

Research on the Impact of Aging on China's Macro-Economy

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Abstract: Since the beginning of the 21st century, China's aging problem has become serious. The proportion of the population over 65 years old in the total population is increasing year by year. The social age structure has changed greatly; on the other hand, China's economic growth rate, after an average of more than 10% in 2000-11, has also gradually slowed down from rapid growth to high-quality growth. This paper analyzes relevant literature, searches for relevant data, speculates on its relevant correlation, and uses qualitative research and other research methods to explore the impact of the accelerated aging rate on my country's macroeconomics from the perspectives of the labor market, savings and investment, and consumer demand. Aging problem to China's economy brings the labor scale, labor quality decline, savings rate, the government fiscal deficit challenges, but also brought the development of the pension industry, the second industry labor capital technology to the third industry transfer opportunities, this paper on the existing challenges and opportunities in the future and the use policy to improve fertility, legislation to improve the rights and interests of women and children, accelerate the development of network and electronic infrastructure construction, mining the elderly consumption potential and labor contribution, etc.

Keywords: aging, macroeconomic, labor force, opportunities and challenges, consumer demand change.

1. Introduction

The issue of "getting old before getting rich" is a key challenge facing China's economic development. In 2023, China's GDP reached RMB 126.06 trillion yuan, up 5.2% year on year, with further slowdown; on the other hand, the per capita disposable income in 2023 was RMB 39,218 yuan, a nominal increase of 6.3% over the previous year, per capita was \$13,400, still far from high-income countries. China's population, after taking the first turn in 2010, saw the first negative growth in 2022. The results of the seventh census in 2020 show that between 2010 and 2020, the proportion of the population aged 60 and above increased by 5.44 percentage points, and the proportion of the population aged 65 and above increased by 4.63 percentage points. The aging rate of the population is still accelerating, which is a social problem that needs to be solved urgently. Therefore, this paper focuses on the impact of aging on China's macroeconomics. The following content will analyze from the aspects of labor market, consumption and savings changes, and national industrial structure adjustment. This study combines existing relevant theoretical research and supplements theoretical

viewpoints for the research on aging and China's macroeconomics in the future economic development of the aging society.

2. The impact of an aging population on the labor market

The problem of aging has first brought an impact on China's labor market. This chapter will investigate the impact of aging on the labor force from three aspects: labor supply, labor demand, and indirect impact.

2.1. Labor supply

The impact of population aging on labor supply is directly reflected in the following three aspects: the first one is to reduce the scale of labor supply. Older people are excluded from most jobs due to physical weakness. The increase in the proportion of the elderly will further reduce the number of workers needed by society and enterprises. Second, with the arrival of retirement age and the decline of physical function, the labor participation rate of the elderly population has declined. However, accelerated aging has increased the proportion of the elderly population, leading to a decline in the total labor force participation rate. Third, with the extension of the life expectancy of the elderly population and the expansion of the labor gap in society, a part of the young elderly population will become a new labor supply group. This has also changed the original age structure of the labor supply market.

2.2. Labor demand

The aging population also has an impact on the demand for labor. First, the increase in the size of the elderly population has driven the development of corresponding industries, such as rehabilitation, medical care, and nursing, and has also promoted the emergence of many new occupations, increasing the demand for labor. Second, the increase in the elderly population has stimulated the growth of the elderly care industry and, at the same time, driven the labor demand of related upstream and downstream industrial chains, which has a multiplier effect. Third, the increase in the elderly population has stimulated the service industry market and increased the demand for labor in the tertiary industry, such as the service industry. Some of the workers who were originally engaged in the secondary industry have transferred to the tertiary industry because of shrinking market profits. This has further aggravated the situation, forming a path for the transfer of capital and labor from the secondary industry to the tertiary industry.

2.3. Indirect effects

Population aging also has an indirect impact on the labor market. As the aging process increases, the cost of raising the elderly population will increase accordingly. Family members, especially the young and middle-aged workforce, will have to invest more money or work time to care for older family members. This will lead to the rising cost of employment opportunities for young and middle-aged workers. When the labor cost of caring for older family members is equal to or exceeds the income earned from employment, rational young and middle-aged workers may choose to give up employment and take care of the older members themselves. Secondly, the increase in the elderly population will change the structure of human capital and promote investment in industrial production factors. With rising labor costs because of aging, the relative price of labor also increases, which will encourage companies in the market to increase their investment in technology or capital while reducing their reliance on labor. The change also encourages workers to improve their skills and quality levels. Finally, relevant research suggests that aging will also have an impact on wages and

productivity in the labor market. According to the study, "there is an 'inverted U-curve' relationship between age and labor productivity, that is, labor productivity first rises and then declines with age." [1]

3. The impact of the aging population on residents' consumption and savings

Research by Sun Mengjie et al. points out that in the short term, the aging population does not have a significant impact on China's macro economy. However, with the continuous improvement of survival probability, population aging has an inhibitory effect on long-term consumption and a promoting effect on net savings. The reason is that in the long term, the average consumption of the elderly is lower than that of young people, and the average life expectancy will reduce consumption and increase the burden of workers to retirees [2].

3.1. Residents' consumption structure

The increase in the elderly population will have an impact on the overall consumption structure of the residents. The elderly population is not generally willing to consume, and the consumption concept is more conservative" is a point of view [3]. The elderly population does not tend to spend on large or large loan amounts, such as housing or cars, but pays more attention to daily life consumption and short-term service consumption, such as health care, short trips, etc. Japan has entered a highly aging society, which has some significance for the Japanese social consumption market. Research shows that "aging of survival consumption and developmental consumption spending level has a significant inhibitory effect but significantly promotes enjoyment of consumption [4]. This may be because the elderly generally have a fixed residence. For living, there is a large demand for spending. From a psychological perspective, more people tend to seize the sunset time of life to enjoy consumption. In addition, the elderly have a stable fixed income and a large amount of free time. They tend to obtain non-physical service consumption or psychological satisfaction when consuming. To some extent, they prefer to use money for entertainment, leisure, and cultural activities.

In general, the deepening of aging will stimulate expenditure on enjoyment consumption, such as entertainment, and will have a significant inhibitory effect on other long-term consumption.

3.2. Residents' savings

China's national savings rate has fluctuated a lot in the cycle, but in general, it still maintains a growth trend. Figure 1 shows that China's national savings rate peaked at a peak of 52.33% during the financial crisis in 2008. Subsequently, it decreased slightly but still maintained a high level of more than 40%, much higher than the world average level of 20%.

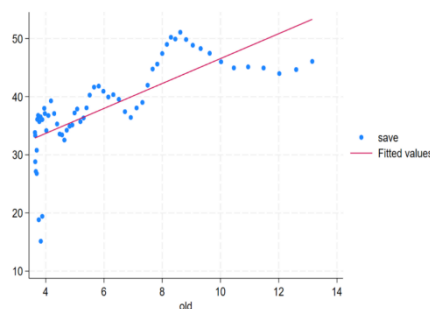


Figure 1: Scatter chart of China's aging population and its national savings rate

It is generally believed that the elderly tend to reduce large consumption and increase their savings for future medical care, pensions, rehabilitation, and other consumption. Therefore, it affects improving the savings rate. However, relevant studies have shown that the promotion effect is short-term and temporary. With the further deepening of the aging degree, the elderly population and, with its extended life span, personal savings coverage will continue to fall, thus reducing the overall savings rate; in addition, the dependency ratio of the elderly population will continue to rise. The increasing pressure on working-age workers in society meant they had to spend more savings on the growing maintenance costs of the elderly population. This would also reduce the overall savings rate even further. As shown in Figure 1 above, the proportion of the elderly population is generally positively correlated with the national savings rate. However, the increase in the savings rate is not entirely linear, with a clear increase in the elderly population (between 4% and 7%); however, when the elderly population continues to increase to about 10%, the increase in the savings rate begins to slow, even with a small decline in some observed values.

At the same time, Hu Cui et al. found that the impact of population aging on the savings rate of urban and rural households was significantly different [5-]. During the observation period, the rural household savings rate decreased with the increase in the proportion of the elderly population, but the urban household savings rate increased with the increase in the proportion of the elderly population. This is also the embodiment of the urban-rural differences brought about by the aging population.

4. The impact of population aging on government finance

The government is responsible for providing for and increasing the pension expenses of the elderly population. There are a lot of expenditures in pension, medical security, rehabilitation, and other aspects, and the government expenditure in this area is often low, easily causing a fiscal deficit, rising debt levels, and increasing pressure on fiscal revenue and expenditure balance. In addition, the increasing data on per capita personal medical consumption has a huge impact on China's basic medical and pension insurance fund and will eventually face the situation of a "gap in social insurance fund expenditure" [6]. According to data, residents under 60 have medical expenses that range from 20% to 33.3% of those over 60, while residents 65–74 have medical expenses that correspond to roughly 6.7% of the population over 80.

It is predicted that with the continuous acceleration and deepening of aging, more than half of China's medical resources will be used for the elderly population in the future, and the proportion of medical expenses will also increase gradually.

5. Foreprediction of future aging and suggestions for countermeasures

5.1. Future aging prediction

According to relevant research, China's elderly population scale in the first half of the 21st century will continue to grow, in 2035, 2050 will reach 412 million, 480 million, in 2050-2056 peak level, about 481 million-484 million, then will have negative growth, than China's population negative time point for about 30 years, this means that "China faces at least 30 years of negative population growth and population aging" [7].

5.2. Corresponding countermeasures and suggestions

In the face of various challenges brought by the deepening of aging, this paper puts forward some countermeasures and suggestions from the following aspects: First, the fertility rate should be improved through policies and other means. At present, the fertility rate in China is only about 1.3, and there are many reasons for the low fertility rate, including the high cost of raising children, the

low tolerance of the job market for reproductive mothers, and the imperfect maternity vacation system. Therefore, in terms of social security, child support subsidy, birth allowance, and economic incentives should be improved; in child care, pre-school care, and health care, gender equity should be promoted to acquire work skills, increase employment rate and income, and thus increase consumption level. Next, in the face of the untapped consumption potential of the low-income elderly population in rural and urban areas, Can promote the construction of the Internet, Using new e-commerce platforms, such as online live streaming, so that the elderly in the home or areas with inconvenient transportation can also efficiently buy and sell goods; Third, in the face of the impact of aging on the fiscal balance, the government has proposed a development strategy of expanding domestic demand and promoting consumption. We will gradually shift government pension spending to the consumption of the elderly. Based on the protection of the basic medical pension, Develop the corresponding elderly care, rehabilitation, tourism, care, and other industries. Create new economic growth points and tax sources. We will reduce the pressure on government fiscal spending.

6. Conclusion

This paper discusses the impact of aging on labor force, household data and savings, and the balance of government finance and expenditure, and gives some predictions on the future trend of aging rate, and puts forward some opinions and suggestions according to the above three aspects. First, in the face of aging of labor shortage, the problem of labor quality decline, first should improve the fertility, through policy is now the fertility rate is only about 1.3, and there are many causes of low fertility, including the cost of raising children is very high, the job market for reproductive mother reemployment tolerance is low, the company birth leave system is not perfect, etc. Therefore, in the aspect of social security, the systems of child support subsidy, birth allowance, economic incentives and so on should be improved; in the aspect of child care, pre-child care, postpartum recovery and gender equality. Second, in the face of the shrinking consumer market, the younger elderly people to acquire working skills, increase the employment rate, and thus promote the increase of consumption level. Next, In the face of the untapped consumption potential of the low-income elderly population in rural and urban areas, Can promote the construction of the Internet, Using new e-commerce platforms such as online live streaming, So that the elderly in the home or areas with inconvenient transportation can also efficiently buy and sell goods consumption; Third, in the face of the impact of aging on the fiscal balance, The government has proposed a development strategy of expanding domestic demand and promoting consumption, We will gradually shift government pension spending to the consumption of the elderly, On the basis of the protection of the basic medical pension, Develop the corresponding elderly care, rehabilitation, tourism, care and other industries, Create new economic growth points and tax sources, We will reduce the pressure on government fiscal spending. This paper only from simple social phenomenon, using simple economic analysis reached some conclusion, there are too many shortcomings.

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