# Longevity Planning: Developing Factors Module of Comfortable Retirement Based on Financial Wellbeing and Financial Resilience

**Jui-Ying Hung (Correspondence Author)**

*Associate Professor & Chairman, Department of Golden-Ager Industry Management,*

*Chaoyang University of Technology*

*(168, Jifeng E. Rd., Wufeng District, Taichung, 413310, Taiwan, R.O.C.)*

***Abstract:***-In the aging generation, elderly people desire to be healthy and financially secure until the end of their lives. Advancements in medicine and technology have prolonged life expectancy. However, financial security is necessary to reap the benefits of career achievements to lead a contented retirement life. Financial security depends on savings accumulated before retirement and proper financial management after retirement. Old age is the riskiest stage of life as health and wealth status is irreversible. This study aims to identify factors associated with the estimation of retirement income and expenses from a demographic structure perspective and considering the long-term care service policy in Taiwan. The study findings are used to develop a factors module of comfortable retirement based on financial wellbeing and financial resilience.

***Keywords***:*Aging, Longevity, Long-Term Care Plan, Elder Care Trust, Elder Financing.*

## 1. Background

Increase in the elderly population is an inevitable issue worldwide. Longevity is based on medical advancement, improved health awareness, and disease prevention in living environments. Moreover, longevity allows the elderly to prolong their contribution of lifelong experiences and knowledge to families, societies and industries. However, a large proportion of elderly population indirectly reduces the scale of industries (labour-intensive industries decline or stagnate due to workforce shortages), has an impact on emergency procedures (blood shortages or emergency personnel shortages), increases care needs, exacerbates the urban–rural gap or accelerates urban–rural migration and lowers their quality of life due to poor retirement planning. Consequently, these impacts reduce the social participation and wellbeing of the elderly, thereby leading to geriatric depression and other age-related problems.

United Nations released ‘World Population Prospects 2019 (WPP, 2019)’ and proposed that the global population is experiencing ‘rapid aging’ with a simultaneous occurrence of ‘mortality rate greater than the fertility rate’. By 2050, one in six individuals worldwide will be over the age of 65 (16%), up from one in 11 in 2019 (9%). Regions where the share of the population aged 65 years or above is projected to double between 2019 and 2050 include Northern Africa and Western Asia, Central and Southern Asia, Eastern and South-Eastern Asia, and Latin America and the Caribbean. The number of individuals aged 80 years or above is projected to triple, from 143 million in 2019 to 426 million in 2050. Life expectancy at birth worldwide, which increased from 64.2 years in 1990 to 72.6 years in 2019, is expected to increase further to 77.1 years by 2050. While there has been significant progress in decreasing the longevity gap between countries, huge discrepancies still exist. In 2019, life expectancy at birth in the least developed countries lags 7.4 years behind the global average, due to persistently high levels of child and maternal mortality, as well as violence, conflict and the continuing impact of the HIV epidemic. According to the Stanford Center on Longevity’s Sight Lines Project, one out of every three households headed by individuals aged 25–34 years had incomes below 200% of the federal poverty level, which, in turn, had potential negative consequences on their long-term wellbeing (Steve, 2017).

Taiwan had entered an aging society in 1993 (the proportion of the elderly population exceeds 7%) and age society in 2018 (more than 14%); the country is expected to become a super-age society (more than 20%) by 2025. The transition from age society to super-age society is the fastest worldwide. Furthermore, according to the '2020 Report on the Survey of Family Income and Expenditure' (Executive Yuan in Taiwan, 2021), retirees aged above 65 years spend approximately USD 18,900 per household per year. The average retiree household includes 1.93 individuals (comprising an elderly individual living alone, an elderly care recipient and an elderly caregiver or two generations of elderly individuals living together). Thus, each retiree spends USD 793 per month on average (Table 1). According to the Labor Force Participation Rates Report (2020), the number of individuals who continue to work after retiring at 60–64 years of age has increased. The Bureau of Labor Insurance in Taiwan reveal that the average old-age pension benefit applied for elderly is USD 574, whereas the average retirement pension is USD 878. These two revenue amounts are insufficient to cover the daily living expenses of the elderly, unless their medical bills and related care services are covered. In the case of the Social Protection Expenditure in Taiwan (2017), the total expenditure is USD 68 billion, an increase from USD 5.826 billion in 2016, with social benefits accounting for 98.6% of the total at USD 66.8 billion. In terms of social benefits based on function, the 'old age' category received the highest funding at 50.8%, followed by 'sickness and health' at 32.0%. As the conservative strategy of money saving is unable to withstand the pressure of inflation, key measures to achieve a financially independent and comfortable retirement life include advance planning, use of financial instruments, engagement in smart financial management, making prudent choices of investment instruments, and making long-term investments in a disciplined manner to prepare for retirement.

Ira (2021) through the article 'Longevity FinTech: A new contract between finance and aging' states that against the backdrop of population aging and longer life expectancies, staying financially secure with the use of financial technology (abbreviation FinTech) until death is an increasingly daunting challenge. However, the necessary financial instruments or services for the elderly are unintegrated and disorganized. Aging is associated with financial risks for the caregiver and care recipient. For example, those with chronic illnesses that require long-term care have high economic burdens. Terms and concepts, such as elderly financial innovation, financial wellbeing and financial resilience, have emerged in response to population aging worldwide. The following three reasons are more important:

(1) There is a significant gap between working life expectancy, financial life expectancy and physiological life expectancy (relationships between retirement age, healthy life expectancy and average life expectancy are misunderstood).

(2) Existing old-age pension benefit policy and retirement age are unable to keep abreast with healthcare, nursing care and living expenses during retirement.

(3) Many financial products and services previously did not serve elderly individuals.

## 2. Review of policies related to elderly life

(1) The retirement pension benefit planning in Taiwan

The retirement and pension funds comprise two structures in Taiwan. The first tier comprises social insurance and old-age benefits and is supported by the second tier that comprises occupational pensions. Social insurance and old-age benefits include labour insurance, public service insurance, military personnel insurance, farmers' health insurance and national pension insurance. Occupational pensions include labour pension, public service pension and retirement and compensation fund for private schools. According to the Ministry of Health and Welfare's Report of the Senior Citizen Condition Survey (2018), 55.3% of elderly individuals aged above 65 years reported that their income was derived from their own earnings, savings, pension or national pension; 28.4% reported depending on their spouse or children and 15.5% reported receiving government aid or subsidies. Of these elderly individuals, 13.7% were working during the time of the survey, the majority (55.0%) for the sake of their own economic status, whereas 15.6% wanted to contribute as part of the workforce and

11.2% claimed that they were working out of boredom. These reports indicate that the major source of income for elderly retirees is their own earnings.

The White Paper on the Long-Term Care Industry in Taiwan (2021) focuses on the needs of elderly groups and the capacity of the long-term care industry following the implementation of the Long-Term Care Plan 2.0 (LTC 2.0). It creates the first long-term care industry map for Taiwan and offers insights into prospective developments in the long-term care industry. Against the backdrop of rapid aging, it is projected that the long-term care needs in Taiwan would experience an accelerated growth within 5–10 years. The industry in Taiwan is estimated to be worth USD 121.3 billion, offering vast business opportunities. However, elderly groups in Taiwan are burdened with long-term care and family living expenses. According to the Directorate General of Budget, Accounting and Statistics of the Executive Yuan (2021), the primary breadwinner of more than 22% of households in Taiwan in 2019 was a family member aged above 65 years. This reveals that many households still rely on elderly individuals as their main source of income. In terms of retirement planning, more than 60% of the respondents surveyed stated that they had made retirement plans; of these, 61.4% were individuals aged 35–54 years, whereas 71.4% (up 10% from the previous year) were individuals aged 55 years and above. The majority of respondents reported that they spent on average USD 1,012 to USD 1,180 per month; however, they are required to save at least USD 1,90,000 to USD 2,00,000 for their life and care needs during retirement. In reality, the respondents primarily saved between USD 202 and USD 236 (per month) for retirement healthcare and long-term care, which is not sufficient considering the expected amount.

(2) Long-Term Care Plan 2.0

Taiwan consists of 3.804 million elderly people, accounting for 16.2% of the total population. This figure is projected to reach 4.6 million (20% of the total population) by 2025. The LTC 2.0 launched in response to the increasing population in need of long-term care due to disability or dementia (2016). The LTC 2.0 was implemented in January 2017, and from 2018 onwards, a reimbursement and co-payment scheme were introduced to provide a wide range of long-term care services, including home care, day care, in-home nursing care, professional care services, transportation, assistive devices, accessible home modifications and respite care. These services aim to establish a community-based long-term care delivery system. According to the statistics of the Ministry of Health and Welfare, the LTC 2.0 served 357,000 individuals through reimbursements and co-payments. LTC 2.0 coverage was 55%, and 94,000 individuals used residential care services. The reimbursement and co-payment criteria are represented in Table 2.

The LTC 2.0 was launched in January 2017 and has been in operation till date. The LTC 2.0 established diverse and comprehensive and partially integrated services models for elderly groups in response to a super-aged society in Taiwan. LTC 2.0 is community-based service that promotes the creation of caregivers' professional skills, welfare assurance and career promotion. The supply and demand of elderly care services in the market are oriented towards 'industrialization' approach. Considering the economic conditions, the goal might enhance the performance of the long-term care industry based on demand. This relies on professional services and quality management, so as to develop a series of business models and organizations that have their own brand.

(3) Trust Plan 2.0

The LTC 2.0 envisages the goal of aging in place and stresses home- and community-based care services first, followed by institutional care services. This approach encourages elderly groups to age in place or in their homes by enabling them to receive the necessary care assistance and services when in need. Consistent with the global trend of de-institutionalization of living with old age, residential care has shifted from the previous concept of 'moving people to buildings for specific purposes' to 'implementing these purposes in place'. The Financial Supervisory Commission on May 26, 2020 announced its plans to promote the Trust Plan 2.0, which is oriented toward three measures: (1) fostering cross-industry trust by providing diverse services through cross-industry cooperation; (2) creating age-friendly homes and promoting aging in place in response to population aging and (3) enhancing asset management to ensure the economic security of all groups.

Elderly groups often have three major concerns related to their life in retirement—health, economic stability and loneliness. Therefore, the financial industry has developed the following initiatives: trust products for elderly individuals, such as cooperation with nursing institutions and healthcare, and social welfare service providers to provide nursing care, shuttle buses, personal secretary, utility bill payments and caregivers; consolidation of other financial products, such as reverse mortgage plans, long-term care insurance and health insurance; collaboration with the real estate industry to develop trust solutions, build nursing facilities or establish nursing home resident trust funds. These measures aim to enhance the innovation and value of nursing trust funds, strengthen the assets of citizens, ensure that elderly groups meet their care needs and safeguard their economic security.

## 3. Enhance awareness of retirement planning based on the indicators and application of post-retirement income

Based on factors affecting an individual's retirement savings needs, a survey on the financial behaviours of Taiwanese in preparation for their retirement revealed that men were financially better prepared than women (Chung-Hua Institution for Economic Research, 2018). Individuals with a higher educational level, fewer people to provide care for, and lower monthly expenditure were shown to be financially well prepared. The gap between the expected and actual retirement savings increases with an increasing number of people needing care in the household, monthly income and monthly expenditure. On average, respondents are expected to save USD 0.34 million for retirement; however, in reality, this figure was merely USD 0.25 million or a difference of USD 0.09 million. This reveals that the Taiwanese are still not well prepared for retirement.

The typical sources of retirement income include company pension, lifetime financial assets (savings, securities and funds), government pension (labour insurance, public service insurance, military personnel insurance, farmers' health insurance and national pension insurance) and an allowance from the retiree's children. Retired individuals can neither rely on government pensions and allowance from their children nor company pensions as they depend on the type of occupation and job performance. Individuals' lifelong financial assets are the only source of income over which they have complete control. However, the question remains, how do estimate the target retirement income for individuals? It might base on the lifestyles, consumption behaviours during retirement and financial risk tolerance differ, it is difficult to estimate the precise amount an individual should save for their retirement. Thus, the pre-retirement standard of living or consumption behaviour can serve as a basis for estimating an individual's target retirement income. Based on the following individual needs:

(1) If an individual's pre-retirement standard of living ≥ the target retirement income, then they should lower their demands, material desires and expenses during retirement as their income is less substantive.

(2) If an individual's pre-retirement standard of living ≤ the target retirement income, then they would have more opportunities to pursue their desires or aspirations than they did before retirement.

The target retirement income might be based on an individual's current standard of personal consumption, which includes immediate consumption and future investments, as shown in Figure 1. The figure refers to daily living expenses while the latter are current investments made for the future. Therefore, an individual's retirement income should be built on their investments for the future, and such investments may be conservative or aggressive:

(1) Conservative strategies are mainly real estate investment or mortgage, employment (increasing retirement savings through career promotion) and financial products for the elderly.

(2) Aggressive strategies are mainly children-related expenses (raising children as an assurance for old age) and investments. The Middle-Aged and Elderly Employment Promotion Act is prohibiting age discrimination in workplaces, planning subsidies and promoting flexibility in employment. The Act enables workers to continue their labour participation in a super-aged society and encourages employers to hire elderly workers. Thus, an individual can consider adding the income from their re-employment into their target retirement income.

## 4. Conclusion

Retirement financial planning is crucial for all as it is necessary for a secure and comfortable life in old age. Financial instruments for the elderly have shifted from the means to accumulate and achieve an individual's expected income during retirement to the means to plan a wonderful retirement that guarantees a high-quality life and physical and mental wellbeing, which are highly valued by the baby boomer generation (those born between 1946 and 1964 and those who are 58–76 years old in 2022). The main findings on the elderly retirement revenue are listed as follows:

(1) Protection: Prevent scams against the elderly;

(2) Monitoring and managing finances: Optimizing the cost of healthcare (or medical care), social security rights, support for day-to-day expenses and assisting caregivers with the ability to monitor parents' financial situation (this is to assist or provide parents with knowledge or means of properly handling finances);

(3) Longevity issues and retirement planning: Especially for low- and middle-income groups, they need to help them digitize retirement planning and asset planning;

(4) Longevity financial planning: Apply existing assets and skills to fund a longer life, including reverse mortgages, moving into an elderly home or a full-age home (family sharing), and applying skills to generate more income after retirement (re-employment at an advanced age—applying past work expertise or secondary harvest employment—and employment after training for an individual's dream job).

Against the backdrop of the inevitable population aging in Taiwan, citizens should make retirement plans and preparations in advance to cater to their demands at a later stage in life. The best way to reduce financial problems in retirement can be achieved through three strategies: first, by assisting citizens to understand the LTC 2.0 solutions through platforms they are familiar with based on their age group; second, by deploying in advance necessary economic and workforce solutions; third, by understanding the daily living needs of the elderly that fall beyond the scope of the LTC 2.0. There remains a gap between the perceived longevity risk and pension savings of elderly groups, as majority are not well prepared and possess limited knowledge about the expected length of their retirement life, their actual expenses during retirement and impacts of inflation. Thus, individuals should prepare and adjust their asset allocation strategies based on their age to prevent economic hardships during retirement. This assures that they will be able to reap the benefits of asset appreciation as well as lead a high quality of life.

**Refrences**

[1] Directorate-General PF Budget, Accounting and Statistics.(2021) Report on the survey of family income and expenditure[online]. Executive Yuan, Republic of China.https://win.dgbas.gov.tw/fies/doc/result/109.pdf (Accessed Day Month Year).

[2] Financial Supervisory Commission. (2020) Trust 2.0 plan [online] https://www.fsc.gov.tw/ch/home.jsp?id=834&parentpath=0%2C2%2C310 (Accessed Day Month Year).

[3] Industrial Technology Research Institute. (2021) White paper on the long-term care industry in Taiwan [online].https://www.itri.org.tw/ListStyle.aspx?DisplayStyle=01_content&SiteID=1&MmmID=1036276263153520257&MGID=110091517021658348 (Accessed Day Month Year).

[4] Ira S. (2020) Longevity FinTech: A new contract between finance and aging, Longevity Technology.https://www.longevity.technology/longevity-fintech-a-new-contract-between-finance-and-aging/(Accessed Day Month Year).

[5] Ministry of Health and Welfare. (2018) Report of the senior citizen condition survey 2017. https://dep.mohw.gov.tw/dos/lp-5095-113-xCat-y106.html (Accessed Day Month Year).

[6] Ministry of Health and Welfare. (2016). Long-term Care 10 years plan 2.0(2017~2026). https://1966.gov.tw/LTC/cp-5200-42415-201.html(Accessed Day Month Year).

[7] Steve V. (2017). Life planning in the age Of longevity-Insights for millennials, Stanford Center on Longevity. https://longevity.stanford.edu/working-longer-retirement/wp-content/uploads/sites/9/2017/02/Life-Planning-Millennials.pdf (Accessed Day Month Year).

[8] True Link Financial. (2015) True link report on elder financial abuse. http://documents.truelinkfinancial.com/True-Link-Report-On-Elder-Financial-Abuse-012815.pdf (Accessed Day Month Year).

[9] United Nations. (2019) World population prospects 2019. https://www.un.org/en/desa/world-population-prospects-2019-highlights (Accessed Day Month Year).

[10] (2019) World population prospects 2019: Highlights, United Nations, 2019. URL (Accessed Day Month Year).
[11] (2017) World population prospects: The 2017 revision, United Nations, 2017. URL (Accessed Day Month Year).
[12] World Health Organization. (2015) World report on ageing and health. URL (Accessed Day Month Year).

**Table 1. Household Income and Expenditure Survey Report in 2020 - Average disposable income and consumption expenditure per household by age group (Taiwan)**

| All families | Number of households | Average number of households | Disposable income | Personal consumption expenditures (PCE) |
|---|---|---|---|---|
| All families | 8,829,46.6 | 2.92 | 1,079,648 | 815,100 |
| Divided by age group | | | | |
| Under 30 years of age | 382,389 | 3.08 | 1,043,728 | 809,874 |
| 30–34 years old | 501,539 | 3.33 | 1,172,666 | 896,749 |
| 35–39 years old | 821,815 | 3.52 | 1,203,941 | 932,019 |
| 40–44 years old | 1,011,760 | 3.58 | 1,194,688 | 931,972 |
| 45–54 years old | 2,018,969 | 3.35 | 1,262,118 | 936,881 |
| 55–64 years old | 2,012,386 | 2.80 | 1,193,435 | 830,802 |
| Above 65 years old | 2,080,608 | 1.93 | 671,672 | 560,003 |

Source: Household Income and Expenditure Survey Report in 2021, (https://win.dgbas.gov.tw/fies/a11.asp?year=109)

**Table 2. Benefits of the Long-Term Care Plan 2.0.**

| Item | Related content |
|---|---|
| Objectives | To realize aging in place by providing a wide continuum of integrated support services, from family care, home care and community care to residential care, coupled with extending the scope of the service system and establishing community-based care networks. These measures are expected to improve the quality of life of long-term care recipients and their caregivers. |
| Key evaluation issues | The categories of long-term care need and the maximum benefit of long-term care services. |
| Categories of long-term care needs | There are eight categories of long-term care needs; however, eligible individuals must meet the criteria under Category 2 (or above) and any one of the following:<br>1. Individuals aged above 65 years;<br>2. Individuals with a certification of disability;<br>3. Indigenous people aged between 55 and 64 years; or<br>4. Individuals with dementia aged above 50 years. |
| Maximum benefit of long-term care services | There are two categories: individual long-term care services and family caregiver support services (respite care), which are not interchangeable. Benefits of individual care services include (1) provision of care and professional services; (2) transportation subsidies and (3) assistive devices and accessible home modifications (the coverage limits might search |

| | |
|---|---|
| | from https://1966.gov.tw/LTC/cp-4212-44992-201.html). |
| Co-payment schemes | The co-payment rate for long-term care services is determined by long-term care recipient category: low-income groups (co-payments waived); low-to-middle-income groups (co-payment of 5%) and general groups (co-payment of 16%). |
| Ineligibility criteria | 1. Users of institutional residential long-term care services.<br>2. Those in need of long-term care services who have employed foreign caregivers or are receiving special care subsidies from the government will only be covered for 30% of such caregiving and professional services. |
| Self-payment requirements | 1. Those who have exceeded the authorized long-term care service benefits (must meet the aforementioned Category 2 and above and must be receiving the authorized long-term care service benefits for that category);<br>2. The rental or sales price of a single assistive device exceeds the specified coverage limit for the device;<br>3. With the exception of long-term care recipients, a household with other family members who are not in need of long-term care will self-pay the costs of long-term care according to the specified rates. |

**Figure 1. Retirement income indicators of elderly**

<table>
<tr><td>81.3-year-old<br>Life Expectancy</td><td>Accommodation elderly residence with long-term care service</td><td colspan="2" rowspan="2">Retirement income targets</td></tr>
<tr><td>72.3-year-oldHealthy<br>Life Expectancy</td><td>Elderly health homes or aging in Place</td></tr>
<tr><td>65-year-old<br>Legal retirement age<br>LTC Plan 2.0</td><td>1. Child-related expenses (Asian family ethics for raising children and preventing old aging, regarded as future investments)<br>2. Savings (especially retirement savings)<br>3. Real estate purchase or mortgage<br>4. Employment expenses (career development and promotion to improve pension provision)<br>5. Heritage<br>6. Income tax<br>7. Investment business expenditure<br>8. Financial commodity planning for the elderly (aging fund)</td><td>Personal consumption</td><td>Invest in the future</td></tr>
</table>

| | | | |
|---|---|---|---|
| 18-year-old<br>Legal working ageTrust plan 2.0 start | 1. Daily life consumption (food and clothing education leisure and entertainment)<br>2. Real estate costs (home insurance and real estate taxes) and rent (if there is no real estate)<br>3. Home décor and equipment<br>4. Transportation and tourism<br>5. Insurance (non-lifetime)<br>6. Healthcare and personal beauty | | **Consume now** |
| Under 18-year-old | No work productivity | | |
| **Age axis** | **Retirement income indicators and old age living planning expenditures** | **Goal of retirement income and work income** | |