

Implementation of the Delayed Retirement Policy on the Basic Pension Insurance Fund and Its Impact on Families

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Abstract. With the intensification of aging population, various countries have taken corresponding measures. In September 2024, China also passed the Decision of the Standing Committee of the National People's Congress on Implementing the Gradual Delay of the Statutory Retirement Age, which is bound to have a positive impact. This article will analyze the sustainability of basic pension funds and their impact on families through delayed retirement based on existing research. It was found that delaying retirement increases and decreases the income of the fund by increasing the number of active employees and reducing the number of retired employees. Therefore, in the short term, it will enhance the sustainability of the fund, but in the long run, further research is needed. Regarding the family aspect, it mainly affects the family through "intergenerational care", and affects the family in terms of economy and time through the soon to be retired population. The negative impact is greater than the positive impact, ultimately manifested as a decrease in fertility rate, and the delayed retirement policy may have target tension with current policies.

Keywords: population aging, delayed retirement, pension funds, grandparental caregiving.

1. Introduction

Since the end of the 20th century, China has been moving towards an aging society, and the pace of aging has gradually accelerated since entering the new century. How to face and respond to an aging society has become an inevitable and unresolved major issue in China. Ten years ago, China explicitly required the research and development of a policy for gradually delaying the statutory retirement age, which was piloted in Shandong and Jiangsu around 2020 and 2022. Finally, in September 2024, the Decision of the Standing Committee of the National People's Congress on Implementing the Gradual Delay of the Statutory Retirement Age (hereinafter referred to as the "Delayed Retirement Decision") was passed.

With the continuous development of medical technology in China, the average life expectancy of Chinese residents has approached the level of developed countries. However, compared to developed and developing countries that have widely implemented delayed retirement policies, China's current statutory retirement age is the lowest, especially for women, which is even far below the international minimum level. Generally speaking, the statutory retirement age is positively correlated with the average life expectancy, but the current situation in China does not quite conform to this pattern, so the policy of delaying retirement is also in line with the overall international trend. For China, the implementation of compulsory education, the increasing demand for high-quality talents in society, and the transformation of public education concepts have all led to a continuous increase in the number of years of education, resulting in a lower proportion of "work" as an important event in people's lives. Therefore, delaying retirement can further stimulate high-quality demographic dividends [1].

The "Delayed Retirement Decision" aims to achieve its policy objectives while minimizing or even avoiding the impact of policy implementation on the country, society, families, and individuals. Therefore, it adopts two prudent methods of "gradual" and "flexible implementation" to promote the policy. The purpose is to fully listen to the voice of the people, learn from lessons and summarize experience in a timely manner, make more reasonable and effective adjustments to the policy, make it fully recognized by society, and better achieve policy effects and achieve policy goals. It is worth further exploring the impact of the implementation of this policy on various aspects of society and

how to optimize it in the future. This article will read and summarize the core papers related to delayed retirement in recent years, and summarize the achievements, shortcomings, and gaps in existing research on the impact of the "Delayed Retirement Decision" on the sustainability of the basic pension insurance fund and families. This will enable other scholars to continue their research, enrich the theoretical system of the "Delayed Retirement Decision", provide a reference for the government and all sectors of society, and assist in the implementation and optimization of policies.

2. Literature Review

2.1. The Sustainability of Pension Insurance Funds under the Delayed Policy

China's pension insurance adopts a pay as you go system, which uses the social security fees paid by current employees to directly pay to retirees at the same time as their pension. Therefore, this is closely related to the age structure of the Chinese population, and the current population structure of accelerated aging and sustained low birth rates in China has led to a decrease in the working age population. This can be seen from the gradually increasing elderly dependency ratio in the National Bureau of Statistics in recent years, and the imbalance of basic pension income and expenditure will increase the financial responsibility of the country. Existing research generally believes that the introduction of the "Delayed Retirement Decision" has the effect of increasing revenue and reducing expenditure in the short term, which can effectively improve the problem of income and expenditure imbalance caused by population aging and promote the sustainability of basic pension. However, the long-term effect still needs to be evaluated.

Before the implementation of the "Delayed Retirement Decision", some scholars had hypothesized that the policy of delayed retirement would be studied, such as directly setting a rough retirement age for men and women in the local area, or in order to implement the policy smoothly, experts had proposed different "gradual" delayed retirement plans. Among them, Tian Yuehong and Zhao Xianglian differ from traditional deterministic actuarial models in that they only provide a single prediction result. For the first time, Monte Carlo random simulation is introduced into the financial sustainability analysis of basic pension funds to quantify uncertainty and make the prediction results more in line with the fluctuation characteristics of economic and population variables in reality [2,3]. Zhao et al. explicitly incorporated the support role of government financial subsidies on funds, which has been overlooked in existing research, into actuarial models to make the calculation of fund income more in line with China's actual situation. They also expanded the scope of fund income to "overall account + personal account + financial subsidies", while considering the fund income of individual accounts, which can more comprehensively evaluate the impact of delayed retirement on the overall sustainability of the fund [4]. Jing Peng et al. constructed an extended overlapping generation model (OLG model) that includes the three departments of "individual + enterprise + government", while incorporating the structure of fiscal expenditure and endogenous fertility rate [5]. He et al. used the CBD (Cairns-Blake-Dowd) random mortality model to consider the dynamic changes in life expectancy and achieve dynamic adaptive adjustment of retirement age, which can effectively reduce the longevity risk faced by the fund [6].

The following literature is based on the parameters set in the "Delayed Retirement Decision" officially issued in 2024, and evaluates the effectiveness from the perspective of policy implementation, making the conclusions more practically valuable for reference. Yang Hualei et al. and Chen Xiaohua et al. both use actuarial models as the core tool [7,8]. Yang Hualei divided the discussion into three situations: no policy intervention, i.e. no implementation of delayed retirement policy, all employees retire according to the gradual statutory retirement age, and employees retire according to different delayed retirement intentions, i.e. employees voluntarily choose flexible retirement according to the "Delayed Retirement Decision". It is believed that in the first scenario, the fund quickly becomes unable to cover its expenses, and the accumulated deficit increases year by year, which increases the country's fiscal responsibility; In the second scenario, although the fund cannot achieve actuarial balance, it can enhance the sustainability of the fund and reduce the financial

responsibility of the country; In the third scenario, the impact of different delayed retirement intentions on the cumulative deficit is weak, but enhancing employees' delayed retirement intentions is more conducive to the sustainable operation of the fund [7]. Chen Xiaohua et al. also indicated that the delayed retirement policy will significantly increase the current and cumulative balances of the pension insurance fund over the 15 years of implementation, enhancing the sustainability of the fund [8]. And for the study of flexible retirement, it is more detailed. Compared with Yang Hualei et al.'s "final retirement age range" [7]. Chen Xiaohua et al. considered the selection methods under different flexible retirement intentions among 21 employees and obtained the optimal flexible retirement choice [8]. However, Zeng Yi et al. broke through the limitations of a single policy dimension and incorporated the "gradual delayed retirement policy" into the framework of the "national pooling system for pension insurance", that is, the impact of the retirement age after the implementation of the "Delayed Retirement Decision" on the national pooling system for urban employee pension insurance. By analyzing the differences in economic level, population structure, and cultural concepts in the eastern, central, and western regions, the sustainability of funds in different time periods varied among provinces. Finally, the central government coordinated and achieved cross regional fund transfer from high surplus areas to high deficit areas among provinces, and comprehensively evaluated the impact of the coordinated implementation of the two on fund sustainability [9].

The above literature is based on the construction of models before and after the implementation of the "Decision on Delayed Retirement", considering different internal and external variables, analyzing the impact of delayed retirement policies on the sustainability of basic pension insurance funds. It is unanimously agreed that delayed retirement can significantly improve the sustainability of basic pension insurance in the short term, and the policy shows significant regional differences in the sustainability of basic pension insurance funds in different provinces in the east and west [2-9]. However, there are also views that basic pension insurance funds will still face unsustainability in the long run [4,7,8].

2.2. The Impact of Delayed Policy on Families

Wang also takes the sociological "role theory" as the core framework, where each individual not only bears social responsibility (productive labor), but also assumes family responsibility (reproductive labor) as a family role [10]. Therefore, the introduction of a policy will affect individuals, and thus affect families and society. The main group affected by the 'Extended Retirement Decision' is young elderly people who are about to retire, described as the 'multi-layer sandwich generation' [11]. On the one hand, influenced by the culture of intergenerational parenting, their children urgently need to return to their families to take care of their grandchildren; On the other hand, some of them also have living elders who need to be taken care of [10]. How this policy will affect families has been mentioned by scholars in their research. Although different methods and models have been constructed, the impact on families is mainly discussed through the economic and time effects faced by delayed retirement groups. On the one hand, these groups will increase their personal economic income when they continue to work after delaying retirement, and on the other hand, they will squeeze out their time for family activities. Among them, Zhang et al. and Guan Guofeng et al. both used the overlapping generation model (OLG) for research: the former innovatively incorporated "time resources (TRS), proportion of economic resources (PERS), and delayed retirement" into the classic OLG model, distinguishing between the four main entities of "individual, enterprise, social security, and capital market", and deriving the relationship between fertility rate, capital stock, delayed retirement time, and proportion of economic resources (PERS) in an equilibrium state [12,13]. They believed that the core reason why delayed retirement would lead to a decline in fertility rate was the negative effect of "TRS reduction causing an increase in the cost of raising young parents' time", which exceeded the positive effect of "PERS increase causing a decrease in the economic cost of young parents". Both the "pay as you go" and "fully accumulated" social security systems are established, indicating that they are not limited by specific social security system [12]. On this basis, the latter further explains that compared to male elderly people delaying

retirement, female elderly people delaying retirement has a significant negative impact on family fertility, which may be based on the traditional concept of "men are responsible for the outside, women are responsible for the inside", which makes women spend more time and energy in the family [13]. Guo Kaiming et al. and Gao Herong et al. utilized existing authoritative data analysis and innovated from a theoretical perspective, analyzing the impact of delayed retirement on families based on traditional Chinese culture [14,15]. Gao Herong et al. divided family types into four categories: "support+upbringing" type, "support" type, "upbringing" type, and "no responsibility" type, and analyzed their impact on the willingness to delay retirement [15]. Wang also analyzed the target tension between the "Delayed Retirement Decision" and other existing policies such as fertility, women's employment, and elderly care policies, and attempted to provide policy methods to solve the dilemma [10].

3. Conclusion

Regarding the impact of delayed retirement on the sustainability of pension insurance funds, existing literature has constructed models from certain aspects to measure the effects of delayed retirement policies on the income, expenditure, and sustainability of pension insurance funds. It is unanimously agreed that delayed retirement policies can significantly improve the sustainability of basic pension insurance funds. However, existing research on the differential impact of delayed retirement policies in different regions, industries, and income groups is not in-depth enough, and research on the long-term effects and dynamic changes of policies is limited. Moreover, the general public mostly compares the macro narrative of national policies with the immediate gains and losses of personal interests to make judgments, lacking a long-term and comprehensive view of the problem. Therefore, it is necessary to formulate incentive policies to increase their willingness to delay retirement, and to develop and improve supporting measures.

Regarding the impact of delayed retirement policies on families, existing research suggests that intergenerational parenting affects fertility rates, specifically through reduced time spent in the family and increased economic resources. However, overall performance has a negative impact on fertility rates. At present, research is using data before 2020, which makes the results lack some timeliness. Therefore, data from recent years can be used to further analyze changes in fertility rates and other factors before and after the implementation of the "Delayed Retirement Decision", making the research results more practical. And existing literature has analyzed the target tension between the delayed policy and other policies, but how to achieve policy synergy is not yet perfect. It is hoped that future research can start from this aspect.

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