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Factors Influencing Employee Retirement Financial Planning: Evidence from Thai Higher Education Institutions

Umawadee Detthamrong ^{1, 2}, Lan Thi Nguyen ³, Khanittha Jitsaeng ³, Wirapong Chansanam ^{3*}, Chunqiu Li ⁴

¹ College of Local Administration, Khon Kaen University, Khon Kaen 40002, Thailand.

² Faculty of Arts and Science, Chaiyaphum Rajabhat University, Chaiyaphum 36000, Thailand.

³ Faculty of Humanities and Social Sciences, Khon Kaen University, Khon Kaen 40002, Thailand.

⁴ School of Government, Beijing Normal University, Beijing 100875, China.

Abstract

This research aimed to examine the factors that impact the financial planning for retirement among employees in Thai Rajabhat universities. To validate the theoretical framework and the collected empirical data, we utilized the confirmation factor analysis method, which allowed us to assess the relationship between the factors and examine how well the data fits the proposed model. We collected data from a sample of 433 employees by administering a 5-point Likert scale questionnaire. The collected data was subsequently analyzed using the Lavaan package in R Studio software. The research findings revealed that knowledge and understanding, financial status assessment, expected return or investment strategy, risk acceptance or risk tolerance, setting goals in life or goals' clarity. and alternative sources of income or other income played important roles in shaping retirement financial planning among our study participants. To evaluate the theoretical structural model, we conducted statistical analyses and found that it fitted the empirical data at a significance level of 0.05. The statistical results of CMIN/df = 11, GFI = 0.941, AGFI = 0.848, FI = 0.946, and RMSEA = 0.000 provided evidence for the validity and reliability of the proposed model. Going forward, the resulting model will serve as a guideline to evaluate the efficiency of financial planning for the retirement of employees, provide solutions to identified problems, and inform policies and programs that aim to improve retirement financial planning for employees in the higher education sector.

1- Introduction

Financial literacy is an important factor and significantly influenced in determining financial preparedness for retirement among academic staff in higher education institutions. Therefore, increasing awareness campaigns on financial products and promoting financial education programs could enhance financial preparedness for retirement [1]. One issue for the long-term viability of system pensions is how people without specialized financial knowledge may manage their wealth and achieve their actual personal retirement aims [2]. Although financial literacy is an essential factor in retirement financial planning, it is only one of several factors contributing to sustainable retirement. Other factors, such as financial attitude, family support, and the role of a financial advisor, also play crucial roles. Several studies have examined the effects of these factors on sustainable financial retirement planning. Mustafa et al. [3] suggested that retirement financial planning is greatly impacted by financial attitude and financial knowledge. Furthermore, the association between financial attitude-retirement financial planning and financial knowledge-

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Financial Planning; Retirement Age; Employees; Confirmatory Factor Analysis; Rajabhat University; Thailand.

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^{*} CONTACT: wirach@kku.ac.th

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retirement financial planning is moderated by the presence of financial advisors. Adam et al. [4] indicated that family support and retirement planning may have a more substantial impact on retirees' financial well-being than financial literacy alone. It is important to encourage retirement planning and financial awareness. Furthermore, Tomar et al. [5] show that retirement planning behavior is positively correlated with future time viewpoint, retirement goal clarity, and social network support, all of which are tempered by financial literacy. Financial literacy and understanding of the financial consequences of retirement, as well as nudging, motivate people to take significant action [6]. According to Van Rooij et al. [7], there is a significant and positive association between financial education and retirement planning; those with more financial understanding are more likely to plan for retirement.

Retirement planning by using Structural Equation Modeling (SEM) has been mentioned in various contexts, such as the effect of financial literacy, financial behavior, family support, number of dependents, and retirement planning on the financial well-being of retirees; the role of financial risk tolerance, cultural influences, income, attitudes, and psychological and social factors on retirement planning and saving practices. Thus, individuals need to consider both financial and non-financial factors when planning for a financially secure and satisfying retirement, such as financial literacy, financial risk tolerance, and cultural factors [2, 8, 9-12]. Kaur & Lehal [10] reveal that psychological, social, and economic factors have a substantial impact on retirement planning and saving strategies. To increase the amount of personal retirement savings, it is crucial to define retirement aims and estimate retirement needs. At the policy level, it is crucial to assist the community's citizens in making clear their retirement goal by assisting them in making future plans. Determining expectations for one's quality of life after retirement is a necessary step in defining retirement goals [13]. Retirement objective clarity is a key determinant of planning behaviors, which predicts savings tendencies [14]. Thus, retirement goal clarity enhanced employees' understanding of their retirement goals, how much individuals needed to save and preparations, and expectations for their quality of life.

Retirement is a significant life transition that can have profound effects on individuals, families, and communities. As people move from full-time employment to a new phase of life, they may face various challenges, such as health issues, financial difficulties, and social isolation. Retirement will result in a decline in earnings; nevertheless, there may be an increase in necessities. It is vital to have financial planning after retirement in order to still be able to satisfy the basic needs of life after retirement [11]. Ketkaew et al. [15] highlighted the pressing need to address the challenges associated with Thailand's aging population. With more than 20% of the population over 60, it is essential to develop a robust pension system that can provide adequate income to cover basic needs after retirement. A strong pension system is crucial for the elderly population in Thailand, as it ensures that they have enough financial security to meet their basic needs after retirement. Additionally, this study emphasized the importance of financial literacy and the need to educate people on financial planning, particularly among low-income earners, who may have limited access to financial products and services. To prepare Thai citizens for retirement stages and overcome post-retirement risks sustainably, it is essential to promote financial literacy and provide education and resources to help individuals understand financial concepts and manage their retirement savings. The literature on financial decision-making for retirement reveals several behavioral biases that affect human behavior outside the traditional economic theories [16]. By addressing behavioral biases and developing appropriate financial literacy programs, individuals can make informed decisions about their retirement planning. Investments in financial assets and earning additional income from a second job can help citizens accumulate wealth. Additionally, the government should enable seniors above 60 years to continue working and encourage employers to provide suitable retirement contribution schemes. These measures can improve the quality of life for the aging population and prepare them for retirement [15]. In a society that prioritizes knowledge, innovation, entrepreneurship, and digitization along with sustainable development goals, university-private collaboration has become increasingly complex and necessary, fostering co-creation of knowledge, the development of new student skills and abilities, support for sustainable education, enhanced education opportunities for people, and curriculum adaptation to the demands of the labor market and financial risk tolerance [17]. Financial risk tolerance partially mediates the indirect impact of financial literacy on financial retirement planning [18]. Additionally, encouraging employees to prepare for retirement is crucial for them to be able to maintain their standard of living after retirement through preretirement activities or lifestyles. Experience value and achieve a high standard of living, which also lessens the financial strain on family and the government to cover the expense of providing elder care. Therefore, given the significance of this social and economic context, research into the factors that motivate personal financial planning is essential in order to support a shift in societal perception that will enable all socioeconomic groups to have adequate financial resources for retirement, raising the standard of living for all retired people.

To support employees' well-being and retirement planning, it is crucial to provide access to affordable healthcare, financial assistance, and promote social engagement at work. This can include retirement saving plans or financial counseling services to help with future planning, as well as employee resource groups or social events to foster connections and morale. Access to necessary healthcare is also essential for all staff members, regardless of income, as it may have a significant effect on their retirement and mental health. Organizations can help ensure a healthy and fulfilling retirement by providing these resources. Little literature exists on retirement financial planning among higher education staff, with limited regional studies, such as Pornwannasiriwet et al. [18] in Chiang Mai Province and Sangwichitr & Intara [19] at Prince of Songkla University's Hatyai Campus. Additionally, Hutabarat & Wijaya [20] conducted the impact of financial literacy on retirement planning of administrative staff and lecturers in Universitas Indonesia. This study focuses on Thai Rajabhat universities, employing Structural Equation Modeling (SEM) to analyze

factors influencing retirement planning. The findings provide valuable insights for staff, universities, financial counselors, and policymakers, supporting the development of tailored programs and solutions for effective retirement financial decision-making. SEM is a powerful multivariate analysis technique widely used in the social sciences, providing a flexible framework for analyzing simple to complex relationships between variables [21]. Four critical issues are relevant to the application of SEM: (1) data characteristics, (2) model characteristics, (3) model estimation, and (4) model evaluation. Our findings show that the confirmatory factor analysis model for retirement financial planning for Rajabhat University employees in Thailand is compatible with the empirical data, with two latent variables: Evaluation (Financial status assessment) and Cognition (Knowledge and Understanding, Expected return or Investment strategy, Risk acceptance or Risk tolerance, Setting Goal in life or Goal clarity, and Alternative source of income or Other income).

The remainder of the paper is structured as follows: Section 2 provides an overview of the literature review and proposes six testable hypotheses. Section 3 contains a description of our research materials and methods. Our research results and discussion are provided in Section 4. Finally, Section 5 concludes the paper.

2- Literature Review and Hypotheses Development

Retirement is one of the most significant life phases. People now take time off from employment to recharge at home after working for a while. Proper preparation is necessary for a pleasant retirement. Assistance with finances is essential in retirement. Retirement financial planning is preparing for the moment when a person will exit the labor field, and all sources of income will be eliminated. It might be viewed as a strategy for striking a balance between current expenditure and reserves in order to have a financially secure retirement [5]. According to Vivel-Búa et al. [22], individuals who prepare retirement plans at the end of their working careers are three times as wealthy as those who lack. Goda et al. [23] have conducted a thorough investigation into the extent to which many people's insufficient retirement savings result from their limited financial capabilities. This research delves into the underlying factors contributing to low retirement savings, shedding light on the critical role of financial literacy and competency in retirement planning and wealth accumulation. Therefore, determining whether people are saving enough for retirement may assist in preventing future inequities in retiree wealth.

2-1-Knowledge and Understanding (KNW)

Studies have shown that financial knowledge has a significant impact on retirement planning [7, 12, 24]. Individuals with higher financial knowledge are more likely to plan for retirement [7], and pension knowledge and money management positively influence the intention to invest in a pension fund [25]. Improving financial literacy is crucial for positively impacting individuals' retirement preparedness. In summary, based on the above discussion, we propose the following:

Hypothesis 1: Knowledge and understanding have a positive association with financial planning for retirement.

2-2-Financial Status Assessment (STA)

Financial status assessment involves managing finances to achieve life goals, such as education, property ownership, or retirement planning. This process includes assessing income and expenses, retirement savings and investments, calculating retirement income needs, and projecting future costs and income sources. Effective debt management is crucial for sound financial planning. Regular financial self-assessment helps achieve goals faster and drop bad habits. Conducting regular financial status assessments enhances savings, debt, taxes, insurance, and retirement situations, leading to sound financial management [26]. Based on the above discussion, we propose that:

Hypothesis 2: Financial status assessment has a positive association with financial planning for retirement.

2-3-Expected Return or Investment Strategy (RET)

As retirement approaches, individuals often use glide path investment strategies that reduce risky assets and increase less risky ones, such as government bonds [27]. Retirement planning can be complex, requiring a proper strategy and savings pattern [28]. Since personal savings and investments will likely be the main source of retirement income, it is important to manage the investment portfolio prudently with medium-risk assets [29, 30]. Retirees have complex portfolios across different asset classes, including bonds, risky assets, annuities, and real estate, and choosing investment assets wisely is essential for financial security [31, 32]. We therefore propose the following testable hypothesis:

Hypothesis 3: Expected return or investment strategy has a positive association with financial planning for retirement.

2-4-Risk Acceptance or Risk Tolerance (RSK)

Risk tolerance is the concept of acknowledging and accepting risks with a manageable potential loss while recognizing that accepted risk does not reduce its impact. While risk acceptance is not a mitigation strategy, it remains

a legitimate option in risk management, often justified by the cost of alternative risk management strategies [33]. Risk tolerance affects financial planning, saving habits, and portfolio selection [34]. Moreover, Ghadwan et al. [8] find that financial risk tolerance is the most crucial variable for those planning their financial planning. Financially risk-tolerant individuals can take on more risk and are more likely to see greater yields. However, risk tolerance is not solely influenced by financial returns but also by social, psychological, and economic factors. Assessing an individual's risk tolerance is helpful in risk profiling, allowing them to earn the finest return on their investments. Adequate risk tolerance has been linked to successful financial retirement planning (33). Modern investment management decision-making approaches and the financial planning process both heavily rely on risk tolerance [34]. Moreover, a positive association between financial literacy and retirement financial planning is strengthened by financial risk tolerance and herding behavior [9]. Additionally, Qian et al. [35] conducted a study elucidating the moderating role of risk perceptions in the correlation between financial comprehension and retirement aspirations. Their research shed light on the nuanced interplay between these variables, highlighting the significance of risk perceptions in shaping retirement goals amidst financial understanding. Based on the above discussion, we propose that:

Hypothesis 4: Risk acceptance or risk tolerance has a positive association with financial planning for retirement.

2-5- Setting Goal in Life or Goal Clarity (GOA)

Goal clarity is crucial for job outcomes, factors, objectives, and retirement planning. Research has shown that having well-defined and specific goals increases motivation and leads to better planning activities and saving behaviors [5, 13]. Retirement goal clarity has a direct impact on financial planning and savings behavior, making it crucial to encourage individuals to have clear retirement goals during strategic planning. Additionally, clarity in retirement goals can aid in understanding the effects of social support, social norms, and financial literacy on annuity and other saving product purchase intentions in the commercial market [36]. The notion of having a clear objective in mind greatly motivates one to complete a task. Clear and specific goals not only improve performance but also provide a framework for establishing upcoming retirement purposes. On the basis of the above arguments, we propose that:

Hypothesis 5: Setting goals in life or goal clarity has a positive association with financial planning for retirement.

2-6-Alternative Source of Income or Other Income (INC)

The level of income has been shown to be a significant factor in saving for retirement, especially in Thailand, where social inequality is high. In recent years, the percentage of Thai people privately saving for retirement has declined, particularly in low- and medium-income households, with some individuals no longer contributing to pension plans. Previous studies [37–39] have emphasized the importance of income in consumption and saving decisions. Mantilla-Garcia et al. [40] use retirement bonds to develop a class of target-income methods that can successfully minimize income risk as retirement approaches while maintaining minimal funding ratio levels. According to these economists, consumption increases with income, but not in a proportional manner, and income plays a crucial role in determining savings. Thus, addressing income inequality may be essential for increasing retirement savings in Thailand. Furthermore, disparities in opportunities for extending one's career are evident across diverse employment sectors [41], emphasizing the need for equitable access to strategies supporting prolonged workforce participation. In summary, based on the above discussion, we propose the following:

Hypothesis 6: Alternative source of income or Other income has a positive association with financial planning for retirement.

Several studies have found that income is a significant predictor of participation in supplementary pension schemes [42] and private retirement accounts [43]. In particular, individuals with higher incomes are more likely to participate in private pension plans [42]. Foster & Smetherham [43] also found that expectations of lower future income could impact an individual's likelihood of subscribing to a private pension plan, indicating that both current and expected income levels are essential factors in the decision-making process. These findings suggest that income is a crucial determinant in retirement planning and that individuals with lower incomes may face additional barriers to saving for retirement. However, it is important to note that fiscal benefits, such as tax incentives or tax-exempt contributions, implemented by governments to encourage individuals' participation in private pension schemes, primarily favor the wealthy. This is because private pension schemes are often positively related to income levels in most countries. Conversely, low-income individuals may be less inclined to save for retirement, as they may perceive public pension schemes as being able to offset the potential wage gap from their working lives during the retirement period.

2-7-Financial Planning for Retirement (FPR)

Making decisions about investment and financial planning for retirement can be challenging, yet it is crucial for financial security and well-being of individuals, families, and the broader economy [5, 7]. Studies have shown that families who engage in retirement planning build substantial wealth and savings compared to those who do not plan.

However, recent pension reforms and labor market changes have made mandatory pension saving less generous, and individuals must make informed decisions on issues, such as pension investment, supplemental savings, and retirement timing. Changing attitudes and actions towards retirement planning is necessary to encourage individuals to plan for a secure retirement [44]. With the development of behavioral finance and the integration of psychological concepts into financial decision-making, this issue has become even more critical. Financial literacy plays a moderating role in the relationship between retirement planning behavior and factors, such as future time perspective, retirement goal clarity, and social network support. Additionally, perspective on the future and clarity of retirement goals act as mediating factors in this relationship [5].

Retirement planning is a multi-step process that entails accumulating wealth to meet post-retirement needs [45]. Unfortunately, many individuals struggle to manage their finances effectively due to limited financial literacy, making it difficult to make informed financial decisions. This can lead to inadequate savings and investment for retirement [46].

Therefore, it is necessary to understand financial knowledge, assessing the financial situation, maximizing retirement savings and investments, managing retirement risks, setting retirement goals, generating other income, and ensuring a secure retirement. As such, this study proposed a conceptual model of financial planning for retirement that consists of six dimensions and 44 explaining items. These dimensions and characteristics were directly developed from the gaps in the literature that were found, as well as some shared characteristics that were confirmed in previous studies.

2-8-Structural Equation Modeling (SEM)

The Structural Equation Modeling (SEM) as a powerful analytical tool for root cause determination, examining the structure of multiple variables through Multivariate Data Analysis by studying covariance between variables. SEM is also capable of analyzing both observed variables and latent variables. Compared to factor analysis, SEM is more efficient because it uses Confirmatory Factor Analysis (CFA) to confirm the structure of a group of theoretical factors that are consistent with actual data, as well as being able to explain the relationship characteristics of the cause and effect with the equation used to confirm the model called the Measurement Model according to the principle of SEM analysis, which is shown as Equations 1 and 3 and the relationship equation is Equation 2. Utilizing SEM we were able to find a causal relationship between variables and confirm the validity of the model, making it an effective tool for analyzing complex relationships between multiple variables [21].

Measurement model: $x = \Lambda_x \xi + \delta$ (1)

Structural equation model: $\eta = \beta \eta + \tau \xi + \zeta$ (2)

Measurement model:
$$Y = \Lambda_Y \eta + \varepsilon$$

where X is Observed exogenous variable, δ is Measurement error in an observed exogenous variable, Y is Observed endogenous variable, ξ is Latent exogenous variable, ε is Measurement error in an observed endogenous variable, ζ is Error term associated with the Latent endogenous variable, and η is Latent endogenous variable.

3- Material and Methods

Exploratory Factor Analysis (EFA) stands as a cornerstone in multivariate statistical methods, playing a pivotal role in developing and validating psychological theories and measurements. This method is instrumental in unraveling the complex relationships among a set of measured variables, with the ultimate goal of identifying a concise and fundamental set of underlying constructs, commonly called factors. These factors are abstract representations of latent traits or dimensions that reside within individuals but are not directly observable. Instead, they manifest through the variations observed in scores across the measured variables. As a statistical technique, EFA acts as a powerful tool to uncover and elucidate these latent constructs, enhancing our understanding of the intricate workings of human behavior and cognition [47]. EFA bridges the observed and the unobserved, helping researchers distill complex data into more understandable and interpretable forms. By identifying and delineating the underlying factors, EFA empowers psychologists and researchers to construct more accurate and meaningful theories and measurement instruments, advancing the field and our insights into the human psyche. Confirmatory Factor Analysis (CFA) is a statistical technique widely employed in academic research, particularly in psychology, education, and the social sciences. CFA is used to validate measurement instruments, assess the construct validity of scales, and examine the underlying structure of latent constructs. Confirmatory Factor Analysis is a powerful tool for assessing measurement instruments, validating constructs, and understanding latent structures in academic research. By following the prescribed steps and considering key factors, researchers can harness the potential of CFA to enhance the rigor and validity of their research findings [48]. The research method used in this study, shown in Figure 1, follows a structured flowchart framework as explained by Thakkar [49]. This makes the research process easy to understand and follow.

(3)



Figure 1. Flowchart of methodology research

This research focuses on understanding the factors influencing retirement financial planning among employees at Thai Rajabhat Universities. Through a comprehensive review of existing literature and identifying research gaps, the study developed a theoretical framework to explore this issue. Confirmatory factor analysis (CFA) was employed to validate the framework and examine the relationship between various factors and retirement financial planning, ensuring the data fits with the proposed model. The study's establishment of a theoretical framework and identification of key influencing factors offers a structured approach to enhancing the understanding and preparedness of employees for retirement in higher education settings. Its findings are valuable for policymakers, financial planners, and educational institutions aiming to improve retirement planning programs and support employees in achieving financial security after employment.

The methodology employed in our study concerning the factors influencing retirement financial planning among employees in higher education institutions is characterized by a systematic and comprehensive approach. Beginning with determining the sample size, we adhered to established guidelines by selecting a sample of 433 employees from Thai Rajabhat Universities, ensuring a robust basis for analysis. Data collection involved utilizing a 5-point Likert scale questionnaire covering various dimensions such as knowledge and understanding, financial status, investment strategy, risk tolerance, goal setting, and alternative income sources.

Confirmation Factor Analysis (CFA) was then applied to validate the measurement models and relationships between identified factors, ensuring the validity and reliability of our instruments. Leveraging the Lavaan package in R Studio, we conducted data analysis to evaluate our theoretical model and assess the significance of factors influencing retirement planning. Moreover, each factor underwent individual Confirmatory Factor Analysis (CFA) to validate the measurement models for unidimensionality, validity, and reliability. Subsequently, these validated measurement models were integrated into a single, comprehensive model for further validation using pooled CFA techniques.

Through this methodological framework, which integrates quantitative data collection, sophisticated statistical analyses, and rigorous validation processes, we aimed to ensure the credibility and robustness of our findings regarding retirement financial planning among employees in higher education institutions.

3-1-The Target Population

This study focuses on employees in higher education institutions, including academic and support academic staff, working at Rajabhat universities in Thailand. The sampling frame, provided by the Ministry of Higher Education, Science, Research, and Innovation, included 433 eligible staff members. Simple probability sampling was used to randomly select participants from the sampling frame, and they were given surveys to complete at their convenience, ensuring that there was no pressure or fear of any kind. The study's rigorous and thoughtful approach to participant selection and survey administration ensured that the data collected was reliable and representative of the target population.

3-2-Sample Size and Sampling Method

Determining an appropriate sample size is essential to validate the measurement model using CFA. Previous studies suggest varying minimum sample size ranging from 100-150 for small indicators [50-52], to a larger sample size of 250-500 for precise CFA analysis [53-55]. Other guidelines recommend having ten cases per observation/indicator [56], one hundred cases/observations per group for multi-group modeling [57], or a sample size to parameter number ratio of five or ten [58]. Finally, we decided to use a sample size of five times the number of indicators in the questionnaire [58, 59]. Therefore, a total sample size of 433 was randomly selected from eligible staff members at Rajabhat universities in Thailand. The collected data was then evaluated for CFA, ensuring that the sample size was appropriate for the analysis.

Validation of measurement models can be approached through either pooled or individual CFA [60, 61]. In this study, the individual CFA procedure was used for each factor, including Knowledge and understanding (KNW), Financial status assessment (STA), Expected return or Investment strategy (RET), Risk acceptance or Risk tolerance (RSK), Setting Goal in life or Goal clarity (GOA), and Alternative source of income or Other income (INC) [60, 62]. The measurement models were assessed for unidimensionality, validity, and reliability before being linked into a single measurement model using a double-headed arrow for pooled-CFA validation [60].

To achieve unidimensionality, a threshold value of 0.5 was used to eliminate any item with a low factor loading [63-65]. Convergent validity was assessed by computing the AVE for each construct, with a threshold value of \geq 0.5 considered to have been reached when the AVE value for a construct met this criterion [50, 64]. Discriminant validity was evaluated by comparing the squared AVE value with the correlation coefficient between two constructs, with the squared AVE value needing to exceed the inter-construct correlation coefficient for a construct to demonstrate discriminant validity [66].

The measurement model's fitness indices, such as the goodness-of-fit index (GFI) and the root mean square error of approximation (RMSEA), were used to assess construct validity [60-62]. Internal consistency and composite reliability for a latent construct require a CR value of ≥ 0.6 [59, 67]. A high CR value indicates that all items are consistently measuring their respective constructs.

3-3-A Measurement Model's Fitness

Previous studies have proposed different fitness indices for evaluating the goodness-of-fit of structural equation models. Brown [68] recommends reporting at least one index from each of the three categories of fitness indices: absolute fit, incremental fit, and parsimonious fit. Absolute fit indices include chi-squared goodness-of-fit (χ 2) and standardized root mean square residual (SRMR), incremental fit indices include the Tucker-Lewis fit index (TLI) and comparative fit index (CFI), and parsimonious fit indices include the root mean square error of approximation (RMSEA). However, past research is not restricted to using specific types of fitness indices and can choose which ones to report based on the methods used in the literature cited.

In order to assess the model fit, several common fitness indices were used, including chi-squared over degree of freedom (Chisq/df), root mean square error of approximation (RMSEA), and comparative fit index (CFI) [69]. A model was considered to have a reasonable fit if the RMSEA values were between 0.05 and 1.00, the CFI was greater than or equal to 0.90, and the Chisq/df was less than or equal to 5.00, as recommended by Moss et al. [70] based on previous literature. These indices were used to assess the fit of the measurement models in this study, with the aim of ensuring that the models adequately represented the underlying data.

Descriptive statistics, including the mean value (\bar{x}) , standard deviation (S.D.), skewness (sk) and kurtosis (ku) of the 44 items of the financial planning were presented in this study. The skewness and kurtosis values were used to assess the normality of the data distribution. Skewness values between 2 and -2 and kurtosis values between 7 and -7 were estimated within the acceptable range of normality. Confirmatory factor analyses (CFA) were conducted using the lavaan package [71] in RStudio software [72]. The hypothesized six-factor model consisting of 44 items was tested in all samples and for each role. The maximum likelihood method was used to fit covariance structures. The model fit was evaluated using various fit indices. A p-value great than 0.05, a ratio of chi-square statistic to degrees of freedom (X²/df) of 2:1, and a Comparative Fit Index (CFI) of at least 0.90 (good fit if \geq 0.95) are considered acceptable [73, 74]. The Tucker-Lewis Coefficient (TLI) of at least 0.95 indicates good fit [75], while a Standardized Root Mean Square Residual (SRMR) value of less than or equal to 0.08 is considered indicative of a good fit [74]. A Root Mean Square Error of Approximation (RMSEA) value of \leq 0.06 is considered indicative of a good fit, \leq 0.08 a fair fit, between 0.08 and 0.10 a mediocre fit, and > 0.10 a poor fit [74].

3-4-Data Analysis

Database development and all statistical analyses were carried out using RStudio software. The lavaan package [71] in RStudio software [72] was used to perform confirmatory factor analysis (CFA) on the hypothesized six-factor model of financial planning for a sample size of 433 employees. Respondents answered all items on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The study used an online questionnaire to collect data, and the Index of Item-Object Congruence (IOC) was used to assess the validity of the questions. A threshold value of 0.50 was used for the IOC, with values greater than 0.50 considered acceptable [76]. The study achieved a high IOC value of 0.94, indicating a good validity for all questions in the questionnaire. The reliability of the questionnaire was assessed using Cronbach's alpha, a commonly used measure of internal consistency reliability. The Cronbach's alpha coefficient ranges from 0 to 1, with values closer to 1 indicating greater internal consistency. In this study, the Cronbach's alpha coefficients for each variable ranged from 0.96 to 0.97, which is higher than the commonly accepted threshold of 0.70 [73], indicating the high level of internal consistency.

The study used discriminant power analysis to assess whether the questions or variables used in the research could classify the respondents. The corrected item-total correlation was calculated and found to be between 0.415-0.797, which exceeded the acceptable value of 0.30 as recommended by Pallant [77]. These findings indicate that the questionnaire used in this study is a reliable tool for assessing KNW, STA, RET, RSK, GOA, and INC. The results presented in the table above indicate that each variable produces an r-count value that is greater than the r-table value of 0.199, suggesting that each question item in the questionnaire is deemed valid. Additionally, the reliability analysis indicates that all statement items within each variable are reliable, with a Cronbach's alpha value greater than the acceptable threshold of 0.60. Multicollinearity among the variables was also examined by assessing the correlation coefficient between the observed variables, and the criterion for consideration should not exceed 0.8, as displayed in Figure 2.

	KNW	STA	RET	RSK	GOA	N N	_ 1
KNW	1.00	0.57	0.63	0.71	0.51	0.39	0.8
STA	0.57	1.00	0.54	0.54	0.59	0.37	·0.6 ·0.4
RET	0.63	0.54	1.00	0.73	0.52	0.44	0.2
RSK	0.71	0.54	0.73	1.00	0.58	0.41	-0.2
GOA	0.51	0.59	0.52	0.58	1.00	0.32	-0.4
INC	0.39	0.37	0.44	0.41	0.32	1.00	-0.8

Figure 2. Observed variables correlations matrix

3-4-1- Correlation Analysis

Figure 2 illustrates the results of correlation analysis examining the relationship between KNW, STA, RET, RSK, GOA and INC. The analysis revealed a strong positive relationship (r = 0.73) between RSK and RET, which was found to be significant at p = 0.01 level

The validity of the dimensions was tested using exploratory factor analysis (EFA). The results showed a high level of Kaiser-Meyer-Olkin (KMO) value 0.84, indicating the appropriateness of the data for factor analysis. The inter-item correlation coefficients were all above 0.30, indicating positive convergent validity. The Bartlett's sphericity test was statistically significant (p<0.05), supporting the decomposability of the correlation matrix. Moreover, the percentage of explainable variance was 67.14%, indicating that the items retained in this dimension have a high model explanatory power. The factor loadings results are shown in Table 1.

Variables	Factor Loadings
Knowledge and understanding: KNW	0.87
Financial status assessment: STA	0.87
Expected return or Investment strategy: RET	0.86
Risk acceptance or Risk tolerance: RSK	0.82
Setting Goal in life or Goal clarity: GOA	0.88
Alternative source of income or Other income: INC	0.93

Table 1. Factor loading	Table	1.	Factor	loadings
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3-4-2- Kaiser-Meyer-Olkin (KMO)

To determine the relationship between the observed variables and examine the correlation coefficient, the researcher employed the KMO test (Kaiser-Meyer-Olkin) and Bartlett's Test of Sphericity, which are useful tools to evaluate the results presented in the Table 2.

KMO and Bartlett's Test				
Measure of Sampling Adequacy (MSA)	-	0.86		
Bartlett's Test of Sphericity	Approx. Chi-Square	1231.85		
-	df	15		
-	Sig.	0.000		

Table 2. The overall correlation matrix with KMO and Bartlett's Test of Sphericity

Kaiser [78] proposed a guideline that KMO values greater than 0.50 indicate that factor analysis is appropriate for the data. In this study, the KMO index was found to be 0.86, indicating that the relationship between variables is highly suitable for conducting confirmatory factor analysis. Additionally, the Bartlett's sphericity test was statistically significant (p < 0.001), indicating that the correlation matrix is suitable for factor analysis. These findings suggest that the data used in this study is suitable for exploring the underlying structure of the variables of interest.

3-4-3- The Number of Factors to Extract

Parallel Analysis (PA) is a statistical method commonly used to determine the number of factors that should be extracted from a dataset in factor analysis. The PA involves comparing the eigenvalues obtained from the observed data with the eigenvalues obtained from a simulated dataset with uncorrelated variables [79]. PA can help to avoid over-extraction or under-extraction of factors by providing a reliable estimate of the number of factors to retain. The number of factors to retain is determined by comparing the eigenvalues obtained from the simulated data with the eigenvalues obtained from the observed data. If the eigenvalues obtained from the observed data are greater than the eigenvalues obtained from the simulated data, then the corresponding factors are retained [80]. PA has been shown to be more accurate than other methods used to determine the number of factors to extract, such as Kaiser's rule and the screen test [81]. It has also been found to be effective in reducing the likelihood of over-extracting factors, which can lead to spurious results [82].

In conclusion, PA is a powerful tool for determining the number of factors to extract in factor analysis. It has been shown to be more accurate than other methods and has been found to be effective in reducing the likelihood of overextracting factors [80-82]. We used the parallel () function from the Factors package [83] to perform a parallel analysis as show in Figure 3.



Parallel Analysis Scree Plots

Parallel analysis suggests that the number of factors = 6 and the number of components = 2, Graph Factor Loading Matrices as shown in Figure 4.

Figure 3. Parallel analysis scree plots



Factor Analysis

Figure 4. Graph factor loading matrices

3-4-4- Regression Analysis

The regression analysis estimates the relationship between a dependent variable (Financial Planning for Retirement: FPR) and two independent variables (PA1 and PA2) using linear regression. The coefficients estimate the strength and direction of the relationship between each independent variable and the dependent variable. The intercept (3.31091) represents the predicted value of the dependent variable when both independent variables are zero, as shown in Figure 5. The t-value and p-value of each coefficient test whether the coefficient is significantly different from zero. The multiple R-squared value (0.6074) indicates the proportion of variance in the dependent variable that is explained by the independent variables. The F-statistic and p-value test whether the model as a whole is significant.



Figure 5. Regression analysis result

The study checked for multicollinearity using tolerance (> 0.10) and Variance Inflation Factor (VIF < 10.00) values, and all variables met the criteria, indicating no multicollinearity. A heteroscedasticity test was also conducted using a scatterplot method, and the results showed that there was no specific pattern in the distribution of residual values, suggesting no heteroscedasticity. As a result, the multiple regression equation for the study is as follows:

FPR = 3.31091 + 0.61744 * PA1 + 0.45710 * PA2

(4)

4- Research Results

We utilized principal component determination (PCA) and perpendicular rotation (Varimax) to extract components and analyze factors that influence financial planning for retirement among employees in Rajabhat Universities. The analysis revealed that a KMO measure of sampling adequacy of 0.86, indicating that the data was suitable for factor analysis. Bartlett's test of sphericity was significant with a value 1231.847 (p = 0.000), indicating a strong correlation between the variables. Using principal component analysis with Varimax rotation, two sub-components were extracted, which were found to significantly affect financial planning for retirement among employees. The results of our analysis showed that there were two sub-components consisting of six indicators that accounted for 70.20% of the variance. In order to conduct confirmatory factor analysis (CFA), we first checked for normal distribution of the data using the Z-Test statistic with the c.r. value as the criteria. We accepted the null hypothesis (H0) that the data are normally distributed at a significance level of 0.05 when the |c.r.| value of every variable was less than 1.96. Our analysis yielded a c.r. value of 0.859, which is less than 1.96, leading us to conclude that the data was normally distributed.

The next step involves checking the coherence of the model by conducting a CFA. We used the maximum likelihood method to test the model's coherence, and the results are presented in Table 3 and Figure 6 below. It is important to note that the coherence of the model is assessed by considering a statistical tester to determine whether the data is congruent with the expected model.

Index	Acceptable range	Results
Chi square/ Degree of Freedom (CMIN/df)	P < 3	11
(Adjusted) Goodness of Fit Index (GFI/AGFI)	$P \ge 0.90$	0.941
Standardized Root Mean Square Residual (RMR/SRMR)	$P \le 0.05$	0.035
Root Mean Square Error of Approximation (RMSEA)	$P \leq 0.08$	0.000
Incremental Fit Index (IFI)	P > 0.90	0.946
	D	0.016



Figure 6. Analysis of the first confirmatory factor analysis of financial planning for retirement

The result of the research suggests that the confirmatory factor analysis model for financial planning for retirement is consistent with the empirical data, with two latent variables: Evaluation (Financial status assessment) and Cognition (Knowledge and Understanding, Expected return or Investment strategy, Risk acceptance or Risk tolerance, Setting Goal in life or Goal clarity, and Alternative source of income or Other income). Knowledge and understanding presents a significantly positive relation to retirement financial planning ($\beta = 0.80$, p < 0.05), which supports Hypothesis 1. This finding is consistent with the results of Arrondel et al. [24], Van Rooij et al. [7] and Safari et al. [12].

Furthermore, H2 hypothesized that financial status assessment would have a positive and significant relationship with retirement financial planning ($\beta = 1.00$, p < 0.05). As can be deduced from Figure 5, H2 is supported. This finding is consistent with evidence from Johnsan [26]. In H3, we hypothesized that expected return or investment strategy would have a significantly positive association with financial planning for retirement. Result support H3 ($\beta = 0.81$, p < 0.05). Our evidence contradicts the findings of Cocco et al. [31], Benzoni et al. [32] and Jang et al. [27].

H4 hypothesized that risk acceptance or risk tolerance would have a positive and statistically significant relation to retirement financial planning. Results from Figure 5 support H4 ($\beta = 0.85$, p < 0.05). This finding is consistent with the results of Snedaker & Rima [33], Rahman [34] and Ghadwan et al. [8]. Setting goal in life or goal clarity shows a significantly positive relation to retirement financial planning ($\beta = 0.69$, p < 0.05), which supports Hypothesis 5. This result is consistent with the findings of Zhu and Chou [13] and Tomar et al. [5]. Additionally, In H6, we hypothesized that alternative source of income or other income would have a significantly positive association with financial planning for retirement. Results support H6 ($\beta = 0.53$, p < 0.05). Our evidence contradicts the result of Mantilla-Garcia et al. [40]. These findings provide support for Hypothesis 1 to Hypothesis 6. Consequently, financial status assessment strongly influenced retirement financial planning behavior, implying that employees with clear, well-defined, and pragmatic evaluation of financial status/financial health present a high level of involvement in retirement financial planning activities and behavior.

Several statistics were evaluated to verify the model's validity, including CMIN/df = 11, GFI = 0.941, AGFI = 0.848, CFI = 0.946, and RMSEA = 0.000. The results indicate that the model is both coherent and well-suited for the data. In

light of these findings, financial planning for retirement is a crucial issue for employees in Thai Rajabhat Universities. It is recommended that institutions prioritize retirement planning programs that incorporate the six components identified in the model. This will ensure that employees are well-prepared for their retirement and have a clear understanding of financial status assessment, knowledge and understanding, expected return or investment strategy, risk acceptance or risk tolerance, setting goals in life or goal clarity, and alternative sources of income. By doing so, institutions can help their employees achieve financial stability and security during their retirement years.

Based on research conducted, financial planning for retirement should be a priority for higher education institutions. Therefore, it is recommended that these components be incorporated into retirement planning programs to ensure employees are adequately prepared for retirement. Similarly, Amani et al. [84] identified seven limitations to retirement planning among higher education researchers. These include: a lack of retirement planning knowledge, unsuccessful attempts to prioritize expenditure, a failure of investment management skills and experience, a negative attitude toward retirement, retirement policies and legal reforms, financial constraints due to extended family needs, and a lack of time to supervise investments. Based on the findings, the study makes solutions to overcome personal, societal, and systemic challenges to academics' effective retirement transition.

Regular evaluation of retirement planning programs is crucial to assess their effectiveness. Curriculum evaluation is a valuable process that can help evaluate resources, processes, and curricular products. To ensure the programs are meeting their objectives, evaluations should be conducted before, during, and after instruction using standardized methods like pre-and post-tests or surveys. These evaluations can help identify areas for improvement and opportunities for growth and development. By regularly evaluating retirement planning programs, institutions can ensure they are effective and meet the needs of their staff.

As retirement costs are increasing, Rajabhat Universities in Thailand should assist their employees in planning for retirement by providing financial planning resources and education. This can include access to financial advisors, retirement planning workshops, and information on their website. To specifically aid their employees, the university can encourage saving for retirement, offer financial planning resources, assist in managing debt, and provide guidance on investment decisions. By doing so, the university can ensure that their employees are well-prepared for retirement, considering the need to save more due to the longer retirement savings horizon and the declining prevalence of traditional pension plans. The pre-retirement planning experiences of academics are crucial to comprehend in order to provide multiple perspectives and conceptual understanding of the retirement journeys and their implications on post-retirement life, especially as the academic work force in Higher Education Institutions ages [84].

To ensure that employees are equipped with the necessary knowledge for career success, it is crucial for institutions of higher learning to create new programs of study that meet the changing needs of employees. Universities can provide sustainable education by modifying their curricula to reflect the most recent advancements in technology, entrepreneurship, and technical fields [17]. Additionally, it is essential to prioritize financial planning for retirement to help employees prepare for a secure and comfortable retirement. This is especially important for Rajabhat Universities in Thailand, as they face various challenges in creating new programs and meeting the changing needs of their staff. By continuing to prioritize financial planning for retirement, the university can ensure that their employees are prepared for their future retirement needs.

5- Discussion

This study addressed a notable gap in the literature about retirement financial planning among higher education employees, which has been relatively overlooked despite its paramount importance for post-retirement financial security. We used careful confirmatory factor analysis (CFA) to confirm that our model made sense. It was based on two latent variables: evaluation (which was mostly about judging someone's financial situation) and cognition (which included things like knowledge and understanding, expected return or investment strategy, risk acceptance or risk tolerance, setting goals in life or having clear goals, and other sources of income or other income). The statistical robustness of our model, as indicated by a range of fit indices, including CMIN/df, GFI, AGFI, RMR/SRMR, RMSEA, IFI, and CFI, reinforces its appropriateness for analyzing retirement financial planning behaviors. These results highlight the intricate nature of the retirement planning process and emphasize the critical roles played by both financial evaluation and cognitive factors in ensuring preparedness for retirement. Comparing our findings with those of Amani et al. [84], we align with their observations regarding common barriers to effective retirement planning, such as limited knowledge and negative attitudes toward retirement. However, this study goes further by examining specific cognitive and evaluative factors that can bolster retirement planning efforts.

Furthermore, this research contributes to the broader discourse on retirement preparedness, echoing the works of Goda et al. [23] and Vivel-Búa et al. [22] on the significance of comprehensive planning for achieving post-retirement financial security. Focusing on higher education employees offers a unique perspective in this field, underscoring the necessity for tailored retirement planning programs that address the sector's specific challenges and opportunities.

Methodologically, this approach to determining the sample size and conducting CFA adhered to established best practices [57-59], ensuring the reliability and validity of our findings. The thorough validation of our measurement models enhances the credibility of our study and its contributions to understanding retirement financial planning among higher education employees.

In summary, this study not only illuminates the factors influencing retirement planning in a specific context but also offers actionable insights for institutions seeking to enhance their employees' retirement preparedness. By validating a model that integrates both evaluative and cognitive dimensions, we provide a comprehensive framework for developing more effective retirement planning programs, ultimately contributing to individuals' financial stability and security in their retirement years.

6- Conclusion, Limitations and Future Research

Confirmatory Factor Analysis (CFA) was used to identify primary factors affecting retirement financial planning. Based on a CFA analysis, this study identified six key factors that influence financial planning for retirement among employees in Rajabhat Universities, Thailand. The findings provide empirical evidence to support the theoretical structure of factors affecting financial planning for retirement, which can guide policymakers and financial planners in developing effective retirement planning programs for employees in higher education institutions.

The study also identified two latent variables, Evaluation and Cognition, and six key factors: financial planning knowledge, assessing financial status, setting realistic goals, alternate income sources, and reasonable risk-taking to guide retirement financial planning for employees in higher education institutions. Based on these findings, the study recommended institutional and policy interventions, as well as additional research on retirement financial planning behavior, factors influencing employees' retirement financial planning over time, the viability of retirees' retirement income options, and the sustainability of retirees' retirement income over the course of their remaining lives. Retirement benefits coaching is one method for imposing retirement goal clarity and closing the gap between perception and reality regarding their future financial well-being. In this context, identifying academics' retirement planning support has critical implications at both the policy and individual levels. Policymakers should improve financial retirement planning awareness among all employees at Rajabhat Universities, Thailand, regardless of socioeconomic background. In addition, Rajabhat University personnel could employ some of the concepts presented in this study to plan their retirement.

Additionally, this study identified pivotal elements crucial for effective retirement planning among Thai Rajabhat University employees: 1) Knowledge and Understanding: Profound comprehension of savings, investments, and financial vehicles facilitates effective planning. 2) Financial Status Assessment: It is vital to accurately evaluate financial situations, including savings potential and expenditure tracking. 3) Expected Return/Investment Strategy: Informed decision-making based on expected returns and risk management enhances planning outcomes. 4) Risk Acceptance/Tolerance: Recognizing and managing risk tolerance is essential for informed planning. 5) Goal Setting (Goal Clarity): Establishing clear, achievable financial objectives influences planning success. And 6) Alternative Sources of Income: Leveraging diverse income streams enhances financial security. These findings underscore the need for comprehensive financial knowledge and strategic planning in retirement preparation, offering insights for institutions and policymakers to develop effective retirement programs.

The results provided empirical validation, identifying critical factors influencing retirement readiness among Thai Rajabhat University' employees. Utilizing confirmatory factor analysis (CFA), it underscores the interconnectedness of factors such as knowledge, financial assessment, investment strategy, risk tolerance, goal setting, and alternative income sources. Contextual relevance to the Thai higher education sector enriches policy implications, emphasizing financial literacy and goal-setting for policymakers and institutional leaders. Methodological rigor ensures reliability, while practical recommendations offer actionable guidance for institutions to enhance retirement planning support. Overall, the study advances theoretical understanding and offers practical strategies for improving retirement preparedness in academia.

Furthermore, the findings of retirement financial planning among higher education employees offer valuable guidance for policymakers and financial planners. Key insights include advocating for customized planning programs tailored to employees' needs, emphasizing financial education to enhance literacy and decision-making, integrating risk management strategies into planning, assisting in goal-setting for realistic outcomes, promoting income diversification for enhanced security, and utilizing findings for policy formulation. Implementing these insights can significantly enhance retirement preparedness and financial well-being among higher education employees, fostering a more secure retirement landscape.

The study's findings on Factors Influencing Employee Retirement Financial Planning in Higher Education Institutions offer practical implications for Thai Rajabhat Universities and similar institutions:

- 1. Tailored Programs: Designing retirement planning programs that address key factors.
- 2. Financial Literacy Workshops: Enhancing knowledge through educational sessions.
- 3. Individualized Counseling: Providing personalized financial guidance.
- 4. Promotion of Diversification: Encouraging alternative income sources.
- 5. Risk Management Support: Assisting in investment decision-making.
- 6. Policy Implementation: Integrating findings into institutional policies.
- 7. Collaboration with Experts: Partnering with financial planners for specialized advice fosters better retirement preparedness and financial well-being.

In summary, to enhance retirement planning and financial literacy among higher education employees in Thailand, policymakers should raise awareness, offer educational programs, and implement savings-friendly policies. Financial planners should provide tailored advice and educational opportunities, while individual employees should regularly assess their finances and diversify income sources. Collaboration among stakeholders is crucial for better retirement outcomes.

Our study is not without potential limitations. To enhance the reliability and generalizability of future research, it is recommended to increase the sample size and amount of data when measuring the efficiency of financial planning for the retirement of employees at Rajabhat Universities through structural analysis to ensure stable and accurate measurements. Policymakers and financial planners should also take into account the identified factors when developing effective retirement planning programs for employees in Thailand. However, since this study only focused on employees in Thai Rajabhat Universities, it may not fully reflect the perspectives of other populations. Therefore, to address this limitation, future research should consider collecting data from other samples to compare whether there is a significant difference between the scores obtained from employees. By expanding the sample size and considering a diverse range of participants, future research can provide more robust insights into the factors affecting financial planning for the retirement of employees in Thailand, and potentially inform more effective strategies for retirement planning. Additionally, to improve study limitations and encourage scholarly discussion, some suggested methods include increasing the sample size to improve reliability, starting longitudinal studies to track changes in planning, coordinating cross-sector comparisons, combining qualitative methods for a more complete understanding, using multiple approaches, conducting cross-cultural studies, and evaluating the effectiveness of policy. These endeavors aspire to deepen comprehension and fortify assistance for retirement planning within the realm of Thai higher education employees.

7- Declarations

7-1-Author Contributions

Conceptualization, U.D. and W.C.; methodology, U.D. and W.C.; software, U.D. and W.C.; validation, L.N.T., K.J., U.D., and W.C.; formal analysis, U.D. and W.C.; investigation, L.N.T., K.J., C.L., U.D., and W.C.; resources, U.D. and W.C.; data curation, U.D. and W.C.; writing—original draft preparation, C.L., U.D., and W.C.; writing—review and editing, L.N.T., C.L., U.D., and W.C.; visualization, U.D. and W.C.; supervision, U.D.; project administration, U.D. and W.C.; funding acquisition, U.D. All authors have read and agreed to the published version of the manuscript.

7-2-Data Availability Statement

The data presented in this study are available on request from the corresponding author.

7-3-Funding

This study was funded by the Research Fund of Chaiyaphum Rajabhat University in 2018.

7-4-Institutional Review Board Statement

Not applicable.

7-5-Informed Consent Statement

Ethical review and approval were not applicable because this study was conducted in early 2018, predating the enforcement of the 'Chaiyaphum Rajabhat University Regulations on Human Research Requirements 2023'. Hence, actions taken before the regulation's announcement cannot be retrospectively enforced. Additionally, retrospective approval is impossible since approval could only be granted before the study commenced.

7-6-Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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Appendix I

Table A-1. Questionnaire

Oractions	Agreement Do			Deg	ree
	5	4	3	2	1
Knowledge and understanding (KNW)					
1. Should you possess adequate knowledge and understanding of savings and investment patterns before making investment decisions?					
2. Are you familiar with different forms of investment and capable of determining the most suitable type?					
3. Is the prospect of returns the primary consideration when selecting a savings or investment option?					
4. Is risk the primary factor influencing your choice of savings or investment?					
5. Do you continuously engage in studying and acquiring knowledge about investing to enhance your chances of success?					
Financial status assessment (STA)					
1. Do you prepare income-expense accounts regularly to calculate your savings ability?					
2. Do you keep a diary of your daily expenses to clearly see your financial habits?					
3. Can you assess your financial position and determine how many assets you have?					
4. Can you assess your financial position and determine how much debt you have?					
5. Are you able to evaluate your financial status in order to change your spending behaviour and become more financially responsible?					
Expected return or Investment strategy (RET)					
1. Do you hav attention to investing to prevent the loss of principal even in the absence of profit?					
2. Do you pay attention to investing to prevent the loss of principal, even in the absence of profit:					
2. Do you phontize investments with high returns, despite the high risk of loss?					
5. Are you an investor who primarily anticipates returns non-the margin?					
4. Do you consider tax deduction benefits when calculating your returns?					
5. Is the uncertainty of upcoming events taken into account when calculating the expected return on investment?					
Risk acceptance or Risk tolerance (RSK)					
1. Do you pay attention to savings and investments that create regular income and are highly secure?					
2. Can you accept risks from savings and investments?					
3. Can you identify and assess risks that may arise from savings and capital investments?					
4. Have you diversified your investments to reduce risk?					
5. Can you tolerate loss?					
Setting Goal in life or Goal clarity (GOA)					
1. Do you and your family members participate in setting goals to set the direction for your life?					
2. Do you plan your children's education so that they have the knowledge and ability to care for themselves in the future?					
3. Is setting a goal of having enough money to spend resulting in family warmth and reducing financial conflicts in the family?					
4. Do you have good financial planning so that you have enough money to spend on purchasing various things for comfort and happiness in your life and that of your family?					
5. Do you have good financial planning to have enough money to spend? Is the main goal to provide a reserve fund for retirement and when an emergency occurs?					
Alternative source of income or Other income (INC)					
1. Do you run your own business to earn or increase income?					
2. Do you jointly conduct business with others?					
3. Do you invest in real estate to generate regular income each month after retirement?					
4. Do you choose to get long-term life insurance that pays benefits after retirement?					
5. Do you invest in various forms of financial instruments, such as debt, equity, and derivative instruments?					
Financial Planning for Retirement (FPR)					
1. Do you explore information about financial planning for retirement?					
2. Have you set your retirement age and life expectancy?					
3 Have you calculated retirement expenses?					
4 Do you check your retirement savings from various sources to see if it is sufficient?					
5 Have you calculated the savings that are still lacking by comparing existing savings and the money required for retirement?					
6. When you know how much money is still missing do you use that goal to plan your sovings?					
7. They you know now much money is still missing, do you use that goal to plan your savings:					
2. Does your financial planning for rationment take future inflation into account?					
 a. Does your manchai planning for retirement take inture initiation into account? b. Do you plan to ellocate monou so that you can be and it after activement with out a sublemus? 					
9. Do you plan to anocate money so that you can spend it after retirement without problems?					
10. Do you prepare a budget to purchase amenities for fire after retirement?					
11. Are you planning to save some money to use for medical expenses when sick?					

12. Do you plan to pay off debt before retirement?