

Research on the Impact of Population Aging on Consumption Growth

Yun Tao Nie^{1,a}

¹Institute of political science and law, University of Jinan, Jinan, Shandong, China

^a974624559@qq.com

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Abstract. On the fortieth year of Chinese reform and opening up, the economy continued to grow at a high speed during this period, and the age structure of the population also changed rapidly. This was manifested by a continuous decline in fertility, stagnation of the growth of the working-age population and a shift to negative growth, and rapid development of population ageing. At the same time, the economic development has fallen into the dilemma of insufficient domestic consumption demand and weak consumption growth. Therefore, studying the relationship between population aging and consumption behavior and understanding the positive and negative effects of population aging on consumption demand and consumption structure can not only give us a clear theoretical understanding of the relationship between them, but also provide corresponding reference for current countermeasures to smoothly survive the aging of the population and adjust the consumption structure.

1. Introduction

Population ageing refers to the corresponding growth of the proportion of the elderly population in the total population caused by the reduction of the fertility rate and the extension of life expectancy due to the decrease of the number of young people and the increase of the number of older people. In 2000, the proportion of the elderly aged 65 years and over in the total population of China reached the international aging standard level of 7%, and completed the transformation of the age structure of the population from adult to elderly. In recent years, the scale of population aging is large and developing rapidly, the regional differences are obvious and the burden ratio of the elderly is increasing. According to the data of the Sixth National Population Census, the total population of China in 2010 is 13397.2 billion (excluding Hong Kong, Macao and Taiwan). Among them, the proportion of the population aged 60 and over, 65 and over accounted for 13.26% and 8.87% of the total population respectively. Compared with the fifth census in 2000, this proportion decreased by 2.93 percentage points and increased by 1.91 percentage points, respectively. At the end of 2011, the proportion of the total population aged 65 years and over was 9.1%. At the end of 2012, 9.4% of the total population was 65 years old and over. As can be seen from Table 1, the proportion of the elderly population in China will also increase substantially.

Table 1 2000-2100 The Proportion of Population of All Ages in China (Unit of measurement: %)

Age composition	2000	2020	2040	2060	2080	2100
0-14 years old	22.89	18.6	15.1	14.4	14.7	14.7
15-64 years old	70.15	64.4	57.0	53.4	51.7	51.1
65 years old and beyond	6.96	17.0	27.8	32.2	33.6	34.3

Source of data: 1. Compilation and calculation of census data over the years 2. Du Peng, et al. Centennial Trend of Population Aging in China [J]. Population research, 2005, 26(6): 90-93.

Consumption is an important factor affecting the sustained growth of national economy. Under the new normal situation, in order to realize the transformation from export-oriented economy driven by investment to endogenous economy driven by consumption driven by domestic demand, the problem of weak consumption must be solved. According to the data of the International Statistical Yearbook 2011, the consumption rates of the BRICS countries in Russia, Brazil and India in 2010 were 51.3%, 64.2% and 63.2% respectively, while that of China was only 38.4%. As the main consumer, people played a vital role in the economic transformation. At present, the

economic and social development is facing a growing burden of aging. At the same time, the economic development has also fallen into the growth dilemma of insufficient domestic consumption demand. Studying the adjustment of population age structure, especially how the acceleration of population aging affects consumption and how it affects consumption, not only has a clear theoretical understanding of the relationship between them, but also can smoothly realize the transformation of the mode of economic growth from investment-driven and export-driven to consumption-driven, and gradually reduce the demographic dividend and raise the population debt in China. It has certain theoretical significance and research value to put forward the corresponding countermeasures to maintain the sustained, healthy and stable development of China's economy and improve people's livelihood.

2. The positive impact of population aging on consumption behavior

According to some research done by domestic and foreign scholars, the aging of population has a positive impact on consumption behavior, and aging is conducive to consumption growth. Leff used cross-sectional data from 74 countries. Through econometric tests, it was found that higher burden coefficient and total burden coefficient of the elderly population were not conducive to the increase of savings rate, in other words, to the growth of consumption. ^[1]Wang Yupeng's research shows that: population aging factors significantly affect the consumption behavior of urban residents, under the control of other factors, the higher the dependency ratio of the elderly population, the higher the average consumption tendency of urban residents; the dependency ratio of children population has no significant impact on urban residents' consumption. ^[2]

First, the aging of the population has increased the consumption of health care, which has led to the rapid development of the health care industry. Higher age leads to the decline of body immunity. Therefore, the elderly are more likely to suffer from various diseases and have a higher demand for medical treatment and health care. The results of China's general health service survey show that the incidence of elderly people over 60 years old is significantly higher than that of adolescents, and each person has 2 to 3 chronic diseases. ^[3] The high prevalence rate has greatly increased the elders' demand for health care consumption.

Secondly, aging increases consumption of cultural and entertainment services and tourism services, promotes the development of the tertiary industry, and is conducive to promoting industrial transformation and upgrading. Older people have more leisure time than younger people. Therefore, reading books, magazines and recreational activities have become an important part of the life of the elderly. Many elderly people choose to travel, while directly increasing the consumption of tourism services, it will also drive the consumption of related items such as catering, transportation and so on.

Third, the elderly increase altruistic consumption, objectively increase their own consumption and promote family consumption. Altruistic consumption has a positive pull effect on consumer demand. Altruism of the elderly is mainly manifested in the marriage for their children, the purchase of houses for their children and the care of their grandchildren. This objectively promotes the altruistic consumption of the elderly in our country. At the same time, altruistic consumption will also improve the consumption level of relatives around the elderly.

The life cycle hypothesis can provide a reasonable theoretical explanation for the benefit of population aging to consumption growth. Modigliani and Bloomberg studied the relationship between population age structure and household consumption earlier, and put forward the life cycle hypothesis. The life cycle hypothesis assumes that there will be no intergenerational transfer of consumers' property. Consumers consume all their property in their life cycle, spend more in their youth and old age, and save more in their middle age. With the aggravation of population aging, the number of elderly people increases, their physical function gradually declines, and the consumption of medical care increases; the elderly need to make up for some deficiencies in their youth, thus generating compensatory consumption; in order to maintain the authority of their

families and family stability, the elderly increase altruistic consumption. In summary, the aging of population will produce an increase in consumption.

3. The Negative impact of population aging on consumption behavior

However, some scholars have shown that the aging of the population will have a negative impact on consumer behavior and hinder the growth of consumption. This section will be divided into direct and indirect impacts on consumption growth. Modigliani & Cao used time series data from 1953 to 2000 in China to test the relationship between population aging and savings rate, and concluded that population aging is an important reason for high savings in China. Li Tongping and Li Jianmin pointed out that the continuous decline of population growth rate and the decline of consumption and productivity of population structure caused by population transformation have produced population dividend, but it is not conducive to the expansion of consumption scale and the improvement of consumption rate.^[4] That is to say, in the process of population transformation, the decline of consumption rate has its inherent inevitability.

First, the elderly group has low purchasing power and limited consumption capacity. Compared with the working period, the purchasing power of the elderly entering the retirement stage has decreased significantly. Their purchasing power mainly comes from pension, child support and their pre-savings.

Secondly, the elderly purchase commodities in the pursuit of practical, it's a kind of stable and inertial consumer behavior. Compared with the young people, the old people pay more attention to the practicability of commodities, and have less requirements for the style and innovation of commodities. When buying goods, the elderly tend to have a certain inertia, preferring to choose a brand they often use. They have plenty of time, and they often choose their goods carefully when they shop. At the same time, they seldom buy impulsively because of their rich experience and knowledge.

Third, the prolonged life expectancy of the population makes the elderly more cautious about consumption behavior. As the life expectancy of the elderly is generally prolonged, it will have an impact on the life expectancy of the working-age population, making them more inclined to save and consume less when they are young; for the elderly, life expectancy is prolonged, and their consumption behavior will be more cautious in order to provide life security for the future aging stage.

Life cycle theory shows that people often save part of their wages in the balance of work, which is their source of livelihood in old age. From the point of view of the whole society, when the birth rate of a certain period is high and the proportion of the working population in the total population is high, the total savings rate of the whole society will increase, and gradually reach its peak. Then, with the proportion of the elderly population in the total population gradually increasing, the savings rate will decrease. When this part of the population increases to a certain scale, it will lead to the decline of the total national savings rate and the accumulation of capital. On the other hand, the aging population will lead to the relative decline and shortage of labor supply.

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