The Influencing Factors of Chinese Household Consumption and the Sources of Urban and Rural Consumption Differences – Based on the Registration Form the Dataset of CHIP

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ABSTRACT

To accelerate the transformation of economic growth mode and promote high-quality economic development, it is necessary to clarify the specific impact of population aging on consumption expenditure and the differences between urban and rural areas. This paper selects chip2013 panel data as samples to construct a regression model and uses OB decomposition to analyze. The results show that the aging of the population has a significant negative impact on consumption expenditure, but the difference between urban and rural consumption is mainly due to their own endowment and consumption concept, rather than the degree of aging. The aging of the population is a long-term trend of China's population development. The research results will help us adjust policies to resist the adverse effects of aging on economic development.

Keywords: Aging, Consumption structure, Social welfare, Urban-rural differences, Development policy.

1. INTRODUCTION

Since China's reform and opening, Chinese consumption rate has been increasing for more than 40 years, and the final rate is between 50% and 70%. However, after 2013, Chinese consumption rate shows a decreasing trend with fluctuations, reaching its peak at 67.3% in 1983 and bottoming out at 49.3% in 2010. Meanwhile, the gap between urban and rural China keeps expanding. In 1992, the urban and rural consumption ratio was 51.7%, but it grew up to 78.2% in 2018.

From the point of view of material consumption and service consumption, material consumption takes smaller parts, but the service consumption ratio seemingly increases. As Kassouri, Alola and Savas point out that "evidence suggests that economic expansion constitutes periods of increase in material consumption mainly due to the consumption side effect of expansion" [1], which partially approves material consumption takes smaller parts. From the aspects of the eating, clothing, living, daily necessities and transportation, eating takes smaller parts in consumption structure, while consumption ratio for clothing, living, daily necessities and transportation gradually increases, which follows the logic of Maslow's hierarchy of needs. Compared to developed countries, China has a much less household consumption ratio in GDP, that is also far away from two other Asian countries, Japan, and Korea. From the macro level, short-term investment to increase economic growth is working, but it also leads to the increasing amount of debts and cumulative risk, so it is not sustainable. Consumption is like the digestive system to the whole economy, only if the production capacity keeps at a certain level that energizes the economy.

Consumption is an important part of the economy cycle. Currently, Chinese consumption and economic

growth have not stepped into the virtuous circle, which adversely affects stable economic growth. Stimulating household consumption and optimizing consumption structure play an important role in promoting social economy growth steadily. From the microscopic aspect, consumption is a meaningful factor, which reflects people's living standard and people's welfare. Raising people's living standard and increasing people's welfare should be the ultimate goal for economic development, and help people achieve their Chinese dreams. Studying the factors of consumption level and consumption structure suggests the related policies achieving a high quality of economy development, which has theoretical and practical meaning in construction of Socialism for a new era.

There are many reasons that lead to a slowdown in consumption growth, like Chinese culture factors, unitarization of production and so on. It turns out that population structure and urbanization have significant effects on economic growth. China is facing a population aging problem, this study will start with the age structure of family and other potential factors and use China Household Income Projects（CHIP）to find how age structure influences family consumption level and consumption structure and focus on the consumption difference in urban cities and rural areas.

This article contributes to the source of consumption structure and Chinese social security system. Also, the article contributes to the first emerging aging problem in China.

2. LITERATURE REVIEW

In general, the starting point of the research on aging within the academic field is usually the life cycle theory, and most focus on static life cycle theory. However, the final conclusions of each research are quite different. The life cycle hypothesis pointed out by Modigliani supposes that "People will allocate their money at different stages of life, save during young and middle age, and consume during childhood and old age. Thus, the higher proportion of the children and the elderly in an economic field, the higher the consumption rate generally. Also, the proportion of increases in elderly age will not significantly reduce the household expenditure." [2] The current pension model in China is still based on family pensions (the respondents have 2-4 children in their families). Parents still have financial support for their children after they reach adulthood, and the transfer of wealth between generations cannot be an effective social investment. Nevertheless, Wangwei believes that in an economic field with deepening aging of the population, the aging issue will lead to an adjustment in the final consumption structure, which will apparently change the mode of household consumption and reduce expenditures, especially in the early stage of the aging

society [3]. Besides, some scholars think that the impact of aging cannot be accurately predicted at this stage. For instance, Bloom believes that the economic consequences of aging depend on the response to changes in age distribution. From a long-term perspective, the impact of aging seems to be uncertain [4]. However, the truth is that this theory ignores the expected effect and dynamic effect. Firstly, the consumption structure curve would be smooth if people can have enough cognition and reason for changes in their consumption and have rational behaviors, rather than a massive decline at a certain point in time. Secondly, with the continuous improvement of human health and life expectancy, the symbol of aging set by the United Nations in 1965 is obviously not applicable to modern society. The average life expectancy in China has risen from 43 in 1946 to 76 in 2020. Therefore, it is particularly necessary to go beyond the life cycle theory then conduct empirical research on the Chinese current stage of aging.

In addition, many scholars conduct academic research on Chinese special urban-rural dual structures. The debate is mainly focusing on the impact of Chinese rural revitalization strategy and urbanization strategy. For example, Li, Lin, and Gan talk about how relaxing the credit constraints helps to improve the rural households' consumption expenditures in developing countries in "China credit constraints and rural households' consumption expenditure" [5]. Part of scholars believes that the implementation of those strategies leads to no significant difference between urban and rural anymore. Other scholars believe that it is necessary to implement more specialized policies to manage rural household consumption based on the unique situation in rural areas such as rear children and the elderly. For example, based on the Lewis model, Liu Huajun and Liu Chuanming find urbanization has a significant negative impact on the aging of the rural population [6]. This article will also explore the issue of urban-rural differences separately and find the origin of the differences.

In the previous study, most researchers pick up the time series data to do their research. Since the aging problem is a new problem in China in the past ten years, the data lack coherence, so the time series analysis lacks credibility. This article will use panel data for research.

3. DATA SOURCE AND MODEL CONSTRUCTION

3.1. Selection and processing of samples and variables

This paper uses the data of CHIP 2013, namely the survey data of household income distribution of rural and urban residents in China for research. Families are

selected as samples and relevant variables are screened. The samples are representative and fit for cross-section analysis. The relevant variables are as follows：

Expenditure. Based on studying the total household consumption expenditure, this study further divides the total consumption expenditure into the subsistence consumption expenditure and the development consumption expenditure. Among them, subsistence consumption expenditure includes food, tobacco, alcohol, clothing, housing, articles for daily use and services, medical and health care consumption expenditure. Developmental consumption expenditure includes education, culture and entertainment, transportation and communications, and other supplies and services.

Different from previous studies, this study will attribute health care spending to necessity rather than a developmental consumption, the transportation and communication costs are attributed to developmental consumption rather than a necessity, because the family of health care spending is main or medical costs. Partly more consumption, which is closely related to basic survival spending, should be classified as necessity. The consumption of tourism travel consumption, communication and communication tools will greatly increase with the improvement of living standards, so it is more appropriate to be classified as developmental consumption.

Family characteristics (family age structure, finance, household registration characteristics). In this study, the proportion of the elderly population (65 years old and over/total population) and the proportion of the juvenile population (15 years old and under/total population) are used to describe the family age structure. Meanwhile, according to previous studies, family net assets and annual net income are introduced to describe family characteristics, and family net assets are calculated using total assets-total liabilities. To make the research more comprehensive and reasonable, the household registration is used to distinguish the urban and rural

areas to reflect the characteristics of China's urban-rural dual structure. To reduce heteroscedasticity, logarithms of explained variables and numerical family characteristics are taken.

Characteristics of household. The characteristics of the head of the household and the influence factors of consumer spending as a family include the gender, age, level of education of the head of the household and the average family's health status. The level of education of the head of the household is the education years, the average family's health is the arithmetic average of self-reported health measures for all family members (1: very bad 2: worse 3: ok 4: better 5: very good).

After filling and deleting the missing value items, a total of 14118 valid samples are obtained.

3.2. Model construction

Basic model:

$$ln \, ln \, C = \alpha_1 K_1 + \alpha_2 K_2 + \alpha_3 \, ln \, ln \, ASSET + \alpha_4 \, ln \, ln \, INCOME + \alpha_5 AOHH + \alpha_6 URBAN + \alpha_7 EOHHY + \alpha_8 AHT + \alpha_9 GENDER \qquad (1)$$

lnC represents the logarithm of consumption expenditure, k1 represents the proportion of children in a family, k2 represents the proportion of the elderly in a family, lnAsset represents the logarithm of the family's net assets, lnIncome represents the logarithm of the family's net income in 2013, and a1 ~ a9 are coefficient estimators. AOHH refers to the age of the head of household. EOHHY refer to the education years of the head of household.

Based on this model, this study conducts regression analysis on total household consumption, subsistence consumption and development consumption respectively, and further conducts regression comparison between urban and rural areas and OB decomposition to analyze the sources of differences.

Table 1. Descriptive statistics of variables

Variable	obs	Mean	Std.Dev.	Min	Max
Hhcode	0				
Number	14118.000	3.415	1.348	1.000	9.000
Child population	14118.000	0.537	0.716	0.000	7.000
Elderly population	14118.000	0.304	0.623	0.000	4.000
Hospitalization days	14118.000	18.832	60.033	0.000	1460.000
Coun	14118.000	376683.500	135693.500	110101.000	621121.000
Education	14118.000	8.631	3.431	0.000	21.000
Net income	14118.000	57782.110	55458.790	40.710	1958943.000
Consumption expenditure	14118.000	40042.250	35636.840	600.020	759530.900

Food alcohol and tobacco	14118.000	12564.200	8586.466	0.000	115321.500
Clothes	14118.000	3222.393	4204.777	0.000	140509.100
Inhabiting	14118.000	9045.475	11139.350	0.000	352712.600
Service	14118.000	2523.227	4178.320	0.000	120378.800
Transportation	14118.000	4847.205	12231.220	0.000	295634.000
Entertainment	14118.000	4342.981	8124.148	0.000	276081.000
Health care	14118.000	2486.182	5619.949	0.000	197641.000
Others	14118.000	1010.592	3814.704	0.000	318000.000
Registered permanent residence	14118.000	0.451	0.498	0.000	1.000
Age	14118.000	50.407	11.790	17.000	79.000
Gender	14118.000	0.157	0.364	0.000	1.000
Net assest	14118.000	105575.800	235999.700	10.000	13500000.000
Health condition	14118.000	3.957	0.742	1.000	5.000
Hospitalization days	14118.000	5.923	20.666	0.000	365.000
Subsistence consumption	14118.000	29841.470	23164.550	466.680	393449.600
Developmental consumption	14118.000	10200.780	17639.060	0.100	469063.600
The consumption structure	14118.000	0.207	0.145	0.000	0.885
lnC0	14118.000	10.328	0.725	6.397	13.540
lnIncome	14118.000	10.659	0.807	3.706	14.488
lnAssest	14118.000	10.817	1.256	2.303	16.422
k1	14118.000	0.128	0.165	0.000	0.778
k2	14118.000	0.112	0.260	0.000	1.000
lnC1	14118.000	10.075	0.671	6.146	12.882
lnC2	14118.000	8.462	1.346	-2.302	13.058

4. EMPIRICAL RESULTS

4.1. The influencing factors of residents' consumption

According to the regression results, there is a positive correlation between the proportion of children and consumption expenditure, the proportion of children increases by 0.1 would cause the total consumption expenditure increases by 1.73%; there is a negative correlation between the proportion of the elderly population and consumption expenditure, the proportion of elderly population increases by 0.1 would cause the total consumption expenditure decreases by 0.94%; there is a positive correlation between assets and consumption expenditure, and the total assets increases by 1% would cause the total consumption expenditure increases by more than 1%. The annual net income of households increases by 1% would cause the total consumption expenditure increases by 0.518%; the age consumption expenditure of heads of households increases by 1 unit would cause the total consumption expenditure decreases

by 0.001%; the influence of the proportion of the elderly population in households on their consumption expenditure shows heterogeneity under the differences between urban and rural areas. The registered residence households consume 0.118% more than the registered residence households in rural areas. This shows that the age structure of family members has a greater impact on rural household consumption, and the education level of household heads is positively correlated with consumption expenditure. The education level of householders is increased by 1 unit would cause the total consumption expenditure increases by 0.021%. The situation increases by one unit would cause the total consumption expenditure decreases by about 0.011%; in contrast, the female headed family consumes 0.06% more than the male headed family.

4.2. The self-causality treatment of the average health status

Combined with the results of OLS regression, there may be a strong two-way causal relationship between the total consumption and the average health status of the

family obtained by self-rated health level, that is, while the health status will affect the total consumption expenditure, the total consumption expenditure will also affect the health status, especially when a family spends a lot of money on health care in the survival consumption, the average health status of the family will increase and the health status will be better, that is, there will be a higher rating. Therefore, we introduce an instrumental variable - the average number of days that the family cannot work, go to school, and live normally due to illness or injury, which is referred to as hospitalization days. This variable is not affected by consumption expenditure and has no self-causality, and it can estimate the health status more accurately. Therefore, this instrumental variable is valid.

4.3. The proportion of children and the elderly influence the heterogeneity of consumption types

The regression results of Column 1 show that: the proportion of the elderly population has a significant negative impact on the total household consumption expenditure, but it is difficult to get the impact of the proportion of the elderly population on various expenditures more accurately only by the regression of column 1. Therefore, column 3, column 4 and column 5 respectively make progress on the regression of survival type consumption expenditure, development type consumption expenditure and consumption structure (development type consumption expenditure / total consumption expenditure) to conduct a heterogeneity study.

From the regression results in Column 3, it can be seen that the proportion of children has a positive correlation with the survival consumption expenditure, the proportion of children increases by 0.1 would cause the survival consumption expenditure increases by 0.99%; the proportion of elderly population has a negative correlation with the survival consumption expenditure, the proportion of elderly population increases by 0.1 would cause the consumption expenditure decreases by 0.94%; the proportion of assets has a positive correlation with the survival consumption expenditure; household annual net income and living consumption expenditure shows a positive correlation, household annual net income rises by 1% would cause consumption expenditure increases by 0.49%, household age has no significant impact; household registered residence in urban areas is more than 0.143% of household registered residence in rural areas; household education level is positively correlated with consumer spending, and household education level is higher. The average health status of the family increases by 1 unit would cause the consumption expenditure increases by 0.018%; the average health status of the family increases by 1 unit would cause the consumption expenditure

increases by 0.068%; in contrast, the female headed family consumes 0.067% more than the male headed family.

From the regression results in Column 4, we can see that the proportion of children is positively correlated with the development type consumption expenditure, the proportion of children increases by 0.1 would cause the consumption expenditure increases by 13.4%; the proportion of elderly population is negatively correlated with the development type consumption expenditure, the proportion of elderly population increases by 0.1 would cause the consumption expenditure decreases by 1.36%; the proportion of assets is positively correlated with the development type consumption expenditure, and the total assets increases by 1% would cause consumption expenditure increases by 0.131%, household annual net income and development consumption expenditure show a positive correlation, household annual net income rises by 1% would cause consumption expenditure increases by 0.705%, household age and development consumption expenditure show a negative correlation, age increases by 1 unit would cause consumption expenditure drops by 0.005%, household registered residence in urban areas is less than 0.003% of household registered residence in rural areas. There is a positive correlation between education years and development consumption expenditure, the education level of the head of household increases by 1 unit would cause the consumption expenditure increases by 0.051%; the average health status of the family is negatively correlated with the development consumption expenditure, the average health status of the family increases by 1 unit would cause the development type consumption expenditure decreases by 0.461%; in contrast, the female headed family consumes 0.042% more than the male headed family.

From the regression results of Column 5, we can see that the proportion of children, the proportion of elderly population, assets, family income, age of head of household, years of education of head of household and average health status of family have greater impact on the development type consumption expenditure than on the survival consumption expenditure. Only the household registration and gender have a greater impact on the survival type consumption expenditure than on the development consumption expenditure.

In the regression results, we should pay special attention to the following points: the influence coefficient of the proportion of the elderly population on the development type consumption expenditure is -0.136, the influence coefficient of the proportion of the elderly population on the survival type consumption expenditure is -0.094, and the influence of the proportion of the elderly population on the development type consumption expenditure is greater; the coefficient of the average annual income of the family in the survival type

consumption expenditure is 0.490, and the coefficient in the development type consumption expenditure is 0.705. The primary factor affecting consumption expenditure is far greater than other factors; urban registered residence households tend to be more inclined to developing

consumption expenditure than rural registered residence households; the average household health status is negatively correlated with the development consumption expenditure, which is contrary to common sense, but can be explained by 3.2 self-correlation study.

Table 2. Instrument variable regression results

	1	2	3	4	5
	the total consumption expenditure	IV	the survival consumption expenditure	the development consumption expenditure	consumption structure
the proportion of children	0.173***	0.191***	0.099***	1.340***	0.080***
	-0.024	-0.027	-0.026	-0.083	-0.009
the proportion of elderly population	-0.094***	-0.114***	-0.094***	-0.136*	-0.011
	-0.017	-0.022	-0.021	-0.077	-0.008
lnAsset	0.101***	0.104***	0.097***	0.131***	0.004***
	-0.004	-0.005	-0.005	-0.014	-0.002
lnIncome	0.518***	0.521***	0.490***	0.705***	0.022***
	-0.011	-0.011	-0.01	-0.026	-0.002
age	-0.001***	-0.002***	0.0004	-0.005***	-0.001***
	0	-0.001	0.0005	-0.002	0
registered permanent residence	0.118***	0.113***	0.143***	-0.003	-0.017***
	-0.01	-0.01	-0.01	-0.032	-0.003
education years	0.021***	0.022***	0.018***	0.051***	0.003***
	-0.001	-0.001	-0.001	-0.004	0
average health condition	-0.011**	-0.051*	0.068***	-0.461***	-0.075***
	-0.006	-0.027	-0.024	-0.097	-0.012
gender	0.060***	0.058***	0.067***	0.042	-0.005
	-0.01	-0.011	-0.01	-0.033	-0.003
_cons	3.562***	3.677***	3.360***	0.694*	0.206***
	-0.089	-0.115	-0.107	-0.361	-0.041
N	14118	14118	14118	14118	14118
R-sq	0.627	0.626	0.62	0.2	.
adj. R-sq	0.627	0.625	0.62	0.199	.
F	2229.443				
（S E）					
="* p<0.1	** p<0.05	*** p<0.01"			

4.4. Research on the source of the difference of urban and rural consumption level

The 19th National Congress of the Communist Party of China put forward the "Rural Revitalization Strategy", which is not only the general requirement to solve the "three rural" problems, but also an important driving force to promote agriculture with Chinese characteristics and rural modernization. Under the new economic stage, it is inevitable to put forward higher requirements for the optimal allocation of poverty alleviation resources. Therefore, in the context of Rural Revitalization Strategy, it is particularly important to specifically study the sources of urban-rural heterogeneity. Next, we use OB decomposition to explore the factors that cause the difference in consumption levels between urban and rural areas.

From the decomposition results, we can see that, overall, about 5 / 6 of the average difference in the total consumption level can be explained by the difference in the average characteristics of urban and rural families. In this part of the explanatory differences, the income gap accounts for about 80%, which is the most important part; the remaining 1 / 6 of the difference is caused by the coefficient difference, which can be summarized as the difference in consumption concept and consumption desire, and the most important one is also caused by the coefficient difference in income. First, the gap of total consumption level between urban and rural families is mainly caused by the difference in their own endowment, and it is mainly caused by the gap of income and assets. Secondly, the impact of the difference in consumption concept between urban and rural families on the gap of consumption level is mainly caused by the marginal consumption tendency of income. Even if the income of urban and rural families increases in the same proportion, the consumption of rural families will increase. The growth rate of household expenditure is also less than that of urban households, which is also reflected in the supplementary regression table of influencing factors of urban and rural household consumption.

Table 3. OB decomposition results

OB-Table			
	0.5	pooled	omega
overall			
group_1	10.048***	10.048***	10.048***
	-0.007	-0.007	-0.007
group_2	10.670***	10.670***	10.670***
	-0.009	-0.009	-0.009
difference	-0.623***	-0.623***	-0.623***
	-0.011	-0.011	-0.011
explained	-0.504***	-0.505***	-0.542***
	-0.01	-0.01	-0.01
unexplained	-0.119***	-0.118***	-0.081***
	-0.009	-0.01	-0.007
explained			
the proportion of children	0.004***	0.004***	0.004***
	-0.001	-0.001	-0.001
the proportion of the elderly	0.002***	0.002***	0.002***
	-0.001	-0.001	-0.001
lnAsset	-0.057***	-0.060***	-0.061***
	-0.003	-0.003	-0.003
lnIncome	-0.394***	-0.380***	-0.397***
	-0.008	-0.01	-0.01
age	0	0	0
	0	0	0
	-0.052***	-0.062***	-0.078***
education years	-0.004	-0.004	-0.004
	-0.007***	-0.009***	-0.012***
	-0.002	-0.002	-0.002
average health condition	0	0	0

	0	0	0
the proportion of children	0.007	0.007	0.007
	-0.006	-0.006	-0.006
the proportion of the elderly	-0.005	-0.004	-0.004
	-0.004	-0.004	-0.004
lnAsset	0.163**	0.167*	0.167*
	-0.075	-0.09	-0.09
lnIncome	-1.966***	-1.979***	-1.962***
	-0.132	-0.223	-0.223
age	-0.122***	-0.122***	-0.122***
	-0.044	-0.043	-0.043
	-0.03	-0.021	-0.005
education years	-0.025	-0.025	-0.025
	-0.004	-0.002	0.001
	-0.004	-0.003	-0.003
average health condition	0.223***	0.223***	0.223***
	-0.044	-0.043	-0.043
	1.615***	1.615***	1.615***
gender	-0.131	-0.181	-0.181
R-sq			
N	14118	14118	14118
(SE)			
="* p<0.1	** p<0.05	*** p<0.01"	

Table 4. OB decomposition of rural and urban areas

	rural	urban
the proportion of children	0.192***	0.138***
	-0.033	-0.036
the proportion of the elderly	-0.126***	-0.084***
	-0.026	-0.023
lnAsset	0.102***	0.087***
	-0.006	-0.006
lnIncome	0.445***	0.629***
	-0.013	-0.016
age	-0.003***	0
	-0.001	-0.001
education years	0.016***	0.020***
	-0.002	-0.002
gender	0.016**	-0.040***
	-0.008	-0.008
average health condition	0.037*	0.060***
	-0.02	-0.012
_cons	4.314***	2.699***
	-0.117	-0.138
R-sq	0.486	0.623
N	7748	6370
Standard errors in parentheses		
="* p<0.1	** p<0.05	*** p<0.01"

5. CONCLUSIONS

Based on the CHIP 2013 database, this research firstly studied the microscopic impact of factors such as the number of children and the proportion of the elderly population on household consumption. According to data analysis, on the one hand, the proportion of the elderly population has a significant positive impact on the overall household consumption, subsistence consumption and development consumption. On the other hand, the proportion of the elderly population has a significant negative impact on household consumption, especially for developmental consumption.

Then after further analysis of the urban-rural differences, it appears that the gap in the overall consumption level of urban and rural households is mainly due to the difference in their own endowments which is mainly caused by the gap in income and assets. However, the difference in consumption concepts of urban and rural households also has a certain impact on the gap in consumption levels, which is mainly due to the marginal propensity to consume income.

6. SUGGESTIONS

Based on the above conclusions, here are some suggestions. "Chinese aging population cannot be responded by emergency strategy and must focus on the integration and participation of diversification and long-term development." [7] Firstly, the primary factor affecting household consumption expenditure is still household income. Therefore, the state can start with the design of pension payment methods and increase the actual labor participation rate of the elderly through reemployment policies. As a result, the retirement age is gradually delayed while strengthening the labor skills and employability of the elderly labor force.

Secondly, the proportion of the elderly population has a significant negative effect on household consumption, while the proportion of the young population has a significant positive effect on household consumption. Meanwhile, "the deposit rate of China will increase in recent society due to the increased population of elderly people." [8] Hence, it is imperative to take measures to resist the aging trend of society. According to the general laws of social development, it is difficult for China's total fertility rate to return to the replacement level of 2.1, but it is still possible to return to the level of 1.8 as much as possible, which is of great benefit to China's social development. "China birth policy changes need to take the road of gradual adjustment; a greater relaxation is inappropriate and the completely abandoned of birth control is not desirable." [9] China should steadily advance the reform of the birth policy. At the same time, it is more important to strengthen the construction of public services as soon as possible, reduce the cost of parenting, and increase the willingness to give birth. On the one hand, the gradual improvement of social security and the universal high-level education system will enable the younger generation to reduce the pressure of parenting, thereby increasing the birth rate and increasing the number of future labor forces; on the other hand, high-level economic society and high-quality social services will attract high-end talents and improve the quality of labor, thereby reducing the shock of my country's aging population on economic growth. Wang and Yu have predicted the consumption of Chinese households in 2049 and reasonably assume that the overall disposable income in 2049 will increase to 5.8 times that of 2015 [10], which indicates that the overall social welfare will be better.

Thirdly, the service supply system should fully consider the factors that accelerate and deepen the aging of the population. The aging trend of society may not stop in the short term, while the proportion of the elderly population does show a negative correlation with consumption. Therefore, the government must pay attention to this trend. A large part of this negative effect stems from the imperfection and incompleteness of the consumption structure. For example, industries for the elderly are too scarce and most elderly people are unwilling to engage in such jobs. As a new form of economic growth in an aging society, the development of industries related to the elderly should become a key support area for industrial policies. Besides that, strengthen law enforcement to gradually weaken or even eliminate age discrimination in the job market. In the end, we may try to alleviate this negative effect by increasing the actual labor participation rate of the elderly who are able and willing to work.

Fourthly, in the context of population aging in response to differences in urban and rural development, rural areas need more support from policies due to endowment effects and differences in consumption concepts. "The government may need to further improve the rural social security system and improve the economic and social conditions and consumption expectations of the rural registered population." [11] At the same time, differentiated products are formulated based on the consumption level of rural residents to achieve overall urban and rural development. It is necessary not only to introduce top talents and specialized talents in key industries in the region, but also to improve the ability of rural areas to retain existing talents, such as setting up a special talent subsidy fund and formulating plans to solve the difficulty of talents in buying houses. At the same time, it is necessary to strengthen the education of the concept of fertility for the rural population, not to simply encourage multiple births, but to promote eugenics and better education.

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