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Reflections on the Challenges of Old-Age Security and Policy Options for an Ageing Population

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Abstract: The global phenomenon of population aging is advancing at an unprecedented pace, particularly in China, where the accelerating aging process poses substantial challenges to the existing pension security system. The issue of elderly care has emerged as a critical topic in the realms of society, economy, and politics, impacting national sustainability and social stability. The challenges brought about by an aging society extend beyond the pressures of pension payments and insufficient elderly care services, encompassing risks related to funding sources and management, as well as concerns over the fairness of the security system. In the face of these challenges, there is an urgent need to optimize pension policies, advance pension system reforms, enhance the elderly care service system, and strengthen the coordination between social and medical security to construct a more equitable and sustainable pension security framework. Measures must be collaboratively advanced through top-level institutional design, policy execution efficiency, and societal involvement to provide robust support in addressing the challenges of aging. This paper will delve into the impact of population aging on the pension security system, analyze the current state and shortcomings of policies, and propose strategies to enhance the system's resilience, offering insights and recommendations for strengthening the pension security framework.

Keywords: population ageing; old-age security; policy measures; challenges

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1. Introduction

The issue of population aging has become a focal point of global concern. With advancements in medical technology and an increase in average life expectancy, the proportion of elderly individuals continues to rise. China, as the country with the largest elderly population in the world, is facing unprecedented pressures in elder care. The intensification of aging not only slows economic growth but also profoundly affects intergenerational relationships and societal balance. The current pension system appears inadequate in addressing the challenges posed by an aging population, with the pension gap widening, severe shortages in elder care resources, and escalating risks in fund management. Additionally, there are significant disparities in pension coverage between urban and rural areas, as well as among different occupational groups, leading to widespread concerns about the fairness of the system. These issues highlight the shortcomings and obsolescence of the existing system design, necessitating a thorough analysis of their causes and a multidimensional policy adjustment to address them. This study aims to systematically examine the dilemmas within the current pension system, analyze the policy challenges in

the context of population aging, and explore feasible policy options to provide guidance for government decision-making and societal development [1].

2. Current Situation and Challenges of Population Ageing

The current state of population aging has become an undeniable global social issue. As the most populous nation in the world, China's accelerating aging population has rendered this problem increasingly urgent. According to the latest statistics presented in Table 1, the number of individuals aged 65 and above in China surpassed 190 million in 2020, accounting for 13.6% of the total population. Projections indicate that by 2050, the elderly population will escalate to 490 million, constituting approximately one-third (33.3%) of the total population.

Table 1. Forecast of the growth trend of the elderly population in China.

year	Total population (billion)	Population aged 65 and above (billion)	Proportion of elderly population (%)	Proportion of elderly population projected by 2050 (%)
2020	14.0	190	13.6	33.3
2025	14.3	220	15.4	
2030	14.5	250	17.2	
2040	14.6	300	20.5	
2050	14.7	490	33.3	

This trend is not only reflected in changes in demographic structure but also has profound implications across multiple dimensions, including the economy, society, and family life. As illustrated in Table 1, the proportion of elderly individuals is projected to rise significantly from 13.6% in 2020 to 33.3% by 2050. This substantial increase exacerbates the shrinking working-age population, directly impacting societal productivity and economic growth. The traditional “demographic dividend” is gradually diminishing, and the rapidly increasing dependency ratio places an additional burden on the working-age population. Furthermore, the surge in demand for elderly care services, as indicated by the growing elderly population in both absolute numbers and proportion, has strained existing resources. This exacerbates shortages in care facilities, personnel, and medical resources, directly affecting the quality of life for the elderly. In the context of population aging, the pressure on pension payments is also mounting, challenging the sustainability of pension funds. Historically, pension systems have overly relied on the continuous support of younger populations, failing to adequately consider the long-term trend of aging. Faced with these complex challenges, a comprehensive reform of the pension security system is urgently needed to address this critical issue concerning social stability and development. The data from Table 1 underscores the necessity for timely and effective policy interventions to mitigate the adverse effects of an aging population on China's economic and social structures.

The data in Table 1 clearly indicate that China's elderly population ratio will experience a rapid increase in the coming decades. This trend imposes significant pressure on the labor market, economic growth, and the pension security system:

Impact on the Labor Market: As the proportion of individuals aged 65 and above rises, the working-age population's percentage decreases, leading to potential labor shortages. This decline can negatively impact societal productivity and the economy's growth potential. **Sustainability of the Pension Security System:** The increase in the elderly population ratio means there is a higher demand for pensions and elderly care services. The

existing "pay-as-you-go" pension model is under severe financial strain, resulting in an expanding pension gap.

Changes in Social and Family Structures: Accelerated aging may cause shifts in family structures, increasing the caregiving responsibilities of the younger generation. Additionally, it can alter societal consumption and savings behaviors, posing potential risks to social stability and economic development. The data in Table 1 not only illustrate the critical nature of aging but also provide solid data support for the subsequent sections of the paper, which discuss the current state, challenges, and policy options of the pension security system. By thoroughly analyzing these data, a deeper understanding of the extensive impacts of population aging on China's socio-economic facets can be achieved, thereby informing the development of effective pension policies.

3. Overview of the Current Old Age Security System

3.1. Social Insurance System

The social insurance system, as the cornerstone of pension security, plays a crucial role in mitigating the impact of aging. In China, the social insurance system primarily comprises basic pension insurance, which aims to provide foundational income protection for urban workers and rural residents alike. However, with the acceleration of the aging process, the existing social insurance framework has revealed structural issues that urgently require reform and enhancement. The current system relies heavily on a "pay-as-you-go" model, wherein the insurance premiums paid by the current workforce are used to fund pensions for retirees. This model functions effectively when there is an ample supply of young labor; however, as demographic shifts lead to a decrease in contributors and an increase in retirees, the pressure on pension payouts has surged. The sustainability of social insurance funds is under severe strain, with some regions facing the risk of pension payment difficulties. Furthermore, there remains an imbalance in social insurance coverage. The disparity between urban and rural areas is still pronounced, with pension levels in rural regions significantly lower than those in urban areas, making it challenging for many migrant workers to enjoy the same pension benefits as their urban counterparts. This urban-rural imbalance not only exacerbates regional development disparities but also contributes to the inequity of pension security and the accumulation of social tensions. Reforming the social insurance system is an inevitable trend. Future directions should focus on enhancing the fairness and sustainability of the system, such as by raising the retirement age and diversifying investment channels for pensions to gradually ease fund pressures.

3.2. Corporate Pension and Personal Savings

Corporate pensions and personal savings serve as supplementary elements within the pension security system, increasingly playing a crucial role. Beyond basic pension insurance, corporate pensions offer employees an additional source of retirement income, while personal savings represent an individual's proactive choice to address future retirement needs. However, both face numerous challenges in practice that affect their effectiveness in providing security. The development of corporate pensions in China remains at an early stage, with a low participation rate among businesses and employees. Many small and medium-sized enterprises, due to cost pressures, are unable to offer pension plans, resulting in a limited scope for corporate pensions that primarily benefit large and medium-sized enterprises and government agencies. This imbalance leaves many workers, particularly those in informal employment, unable to benefit, thereby exacerbating the dual structure of the pension security system. Moreover, the management and operation of corporate pensions involve certain investment risks, with significant fluctuations in returns affecting the actual income security of employees post-retirement [2]. Personal savings play a flexible role in retirement, but their effectiveness depends on individual income levels and savings awareness. In a society with significant income disparity, low-

income groups often struggle to accumulate sufficient savings to cover post-retirement living expenses. Furthermore, external factors such as inflation and financial market volatility diminish the actual value of savings. Therefore, while personal savings offer some flexibility, their support for long-term retirement security is relatively limited. To enhance the roles of corporate pensions and personal savings, policy guidance and incentive mechanisms are crucial. The government should encourage companies to establish pension plans for employees through tax benefits and policy support, and foster employees' savings awareness, thereby making corporate pensions and personal savings a more reliable and widespread part of the pension security system.

3.3. Pension Service System

The elder care service system is an indispensable component of the overall elder protection framework, intimately connected to the quality of life and well-being of the elderly. As the population ages, the demand for elder care services has surged dramatically, rendering traditional family-based care models increasingly inadequate to meet the growing complexities of elderly care needs. Thus, establishing a multi-layered, comprehensive elder care service system has become an urgent task. Currently, there is a significant disparity in the development of elder care services between urban and rural areas. While the number of elder care institutions in cities continues to rise, issues such as a shortage of caregivers and uneven service quality remain prominent. The majority of elderly individuals opt for home-based care, but the development of community care services lags behind, failing to provide adequate support. The situation is even more severe in rural areas, where elder care resources are scarce, and many regions lack even basic elder care facilities, leading to a substantial decline in the quality of life for rural seniors. Furthermore, with the rapid increase in the elderly population, the demand for care for those with disabilities or semi-disabilities has risen annually, creating a bottleneck in the elder care system due to a shortage of professional caregivers. The generally low compensation and limited appeal of the caregiving profession result in a supply of specialized talent that falls short of market demand. To construct a well-rounded elder care service system, a crucial aspect is the collaborative effort of government, society, and the market. The government should enhance investment in elder care services, particularly at the rural and community levels, to address infrastructure and service deficiencies [3].

4. Major Challenges to Pension Security

4.1. Sustainability of Pension Payments

The issue of pension sustainability stands as one of the core challenges confronting the pension security system amid the current demographic aging. With the continuous rise in the elderly population, the pressure on pension payments is mounting, particularly under the "pay-as-you-go" model, where this conflict becomes more pronounced. The existing pension system relies on the younger workforce to contribute premiums for the elderly, but as birth rates decline and the aging process accelerates, the proportion of contributors decreases while the number of pensioners grows rapidly, exacerbating the imbalance between pension fund revenues and expenditures. Moreover, increased life expectancy extends the period over which pensions are paid, posing a persistent challenge to the stability of pension funds. The financial strain caused by longevity cannot be overlooked, and the current system's relatively low retirement age, combined with longer retirement durations, heightens the burden of payments. Particularly in the context of slowed economic growth and an unstable labor market, the revenue from pension contributions struggles to keep pace with the increasing elderly population, with fund accumulation rates insufficient to support future large-scale pension expenditures. To address this issue, reforming the pension system is imperative. Delaying the retirement age is consid-

ered one of the effective measures to alleviate payment pressure, as it helps extend working years, increase the duration and amount of pension contributions, and thereby ease the burden on the fund.

4.2. Insufficient Supply of Pension Services

The insufficiency of eldercare services is a prominent issue in addressing the challenges posed by an aging population. With the rapid increase in the elderly population, the demand for eldercare services has surged significantly; however, the current supply capabilities lag far behind. Both institutional and home-based eldercare face issues of resource scarcity and inadequate service capacity, leading to an inability to meet the growing caregiving needs of the elderly. In urban areas, although the number of eldercare institutions has risen, high-quality services remain elusive. Particularly concerning are the care requirements for the frail and semi-frail elderly, as specialized institutions are limited and their services prohibitively expensive, placing them beyond the reach of ordinary families. The development of community-based eldercare services is also lacking; community infrastructure is often insufficient, failing to provide comprehensive support for home-based care. In rural areas, eldercare services are even more deficient, with many regions lacking fundamental facilities and professional caregivers, thereby compromising the quality of life for elderly residents. One root cause of the shortage in eldercare services is the scarcity of specialized caregiving professionals. The low remuneration and high stress associated with jobs in the eldercare industry result in a lack of appeal, severe talent attrition, and a challenge in enhancing professional standards. The shortage of caregiving talent directly impacts the quality of eldercare services and hampers the effective management of complex elderly care needs [4].

4.3. Funding Sources and Management Risks

The sources of pension funding and the risks associated with its management are crucial to the stability and sustainability of the pension system. In the context of an increasingly aging population, ensuring the adequacy and security of pension funds presents a significant challenge. The singularity of funding sources and the uncertainties in management are prone to causing disruptions in the funding chain and difficulties in payments, which severely impact the livelihood of the elderly. Currently, the primary sources of pension funds rely on contributions from the working population and government fiscal subsidies. However, as the labor force diminishes and aging accelerates, the proportion of contributing individuals steadily declines, leading to a reduction in fund revenues. Additionally, economic fluctuations and instability in the job market exacerbate the uncertainty of fund income, making it particularly challenging to stabilize contribution levels during economic downturns and complicating the long-term accumulation of the fund. Regarding management risks, the investment and operational capabilities of pension funds directly affect their yield. To preserve and enhance the value of funds, pension funds typically engage in market-based investments. Yet, the investment market itself is fraught with uncertainties, influenced by economic cycles, policy environments, and international situations. Any misstep in investment decisions could lead to losses and potentially jeopardize the entire fund's operation. Furthermore, excessive concentration in investment channels and insufficient risk diversification also heighten the risks associated with fund operations.

4.4. Fairness of the Pension Security System

The fairness of the old-age security system is one of the focuses of social concern, especially in a diversified social structure, where the fairness of the system directly affects public trust in and support for the old-age security system. In the current pension system, there are significant differences in the treatment of different groups, especially between

urban and rural residents, different occupational groups, and individuals of different economic levels, and there is a clear division in the rights and benefits enjoyed by the pension system. The gap between urban and rural pension benefits persists, not only in terms of the level of pensions received, but also in terms of the accessibility and quality of pension services. The relatively low level of economic development in rural areas and the lack of basic old-age service facilities have prevented the majority of rural older persons from receiving the same level of old-age security support as their urban counterparts, a problem that has become more pronounced, particularly in the context of accelerated ageing. Differences in treatment between occupational groups are another important aspect of the fairness of old-age security. There is a persistent imbalance between the pension benefits of civil servants, public institutions and enterprises, with the former receiving more generous contribution rates and benefits, while enterprise workers receive relatively low levels of pension, an imbalance that has further exacerbated social dissatisfaction with the pension system.

5. Policy Options and Measures

5.1. Construction of Pension Service System

The construction of the eldercare service system should aim to meet the increasingly diverse needs of the elderly population, fostering the rational allocation of social resources and the specialization of service provision. Firstly, it is essential to expedite the balanced distribution of eldercare resources between urban and rural areas, with a particular focus on enhancing the development of eldercare facilities in rural and remote regions. These areas have a higher proportion of elderly individuals but suffer from weak infrastructure and inadequate service supply. The government could incentivize private sector involvement in the investment and operation of rural eldercare facilities through policy guidance and financial support, while also strengthening community and familial caregiving capabilities. To address disparities in the quality of urban eldercare institutions, an evaluation and oversight mechanism for eldercare service quality should be established to ensure standardized and transparent services. Introducing third-party assessment agencies to conduct regular inspections of eldercare institutions and publicly disclose the results could stimulate a healthy market competition based on merit. Furthermore, the government should provide targeted eldercare service subsidies for low- and middle-income families, ensuring that economically disadvantaged elderly individuals also have access to high-quality eldercare services. In terms of diversifying service provision, there should be a vigorous development of community-based and home-based eldercare services, particularly promoting the "integrated medical and eldercare" model. By integrating medical and eldercare resources, elderly individuals can receive essential daily care and medical attention within their communities and homes. This approach not only alleviates the pressure on institutional care but also meets the more personalized needs of the elderly. Additionally, encouraging the development of daytime care services and psychological counseling for the elderly could address their spiritual, cultural, and mental health needs. Lastly, the training and enhancement of the attractiveness of eldercare professionals are vital components of eldercare system development. Improving the professional skills of caregivers through vocational training and certification, as well as enhancing working conditions and compensation, will help reduce turnover, stabilize the workforce, and elevate service quality [5].

5.2. Coordination Between Social Security and Medical Security

Coordinating social security and healthcare is a crucial aspect in addressing the challenges of an aging population. Particularly within the elderly demographic, the alignment of increasing healthcare demands with income security becomes paramount. To achieve effective integration of these two elements, it is essential first to establish a unified information platform for pension and healthcare security. Utilizing big data and intelligent

technologies, this platform would facilitate the sharing of individual health information and social security data, thereby preventing information silos. Such an approach not only supports the rational allocation of pension resources but also enables more precise delivery of medical services, enhancing service efficiency. Building upon this foundation, it is advisable to promote an integrated "medical-nursing" service model, where healthcare and elderly care services are deeply intertwined. In this model, seniors in care institutions would receive both daily living support and medical care, thus alleviating the burden of frequent hospital visits and improving the quality of care provided by the institutions. To advance this model, the government could incentivize collaboration between healthcare and elderly care institutions through policy support and financial aid, encouraging the establishment of more "medical-nursing" service points within communities and institutions. Additionally, the payment methods for healthcare should be reformed, particularly to address the long-term care needs of the elderly. The establishment of dedicated long-term care insurance or subsidies could alleviate the financial strain on families caring for elderly members.

5.3. Enhancing Social Participation and Public Support

Enhancing social engagement and public support is a crucial aspect in addressing the challenges of an aging population and is pivotal to the sustainable development of the elderly care system. Society must harness the collaborative efforts of all sectors to foster an environment of care for the elderly and increase public awareness and involvement in elderly care issues. Firstly, a sense of social inclusion for the elderly should be bolstered through diverse community activities. Government bodies, corporations, and non-governmental organizations should regularly organize cultural and sporting events that involve the elderly, aiding in their physical and mental well-being. Such activities not only alleviate feelings of loneliness among the elderly but also promote intergenerational interactions, fostering greater understanding and compassion among different social groups. Moreover, enhancing the volunteer service system will further encourage social participation. A sustainable volunteer management mechanism should be established to attract more young people and community members to elderly care services. Providing volunteers with training and incentives will enhance their professional skills and enthusiasm for participation. Promoting volunteer companionship and home-based care services within communities can effectively reduce the burden on care institutions while ensuring that the elderly feel the warmth of societal support. On a systemic level, media promotion and education are also of great importance. The government should utilize various media forms to disseminate correct concepts of elderly care, encouraging the public to save for retirement and engage in social elderly care systems.

6. Conclusion

The onslaught of an aging population upon the pension system is pervasive and profound, necessitating a multifaceted response that encompasses policy, societal, and economic dimensions. The resolution of this conundrum impinges not only upon the well-being of the elderly demographic but also stands as a paramount testament to social equity and sustainable development. Within the remit of pension reform, the pivotal keys to sustaining the viability of the system involve judiciously adjusting contribution structures, delaying the retirement age, and enhancing the returns on investment. Simultaneously, the development of a heterogeneous framework for eldercare, with a particular emphasis on home-based and community services, can effectively mitigate the disparity between supply and demand for care. The confluence of social security and healthcare is equally vital, as it can provide a more comprehensive protection of health and wellness in old age. Moreover, fostering the participation of the wider community and encouraging both corporate and public sectors to invest in the cause of eldercare is instrumental in assembling a collective force to confront the challenges of an aging society. In the face of this long-

standing and complex issue, a more open and innovative perspective must be adopted to formulate and implement policies that are tailored to national conditions, thereby genuinely safeguarding the dignity and quality of life for the elderly and promoting societal harmony and progress.

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