

Private Long-Term Care Insurance in a Super-Aging Society: A Purchasing Motivation Study in Hong Kong

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Key points

- Analysis of middle-aged individuals' willingness to purchase hypothetical private long-term care insurance plans as determined in a discrete choice experiment.
- A fairly encouraging acceptance rate for long-term care insurance was found, while barriers that might discourage purchase were identified.
- Discussion of major factors that encourage or discourage individuals' interest in purchasing long-term care insurance.
- Policy implications for long-term care reforms in Hong Kong and beyond.

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Policy Focus

Hong Kong, a rapidly aging society, has been grappling with daunting challenges associated with long-term care (LTC) financing. This problem reflects Hong Kong's very long average life expectancy (as of 2019, 82.2 years for men and 88.1 years for women) and very low fertility rate (1,051 births per 1,000 females in the population). The population of citizens aged 65 and above reached 1.31 million (i.e., 17.6% of the total population) in 2019, with the percentage projected to rise as high as 35.9% by 2069. The elderly population (i.e., those aged 85 years and above) is expected to grow faster than the remaining age cohorts (from 153,000 in 2014 to 724,000 in 2064). The HKSAR

government has been contemplating the promotion of private LTC insurance to diversify its financing base. This Bulletin introduces a paper by He et al. (2023) that investigated motivations for purchasing LTCI in Hong Kong and addresses the following questions:

- What factors determine individuals' willingness to purchase LTCI?
- What factors discourage interest in LTCI?
- What policy-making implications are to be drawn from the study?

A 2008 survey conducted in Hong Kong estimated that 280,500 community-dwelling elderly individuals required assistance in daily living, but only 47.6% were served by caregivers, of whom 65.6% received care from family members and 25.6% were supported by domestic helpers. (Census and Statistics Department, HKSAR 2009). The current situation, in which the lion's share of total LTC costs are paid out of pocket, represents a catastrophic financial risk for older adults. Conventional economic theories suggest that its high cost and low probability of being needed make LTC dependency an ideally insurable risk, but it faces a paradox that reflects a remarkably underdeveloped LTC insurance market, even in fully mature market economies.

On the other hand, an individual's decision to purchase insurance is determined not only by self-assessment of risk and anticipated needs but also by the structural features— coverage, premium, and term length of insurance plans. Previous studies have found that income, financial status, and bequest motives are closely related to individuals' decisions to purchase LTCI. The value individuals place on LTCI depends on their beliefs about their future care needs. Some factors have been shown to crowd out the wish to purchase LTCI, such as the presence of children who can provide informal care.

Hong Kong is an ideal place in which to study and experiment with private LTCI to offer useful guidance to other aging societies; apart from its super-aging characteristic, the city is an international finance hub with a highly developed insurance industry where the extensive penetration of private insurance reflects wide public acceptance.

Study Methodology

This study used actuarial projection to compute the attributes that indicate willingness to purchase and pay the premiums charged for LTCI plans; the hypothetical plans were built on Anderson's behavioral model of health services. A discrete choice experiment was then conducted to determine which of the hypothetical plans was most appealing to middle-aged respondents. Because the COVID-19 pandemic was in progress during this investigation, a telephone survey was adopted instead of a standard household survey. A tobit model was used for multivariate analysis and a robustness check was performed to corroborate the statistical results using a fractional probit model.

The three groups of factors illustrated in Anderson's model have been applied widely in LTCI studies; these are predisposing, enabling, and needs factors. Predisposing factors, such as age, gender, and belief, exist before care uptake but may influence behaviors related to purchase decisions. Enabling factors facilitate or inhibit the purchase of LTCI, and these include income, assets, financial literacy, and cognitive capacity. Needs factors represent perceived or real needs for LTC

that directly influence purchase decisions.

Plan Parameters	Plan 1	Plan 2
Monthly benefit	HK\$20,000	HK\$20,000
Inflation protection	3% Annual growth	Nil
Years of premium contribution	15 Years (age 50-65)	35 Years (age 30-65)
Monthly premium	HK\$1,237 (men) HK\$2,150 (women)	HK\$180 (men) HK\$298 (women)

Table 1. Hypothetical LTCI plans designed for the study

Employing a two-stage stratified sampling method for this study, invitations were first sent to a random sample of household addresses drawn from registered quarters and segment samples were obtained from the Census and Statistics Department. A household member aged 40-59 was then chosen using the "next birthday" method to ensure unbiased random selection. The sample in this study closely resembles the overall demographic characteristics of the Hong Kong population, as those aged 50-59 years in Hong Kong occupy 51% of the middle-aged group (40-59 years), and women account for 57% of the entire middle-aged group. The key features of both plans were presented to the respondents, who were instructed to indicate their willingness to subscribe on a 0%-100% scale. All those who did not indicate full willingness (did not select 100% on the scale) were asked to choose from a list of reasons, including dissatisfaction with the terms, lack of available alternative funding, distrust of commercial insurers, the belief that it is government's responsibility to finance LTC, the desire to reserve funding for bequests, lack of familiarity with private LTCI, and others.

The predisposing factors were presented using binary variables: sex (1=female), age (1=50-59 years old), marital status (1=married), parenthood (1=having at least one child), education (1= some tertiary education), living arrangement (1= living alone), availability of family care (1=available). Four attitudinal statements about LTCI were included to indicate bequest motives, formal care preferences, the principle of familial obligation, and concerns about insurers.

Findings and Analysis

Table 2 summarizes the basic statistics extracted from the survey. The preference for Plan 1, as shown in the table, is higher than that for Plan 2, indicating that middle-aged adults find the primary insurance product generated for the discrete-choice experiment more appealing than other cohorts do. Around one-fifth of the respondents attributed their lack of interest to their

lack of familiarity with the LTCI market. More than three-quarters of the respondents anticipated some LTC needs in old age. Almost two-thirds of the middle-aged adults in the study expected family care to be available should LTC needs arise, and only 9.1% anticipated living alone in old age. Anticipated dependence in old age powerfully predicted interest in both plans; the presence of cognitive difficulties hampered some of the respondents from making proper judgments regarding financial planning, which is unsurprising and reduced interest in the hypothetical purchase. Women were found, with higher statistical significance, to be less likely to purchase either plan, and therefore we posited that reluctance to purchase on the part of women owes primarily to the high annual premium at HK\$25,440, compared with the premium of HK\$14,884 for men. Women are understandably more conservative when considering such a hypothetical purchase.

Variables	Percentage (%)
Interest in Plan 1	61.59
Interest in Plan 2	46.72
Female	60.7
Age 50-59	53
Married	86.6
Having at least 1 child	80.2
Tertiary education	21.2
Bequest motive	60.3
Preference for formal care	72.2
Concern on insurers	32.7
Low income (<10K/month)	28.2
High income (>30K/month)	16.8
Ability to afford premium	56.7
Anticipated dependence	76.8
Chronic condition	36.4
Insurance ownership	73.1

Table 2. Statistical summary of survey results

Hesitancy to make long-term premium commitments

The discrepancies generated between the statistical patterns for Plan 1 and Plan 2 can be explained by reference to salient differences in the key features of the two hypothetical products. Plan 1 provides a shorter payment period with a higher monthly premium, while Plan 2 trades off a much longer payment period in exchange for a significantly lower monthly premium. The factors denoted by "concerns about insurers" and "financial literacy" apparently reduce respondents' interest in Plan 2, while these factors are negligible for Plan 1. This finding could be attributed to Plan 2's smoothing of the total premium across a very long period of 35 years, which naturally aroused concern about uncertainties related to financial risks and insolvency that insurance companies might face over the course of such long-term contractual relationships.

Strong desire for self-reliance among middle-aged adults

The survey result indicates that many respondents have a strong wish for self-reliance. Half of the respondents believed that supporting LTC is primarily a familial obligation, reflecting habitual adherence to out-of-pocket payments of LTC expenses. Most respondents indicated personal savings as their principal source of LTC financing, and nearly half reported that they would pay for LTC using social welfare benefits. Around 60% expressed a bequest motive to leave considerable money to their children. For both Plan 1 and Plan 2, respondents holding other private insurance policies were more likely to indicate willingness to purchase LTCI, arguably because they preferred risk aversion. The statistical significance of negative responses to "familial obligation", a preference for formal care, and private insurance ownership appears to reflect a desire for self-sufficiency in paying for LTC expenses.

In our sample, middle-aged adults (those born between 1961 and 1980) show a remarkably strong preference for formal LTC in residential or community settings, and this preference seems to have reinforced their interest in purchasing private LTCI. The prospect of support from family members appears to have been unimportant to respondents, as it seems not to have dampened interest in LTCI purchases. These results mirror the notable changes in family structure and intergenerational dynamics that have occurred recently within families in Hong Kong. The current cohort of middle-aged Hong Kong adults is more economically independent than earlier generations and appears to have formed much lower expectations that their children or families will be the chief sources of LTC support. In fact, should chronic disability occur, they do not expect their children to support them in monetary or even in-kind terms.

The effects of higher education, higher income, and the bequest motive

Higher education was associated with a significantly weaker intention to purchase Plan 1. Studies suggest that higher education increases both risk aversion and the willingness to delay gratification for future benefits, a phenomenon denoted as "temporal discounting". Respondents with more advanced educational attainment tend to prefer paying premiums over a longer period when making such decisions.

On the other hand, higher-income respondents and those who reported having the capacity to pay for LTC with savings demonstrated less interest in the hypothetical insurance products. Higher income was also strongly associated with negative acceptance of Plan 1; this non-purchase intention may be explained in part by these respondents' confidence in their capacity

to absorb LTC expenses with retirement savings.

The bequest motive was not a statistically significant factor in explaining purchase interest. The empirical results indicate diminished importance of the bequest motive when compared with what previous studies (including those carried out in Chinese settings) have found. While earlier studies have found this motive to be a significant factor in senior financial planning, the results of this study suggest otherwise. Some major changes in family values, individualism, and independence are shaping the financial planning behaviors of middle-aged adults in Hong Kong.

Recommendations

Calling for sound real-world actuarial analysis

Many post-industrialized societies like Hong Kong have been experiencing major changes in societal values, family structure, and intergenerational relations; the value of self-reliance and the preference for formal care are evidently on the rise, and such changes have provided profitable opportunities for the development of LTCI. This survey study was based on a discrete choice experiment built on actuarial projections; several important assumptions were made when performing the actuarial analysis that may not fully hold; and the hypothetical plans that the study presented to respondents were illustrative in nature and may not necessarily reflect what an actual launched product would look like in the real LTCI market. As a result, a sound real-world actuarial analysis is required to meet basic principles associated with commercial insurance, and insurance product design should consider socioeconomic and cultural dynamics.

Calling for public education programs and information campaigns

Although the literature does not suggest an especially bright prospect for private LTCI even in free-market economies, middle-aged individuals surveyed for this study seem receptive to LTCI, as the response rate was as high as 60%. Given their lack of familiarity with the LTCI market (even though most demonstrated a basic level of financial literacy) and habitual adherence to conventional ways of financing LTC costs such as

savings and assets, however, the majority of these better-off middle-aged Hong Kong residents seem to believe that their LTC needs can be met by hiring domestic helpers and providing self-insurance, limiting their interest in LTCI. As a result, public education is necessary to inform members of high-income, super-aging societies about LTCI.

On the other hand, although the LTCI paradox may result in part from the intrinsic characteristics of insurance plans themselves (such as the high premium cost in the hypothetical package), demand-side issues are responsible to a larger extent for the underdevelopment of the LTCI market: low awareness of LTC costs, short-sightedness, and habitual adherence to out-of-pocket payments of LTC costs from savings or assets (instead of subscribing to prepaid insurance plans that offer fairly generous packages, even in a society like Hong Kong, with a highly developed finance industry and wide coverage of commercial insurance). Lack of familiarity with LTCI and concerns about commercial insurers will likely discourage consumer acceptance. Education and information campaigns could clear away these hindrances on the way to understanding and accepting LTCI.

Main Reference

He, Alex Jingwei, et al. "Willingness to Purchase Hypothetical Private Long-Term Care Insurance Plans in a Super-ageing Society: Evidence from Hong Kong." *Journal of Aging & Social Policy* (2023): 1-26.



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