

The Impact of Population Structure Change in China on Life Insurance Demand and Corresponding Strategies

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Abstract: As an important factor affecting the demand for life insurance, population structure directly affects the supply-demand balance of the life insurance market. This article first introduced the development status of China's population structure and life insurance market. It then analyzed the impact of population structure changes on the total demand and structure of life insurance in China, such as aging, fewer children, small family size, increasing high-quality educated population and increasing urbanization rate. Finally, targeted countermeasures are proposed, including optimizing the alignment between population policies and life insurance demand, advocating for awareness of healthy retirement planning, and strengthening product innovation. Finally, targeted countermeasures were proposed, including strengthening guidance, support, and regulation, advocating for awareness of healthy retirement planning, and enhancing product innovation. The results are of great significance for improving people's risk awareness and pension planning ability, and promoting the innovation and development of life insurance products.

Keywords: Life Insurance; Population Structure; Total Demand for Life Insurance; Demand Structure for Life Insurance

1. Introduction

In today's society, the population structure, as one of the important factors affecting the economic development, its changes have had a profound impact on all walks of life, and the life insurance industry is no exception^[1]. As the most populous country in the world, the population structure in China is undergoing unprecedented changes, which not only affects the country's social-economic development, but also directly relates to the demand and

future development of the life insurance market. The life insurance market in China is facing unprecedented opportunities and challenges^[2]. A comprehensive and in-depth study of the impact of demographic changes on life insurance demand not only helps to enrich and improve the theoretical research system of population transformation and life insurance demand, but also provides strong theoretical support for the practical development of the life insurance industry. This article deeply analyzed the impact of factors such as population aging, low birth rate, small family size, improved education level, and urbanization process on the demand for life insurance. Corresponding countermeasures and suggestions were proposed from the perspectives of government, society, and insurance enterprises, aiming to promote the healthy and sustainable development of the life insurance market and meet the diverse life insurance needs of residents.

2. Current Situation of Population Structure in China

2.1 The Aging Problem is Becoming Increasingly Severe

In recent years, the number of elderly people in China has been continuously increasing. By the end of 2023, the number of elderly people aged 60 and above in China has reached 297 million, accounting for 21.10% of the total population. The number of elderly people aged 65 and above is about 217 million, accounting for 15.40% of the total population (Figure 1), belonging to a deeply aging society. It is expected that by 2050, the elderly population aged 60 and above in China will reach 487 million, accounting for 39% of the total population. The aging rate of China's population is also accelerating. In terms of the time taken by the aging rate of major countries from 7% to 14%, France took 126 years,

Sweden took 85 years, the United States took 72 years, the United Kingdom took 46 years,

Germany took 40 years, Japan took 24 years, while China only took 21 years.

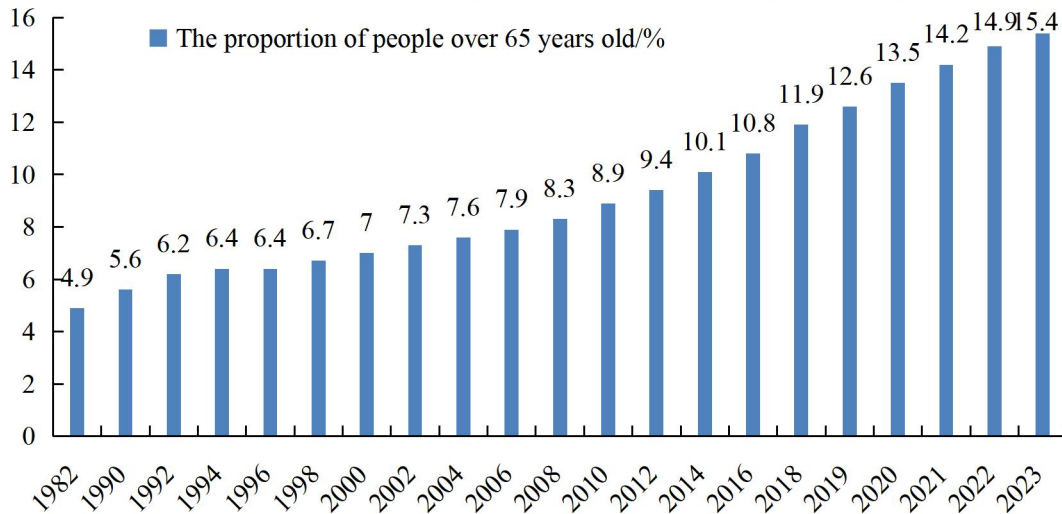


Figure 1. The Proportion of People Over 65 Years Old in China

2.2 The Issue of a Declining Birth Rate is Prominent

According to the China Population Forecast Report 2024, the number of children in China will decline by nearly 50% in the next 20 years, with the largest decline among children aged 6 to 8. The number of children aged 10 to 17 reached its peak around 1980, and since then, with the implementation of the family planning policy and the impact of long-term low fertility rates, the number of children has gradually decreased. Although the birth policy has been relaxed in recent years, the overall trend of the number of children is still rapidly decreasing.

In 2023, China's total fertility rate has been less than 1.1, much lower than the global average and even lower than some developed countries. Although the Chinese government has implemented measures such as the "two

child policy" and "three child policy" to encourage childbirth, the downward trend of the birth rate has not been effectively reversed. From 2010 to 2023, the number of births, deaths, and natural growth rates in China are shown in Figure 2. In 2016, the birth rate in China reached its peak, and after seven consecutive years of decline, the birth rate in 2023 was 9.02 million, with a birth rate of 6.39 ‰ and a death rate of 11.1 million, with a death rate of 7.87 ‰. The natural population growth rate is -1.48 ‰, indicating that China has entered a period of negative population growth. In 2024, although some experts predicted at the beginning of the year that the number of births might rebound due to the the Year of the Loong, the actual data showed that the number of births in the first half of 2024 was 4.33 million, and the number of births in the whole year might hit a new low.

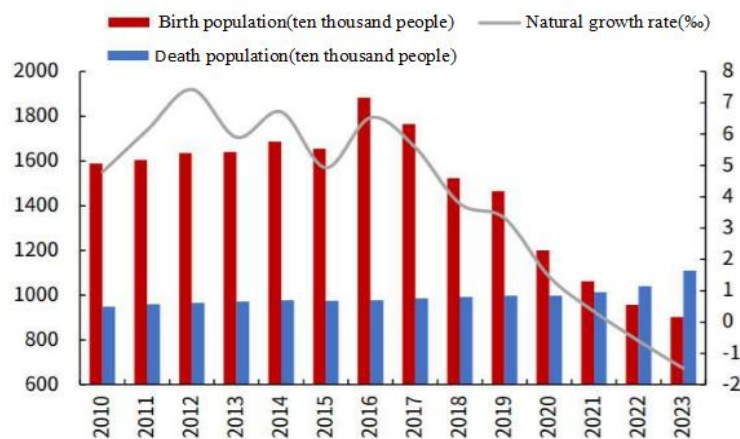


Figure 2. Births, Deaths and Natural Growth Rates in China

2.3 The Size of Households is Shrinking

Figure 3 shows the family size data of all previous national population censuses from 1953 to 2020. The family size continues to decline, from 4.41 people in 1953, 4.44 people in 1964, 4.39 people in 1982, 3.96 people in 1990, 3.44 people in 2000, 3.10 people in 2010 to 2.62 people in 2020. The average family size in China has dropped to less than 3 people. The decrease in marriage rate, the increase in divorce rate and non marriage rate have directly led to the miniaturization of family size. People are increasingly inclined to marry later or even never marry, or choose to form smaller families. According to data released by the National Bureau of Statistics, the number of first marriages in China in 2023 was 11,939,800, which although increased

compared to 2022, still showed an overall downward trend. The long-term low level of fertility intention and fertility level has further promoted the miniaturization of family size. With the development of society and changes in population structure, family structures have also shown a trend of diversification. The proportions of new types of families such as one-person households, empty-nest families (elderly people living alone), and pet-owning families have been rising, with the growth of empty-nest families being particularly notable. It is predicted that around 2033, China will enter a super-aged society where the proportion of the elderly exceeds 20%, and the number of elderly people living alone will continue to rise.

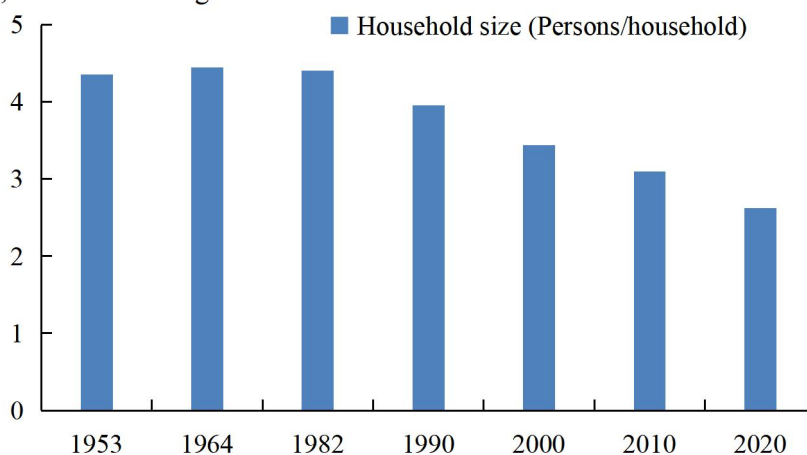


Figure 3. Household Size in China

2.4 The Population with High-Quality Education Continues to Increase

According to data released by the National Bureau of Statistics, the average length of education for the population aged 15 and above in China reached 9.9 years in 2020, an increase of 0.7 years from 2012.

In 2020, the population with a high school education or above reached 431.37 million, accounting for 30.6% of the total population in China. This represents an increase of 123.74 million people compared to 2010, with the proportion rising by 7.6 percentage points. In recent years, the number of students enrolled in higher education in China has grown rapidly. As shown in Figure 4, the total scale of students enrolled in higher education in China reached 47.6319 million in 2023, an increase of 5.8 million compared to 2020, with a growth rate of 13.8%. The gross enrollment

rate of higher education has increased from 54.4% in 2020 to 60.2% in 2023, achieving the target of 60% by 2025 ahead of schedule. This marks a historic transition of higher education from massification to universalization in China. As of June 2023, there were a total of 3,074 institutions of higher education in China, including 1,275 undergraduate institutions, 1,547 vocational (specialized) colleges, and 252 adult higher education institutions. Additionally, there were 233 research institutions that offer graduate education. The increase in educational attainment, the rapid development of higher education, and the growth in the number and types of institutions of higher education have laid a solid foundation for the continuous increase in the number of highly skilled individuals in China, enhancing the overall quality of the country's population.

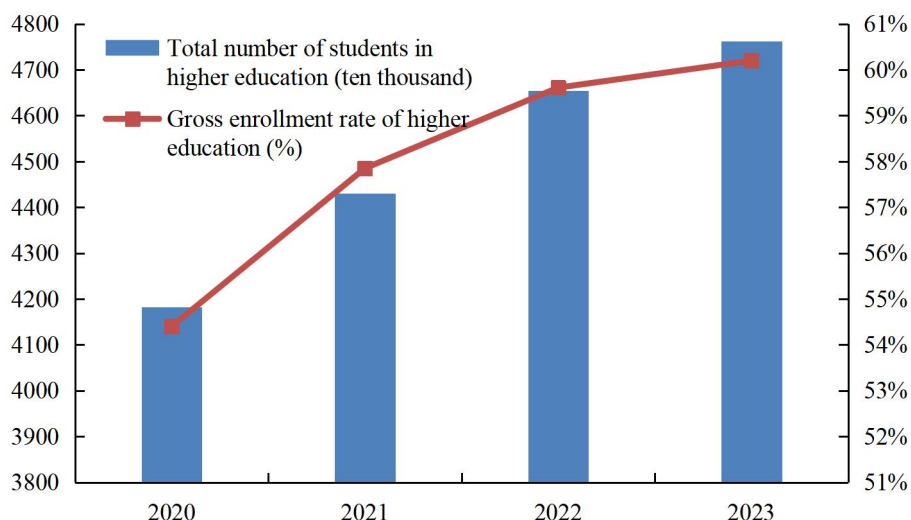


Figure 4. Total Enrollment and Gross Enrollment Rate of Higher Education in China from 2020 to 2023

2.5 The Urbanization Rate of the Population is Constantly Rising

In recent years, China's urbanization rate has continued to increase. According to data from the National Bureau of Statistics, from 2018 to 2023, the number of permanent urban residents increased from 831.37 million to 932.67 million, an increase of 101.3 million.

The urbanization rate of permanent residents rose from 59.58% to 66.16%, an increase of 6.58 percentage points (Figure 5). These data indicate that both the number of permanent urban residents and the urbanization rate in China have shown a steady growth trend, reflecting the accelerated progress of urbanization and the gradual narrowing of the urban-rural gap.

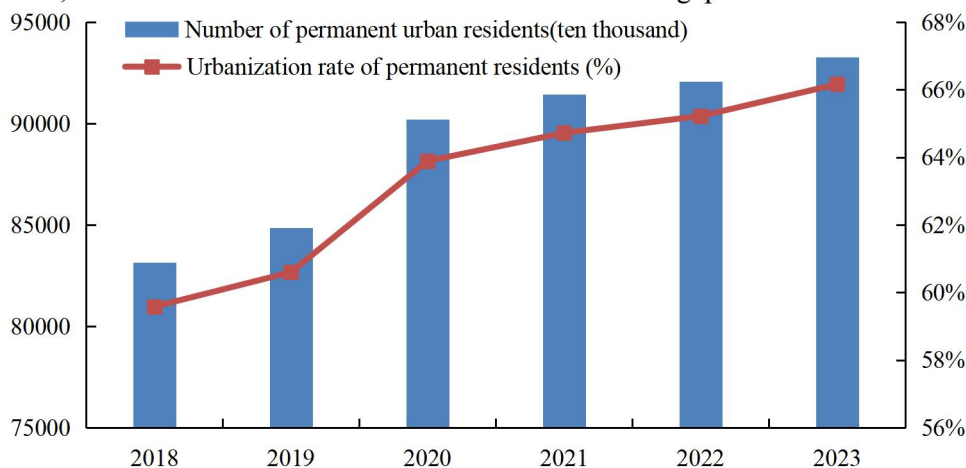


Figure 5. The Number of Permanent Urban Residents and Urbanization Rate of Permanent Urban Residents in China from 2018 to 2023

3. Analysis of the Current Demand for Life Insurance in China

3.1 Increasing Volatility in Premium Income and Expansion of Market Size

In 2019, China's life insurance protection gap was as high as \$4.06 billion, and it will increase to \$63.6 trillion in 2030.. Meanwhile, the proportion of out-of-pocket (OOP) health expenditures and catastrophic health

expenditures remains high in China, indicating a significant health protection gap. In 2022, total health expenditure in China amounted to RMB 8,484.67 billion. Among this, OOP health expenditures totaled RMB 2,291.45 billion, accounting for 27% of the total, which is nearly 9 percentage points higher than the average OOP health expenditure proportion in OECD countries. Currently, Chinese residents still face a large life insurance and health protection gap.

As shown in Figure 6, from 2015 to 2023, the scale of life insurance premium income in China grew with fluctuations, while the growth rate fluctuated and declined. In 2023, China's life insurance premium income reached RMB 2,764.6 billion, a year-on-year increase of 12.8%. In the first quarter of 2024,

China's life insurance premium income was RMB 1,397.0 billion, representing a 13.8% increase compared to the same period in 2022. It is predicted that by 2029, China's original life insurance premium income is expected to approach RMB 4 trillion.

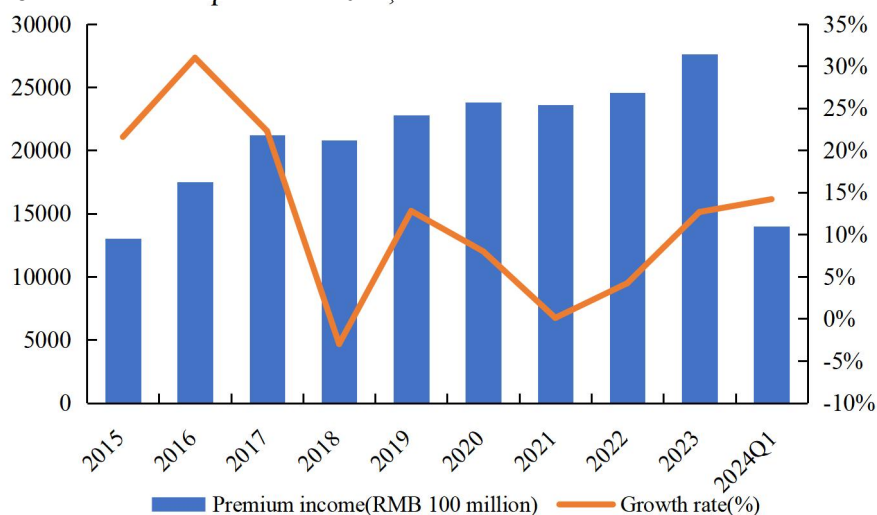


Figure 6. Original Life Insurance Premium Income in China from 2015 to 2024

According to statistical data, as of the end of 2023, there were 75 life insurance companies, with 61 of them listed and having a total asset value of RMB 22.13 trillion. Among these, 6 life insurance companies had asset scales exceeding RMB 1 trillion, and 24 life insurance companies had total assets of over RMB 100 billion. In the first half of 2024, the Chinese life insurance market continued to maintain a steady growth trend, with the 75 life insurance companies nationwide collectively achieving insurance business revenue of RMB 2.63 trillion, a year-on-year increase of 5.1%. The total assets of life insurance companies grew rapidly in the first eight months of 2024, with a growth rate of 13.92%, an increase of 16.3% compared to the same period last year. This growth trend is eye-catching among various financial institutions, demonstrating the strong growth of the life insurance industry in the financial industry

3.2 Life Insurance Density and Depth Have Steadily Increased, but Still Lower than Developed Countries and Regions

Life insurance density refers to the average amount of life insurance premiums per capita within a defined statistical area. It indicates the degree of development of the life insurance

business in that region and also reflects the economic development status of the area as well as the strength of people's awareness of life insurance. As shown in Figure 7, in recent years, China's life insurance density has exhibited a trend of rapid growth, increasing from RMB 957 per capita in 2015 to RMB 1,961 per capita in 2023, with an average annual compound growth rate of 9.38%.

Life insurance penetration refers to the ratio of life insurance premium income to the gross domestic product (GDP) of a region, reflecting the position of the life insurance industry in the overall national economy of that region. As shown in Figure 8, China's life insurance penetration continued to grow from 2015 to 2017, reaching 2.58%, and then fluctuated downwards, with the insurance penetration in 2023 being 2.21%. Overall, in recent years, China's life insurance penetration has fluctuated between 1% and 3%.

In recent years, China's life insurance industry has achieved significant development accomplishments. However, compared with developed countries and regions worldwide, there is still a considerable gap in terms of life insurance density and penetration. For instance, countries like Singapore and Denmark have life insurance density levels exceeding EUR 4,000 per capita (equivalent to more than

RMB 30,000), and developed countries such as Switzerland, Japan, and the United States also generally have high life insurance density, typically exceeding EUR 2,000 per capita. Singapore and the United Kingdom have life insurance penetration rates above 8%, while the United States, Japan, and Germany also generally have high life insurance penetration rates, typically exceeding 5%.

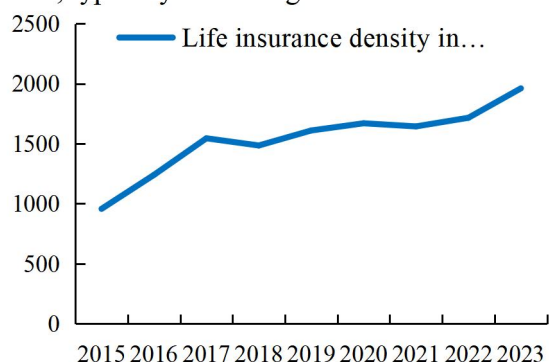


Figure 7. Life Insurance Density in China from 2015 to 2023

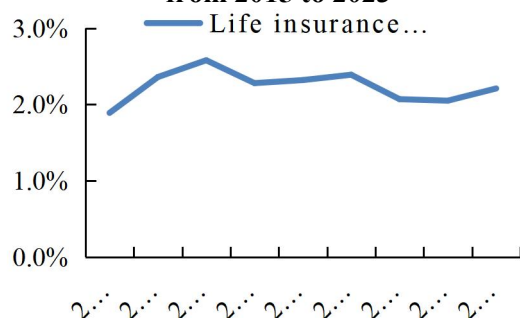


Figure 8. Life Insurance Depth in China from 2015 to 2023

3.3 Unbalanced Regional Development

The original life insurance premium income of various provinces and municipalities in China exhibits certain differences and imbalances. The life insurance market in the eastern coastal regions is relatively developed with higher premium income levels, while the life insurance market in the central and western regions is relatively weaker. Figure 9 shows the distribution of original life insurance premium income in major provinces and municipalities in China in 2023. Guangdong Province ranks first nationwide in terms of original life insurance premium income, reaching RMB 352.2 billion, and is the only province or municipality with a premium income exceeding RMB 300 billion. Jiangsu Province and Beijing rank second and third, respectively, with premium incomes both

exceeding RMB 200 billion. Shandong Province, Zhejiang Province, and other eastern coastal regions also have relatively high original life insurance premium incomes, all exceeding RMB 100 billion. In terms of market share, Guangdong Province's life insurance premium income accounts for 12.74% of the national total, Jiangsu Province's share is 10.23%, and Beijing's share is 7.53%. The market shares of the remaining provinces have not exceeded 7%. Compared with 2022, the three provinces and municipalities with the fastest year-on-year growth rates in original life insurance premium income in 2023 were Shanghai, Beijing, and Ningxia. The growth rates of other provinces and municipalities did not exceed 20%. Among them, Shanghai had the fastest growth rate, reaching 24.73%, ranking first in the country.

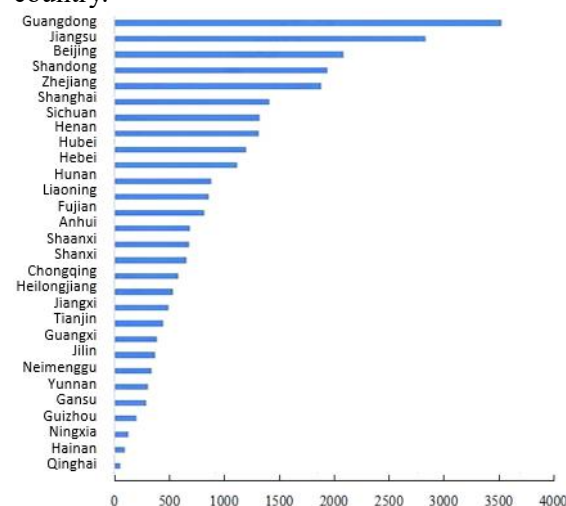


Figure 9. Regional Distribution of Original Life Insurance Premium Income in China in 2023 (unit: RMB 100 million)

4. The Impact of Demographic Structure Change on the Demand of Life Insurance in China

4.1 The Impact of Population Aging on the Demand for Life Insurance

With the increasing trend of population aging, the social pension insurance system faces an increasingly large funding gap, which has increased the demand for pension insurance among individuals and families. Life insurance, as an indispensable component of the pension insurance system, plays a crucial role. By purchasing life insurance products, individuals and families can accumulate a certain amount

of pension reserves during their younger years to secure a stable income source in their old age. Additionally, life insurance products can also provide supplementary services such as death benefits and disease coverage, offering more security and convenience for the elderly in their daily lives^[3]. According to data released by the National Financial Regulatory Administration, China's life insurance premium income has shown an overall upward trend. In 2023, China's original life insurance premium income amounted to RMB 3.76 trillion, with a year-on-year increase of 9.9%. Among this, life insurance premium income reached RMB 2,764.6 billion, up 12.75% year-on-year, becoming the main driver of growth in the life insurance business.

The aging of the population has also significantly influenced the demand structure for life insurance products, with changes in demand for traditional life insurance such as term life insurance, whole life insurance, and endowment insurance exhibiting a certain degree of complexity and diversity^[4]. In the context of intensifying population aging, as term life insurance primarily provides life coverage for a specific period, and the elderly population is more concerned with long-term or lifelong coverage, its demand may relatively decrease. Whole life insurance provides lifelong life coverage and may come with certain savings or investment functions. The elderly population values long-term and stable coverage and asset inheritance more, so the demand for whole life insurance may remain stable or show slight growth. Endowment insurance provides both life coverage and a payout upon the expiration of the insurance period. The elderly population focuses more on actual coverage needs rather than purely savings or investment returns, so the demand for endowment insurance may be affected to some extent.

With the increasing demands of the elderly population for pension, healthcare, nursing, and other aspects, new types of insurance products tailored for the elderly, such as pension insurance, health insurance, and long-term care insurance, have emerged continuously. These products better meet the actual needs of the elderly and promote the optimization of life insurance product structures. Pension insurance provides stable pension income to help the elderly maintain

their living standards. Health insurance primarily offers medical expense coverage, including disease treatment and rehabilitation costs. As the elderly population faces higher risks of illness, health insurance has become an important safeguard for them. Long-term care insurance mainly provides long-term care coverage, and due to changes in family structures and shortages of nursing resources, the market demand for long-term care insurance is also expanding.

4.2 The Impact of Declining Birth Rates on the Demand for Life Insurance

Fewer children means that each family needs to support fewer children, thereby reducing the family's burden of support, which allows families to have more economic resources to purchase life insurance products to enhance their risk protection levels. In a family structure where one-child families are mainstream, parents have higher levels of concern and protection needs for their children, which also increases the demand for child life insurance. Families place greater emphasis on their children's education and future planning, prompting parents to pay more attention to their own risk protection issues. Therefore, they may be more inclined to purchase life insurance products to provide economic security for themselves and their families. On the other hand, the increased pressure on the social security system, heightened economic pressures and risk awareness, as well as the development of financial markets, have also created favorable conditions for the growth in total demand for life insurance^[5].

For insurance products, traditional children's life insurance often focuses on providing long-term planning such as education funds and growth protection for children. However, in the context of declining fertility rates, some families may perceive a reduced necessity for such products and instead prefer to purchase life insurance that covers the entire life cycle to ensure that family members receive adequate protection when facing risks. With changes in family structures, there is also an increasing demand for new types of insurance products, such as family liability insurance. For one-child families, they may be more concerned about their child's health and education, opting for insurance products that include critical illness coverage and education

fund savings. Consumers are increasingly valuing product flexibility and personalization. For example, insurance products with flexible payment options (such as one-time payment, installment payments, or adjustments to payment amounts based on family economic conditions) and diversified coverage periods (such as coverage until the child reaches adulthood, graduates from college, or marries at specific time points) are becoming more popular.

4.3 The Impact of the Increase in High-Quality Education Population on the Demand for Life Insurance

With the improvement of education level, people's risk cognition ability is significantly enhanced. The highly educated population usually has stronger logical thinking and data analysis skills, and can better understand and evaluate potential risks. Therefore, they are more likely to recognize the importance of life insurance in providing economic security and reducing family burdens, thereby increasing their demand for life insurance products. The increase in the highly educated population contributes to forming a demographic dividend of quality, driving up per capita income levels. As incomes rise, people's insurance purchasing power also increases, further promoting growth in total demand for life insurance. When the education level reaches a certain threshold, people's willingness to purchase insurance and the amount of insurance premiums they are willing to pay also change. Highly educated individuals may place greater emphasis on health protection for themselves and their families, thus being more willing to purchase life insurance products to hedge against potential health risks. Additionally, highly educated individuals usually have higher income levels and the ability to pay higher premiums, thereby increasing the sales volume of life insurance.

The increase in the highly educated population in China has had a profound impact on the demand structure for life insurance, particularly in terms of demand for life insurance products with safeguard functions, as well as for product personalization, differentiation, and innovation. Highly educated individuals typically have a deeper understanding of risks and are more aware of the uncertainties in life, such as potential risks

like diseases, accidents, and death. Therefore, they prefer to purchase life insurance products with safeguard functions, such as term life insurance, whole life insurance, and critical illness insurance, to address these potential risks. Highly educated individuals often expect life insurance products to meet their specific needs, such as particular coverage periods, policy limits, and scopes of coverage. Furthermore, they hope that life insurance products can differentiate themselves from others in terms of safeguard functions, investment returns, service experiences, and other aspects, reflecting their unique tastes and identities.

4.4 The Impact of the Increase in Population Urbanization Rate on the Demand for Life Insurance

With the improvement of the urbanization rate, a large number of rural residents will become urban residents, and their income level will be improved, so that urban residents will have more disposable income to buy life insurance products. Compared to rural residents, urban residents generally have stronger risk awareness and insurance awareness. They are more likely to recognize the important role of life insurance in risk management, asset preservation, and appreciation, and therefore tend to purchase life insurance products to mitigate potential risks. During the urbanization process, as the living standards of urban residents improve, their demand for social security also increases correspondingly. As an important supplement to the social security system, the demand for life insurance also rises to meet the security needs of urban residents in areas such as pension and healthcare.

Urbanization has significantly changed residents' living standards, consumption concepts, and demand levels. Urban residents are no longer satisfied with traditional, single-purpose life insurance products but instead focus more on product personalization, differentiation, and innovation. They hope that life insurance products can be customized according to individual risk tolerance, family status, financial conditions, and other factors, providing unique safeguard functions and investment returns. For example, some urban residents may want life insurance products to integrate health management services, offering

value-added services such as health monitoring and disease prevention. Others may prioritize the investment attributes of life insurance products, hoping to obtain stable investment returns while safeguarding against risks.

5. Countermeasures and Suggestions Based on the Impact of Population Structure Changes on Life Insurance Demand

5.1 At the Government Level, Optimize the Docking of Population Policy and Life Insurance Demand, and Strengthen Guidance, Support and Supervision

The government should adjust population policies in a timely manner based on the trends in demographic changes and shifts in life insurance demand, such as optimizing fertility policies and improving pension security policies, to promote coordinated development between the population structure and life insurance demand. Strengthen cooperation and exchanges among the government, life insurance companies, and scientific research institutions to jointly study the impact of demographic changes on life insurance demand, and promote the alignment and coordinated development of life insurance demand and population policies. The government can introduce special support policies for the life insurance industry, such as tax reductions and exemptions, and financial subsidies, to encourage life insurance companies to develop life insurance products that adapt to demographic changes. Establish a life insurance innovation fund to support life insurance companies' investments in product innovation, technological research and development, market expansion, and other areas. Establish and improve the regulatory system for the life insurance market, strengthen daily supervision and risk monitoring of the life insurance market, and prevent the occurrence of unfair competition and fraudulent behavior. Promote transparency and standardization in the life insurance market, improving its overall credibility and competitiveness.

5.2 At the Social Level, Promote the Awareness of Healthy Pension Planning and Strengthen the Family Security Function

In today's increasingly significant

demographic changes, all sectors of society must work together to advocate for healthy retirement planning awareness, encouraging residents to prepare for the future in advance. Strengthen the promotion of life insurance through media, social platforms, and other channels to enhance public awareness and acceptance of life insurance, encourage residents to plan for their retirement life in advance, promote healthy and positive life insurance consumption concepts, and guide the public to reasonably plan their family and personal finances. Organize activities such as health lectures and retirement planning seminars in communities to increase residents' awareness and acceptance of life insurance by promoting the role of life insurance products in retirement and health protection. As the basic unit of society, families play a crucial role in addressing the challenges posed by demographic changes. Strengthening family protection functions helps improve risk-sharing capabilities among family members and meets life insurance demands. Encourage family members to purchase life insurance products suitable for themselves based on their own needs and family economic status, providing economic protection and risk management support for the family. Family members should jointly participate in family financial planning and risk response plans to ensure the stable operation of the family economy.

5.3 At the Level of Insurance Companies, Strengthen Product Innovation and Optimize Product Structure

Insurance companies should strengthen their research and analysis of demographic changes, understand the needs and preferences of different age groups, develop life insurance products suitable for different groups of people based on market demand, and meet the diverse needs of consumers^[6]. In view of the aging trend, insurance companies should develop more products suitable for the elderly, such as pension insurance, medical insurance, critical illness insurance, and long-term care insurance, to meet their needs for pension and health protection. They should also design more flexible and personalized insurance products based on the actual needs and risk tolerance of the elderly. For single-child families, life insurance products including children's

personal safety protection, such as children's life insurance, family liability insurance, etc., should be designed to meet the needs of family members for personal protection. Provide life insurance products with education fund reserve function to help families plan their children's future education expenses. Design more flexible and personalized life insurance products to meet the different needs of small-scale families. Launch joint life insurance products suitable for both spouses to achieve risk sharing and resource sharing. Develop life insurance products suitable for high-quality populations, such as those covering high-end medical care, health management, education planning, and other added value, to meet their needs for quality of life and personalized services. Introduce intelligent insurance and claims systems, utilize big data and artificial intelligence technology to improve the efficiency and accuracy of insurance and claims, and enhance the insurance experience for high-quality populations. Develop targeted life insurance products, such as housing loan insurance and education insurance, to meet the diverse needs of residents facing housing, education, and medical pressures in the process of urbanization. Introduce group life insurance products suitable for urban residents, providing group protection for residents through organizations such as enterprises and

communities, and reducing individual insurance costs.

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