

The Influence of Population Aging on China's Economy

Ruiheng He^{1,a,*}

¹Beijing Twenty First Century International School, Beijing, China

a. 1809040107@stu.hrbust.edu.cn

*corresponding author

Abstract: In the face of the increasingly severe trend of population aging, China, as the largest developing country in the world, is undergoing profound adjustments in its economic structure and growth model. Over the past five years (2018-2023), an in-depth analysis of official data has revealed the multidimensional impact of aging on the economy. In terms of the labor market, the decline in the supply of working-age labor has intensified the rise in corporate labor costs and the talent gap in industrial upgrading. In terms of consumption patterns, the increase in the proportion of the elderly population has prompted a shift in market demand towards health, pension, medical care, and other service sectors, with notable changes in consumption preferences. At the same time, the government has continued to increase investment in public services such as pension security and healthcare, aiming to build a more comprehensive social security system to address the challenges posed by aging and ensure the sustainable development of the economy and society.

Keywords: Population aging, economic impacts, social issues.

1. Introduction

First, this article will define the concept of population aging. Population aging refers to when the percentage of people over 60 years old increases, while the percentage of young people under 15 years old decreases [1].

Since the founding of China, that is, October 1, 1949, the improvement of social life and the advancement of medical standards have resulted in a rapid augmentation in population during this period. China has experienced three peaks of population growth. Based on data from the People's Republic of China's Central People's Government, from 1949 to 1957, the overall rise in population was 105 million, which was the first population growth peak in China. From 1962 to 1970, the net increase in population was 157 million, which was the second population growth peak in China. From 1981 to 1990, the net increase in population was 143 million, which was the third population growth peak in China [2]. The three population growth peaks all occurred during the latter half of the 20th century. These three growth peaks added a total of 405 million people to China's population. Until today, at the outset of the 21st century, the first group of people who experienced the first baby boom has now become elderly people in their seventies, and the second group of people who experienced the second baby boom has now become elderly people in their sixties, and the most recent group of people who experienced the most recent baby boom have become middle-aged people. The people who experienced the first two baby boomers have now retired, and the most recent group of people are in their middle age.

According to recent data released by the National Bureau of Statistics of China, the number of individuals aged 60 and older in China will surpass 290 million by the conclusion of 2023, representing for 21.1% of the total population, of which the population aged 65 and older will surpass 210 million, accounting for 15.4% of the total population [3]. Furthermore, the aging of Chinese society is a significant development trend, which is accompanied by a decrease in the fertility rate. In the future, the social problems of population aging will increase day by day. Meanwhile, the characteristics of China's aging are also obvious. First, China has a large aging population base. The huge total population will certainly lead to an increasing number of elderly people. Second, China's aging is growing rapidly, and the population structure is transforming very fast, from the adult type to the elderly type in just 18 years. Third, the rate of population aging in urban and rural areas is inverted, with aging being more severe in rural areas than in cities [4].

Population aging has a far-reaching impact on the national economy. The direct effects of population aging on China's economy will be covered in this article from the micro to the macro perspective. From a micro perspective, it analyzes the effect of population aging on enterprises, and from a macro perspective, it analyzes the changes in China's fiscal expenditure after population aging and its impact on people's consumption framework.

2. Impact on Labor Supply

This article aims to explore the direct impact of population aging on China's economy, focusing on its dual impact on production activities and consumption behavior. The influence of population aging on production is primarily and most directly reflected in the labor supply structure. Based on authoritative information provided by China's National Bureau of Statistics, this article will deeply analyze how the aging trend gradually changes the supply and demand structure of the labor market and thus has a profound impact on China's economic production efficiency and growth potential.

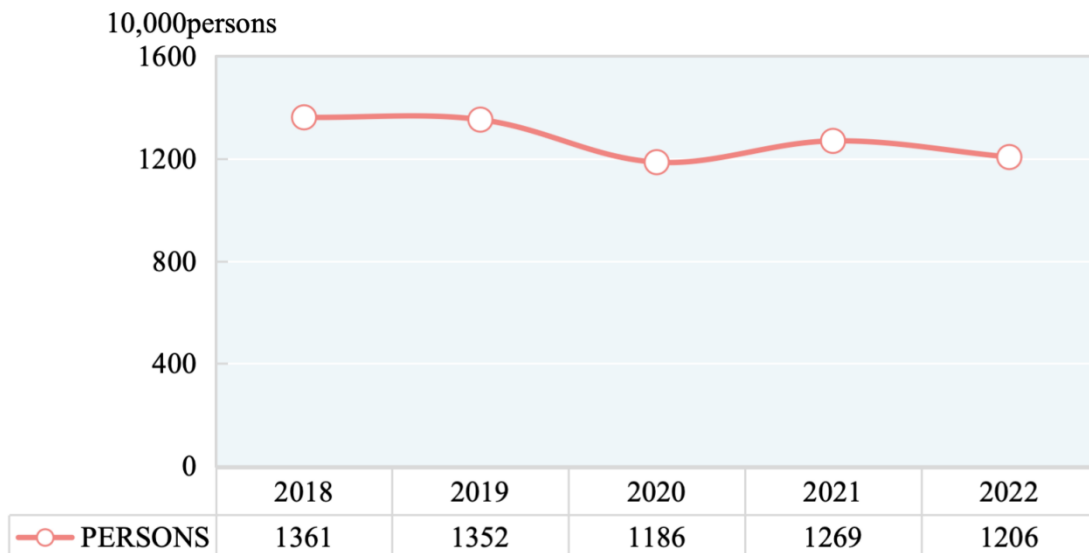


Figure 1: Recently Rising Employment rates in cities 2018-2022 [4]

Figure 1 shows the changes in the quantity of recently added positions in China from 2018 to 2022. The number of newly added jobs is generally on a downward trend, although the intermediate data fluctuates. This reflects that the labor supply market has weakened due to the aging of the population. The weakening of the labor supply in the market has also caused new problems.

Based on the Demand and Supply theory proposed by French economist Jean-Baptiste Say, when Demand and Supply intersect, the market will reach an equilibrium [5]. However, the reduction in labor supply will also cause the supply curve to flatten. The result is a reduction in the number of workers in the market and the rise in employment price of each laborer. When the price of each laborer rises, what impact will it have on companies in the market?

The production cost of companies will increase. According to data released by Statista, China's hourly manufacturing labor cost has continued to increase from 2018 to 2022. Such a continuous increase in employment costs has led to the employment of employees accounting for a large proportion of the cost of companies, as shown in figure 2.

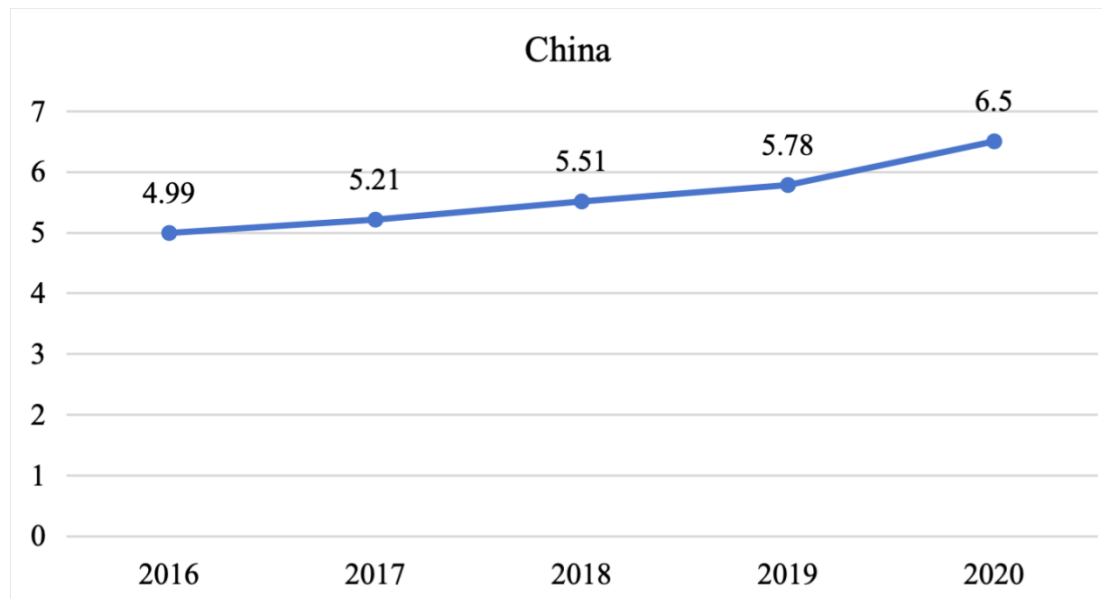


Figure 2: Manufacturing labor cost per hour in China 2016-2020 [6]

More importantly, the increased production costs will also result in a decrease in the competitiveness of the company in the industry. The competitiveness of an enterprise can be reflected by the operational efficiency and cost control of the product. The rising in production costs will undoubtedly lead to a fall in production efficiency.

3. Impact on Consumption Structure

This article will discuss the impact of population aging on people's consumption structure. First of all, consumption, as a major part of the national economy, accounts for a large proportion of the economy [7]. Based on the cited article, the elderly are more inclined to consume medical and nursing services. And because the elderly's consumption concept is more developed and reasoned, the elderly's level of consumption is lower, and the elderly's consumption in the clothing and transportation sectors has decreased. Alternatively, the elderly's consumption of medical care and food has increased. By understanding the consumption trends of the elderly, this article focuses on how the increase in the elderly's consumption of medical care has emerged as a major propelling the growth of the medical care sector and other related companies.

Population aging is an opportunity for the medical industry. Population aging will lead to a rising demand for medical services. Because the elderly are physically weak, they are very dependent on medical care. Whether it is a physical examination or a consultation, they need to go to a medical company for a comprehensive service. This allows medical companies to earn more profits. Meanwhile, the abundance of senior citizens will further increase the demand for medical staff,

such as nurses, doctors, and other medical personnel. Not only hospitals will benefit from it, but also some pharmaceutical companies that specialize in the development of common diseases of the elderly will benefit from it, such as osteoporosis in the elderly, or cardiovascular and cerebrovascular diseases. The elderly will increase their demand for these drugs.

Secondly, the social demand for healthcare products will also increase. To prevent some diseases, the elderly usually prevent the occurrence of diseases in advance, which will cause a spike in the market for medical supplies and will also stimulate competition in the healthcare industry, further promoting the development of healthcare companies.

Similarly, the development of senior care services is also indispensable. The aged care services industry's internal circulation has been progressively worse in recent years. Now the construction of nursing homes is very complete. With the increasing severity of the aging problem, there will be a rise in the need for nursing facilities as well. In addition, the requirements for elderly care workers will be higher.

The aging population not only has a higher demand for healthcare companies but also promotes the development of some other companies. For example, for the technology industry, technology companies see opportunities under the general trend of population aging and will develop some easy-to-operate products suitable for the elderly, such as smart lighting, etc., which will undoubtedly enable other industries to answer this question.

4. Social Security

According to information provided by the Ministry of Human Resources and Social Security of the People's Republic of China, the number of participants in China's basic pension insurance increased by 98.89 million in five years from 2019 to 2023 [8]. What impact does population aging have on China's social security system? This article will analyze the pressure that population aging puts on China's pension and medical insurance expenditures.

First, pension insurance is usually paid by employees and companies to the state. As the population's aging is becoming a major issue, a serious problem will arise. There are more and more people who need to receive pensions. On the contrary, The number of persons contributing to pension insurance is steadily declining. Inequality in pension insurance revenue and expenses will result from this. Therefore, it is very likely that in the future, the pension insurance fund will face the problem of being unable to pay the pension insurance for a large population base. Then the government will need to provide financial subsidies.

Second, population aging will also increase pressure on medical insurance expenditures. Compared with young people, the elderly are accompanied by chronic diseases and cerebrovascular diseases. However, for those who are covered by medical insurance, medical expenses will be greatly reduced. According to the cited article, the length of hospital stay, hospitalization expenditures, and medical insurance prices of older patients have all decreased dramatically after the introduction of LTCI, a type of medical insurance, by 41.0%, 17.7%, and 11.4%, respectively. [9]. According to the survey of this cited article, middle-aged and elderly people with medical insurance are more inclined to obtain more medical care services [10]. Therefore, the increased elderly people and the consumption tendency of elderly people with medical insurance can further put pressure on the entire medical insurance.

5. Impact on Government Finances

As the issue of aging population becomes increasingly serious, pension insurance funds and medical insurance funds pose a challenge to fiscal expenditure. The growing number of elderly people has brought tremendous pressure on these two funds, and they are even unaffordable. Therefore, the

state must provide subsidies to maintain the continued operation of these two funds. In addition, as the proportion of senior citizens rises, the state will introduce some social welfare for the elderly, such as providing them with free wheelchairs, etc. These additional expenditures will also increase the pressure on the government.

6. Conclusion

Population aging is an opportunity for some industries, but it is also a challenge for the entire country's society. Although many experts believe that the general level of the economy will drop as a result of population aging. But in fact, population aging can promote economic growth by raising the amount spend on health and medical services as well as pension insurance. The aging population will also promote the development and growth of medical care, pension, and health care. At the same time, some pension companies will also rise together to meet the supply of professionals in nursing homes. But at the same time, the negative effects of aging are also very large. Whether it is the reduction of the labor force or the increase of government fiscal expenditure, the negative effects will follow with the increase of aging. The government should also formulate relevant supporting policies to encourage childbirth and gradually reduce the rising elderly population. This article believes that the government should moderately raise the statutory retirement age to ensure a sufficient labor force and thus ensure the stability of the entire market. In addition, the government should make certain adjustments to pension funds and medical insurance funds, otherwise, it will face the problem of insufficient funding. At the same time, if it wants to solve the problem fundamentally, the country needs to further develop China's medical level and minimize the use of imported drugs to reduce medical costs.

References

- [1] Reynaud, C., Miccoli, S. (2019) *Population Aging in Italy after the 2008 Economic Crisis: A Demographic Approach*. *Futures*, 105, 17-26.
- [2] Bureau of Statistics. (2009) *the Structure of Moderate Population Growth in New China in the Past 60 Years Has Improved Significantly*.
- [3] China Government Network. (2024) *Old Have to Support, Bigger and Better Silver Economy*.
- [4] Central Government Portal Website. (2024) *China's Aging Has Five Prominent Characteristics. Aging Should Be Ahead of Modernization*.
- [5] Cornwall, J., Cornwall, W. (2002) *A Demand and Supply Analysis of Productivity Growth. Structural Change and Economic Dynamics*, 13(2), 203-229.
- [6] Wang, Y., Zhao, W., Meng, W. (2022) *Bilateral Effect of Aging Population on Consumption Structure: Evidence From China*. *Frontiers in Public Health*, 10.
- [7] Ministry of Human Resources and Social Security, PRC. (2024) *2023 Statistical Bulletin on the Development of Human Resources and Social Security undertakings*.
- [8] Feng, J., Wang, Z., Yu, Y. (2020) *Does Long-term Care Insurance Reduce Hospital Utilization and Medical Expenditures? Evidence from China*. *Social Science and Medicine*, 258, 113081.
- [9] Zhou, Y., Wushouer, H., Vuillermin, D., Ni, B., Guan, X., Shi, L. (2020) *Medical Insurance and Healthcare Utilization Among the Middle-aged and Elderly in China: Evidence From the China Health and Retirement Longitudinal Study 2011, 2013 and 2015*. *BMC Health Services Research*, 20, 1-9.
- [10] Chen, Q., Chi, Q., Chen, Y., Lyulyov, O., Pimonenko, T. (2022) *Does Population Aging Impact China's Economic Growth*. *International Journal of Environmental Research and Public Health*, 19(19), 12171.