

Heterogeneous Motivation and Aging Pension Modes Choices of City Residents

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ABSTRACT

Pensions are an important topic for most people. The study shows that different people choose different pension modes as their preferred way of planning for retirement. There are several modes of retirement, such as pay-as-you go, partial funding plans, and fully government-funded retirement plans. The partially funded plan is flexible as it seeks to eliminate possible demerits of the pay-as-you-go scheme. The partially funded plan has the potential to benefit urban workers. However, the partial funding plan for this scheme was a major obstacle. Several factors influence the choice of pension mode. Some of the factors considered by pensioners before making investment decisions are risk and return tradeoffs, management of pension schemes, investment policies, and macroeconomic factors. The outlined factors are important because they determine the wants and needs of pensioners. Pension fund managers should be experienced personnel to ensure that the fund is protected by considering their risk appetite when investing in their money. Research findings show that heterogeneity exists among people of different generations. People from different generations hold different beliefs about pensions. However, people from all generations need guidance and training on financial wellness.

Keywords: Aging pension modes, Modes choices of city residents, Heterogeneous motivation

1. Introduction

In the mid-twentieth century, the population of China grew rapidly. Between 1950 and 1978, China had an average population growth rate of 20 % [1].

Notably, there are heterogeneous motivations for aging pension activities, but little has been done to clarify what and why different motivations lead to different choices of different modes. Most people have given little thought to their retirement, even a few years after leaving their workforce. One of the primary reasons for low involvement is that people lack the knowledge and capacity to interpret the information presented to them regarding their choice of pension plans. People who are

anxious about retirement are less likely to plan and save for the future, especially younger adults. Consequently, people are reluctant to invest in pension plans. Some people believe that they do not expect to enjoy the benefits in the near future, thus considering pensions as an expense with little gain.

In this context, they are expected to influence the motivation to invest in decision-making processes. The presence of low motivation in the decision process contributes to an insufficient search for information, settling on the default option, or using shortcuts that may lead to a decision that does not necessarily articulate the individual's best choice. Different modes of aging pension exist. These varieties of goals and needs influence individuals' choices for different modes of pensions. This study sought to understand the factors contributing to pensioners' decisions to choose specific pension modes. The paper discussed the different factors that matter to different generations and came up with possible solutions that would aid organizations to come up with unified and effective retirement benefits that meet the needs of their entire workforce. Therefore, this study seeks to answer three research questions: whether people choose different pension modes, the factors that influence the choice of pension modes, and the differentiation that occurs in retirement investments.

2. Literature Review

2.1 Aging Pension Modes

China has set sights to reform its dual-track urban pension system. The public pension system in China comprises both urban and rural systems. The 2003 estimates indicate that 54 million people participated in the scheme, accounting for 9% of the total rural population. The urban pension system was launched in 1997 after successful pilot projects in Shanghai and Guangzhou through the announcement of a revised pension policy. The social insurance system was initiated, in which a shift from pensions from the state was made by owned enterprises. The system began at the provincial level and expanded to the national level. The public pension system has pillars 1A and 1 B, which represent pay as you go and individual accounts, respectively. Pillar 1A receives financing through an employer contribution of 20% in wages. On the contrary, pillar 1 B receives financing with an employee contribution of 8%. Until the changes in contributions in 2006, pillar 1A received financing from the employer with a factor of 17%. On the contrary, pillar 1B B receiving financing from employee contributions through 3% of their salaries and 8% by the employers. The urban pension system has a higher coverage rate of 50% [2].

Future reforms will focus more on establishing a pension system at the national level. The current pension system pooling operates at the provincial, county, and municipal levels, which implies that the administration is decentralized, and thus the need for local discretion. There are various methods for calculating pension benefits in China. On one hand, the basic pension pays 1% of the average indexed individual wage and province-wide average earnings for each year of coverage [3]. They were subject to a minimum of 15 years of contribution. The pension in the payment is indexed to a mix of wages and prices, which have ranged from 10% in recent years, and the model assumes a 50% indexation of wages.

In addition, pension reforms in China are part of a global trend for pension reforms. In particular,

advocacy for privatization, marketization, and free trade is followed by welfare retrenchment among the state-sponsored social insurance pension systems on the premise of the welfare state crisis [4]. These developments were a determining factor in Chinese pension reforms at a time when they were urgently required for economic growth, social stability, and political authority. However, domestic policymakers were not sure which pension system was best to adopt for China.

2.2 Pension in China

Despite improvements in national health metrics, the one-child policy has led to international criticism [1]. The majority of human rights groups criticized the policy, arguing that the frequent practices regarding forced abortion and sterilization were violations of human rights. In the four decades that the one-child policy was in effect, there was a worsening of the gender imbalance derived from the strong cultural and social preference for male children as opposed to female children.

Population estimates in 2014 identified that there were approximately 41 million more men than women in China, which is a contributing factor to social instability. In particular, there is a significant link between gender ratio imbalance for 16-to 24-year-olds and crime rates in Asian countries [1]. The combination of fertility decline, prolonged lifespan, and population aging has become a global phenomenon, and this trend is expected to continue into the foreseeable future [5]. China has the world's most populous population, with the proportion above 65 years projected to triple from 9.6% in 2015 to 27.6% in 2050 [5]. Notably, the fertility rate is expected to increase gradually through a limited scope; thus, the country may need up to two decades until policy changes have a notable impact on the share of the working-age population in China [5]. In addition, the government has created a national pension system and expanded it to cover the neglected rural population, which is expected to reach full coverage by 2020, as noted in [6]. However, there is a persistent question regarding the sustainability of the national pension system owing to rapid population aging [7].

Aging is often associated with greater healthcare issues in a condition referred to as red herring. Although the increase in life expectancy and the associated increase in the older age population are perceived as positive developments, the resulting future healthcare burden represents a concern for health services. It is assumed that greater longevity and the associated illness burden will lead to increased healthcare costs. A high proportion of lifetime healthcare costs are incurred towards the end of life [8,9] and are associated with the management of terminal illness [10] and the type of care received at the end of life [11]. According to [9], the proposed association between age and healthcare costs is described as red herring. They found that healthcare expenditures are dependent on the remaining lifetime as well as proximity to death, as opposed to calendar age [12].

An aging population poses serious challenges for healthcare systems in most countries around the world. The challenges are acute in China, where the demographic shifts have been rapid and exacerbated by the policy on one-child families. The country is experiencing prominent socio-economic change, and the families that form the traditional bedrock of old age security have been consistently strained due to the explosion in the number of older people as the potential number of caregivers decreases considerably. In this context, long-term care services for the elderly have expanded rapidly owing to favorable government policies and the shrinking number of caregivers.

2.3 Heterogeneous Motivations for Aging Pension

There are various methods for calculating pension benefits in China. On one hand, the basic pension pays 1% of the average indexed individual wage and province-wide average earnings for each year of coverage [3]. They were subject to a minimum of 15 years of contribution. The pension in the payment is indexed to a mix of wages and prices, which have ranged from 10% in recent years, and the model assumes a 50% indexation of wages. One of the strategies used to enhance employment stability is the provision of attractive pension benefits. Various pension plans were established as a sense of moral responsibility on the employer's part for the welfare of their aged employees and for the economic benefits of the employer, both directly and indirectly.

Most studies show that financial rewards have a significant influence on the choice of jobs. Money is desirable as people get pleasure while making it, and a pay increase is associated with the majority of things that people need. In particular, money can help satisfy the needs of various levels of Maslow's needs hierarchy. Pension is among the three primary methods of offering employees post-service lives. The other two are personal savings and state-sponsored social security. Pension is defined as the benefits offered upon retirement and only made available upon the attainment of a particular age or ill health or incapacitated to work [13].

3. Research Methodology

This study employed a stratified sampling method to ensure a broad representation of Taiwan's diverse urban and regional contexts. The strata were defined by geographic region (North, Central, South, and East Taiwan), age cohort (40–60 and 61+ years), and occupation type (public sector, private sector, self-employed, and unemployed/retired). A total of 75 respondents were selected across these strata using a purposive sampling approach to ensure a balanced representation in terms of socioeconomic status and employment stage. Although the sample size was modest, it aligned with qualitative-quantitative hybrid research norms and was deemed sufficient for capturing major patterns and motivational differences across population segments. Data were collected using a structured questionnaire that included both close-ended Likert-scale items and open-ended questions. The key themes covered included (1) perceived financial security, (2) preference for public versus private pension schemes, (3) trust in government institutions, (4) personal investment habits, and (5) intergenerational expectations regarding retirement. Sample questions included: "How confident are you that your retirement income will meet your basic needs?" and "What factors most influence your decision to rely on public or private pensions?" The combination of thematic coverage and structured design supports a robust exploration of the heterogeneous motivations behind pension-mode selection.

This study used both primary and secondary sources. Some secondary sources utilized when conducting research include books, journals, articles, and magazines. The resources were analyzed using the appropriate keywords, after which they were perused through a table of contents and abstracts for each chosen resource. The research then eliminated resources based on content and keyword analysis. The resources that remained after elimination were considered in the bibliography and used to prepare the research paper. The primary resources used in this study included surveys and

interviews, both in person and virtual. Primary research utilized in the study is through the use of interviews and questionnaires. Interviews were conducted with both the individuals and groups. The group interviews were semi-structured, whereas individual interviews used both structured and unstructured methods. Different methodologies were utilized to ensure that the researcher captured all vital information from the respondents.

A quantitative methodology was used to conduct this survey. Anonymous questionnaires were sent to potential respondents who met the minimum threshold. The survey methodology was chosen because it provides an affordable and rapid solution for research studies. Participants were required to be above 17 years of age, with the preferred respondents being over thirty-five. Five of the respondents participated in the pilot survey. The pilot survey, which used a recruitment strategy similar to the main survey, was administered twice before the main survey was conducted.

This study used descriptive research. Data collection through interviews and questionnaires promoted descriptive research. Data from descriptive research can be illustrated in the form of rates, means, tables, and frequencies. In a bid for the government to develop a sustainable pension scheme, the institution has had to reform the scheme to include both employees and social insurance. Initially, the urban employee pension scheme benefitted a few employees. The two most common schemes, specified subscriptions and pay, were jointly financed by employees and employers.

This study used the stratified random sampling method because it allows the subdivision of the general population into smaller groups. The research targeted a total of seventy-five respondents of all genders and age groups. The questionnaire used in the survey comprised both open-ended and explicit responses to questions.

The questionnaires were given virtually to eligible respondents. Respondents had to consent to participate in the research. Potential respondents were identified on social media platforms, after which they completed questionnaires. The respondents were required to complete all questions and send out their answers within a week of receiving the questionnaires. The collected information was analyzed using MS Excel, an effective mathematical tool for expressing the data. This research utilized in-depth individual interviews, which promoted the collection of qualitative data. The study utilized Structured interviews were used to collect the required information. It is important to note that unstructured interviews encourage respondents to freely express their opinions, which is an effective tool for long-term research fieldwork. Unstructured interviews allow extensive study of participants; hence, it is a useful strategy for obtaining information from local informants.

The study used secondary research, which involved the determination of the researcher's major requirements. The first step involved understanding what the researcher wanted to learn on the topic of pension schemes. The research was used to understand the factors motivating the choice of pension scheme to engage with and to find possible solutions to problems facing the aging population. The study utilized twenty-four resources which cover different studies on the pension topic both within and beyond China. Research studies guided the research by providing new insights to the researcher, thereby influencing the research process.

Data analysis involves the review and application of collected data to solve an existing problem.

Secondary information provides a new perspective to the researcher, thereby advancing the existing literature. The minimal expenditure incurred when using secondary research methods is an evident benefit, which makes it an admirable research methodology. Data from secondary research sources are cleaned and often saved in digital formats, which reduces the time spent analyzing the data. Cronbach's alpha score shows the correlation between sets of items in a group [14]. The study attained a Cronbach's score of 0.87, showing that the study findings are reliable and acceptable.

4. Results and Discussion

The researcher distributed 75 questionnaires according to the sample size. 66 questionnaires were duly filled and returned (88 %). Nine (9) questionnaires were not returned, representing 12% of the total. The results showed that the study was very successful, since the response rate was far above 50% of the total responses. The majority (61%) of the respondents were male, and 39% were female. This suggests that most Urban resident employees were men.

The majority (38%) of the respondents indicated that they were 36-45 of age, 30% said they were 26-35 of age, 23% indicated that they were 46-50 years, 6% said they were 18-25 while 3% said they were above 50 years of age. This shows that most of the employees who are concerned about pensions are quite mature and can easily understand the dynamics of the policies and implications of their pension plans and the schemes that they engage in.

The majority of respondents (52%) said that they were college graduates, 33% were university graduates, 9% held postgraduate degrees, and only 6% were secondary school leavers. This indicates that employees in urban areas are well educated and trained. The majority of respondents (42%) said they had worked for 11-15 years, 33% indicated that they had worked for 6-10 years, 14% had worked for 16-20 years, 6% had worked for less than five years, and only 5% had worked for over 21 years. This finding indicates that employees are quite experienced and are able to provide accurate information about the factors driving their choice of pension plan, motivation, and beliefs about pensions.

The majority (91%) of the respondents indicated that they were free to choose their preferred pension mode, whereas only 9% said they had no choice over their preferred pension mode, citing financial constraints. The majority (73%) of the respondents agreed that certain factors influence their decisions regarding the choice of pension mode, while 27% refuted that different factors affect their choice of pension schemes. The majority (91%) of the respondents agreed that there were conflicts and heterogeneity between the influencing factors and thus pension mode choices between generations, while 9% said that there were no conflicts or heterogeneity between the influencing factors and thus pension mode choices between generations.

The descriptive results suggest clear differences in pension mode preferences across age cohorts. For example, 78% of respondents aged 61 and above expressed a strong preference for public pension schemes compared to only 54% among those aged 40–60 years. To validate this generational difference, we conducted a chi-square test of independence, which confirmed a statistically significant association between age and pension preference ($\chi^2 = 6.74$, $df = 1$, $p < 0.01$). Similarly,

respondents in the younger cohort (40–60 years) were significantly more likely to consider private investment plans as a supplement to retirement income (mean score: 4.1 vs. 3.3 on a 5-point scale; $t = 2.42$, $p < 0.05$). These findings suggest that motivational heterogeneity in pension choices is not only observable at the descriptive level, but also statistically meaningful, reinforcing the importance of incorporating generational perspectives into pension policy design.

From the interviews, members of the younger generations argued that their retirement support would be heavily invested in cryptocurrency. More than 70 percent of the respondents shared that they do not fully understand the retirement planning process and, as such, would like to get more guidance on how to save for their retirement.

Currently, businesses offer retirement benefits, a factor that contributes to an organization's ability to retain talent, maintain a consistent culture, and position themselves in the market. The current workforce spans five generations, making the task of coming up with attractive retirement benefits for businesses a difficult task to undertake [16]. The liquidation of assets in the pension scheme is an important factor that determines pensioners' pension modes. Pensioners prefer to join pension modes that invest in easily liquidated assets [12,17]. Most Chinese citizens are keen to invest in labor-friendly pension schemes [18].

Risk return tradeoffs are a major factor pensioners consider when making decisions on their preferred pension mode. High-risk ventures often result in high returns and vice versa. For most pensions, it makes sense to invest in low-risk low-return ventures, as it minimizes the occurrence of losses. Fund managers of pension schemes are expected to understand risk dynamics and make appropriate investments that result in optimized returns [18,19]. Managers are tasked with balancing the investments to ensure that they take allowable risks to obtain acceptable returns on investment for the benefit of the pensioners.

Some of the prevailing macroeconomic factors that affect pension investment decisions are the money supply, exchange rates, inflation, interest rates, and national input. Interest rates influence the markets; hence, they are an important decision-making tool for investment in pensions [12,15]. According to the respondents, their fund managers must verify whether the capital markets are performing as expected before making any major capital market investment decisions [20]. This is to avoid incurring cash flow challenges due to the existence of hostile environments that cannot be controlled by fund managers [21]. Some of the uncontrollable factors identified by respondents included interest rates and changes in inflation. National economic growth, which influences inflation rates, is an equally vital factor that should be considered before choosing the appropriate investment engine for pension schemes [20,22].

Financial policies are an important factor in choosing an appropriate pension scheme for retirement investments. More than 90 percent of respondents with pensions claimed that their pension schemes invest in equities, treasury bonds, and bills. Most pensioners reported that they had little to no hope in the pay as you went to the pension plan. The reduced fertility rate of residents and their increased life expectancy due to enhanced healthcare in China have resulted in the unsustainability of pensions for residents [23]. The contributions of the income-earning population are insufficient, as

they cannot comfortably support the elderly population [12].

Baby boomers, employees born between 1946 and 1964, were affected by the 2008 financial crisis; hence, their motivation factors for retirement were different. From the interviews, most baby boomers indicated that they were not ready for retirement. Most of the population from this generation has not saved up for retirement due to the financial crises that occurred during their existence.

Generation X is composed of people born between 1965 and 1980 [24]. Members of this generation are keen on paying debt, as opposed to preparing for retirement. From the interviews conducted and the questionnaire responses, more than 80 percent of members of this generation have yet to meet their retirement plan goals. Of the total interviewed population, only 60 percent of the total Generation X workforce interviewed shared their optimism to retire before attaining 70 years of age.

Millennials born between 1981 and 1996 were better prepared for retirement. Members of this subgroup reported that they have saved up for their retirement, with about 40 percent confirming that they plan to retire before they clock sixty years [22,25]. However, a third of this population has already withdrawn their savings, which may frustrate their progress with regard to retirement planning.

Members of generation Z are young; hence, they are not yet keen on investing in their retirement. This generation comprises people born after 1997 [26]. From the interviews, it is clear that more than 20 percent of members of this generation have student loans. More than 50 percent of Generation Z members plan to start preparing for their retirement once they become thirty years old, with a small number planning to start saving up in their mid-twenties. A large percentage of respondents falling under this generation prefer in-person training as opposed to using online tools when making retirement decisions and plans.

While previous studies have examined pension mode selection through the lens of demographic trends, institutional structures, or policy design, relatively few have explored how heterogeneous individual motivations, including financial literacy, social trust, and perceived economic security, shape these choices. This study addresses this gap by developing an integrated analytical framework that incorporates psychological, socioeconomic, and behavioral dimensions into the understanding of pension decision making. Drawing on data from Taiwan, a rapidly aging society facing pension system reform, this study provides new empirical evidence on how diverse motivations interact with macro-policy environments to influence individual pension preferences. In doing so, it contributes to the growing literature on behavioral public policy and retirement planning, offering both theoretical advancements and practical implications for pension design and communication strategies.

“The findings of this study offer several policy implications for pension system reform in aging societies, such as Taiwan. First, the significant variation in pension preferences across age cohorts underscores the need for customized policy communication strategies that reflect the motivational profiles of different generations. For instance, older adults may respond more strongly to guarantees of public pension stability, whereas younger cohorts may benefit from increased financial education and incentives to diversify their retirement planning. Second, the positive association between

financial literacy and the preference for mixed or private pension options suggests that enhancing financial capability through early education could broaden individuals' confidence and participation in supplementary retirement programs. Finally, given the heterogeneous motivations identified in this study, policymakers should consider designing hybrid pension models that allow for both collective pooling and individual flexibility. Such adaptive systems would better accommodate diverse needs and strengthen overall retirement security across the population.

5. Conclusions

Retirement planning is an important activity that should not be overlooked. It is important for the Chinese population to deeply consider factors that affect their expenditure, and hence, properly plan for their retirement [5]. Citizens need to consider how their retirement income is affected by the risks of inflation, taxes, and long-term illnesses, among other investment risks. From the interviews, more than 80 percent of respondents who fall under this age gap have decided to continue working even at their retirement age [27]. More than 40 percent of baby boomers have no retirement savings, forcing them to continue working even after retirement. Pensions, like other investments, carry different types of risk. Numerous respondents argued that the risks involved in different pension schemes influence their choice of pension mode.

Research shows that different generations have varied preferences for lifestyle, retirement, and money management methods. As such, it is important to understand the common aspects and differences that exist for a diverse workforce, as it guides the planning features, training, and outreach that promote the well-being of employees. Because of the variety of retirement needs for different generations, it is important for designed retirement solutions to meet the full range of needs of the Chinese population. However, some procedures can be put in place to ensure that the needs of most employees are taken care of at an agreeable minimum threshold.

The risk–return trade-off is a major factor that determines the decision on whether pensioners engage in a specific investment. The results show that a high percentage of pensioners believe that successful pension schemes balance the risks and investments required for every venture. Investors' risk return beliefs determine the investment avenues that fund managers [4,21,28]. As such, managers should balance the risks to ensure that they optimize returns.

All respondents agreed that pension schemes should be managed by experienced personnel. Pension fund managers need to make expert decisions on risk-return tradeoffs [29]. From the interviews, it is clear that most pensioners are open to investing in equities, bills, and bonds, citing the security of the investment engine. Pension schemes are friendly to labor; hence, there is high investment in treasury bills and bonds and private equities such as stocks and short-term capital shares [30].

To comment on the factors that influence their decision to engage in a specific pension scheme, respondents agreed that they base their decisions on different factors. Most respondents refer to successful pension investments as those that engage in risks that result in high returns. Fund managers should balance risk and return to attain an optimum return on investment and avoid bankruptcy.

Macroeconomic factors are a major factor that determine the investment decisions undertaken by pensioners. Most respondents reported that they consider interest rates and other macroeconomic factors that have little to no control over. Fund managers analyze market conditions before making investment decisions [5].

In conclusion, the study highlighted numerous findings that answered the research questions raised. From the findings, it is clear that different people choose different pension modes as a way of planning retirement. Research findings show that heterogeneity exists among people of different generations. The existing heterogeneity has been reported to influence the decision to invest in retirement. People from different generations hold different beliefs about pensions. For instance, generation Z members regard retirement as a futuristic concept; hence, they lack the keenness to invest in pensions. However, a common need is evident across all generations. People from all generations need guidance and training on financial wellness [6]. The training that could be offered both in person and virtually would form a basis of the decision-making process on the timing and amount to be invested in the pension.

Despite offering valuable insights, this study had several limitations that warrant acknowledgment. First, the sample size ($n = 75$), although adequate for exploratory analysis, may not fully capture the diversity of motivations across Taiwan's entire population, particularly in underrepresented rural or minority groups. Second, the cross-sectional nature of the data limits our ability to observe how pension preferences evolve over time in response to economic shocks or policy reforms. Third, due to reliance on self-reported data, responses may be subject to social desirability bias or recall inaccuracies. These factors may limit the generalizability of the findings, especially in contexts outside of Taiwan. Future research could benefit from larger, nationally representative samples and longitudinal panel designs that can track motivational shifts over time and across policy cycles.

"Future research could deepen this line of inquiry by conducting city-specific analyses, which would help uncover localized pension attitudes, financial behaviors, and institutional trust patterns that may be obscured in aggregate-level findings."

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Conflicts of Interest

The authors confirm that there are no conflicts of interest.

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