Research Paper

The Influence of Future Time Perspective, Financial Risk Tolerance, and Knowledge of Financial Planning for Retirement on the Retirement Saving Behavior of SMEs Entrepreneurs in Sleman Regency

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Abstract

Saving is a method effective in supporting future life, especially for SMEs that do not have pension insurance. This study analyzes the influence of future time perspective, financial risk tolerance, and knowledge of financial planning for retirement on retirement saving behavior, with gender as a moderating variable. The population is MSMEs in Sleman Regency. A total of 102 SMEs in Sleman Regency were selected using a specific sampling technique. The analysis technique with regression Moderation using Partial Least Squares-Structural Equation Modeling (PLS-SEM). The results of the study indicate that future time perspective and knowledge of financial planning for retirement have a positive effect on retirement saving behavior. Financial risk tolerance does not affect retirement saving behavior. Gender moderates the relationship between future time perspective, financial risk tolerance, and knowledge of financial planning for retirement on retirement saving behavior. Results study. This emphasizes the importance of future awareness, financial risk tolerance, and understanding of financial planning in shaping savings behavior. Providing policy recommendations to improve the financial readiness of SME entrepreneurs.

Keywords: *Future Time Perspective, Financial Risk Tolerance, Knowledge Of Financial Planning For Retirement, Retirement Saving Behavior.*

INTRODUCTION

Between 2023 and 2025, there was a phenomenal surge in the growth of SMEs in Yogyakarta, reaching 464,033 (BAPPEDA DIY, 2025). An impressive achievement, considering that 10 percent of the DIY population now chooses careers in this sector. Government programs assisting SMEs amount to Rp 2.4 million per micro-entrepreneur. Providing guidance and development to SMEs through SMEXPO. Providing training and capacity building for SMEs. SME entrepreneurs work in less structured environments. without regulations which clear, as well as often times no own contract work, both written and unwritten. This uncertainty is further exacerbated by the low level of participation of SMEs in pension programs.

Retirement saving behavior (RSB) is a crucial aspect of building financial preparedness after entering retirement. Unfortunately, the adoption rate of RSB among SME entrepreneurs remains low, leaving many at risk of financial hardship in old age. According to Tabita et al. (2023) and Alkhawaja and Albaity (2024), factors such as age, gender, education level, and income play a role in shaping individual patterns in setting aside and systematically allocating income for retirement funds.

Future time perspective (FTP) plays a role in forming long-term savings habits. Individuals with a stronger future time perspective tend to have more awareness of the need for financial planning for retirement. Research by Sulistianingsih et al. (2025) and Alkhawaja and Albaity (2022) shows that Individuals with a stronger future perspective are more likely to have better

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savings habits and be more disciplined in retirement planning.

Financial risk tolerance (FRT) shapes the way individuals strategize finance, especially in the face of uncertainty in the future. High risk tolerance encourages more aggressive investment decisions, while low risk tolerance discourages more aggressive investment decisions. Which low makes somebody tend to choose an asset that more safe, avoiding retirement planning. Research by Meisa and Marsha Aulia (2023), shows that FRT has a positive relationship with retirement saving habits.

Knowledge of financial planning for retirement (KFPR) plays an important role in forming the habit of saving for retirement. According to Meisa and Marsha Aulia (2023), KFPR has a positive and significant influence on retirement saving behavior (RSB). This confirms that individuals with an understanding of financial which good tend to be more disciplined in setting aside funds from an early stage. SME entrepreneurs who do not have access to formal pension programs must rely on personal initiative in managing their finances.

Studies on retirement saving behavior in SMEs are still limited, especially in Indonesia. Lack of social security and limited access to formal pension programs are factors that can influence SMEs' decisions to save for retirement. pension. Study this, fill in the population gap by analyzing the influence of future time perspective, financial risk tolerance, and knowledge of financial planning for retirement on retirement saving behavior of SMEs in Sleman Regency. This analysis was conducted by considering gender as a moderating variable.

LITERATURE REVIEW

Retirement Saving Behavior

Retirement saving behavior is defined as setting aside a portion of one's income or wealth for retirement purposes (Alkhawaja & Albaity, 2024). According to Alkhawaja and Albaity (2022), saving can be done in various ways, such as keeping cash, placing funds in deposits, investing in financial instruments, and participating in pension fund schemes offered by the government and the private sector.

Future Time Perspective

Future time perspective is defined as a key personality trait that indicates the extent to which a person can imagine and plan for their future. The concept can be measured with various methods, depending on the field study, like patience, preference time in economics, and planning timeframe in psychology (Bandura, 1986; Tomar et al., 2021; Alkhawaja & Albaity, 2022).

Financial Risk Tolerance

Financial risk tolerance is defined as the extent to which individuals are willing to accept uncertainty or potential losses in their financial decisions (Murhadi et al., 2023). It reflects an individual's attitude and preference toward risk in managing their assets and investments (Utami & Wedasuari, 2023). Saving and Liquidity Constraints Theory, developed by Angus Deaton in 1991, is a theory that explains how individuals make saving decisions under conditions of financial constraints

Knowledge of Financial Planning for Retirement

Knowledge of financial planning for retirement is defined as an individual's understanding of the strategies and practices needed to prepare for financial needs in retirement, including understanding of investment instruments, asset management, and available pension programs (Ghadwan et al., 2022; Herrador-Alcaide et al., 2021).

Gender

Gender is not just a biological difference, but rather a social and cultural construct that shapes how individuals interact in various aspects of life. In an economic context, gender plays a role in influencing how individuals make financial decisions. Biological, social, and psychological differences between men and women often shape the mindset and approach used in the decision-making process.

Connection Future Time Perspective to Retirement Saving Behavior

Studies show that individuals with a prospective time perspective who more stronger tend to have behavior that saves for a pension, which is more beneficial compared to those who are more oriented on satisfaction term short (Alkhawaja & Albaity, 2022). FTP plays a role in shaping their financial attitudes and decisions. Increasing awareness of the future through financial education and intervention programs can help individuals develop better savings habits and prepare for life after retirement (Alkhawaja & Albaity, 2022)**.** Hypothesis 1: Future time perspective has a significant positive effect on retirement saving behavior.

The Relationship between Financial Risk Tolerance and Retirement Saving Behavior

Studies show that individuals with level tolerance risk, which more tall tend have a tendency to invest in more aggressive financial instruments, which can increase the accumulation of pension fund (Meisa & Aulia, 2023). Several studies have shown that individuals with a high risk tolerance tend to invest in riskier financial instruments, but they may also face greater volatility, potentially affecting their financial stability in retirement (Madeta et al., 2022). Individuals with a high risk tolerance have better saving behavior for retirement, as their investment decisions are also influenced by other factors such as financial knowledge and future time perspective (Alkhawaja & Albaity, 2024). Hypothesis 2: Financial risk tolerance has a positive effect on retirement saving behavior.

Connection Knowledge of Financial Planning for Retirement to Retirement Saving Behavior

Knowledge about planning finance for pensions has a relationship which closely with behavior and saving for time pension (Meisa & Aulia, 2023). Studies by Sari et al. (2023) show that financial knowledge is related to individual awareness in planning retirement funds from an early age. Individuals who understand instrument finance, risk investment, and fund management strategies tend to have consistent and targeted savings patterns (Alkhawaja & Albaity, 2022). Increasing financial knowledge helps individuals manage their income more effectively, ensuring retirement funds and financial stability in old age (Meisa & Aulia, 2023). Hypothesis 3: Knowledge of financial planning for retirement has a significant positive effect on retirement saving behavior.

The Relationship of Gender to Retirement Saving Behavior, Future Time Perspective, Financial Risk Tolerance, and Knowledge of Financial Retirement Planning

According to Afthanorhan et al. (2020), women are taller in save for pension compared to men. Research by Ketkaew et al. (2022) shows that women are more likely to have a short-term focus than men, who are more likely to have a longer-term perspective and be more structured in their financial planning. According to Shah et al. (2020), financial risk tolerance (FRT) also differs by gender, with men being more willing to take higher financial risks than women, who are more likely to choose safer investment instruments. According to Fabian et al. (2022), in the aspect of knowledge of financial planning for retirement (KFPR), women generally have a lower level of understanding of finance, which more lower compared to men, which impacts their readiness to save and invest for retirement. Hypothesis 4: Gender moderates the influence of future time perspective on retirement saving behavior. Hypothesis 5: Gender moderates the influence on financial risk tolerance to retirement saving behavior. Hypothesis 6: Gender moderates the influence of knowledge of financial planning for retirement on retirement saving behavior**.**

RESEARCH METHOD

The research object in this study is SMEs in Sleman Regency. The population of SME Entrepreneurs in Regency Sleman is as much as 110,143 business units (Sleman https://dataumkm.slemankab.go.id/newportal2). Contribution sample research on 102 SMEs (Sekaran & Bougie, 2016). In this study, the independent variables used consist of future time perspective, financial risk tolerance, and knowledge of financial planning for retirement. Retirement saving behavior acts as the dependent variable. Gender as a moderating variable.

Operational Variables

Definition operational, and indicators from retirement saving behavior, financial risk tolerance, and knowledge of financial planning for retirement, using Research by Alkhawaja and Albaity (2022). Retirement saving behavior indicators using (Y): Frequency of saving for pension, awareness of saving, planning pension savings, readiness for financial Pension savings. Financial risk tolerance indicator (X2): Preference for risky investments, focused growth assets, willingness to take risks, and attitude toward investment safety. Financial knowledge indicators (X3): pension knowledge, confidence self, ability to access information, knowledge instrument retirement investment. Future time perspective (X1) uses (Tomar et al., 2021): Thinking about the future, reflecting on future life, future enthusiasm, long-term perspective long term, perception social future orientation. This was measured using a Likert scale with 5 points.

FINDINGS AND DISCUSSION

Analysis Quantitative

The PLS method consists of two main components, namely the outer model (measurement model) and the inner model (structural model), which were tested based on data from 102 respondents. variables in the study. This own mark AVE > 0.50. All variables used in this study are valid. All variables in this study have a Cronbach's alpha value > 0.70. Variables used in the study are reliable. All variables in this study had a Composite Reliability value > 0.70. All variables used in this study met the Composite Reliability criteria and can be declared reliable.

Analysis Model Structural (Inner Model)

The Retirement Saving Behavior variable has an R-Square value of 0.758, indicating that the model has good predictive ability. strong in explaining variables. The model used in this study has a strong level of suitability in explaining the retirement saving behavior variable. The Q2 test result for variable Y is 0.618. This value indicates that variable Y has a Q2 value > 0. It is concluded that the variables in this study have predictive relevance, have good models, and parameter estimates.

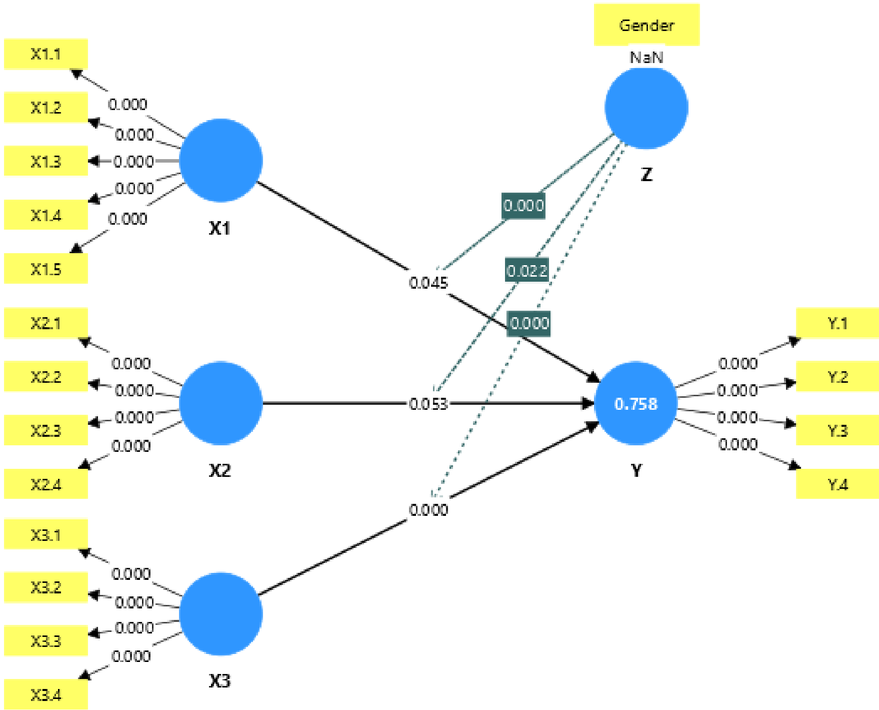

Figure 1. Inner Model

Influence Without Moderation

Table 1. Path Coefficient No Moderation

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X1 -> Y	0.180	0.201	0.090	2,001	0.045
X2 -> Y	-0.338	-0.291	0.174	1,938	0.053
X3 -> Y	0.696	0.724	0.155	4,496	0.000

Source: Output data processed from SmartPLS 4.0, 2025

The Influence of Future Time Perspective on Retirement Saving Behavior

The test results indicate that future time perspective has a positive effect. on retirement saving behavior. This indicates that the hypothesis (X1 → Y) **is accepted**, which means that the higher the future time perspective, the greater the tendency of SMEs to engage in retirement saving behavior. This result is in line with the Goal-Based Motivation Theory proposed by Bandura (1986). This research supports a study previously conducted by Alkhawaja and Albaity (2024) and Tomar et al. (2021).

The Influence of Financial Risk Tolerance on Retirement Saving Behavior

In Table 1, the t-statistic value obtained is 1.938, which is smaller than the t-table value (1.96). The results of this test indicate that financial risk tolerance does not have a significant effect on retirement saving behavior in SMEs in the Regency of Sleman. This shows that the hypothesis (X2 → Y) **is rejected**, which means the tolerance level risk financial individuals have no influence, which significantly on the tendency of informal workers to save for retirement.

The research findings are in line with several previous studies of Alkhawaja and Albaity (2022), Meisa and Aulia (2023), Madeta et al. (2022) find that Risk Tolerance did not affect retirement saving/investment, further strengthening the idea that other factors may play a greater role in retirement saving decisions.

The Influence of Knowledge of Financial Planning for Retirement on Retirement Saving Behavior

Table 1 obtained the t-statistic value as big as 4,496, which more bigger compared to with mark t-table (1.96). The results indicate that knowledge of financial planning for retirement has a positive and significant effect on retirement saving behavior. This shows that the hypothesis (X3 → Y) **is accepted**. Knowledge about financial planning for retirement plays a role as a cognitive factor that influences individual decisions in developing long-term financial strategies. Research of Alkhawaja and Albaity (2022); Meisa and Aulia (2023). Also found that financial knowledge has a significant influence on financial planning. funds pension. Findings: This strengthens that the higher level of individual understanding of financial planning for retirement.

Influence With Moderation

Table 2. Path Coefficient With Moderation

	Original Sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Z x X1 -> Y	0.781	0.692	0.194	4,025	0.000
Z x X2 -> Y	0.454	0.395	0.198	2,291	0.022
Z x X3 -> Y	-0.618	-0.582	0.153	4,026	0.000

Source: Output data processed from SmartPLS 4.0, 2025

The Influence of Future Time Perspective on Retirement Saving Behavior Moderated by Gender

Based on the results of data processing in Table 2, it shows that gender moderates the influence between future time perspective and retirement saving behavior. The original value sample as big as 0.781 shows that the influence of future time perspective on retirement saving behavior becomes stronger when influenced by Gender. Hypothesis 4 **is accepted**. This finding aligns with the Social Role Theory proposed by Eagly et al. (2000). Gender significantly moderates the relationship between financial risk tolerance and retirement saving behavior. The original sample value of 0.454 indicates that the influence of financial risk tolerance on retirement saving behavior becomes stronger when influenced by Gender. Hypothesis 5 **is accepted**. Gender moderates the relationship between financial risk tolerance and retirement saving behavior, due to differences in how men and women manage risk and financial strategies. Gender weakens the connection between knowledge of financial planning for retirement and retirement saving behavior. Hypothesis 6 **is accepted**. This finding can be explained through Financial Socialization Theory (Gudmunson & Danes, 2011), which states that even if someone has high financial knowledge, environmental influences and social factors (including gender) can influence them in applying knowledge.

CONCLUSIONS

Based on research, the following conclusions can be drawn: 1) Future time perspective has a significant positive effect on retirement saving behavior in SMEs in Sleman Regency. 2) Financial risk tolerance does not affect retirement saving behavior in informal workers in Sleman Regency. 3) Knowledge of financial planning for retirement has a significant positive effect on retirement saving behavior in SMEs in Sleman Regency. 4) Gender moderates the influence of future time perspective, financial risk tolerance, knowledge of financial planning for retirement, to retirement saving behavior on SMEs in Sleman Regency.

LIMITATION & FURTHER RESEARCH

Improving financial education and awareness for SMEs. Results study show that knowledge of financial planning for retirement has a positive and significant influence on retirement saving behavior. It is important for the government, financial institutions, and social organizations to improve program education finance which more affordable and easily accessible to informal workers. This program could include training on long-term investment strategies, financial risk management, and retirement planning benefits. Future research is recommended to explore how socio-demographic factors such as education level, type of employment, or financial experience may influence retirement saving decisions. Limitations of this study include: further research is needed with different SMEs industries. Comparisons between SMEs industries. The addition of private financial management variables, such as risk management.

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