The Impact of Health Insurance Coverage and Residents' Benefits on Residents' Preventive Savings in the Context of Population Aging

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Abstract. Under the background of accelerated population aging, the impact of health insurance coverage and the extent of residents' actual benefits on preventive savings behavior have become increasingly significant. This study investigates the intrinsic mechanisms through which health insurance influences saving behavior amid demographic aging, building on existing research. By analyzing Chinese macro-level data from NBS from 2019 to 2023, including trends in residents' savings and health insurance participation, the research examines how expanded health insurance coverage and enhanced benefits affect household precautionary savings. The findings reveal that under China's basic health insurance system, improved benefits for residents lead to a reduction in precautionary savings. This suggests that when individuals perceive greater financial protection against medical expenses, they are less inclined to save as a hedge against future health risks. The study highlights the critical role of health insurance in mitigating household savings pressures, particularly in aging societies where healthcare costs are a major concern. These insights provide valuable implications for policymakers aiming to optimize social security systems and stimulate domestic consumption by reducing unnecessary precautionary savings.

1 Introduction

Today, aging has become a global concern, especially in China. China is home to the world's largest population aged 60 and above and is aging significantly faster than other countries, and there is a shortage of healthcare resources for the aging population, which is not encouraging. Overall, the situation of the aging situation is not optimistic. In this context, residents tend to choose to increase family savings as a future life protection [1]. Among them, from 2014 to 2023, the per capita healthcare consumption expenditure will increase year by year, climbing from 1,045 yuan to 2,460 yuan, and the consumption demand of residents in healthcare is showing a steady upward trend [2]. As an important part of residents' life protection, health insurance can reduce the financial burden of residents' health care, so that more of their income can be used for consumption. Current research mostly focuses on the broader economic effects of health insurance on

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consumption and savings behaviors. However, few studies have explored how these dynamics have evolved in the post-pandemic era, particularly given China's rapidly aging population and the potential shifts in health insurance's influence on residents' saving patterns following COVID-19. To address these issues, this study aims to investigate whether health insurance has an impact on residents' savings in the context of aging and whether there are urban-rural differences in this impact. This study explores whether and how health insurance development influences residents' savings rates by using data from the National Bureau of Statistics (NBS) and the comparative analysis method of macro data to examine the changes in the level of health insurance and the savings rate of the population. The aim of the study is to reveal how health insurance affects the internal mechanism of savings and provide a basis for policy optimization. It also proposes to reduce the savings rate by increasing the actual level of health insurance coverage (instead of only expanding the coverage) a policy path to release the consumption potential, which is of practical significance to meet the challenges of the aging economy. The subsequent chapters are organized as follows: Part II presents the literature review and theoretical framework, Part III presents the data and results, and Part IV draws conclusions and policy recommendations.

2 Literature review: refining the logical chain of aging, health insurance, and saving behavior

The elderly population in China currently encounters significant health challenges, particularly the high prevalence of chronic non-communicable diseases (CNCDs) such as cardiovascular conditions, alongside age-related conditions including frailty and neurodegenerative disorders [3]. These challenges threaten the quality of life of older adults and will become more serious as aging progresses. At the same time, the size and structure of the Chinese family are also changing, with today's Chinese citizens having more individualized family behaviors, coupled with a tradition of high marriage climbing and better-educated females, and the likelihood of more lifelong singles in the future [4]. This change will have a direct impact on access to security for the elderly.

Regarding how the saving behavior of residents is influenced by the hypothesis of aging, the current analysis is grounded in two cornerstone theories of household economics that have shaped decades of empirical research.

The life cycle theory was first proposed by the famous economist Modigliani in the 1950s, and its core idea is that an individual's consumption decision should not be confined to a specific period but should be considered across the entire life cycle [5]. To realize the best resource allocation, people need to make reasonable consumption arrangements at different life stages. The choice of consumption behavior is influenced by both current income and future expected income, which determine how to maximize the consumption utility of the entire family life cycle.

The core of the precautionary savings theory is that consumers will adopt a different consumption strategy for their own consumption compared to that when their income is stable to reduce the income risk. They are more inclined to plan their consumption behavior prudently based on the current level of income [6]. Due to possible future uncertainties such as unemployment, illness, accidents, etc., individuals will choose to reserve a portion of their funds in advance to cope with possible economic shocks, thus protecting themselves from financial difficulties and maintaining a sense of economic security and stability in their quality of life.

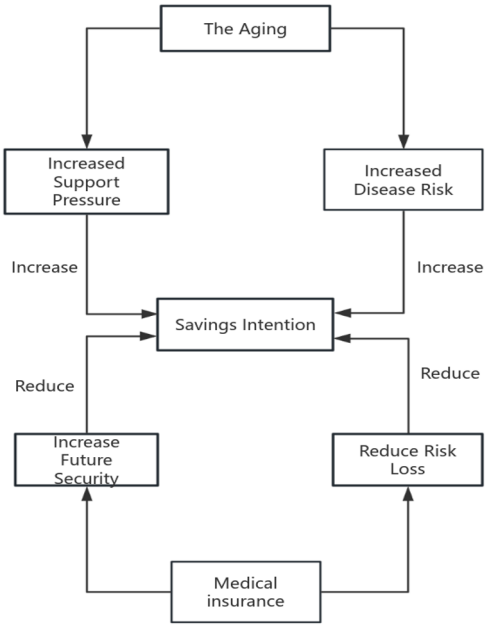


Fig. 1. The impact of the aging and medical insurance on savings intention

Based on the above theory, it can be seen in figure 1 which concluded that the reasons for residents' saving behavior come from two aspects, to provide financial security for their middle-aged and old-aged life to avoid the decrease in income and quality of life caused by physical decline; or worry about possible health risks, as an important background risk of the family, which may increase the family's unforeseen medical expenses and reduce the source of income of the family, so that the family will increase the preventive savings[7]. Especially in the case of major emergencies such as epidemics, residents' willingness to save is higher than usual compared to consumption and there is a positive correlation between willingness intensity and severity [8]. In the context of aging, most of the Chinese family members (the main labor force) are only children, who are unable to share the burden of supporting the elderly with others, and the pressure of old-age pension has increased. At the same time, the risk of chronic diseases faced by aging also rises with the average age of the society, and the two together promote the willingness of residents to save.

Medical insurance, on the other hand, allows for the payment of medical insurance premiums through medical insurance organizations in order to hedge a portion of the medical risks and compensate for the losses incurred by workers as a result of illness or injury. Relevant studies show that health insurance can indeed reduce the risk of illness of the population, i.e., health insurance can, to some extent, reduce the future risk of the population and share part of the losses when facing major illnesses and injuries, e.g., short-term insurance for major illnesses can help to reduce the out-of-pocket costs of the patients and increase the reimbursement rate of the high-cost groups [9], which led to an increase in the per capita consumption of the household by about 6% [10]. Meanwhile, an increasing number of households that are protected by health insurance significantly reduces household savings rates [11]. In rural China, the propensity of households to save except for poverty was reduced because of the new rural cooperative medical system [12]. In summary, health insurance reduces future uncertainty by enhancing future security and mitigating risky losses, thus reducing the savings rate. The typical example is that in the absence of health insurance in Japan, high-income households turn to self-insurance, which

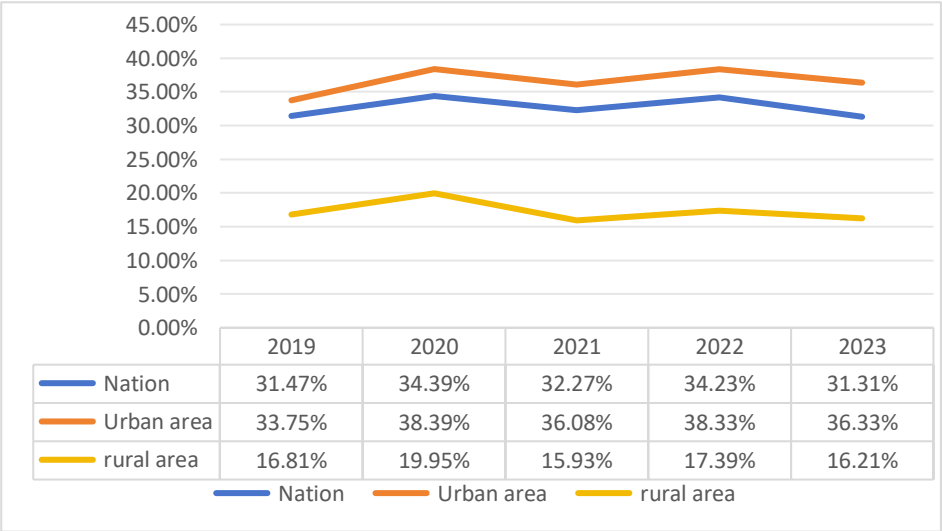
significantly increases total savings [13].

Accordingly, this paper proposes the following research hypothesis: China's urban and rural health insurance helps reduce household precautionary savings.

3 Research analysis

3.1 Current situation of saving in China

Figure 2 gives the change in urban and rural savings rates in 2019-2023. It can be seen that the total savings of China's residents has a relatively small change, which remains above 30% and the savings rate has a weak downward trend all year round, but there is a reverse upward change in 2020 and 2022, reaching 34.39% and 34.23%, respectively. This may be due to the impact of the new crown epidemic health emergency in 2020 and the lack of consumption momentum caused by the epidemic control in 2022. Overall, the savings rate of Chinese residents is on a steady downward trend, but it will rise due to the impact of emergencies such as the New Crown epidemic.



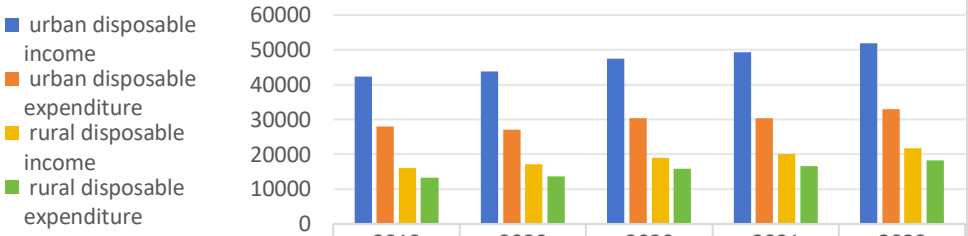
	2019	2020	2021	2022	2023
Nation	31.47%	34.39%	32.27%	34.23%	31.31%
Urban area	33.75%	38.39%	36.08%	38.33%	36.33%
rural area	16.81%	19.95%	15.93%	17.39%	16.21%

Fig. 2. The ratio of the saving in China from 2019 to 2023

From the perspective of urban and rural direction, the savings rate of urban residents in 2019 - 2023 centers around 36%, which is much higher than the savings rate of rural residents (at around 17%), and about twice as high as that of rural residents. Meanwhile, both savings rates show a fluctuating downward trend, consistent with the overall fluctuation of the national savings rate.

Figure 3 gives the disposable income and expenditure per capita for rural and urban areas from 2019 to 2023. The chart shows that the residents' average disposable income and expenditure in China have increased year by year, with urban residents' average disposable income and expenditure increasing by 7987 yuan and 5987 yuan, and rural residents' average disposable income and expenditure increasing by 4560 yuan and 4462 yuan. Current data reveal a persistent urban-rural disparity in financial capacity, showing rural households' disposable income and consumption expenditure amounting to nearly only 50% of urban levels. It can be seen that China has the problem of unequal development between rural and urban areas and that the savings rate fails to fall with the rise of disposable income

and expenditure.



	2019	2020	2020	2021	2023
urban disposable income	42359	43834	47412	49283	51821
urban disposable expenditure	28063	27007	30307	30391	32994
rural disposable income	16021	17131	18931	20133	21691
rural disposable expenditure	13328	13713	15916	16632	18175

Fig. 3. The resident's disposable personal income and expenditure from 2019 to 2023

3.2 Current situation of medical insurance

Currently, China's healthcare security framework consists of multiple tiers. The primary pillar is the fundamental medical insurance scheme, supported by government medical aid initiatives. Additional layers encompass private health insurance plans, philanthropic contributions, and collective medical support programs as auxiliary measures.[14]. Among them, the participation rate of basic medical insurance has been consolidated at 95%, basically realizing universal coverage. Meanwhile, in 2016, to narrow the gap in medical insurance in different areas, especially between the town and country, China implemented nationwide basic medical insurance to provide guarantees for rural and non-working urban residents, aimed at reducing healthcare disparities by equalizing insurance benefits for rural populations[15].

Figure 4 gives the situation of urban and rural medical insurance in 2019-2023, and it can be found that the number of residents enjoying the treatment has an upward trend, from 2170 million in 2019 to 2610 million in 2023, with the fund income and spending increasing year by year, which indicates that the operation of medical insurance is stable and the medical protection received by the residents is enhanced.

From 2019 to 2023, the residents' savings rate showed a downward trend with the medical insurance running well and the number of people enjoying health insurance benefits increased. According to the above analysis, the conclusion that medical insurance plays a positive role in the reduction of preventive savings of households could be drawn.

Fig. 4. The situation of health insurance in China between 2019 and 2023

3.3 Situation in countries around the world

Table 1. The savings rate of China and some countries in 2023

Country	Japan	France	United Kingdom	United States	Germany	China
Savings rate (%)	19.28	16.51	7.34	10.99	19.28	31.31

Table 1 lists the levels of residential savings rates in 2023 for the developed countries of the world - Japan, France, the United Kingdom, the United States, and Germany - as well as for China, and it can be seen that China's savings rate of 31.31% is much higher than that of the USA's 10.99% and that of the UK's 7.34%. Japan, which has an even more serious aging population, also has a savings rate of 19.28%, which is about 10 percentage points lower than that of China. Despite the current downward trend in the national savings rate, there is still a gap with major countries in the world.

Take Japan's health insurance, which is similar to China's, as an example. It adopts the establishment of a medical insurance system for the elderly and an insurance system for long-term care to face the aging problem, which is heavier than China's [16]. The proportion of out-of-pocket expenses of the insured is determined by age and income, and the proportion of out-of-pocket expenses is low for the elderly and the low-income group [16]. Meanwhile, Japan established a nursing care insurance system in 2000 to meet the growing demand for care for the elderly, and has effectively responded to the medical and nursing care pressure of the aging society through tiered coverage, inter-insurance fund coordination, and care grading [16]. At present, almost all residents both in town and country are protected by the basic medical insurance system. However, there is still an uneven distribution of medical resources and a failure to reflect the true medical needs of different groups. The development of medical insurance in Japan can provide for solving

these problems.

4 Conclusion

This study utilizes data from NBS to examine whether health insurance coverage and benefits have a positive effect on household preventive savings. This study analyzes the situation of urban and rural savings rates in China between 2019 and 2023 and finds that the savings rate has not declined to the same extent as the growth of per capita disposable income. The study also finds that China's savings rate is on a downward trend when health insurance is basically covered and the number of beneficiaries becomes larger, which includes that health insurance coverage and benefits have a positive effect on reducing household precautionary savings. Therefore, it is possible to promote the coverage and benefits of health insurance among residents to reduce household preventive savings, and to promote economic development by reducing the proportion of household income saved and increasing the proportion of consumption. At the same time, the medical insurance development of Japan can offer the experience to China to reduce the gap between urban and rural medical insurance, increase the reimbursement ratio, and build a multi-level, full-coverage and sustainable medical care service system.

To enhance the robustness and generalizability of findings, this study utilizes the most recent macroeconomic datasets from both Chinese and international sources, so that the conclusions can accurately reflect the current economic development trend, avoiding the analytical bias caused by lagging data, and supplementing the latest evidence for this thesis.

Finally, this study does not adequately quantify the relationship between health insurance coverage and benefits and household precautionary savings, and there is a lack of evidence to further prove that there is a link between the two. However, the present study is theoretically bounded, examining health insurance's influence on savings behavior solely through conceptual analysis rather than empirical validation and does not quantitatively analyze the impact of each intermediate variable on savings. In the future, the relationship between the two can be further proved and quantitatively analyzed through questionnaires and empirical analysis.

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