**Influence Factors of Attitude of Offspring on the Demand for Housing Reverse Mortgage Endowment Insurance in China**

Yue Zhang

*School of Insurance, University of International Business and Economics, Beijing, 100029, China*

942620135@qq.com

*Corresponding author: zy18349371769@163.com*

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**Abstract:** Based on the Logistic model and the survey data of residents in Gansu, China, this paper made an empirical analysis on the influencing factors of their elderly's willingness to participate in the reverse mortgage endowment insurance from four aspects including the characteristics of residents, economic status, cognition of this insurance and traditional social concepts. The results show that offspring's age, number of siblings, education level, the elderly's marital status, the elderly's physical condition, offspring's monthly income, offspring's monthly expenditure, offspring's occupation type, offspring's cognition of this insurance, the number of houses owned by the elderly, the willingness of offspring to participate in this insurance are significant influencing factors for offspring to choose whether to support their elderly to participate in housing reverse mortgage endowment insurance. Combined with the research results, the characteristics of potential demand customer groups for the insurance companies to carry out the housing reverse mortgage endowment insurance business were determined, and the policy suggestions were put forward: strengthening the scientific publicity of the housing reverse mortgage endowment insurance; The government provides security, improves relevant laws and regulations, and establishes and improves the implementation system of housing reverse mortgage endowment insurance. The insurance company designs products reasonably and flexibly.

1. **Introduction**

The problem of population aging has a profound and lasting impact on the whole society. According to demographic change data released by China's national bureau of statistics, China now has a resident over the age of 60 in less than four seconds, well above the international norm for an aging society. Under the background of getting old before getting rich, a large number of elderly groups bring great challenges for the society to cope with the aging of the population. In particular, under the "4-2-1" family structure, which is common in China's one-child policy, the family pension function is weakened. In addition, China's pension fund gap, pension fund imbalance has existed for a long time.

Under the influence of many factors, China's pension business is facing great challenges. Therefore, it is urgent to explore a new way of providing for the aged in line with China's national
conditions to broaden the elderly's choice of providing for the aged. In 2003, Dr. Meng Xiaosu, known as "the father of Chinese real estate", put forward the concept of "reverse mortgage", and this method began to be understood by Chinese people. Back in the 1960s, the Netherlands began to experiment with this new way of providing for the elderly. Subsequently, the United States, Canada, Britain and other countries also began to promote.

This way of providing for the aged has attracted wide attention from all walks of life. Nowadays, young people are under great pressure to provide for the aged. Under this mode, it can not only greatly reduce the pressure of supporting offspring, but also greatly improve the quality of life of the elderly. In China, government-led housing reverse mortgage pension insurance started to be carried out in Nanjing and Shanghai in 2006, and commercial bank-based housing reverse mortgage pension insurance began to be promoted in 2011. Communities, nursing homes, funds and enterprises also carried out relevant businesses, but they were always popular. In September 2013, China issued the opinions of the state council on accelerating the development of old-age care service industry, encouraging private capital investment and financing to carry out the pilot of reverse mortgage old-age insurance for the elderly in order to face the rapidly developing aging population. In June 2014, the Chinese government issued the guidelines of the China insurance regulatory commission on the pilot of reverse mortgage housing endowment insurance for the elderly, marking the official start of reverse mortgage housing endowment insurance in Guangzhou, Shanghai, Wuhan and Beijing for two years. In the golden age of providing for the aged is about to come, those who greet housing reverse mortgage endowment insurance pilot is just inside 3 years however valid insurance policy 70, involve the 98 old person of 70 families only.

Although housing reverse mortgage pension insurance can not only guarantee the right of residence for the elderly, but also increase their liquidity assets and improve their quality of life. However, in reality, housing reverse mortgage pension insurance is met with cold: since the pilot, in China, only one insurance company in the supply side, happy life, has made substantial progress and launched a product -- "happy house noble elderly housing reverse mortgage pension insurance". Due to the fact that the pricing of this product involves real estate mortgage and life annuity, the "70-year property right" system in the real estate market and the potential price volatility risk, the insurance company cannot accurately price the product, and the product promotion involves many departments, so it is extremely complicated. On the other hand, influenced by traditional ideas, old people is a relatively weak demand for this product, want to leave home ownership to her offspring in order to realize the intergenerational transfer of wealth, family and offspring don't agree with the elderly mortgage free housing consumption psychology cause only a small number of families are willing to take the way of housing reverse mortgage endowment insurance.

2. A Brief Historical Perspective

The Netherlands is the origin of reverse mortgage insurance, followed by the United Kingdom, the United States, and Japan. At present, the reverse mortgage insurance business in the United States is the most mature, with flexible products. Consumers can choose not only fixed-rate loans, but also adjustable-rate loans. There are many ways to pay: there are not only regular annuities, but also annuities for the life of your home. As early as in 1984, Maurice D.1 believed that only the elderly with low income and no offspring could have the demand for housing for the elderly. In 1991, Venti S F.2 The analysis shows that the housing reverse mortgage pension insurance may lead to residents' fear that the rise in housing prices will lead to the loss of appreciation, and lead to their

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1 Maurice D. Weinrobe. Consumer Safeguards for Financial Instruments Unlocking Home Equity for the Aged[J]. Journal of Housing For the Elderly,1984,2(2).
2 Venti S F. 1991. But They Don't Want to Reduce Housing Equity. NBER Working Papers: 13-32
reluctance to obtain funds through the housing reverse mortgage pension insurance.

In 2004, scholars represented by Mitohen took Japan as the research object, which showed that only when the government attached great importance to and provided financial support to the housing reverse mortgage pension insurance could large-scale business be carried out. George Liondis (2005) also investigated the Australian pension market and believed that the promotion of housing reverse mortgage pension insurance might substantially improve the quality of life of local elderly residents. Shan and Shop (2008), from the perspective of fha profitability, believe that only reasonable prediction of mortality rate, cash flow structure and housing price volatility can ensure sustained profitability. Hui Shan (2009) analyzed participants' data of reverse mortgage insurance and found that consumers were more willing to participate in reverse mortgage insurance when the real estate market in a certain region was at its peak. This study also explained the rapid development of reverse mortgage insurance when the real estate market was booming in the United States around 2004.

In China, scholars with positive opinions believe that housing reverse mortgage pension insurance is a positive supplement to China's pension security system, especially for families who have lost their only child, because there is no traditional inheritance motive, and housing reverse mortgage pension insurance can help such families build a social support system. A negative opinion of the scholars think that the traditional concept of bondage, incomplete financial markets and so on the existence of objective factors make this way would not be widely available: the premise of yuan ouyang (2008) scholars believe that although the country actively carry out pilot housing reverse mortgage insurance, but because of the lag of relevant legal policy, is not conducive to the development of the housing reverse mortgage insurance; Li tang ning (2011) pointed out that the "70-year property right" system in China would make participating institutions reluctant to carry out reverse mortgage insurance for housing. Li yue (2012) and tao liqun (2013) believe that the uncertainty of the future trend of China's housing prices will also affect participants' willingness to participate.

In order to further demonstrate which factors affect residents' choice of housing reverse mortgage pension insurance, Chinese scholars conducted researches from the following aspects: Zhen-wu shi, yuen, sweet, using Logistic model, the empirical study of Harbin city people, the results showed that men than in women, on the lower income level, educational level, health conditions, have poor relationship with their offspring, who owns a property, only the more understanding of housing reverse mortgage endowment enterprise, less spiritual solace of the offspring to the elderly are more inclined to choose the housing reverse mortgage endowment insurance; Qu xiaomin also used Logistic model to analyze the results: the elderly with good health status, high education level, spouse and dissatisfaction with their offspring's support are more likely to accept house-based pension. On the basis of the previous two analyses, xiong jingwei et al. found that the intergenerational relationship significantly affected the participation intention of the elderly, and the supportive attitude of offspring had a positive impact on the elderly's choice of housing reverse mortgage endowment insurance.

In terms of policy Suggestions, scholars from all sides have made Suggestions from various aspects: zhang lechuan (2010) proposed that China should improve the role of housing reverse mortgage insurance in the social pension system and weaken the family pension model; Tang xu (2011) suggested that the government could provide partial capital subsidies to participating institutions of reverse mortgage insurance for housing, so that the reform insurance could be carried out smoothly in the initial stage. Zhang renfeng (2012) pointed out that if housing reverse mortgage insurance is to be promoted on a large scale, China's real estate market needs to undergo a necessary transformation.

Because developed countries such as Europe and the United States entered the aging society
around 1970, scholars in Europe and the United States carried out researches on housing reverse mortgage endowment insurance earlier, and the researches were relatively mature and extensive. However, compared with China, Europe and the United States do not have a deep-rooted idea of inheriting offspring, so we should take China's national conditions into consideration on the basis of learning from existing foreign studies. Since Japanese and Chinese traditional concepts are similar, the subsequent in-depth study of Japanese pension market has a reference role for the development of China's housing reverse mortgage pension insurance.

For housing this pension mode of reverse mortgage endowment insurance, Chinese scholars attend housing reverse mortgage endowment insurance for the elderly will influence factors of the empirical studies have been relatively full, and the research shows that offspring's attitude to whether the elderly choose to participate in the housing reverse mortgage endowment insurance has a significant effect: on the one hand, the elderly age longer, it is difficult to separate the rational choice and decided to pension, so the majority of the elderly will solicit opinions of the offspring; On the other hand, considering that the choice of housing reverse mortgage endowment insurance may cause the offspring to be unable to inherit the property after a hundred years, thus causing the risk of complaints from the offspring, the elderly are more inclined to ask their offspring about their attitudes. Therefore, from the perspective of the elderly offspring, this study conducted an empirical study on the influencing factors behind the the elderly' attitude of supporting or opposing housing reverse mortgage pension insurance, and explored which factors would influence their the elderly' support or opposition to housing reverse mortgage pension insurance.

3. Purpose of the Study

This article hopes to the elderly for their offspring for the attitude of the housing reverse mortgage endowment insurance for empirical research, analysis influence offspring support or oppose the elderly factors participating in the housing reverse mortgage endowment insurance, according to the research results of the analysis, thus help insurance companies determine the housing reverse mortgage endowment insurance offspring characteristics of the target group, combined the technology of big data, targeted to the crowd in the publicity and promotion. Theoretically, to promote the development of reverse mortgage insurance for housing, on the one hand, to realize the innovation of financial insurance instruments, is very beneficial to the diversified development of Chinese insurance companies; On the other hand, it enriches the existing pension mode in China. In reality, the elderly can cash in their existing houses to improve their quality of life and stimulate their consumption market. Advocate independence for offspring and reduce family disputes over inheritance.

4. Research Methods

At present, there is no relevant research on offspring's attitude towards their the elderly' insurance of housing reverse mortgage endowment insurance. Therefore, on the basis of a large number of literatures, this paper draws on the existing results and introduces 15 variables of 4 kinds of factors. From the perspective of offspring, this paper studies offspring's attitude towards their the elderly' insurance of housing reverse mortgage endowment insurance. Logistic model was used to explore the influencing factors of offspring's attitude to their the elderly' housing reverse mortgage endowment insurance, so as to fill the research gap in this field.

5. Study Hypotheses

The conclusion obtained based on the related literature with offspring aged family don't want to
choose the housing reverse mortgage endowment insurance is important because the traditional ideas, the idea of "support" restricts the old people's choice of the new endowment way, for the most part the elderly worried that participating in the housing reverse mortgage affect after the endowment insurance and their offspring's feelings. However, due to the development of The Times, offspring born in the 1980s and 1990s have a more tolerant idea about whether to inherit their the elderly' property, so what the elderly worry about is not necessarily what their offspring worry about. If offspring can to some extent support their the elderly to create a better life for the elderly through the housing reverse mortgage pension insurance, the housing reverse mortgage pension insurance will be further developed in China. Based on the relevant data of questionnaire survey on residents' intention of housing reverse mortgage pension insurance in Gansu province, this study will explore the reasons and influencing factors of offspring's support for or opposition to their the elderly' housing reverse mortgage pension insurance, and further analyze the feasibility of implementing housing reverse mortgage pension insurance in China.

According to the research needs, this paper takes the attitude of offspring supporting their the elderly to participate in the housing reverse mortgage endowment insurance as the dependent variable for regression analysis. Offspring support or oppose the elderly to participate in the housing reverse mortgage endowment insurance is affected by individual and family factors. According to netsnake look from an aging population in the opportunities and challenges in the development of Chinese life insurance is the conclusion, the life insurance demand by the economic environment, people awareness of risk, family structure, recognition of life the influence of such factors as people, therefore, in this paper, combining with the characteristics of housing reverse mortgage endowment insurance, the selection of residents' own characteristics, economic conditions, pension cognitive situation, the social traditional ideas in four aspects of common variables as explanatory variables. Among them, the characteristics of residents include gender, age, marital status of the elderly, education level, physical condition of the elderly, number of siblings, and occupation type. Financial status includes personal income (monthly), personal expenses (monthly), the number of houses owned by the elderly, and whether the the elderly have endowment insurance. Pension cognition includes monthly pension expense expectation (assuming no inflation is taken into account), housing reverse mortgage pension cognition, and own housing reverse mortgage pension intention. The traditional concept of society mainly refers to offspring's desire to inherit. The definition and description of relevant variables are shown in table.

| variable | Variable assignment | Anticipation |
|----------|---------------------|--------------|
| Support your the elderly' willingness to use the house for retirement | Against the elderly to participate in the housing pension=0; Support the elderly with a house =1 | |
| Characteristics of residents themselves | | |
| Gender | F = 0; M = 1 | positive |
| Age | Age 44 and below =0; Age 45 and above =1 | negative |
| Level of education | High school, technical secondary school and below =0; College, bachelor or above =1 | positive |
| Physical condition of the elderly | Good = 0; Poor = 1 | positive |
| Number of siblings | No siblings =0; One or more =1 | negative |
| Marital status of the elderly | Married and spouse built at =0; Divorced, married and deceased spouse =1 | positive |
| Professional types | Establishment of public institutions, state-owned enterprises and civil servants =0; Other = 1 | positive |
| State of the economy | | |
| Personal income (monthly) | 5000 yuan and above =0; Less than 5000 yuan =1 | positive |
|--------------------------|-----------------------------------------------|----------|
| Personal expenses (monthly) | More than 80% of income goes to consumption =0; Consumption of less than 80% of income =1 | negative |
| the number of houses owned by the elderly | 1 set = 0; 2 sets and above =1 | negative |
| Whether the elderly have endowment insurance | Both parties have endowment insurance =0; Both parties have endowment insurance =1 | negative |
| Cognition of old-age care | | |
| Their monthly pension cost expectations | 3000 yuan and below =0; Above 3000 yuan =1 | positive |
| With the room endowment cognition situation | Understand = 0; never heard =one | negative |
| Oneself with room endowment intention | Can try = 0; Never mind =1 | positive |
| Social traditional concept | | |
| Offspring’s inheritance | Other approaches to heritage =0; Offspring’s inheritance =1 | negative |

6. Data Sources

From January to March 2019, random sampling and non-random quota sampling were conducted on residents in Gansu province, China. A total of 400 questionnaires were issued, 388 were recovered, and 359 were valid. 346 samples were selected from those whose the elderly owned at least one house for analysis. The reason why this paper chooses residents of Gansu province as the research object is that Gansu province, as a typical representative of northwest China, has a backward pension service industry as a whole. Therefore, the research conclusion of this paper can reflect the potential of housing reverse mortgage pension insurance in underdeveloped areas.

7. The Regression Model

In this paper, the intention to support the elderly’s housing reverse mortgage endowment insurance and its influencing factors are expressed as $Y = f(X_1, X_2, X_3, X_4) + \varepsilon$, where $X_i$ means 4 kinds of factors, and $Y$ is the explained variable. That is, whether offspring support their the elderly's housing reverse mortgage pension insurance, support =1, opposition =0, which is a binary variable, so the binary Logistic regression model is adopted.

8. Regression Results

For the housing reverse mortgage pension insurance, 84% of residents support their the elderly to participate in the housing reverse mortgage pension insurance, while 16% oppose. Although the proportion of support is not high, it can be said that some residents have already accepted the new way of caring for their the elderly and do not mind whether or not to inherit their the elderly' inheritance.

Logistic regression was carried out on the 346 valid sample data processing: gender, age, number
of siblings, the elderly, cultural degree, marital status, the elderly body status, monthly income, spending a month have endowment insurance, occupational type, the elderly, offspring inherit, housing reverse mortgage endowment insurance cognitive situation, its pension monthly fees, the number of houses owned by the elderly, housing reverse mortgage endowment insurance will 15 influencing factors as independent variables, offspring choose the elderly the attitude of the housing reverse mortgage endowment insurance as a dependent variable. Show that the fit of the model is good, age, number of siblings, culture degree, the elderly' marital status, the elderly' health, monthly income and spending a month, professional type, the housing reverse mortgage endowment insurance cognitive situation, the number of houses owned by the elderly, housing reverse mortgage endowment insurance will ten factors effect is remarkable.

9. Conclusions

The Logistic regression analysis method was used in this paper, and the results showed that the majority of residents in gansu had a positive attitude towards their the elderly' choice of housing reverse mortgage endowment insurance and were willing to try to participate in this pension mode. According to the data analysis, the main influencing factors are age, number of siblings, education level, the elderly' marital status, the elderly' physical status, monthly income, monthly expenditure, occupation type, housing reverse mortgage pension awareness, the number of houses owned by the elderly, their own housing reverse mortgage pension intention.

In order to promote the smooth promotion of housing reverse mortgage pension insurance in Gansu province, this paper gives the following Suggestions:

First, the Chinese government and insurance institutions strengthen the scientific publicity of housing reverse mortgage endowment insurance. According to the research conclusion of this paper, residents who understand the housing reverse mortgage endowment insurance are more likely to support their the elderly to participate in the housing endowment insurance, so it is a new product whose promotion is based on public acceptance and recognition. Early cold is inevitable, as the most mature way to provide for the elderly in the United States is also launched after 10 years after the start of the general acceptance of the United States residents. The government and insurance institutions can publicize through various media to encourage residents to break the traditional concept and try the new pension mode of reverse mortgage housing. In particular, insurance companies can make use of the advantages of multi-channel sales and use third-party channels to publicize on the platform of part-time insurance agents. Combined with the research conclusions of this paper, targeted publicity can be conducted on the only offspring over the age of 45, with high education, non-public institutions, state-owned enterprises, civil service establishment, low savings rate, the elderly with persistent marriage but poor health, and the elderly with only one real estate.

Second, the Chinese government provides security, improves relevant laws and regulations, and establishes and improves the implementation system of housing reverse mortgage pension insurance. The government should strengthen supervision and strict management, so that the rights and obligations of both parties of housing reverse mortgage pension insurance are equal, the interests of both parties are protected, and the land-use right of 70 years is clear. Because housing reverse mortgage pension insurance is faced with credit risk, market risk, housing price volatility risk and many other risks, so the government should coordinate the bank insurance regulatory commission, trust institutions and other coordination and cooperation, can set up a special management agency, do a good job in the bottom.

Third, the insurance company promotes the innovation ability, the reasonable, the flexible design product. Can draw lessons from HECM way, besides borrower gets by the month, apply for fund flexibly to apply for, still can get one-time; The termination of the contract may be conditional not
only on the death of the borrower but also on the fact that the borrower ceases to live in the mortgaged premises; Let the elderly choose for themselves whether and how property rights in their homes will change. There is only one insurance company in China, so the design of the product needs to be improved.

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