rural residents	Per capita consumption expenditure of urban and rural residents
Ec_u	The Engel's coefficient of urban and rural residents	Per capita food consumption expenditure/total consumption of urban and rural residents
Pens_a	Basic pension insurance protection level 1	The ratio of social pension insurance fund expenditure to the total population
Pens_b	Basic pension insurance protection level 2	The ratio of social pension insurance fund expenditure to GDP
Annu_a	Commercial Annuity Protection Level 1	The ratio of business annuity benefits to the total population
Annu_b	Commercial Annuity Protection Level 2	The ratio of business annuity benefits to GDP
Dr	Total dependency ratio of urban and rural families	Old age dependency ratio + child dependency ratio
Cons_h	Consumption habits	The lag of consumption expenditure
Urinc	Uneven income distribution between urban and rural areas	The ratio of per capita disposable income of urban residents to per capita net income of rural residents
Inco	Income level of urban and rural residents	Per capita disposable income of urban and rural residents

Data Sources and Descriptive Statistics

This article selects data from 31 provinces and municipalities in mainland China from 2010 to 2018 for analysis. Panel data integrates the characteristics of the two dimensions of cross-section and time, which can omit variable bias to a certain extent. The commercial annuity data comes from the "China Insurance Yearbook", the basic pension insurance data comes from the "China Labor Statistics Yearbook", the demographic data comes from the "China Demographic Yearbook", and the other data comes from the National Bureau of Statistics and the "China Statistics Yearbook. In order to eliminate the impact of price fluctuations, this paper calculates the fixed base price index of each province (2010=100), and adjusts the data of household consumption, income, annuity payment and basic pension benefit to comparable data with 2010 as the base year.

In order to smooth the data and reduce the heteroscedasticity between cross-sections, this paper uses natural logarithms to regress the variables of household consumption, income and insurance expenditure. The descriptive statistics of each variable in this paper are shown in Table 2. It can be seen from Table 2 that the minimum value of the commercial annuity protection level is close to 0. This is due to the low level of commercial annuity development in some areas (such as the Tibet Autonomous Region). Since the data did not have a significant impact on this study, this article does not make data corrections.

Table 2. Variable Descriptive Statistics

Variables	Observations	Mean	St. Dev.	Maximum	Minimum
Consumption level of urban and rural residents	279	279.00	12723.18	5479.04	34942.41
The Engel's coefficient of urban and rural residents	279	0.34	0.06	0.52	0.20
Income level of urban and rural residents	279	17777.81	8091.54	51733.09	6596.17
Basic pension insurance protection level 1	279	0.18	0.14	0.89	0.03
Basic pension insurance protection level 2	279	0.06	0.03	0.17	0.01
Commercial Annuity Protection Level 1	279	0.35	0.41	3.29	0.00
Commercial Annuity Protection Level 2	279	0.10	0.07	0.41	0.00
Total dependency ratio of urban and rural families	279	0.36	0.07	0.51	0.19
Uneven income distribution between urban and rural areas	279	2.71	0.45	4.07	1.85

EMPIRICAL RESULTS

The Impact of Commercial Annuity on the Total Consumption

Since the consumption equation contains lagging explained variables, in order to solve the endogenous problem, this paper uses the two-stage System Generalized Method of Moments (System GMM) to perform regression analysis. The System GMM method estimates the level and the difference equation as a system. Compared with the difference GMM, the System GMM can not only improve the estimation efficiency, but also estimate the effect of variables that do not change with time.

The results are shown in model (1) in Table 3. The p-value of Wald test result of model (1) is less than 5%, indicating that the explanatory variables in this model are jointly significant. It can be seen from the p value of the sequence correlation that there is no second-order sequence correlation in the residual after sample difference, that is, the original model does not have the autocorrelation problem. The p value of Sargan's over-identification test is greater than 5%, which proves the joint validity of the instrumental variable set. In addition, this paper also controls the time effect in the regression analysis.

It can be seen from model (1) that both the basic pension insurance protection level 1 and commercial annuity protection level 1 have a significant positive impact on household consumption. Among them, the impact coefficient of the basic pension insurance protection level is 0.015, which is slightly larger than that of the commercial annuity protection level. It can be seen that the basic pension insurance protection level plays a greater role in promoting household consumption. This may be due to the fact that the first pillar of the basic pension insurance system in China has not yet been perfectly established, so more efforts should be made to improve the level of basic pension insurance at this stage. Only by keeping the "base" stable can we be qualified to talk about higher-level pension security. Residents' income level significantly promotes residents' consumption, and income affects residents' consumption to a much greater extent than basic

pension insurance and commercial annuities. This is because the main factor that determines residents' consumption at this stage is still per capita income. According to Keynes' absolute income theory, the increase in income has a direct impact on the expansion of consumption. In addition, the lagging period of household consumption also has a positive impact on current consumption, and it is significant at the level of 1%. It can be seen that household consumption has inertia, and residents often refer to the consumption behavior of the previous period when making current consumption decisions.

Regarding demographic variables, the total population dependency ratio has a negative impact on current consumption, but the regression results are not significant. This may be due to the fact that the dual impact of population burden on residents' consumption has offset each other: on the one hand, the increase in the burden of population support will increase expenditures on education, medical care and pensions, thus promoting consumption; on the other hand, the burden of population support will increase the uncertainty of future household income and expenditure, thereby increasing residents' preventive savings and reducing current consumption. The expansion of the urban-rural income gap shows a positive correlation with household consumption, which is inconsistent with the research of Chen(2012) and Zhao, et al.(2017), and also does not meet theoretical expectations. It can be seen from the existing literature that some scholars have reached the same result (Cai, 2015; Yang, et al., 2014). Yang, et al.(2014) explained that the income gap between urban and rural residents may not be a good substitute for the variable of income distribution, so it cannot reflect the income gap between residents.

In order to verify the robustness of the regression results, this paper also performs ordinary least square regression (OLS) on the model (1), and the regression results are shown in the model (3) in Table 3. This regression removes the consumption habit variables to prevent endogenity. It can be seen that both the basic pension insurance protection level 1 and the commercial annuity protection level 1 have a significant positive impact on household consumption, and the influence coefficient of the former is greater than the latter, which is consistent with the GMM regression results. In addition, residents' income is still the most important factor affecting consumption. The regression coefficient of the total dependency ratio is still negative and significant at the 5% level. The inequality of income distribution between urban and rural areas still shows a positive relationship with household consumption, which is also consistent with the regression results of GMM. In summary, the regression result of model (1) is robust.

In addition, this paper also replaces the indicators of basic pension insurance protection level and commercial annuity protection level with the corresponding insurance benefits as a percentage of GDP for analysis. The regression results are shown in models (2) and (4) in Table 3. It can be seen that the regression results of models (2) and (4) are basically consistent with the results of (1) and (3), except that the significance of the insurance protection level in model (2) has decreased. Here, the robustness of the regression results is verified from the perspective of replacing the core explanatory variables.

Table 3. Commercial Annuity Insurance and Chinese Residents' Consumption

	(1)	(2)	(3)	(4)
Explanatory Variables	**GMM**	**GMM**	**OLS**	**OLS**
The lag of consumption	0.695***	0.698***		
	(11.56)	(7.85)		
Income level	0.249***	0.271***	0.857***	0.934***
	(4.59)	(3.29)	(36.16)	(50.80)
Basic pension insurance protection level 1	0.015*		0.046***	
	(1.88)		(3.47)	
Commercial Annuity Protection Level 1	0.013***		0.033***	
	(2.81)		(2.65)	
Basic pension insurance protection level 2		0.013*		0.034**
		(1.70)		(2.57)
Commercial Annuity Protection Level 2		0.010		0.025**
		(1.22)		(2.06)
Total dependency ratio	-0.034	-0.044	-0.195**	-0.308***
	(-0.69)	(-0.58)	(-2.48)	(-4.04)
Uneven income distribution between urban and rural areas	0.028***	0.026***	0.063***	0.054***
	(4.55)	(2.85)	(7.11)	(6.13)
Time effect	control	control	control	control
Observations	248	248	279	279
Wald Test	0.000	0.000	0.000	0.000
AR(1)	0.004	0.010	0.004	0.005
AR(2)	0.947	0.991	0.972	0.973
Sargan Test	0.995	0.993	0.990	0.972

Note: ***、 ** and * indicate the significance level test of 1%, 5% and 10% respectively, t-statistics in parentheses.

The Impact of Commercial Annuity on the Consumption Structure

In addition, this article also analyzes the relationship between commercial annuity and residents' consumption structure. The regression analysis methods and robustness test methods used here are consistent with the above studies, and the regression results are shown in Table 4. The regression results of models (1) and (3) are basically the same. It can be seen from the model (1) that both the basic pension insurance protection level 1 and the commercial annuity protection level 1 have a negative impact on the Engel's coefficient. The impact coefficient of the commercial annuity protection level is even greater, and is significant at the 1% level.

Therefore, in terms of improving the consumption structure of residents, commercial annuities play a greater role than basic pension insurance. The regression result of the lag term of the Engel's coefficient is significantly positive at the 1% level, that is, the proportion of food consumption in the total consumption in the current period depends to a large extent on the consumption behavior

in the previous period. The influence of residents' income on consumption structure is not significant. It means that the effect of residents' income on consumption structure is not obvious, which may because the focus of the impact of residents' income on consumption is to expand the total consumption. In addition, the regression coefficients of population support burden and urban-rural income gap are not significant. The reason may be the inappropriate selection of indicators, so we will not analyze it here. Models (2) and (4) also replace the core explanatory variable with the ratio of pension insurance benefits to GDP. From the regression results, it can be seen that an increase in the level of commercial annuity protection can significantly improve the consumption structure of residents.

Under the protection of commercial annuity insurance, residents tend to develop non-food consumption. The basic pension insurance has no significant impact on the consumption structure. It can be seen that compared with the basic pension insurance, commercial annuities have more advantages in promoting the optimization and upgrading of residents' consumption structure.

Table 4. Commercial Annuity Insurance and Chinese Residents' Consumption Structure

	(1)	(2)	(3)	(4)
Explanatory Variables	**GMM**	**GMM**	**OLS**	**OLS**
The lag of the Engle's Coefficient	0.766***	0.770***		
	(16.17)	(15.36)		
Income level	0.012	-0.006	0.035***	-0.010
	(1.30)	(-0.71)	(2.78)	(-0.87)
Basic pension insurance protection level 1	-0.005		-0.010	
	(-0.90)		(-1.13)	
Commercial Annuity Protection Level 1	-0.013***		-0.037***	
	(-3.69)		(-5.09)	
Basic pension insurance protection level 2		-0.004		0.002
		(-0.60)		(0.24)
Commercial Annuity Protection Level 2		-0.011***		-0.032***
		(-3.14)		(-4.35)
Total dependency ratio	0.021	0.047	0.192***	0.270***
	(0.42)	(1.05)	(4.31)	(6.41)
Uneven income distribution between urban and rural areas	-0.008	-0.006	-0.009*	-0.005
	(-1.53)	(-1.09)	(-1.77)	(-0.86)
Time effect	control	control	control	control
Observations	248	248	279	279
Wald Test	0.000	0.000	0.000	0.000
AR(1)	0.004	0.010	0.004	0.005
AR(2)	0.947	0.991	0.972	0.973
Sargan Test	0.995	0.993	0.990	0.972

Note: ***、 ** and * indicate the significance level test of 1%, 5% and 10% respectively, t-statistics in parentheses.

CONCLUSIONS AND IMPLICATIONS

Conclusions

Using data from 31 provinces, municipalities and autonomous regions in Mainland China from 2010 to 2018, this paper establishes a dynamic panel regression model and adopts a two-stage System GMM method to explore the impact of commercial annuity development on total household consumption and consumption structure. In addition, this article also compares the effects of basic pension insurance and commercial annuity on household consumption. In order to test the robustness of the regression results, this paper replaces the core explanatory variables with the proportion of insurance benefits to GDP for regression, and also uses the ordinary least squares estimation results to further verify the reliability of the results.

The conclusions are as follows: (1) The per capita disposable income of residents is still the main factor to promote residents' consumption. (2) The improvement of commercial annuity and basic endowment insurance will help to promote residents' consumption. Among them, the effect of commercial annuity in promoting residents' consumption is more significant. (3) In terms of improving the consumption structure, commercial annuity insurance plays a more significant role compared with the income level of residents and basic pension insurance.

Implications

Raise the income level of residents and increase residents' consumption from the root cause. Keynes' absolute income theory believes that residents' consumption expenditure is affected by the level of personal absolute income. Looking at China's national conditions, an important reason for the low consumption rate of residents is the limited real income level of residents. Therefore, if China wants to promote the transformation and upgrading of residents' consumption and its structure, we must focus on increasing the level of residents' income and promoting the rational distribution of national income. Only when income increases can we squeeze out residents' preventive savings, expand domestic demand, and continuously improve residents' living standards.

Learn from pilot experience and vigorously promote the development of the "third pillar" of pension insurance. The research results show that the development level of commercial annuity has an advantageous effect on the expansion of household consumption and the optimization and upgrading of consumption structure. Therefore, China must vigorously promote the development of the "third pillar" commercial annuity insurance. At present, the level of development of the third pillar of China's endowment insurance is relatively low, which cannot effectively meet the residents' risk protection needs. In the future, insurance companies should speed up the design of commercial pension insurance that meets the needs of the people, speed up the trial of tax-deferred pension insurance, and gradually expand the scope of the trial based on the experience of last year, so that the "third pillar" can fully play the supporting role as soon as possible.

Do a good job in the top-level design and steadily promote the coordinated development of the "three pillars" of the pension insurance system. China currently implements the internationally popular "three pillars" pension insurance system. It is necessary to do a scientific and reasonable top-level design plan, steadily promote the coordinated development of various pillars, and give full play to the role of pension insurance in reducing uncertain expectations. For the first pillar of basic pension insurance, it is necessary to effectively solve the problem of uneven security levels

in different regions and groups, and increase the protection of special groups such as rural residents and floating population. At present, the coverage rate of enterprise annuity is less than 7% in China, so efforts should be made to expand the coverage of enterprise annuity and occupational annuity. In addition, more efforts should be made to speed up the development of commercial pension insurance, to upgrade the system construction to the national level and give full play to the supporting role of the third pillar.

References

1. Ando, A., and Franco, M. (1963), The 'Life-Cycle Hypothesis' of Saving: Aggregate Implications and Tests. American Economic Review, 53(1), pp.55-84.
2. Bai, C. E., Wu, B. Z., and Jin, Y. (2012). The Impact of China's Pension Insurance Payment on Consumption and Savings. Chinese Social Sciences, 8, pp. 48-71.
3. Barro, R. J. (1974), Are Government Bonds Net Wealth. Journal of Political Economy, 82(6), pp. 1095-1117.
4. Cai, X. (2015). Life expectancy, pension insurance development and Chinese residents' consumption. Economic Review, 6, pp. 81-91, 107.
5. Chen, B. K. (2012). Income Distribution and Chinese Residents' Consumption——Theoretical and Empirical Research Based on China. Nankai Economic Research, 1, pp. 33-49.
6. Feldstein, M. (1974), Social Security, Induced Retirement, and Aggregate Capital Accumulation. Journal of Political Economy, 82(5), pp. 905-926.
7. He, L. X., Feng, J, and Zuo, T. H. (2011). The Impact of Pension Reform on Household Savings Rate: Empirical Evidence from China. Economic Research, 10, pp. 117-130.
8. Kenneth J. Arrow. (1963), Uncertainty and the Welfare Economics of Medical Care. The American Economic Review, 53(5), pp. 941-973.
9. Li, X. Y., Wu, Y., and Zhang, Y. X. (2012). Research on the Mechanism of Life Insurance's Effect on Domestic Consumption. Insurance Research,6, pp. 13-21.
10. Nan, Y. Q., He, P. H., and Zhou, Q. (2020), Research on the Impact of Commercial Insurance on Residents Consumption——Based on Empirical Evidence from China's Provincial Panel Data. Insurance Research,3, pp. 23-40.
11. Robert W. Strain. (1959), The Impact of Increased Life Insurance Purchases on the Consumption Function. The Journal of Insurance, 25(4), pp. 28-31.
12. Shi, L. Y., Sun, Q. X. (2014), Life Insurance and Resident Consumption——Data Research from China. Insurance Research,4, pp.74-81.
13. Wang, L. P. (2005), Correlation Analysis of My country's Insurance and Urban Residents' Consumption Demand. Journal of Shanxi University of Finance and Economics, 27(4), pp. 39-42.
14. Yang, B. Y., Zhang, B., and Yi, X. J. (2014), Research on the Impact of Housing Demand on Urban Residents' Consumption Propensity and Regional Differences. Consumer Economy,30(1), pp. 7-14.
15. Zhang, J. (2010), An Empirical Analysis of Life Insurance and Consumption Based on the VEC Model. Economic Review, (6), pp. 122 -129.
16. Zhao, Q., Li, Z. (2017), Research on the Relationship between Public Pension System and Residents' Consumption——Based on the Cross-border Experience Analysis of CWED Data. Insurance Research, (10), pp. 87-101.
17. Zhao, W., Li, G. Q. (2014), Can House Price Regulation and Expansion of Social Security Promote Residents' Consumption. Journal of China University of Geosciences (Social Science Edition), 14(3), pp. 22-29, 138.

18. Zhao, X. D., Wang, H., and Liu, T. (2017), Population Aging, Pension Insurance and Resident Savings Rate. China Soft Science, (8), pp. 156-165.