

THE RELATIONSHIP BETWEEN RETIREMENT
PLANNING BEHAVIOR AND RISK ROLERANCE
AMONG URBAN ADULT EMPLOYEES IN
MALAYSIA

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- (3) Equal contribution has been made by each group member in completing the FYP.
- (4) The word count of this research report is 16971.

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TABLE OF CONTENT

Chapter 1: Introduction	10
Introduction	10

Research Background	10
Research Problem Statement	13
Research Question	15
Research Objective	15
Research Significance.....	16
Chapter 2: Literature Review	19
Introduction	19
Dependent Variable	19
Retirement Planning Behavior	19
Independent Variables.....	20
Financial Knowledge	20
Risk Tolerance	21
Propensity To Plan	22
Moderator.....	24
Gender	24
Theories	24
Theory of Planned Behavior (TPB)	34
Risk-bearing and Consumption Theory.....	24
Propensity to Plan Theory.....	25
Conceptual Framework.....	26
Hypothesis Testing.....	27
Conclusion.....	29
Chapter 3: Research Method	30
Introduction	30
Research Design.....	30
Sampling design/ diagnostic checking	30
Target Population	31
Sampling Frame and Sampling Location	31
Sampling Element	31
Sampling Technique.....	31
Sampling Size	32
Data collection procedures.....	32
Data analysis technique	33
Descriptive Analysis	34

Partial Least Squares-Structure Equation Modelling (PLS-SEM).....	36
Outer Loading Analysis	36
Reliability and Validity test	36
Discriminant Validity	38
Collinearity Statistics.....	38
Boostrapping.....	39
Conclusion.....	40
Chapter 4: Data Analysis Findings and Interpretation	41
Introduction	41
Descriptive analysis.....	41
Respondent Demographic Profile	41
Central Tendencies Measurement of Constructs	43
PLS - SEM.....	46
Outer-Loading Analysis	47
Construct Reliability and Validity	49
Cronbach’s Alpha	49
Composite reliability (rho_a)	50
Average Variance Extracted (AVE)	51
Discriminant Validity	51
Collinearity Statistics (VIF)	52
Bootstrapping	52
T – statistic	53
P – Value	53
Path Coefficient.....	53
Moderation effect of Gender towards relationship between independent variables, FK, PTP, RT and dependent variables, RPB.	54
Chapter 5: Conclusion and Implications	56
Introduction	56
Summary of Statistical Analysis	56
Discussion on Demographic.....	56
Discussion on Construct.....	59
Discussion on Major Findings	61
Research implications	64
Limitation	65

Recommendation..... 67
Conclusion..... 67

ABSTRACT

This research paper aimed to determine the relationship between retirement planning behavior and risk tolerance among urban area employees in Malaysia. In this study, there are three independent variables, including risk tolerance, financial knowledge, and propensity to plan. The theory applied in this study are principle of propensity to plan, risk-bearing and consumption theory, and theory of planned behavior. The target population in our research are those Malaysian who in working age between 15-64 years old, including early working ages, middle working age and old-working age employees in urban area Malaysia. Smart PLS software has been applied in this study for compute, measure, and determined the statistical results in our research. The major findings show that financial knowledge is not correlated to the retirement planning behavior, but risk tolerance and propensity to plan are both correlated. At the same time, gender as a moderator has no moderating effect in the interaction between propensity to plan and retirement planning behavior, while it has not moderated effect in the interaction between risk tolerance and retirement planning behavior, as well as the interaction between financial knowledge and retirement planning behavior.

Chapter 1: Introduction

1.0 Introduction

In Malaysia, the general retirement age is at the official retirement age of 60. When come to retirement, most common questions are how much should save for the retirement, is there any income when an individual stops working at all, is the income after retirement affordable for the life expenses? Fayyadh (2022) mentioned that there are only up to 12% of Malaysia citizens are preparing for their early retirement, and 55 % of them do not know how to achieve the financial liberty so that to retire as soon as possible. The rising of the health and medical cost increase consciousness of majority employees of the retirement strategy. Most of the employees worried they may not have enough money for the health care cost at their retirement age. Due to the wide range of costs in many areas, including health, recreation, and employment, study has concentrated on the financial side of retirement planning (Asebedo & Seay, 2014). Therefore, the financial freedom during retirement should not be considered as just relaxing in the retirement period, a prior advanced retirement planning is required to achieve meaningful retirement life. The previous study revealed several behavioral factors lead to retirement planning behavior such as knowledges, time preferences, risk attitude, confidence, and savings attitude (Hanna et al, 2011; Mitchell & Utkus, 2003; Tanaka et al, 2010; Van Rooij et al, 2011). There is currently a lack of knowledge about how behavioural aspects affect a person's retreat preparation. The idea of planned conduct states that an individual's viewpoint on benefits assessment, risk tolerance, and expected consequences all have a significant impact on their behaviour.

1.1 Research Background

According to Shafee (2018), the fundamental challenge facing policy makers today is still seen as the lack of understanding about retirement planning, which has been

highlighted as a contemporary issue affecting all working people. (Samad and Mansor, 2017). The establishment of a law requiring employees to contribute to the Employee Provident Fund (EPF) is an effort of government's attempts to ensure that all Malaysians have a retirement plan. Additionally, they are collaborating with the private sector, international businesses, and other statutory as well as local authorities. According to EPF (2022), the Employees Provident Fund (EPF) reported that there was total up to 5.3 million of EPF withdrawal under the Special Withdrawal facility with the total amount of RM40.1 billion. The number of withdrawals was totally up to 44% out of the 11.95 million members, while the B40, M40 and T20 members accounted for 55%, 59% and 39% respectively. Furthermore, there are 29% of inactive members applied too. This phenomenon explains that most of the Malaysians are not preparing well for their emergency fund even their retirement planning.

According to Kimiyagahlam (2019) in Malaysia, all retirement planning risks have been transferred to untrained people as a result of the shift from a definite advantage plan to a definite involvement plan, who frequently lack the time or skills to prepare for their retirement. These risks include making poor investment decisions, not saving enough money, and outliving savings (Andonov, Bauer, & Cremers, 2017). The replacement of definite advantage plans with definite involvement plans has lessened the certainty of social security benefits together with rising longevity, which has been exacerbated by rising healthcare expenditures. Most of the people assume the only significance towards thinking about retirement when they are already retired or when they are young and have a long time before they will need to. But, although individuals begin to save money for retreat, it won't be sufficient (Martin, Guillemette, & Browning, 2016).

Based on Wahab (2022), psychological factors like financial perspectives and power control structures, as well as sociodemographic factors like an individual's income, education, and employment status, influence financial behaviour, which is referred to in their paper as "personal financial management behaviour". Additionally, Sabri et al. (2020b) found financial well-being may be negatively impacted by a low financial awareness such as mix of debt, income, and financial problems. The FWB of young people affects their psychological health as well as their degree of life happiness, scholastic achievement, and work performance

(Pandey et al., 2020). Financial issues, such as a lack of financial literacy, low wages, and excessive liability, may also have a negative impact on both FWB for individuals and households, claim Sabri et al. (2020). The FWB of young people affects their psychological health as well as their degree of life happiness, scholastic achievement, and work performance (Pandey et al., 2020).

In order to boost retirement savings in Malaysia and encourage more Malaysians to participate in long-term investment plans like the Private Retirement Plan (PRS), it is asserted that the Malaysian government has already implemented tax exemption measures (Zakaria et al, 2017). Due to their low degree of risk tolerance, Malaysians are still underrepresented in long-term investment schemes. In Kuala Lumpur, Malaysia, the majority of survey respondents, according to Karim, Wenceslas, and Shukri (2016), just a small percentage of respondents said they participated in investment of risky items like gold, but the majority remain risk averse and favour liquid assets like savings accounts, cash on hand, and employment pension funds (EPF).

According to Kim (2020), propensity to plan stands crucial as well as advantageous for individuals' subjective financial well-being (Ali, Rahman, & Baker, 2015; Xiao & O'Neill, 2018). The tendency and aptitude for long-term planning of Millennials, who are currently middle-aged adults, will have a substantial impact on both their present and future financial positions. According to Kim (2016), decisions about wealth accumulation and retirement savings have both been explained in part by the propensity to plan. The tendency to plan is a set of attitudes and abilities that influence how a household approaches the work of financial planning, according to the fields of personal finance and economics. Individual variations in attitudes and abilities to minimise distractions are referred to as individual variances in the desire to plan. Individuals with a higher predisposition to evaluate and deal with problems like excessive spending are those who are willing and able to actively manage their money and pay careful attention to their consumption patterns.

This research aim to examine the retirement planning behaviours of adult employees in metropolitan Malaysia. The coming chapters will therefore cover the connection between retirement planning behaviour and financial literacy, risk tolerance, and propensity to plan.

1.2 Research Problem Statement

This topic will cover issue of retirement planning. Retirement describes the time an individual leaves their job as a result of attaining the traditional retirement age. A lot of individuals who are still in working ages concerned about how they pay for their "senior years" because of low savings, high healthcare expenses, and prolonged life anticipations. HSBC Global study from 2015 found that 81% of Malaysians were concerned of finishing money and 88% concerned of sufficient money to survive in retirement (Fatemah, et.al, 2019).

Employees Provident Fund (EPF), a government agency in Malaysia, is in charge of managing the retirement and savings plans for workers in private companies. In Malaysia, the private sector employs a large proportion of the workforce (EPF, 2016). According to EPF report from 2020, many Malaysians must continue working when they turn 55 since they do not have enough retirement savings in their pension plans. The fact that 50% of retirees exhaust their EPF money in just five years is also well known.

Between the categories of 18 years old and 55 years old, just 27% of EPF members satisfied the minimal savings requirement, according to a news report published in the New Straits Times, (2021). This effectively meant that 73% of EPF (Employees Provident Fund) members, or the majority, would not have sufficient money to cover their retirement spending (Edgar, 2022). The majority of existing working population will face a very bleak future as a result of the stark realities of our current predicament (Edgar, 2022).

Apart from that, the economic was suffering a recession and downturn due to the pandemic of covid-19. The trend of growing commodity prices, the scarcity of both edible and mineral cooking oils, the political unrest, and the sound of war drums coming from as far away as Russia, the Ukraine, and Sri Lanka should all serve as warnings to us all. The ongoing hostility between the United States and China is also a major source of worry. Moreover, investors exercised extreme caution due to the falling ringgit, the likelihood of future political unrest, the general decline in

investor confidence in the financial markets, and the uncertainty surrounding the outcomes of numerous ongoing court proceedings. Those conditions will accelerate inflation and lead to rising prices and reduce the people's purchasing power. This may also disrupt retirement planning and make it more difficult for an already varied retirement plan.

From previous research, workers and those approaching retirement are dreadfully unprepared for their golden retirement years. According to the report, they barely saved tertiary of what was required for retirement suitably. Moreover, just 50% of persons between the ages of 25 and 71 will have sufficient income saved for good retirement. Several emerging countries do not have fully established retirement systems (Kamal et.al, 2016).

Even the most fundamental economic principles, which are necessary to decide whether to save money or invest it, are unclear to many households. Both younger and older Malaysians showed a shocking lack of knowledge about fundamental financial concepts, which has major consequences for judgments regarding saving, retirement planning, mortgages, and other matters (Nurul & Halimah, 2017). Financial ignorance has the effect of preventing adequate retirement planning and saving.

Because it requires long-term planning, the younger working population today views retirement preparation as a hardship for them. In contrast to individuals during 30s and 40s, who like to feel they prepared since they own assets in their Employee Provident Fund, persons in their 20s believe they are too young to start thinking about retirement (Auni & Salina, 2021). Since they put off planning for retirement, the majority of Americans unable to retire at age 55. Additionally, demographic considerations have influenced people's retirement savings decisions and psychological factors also directly affect those choices (Koe & Ken, 2018).

Therefore, compared to past generations, the 21st century generation is more likely to emphasise retirement planning from an economic, social, and demographic perspective. This is due to the fact that having retirement planning in place may result in retirees feeling more in control of their lives and encouraging them to be more optimistic about the future. Employees' retirement planning behaviour can be affected by the individual, coworkers, family, employers, or government regulation

in order to accept that life drastically changes after retirement (Faezah & Halimah, 2017). In addition, people who have to make preparation before retirement age will feel safer and at ease than people who have not done any planning for life after retirement.

For the research gap, all of the independent variables such as financial knowledge, risk tolerance and propensity to plan are independent variables that previous researchers have regularly used in predicting the retirement planning behaviour. The previous researcher, however, was unable to draw any firm conclusions on the relationship between these three variables. Additionally, there are numerous studies being undertaken in Malaysia, but most of them concentrate on retirees and only a small number on those who are in paid employment. The lack of enough material from previous study on how employees' plan for retirement lead to the reason of conducting this study in the perspective of these variables. Therefore, it is important to investigate how financial knowledges, risk tolerance and propensity to plan are substantial relationship towards individual retirement planning behavior so more individual may understand the significance of retirement planning.

1.3 Research Question

1. Does risk tolerance have significant relationship to the retirement planning behavior among adult employees in urban area Malaysia?
2. Does financial knowledge have significant relationship to the retirement planning behavior among adult employees in urban area Malaysia?
3. Does the propensity to plan have significant relationship to the retirement planning behavior among adult employees in urban area Malaysia?

1.4 Research Objective

1. To determine significant relationship between risk tolerance and the retirement planning behavior among adult employees in urban area Malaysia.

2. To determine the significant relationship between financial knowledges and the retirement planning behavior among adult employees in urban area Malaysia.
3. To determine the significant relationship between the propensity to plan and the retirement planning behavior among adult employees within urban area Malaysia.

1.5 Research Significance

This research focusses on the factors selected, which are financial knowledge, gender and risk tolerance have influence over the retirement planning behavior of individual adult employees in urban area Malaysia. These factors are selected as they can affect the retirement planning decision. This study provides information that retirement planning is not only affect by macroeconomic and microeconomic factors but also those stated factors.

EPF contributors in urban area will benefit from this study. This study also could be used as a reference for developing adult employees' retirement planning behavior. It can alert those undergraduate, working adults, and employees about which factors influence their retirement planning outcome. This assists them to make wise decision in their progress of accumulating retirement funds, hence improve their retirement life quality. The retirement planning is important as it would cause an individual depression at their retirement age, family issue and bankruptcy if not manage well. Moreover, the insufficient of pension fund is still a main problem for those retirees in Malaysia. In fact, there are still majority of Employees Provident Fund (EPF) contributors do not have about RM10,000 in their saving account. The statistics show us the financial stress of most employees are not prepare well for their retirement years. As a result, Malaysia government could refer to this research to conduct a policy to handle with those employees, providing a safety net for their retirement period. For instance, providing preferential tax treatment to those specific categories who need assistance.

This study also provides information for those Malaysia government about the important of including financial management behavior in employees' retirement planning. The case of bankruptcy rises in the recent years because of outbreak of the pandemic Covid-19. There has been an anxious outpouring in old age employees and bankruptcy in the retirement life which caused by improper investment and over loan for the unaffordable mortgage and vehicle. Malaysia government could use this study as a guidance to develop a suitable policy to help adult employees in urban area have a proper retirement planning. Malaysia government could offer the investment opportunities for those non- indigenious. The rise of the demand of home ownership result in the rocker flying of the property prices at urban areas, the government could develop a policy to help those adult employees to afford their dream home.

This study also provides meaningful information to EPF company about the retirement behavior of EPF contributors in urban area Malaysia. This study also provides information regard risk tolerance of adult employees in urban area. EPF company could refer to this research in their development of i-Invest. Moreover, one of the risk tolerance issues is about insurance coverage for retirement. For example, the i-Lindung is a program that provide the members of EPF to buy life and critical illness insurance at affordable prices. A complete insurance plan is vital component of a one's retirement planning. At the same time, people should have enough coverage for their life, medical and accident insurance to protect their life quality of retirement. EPF company is expected to understand and have specific strategy to promote urban employees actively save their money in their fund.

Future researchers are expected to extent their studies of retirement planning behavior through this research. Moreover, this research includes other variables and conditions dissimilar as of past studies. Furthermore, research outcome expected to give meaningful information to those adult employees in urban areas to improve their retirement planning behavior. The adult employees, especially those working individuals are advised to learn the reasons of influencing the retirement planning behavior so that to avoid from being drop into financial issues and end up with poor retirement life.

Chapter 2: Literature Review

2.0 Introduction

This topic include risk tolerance, financial knowledge, propensity to plan as the independent variables, while gender as moderator. This topic will investigate the relationship between retirement planning behaviour and other variables. In addition, gender will be examined in this topic to see how it modifies relationship among independent and dependent variables. Conclusions and descriptions of the independent variables analysed in earlier studies. The Theory of Planned Behavior (TPB) and the Future Time Perspective Theory will both be mentioned in this study. The conceptual framework and hypothesis testing also provided.

2.1 Dependent Variable

2.1.1 Retirement Planning Behavior

Retirement planning identifies desired retreat income levels in addition to choices plus actions necessary for it. Identification of income sources, spending approximation, execution of investments strategy, assets and risk organisation are retirement planning mechanisms. In an ideal world, retirement planning would last lifetime. It will bring best effort if individual incorporate it in their retirement strategy, though you can start at any time.

Retirement planning is the process of preparing for life following paid employment, covering both financial and non-financial components. Lifestyle choices including living location, whether to break job altogether, as well as in what way to spend time during retirement are the non-financial concerns. While making a comprehensive plan for retirement, all of these considerations are taken into account.

One's focus on retirement preparation shifts as they move through different life stages. Retirement planning is the early accumulation of sufficient funds for retirement. It could also mean making specific goals for your assets or income while still in the middle of your career and working towards them. The era of wealth growth ends when you reach retirement age, and the phase of asset distribution begins. Your decades of saving are now paying out, not what you were paying in (Julia, 2021).

According to Murari, 2021, while some people view retirement as an undesirable alteration in life which devalues them in society, others view it as an opportunity to engage in social and other activities that they were previously unable to accomplish because of their work commitments, pressure, and lack of time (Saeed and Sarwar, 2016). Despite the fact that retirement planning is general, individuals still prefer to make plans for their retirement regardless of how they feel about retirement. People typically carry their existing characteristics, attitudes when come to their retirement. Prospective pensioners might require developing their own lifestyle for retirement before making the transfer due to the continuity between pre-retirement and retirement. Workers' retirement planning exposes both their needs and their concerns regarding what would happen to them after they retire. The idea of retirement planning relates to getting ready for the adjustments that come with retiring (Mustafa et al, 2017)

2.2 Independent Variables

2.2.1 Financial Knowledge

Understanding money, credit, and debt management are all components of financial literacy, which is necessary for making daily decisions. Financial literacy includes understanding the distinctions between financial products, budget control, and paying off debt. Financial knowledge has a big impact on families who want to balance their budget, buy a property, pay for their children's education, or provide an income in retirement (Kristina, 2022).

Research shows that consumers with high wages and advanced degrees may be just as ignorant about financial concerns as consumers with lower incomes and less education, despite the likelihood that financial literacy varies with wealth and educational levels.

Retirement planning and the idea of financial literacy education are closely intertwined. Financial literacy education refers to acquiring the knowledge and abilities required to manage financial assets properly and make educated economic and financial decisions. The development of a person's entire financial knowledge, abilities, and perspectives which are influenced by attitudes, values, motivation, and the application of both cognitive and practical skills can also be thought of as a component of financial literacy education (Ornella & Massimo, 2017). Thus, acquiring financial information and abilities as well as comprehending how they relate to one another are two components of financial literacy education. Based on people's knowledge of or experience with financial concepts and products, these components are created. Financial literacy among people rises with financial education. Education in financial literacy is helpful in supplying adequate financial knowledge to support retirement planning. It is crucial for each and every person to arm themselves with relevant financial information in the current era of the greatest financial crisis (Visyalini, et.al, 2018).

2.2.2 Risk Tolerance

An investor's risk tolerance is revealed by how much volatility in the value of their investments. Given that it typically affects the types and amounts of investments a person makes, risk tolerance is an important issue in investing. Higher risk tolerance is typically related with investments in equities, equity funds, and exchange-traded funds, and lower risk tolerance is frequently related with the purchase of bonds, bond funds, and income funds (ETFs).

Investors can plan their complete portfolio and choose how to invest when they are aware of their level of risk tolerance. Risk is a factor in all investments to some extent. Depend on the level of risk they willing to accept, investors are categorised into three groups: aggressive, moderate, and careful. Online risk tolerance tests include surveys and questionnaires that ask questions about risk. An investor could also wish to look into historical returns for different asset classes in order to gauge the volatility of various financial instruments.

One factor that affects risk tolerance is the investor's time horizon. A prudent investor with a long-term financial goal who carefully selects higher-risk assets, such as shares, may see superior returns. But, less risky cash investments may be more appropriate for short-term financial goals. Future earning potential and the presence of other assets, such as a home, pension, Social Security, or an inheritance, have an impact on an investor's risk tolerance. When an investor has other, more reliable sources of funding available, they are able to take on greater risk with investable assets. Additionally, because a larger portfolio's percentage of loss is significantly lower than a smaller portfolio's, investors with larger portfolios may be more risk-tolerant (Alexandra, 2022).

Risk tolerance is a key component of a strategy for building wealth without worrying about it constantly. You will need to settle with lesser-risk investments and the lower returns they offer if you don't have the ability for managing the dangers of temporarily losing money. Larger return investments frequently have a higher chance of experiencing abrupt downturns or outright losses. With an awareness of your level of risk tolerance, you can develop an investment strategy that will enable you to strike a compromise between your concerns about volatility and the possibility for higher returns over the long term (Greg, 2022).

2.2.3 Propensity To Plan

Propensity to plan is their propensity to set reasonable, goal-setting behavior for the long run. Previous studies have shown that planning tendency influences sound retirement behavior.

Goal setting is frequently characterised as a commitment to regulate time-inconsistent desires and processes, which can improve learning, job performance, mental health, and even saving decisions for goal holders. Yet, even if someone makes a commitment to setting a goal, just having the intention to do so does not guarantee goal accomplishment because there is a chasm between setting a goal and really implementing it (Falahati & Sabri, 2015). In order to distinguish between the intention to pursue a goal alone and the intention to do so, or inclination to plan, which might include the act of pursuing a goal. According to studies, exercising or making implementation intentions entails choosing and practising an efficient goal-directed activity in a particular situational scenario so that people can start and keep working toward a goal. A planned propensity that outlines the when, where, and how each reaction leads to the beginning of the actual action encourages goal achievement (Kyoung, 2016). Planning tends to be viewed as a predisposition to make an attempt to pursue the objective by employing prompts and reminders to minimise potential distractions. Beyond only creating goals, this inclination might help us foresee interruptions to our plans or conflicts between objectives.

According to the inclination to plan theory, different degrees of management hard works in savings have a significant amount of empirical power to explain varied levels of behavior related to retirement planning. One of the primary underlying assumptions is that individual attempts to limit the discount on future benefits or issue of coordinated long-term goals through current options can enhance decisions on retirement planning behavior (Jing, 2018). This assumption is based on various aptitudes and attitudes. It has been discovered that deliberate planning efforts and pertinent consumer search activities during the decision-making process increase the likelihood of obtaining the desired goals by controlling one's natural urge for instant pleasure. An individual who puts more thought into their personal financial choices has a better probability of reviewing those choices, which could

result in effective retirement planning behavior. According to the past studies, few research has generally focused on the distinctions between genders in decision-making and financial management (Francis et al, 2015).

2.3 Moderator

2.3.1 Gender

Men and women respond to general attitudes and values regarding money in various ways, according to Gender Theory (England, 1993). Gender was used to study the difference among urban adult employees in Malaysia. The term "moderator" describes a variable that could soften or change how the relationship between the independent factors and the dependent variable is shaped. Nevertheless, no research has looked into how gender may act as a moderator in the relationship between young workers' financial capabilities, financial distress, and attitudes towards money in Malaysia. Currently, the rise of Malaysia's economy, along with the inflation rate, has caused the prices of goods to increase which become a burden to the adult employees nowadays. In addition, women tend to be less financially literate than men are (Chen & Volpe, 2002; Leila & Laily, 2011; Lusardi & Mitchell, 2011), with males having a tendency to know more about credit and risk management. It is crucial to further investigate the moderating effect of gender to understand the disparities in their financial competence in order to aid enhance their financial literacy and responsible monetary behaviour.

2.4 Theories

2.4.2 Risk-bearing and Consumption Theory

In order to analyse situations more thoroughly and come to the best risk-bearing decisions, risk-bearing and consumption theory takes into account risky circumstances, including savings as a substitute for insurance, and introduces two new concepts, effective risk coverage and a risk-bearing budget(Moffet, 1975). Decision-makers must concurrently strike a balance between risk-bearing goals and budgeting requirements for insurance and savings(Moffet, 1975). Because the study shows the substitution impact between insurance coverage and savings, Moffet's (1975) findings suggest that those who are less risk averse will not buy comprehensive insurance coverage but will instead supplement it with savings. Therefore, risk taking, and consumption may be used to explain how risk tolerance affects saving behavior.

Risk is the unpredictability of future results, and risk tolerance is determined by the percentage of risky assets in a person's whole portfolio of financial assets(Duasa & Yusof, 2013). The majority of Malaysian respondents to the study said they would like to have cash and savings accounts since they involve the least amount of risk when compared to other assets(Duasa & Yusof, 2013). In Kuala Lumpur, Malaysia, the majority of survey respondents, according to(Karim et al, 2016), are risk averse and prefer liquid assets like savings accounts, cash on hand, and Employment Pension Funds (EPF), conversely a very small portion of respondents make investments in riskier commodities like gold and real estate. This suggests that someone with limited risk tolerance will spend their money in safer assets or securities rather than taking on more risk.

2.4.3 Propensity to Plan Theory

Psychology has a notion known as "propensity to plan" (Ameriks et al., 2003; Gollwitzer, 1999). The idea was utilised by Ameriks et al. (2003) to explain variations in household wealth accumulation patterns and status. Examples of preferences that may influence judgments about asset

accumulation include the discount factor, rate of risk aversion, and bequest motives. These preferences have been linked to variations in asset accumulation. However, these methods have limited empirical use in explaining various degrees of wealth increase when family socioeconomic variables were considered (Barsky et al., 1997; Bernheim et al., 2001)

The propensity to plan reflects control abilities that reveal which people are more eager and capable of managing their finances, which people pay close attention to their spending habits, and which people will be able to solve difficulties more easily. According to the propensity to plan hypothesis, certain attitudes and abilities have an impact on household financial planning and can help people achieve long-term objectives like asset creation. Therefore, the propensity to plan refers to the deliberate actions taken to lessen the tension between present happiness and future usefulness (Kim, 2016).

2.5 Conceptual Framework

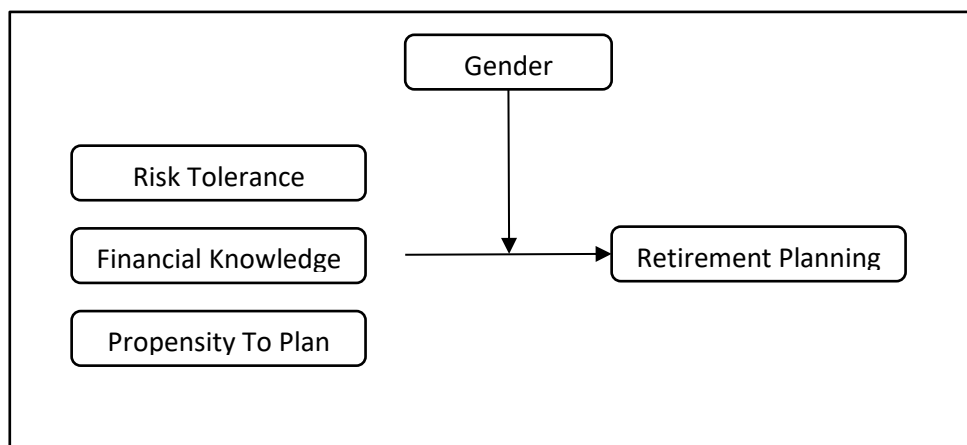


Figure 2.4.1. Conceptual Framework

Relationship between risk tolerance, financial knowledge, and propensity to plan with the retirement planning behavior among employee adult in urban area, Kuala Lumpur in Malaysia will be investigated in this research. At the same time, the moderation effect of gender towards the relationship between risk tolerance, financial knowledge, propensity to plan and retirement planning behaviour will be studied in this topic too. According to earlier studies, there is a link between financial management and one's money

attitude, and one's attitude towards money might vary depending on one's gender as well as one's overall views, thoughts, values, and behaviour (Dowling et al., 2009; Lim & Teo, 1997). Gender different, which male and female may have different way to treat their money. According to Furnham, Stumm and Fenton-O'Creedy (2015), male and female have different attitude towards money act, and they conclude that female get their satisfaction from spending money on shopping and thus worry about money later. According to the Federation of Malaysian Consumers Associations' (FOMCA) 2011 report, credit card debt accounted for the bulk of bankruptcy declarations among Malaysians under 40 years of age, and 72% of them did not have any retirement plans.

This study's conceptual framework about the relationship between risk tolerance, propensity to plan, financial knowledge, and retirement planning behaviour, where the gender act as the moderator is shown as above.

2.6 Hypothesis Testing

This study aims to explore the relationship between Financial Knowledge, Risk Tolerance, Propensity to Plan towards the Retirement Planning Behavior. The three hypotheses for this study were developed and shown below:

Hypothesis 1:

H₀: There is no significant relationship between risk tolerance and retirement planning behavior.

H₁: There is significant relationship between risk tolerance and retirement planning behavior.

It is expected to have significant relationship between risk tolerance and retirement planning behavior. People with enough financial knowledge will confident when encountering difficulties in managing their finances. (Ahmad NW, Mawar MY, Ripain N (2016).

Hypothesis 2:

H₀: There is no significant relationship between financial knowledge and retirement planning behavior.

H₁: There is significant relationship between financial knowledge and retirement planning behavior.

It is expected to have significant relationship between financial knowledge and retirement planning behavior. According to Arifin (2017); Grable et al. (2020); and Saurabh and Nandan (2018), past study revealed that financial knowledge is significantly affect the financial behavior

Hypothesis 3:

H₀: There is significant relationship between propensity to plan and retirement planning behavior.

H₁: There is significant relationship between propensity to plan and retirement planning behavior.

Propensity to plan is expected to have significant relationship with the retirement planning behavior. The study found that an individual who has the characteristics related to industriousness such as propensity to plan has more chances to hold formal credit card and savings products (Roa et al. (2019)).

Hypothesis 4:

H₀: Gender is significant moderating effect to relationship between propensity to plan and retirement planning behavior.

H₁: Gender no significant moderating effect to relationship between propensity to plan and retirement planning behavior.

Hypothesis 5:

H₀: Gender is significant moderating effect to relationship between financial knowledge and retirement planning behavior.

H₁: Gender no significant moderating effect to relationship between financial knowledge and retirement planning behavior.

Hypothesis 6:

H₀: Gender is significant moderating effect to relationship between risk tolerance and retirement planning behavior.

H₁: Gender no significant moderating effect to relationship between risk tolerance and retirement planning behavior.

2.7 Conclusion

Essentially, Chapter 2 has discussed the relationships between the retirement planning behavior with risk tolerance, financial knowledge, and planning propensity. The fundamental linkages between the independent and dependent variables have been clearly clarified by the summary of the theories used. Furthermore, these hypotheses will be established for appropriate analysis in Chapter 4.

Chapter 3: Research Method

3.0 Introduction

Chapter 3 propose study method used to examine the relationship between risk tolerance, financial knowledge, propensity to plan towards retirement planning behavior of adult's workers in urban area Malaysia. Plus, this chapter will show the details of research method, involving research design, sampling method, data collection as well as data analysis practise.

3.1 Research Design

Quantitative research applied in the research as this type of research makes it much simpler to explain the data in figure form using a variety of ways, making it easier for readers and researchers to understand the material. The process of gathering and interpreting numerical data is known as quantitative research. It can be used to identify trends and averages, formulate hypotheses, examine causality, and extrapolate findings to larger populations. This study aims to determine how personal factor such as financial knowledge, risk tolerance, propensity to plan have considerable relationship to retirement planning behavior.

Consequently, quantitative approach used in research so that sample population can be explained in a quantifiable way (Mertler, 2016). In this research, the 5-point Likert scale was applied for research regardings retirement planning behavior, risk tolerance, propensity to plan. The construction of questions for financial knowledge will be based on the number of the respondent's five total questions were correctly answered, and a mark will be assigned in percentage form.

3.2 Sampling design/ diagnostic checking

After understanding the research design, sampling design is conducted earlier before distribution of google form. Sampling design is technique for calculating likelihood of selecting somewhat certain sample from population. It lead to learning how to structure the best-fit sampling method in real-world condition for studying method of deriving possibility functions to describe a specific sampling method.

The construction of pilot study is done before distributing the questionnaires to the respondents. The main objective of pilot test is to assess the practicality of the proposed questions. The total of 30 sample respondents are participated in this survey to test the practicality of the research.

3.2.1 Target Population

Target population are adult employees aged between 15-64 years in Kuala Lumpur, Penang, and Johor Bahru. Kuala Lumpur is the fastest growing metropolitan area of Malaysia (World Population Review, 2022) having most population among urban areas Malaysia, with the estimated 1.75 million population, while Johor Bahru with the estimated 3.79 million population and Penang with 1.77 million population in year 2021 (Department of Statistic Malaysia, 2021).

3.2.2 Sampling Frame and Sampling Location

Population consist of sampling frame and sampling location. Population different from sample frame as population is general while the sample frame is specific. This study included working individuals from 15-64 years. The sampling location is in Kuala Lumpur, Penang, and Johor Bahru.

3.2.3 Sampling Element

Total of 500 questionnaires survey will be distributed to the working adults with ages between 15-64 years old. The respondents from this aged mostly started earning their income and facing more personal financial management issue.

3.2.4 Sampling Technique

Convenience sampling is applied in study. Convenience sampling technique known as non-probability sampling of gathering representative information from a population that are easy to reach. Convenience sampling depends on respondents who are conveniently to participate in this research. The advantages of using convenience sampling are that it saves time, helpful for pilot test and less costing as the primary data collection can be completed in shorter time (Saunders, M., Lewis, P. and Thornhill, A. (2012)).

3.2.5 Sampling Size

The sample size indicates the requirement amount of individual sample. An appropriate sample size is important in the inferential analysis. The large enough sample size makes the outcome unbiased and represent the whole population. Population of Malaysia in year 2022 expected 32.7 million while working age group (15-64) was estimated at 22.7 million (Department of Statistic Malaysia, 2022). Sample size will be 384 for the research.

3.3 Data collection procedures

Data collection is practice of gathering, evaluating the data collected using the systematic procedures enable researchers answering research questions, and test hypotheses. The primary data applied through the questionnaire survey. The channels to distribute the survey are online social media and face to face.

In this research, questionnaire delivered to target respondents as primary resources of the data gathering to establish the significant relationship of the risk tolerance, financial knowledge, and propensity to plan toward retirement planning behavior. The questionnaire created through “Google Form”, consisting of two sections which Part A consist of demographic information and Part B consist of dependent variable, and independent variables questions in 5-point Likert scale form.

Section A, items contain participants' demographic information like age, gender, employment status, marital status, as well as current savings for retirement. In section B consists of 4 variables. The sources of the questionnaires are stated below:

Variable	Questions Resource
Retirement Planning	MacFarland, Marconi, and Utkus, (2003), Noone et al. (2010), Petkoska and Earl, (2009) and Van Rooij et al., (2011) and Brandstatter (2005), Webley and Nyhus (2006), Sherraden, Peters, Wagner, Guo, and Clancy (2013), Shim et al. (2010), Benmoyal and Moscjis (2010), Richins and Dawson (1992).
Propensity To Plan	(Lynch, Netemeyer, Spiller, and Zammit, (2010))
Financial Knowledge	Runyard et al. (2020)
Risk Tolerance	Kuzniak, Rabbani, Heo, Ruiz-Menjivar and Grable (2015)

3.4 Data analysis technique

Data analysis technique is the process of gathering, modelling, and analyzing data to extract insights that can be used to make decisions. Data analysis is applied to analyze data collected. This step is important in assisting researchers to ordering, manipulating, and interpreting data collected into meaningful information for the

research. By using SEM-PLS 3, it can produce several analysis such as descriptive analysis, outer loading analysis, bootstrapping as well as reliability test.

2.4.1 Theory of Planned Behavior (TPB)

This theory is used to examine the relationship between retirement planning behavior and financial knowledge. The hypothesis was developed to describe all actions that humans may exercise self-control over. This model's most important element is behavioral intent, which is impacted by attitudes about the likelihood that an action will result in the desired outcome and a subjective assessment of the risks and advantages of that outcome (LaMorte, 2019).

The fundamental TPB components have been modified to account for financial knowledge in order to evaluate potential investors' investment goals. Since financial knowledge is crucial in influencing financial behavior, it was taken into consideration (Khan, 2016; Tauni et al., 2017). Additionally, personality was added since studies in the field of behavioral finance have demonstrated that personal traits have an impact on investing decisions (Durand et al., 2008).

According to Griffin (2012) although several recent studies from the researchers (Hershey, Jacobs-Lawson, McCardle, & Hamagami, 2007; Petkoska & Earl, 2009) have discovered psychological elements that have an influence on planning behavior, the majority of research on the predictors of retirement planning has focused on demographic characteristics. However, this study has typically not been supported by a foundational theoretical framework. The current work advances the area by creating and testing a model of predictors for retirement planning using the idea of planned behavior (Ajzen, 1985, 1991).

According to the TPB, intentions to engage in an activity are a good predictor of actual action, and meta-analytic study has confirmed this association (Godin & Kok, 1996; Hausenblas, Carron, & Mack, 1997). Intentions are considered to act as a mediator between the four behavioral

predictors (attitude, subjective norms, behavioral norms, and perceived behavioral control) and their effects. An individual's behavior patterns are thought to be influenced by behavioral purpose (Kimiyaalam, 2017). However, there are explanations for why conduct deviates from what the theory of planned behavior predicts (Ajzen & Madden, 1986; Armitage & Conner, 2001; Rise, Sheeran, & Hukkelberg, 2010).

However, studies lacking a measure of intentions have frequently looked at the direct impact of TPB factors on actual behavior (Carvajal, Wiatrek, Evans, Knee, & Nash, 2000; Godin & Kok, 1996). However, as of yet, planning behavior has not been predicted using the TPB (van Dam, van der Vorst, and van der Heijden, 2009). However, the TPB has been effectively applied to activities like eating and exercise that are not only time-consuming but also have a delayed payoff. These behaviors are particularly typical of actions in the realm of retirement planning. In this study, we make use of a revised version of the TPB (Warburton & Terry, 2000), which considers attitudes, perceived behavioral control, and behavioral norms as predictors of behavior.

3.4.1 Descriptive Analysis

Descriptive analysis summarising the data collected in this study into meaningful information. The output of the descriptive analysis in this study will be percentage and central tendency (mean) which applied in the measurement of the demographic profile.

Smart PLS 3 software is applied in this research. Smart PLS 3 is meaningful in variable modelling as it can include the art techniques with simple to use and perceptive graphical user interface.

3.4.2 Partial Least Squares-Structure Equation Modelling (PLS-SEM)

PLS SEM is statistical technique to analyze relationships between observed and latent variables. It is a form of structural equation modeling that uses latent variables to explain the relationships between observed variables. PLS SEM identify interactions between variables, test hypotheses, and make predictions. Therefore, PLS will be applied in testing relationship between two variables in study. PLS-SEM comfortable to apply for this research due to its ability to predict and explain (Hair et al., 2014).

3.4.2.1 Outer Loading Analysis

Outer loading analysis accustomed to recognising the fundamental construct of a dataset. It aims in distinguishing patterns within the data and to determine which variables are most important in explaining the data. Outer loading analysis is often used in exploratory data analysis and can be used to identify relationships between variables, identify clusters of variables, and identify outliers. The table below summarises the interpretation of the range of the value and its respective interpretation.

Interpretation of Factor Loading	
Not considered	<0.40
Acceptable	0.40 – 0.70
Desired	>0.70

Wong (2013)

3.4.2.2 Reliability and Validity test

The Reliability Analysis process computes a variety of regularly used measures of scale reliability as well as information about the relationships

between particular scale items. Cronbach's alpha test is introduced for the study to measure internal consistency within a set of Likert scale surveys.

Cronbach's alpha is ranging from 0 to 1.. In general, a good Cronbach alpha values of higher or equal to 0.7 is considered as acceptable internal consistency. In this study, an internal consistency score of Cronbach's alpha higher than or equal to 0.7 regarded as favourable. The range of the value as well as its respective level shown as below:

Interpretation of Cronbach's Alpha Value	
Cronbach's Alpha Value	Reliability Level
More than 0.90	Brilliant
Between 0.80 – 0.89	Nice
Between 0.70 – 0.79	Good and Acceptable
Between 0.60 – 0.69	Acceptable
Between 0.50 – 0.59	Weak
Less than 0.59	Unacceptable

Source: Mohd Arof, Khairul & Ismail, Syuhaida & Saleh, Abd Latif. (2018).

Composite reliability, on the other hand, quantifies how reliable a composite score or scale is. It is calculated by dividing the average variance of the items in the composite by the total variance of the items. It aim to measure the reliability of a composite score or range and is typically expressed as a percentage. Composite reliability known as metric for scale components' internal consistency (Netemeyer, 2003). According to Brunner and Süß (2005), it equals to the whole quantity of actual score variance in relation to the sum of scale score variance.

Besides, Average Variance Extraction (AVE) is statistical technique for discovering fundamental formation of a group of variables. It is used to cut down the amount of variables in a dataset by extracting the common variance among them. AVE is often used in factor analysis, where it aim to determine the fundamental factors which describe the variance in the data.

According to Hair et al (2013), the AVE value should at least 0.50 or above to prove there is sufficient convergent validity for each item. Besides, AVE value which less than 0.50 is unacceptable due to the explained variance is less than the variance of error.

3.4.2.3 Discriminant Validity

A test's discriminant validity describes how little it is like other tests which assess distinct constructs (Nikolopoulou, 2022). A construct is a behaviour, attitude, or concept in this context, especially one that is not immediately observable. Two exams reflect independent constructs shouldn't be greatly linked with one another, If they are, it is unreasonable to say that they are evaluating separate constructs. Therefore, discriminant validity is a calculate of how different two notions are from one another.

There are two indicators to measure the discriminant validity, which are Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio of Correlations (HTMT). Fornell-Larcker Criterion is one of the measures of discriminant validity. To do the comparison, the AVE and correlation of hidden constructs are required. The prospective construct should clarify its own differences rather than those of other possible constructs. Fornell-Larcker criterion and cross-loadings are frequently used by marketing researchers (Hair et al. 2012), however there are not many empirical studies demonstrating their usefulness for proving discriminant validity. According to recent studies, the Fornell-Larcker criterion may be ineffective in some situations. Therefore, in this research, Heterotrait-Monotrait Ratio of Correlations (HTMT) will be used to measure the discriminant validity.

3.4.2.4 Collinearity Statistics

Collinearity is the statistical term for the correlation of predictor variables (or independent variables) in a regression model to represent a linear

connection. They are unable to independently estimate the value of the dependent variable when predictor variables in the same regression model are coupled. If there is correlation in the relationship between the predictors, the standard error of predictor coefficients will increase. In order to gauge how much the variance has been inflated, the researcher should apply the Variance Inflation Factor (VIF). According to (Daoud, 2017), VIF allow researchers to find out the degree of correlation between IVs, whereas VIF = 1 to 5 show a moderate correlation, but not enough to call for remedial action, VIF = 1 implies no correlation between the independent variable and other variables. Critical levels of multicollinearity are indicated by VIFs > 5, which suggests that the coefficients are under-estimated. Table below show the interpretation of the Variance Inflation Factors (VIF):

Interpretation of VIF Value	
VIF	Interpretation
VIF = 1	Not Correlated
$1 < \text{VIF} \leq 5$	Moderated correlated
VIF > 5	Highly correlated

Source: Daoud, 2017

3.4.2.5 Bootstrapping

In statistics and computer science, bootstrapping is a resampling technique used to estimate the distribution of a population or the properties of an estimator by creating multiple samples from a single data set. According to Gutwin et al, (2017), A non-parametric resampling method called "bootstrapping" is used to examine the statistics of uncertain distributions of samples.

The basic idea behind bootstrapping is to create a large number of datasets by randomly sampling with replacement from the original dataset. For each new dataset, a statistic of interest, such as a mean or a correlation coefficient, is calculated. This process is repeated many times, and the resulting distribution of statistics is used to estimate the properties of the population or the estimator. According to Garson, (2016), researchers can define the importance of PLS coefficients as well as correlations between variables by using bootstrapping. Bootstrapping can be useful in situations where obtaining new data is difficult or impossible, or when the sample size is small. It can also be used to estimate the accuracy of a statistical model, to compare two or more models, or to identify outliers in a data set.

In this research, Bootstrapping will be implemented to evaluate t-statistic, p-value, and path coefficient. According to Wong, (2013), T-statistic can determine the importance of outer model loadings, and path coefficient known as important when value more than 1.96. But, if the T- statistic value is less than 1.96, p-value will be used to determine the significance of the variables. Path coefficients will be used to indicate the relationship between the explanatory variables either direct or indirect on the traits or dependent variables (Li, 1975, Düzgüneş et al. 1996, Keskin 1998).

3.5 Conclusion

In short, chapter 3 is focus on the research design, sampling design (frame, location, element, size, and techniques) and data analysis technique such as inferential analysis and descriptive analysis. The research method is important to guide researchers to transform collected data into valuable information. Moreover, a complete research methodology able to prove whether the outcomes adapt to the theories on past research.

Chapter 4: Data Analysis Findings and Interpretation

4.0 Introduction

Based on the demographic profile gathered from the questionnaire, descriptive analysis is conducted to analyse the central tendencies measurement of the Retirement Planning Behaviour, Propensity to Plan, and financial literacy measurements. Cronbach's Alpha applied for pilot test which for the measurement of reliability of the variables. The interpretation of each inferential analysis for each variable also involved.

4.1 Descriptive analysis

4.1.1 Respondent Demographic Profile

Based on the Table 4.1, respondents' information such as age, gender, marital status, employment status, living area, and current savings for retirement had been summarised. 384 participants participated in the research.

Table 4.1 Participants' Demographic Information

Variables	Frequency (384)	Percentage (%)
Age		
15 to 24 years old (early working age)	222	57.8
25 to 54 years (prime working age)	107	27.9
55 to 64 years (mature working age)	55	14.3
Gender		
Female	272	70.8
Male	112	29.2
Marital Status		
Married	79	20.6

Single	305	79.4
Are you come from urban area of Malaysia?		
No	41	10.7
Yes	343	89.3
Employment Status		
Employed	214	55.7
Unemployed	170	44.3
Current Savings for Retirement		
< RM5,000	193	50.3
> RM100,000	11	2.9
Not involve in any investment	56	14.6
RM10,001 - RM40,000	46	12.0
RM40,001 - RM70,000	18	4.7
RM5,000 - RM10,000	54	14.1
RM70,001 - RM100,000	6	1.6

Established from research.

Based on the Table 4.1, the distribution of the sample are 272 (70.8%) female respondents and 112 (29.2%) male respondents participated in this research. Majority respondents are aged from 15-24 years old (early working age) has total respondents (57.8%), at the same time, there are 107 (27.9%) respondents aged from 25-24 years old (prime working age) and 55 (14.3%) respondents aged from 55-64 years old (mature working age).

In term of marital status, there are a total of 305 (79.4%) respondents are single, while 79 (20.6%) of the respondents are married. In term of employments status, there are 214 (55.7%) of respondents are being employed while the rest 170 (44.3%) are unemployed.

Besides, there are 343 of respondents say that they are come from urban area Malaysia, while the rest 41 are not come from urban area Malaysia. In term of employment status, there are 214 respondents (55.7%) out of total 384 respondents are employed while the rest, 170 (44.3%) are unemployed. For the current savings for retirement, the respondents were separated into 7 categories, which 193 (50.3%) respondents have less than RM5,000, 54

(14.1%) respondents have between RM5,000 – RM10,000, 46 (12.0%) respondents have between RM10,001 – RM40,000, 18 (4.7%) respondents have RM40,001 – RM70,000, 6 (1.6%) respondents have RM70,001 – RM100,000, 11 (2.9%) respondents have more than RM100,000 and 56 (14.6%) respondents have not involved in any involvement.

4.1.2 Central Tendencies Measurement of Constructs

Table 4.2 Retirement Planning Behaviour	
Questions	Average
RPB1	3.71
RPB2	3.06
RPB3	3.71
RPB4	3.16
RPB5	3.68
RPB6	2.45
RPB7	3.25
RPB8	2.9
RPB9	3.24
RPB10	3.6
RPB11	3.49
RPB12	3.58
RPB13	3.63
RPB14	3.67
RPB15	3.74

Source: Developed from research

The result above shows the mean of each questions assesses to Retirement Planning Behavior of the participants. RPB15 shows the top rank of mean value of 3.74 as compared to the other items.

Besides, RPB6 has the lowest mean value of 2.45 only. The mean value of other overall items is about 3.39 and have range between 2.90 and 3.71, which most of the respondents have chosen ‘Strongly Agree’ and ‘Agree’ for the items related to their outlook on the future retirement planning, saving money attitude, income for sustaining the living quality, attitude to learn retirement planning, confidence in making financial decision and confidence in their current financial condition.

Questions	Average
RT1	3.25
RT2	3.3
RT3	3.2
RT4	3.2
RT5	3.28

Established from research.

Result above show the average response related to the Risk Tolerance. The overall mean value of Risk Tolerance related items is nearly closed to each other, which ranges between 3.20 and 3.30. RT2 shows the top mean value of 3.30 amongst all items. Besides, RT3 and RT4 have same mean value of 3.20. In this research, there are majority of the responses are about to choose ‘agree’, reflecting that most of them prefer low risk investment as compared to high-risk investment provided high return.

Questions	TRU E	FALS E	DO NOT KNOW
It is likely to get free cash from an ATM by using a credit card.	97 (25%)	188 (49%)	99 (26%)
When compared to investing in a stock mutual fund,		183 (48%)	151 (39%)

investment in a company's shares carries less risk.	50 (13%)		
When inflation rate higher than the interest rate, buying power will be decreased.	197 (51%)	63 (16%)	124 (32%)
If I have RM 100 in savings account earning 2% interest annually, I will have RM 102 or more in your bank account after five years.	97 (25%)	195 (51%)	92 (25%)
Regular smokers who purchase medical insurance pay the same rate as non-smokers.	211 (55%)	33 (9%)	140 (36%)

Established from research.

Table 4.4 show the responses for the Financial Knowledge, and outcome indicated the most of the participants give the correct answer on ‘*When inflation rate is higher than the interest rate, buying power will be decreased,*’ with 197 (51 %) respondents. The second highest item is ‘*It is possible to get free cash from an ATM by using a credit card,*’ which 188 (49%) respondents give the correct answer. At the same time, the most wrongly answered item is ‘*Regular smokers who purchase medical insurance pay the same rate as non-smokers,*’ with only 33 (9%) respondents answered correctly in this question. In addition, the question received top ‘Do Not Know’ is ‘*When compared to investing in a stock mutual fund, investment in a company's shares carries less risk*’, with 151 (39%) of respondents choose that they do not know about it.

Scores of Respondent’s in Financial Knowledge Test

	0	1	2	3	4	5	Mean
Sum of scores of respondents	76	0	111	120	0	77	2.52

Source: Developed from research

In term of financial knowledge, the respondents were classified into several categories as shown in table above. The mean value of the sum scores of respondents in this study is 2.52. Based on the table, majority of the respondents, which is 120 (31.3%) respondents get score of 3, and the second most score by respondents in this research is score of 2, which has 111 (28.9%) of respondents. There is nobody get both score of 1 and zero in this research, however there are few respondents score 0 in this research, which is 76 (19.8%) respondents. Besides, there is 77 (20.1%) respondents able to score full mark, which is 5 in this research.

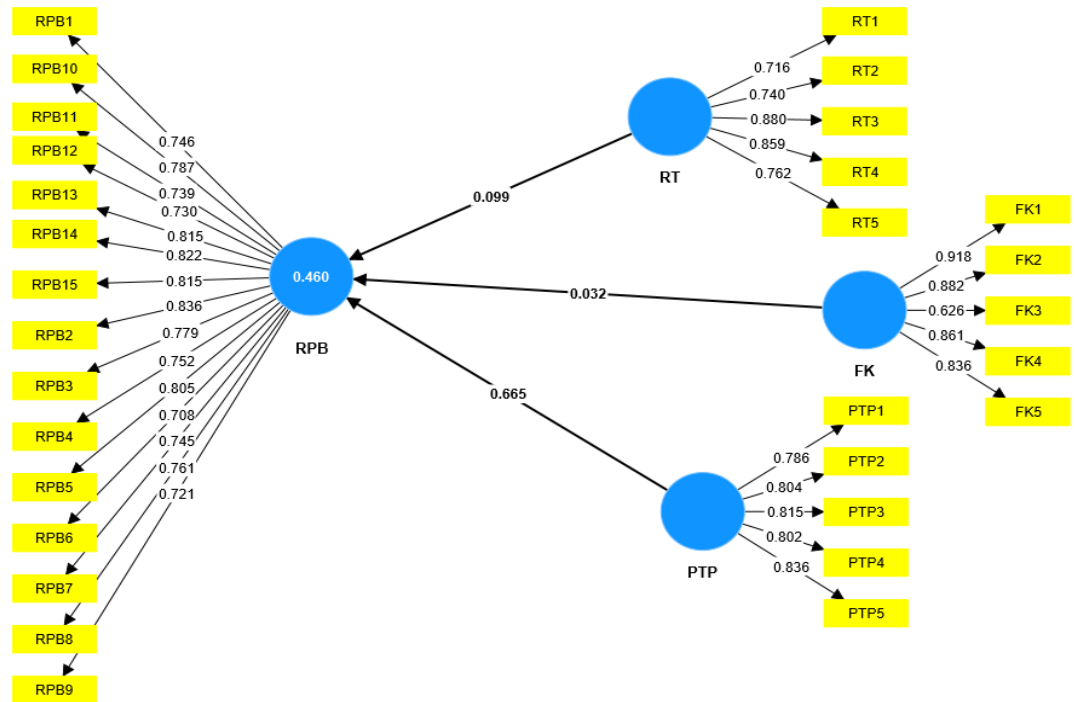
Questions	Average
PTP1	3.11
PTP2	3.13
PTP3	2.96
PTP4	2.96
PTP5	2.96

Established from research

The mean value of the five items are almost similar, ranging from 2.96 to 3.13. The question PTP2 shown the highest mean value which is 3.13, while the question PTP3, PTP4, PTP5 shown the lowest mean value of 2.96. The result show that majority of the respondents have negative attitude in term of propensity to plan which reflected from the items 3, 4 and 5.

4.2 PLS - SEM

4.2.1 Outer-Loading Analysis



Source: developed from research

Where:

RPB = Retirement Planning Behaviour

RT = Risk Tolerance

PTP = Propensity to Plan

FK = Financial Knowledge

Indicator	FK	PTP	RPB	RT
FK1	0.918			
FK2	0.882			
FK3	0.626			
FK4	0.861			
FK5	0.836			
PTP1		0.786		
PTP2		0.804		

PTP3		0.815		
PTP4		0.802		
PTP5		0.836		
RPB1			0.746	
RPB10			0.787	
RPB11			0.739	
RPB12			0.730	
RPB13			0.815	
RPB14			0.822	
RPB15			0.815	
RPB2			0.836	
RPB3			0.779	
RPB4			0.752	
RPB5			0.805	
RPB6			0.708	
RPB7			0.745	
RPB8			0.761	
RPB9			0.721	
RT1				0.716
RT2				0.740
RT3				0.880
RT4				0.859
RT5				0.762

Source: developed from research

According to the result above, outer loading values of all indicators have between 0.626 and 0.918, therefore all the indicators are considered desirable. Besides, the results show that all indicators are high reliability and should be maintained as they made absolute contribution to its allocated construct. The outer loading values for each indicator are at least 0.708, except for FK3, thus the reliability level for all indicators are considered high.

4.3 Construct Reliability and Validity

4.3.1 Cronbach's Alpha

In this research, the pilot test was conducted based on sample size of 30 respondents from the total 384 respondents. The table below reveals the Cronbach's Alpha value which indicated the reliability of each respective construct. Besides, the table also summarized the Cronbach's Alpha value for sample size of 384 respondents.

Items	Cronbach's Alpha Value	
	30 respondents (Pilot Test)	384 respondents
Dependent Variable: Retirement Planning Behavior	0.831	0.951
Risk Tolerance	0.623	0.854
Financial Knowledge	0.817	0.895
Propensity to Plan	0.866	0.868

Source: Developed from research

Cronbach's Alpha known as metric for evaluating a group of survey questions' internal consistency or reliability. There are various report showing recommended appropriate values of alpha ranging from 0.70 to

0.95, DeVellis, R. F., & Thorpe, C. T. (2021). Usually, the maximum Cronbach's alpha value of 0.90 was recommended as if the value is too high may indicated that some of the items are redundant (Streiner, D. L. (2003)). According to (Achour, Bachir. (2017)), Cronbach's alpha value range of below 0.60 is unacceptable, between 0.60 and 0.70 is acceptable, 0.70 to 0.80 is good to accept, and 0.80 to 0.90 is excellent. However, if the Cronbach's alpha value more than 0.90, the research test should consider to be shortened in term of length.

In this research, the table above has proved that Retirement Planning Behavior, Risk Tolerance, Propensity to Plan and Financial Knowledge have good reliability. According to the table above, Retirement Planning Behavior, Risk Tolerance, Financial Knowledge, and Propensity to Plan have Cronbach's Value of 0.953, 0.854, 0.895 and 0.868. The value indicated the overall variables have good reliability in this research.

4.3.2 Composite reliability (rho_a)

	Composite reliability (rho_a)
Retirement Planning Behaviour	0.953
Financial Knowledge	0.952
Propensity To Plan	0.868
Risk Tolerance	0.873

Established from research

Cronbach's alpha makes the supposition that all objects are similarly dependable and have equivalent outside loadings on the construct (Hair et al., 2014). Therefore, with this limitation, composite reliability essential to accessing internal consistency and reliability of construct. Based on the table above, RPB has the highest CR value among all the variables.

4.3.3 Average Variance Extracted (AVE)

Variables	AVE
Retirement Planning Behaviour	0.595
Financial Knowledge	0.690
Propensity To Plan	0.654
Risk Tolerance	0.630

Established from research

According to result above, FK has top AVE with the value of 0.690, whereas RPB has the lowest with the value of 0.595. Due to fact that all AVE are over 0.500 and have a range between 0.595 and 0.690, the convergent validity is sufficient.

4.3.4 Discriminant Validity

4.3.4.1 Heterotrait-Monotrait Ratio of Correlations (HTMT)

	FK	PTP	RPB	RT
FK				
PTP	0.111			
RPB	0.053	0.734		
RT	0.068	0.108	0.166	

Source: Developed from research

HTMT is used to determine the discriminant validity. HTMT threshold is questionable; according to Henseler et al. and Hair et al. publications, a HTMT ratio value that is lower than 0.9 is recommended and less than 1.00 is required (Henseler, Ringle, & Sarstedt, 2015). Therefore, the results above show that all the variables are lower than 0.900 proving the discriminant validity of this model is adequate.

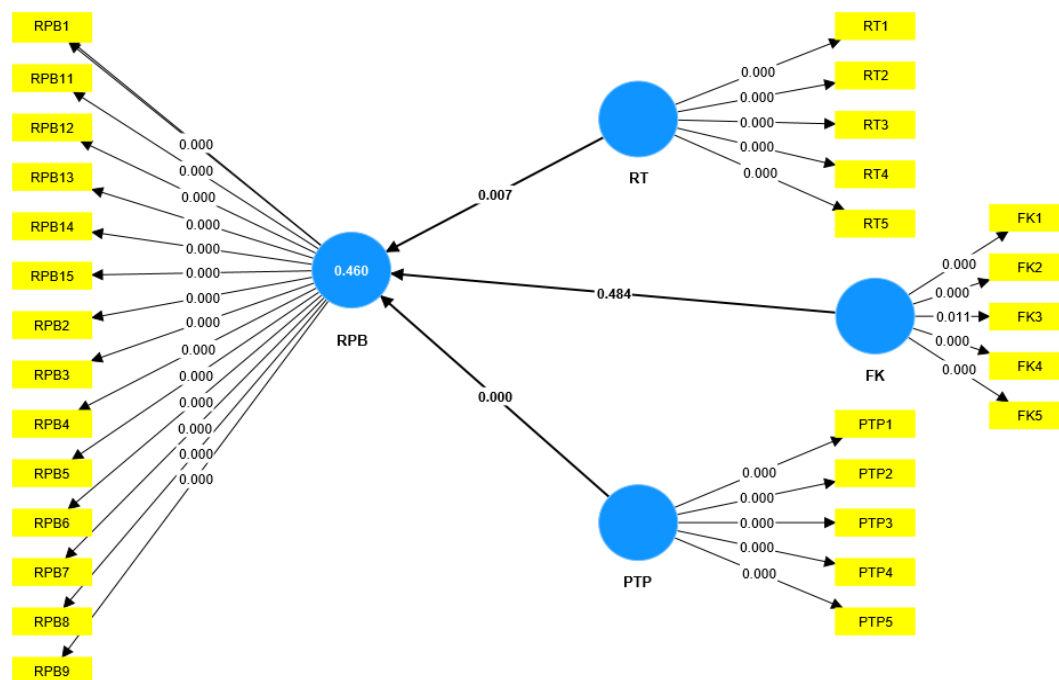
4.3.5 Collinearity Statistics (VIF)

Variables	VIF
Financial Knowledge	1.013
Propensity To Plan	1.020
Risk Tolerance	1.010

Established from the research

Based on the table above, it is obviously that VIF for three IVs, FK, PTP, and RT are more than 1 but less than 5, so three variables are moderate correlation.

4.4 Bootstrapping



Source: developed from research

Where:

RPB = Retirement Planning Behaviour

RT = Risk Tolerance

FK= Financial Knowledge

PTP = Propensity to Plan

The result above show the bootstrapping data results which contain the path coefficient value of RT, FK, and PTP towards the RPB.

4.4.1 T – statistic

	T statistics (O/STDEV)
FK -> RPB	0.700
PTP -> RPB	17.271
RT -> RPB	2.714

Source: developed from the research

In the event of significance level of 0.05, if the magnitude of t statistic value is greater than the critical value of 1.96, then the null hypothesis which there is no relationship between IVs and DVs can be rejected (Robert, 2020). Based on the table, both PTP and RT is greater than the 1.96, this indicated that both of them are significant, while FK with 0.700, lower than 1.96 is not significant.

4.4.2 P – Value

	P values
FK -> RPB	0.484
PTP -> RPB	0.000
RT -> RPB	0.007

Source: developed from the research

Assume significance level is 0.05, p-value based on the table indicated that both PTP and RT are significance to RPB, with the p-value of 0.000 and 0.007 respectively. Otherwise, FK with p-value of 0.484 is more than 0.05, therefore not significant to the RPB.

4.4.3 Path Coefficient

	Original sample (O)	Path Coefficient Value
FK -> RPB	0.032	Positive
PTP -> RPB	0.665	Positive
RT -> RPB	0.099	Positive

Established from the research

According to result above, FK, PTP, RT three have positive relationship with the dependent variable, RPB. PTP has the most influence power to the RPB, with the highest path coefficient value of 0.665 among all the values. This indicates that RPB will increase 0.665 by units if PTP increase 1 unit. Moreover, if FK increase 1 unit, RPB will increase by 0.032 units; while for RT increase 1 unit, RPB will rise by 0.099 units.

4.5 Moderation effect of Gender towards relationship between independent variables, FK, PTP, RT and dependent variables, RPB.

	Original sample (O)	Path Coefficient Value	T statistics (O/STDEV)	P values
Gender x RT -> RPB	-0.045	Negative	1.012	0.311
Gender x PTP -> RPB	0.102	Positive	2.427	0.015
Gender x FK -> RPB	0.009	Positive	0.216	0.829

Source: Developed from research

Based on the result above, gender has T-statistics are greater than 1.96 in the interaction of FK, while the other two interactions are less than 1.96. Besides, P-

value of gender in the interaction of PTP is less than 0.05, indicated that gender has significant moderating effect on the relationship between PTP and RPB, while gender has not moderated effect on the relationship between RT and RPB, and FK and RPB due to both P-value more than 0.05, and T-statistics less than 1.96.

4.6 Conclusion

In chapter 4, descriptive analysis, PLS-SEM analysis, and Bootstrapping analysis are included for data analysis. Descriptive analysis used to arrange data. PLS-SEM analysis used for studying the reliability and validity, significance, and correlation of the variables in this research. In Chapter 5, the interpretation of the data will be included.

Chapter 5: Conclusion and Implications

5.0 Introduction

The information and outcomes from the questionnaires that were collected were analysed in the earlier chapters. To give Malaysian-relevant facts, discussion will be conducted at the end of this chapter. It includes a study recommendation as well as a review of the research findings from Chapter 4. A few guidelines and recommendations will also be offered for future study, in addition to identifying the limits that were discovered over the course of the investigation. The whole work will come to a finish with a conclusion.

5.1 Summary of Statistical Analysis

5.1.1 Discussion on Demographic

Table 5.1.1: Summary of the Demographic Profile

Demographic Factors	Distribution		
Gender	Male(29.2%)		Female(70.8%)
Age	15-24 years old(57.8%)	25-54 years old(27.9%)	55-64 years old(14.3%)

Marial Status	Married(20.6%)				Single(79.4%)		
From Urban Area	Yes(89.3%)				No(10.7%)		
Employment Status	Employed(55.7%)				Unemployed(44.3%)		
Current Savings for retireme nt	Less Than RM5000 (50.3%)	RM500 0- RM10, 000(14. 1%)	RM10,001 - RM40,000 (12%)	RM40, 001- RM70, 000(4. 7%)	RM70,001- RM10,000(1 .6%)	More than RM100, 000(2.9 %)	Not involve in any investment (14.6%)

Source: Developed from research

For 384 respondents from urban adult employees in Malaysia, six demographic factors are gathered and examined. The observation that most respondents are between the ages of 15 and 24 is one of the most important findings. They are single, employed, have current retirement savings of less than RM 5,000, and live in urban areas of Malaysia.

First of all, the interesting finding is the current savings for retirement. There are 14.6% of the respondents which are not involved in any investment and it can be linked to their marriage status. There are 79.4% of the respondents which are in single status. This indicates that they fall into the 15 to 24 age range and do not have savings to prepare for their retirement plan without any investment. Retirement planning involves saving a sufficient amount of money early in one's working career (Julia, 2021). In this age group, most of the people are the students and the people who just got a new job. Nowadays, most of the people prefer to study further after graduating from secondary school but some of them already start work. Due to getting a new job and being unemployed(student), they have no savings and are still dependent financially on their families to cover their living expenses.

Planning an early retirement may be advantageous to them. As a result, they won't stray from their goal and will stick to their retirement plan (Mustafa et al., 2017).

Moreover, 50.3% of the respondents have their current savings less than RM5000. It can be defined as a concern that they need to start preparing for the retirement plan when they are still students. For the university students who are currently studying, they have no much savings. Although if students don't presently have any savings, they still have a debt to PTPTN that must be repaid in the future when they start working. Hence, it is crucial that they begin managing their money responsibly while they are still students.

Other than that, another finding is the employment status. Due to the 55.7% of the respondents already employed, they must be more aware of their retirement plan. As a worker to prepare for their retirement plan, they must learn how to plan, save, and spend sensibly. If they don't, they will suffer in the future, therefore they must have a high level of tolerance for managing their money instead of a retirement plan. They won't be able to achieve their retirement plan in the future if they spend a lot today while failing to manage their expenses effectively. Therefore, financial knowledge plays an important role for the workers in preparing the investment plan when they are still young, with its expertise in financial management and planning, it may gain advantages and prevent losses (Fitra et al., 2018). This is confirmed by the findings of Pritazahara and Sriwidodo's (2015) study, which found that even while having financial knowledge might help you make better financial decisions, it is still not widely used in many countries. Education in financial literacy is helpful in giving the required financial data to support retirement planning. Everyone has to arm oneself with crucial financial information today, during the biggest financial crisis. (Visyalini, 2018).

5.1.2 Discussion on Construct

In order to confirm the reliability, a pilot test using the 30 respondents was done to determine that Cronbach's alpha has to be higher than 0.6 and between 0.60 and 0.70. This questionnaire asks 30 questions in total, including 15 questions on retirement planning behaviour, 5 questions about risk tolerance, 5 questions about financial knowledge, and 5 questions about propensity to plan.

Table 5.1.2: Summary of the Ranking for the Construct Measurement

Construct	Item	Ranking	Mean
RPB	RPB15	Highest	3.74
	RPB6	Lowest	2.45
RT	RT2	Highest	3.30
	RT3 & RT4	Lowest	3.20
FK	Regular smokers who purchase medical insurance pay the same rate as non-smokers.	Highest	55%
	Regular smokers who purchase medical insurance pay the same rate as non-smokers.	Lowest	9%
PTP	PTP2	Highest	3.13
	PTP3 , PTP4 & PTP5	Lowest	2.96

Source: Developed from research

Considering the outcomes above, it can be defined that the interviewees are aware of and interested in retirement planning. They start to save their money instead of managing their expenses wisely. Since this research is focusing on the urban adult employees in Malaysia, it can be indicated that those people who work in high tension or busy cities such as Johor, Penang and Kuala Lumpur, should implement their retirement planning behaviour earlier than those that live outside the urban area. Hence, they should start to control their cash outflow instead of start investing and saving when they get their salary.

The other finding is the risk tolerance. They decide to invest in less risky investments since the return is very high. It was a good choice to them because investing in greater risk investment acquired the respondents to have better financial knowledge and investing decisions that applied in. When given a risk against benefit trade-off, RT is the propensity in selecting riskier or lower options (Harahap et al., 2022). However, there were still many respondents having the behaviour of saving their money in savings accounts such as fixed deposit, which was the common and secure investment that many people did currently even though the return is not higher than those risky investments. But, for those urban adult employees, they have suffered high living expenses and high working pressure. It may provide them difficulty in making investments so that many employees have another source of income as well as a part time job and they could have the extra money to do saving for their retirement.

Based on the findings, the majority of them are out of control with their propensity to plan. The majority means 'I make an early strategy for how I'll spend my money over the next one to two years.' However, the majority of them had chosen the 'disagree' option. This showed that they were not aware of their retirement with propensity to plan. Since they were working in a busy city and always held in a rushing situation, they had no extra time to make their planning goals for their retirement. When it comes to planning,

a person's propensity to plan is their propensity to have reasonable, long-term objectives. Setting goals was widely described as a determination to control time-inconsistent impulses and behaviours, which may improve learning, quality of work, psychological health, and even goal-holders' financial decisions (Jing, 2018). Hence, without the plan, the goal could not be achieved and completed.

5.1.3 Discussion on Major Findings

H0 will be rejected and H1 will be accepted according to the analysis method's requirements for an explanatory variable which has the higher p-value against the 0.05 significance level. The results of the analysis above conclusively demonstrate that, with the exception of financial knowledge; risk tolerance as well as the propensity to plan related to the predicted variable of the research.

5.1.3.1 Financial Knowledge

As the p-value (0.484) above the significance level (0.05), accept the H0 for the independent variable "financial knowledge" (FK). Hence, it is insufficient to demonstrate that FK and RPB are strongly connected. To put it another way, this study was unable to show that a person's impression of how challenging a task would be to engage in would be sufficient for influencing that person's decision to pursue retirement planning. When compared to a few other studies published in journals, this study, unfortunately, provides the opposite conclusion. According to research, planning and financial understanding go hand in hand. Individuals with better financial understanding are more interested in planning and executing their plans successfully (Ornella & Massimo, 2017). Retirement planning and financial knowledge are independent.

Retirement planning and financial knowledge have a significant favourable relationship. Higher financial knowledge levels increase a person's likelihood of making long-term plans. The development of a person's total financial knowledge, abilities, and perspectives, which are influenced by their use of cognition and useful skills, perspectives, desire, and beliefs that can also be considered as a component of financial literacy education. It plays an important role to every person to prepare themselves with relevant financial knowledge in the current period's economic downturn. Financial knowledge should be introduced to the younger generation in schools rather than waiting till one begins working (Visyalini, et.al, 2018).

5.1.3.2 Propensity to plan

Reject H0 for the "propensity to plan" variable because the p-value (0.000) is lower than the significance level (0.05). As a result, H1 is accepted, indicating a substantial connection between the propensity to plan and retirement planning behaviour. It also suggests that the propensity to plan towards retirement planning behaviours may have an impact on one's intention to do so. According to Jing (2018), consumers who are inclined to plan are more likely to be financially capable. The results of this study show a relationship between planning propensity and four indicators of financial capability. According to the findings, propensity for planning may lead in favourable retirement planning behaviour, and one favourable conduct may be related to several aspects of financial capabilities. The results suggest that promoting retirement planning activity may boost consumer financial education and other positive financial behaviours. The propensity to plan was frequently considered to have a favourable impact on financial choices and results. The evidence for this link varies among studies and some have discovered

that people who have greater propensities to plan tend to accumulate more assets (Kyoung, 2016).

5.1.3.3 Risk Tolerance

H0 of risk tolerance has been rejected based on the data analysis findings if the p-value (0.007) locates below the significance level (0.05). As a result, overall findings indicate that risk tolerance and retirement planning behaviour are significantly correlated. In other words, a person's desire to engage in retirement planning behaviour will depend on their risk tolerance. Risk tolerance is closely correlated with financial literacy, which in turn has a favourable impact on household pension savings over time, managing risk acceptance, and asset building for planning on retirement (Harahap et al., 2022). The Larisa (2020) and Chatterjee (2017) studies' conclusions demonstrate that risk tolerance significantly influences retirement planning. The more willing an entrepreneur is to take financial risks, the more advanced their retirement financial planning will be. Their concern with their personal risk level, which they will worry about as a result of their risk tolerance, may lead them to think more clearly about their future situations.

5.1.3.4 Gender

H0 has been rejected based on data analysis findings if the p-value of gender in the interaction of PTP (0.015) locates below significance level (0.05). The p-value of gender in the interaction of RT (0.311) locates above the significance level (0.05) while the p-value of gender in the interaction of FK (0.829) locates above the significance level (0.05) so that both of these variables have been accepted. As a result, overall findings indicate that gender in the interaction of PTP is significantly correlated with RPB while gender in the interaction of RT as well as FK are not. In other words, a person's desire to engage in RPB will depend on their PTP except FK and

RT, in the interaction of gender. Men prefer to have RPB compared to women, according to Surrette (1998). According to Croson & Gneezy (2004), the findings indicated that men were having higher risk-taking compared to women. According to Lusardi and Mitchell (2007), FK had an impact on RPB and men had more financial education than women. Yet, according to DeVaney and Su (1997), they came to the same conclusion that both genders had equivalent understanding of retirement planning, while Masters and Meier (1988) found no gender differences in the tendency of taking risks.

5.2 Research implications

The researcher's conclusions support academic work and provide direction for it. This study has research gap with some studies on the variables affecting retirement planning behaviour in Malaysia. The basis of a nation, which supports economic progress, is known as emerging adults. They will eventually become someone's parents. Their retirement life may not be secure and comfortable if their retirement planning behaviour is poor. There is a good likelihood that they will eventually become someone's parent, and that their offspring will exhibit poor retirement planning habits as well. So, understanding retirement planning behaviour is crucial to preventing or minimizing any social or economic problems.

In this study, three variables that influence urban adult employees' retirement planning behaviour in Malaysia were examined. By addressing the potential circumstances that could influence their retirement planning behaviour, it consequently provides suggestions for emerging adults to develop and improve their retirement planning behaviour.

Also, it has been discovered that urban adult employees lack the confidence to handle a financial emergency. Urban adult workers are therefore recommended to accumulate an emergency fund. In order to deal with unforeseen occurrences and prevent financial troubles, emergency savings were essential. For instance, COVID-19 has made people experience financial hardships, and many of them decide to end their lives. They will face financial trouble if they do not plan for an emergency

because there is no certainty that there won't be another financial disaster in the foreseeable future. It serves as another evidence of how crucial it is for urban adult workers to practise wise retirement planning to safeguard the life living in retirement.

Also, it can remind the government in Malaysia to develop regulations that will improve Malaysian urban adult workers' retirement planning. Malaysia's level of living will increase through better retirement planning practices, which will boost future economic growth. Because living expenses are so high and overloaded with occupations, urban adult employees in Malaysia, particularly in cities like Penang, Kuala Lumpur, and Johor Bahru, appear to have a more stressful life. For instance, Kuala Lumpur is the most time spent working and commuting city.

Also, from research, the uneven work-life equilibrium causes nearly half of Malaysians to endure work-related depression. Urban adult employees who are experiencing moderate financial stress run the risk of sliding into low or high levels of stress if they do not find a solution to their issues. Because of their inability to concentrate on their employment, it affects both their personal finances and their productivity at work. So, the government might decide to take the lead in offering financial counselling and instruction, particularly for young employees.

Also, the government should set up initiatives to increase Malaysians' financial education. In order to assist individuals in acquiring and attaining financial awareness, financial management, and financial considerations, the Federation of Malaysian Consumers Associations really developed financial literacy improvement programmes. The government may introduce some online financial assistance initiatives during the pandemic season and advertise them on social media, in schools, and on other public forums. Additional examples and real-world experiences can be presented to help emerging adults understand. Under this campaign, urban adult employees in Malaysia can enhance their retirement planning behaviours by increasing their theoretical and practical financial knowledge.

5.3 Limitation

While the research is conducted, many limits are found and defined. This study's primary focus was an urban environment, which was its only chosen location. But, those who are not from metropolitan areas are among those that assist us in filling out the research form and completing this survey. In truth, the rate of economic growth may vary between different places. For instance, the cost of living in a metropolitan area is significantly higher than it is elsewhere. As a result, by focusing mainly on metropolitan areas, which in Malaysia have the fastest economic development rates, this study may produce results that are skewed and less reliable and accurate.

The COVID-19 pandemic epidemic, which began in the middle of 2022, is the setting for this study. Although one of the factors related to a vaccination rollout has apparently caused COVID-19 to cease, this study does not account for the COVID-19 event. From February 2021, when Malaysia began its COVID-19 vaccination campaign, COVID-19 in Malaysia has been anticipated to expire soon. Nevertheless, because retirement planning behaviour is assessed over a lengthy period of time, if the short-term event COVID-19 is included in this study, the results might be distorted. In June 2021, Malaysia unexpectedly noted the first patient with the COVID-19 variant. Because of the extremely contagious COVID-19 strain, a stricter lockdown policy has been enforced by the Malaysian government. In the end, it would make Malaysians more financially susceptible, which would eventually have an impact on how they plan for retirement. Therefore, it is important to monitor how COVID-19 affects retirement planning behaviour.

The fact that only a small number of the numerous potential variables that could influence saving practices are analysed limits the scope of current study. The clarity of one's retirement objectives and attitudes about retirement are only two examples of the many psychological elements that have an impact on saving and preparing for retirement. Despite the fact that several demographic factors are related to saving habits, the current study only considers psychological factors. Namely, those that seem to be the best indicators of a person's propensity to save. Perhaps more psychological and demographic factors will be included in future studies in an aim at understanding the connections between these two sets of variables. For instance, it would be intriguing to investigate how psychological characteristics change as

people age and how any changes in normative development affect people's saving habits.

5.4 Recommendation

It is advised to conduct a survey of the adult employees who solely reside in metropolitan areas due to the restricted scope of the targeted region. As a result, it would take both regional and economic aspects into account, which would likely have an impact on a person's perceived financial behaviour, retirement planning behaviour, and other behaviours. As a result, the analysis might be able to represent all of Malaysia's urban adult workforce.

People's retirement planning habits have changed as a result of COVID-19's current severity. For instance, claimed that compared to before the COVID-19 crisis, Malaysians now tend to save more and spend more responsibly. This alteration in behaviour would continue until COVID-19 worries subsided and a more upbeat economic perspective took hold. As a result, the behavioural shift would last forever, which could ultimately have an impact on how someone plans for retirement down the road. Future investigators are advised to perform comparative studies on retirement planning behaviour before and after the crisis to better investigate the COVID-19 crisis' implications.

Researchers could take another lucrative future path by creating more thorough predictions of the factors that affect retirement funds. To effectively merge the psychologists' work and financial advisory experts, it would seem that a mixed methods approach would be required. There has already been a significant amount of sporadic study on variables that influence savings in research. It might be argued that retirement investing researchers need to cross disciplinary boundaries.

5.5 Conclusion

The current study's objective is to investigate the influence of three factors on retirement saving behaviour. The results of this investigation support earlier findings that more active retirement planning is connected with greater propensity

to plan level, greater retirement financial planning knowledge, and financial risk tolerance. These characteristics are typically looked at alone or in combination with other variables including age, gender, and wealth. The three variables were all looked at at the same time in this study, which makes it special. We were able to determine the relative importance of these three predictors by doing this.

Our data suggest that propensity to plan, financial knowledge, and financial risk tolerance are all significant factors when trying to understand the retirement saving behaviour of urban adult employees. The results of this research also indicate that additional research into the relationships between demographic and psychological variables and urban adult employees' retirement saving behaviour might be useful. Overall, even if this kind of research has its difficulties, it has great potential to advance our knowledge of the factors that influence urban adult workers to adopt wise retirement saving habits.

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APPENDICES

Appendix A: Participants' Demographic Information

Table 4.1 Participants' Demographic Information

Variables	Frequency (384)	Percentage (%)
Age		
15 to 24 years old (early working age)	222	57.8
25 to 54 years (prime working age)	107	27.9
55 to 64 years (mature working age)	55	14.3
Gender		
Female	272	70.8
Male	112	29.2
Marital Status		
Married	79	20.6
Single	305	79.4
Are you come from urban area of Malaysia?		
No	41	10.7
Yes	343	89.3
Employment Status		
Employed	214	55.7
Unemployed	170	44.3
Current Savings for Retirement		
< RM5,000	193	50.3
> RM100,000	11	2.9
Not involve in any investment	56	14.6
RM10,001 - RM40,000	46	12.0
RM40,001 - RM70,000	18	4.7
RM5,000 - RM10,000	54	14.1
RM70,001 - RM100,000	6	1.6

Appendix B: Dependent Variable: Retirement Planning Behavior

No.	Questions	SD	D	N	A	SA
1.	I have a generally positive outlook on my financial future. positive	1	2	3	4	5

2.	It is too soon for me to consider my retirement plans.	1	2	3	4	5
3.	It is important to set aside money for retirement.	1	2	3	4	5
4.	I am very aware of the financial concerns that retirees face.	1	2	3	4	5
5.	I set out time to plan and evaluate my finances.	1	2	3	4	5
6.	I never consider about retirement planning.	1	2	3	4	5
7.	When I consider retirement preparation, I am anxious.	1	2	3	4	5
8.	I am less concerned with retirement preparation than I am with my daily obligations.	1	2	3	4	5
9.	I always discuss the retirement planning with my family and friends.	1	2	3	4	5
10.	I participated in workshops, conferences on retirement planning.					
11.	Retirement planning required many time and effort.					
12.	I have clear understanding of amount for retirement.					
13.	I confident I will have enough income to sustain the living quality of my retirement time.					

14.	I save money more financial independence					
15.	Saves more and spend strictly necessary are important.					

Appendix C: Risk Tolerance

No.	Questions	SD	D	N	A	SA
16.	I recognize the word "risk" refers to a potential for loss rather than an opportunity.	1	2	3	4	5
17.	I am not willing to accept the investment with high risk even the opportunity of return is high.	1	2	3	4	5
18.	I am willing to invest my monthly income into low risk investment as compared to high risk investment.	1	2	3	4	5
19.	I am more willing to save my money in savings account instead of risky investment such as stock and bond investment.	1	2	3	4	5
20.	Even though it is my "once in a lifetime" vacation, if I lose my work three weeks prior to my vacation, I will cancel it.	1	2	3	4	5

Appendix D: Financial Knowledge

No.	Questions	True	False	Do not know

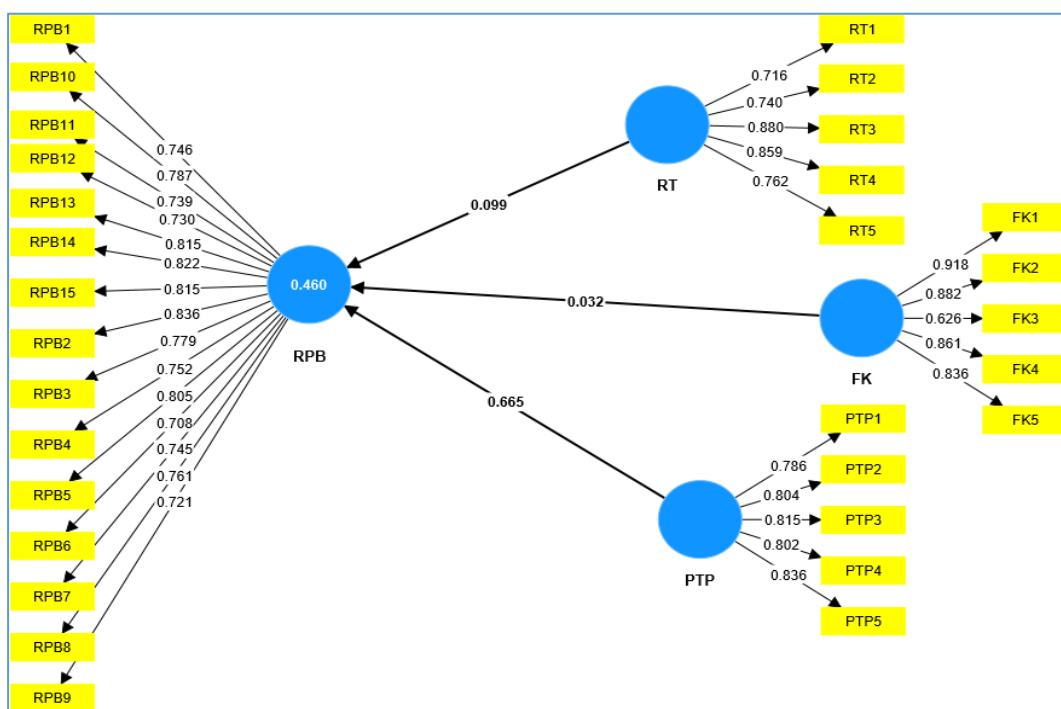
21.	It is possible to get free cash from an ATM by using a credit card. FALSE			
22.	When compared to investing in a stock mutual fund, investment in a company's shares carries less risk. FALSE			
23.	When the inflation rate is higher than the interest rate, buying power will be decreased. TRUE			
24.	If I have RM 100 in a savings account earning 2% interest annually, I will have RM 102 or more in your bank account after five years. TRUE			
25.	Regular smokers who purchase medical insurance pay the same rate as non-smokers. FALSE			

Appendix E: Propensity to Plan

No.	Questions	SD	D	N	A	SA
26.	I have financial objectives that I have set for the next one to two years. positive	1	2	3	4	5
27.	I make an early strategy for how I'll spend my money over the next one to two years. positive	1	2	3	4	5
28.	Having a budget for the upcoming 1-2 makes me feel years better. positive	1	2	3	4	5
29.	A review of my financial plan in the next one to two years will enable me	1	2	3	4	5

	to see how much I will spend going forward. positive					
30.	I am constantly thinking about what I need to do to follow my financial strategy for the next one to two years. positive	1	2	3	4	5

Appendix F: Outer Loading Analysis



Appendix G: Cronbach's Alpha

Items	Cronbach's Alpha Value	
	30 respondents (Pilot Test)	384 respondents
Dependent Variable: Retirement Planning Behavior	0.831	0.951
Risk Tolerance	0.623	0.854
Financial Knowledge	0.817	0.895

Propensity to Plan	0.866	0.868
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Developed from research

Appendix H: Composite Reliability

	Composite reliability (rho_a)
Retirement Planning Behaviour	0.953
Financial Knowledge	0.952
Propensity To Plan	0.868
Risk Tolerance	0.873

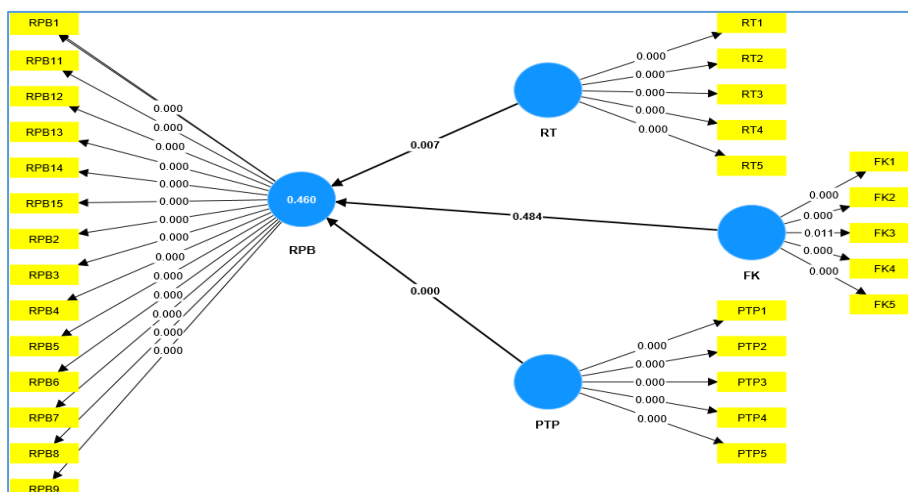
Appendix I: Average Variance Extracted (AVE)

Variables	AVE
Retirement Planning Behaviour	0.595
Financial Knowledge	0.690
Propensity To Plan	0.654
Risk Tolerance	0.630

Appendix J: HTMT ratio

	FK	PTP	RPB	RT
FK				
PTP	0.111			
RPB	0.053	0.734		
RT	0.068	0.108	0.166	

Appendix K: Bootstrapping



Appendix L: T-statistic

	T statistics (O/STDEV)
FK -> RPB	0.700
PTP -> RPB	17.271
RT -> RPB	2.714

Appendix M: P-Value

	P values
FK -> RPB	0.484
PTP -> RPB	0.000
RT -> RPB	0.007

Appendix N: Path Coefficient

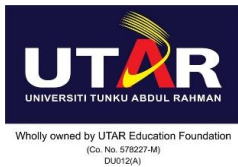
	Original sample (O)	Path Coefficient Value
FK -> RPB	0.032	Positive
PTP -> RPB	0.665	Positive
RT -> RPB	0.099	Positive

Appendix O: Moderation effect of Gender towards relationship between independent variables, FK, PTP, RT and dependent variables, RPB.

	Original sample (O)	Path Coefficient Value	T statistics (O/STDEV)	P values
Gender x RT -> RPB	-0.045	Negative	1.012	0.311
Gender x PTP -> RPB	0.102	Positive	2.427	0.015
Gender x FK -> RPB	0.009	Positive	0.216	0.829

Appendix P: Questionnaires of the survey

Questionnaire



UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF BUSINESS AND FINANCE
ACADEMIC YEAR 2022/2023

Title: THE RELATIONSHIP BETWEEN RETIREMENT PLANNING BEHAVIOUR AND RISK TOLERANCE AMONG URBAN ADULT EMPLOYEES IN MALAYSIA

Good day everyone. We are students from the programme of Bachelor of Finance (Hons), Faculty of Business and Finance (FBF), UTAR. Currently, we are conducting a survey on “The Relationship Between Retirement Planning Behaviour and Risk Tolerance Among Urban Adult Employees in Malaysia”. This survey helps to understand the risk tolerance and other factors have significant relationship toward retirement planning behaviour among working adult in Malaysia. The objective of this survey is to examine the outcome of responses and conclude the proportions result to test the factors leading to the retirement planning behaviour from the perspective of financial knowledge, risk tolerance and propensity to plan among urban adult employees in Malaysia.

We are pleasure to welcome you to participate in this survey.

If there is any enquiry, please do not hesitate to contact our group members as shown below:

1. Goh Zi Wei: weiweigoh.com@lutar.my
2. Lee Hao Xian: haoxian6666@lutar.my
3. Lee Jun Han: han.han3328@lutar.my
4. Tan Jing Yang: tanjingyang2001@lutar.my

This survey may take approximately 10 minutes. All information will be kept private solely for survey purposes. Your response and contribution are highly appreciated.

Thank you.

* Required

PERSONAL DATA PROTECTION STATEMENT

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 - For processing any benefits and services
 - For communication purposes
 - For advertorial and news
 - For general administration and record purposes
 - For enhancing the value of education
 - For educational and related purposes consequential to UTAR
 - For the purpose of our corporate governance
 - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at han.han3328@utar.my.

Acknowledgment of Notice

[] I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

[] I disagree, my personal data will not be processed.

.....

Name:

Section A: Demographic Profile

A1: Gender

- Male
- Female

A2: Age

- 15 to 24 years old (early working age)
- 25 to 54 years (prime working age)
- 55 to 64 years (mature working age)

A3: Marital Status

- Married
- Single

A4: Are you come from urban area Malaysia?

- Yes
- No

A5: Employment Status

- Employed
- Unemployed

A6: Current savings for retirement

- < RM5,000
- RM5,000 – RM10,000
- RM10,001 – RM40,000
- RM40,001 – RM70,000
- RM70,001 – RM100,000
- > RM100,000
- Not involve in any investment

Questionnaire

Please indicate your agreement for the following items based on the scale of 1 to 5 (1="Strongly Disagree", 2="Disagree", 3="Neutral", 4="Agree", and 5="Strongly Agree"). Each item represents a commonly held opinion. Indicate your agreement to each statement by **selecting the most appropriate answer**.

1	2	3	4	5
Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)

Section B: Factors that Influence Retirement Planning Behaviour among Urban Adult Employees in Malaysia.

1. Dependent Variable: Retirement Planning Behavior

No.	Questions	SD	D	N	A	SA
31.	I have a generally positive outlook on my financial future.	1	2	3	4	5
32.	It is too soon for me to consider my retirement plans.	1	2	3	4	5
33.	It is important to set aside money for retirement.	1	2	3	4	5
34.	I am very aware of the financial concerns that retirees face.	1	2	3	4	5
35.	I set out time to plan and evaluate my finances.	1	2	3	4	5
36.	I never consider about retirement planning.	1	2	3	4	5
37.	When I consider retirement preparation, I am anxious.	1	2	3	4	5

38.	I am less concerned with retirement preparation than I am with my daily obligations.	1	2	3	4	5
39.	I always discuss the retirement planning with my family and friends.	1	2	3	4	5
40.	I participated in workshops, conferences on retirement planning.					
41.	Retirement planning required many time and effort.					
42.	I have clear understanding of amount for retirement.					
43.	I confident I will have enough income to sustain the living quality of my retirement time.					
44.	I save money more financial independence					
45.	Saves more and spend strictly necessary are important.					

Independent Variable:

1. Risk Tolerance

No.	Questions	SD	D	N	A	SA
46.	I recognize the word "risk" refers to a potential for loss rather than an opportunity.	1	2	3	4	5
47.	I am not willing to accept the investment with high risk even the opportunity of return is high.	1	2	3	4	5
48.	I am willing to invest my monthly income into low risk investment as compared to high risk investment.	1	2	3	4	5
49.	I am more willing to save my money in savings account instead of risky investment such as stock and bond investment.	1	2	3	4	5
50.	Even though it is my "once in a lifetime" vacation, if I lose my work three weeks prior to my vacation, I will cancel it.	1	2	3	4	5

2. Financial Knowledge

(Please tick (✓) for the correct answer)

No.	Questions	True	False	Do not know
51.	It is possible to get free cash from an ATM by using a credit card. FALSE			

52.	When compared to investing in a stock mutual fund, investment in a company's shares carries less risk. FALSE			
53.	When the inflation rate is higher than the interest rate, buying power will be decreased. TRUE			
54.	If I have RM 100 in a savings account earning 2% interest annually, I will have RM 102 or more in your bank account after five years. TRUE			
55.	Regular smokers who purchase medical insurance pay the same rate as non-smokers. FALSE			

3. Propensity To Plan

No.	Questions	SD	D	N	A	SA
56.	I have financial objectives that I have set for the next one to two years. positive	1	2	3	4	5
57.	I make an early strategy for how I'll spend my money over the next one to two years. positive	1	2	3	4	5
58.	Having a budget for the upcoming 1-2 makes me feel years better. positive	1	2	3	4	5
59.	A review of my financial plan in the next one to two years will enable me to see how much I will spend going forward. positive	1	2	3	4	5

60.	I am constantly thinking about what I need to do to follow my financial strategy for the next one to two years. positive	1	2	3	4	5
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Thank you very much for your kind participation