

Long-Term Care Insurance as a Driver of Elderly Consumption: Japan's Experience and Implications for China

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Abstract. Japan, as the world's most aged society, offers valuable lessons. This paper examines how Japan's Long-Term Care Insurance (LTCI) system unlocks elderly consumption and explores the implications for China. Drawing on precautionary saving and life-cycle theories, the analysis establishes a clear causal mechanism: LTCI reduces uncertainty about future care expenses, which lowers precautionary savings and releases funds for current consumption. Evidence from Japan supports this mechanism: following LTCI implementation in 2000, Japan's elderly care service market expanded from 3.6 trillion yen to 9.6 trillion yen by 2013 and healthcare spending as a share of household expenditure rose from 6% to 12%. Evidence from China's LTCI pilots provides causal confirmation: public LTCI increases elderly household non-health consumption by 15.7%. However, direct policy transplantation is not advisable due to contextual differences in GDP per capita, income growth, and urbanization rates. Based on these findings, this paper proposes targeted policy implications for China's LTCI system design, silver economy market development, and elderly consumption release strategies, tailored to China's institutional and economic context.

Keywords: Long-Term Care Insurance, Elderly Consumption, Population Aging, Japan-China Comparison, Precautionary Saving

1. Introduction

China is undergoing an unprecedented demographic transition. According to Fang et al. [1], the number of those aged 60 years and older is expected to increase to 39% of the entire population, compared to 18% in 2020. The high rate of aging poses great challenges to the labor supply, the financial sustainability and the social welfare system. Nevertheless, it opens up new economic opportunities. The market of goods and services that cater to the needs of the older generation, known as the silver economy, has become a potential growth engine. Globally, the population aged 65 and above is expected to increase from 700 million in 2020 to 1.5 billion by 2050 [2], thus the silver economy is one of the few booming markets within the rest of the aging world. As such, understanding how to unlock the consumption potential of the elderly has become a critical policy priority [3].

Japan being the oldest society in the world provides China with a lot to learn. With 29.1% of its population aged 65 and above in 2024, Japan has long grappled with the economic consequences of demographic aging. The use of the Long-Term Care Insurance (LTCI) system, which was introduced in 2000, was a very significant event in the Japanese policy response. This institutional innovation aimed to not only provide care services but also fundamentally reshape the economic behavior of older adults. By reducing risk and the financial uncertainty of future care needs, LTCI effectively reduced precautionary savings for older adults. This, in turn, unleashed the accumulated demand on consumption, particularly in healthcare and services, as well as led to the development of the silver economy in Japan [4, 5].

Although there are now more and more studies of the elderly in Japan, most are still descriptive. Only a few have explored how LTCI influences the consumption patterns of older adults in depth. Moreover, comparative analyses that directly link Japan's institutional innovation to China's ongoing LTCI pilots remain scarce [6, 7]. The missing link in this paper will be addressed by the following questions: How can LTCI encourage older people to increase their consumption by reducing precautionary savings, and what specific applications can China learn from Japan's experience, given the different environments of the two countries?

2. Theoretical background

2.1. Precautionary saving theory

Leland [8] proposed precautionary savings, and based on the uncertainty of future income and expenditure, individuals will be more likely to save a higher amount than if this uncertainty did not exist. The primary source of anxiety for older people is often one's own health problems. The risk of a large, long-term care expense is as follows. Long-term care expenses are irregular in both the timing and amount compared to regular medical costs. The uncertainty leads to a high desire for precautionary saving, and thus consumption in the present is reduced [9].

2.2. Life-cycle hypothesis

Modigliani and Brumberg [10] are another theory that has provided the Modigliani-Brumberg life-cycle hypothesis, and it is also used to study changes in people's living patterns as they age. According to the above theory, people reduce their consumption by saving in their working years and spend their savings in retirement. With an ageing population, the proportion of non-working age people is increasing, thus reducing the total amount of savings and changing the pattern of consumption to focus on services, such as healthcare, rather than durable goods. Long-term care insurance (LTCI) can be viewed as a financial product that helps older adults with disabilities manage the financial risks of irregular care costs and thus supports consumption smoothing behaviour according to the life-cycle hypothesis. This forecast is supported by empirical data in Japan: during its period of deep aging (2007–2024), the share of household expenditure allocated to healthcare rose from approximately 6% in 1995 to 12% in 2020 [4].

2.3. Long-term care risk and the role of LTCI

Long-term care risk is a specific type of uncertainty that is characterised by a high cost, extended time and low predictability. These are not general health risks; long-term care needs often last for years and can deplete household savings. Long-term care insurance (LTCI) will help distribute this

risk among many people and lower the financial pressure on them for extended-use care. LTCI offers a fixed-benefit system that covers a considerable proportion of the long-term care expense, thereby reducing the amount of large precautionary funds people need to set aside for potential future care costs. This reduction in precautionary savings will also release some funds for elderly consumption. The mechanism is as follows: LTCI results in a decline in the uncertainty of future care costs; therefore, precautionary savings are reduced and current consumption is increased. Recently, studies abroad have supported this. According to the EMAC 2025 conference records, older adults are "the last growth market", and therefore financial uncertainty reduction must address their needs.

3. Literature review

3.1. Japan's aging and changing consumption patterns

Japan's problem of an aging population serves as a representative case study for how to change consumption patterns due to population ageing. Being the oldest society in the world, 29.1% of the population in Japan is 65 years or older in 2024, the country has undergone significant changes in household spending in the last 30 years. According to Dongwu Securities [4], during Japan's period of deep aging from 2007 to 2024, private consumption growth slowed to an average of 0.2% annually. More importantly, the consumption structure changed drastically: household spending on food and healthcare became a larger part of total expenditure, and expenditure on housing and clothing fell. Empirical data from the Ministry of Health, Labour and Welfare in Japan [5] also show that about 6% of household expenditures were on healthcare in 1995, and this figure had reached around 12% by 2020.

Research by Japanese scholars has also laid the foundation for this study. The so-called retirement consumption puzzle, that is to say the reduction in consumption at the time of retirement, has been widely studied in Japan. Early studies by Stephens and Unayama [11] and Wakabayashi [12] found that Japanese household consumption was in line with the life-cycle permanent-income hypothesis (LC-PIH), and thus people were able to reduce consumption in old age. However, more recent research by Kimura et al. [13] challenges this consensus by examining the impact of Japan's evolving pension and employment policies. They determine that, non-durable and food spending grows during partial retirement due to liquidity effects of large amounts of retirement lump-sum payment (tais yokukin), which is common in the unique Japanese employment system.

This result is important as it indicates that institutional aspects, especially the existing mandatory retirement age system and lump-sum benefits in Japan can generate consumption patterns that are not consistent with the normal theoretical expectations. The revision of the Act on Stabilization of Employment of Elderly Persons (AEEP) in 2006 and 2013 has further complicated the retirement landscape, making partial retirement increasingly common. These structural transformations show the need to incorporate institutional context in the process of analyzing elderly consumption behavior.

3.2. The economic effects of long-term care insurance

A pivotal institutional innovation in Japan's response to population aging was the implementation of the Long-Term Care Insurance (LTCI) system in 2000, known as the Kaigo Hoken system. The law has also significantly changed the structure of the Japanese silver economy in recent years and has introduced new types of elderly care services and products [4]. The economy of Japan's silver

industry has shown some growth under LTCI. Before its implementation in 2000, the amount of money for elderly care services in Japan was about 3.6 trillion yen. The quantity of fee-based elderly care homes had increased to 1, 732 by 2006 and by 2013, the market had grown to 9.6 trillion yen [14]. With the spread of assistance devices, the sales of some representative products such as wheelchairs and adjustable beds have also risen significantly within two years of the implementation of LTCI. The nature of these market expansions can be explained by the fact that the system design characteristics, including the mandatory enrollment at the age of 40, market-based service delivery, and the co-payment rate of 10-30 percent, established a sustainable financing system that triggered both supply and demand in the aging care market [15].

Beyond market expansion, LTCI also plays a crucial role in stimulating consumption. The mechanism operates through reducing precautionary savings: by lowering the financial uncertainty associated with future care needs, LTCI encourages elderly households to spend rather than save. Liu, Ma, and Zhao [16] present strict empirical data of the LTCI pilot program in China, which shows that public LTCI raises household non-health consumption by 15.7 percent and lowers household savings rates by 17.5 percentage points. In their article published in the *Journal of Health Economics*, they use a triple-difference identification approach based on CHARLS longitudinal data and discover that such effects are the most significant in families that do not need care urgently. This implies that LTCI can be said to work by minimizing risks of future care instead of direct use of services- a result that directly underpins the conceptual workings of Section 2.

In addition to market and consumption effects, LTCI carries significant fiscal and welfare implications. Zhang and Wang [15] examine the LTCI financial sustainability mechanisms in Japan, stating that the system is funded by the mandatory premiums of citizens aged 40 and older along with the public fiscal contributions. Key mechanisms include inter-municipal fiscal transfers, stabilization funds, and differentiated support for home-based care, community care, and institutional care. These institutional features help balance financial sustainability with adequate service provision. From a welfare perspective, Courbage and colleagues [17] discuss the demand-side determinants of LTCI uptake, presenting two new behavioral variables, including correlation preference whether people prefer to transfer their wealth to poor-health states and relative preference of quality of life over wealth. Their experimental findings suggest that individuals with a stronger preference for quality of life are more likely to purchase LTCI coverage, anticipating future demand for care services. This means that not only does LTCI decrease financial uncertainty, but also it is consistent with personal preferences towards preserving quality of life in old age, which creates welfare benefits over and above that of pure consumption.

3.3. Japan-China comparative studies and research gap

Comparing aging in Japan and China reveals significant similarities and important differences that shape policy implications. Shi [6] provides a foundational comparative study, noting that Japan's aging process began approximately 20 years before China's, and while China faces similar demographic challenges, its policy responses have been more gradual and less comprehensive. As stated in the study, most of the economic effects that are already felt in Japan are yet to be felt in China, which is why it is worthwhile to use Japan as a kind of a preview of the population trends in China.

More recent comparative research by Guo et al. [18] examines the spatiotemporal evolution of population aging in Japan and China from 1995 to 2020 using geographic information systems and geodetector methods. They find that both nations are experiencing rising trends in aging but the rate at which China is aging is higher than that of Japan. Key factors influencing aging patterns include

GDP per capita, health insurance coverage, and healthcare resources, with notable differences in the explanatory power of these factors between the two countries.

In terms of consumption potential, Dongwu Securities [4] highlights critical differences between the two countries. The per capita income of China is on the rise at a rate of above 5% per year as opposed to the 1-2% per year growth of Japan during a similar aging process. The rate of urbanization in China is about 65% compared to Japan which had already become 90% urbanized before its population started to decline. The differences imply that China might possess higher latent consumption power to be mobilized by proper policy interventions.

Beyond macroeconomic conditions, the institutional design of long-term care insurance (LTCI) also differs fundamentally between Japan and China. Japan adopted a universal social insurance model with mandatory coverage and uniform benefits nationwide. In contrast, China is piloting LTCI on a voluntary, city-level basis across 49 cities, with significant regional variation in design, financing, and benefit packages (see Section 4.3 for a detailed comparison). These institutional differences provide a valuable comparative context for understanding how LTCI design shapes its consumption effects.

The China National Committee on Aging [7] has clearly indicated the need to understand consumption habits among the old people as one of the priorities towards high quality silver economy development. Current research directions emphasize the need to study consumption expenditure levels, structural characteristics, and the role of institutional factors such as LTCI in shaping elderly consumption behavior.

3.4. Research gap and contribution of this paper

Despite the growing body of literature on Japan's aging experience, most existing studies remain descriptive. Not many have empirically examined how LTCI mediates its effects on elderly consumption, that is, how diminished precautionary saving leads to higher consumption. Further, as Chinese scholars have begun to insist on the need to draw lessons from Japan, there is little evidence of comparative analysis that explicitly links Japan's mature LTCI system to China's current LTCI pilots. A natural experimental design—the Chinese LTCI pilot program, which began in 2016 and was later extended to 49 cities—offers an experimental opportunity to test whether similar mechanisms work under China's unique institutional environment.

This paper addresses this gap by focusing on the consumption effects of LTCI as an institutional innovation, synthesizing evidence from Japan's mature LTCI system and China's pilot experiences. This study seeks to provide policy-relevant implications for China's current attempts to make its silver economy sustainable and growth-oriented by explicitly theorizing the relationship between LTCI and the reduction in precautionary saving and consumption increase.

4. Discussion

4.1. How LTCI unlocks elderly consumption

As established in Section 2, the primary mechanism is the reduction of precautionary saving. Elderly households face uncertainty about future long-term care expenses, which encourages saving and suppresses current consumption. LTCI reduces this uncertainty by pooling risk. LTCI frees up funds for current consumption by reducing the amount of precautionary savings that are required. The causal chain is: LTCI → lower precautionary savings → increased consumption.

4.2. Evidence from Japan

Several pieces of evidence support this mechanism. The elder care service market in Japan grew from 3.6 Trillion yens in 2000 to 9.6 Trillion yens in 2013 after Japan introduced LTCI in 2000 [14]. Increased supply was attributable to increased demand from elder consumers who no longer had to save too much for future care. Within two years from the introduction of LTCI, the use of assistive devices such as wheelchairs and adjustable beds, tripled. This was because elder households shifted from savings to buy such consumption augmenting devices. Household expenditure data further show that healthcare spending as a share of household expenditure rose from 6% in 1995 to 12% in 2020 [4], coinciding with the maturation of the LTCI system. Although correlation does not mean that one variable causes the other, this trend is in line with the mechanism of reduction of precautionary savings. Evidence from China's LTCI pilots provides causal support: Liu, Ma, and Zhao [16] find that public LTCI increases elderly household non-health consumption by 15.7% and reduces savings rates by 17.5 percentage points, with effects strongest for households without immediate care needs, suggesting that LTCI operates through reducing expected future care risks rather than through immediate service utilization.

4.3. Japan-China differences

Transplantation of policies directly is not recommended because of contextual differences. At the time of the implementation of LTCI by Japan, the GDP per capita stood at \$37,000 in comparison to 13,000 in China. The per capita income of China increases by more than 5% per year compared to 1-2% of Japan and urbanization rate of China is 65% compared to 90% of Japan. While Japan adopted a universal social insurance model, China is piloting LTCI in 49 cities with significant variation in design.

4.4. Challenges in China's pilots

China's LTCI pilots have three main problems. First of all, there are insufficient funds; most cities have set aside no more than 100 RMB per capita per year. The above shortcomings are due to the fact that China's LTCI pilots are mainly based on the reallocation of basic medical insurance funds rather than voluntary premium contributions, and voluntary participation limits the scale of the risk pool. Second, there is a shortage of well-trained caregivers. This leads to insufficient service supply. The rapid expansion of pilot cities has outpaced the development of professional training systems for long-term care workers. As a result, there are not enough qualified personnel to meet the increased demand. Third, urban and rural areas have different coverage rates and are therefore not the same. This gap stems from various reasons, including disjointed administrative arrangements; rural counties generally lack the funds for joint-financing of the LTCI plan, and lower awareness among rural elderly further suppresses enrollment and utilization.

4.5. Policy implications

Three Policy Recommendations are proposed. Institutional Design in China needs to achieve a balance among the government, individuals and the market. Develop the market and provide incentives for private-sector participation. Expand the range of LTCI coverage to enhance the scale of consumption releases. Research has also found that intergenerational support can promote the digital health consumption of "new seniors" [19].

5. Conclusion

This paper has discussed the benefits of the Long-Term Care Insurance (LTCI) system in Japan in releasing the consumption potential of the elderly and the implications of this to China. The analysis, which is based on precautionary saving and life-cycle theories, established a clear causal mechanism: LTCI decreases uncertainty regarding future care costs, which decreases precautionary savings and frees money to be employed currently.

Evidence from Japan supports this mechanism. Since 2000, with the implementation of the LTCI, the market of elderly care services in Japan increased its volume of 3.6 trillion yen to 9.6 trillion yen in 2013, and the healthcare spending ratio of household spending grew to 12 percent [4, 14]. Evidence from China's LTCI pilots provides causal confirmation: public LTCI increases elderly household non-health consumption by 15.7% [16].

However, direct policy transplantation is not advisable due to contextual differences. The GDP per capita of Japan at LTCI implementation was \$37,000 compared to the present figure of China at 13,000. China's per capita income grows at over 5% annually versus Japan's 1–2%, and the urbanization process in China is 65% as compared to 90% per year in Japan. China is testing LTCI in 49 cities, with the challenge of lack of funding, inadequate supply of services and rural-urban disparities.

Based on these findings, three policy implications emerge. To begin with, China needs to explain how to finance it and share the responsibility between the government, individuals and the market. Second, there should be policies to promote the involvement of the silver economy by the private sector. Third, the increased LTCI coverage may improve consumption impacts. Intergenerational support may also facilitate digital health consumption among "new seniors" [19].

This study has limitations. The limitation of data restricts the richness of empirical analysis, and determining causal relationships may need more stringent identification methods. Further studies may include the micro-level survey information of the LTCI pilot cities in China in order to perform an empirical study and offer more solid policy design evidence.

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