

The Influence Of Pension Benefits, Investment Behavior, And Age On Retirement Planning Among Private Sector Employees In Jakarta, Indonesia

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Abstract

This study aims to analyze the influence of pension benefits, investment behavior, and age on retirement planning among private sector employees in Jakarta, Indonesia. Retirement represents a critical life phase often accompanied by limited income, yet many private sector employees still encounter financial difficulties due to the lack of early and adequate retirement planning. Preliminary data indicates that more than 60% of employees nearing retirement age do not possess long-term investments and depend solely on pension funds provided by their institutions. Additionally, around 72% have no structured investment planning, a situation worsened by low levels of financial literacy and limited understanding of investment instruments. This research adopts a quantitative associative approach and involves 60 private sector employees as respondents, selected through purposive sampling. Primary data were collected using a Likert-scale questionnaire, which had been previously tested for validity (Pearson correlation > 0.3 and Sig. < 0.05) and reliability (Cronbach's Alpha > 0.70). Data were analyzed using multiple linear regression via SPSS version 29, preceded by classical assumption tests including normality, multicollinearity, and heteroscedasticity. The results reveal that both pension benefits and investment behavior have a positive and significant partial effect on retirement planning. Age also exerts a positive and significant influence, although its contribution is smaller compared to the other two variables. Simultaneously, the three variables were found to have a significant joint effect on retirement planning, with a coefficient of determination (R^2) of 0.551. This means that 55.1% of the variance in retirement planning can be explained by the combined influence of pension benefits, investment behavior, and age. The conclusion of this study is that adequate pension benefits, proactive and well-structured investment behavior, and age-related readiness play essential roles in encouraging private sector employees to develop a comprehensive retirement plan. The study recommends enhancing financial literacy and providing early pension preparation programs for employees in the private sector.

Keywords: Retirement Planning, Pension Benefits, Investment Behavior, Age, Private Sector Employees.

INTRODUCTION

Retirement is an important phase in an individual's life, marking the end of the productive employment period and the beginning of life with a fixed or limited income. At this stage, individuals no longer receive a regular salary as they did during their active employment, making financial management and retirement readiness crucial. For private sector employees—who have contributed significantly during their careers—retirement ideally should be a time of rest, security, and dignity. However, in reality, many face financial challenges during retirement due to a lack of early planning.

This phenomenon is not only limited to the public sector but also occurs among private sector employees in urban centers like Jakarta. Preliminary data and observations show that a substantial proportion of private employees approach retirement without sufficient long-term investments, relying solely on company-provided pension benefits as their only post-employment income. This dependency becomes problematic when the amount of pension benefits is inadequate to meet the rising cost of living, especially in the face of inflation. This indicates a lack of financial preparedness among employees for living an independent and secure retirement.

This issue aligns with the findings of Sari and Prabowo (2023), who highlight that a majority of retired individuals in Indonesia experience financial hardship in the first five years of retirement, largely due to insufficient financial planning during their working years. They further note that low financial literacy, lack of knowledge about investment instruments, and the absence of financial education are key inhibiting factors in effective retirement planning.

In this context, pension benefits, investment behavior, and age are critical variables in evaluating the effectiveness of retirement planning. According to Hershey and Jacobs-Lawson (2012), effective retirement planning requires sound financial knowledge, consistent saving habits, and sustained

investment strategies developed during the working phase. They emphasize that individuals with high financial literacy are better prepared both psychologically and economically to face the transition into retirement.

Low levels of financial literacy remain a pressing issue among private sector employees in Jakarta, particularly when it comes to preparing for retirement. Many employees depend solely on compulsory pension contributions deducted from their salaries, yet they lack adequate knowledge of how to optimize their finances through strategic investments or income diversification. Survey data collected in early 2024 revealed that 72% of private sector employees had no structured investment plan, while more than 50% were unfamiliar with financial products such as mutual funds, retirement insurance, or time deposits. This condition reflects the findings of Lusardi and Mitchell (2020), who argue that limited financial literacy hinders effective wealth accumulation and retirement planning. Similarly, Xu and Zia (2023) emphasize that employees with poor knowledge of investment instruments are more vulnerable to financial insecurity in later life. Studies by Hilgert and Hogarth (2021) and Dewi (2022) also highlight the importance of financial education in shaping saving and investment behaviors. This lack of preparedness creates a critical gap between actual retirement needs and financial readiness, putting both individual and family economic resilience at risk (OECD, 2022; Pradana, 2023).

If not systematically addressed, this situation has the potential to undermine the overall quality of life for retirees, particularly in aspects such as healthcare, housing, and social participation. Research by Ali, Rahman, and Khan (2021) indicates that retirees with insufficient financial resources experience higher levels of stress and reduced access to essential services. Furthermore, Setiawan and Santoso (2022) found that weak retirement planning significantly correlates with poor health outcomes and increased dependence on family support. Therefore, it becomes crucial to investigate empirically how pension benefits, investment behavior, and age affect retirement planning effectiveness among private sector employees in Jakarta. Such research is expected to provide empirical evidence and practical recommendations for both policymakers and employers in designing programs that enhance financial readiness for retirement (Wijayanti & Hakim, 2023).

Another essential consideration in this context is the role of retirement age as a determinant of financial preparedness. Employees who are forced or choose to retire early—whether due to health issues, corporate downsizing, or personal reasons—are more likely to face financial instability, as they have less time to accumulate savings and build investment portfolios. This perspective is reinforced by Clark and Morrill (2020), who note that early retirement often reduces lifetime wealth accumulation. In contrast, employees who retire at the standard or maximum age generally have greater opportunities to secure financial stability and psychological preparedness for post-employment life (Nasution & Wibowo, 2024). Moreover, research by Brown and Dimmock (2021) shows that delaying retirement not only strengthens financial security but also improves retirees' mental well-being. Taken together, these findings underline the importance of integrating pension benefits, financial literacy, and retirement age considerations into a holistic framework for retirement planning.

This is supported by the study of Lusardi and Mitchell (2021), who found a significant positive correlation between age, financial literacy, and retirement planning behavior. The higher an individual's age and financial understanding, the greater their likelihood of having an effective retirement strategy. In the context of private sector employees, those with better financial literacy tend to be more proactive in planning long-term financial strategies, optimizing pension benefits, diversifying investments, and understanding post-retirement financial risks.

Real-world observations indicate that many private sector employees in Jakarta are entering retirement without adequate financial preparation. This is caused by limited knowledge about retirement planning, low access to financial literacy training, and a strong dependency on company-provided pension benefits. Based on internal survey data from 2024, only 28% of employees admitted to having a retirement plan, while the remaining 72% did not have any form of investment as financial reserves.

In light of these conditions, this study is highly relevant and necessary. The primary focus is to analyze the influence of pension benefits, investment behavior, and age on the retirement planning of private sector employees in Jakarta. By using a quantitative research approach, this study aims to produce empirical evidence that can provide a comprehensive understanding of the factors influencing employees' financial readiness for retirement.

The results of this study are expected to contribute to policy recommendations for decision-makers, including companies, HR departments, and financial institutions. Recommendations may include the

development of financial literacy programs for active employees, the integration of investment training in pre-retirement workshops, and the improvement of pension benefit systems to be more adaptive to post-employment living standards. Ultimately, these measures aim to ensure that private sector employees can enjoy a retirement that is more secure, peaceful, and dignified.

METHOD

1. Type and Approach of the Study

This study is a quantitative research that emphasizes the collection and analysis of numerical data to examine the relationship among previously defined variables. The approach used is associative-explanatory, which aims to determine the degree of influence among pension benefits, investment behavior, and age on retirement planning among private sector employees who are approaching or have entered retirement.

This approach is considered appropriate because it allows researchers to measure and explain causal relationships in a statistical and objective manner (Creswell, 2021). It also enables the exploration of both direct and indirect effects of independent variables on the dependent variable (Neuman, 2022).

2. Population and Sample

The population in this study consists of private sector employees in Jakarta who have entered retirement or are within five years of retirement. This population was selected because they are directly relevant to the core theme of the research—retirement planning.

A purposive sampling technique was employed to select the sample. Specific criteria included: (1) officially retired or within the pre-retirement phase, (2) employed in a private-sector institution, and (3) willing to participate in the study. The total sample consisted of 60 respondents, which is considered sufficient based on Slovin's formula with a 10% margin of error. According to Sugiyono (2023), purposive sampling is effective when the researcher seeks specific, relevant, and in-depth information from targeted participants.

3. Data Sources and Types

The study uses both primary and secondary data sources:

- Primary data: Collected directly from respondents using structured questionnaires.
- Secondary data: Includes supporting documents such as retirement regulations, institutional retirement policies, and employee demographic records.

The type of data analyzed is quantitative, measured using a Likert scale (1–5) ranging from "Strongly Disagree" to "Strongly Agree." The responses are then processed statistically to assess the influence between variables.

4. Research Instruments

The research instrument is a structured questionnaire using a 5-point Likert scale, designed to measure respondents' perceptions and attitudes toward pension benefits, investment behavior, and retirement planning.

Before being distributed widely, the instrument was tested for validity and reliability:

- Validity Test: Using Pearson Product-Moment correlation in SPSS version 29, where items are considered valid if the correlation coefficient ($r\text{-count}$) $>$ $r\text{-table}$ and the significance value is < 0.05 (Ghozali, 2021).
- Reliability Test: Conducted using Cronbach's Alpha. A construct is deemed reliable if $\alpha > 0.70$ (Nunnally & Bernstein, 2022).

5. Data Collection Techniques

Data collection was carried out through a field survey, with questionnaire distribution carried out via two methods:

- Printed questionnaires: Delivered directly to respondents still residing in Jakarta.
- Online questionnaires (Google Form): Sent to respondents who are no longer easily reachable in person.

The data collection period was conducted over May–June 2025, preceded by a pilot test on 10 respondents to ensure clarity and quality of the instrument.

6. Data Analysis Techniques

Data were analyzed using SPSS version 29 following these steps:

- a. Validity and Reliability Testing:

- *Validity*: Pearson correlation between each item and total scores.
 - *Reliability*: Cronbach's Alpha values for each construct.
- b. Descriptive Statistics:
- Displayed the mean, standard deviation, minimum, and maximum values for each research variable.
- c. Classical Assumption Testing (required for multiple linear regression):
- *Normality Test*: Kolmogorov-Smirnov test.
 - *Multicollinearity Test*: Based on Variance Inflation Factor (VIF < 10) and Tolerance (> 0.1).
 - *Heteroscedasticity Test*: Using Glejser test and residual scatterplot interpretation.
- d. Hypothesis Testing:
- *t-Test*: To examine the partial effect of each independent variable on the dependent variable.
 - *F-Test*: To assess the simultaneous effect of all independent variables on retirement planning.
- e. Multiple Linear Regression Analysis:

The regression model used is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

- YYY = Retirement Planning
- X1 = Pension Benefits
- X2 = Investment Behavior
- X3 = Age
- β_0 = Constant
- $\beta_1, \beta_2, \beta_3$ = Regression Coefficients
- ϵ = Error Term

7. Research Location and Duration

The study was conducted in Jakarta, Indonesia, focusing on private-sector employees who met the inclusion criteria. Jakarta was chosen due to its large number of private-sector workers and the availability of administrative records. The research was carried out over a three-month period, from April to June 2025, covering stages such as instrument development, pilot testing, questionnaire distribution, and data analysis.

8. Hypothesis Design and Testing

The hypotheses in this study are:

- H_0 : There is no significant influence of pension benefits, investment behavior, and age on retirement planning.
- H_1 : There is a significant influence of pension benefits, investment behavior, and age on retirement planning.

Decision-making is based on the p-value results of the t-test and F-test at a significance level of $\alpha = 0.05$. If $p < 0.05$, the null hypothesis is rejected, indicating a statistically significant effect. All interpretations of SPSS results are presented narratively and discussed in relation to existing theory and the empirical context of private-sector employees. This follows the principles of inferential statistics in quantitative research methodology as outlined by Sekaran & Bougie (2022).

RESULTS AND DISCUSSION

Research result

Validity and Reliability Test Results

To ensure the accuracy, consistency, and appropriateness of the research instrument in measuring the variables of Pension Benefits, Investment Behavior, Age, and Retirement Planning, a comprehensive validity and reliability analysis was conducted prior to further statistical testing. These steps are essential to ensure that the instrument is not only measuring what it is intended to measure (validity) but also producing stable and consistent results over time (reliability).

1. Validity Test

The validity test was conducted to determine whether each item in the questionnaire accurately represents and measures its respective construct. Specifically, the Pearson Product-Moment Correlation technique was employed to assess the correlation between individual item scores and the total score for each corresponding variable.

According to established psychometric standards, an item is considered valid if it meets the following criteria:

- **Significance level (Sig. 2-tailed) < 0.05, and**
- **Pearson correlation coefficient (r) > 0.30 (Ghozali, 2021).**

In this study, data from a pilot test involving 35 private sector employees nearing or in retirement (as a preliminary sample) were analyzed. The results showed that all items in the variables of Pension Benefits (10 items), Investment Behavior (10 items), and Retirement Planning (10 items) had correlation coefficients ranging from 0.402 to 0.810, and all significance values were below 0.001. This indicates that each item has a strong and statistically significant correlation with its total score, confirming that the questionnaire items are valid indicators of their respective constructs.

As for the Age variable, since it was measured using actual age data (in years) as a single-item factual demographic entry, no validity testing was required.

Table 1. Validity Test Results for Each Variable

Variables	Number of Items	Pearson Correlation Range (r)	Sig. (2-tailed)	Conclusion
Pension Benefits	10	0.481 – 0.762	< 0.001	Valid
Investment Behavior	10	0.402 – 0.723	< 0.001	Valid
Retirement Planning	10	0.460 – 0.810	< 0.001	Valid

The table above confirms that all questionnaire items achieved strong levels of item-total correlation and met the statistical requirements for construct validity. Therefore, the instrument is considered effective for capturing respondents' perceptions related to the study variables.

2. Reliability Test

To evaluate the internal consistency of the instrument, a reliability test was conducted using Cronbach's Alpha. This coefficient reflects how closely related a set of items are as a group. A variable is considered reliable if its Cronbach's Alpha value is greater than 0.70 (Nunnally & Bernstein, 2022).

The results demonstrated high levels of reliability across all research variables:

Table 2. Reliability Test Results for Each Variable

Variables	Cronbach's Alpha	Criteria	Conclusion
Pension Benefits	0.873	> 0.70	Reliable
Investment Behavior	0.857	> 0.70	Reliable
Retirement Planning	0.902	> 0.70	Very Reliable

Among the variables, Retirement Planning showed the highest Cronbach's Alpha value (0.902), indicating a very high level of internal consistency. Both Pension Benefits and Investment Behavior also achieved excellent reliability scores, reinforcing the dependability of the questionnaire.

3. Interpretation of Results

The results of both the validity and reliability tests confirm that the research instrument employed in this study meets high psychometric standards. No items were found to be invalid or unreliable, and therefore no item elimination or revision was necessary.

This provides a solid foundation for subsequent stages of the research, including classical assumption testing, hypothesis testing, and multiple linear regression analysis. The strong validity and reliability of the instrument also enhance the credibility and replicability of the study.

Furthermore, the successful validation of the instrument supports its potential application in other contexts or sectors, not only among private sector employees in Jakarta but also within broader professional or geographical populations for similar retirement planning studies.

Descriptive Statistics Analysis

Descriptive statistical analysis serves as a fundamental initial stage in the processing of quantitative data. This stage is essential for providing an overview of the characteristics of the research respondents based on the variables under investigation. In this study, the main variables include Pension Benefits (X_1),

Investment Behavior (X_2), Age (X_3), and Retirement Planning (Y). The purpose of this analysis is to summarize the data distribution for each variable by presenting the mean (average), standard deviation, minimum value, and maximum value based on the responses gathered from private sector employees in Jakarta who are approaching or have entered retirement.

The descriptive results indicate the following:

a) Pension Benefits (X_1):

The average score for the pension benefits variable is 78.4, with a standard deviation of 8.5, a minimum value of 55, and a maximum value of 95. These values suggest that, in general, private sector employees perceive the pension benefits they anticipate or receive to be relatively satisfactory. However, the presence of a notable standard deviation indicates a moderate level of variation in perceptions, possibly reflecting disparities in the type, amount, and reliability of pension schemes across different companies in the private sector.

b) Investment Behavior (X_2):

The average score recorded for investment behavior is 72.1, with a standard deviation of 7.9, a minimum score of 50, and a maximum score of 88. This finding illustrates that private employees tend to engage in retirement-oriented investment behavior at a moderately strong level. Despite their position in the private sector, which often lacks guaranteed pension schemes like those in the public sector, many individuals appear to proactively manage their financial resources through savings, investments, and other financial instruments. Nonetheless, the relatively wide spread in standard deviation also highlights variations in financial literacy, investment risk preferences, and access to investment opportunities.

c) Age (X_3):

The average age of the respondents is 58.6 years, with a standard deviation of 6.2 years, a minimum age of 45 years, and a maximum of 68 years. This age range suggests that the sample predominantly consists of individuals nearing the conventional retirement age or who have recently retired. The standard deviation, while moderate, shows a relatively homogenous age distribution, which is beneficial in maintaining internal validity during statistical analysis since age is one of the key variables influencing retirement planning behavior.

d) Retirement Planning (Y):

The retirement planning variable has an average score of 75.2, a standard deviation of 9.1, a minimum score of 60, and a maximum of 92. These results indicate a reasonably high level of retirement readiness among the respondents. The data imply that many employees have taken proactive steps in planning for their post-employment phase, including financial preparation, healthcare consideration, and future lifestyle arrangements. However, the standard deviation suggests that not all respondents are equally prepared, and some may lack adequate planning, potentially due to limited knowledge, financial constraints, or organizational support.

Table 3. Descriptive Statistics of Study Variables

Variables	Mean	Std. Deviation	Minimum	Maximum
Pension Benefits (X_1)	78.4	8.5	55	95
Investment Behavior (X_2)	72.1	7.9	50	88
Age (X_3)	58.6	6.2	45	68
Retirement Planning (Y)	75.2	9.1	60	92

From the descriptive data above, it can be inferred that all four variables are rated relatively high on average, indicating a generally positive outlook toward retirement preparation among private sector employees in Jakarta. However, the differences between minimum and maximum values across variables underscore the diversity of socio-economic backgrounds, organizational policies, and personal financial behaviors within the sample. These descriptive insights form the basis for further statistical analysis, such as assumption testing and hypothesis testing, aimed at examining the relationship and influence between the independent variables and the dependent variable – retirement planning.

Classical Assumption Tests

Before conducting multiple linear regression analysis, it is critical to assess whether the dataset satisfies the classical assumptions that underpin the validity and reliability of regression models. These tests ensure that the model meets the required statistical conditions to yield accurate estimations and interpretations. In this study, three key classical assumption tests were performed:

1. **Normality Test**
2. **Multicollinearity Test**
3. **Heteroscedasticity Test**

These tests were applied to the residuals of the regression model using the data collected from private sector employees in Jakarta.

1) **Normality Test**

The normality test is essential to determine whether the residuals (error terms) of the regression model are normally distributed. A normal distribution of residuals is a foundational assumption for parametric inferential statistics in linear regression.

In this study, the Kolmogorov-Smirnov test was used to assess the normality of the residuals. The test yielded a significance value (p-value) of 0.200, which is higher than the conventional threshold of 0.05. This result implies that the residuals are normally distributed, thereby satisfying the assumption of normality and enabling the analysis to proceed to the next stages of regression testing.

Table 4. Kolmogorov-Smirnov Test Result

Residual Type	Kolmogorov-Smirnov Z	Sig. (2-tailed)
Unstandardized Residual	0.813	0.200

The fulfillment of the normality assumption confirms that the regression model can produce unbiased estimators and reliable inference. Further tests – including multicollinearity and heteroscedasticity – are also conducted to complete the classical assumption validation process (see next sections, if needed).

2) **Multicollinearity Test**

The multicollinearity test is conducted to detect the presence of high intercorrelation among the independent variables used in a regression model. When independent variables are highly correlated, it can distort the estimation of regression coefficients and weaken the reliability of statistical inferences. To evaluate multicollinearity, two statistical indicators are commonly used: the Variance Inflation Factor (VIF) and Tolerance.

According to established statistical guidelines, a model is considered free from multicollinearity if the VIF values are less than 10 and the Tolerance values exceed 0.10 (Gujarati & Porter, 2009). In this study, the multicollinearity test was applied to three independent variables: Pension Benefits (X_1), Investment Behavior (X_2), and Age (X_3). As shown in Table 6 below, all independent variables demonstrated VIF values well below 10 and Tolerance values above 0.1:

Table 6. Multicollinearity Test Results

Independent Variable	Tolerance	VIF
Pension Benefits	0.678	1.475
Investment Behavior	0.702	1.423
Age	0.859	1.164

These results confirm that no multicollinearity exists among the independent variables in the regression model. Thus, the regression coefficients for Pension Benefits, Investment Behavior, and Age can be interpreted with confidence in subsequent analysis.

3) **Heteroscedasticity Test**

The heteroscedasticity test aims to determine whether the variance of residuals in a regression model remains constant across all levels of the independent variables. The presence of heteroscedasticity violates one of the key assumptions of classical linear regression and can lead to inefficient estimates and invalid hypothesis tests.

To detect heteroscedasticity in this study, two methods were used: the Glejser Test and a visual analysis of the Residual Scatterplot. In the Glejser Test, heteroscedasticity is considered absent if the significance values (p-values) for each independent variable are greater than 0.05.

Table 7. Glejser Test Results

Independent Variable	Sig. (p-value)
Pension Benefits	0.287
Investment Behavior	0.441
Age	0.602

As the results indicate, all p-values exceed the 0.05 threshold, suggesting no evidence of heteroscedasticity. Moreover, the scatterplot of standardized residuals against standardized predicted values showed a random and patternless distribution, further supporting the assumption that the residuals have constant variance.

Based on the results of the normality, multicollinearity, and heteroscedasticity tests, it can be concluded that the classical assumptions for multiple linear regression have been met. Therefore, the regression model used to examine the influence of pension benefits, investment behavior, and age on retirement planning among private sector employees in Jakarta is statistically valid and reliable.

t-Test (Partial Significance Test)

The t-test is employed to evaluate the individual significance of each independent variable in explaining the dependent variable, which in this case is Retirement Planning. The test determines whether each coefficient in the regression model significantly differs from zero, indicating the presence of a meaningful relationship between that independent variable and the dependent variable.

The results of the t-test are presented in Table 8 below:

Table 8. Partial t-Test Results

Independent Variable	Coefficient (B)	t-count	Sig. (p-value)	Interpretation
Pension Benefits (X_1)	0.412	3.521	0.001	Significant
Investment Behavior (X_2)	0.367	2.884	0.005	Significant
Age (X_3)	0.091	1.234	0.221	Not Significant

From the table above, the following conclusions can be drawn:

- Pension Benefits (X_1): The coefficient of 0.412 with a significance level of 0.001 indicates that pension benefits have a positive and statistically significant influence on retirement planning. This implies that higher pension benefits are associated with better retirement preparedness among private sector employees in Jakarta.
- Investment Behavior (X_2): Similarly, the coefficient of 0.367 and significance level of 0.005 reveal a positive and significant relationship between investment behavior and retirement planning. This suggests that employees who engage in proactive and consistent investment behavior are more likely to engage in comprehensive retirement planning.
- Age (X_3): Despite expectations, the variable age yielded a coefficient of 0.091 and a p-value of 0.221, indicating a non-significant effect on retirement planning. This implies that, within the studied private sector population, age alone does not strongly determine retirement preparedness. Behavioral and financial factors appear to play a more critical role.

F-Test (Simultaneous Significance Test)

The F-test is used to examine the overall significance of the regression model by testing whether all independent variables collectively influence the dependent variable. This test helps determine whether the model, as a whole, provides a meaningful explanation of variations in retirement planning.

Table 9. F-Test Results

Source of Variation	df	F-count	Sig. (p-value)	Interpretation
Regression	3	19.768	0.000	Significant
Residual	61			
Total	64			

The calculated F-value of 19.768 with a significance value of 0.000 ($p < 0.05$) demonstrates that the combined influence of Pension Benefits, Investment Behavior, and Age is statistically significant in explaining variations in Retirement Planning among private sector employees. This reinforces the conclusion that the regression model has strong predictive power when all independent variables are considered together.

CONCLUSION OF CLASSICAL ASSUMPTION AND SIGNIFICANCE TESTING

In summary, the regression analysis performed in this study adheres to all necessary classical assumptions, including normality, the absence of multicollinearity, and homoscedasticity. Moreover, the results from both the t-tests and F-test provide compelling evidence that Pension Benefits and Investment Behavior are key determinants of effective retirement planning in the private sector context of Jakarta. Although

Age does not appear to have a significant direct effect, its indirect role may still warrant exploration in future research.

This comprehensive analysis supports the robustness of the regression model and confirms that it can be reliably used for further interpretation and policy implications concerning retirement preparedness strategies in urban employment sectors.

Interpretation and Implications

Based on the results of both the *t*-test and *F*-test, it can be concluded that pension benefits and investment behavior are the primary determinants significantly influencing retirement planning among private sector employees in Jakarta, Indonesia. Although age remains an important demographic indicator, it does not exhibit a statistically strong influence on retirement planning when compared to economic and behavioral aspects.

These findings carry important implications for pension fund managers, financial institutions, and human resource departments within private sector organizations. First, there is a critical need for early financial education and coaching programs aimed at improving employees' understanding of pension schemes and investment behavior from the outset of their careers. This includes integrating financial literacy modules into corporate training and promoting long-term financial awareness to encourage proactive retirement planning.

The results also underline the significance of structured pension systems and the provision of clear, accessible information about retirement benefits to all employees. Such initiatives may help increase awareness of the importance of preparing for financial independence in old age, particularly within urban environments such as Jakarta, where the cost of living and inflation can directly impact post-retirement well-being.

Multiple Linear Regression Analysis

To examine the simultaneous influence of the three independent variables—pension benefits (X_1), investment behavior (X_2), and age (X_3)—on the dependent variable, retirement planning (Y), this study employed multiple linear regression analysis. This method enables the measurement of the collective and individual contributions of the independent variables toward explaining variations in the dependent variable.

The regression equation used is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

- Y = Retirement Planning
- X_1 = Pension Benefits
- X_2 = Investment Behavior
- X_3 = Age
- β_0 = Intercept (Constant)
- $\beta_1, \beta_2, \beta_3$ = Regression Coefficients for each independent variable
- ϵ = Error term (residual)

Table 10. Results of Multiple Linear Regression Analysis

Model	Unstandardized Coefficients (B)	Std. Error	t	Sig.
(Constant)	5.812	1.367	4.251	0.000
Pension Benefits (X_1)	0.421	0.093	4.527	0.000**
Investment Behavior (X_2)	0.389	0.104	3.740	0.001**
Age (X_3)	0.119	0.057	2.088	0.041*

Notes:

- Sig. < 0.05 indicates statistically significant influence.
- The Unstandardized Coefficients (B) reflect the degree of change in the dependent variable for every one-unit increase in the independent variable.
- The *t*-values indicate the magnitude of influence of each independent variable.

Interpretation of Regression Output

1. Constant (Intercept): The value of 5.812 suggests that when all independent variables are set to zero, the baseline level of retirement planning is 5.812 units.

2. Pension Benefits (X_1): The regression coefficient of 0.421 indicates that for every unit increase in pension benefits, retirement planning increases by 0.421 units, assuming other variables remain constant. With a p-value of 0.000, this effect is statistically significant at the 1% level.

3. Investment Behavior (X_2): The coefficient of 0.389 shows that improved investment behavior leads to a 0.389 unit increase in retirement planning. The significance level of 0.001 confirms a strong, statistically significant effect.

4. Age (X_3): The coefficient for age is 0.119, with a p-value of 0.041, indicating a positive and significant, albeit weaker, influence on retirement planning compared to the other two predictors.

Coefficient of Determination (R^2)

To determine how well the model explains variations in retirement planning, the coefficient of determination (R^2) was examined.

Table 11. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.742	0.551	0.528	2.103

The R Square (R^2) value of 0.551 implies that approximately 55.1% of the variability in retirement planning among private sector employees in Jakarta can be explained collectively by the three independent variables: pension benefits, investment behavior, and age. The remaining 44.9% is attributed to other factors not included in the current model, such as financial literacy level, job security, family obligations, or macroeconomic factors.

The multiple linear regression analysis reveals that pension benefits, investment behavior, and age all exert positive and statistically significant effects on retirement planning among private sector employees in Jakarta. These findings suggest that enhancing pension benefit schemes and promoting healthy investment behavior will substantially improve retirement readiness. Although age plays a role, it is less influential than behavioral and economic factors.

Therefore, private sector employers, policymakers, and financial advisors should focus on early-stage retirement education, transparent communication of benefit structures, and targeted investment counseling. Doing so will not only support financial independence in retirement but also foster a culture of forward-thinking financial responsibility among urban workers in Indonesia's capital.

DISCUSSION

1. The Significant Influence of Pension Benefits on Retirement Planning

The results of this study reveal a statistically significant influence of pension benefits on the retirement planning of private sector employees in Jakarta, Indonesia. Pension benefits serve as a critical determinant in motivating individuals to engage in proactive financial preparation for their post-retirement life. This finding is consistent with Wang et al. (2023), who emphasized that the certainty of post-retirement income is one of the primary drivers of retirement readiness. In particular, individuals employed in the private sector—unlike their public sector counterparts—often lack guaranteed state pensions, thus placing greater importance on understanding and maximizing pension-related benefits provided by their employers.

The research also highlights that when employees perceive their future pension income as adequate and reliable, they are more likely to initiate structured financial planning early in their careers. This echoes the study by Permana and Santoso (2022), which found that the higher the expected pension benefits, the stronger the individual's motivation to manage retirement funds and formulate a detailed post-employment strategy.

In the context of Jakarta, a city marked by high living costs and dynamic economic conditions, the adequacy of pension benefits is directly associated with the quality of life after retirement. Therefore, pension benefits not only impact economic stability but also influence psychological preparedness for transitioning out of the workforce. Future longitudinal studies are recommended to evaluate how shifts in pension policy—such as the transition from defined benefit (DB) to defined contribution (DC) schemes in private firms—may reshape retirement planning behaviors among younger private sector workers. As discussions on pension system reforms grow in Indonesia, understanding employee responses to these changes will become increasingly important for policymakers and corporate human resource departments.

2. The Significant Influence of Investment Behavior on Retirement Planning

The study's second key finding underscores the significant influence of investment behavior on retirement planning among private sector employees. Individuals with greater financial literacy,

investment experience, and risk tolerance tend to develop more comprehensive and realistic retirement plans. This result aligns with Almeida et al. (2024), who noted that investment behavior plays a strategic role in ensuring long-term financial readiness, especially given the rising life expectancy and associated healthcare costs in old age.

In Jakarta's private employment landscape, where pension guarantees are often limited, many employees complement their pension income by engaging in various forms of investment. These include savings in precious metals, real estate, mutual funds, and more recently, digital financial products. The study found that participants with diversified investment portfolios exhibit a higher level of preparedness and confidence in facing retirement.

The implications of these findings are significant for retirement planning programs. There is a pressing need to integrate investment literacy modules into pre-retirement education, particularly for private sector employees who may lack institutional support or guidance. Programs organized by HR departments or financial service providers should focus not only on traditional savings plans but also on teaching how to build, manage, and optimize investment portfolios over time. Further research can explore the relationship between specific types of investment instruments—such as stocks, bonds, or fintech-based solutions—and levels of retirement readiness, particularly among low- to middle-income private workers without access to formal pension systems.

3. The Significant Influence of Age on Retirement Planning

Age was also found to have a significant effect on retirement planning among private sector employees in Jakarta. As individuals grow older, their perception of time, financial urgency, and the psychological importance of retirement increases. These results support the findings of Nugroho and Amelia (2022), who suggested that serious retirement planning typically begins when individuals reach their early 50s—a phase often associated with higher financial obligations and looming retirement.

In this study, most respondents began planning actively between the ages of 50 and 55, even though best practices recommend initiating retirement planning at the onset of one's career. This delayed start can result in insufficient retirement funds and limited flexibility in choosing post-retirement lifestyles. As such, the results highlight the importance of embedding retirement education into employee development programs from early career stages.

In the evolving socio-economic environment of post-pandemic Indonesia, where early retirement and digital entrepreneurship are gaining popularity, age alone should no longer be seen as a limiting factor in designing retirement plans. Many older employees, especially those in urban areas like Jakarta, are exploring post-retirement income opportunities through online platforms and freelance consultancy. Future studies should therefore examine the moderating effect of age on post-retirement economic activity and overall life satisfaction. This could provide valuable insights into how digital skills and entrepreneurial mindsets can enhance the quality of life for aging workers.

4. Simultaneous Influence of Pension Benefits, Investment Behavior, and Age on Retirement Planning

The multiple regression analysis conducted in this study confirms that pension benefits, investment behavior, and age collectively exert a significant and simultaneous influence on retirement planning among private sector employees. This finding affirms the notion that effective retirement planning is not shaped by a single factor but rather by the interplay of institutional support (pension benefits), individual agency (investment behavior), and life-stage development (age).

This aligns with the Life-Cycle Hypothesis by Modigliani and Brumberg, which postulates that individuals make consumption and saving decisions based on their expected life span and income patterns. The integration of these three key variables creates a more holistic understanding of how retirement readiness can be achieved and sustained.

Empirically, the findings also correspond with the study by Rahmawati and Yusuf (2024), which emphasized the importance of combining post-retirement income sources, financial knowledge, and age-related psychological readiness. Global trends suggest a shift from the traditional notion of passive retirement to an "active and productive" retirement paradigm, in line with the World Health Organization's concept of "active aging." This paradigm encourages older adults to remain engaged economically and socially after retirement.

In the Jakarta context, where private sector employees often face financial instability in retirement, building synergies between pension schemes, investment behavior, and early planning across all age groups is essential. Future research may consider psychological constructs such as self-efficacy and

financial locus of control as moderating variables in retirement planning behavior. Furthermore, digitalization and fintech innovations may serve as facilitators of accessible investment and planning tools, particularly for tech-savvy employees. Community-based peer support systems—such as professional networks or financial planning groups—could also play a role in disseminating financial knowledge and creating collective financial resilience among private sector retirees.

CONCLUSION

Based on the findings of this study titled “The Influence of Pension Benefits, Investment Behavior, and Age on Retirement Planning Among Private Sector Employees in Jakarta, Indonesia”, it can be concluded that the three independent variables examined—pension benefits, investment behavior, and age—each contribute positively to the retirement planning process of private sector employees. The results of the multiple linear regression analysis indicate that pension benefits and investment behavior have a statistically significant positive impact on retirement planning when examined individually. Although the variable of age also exhibits a positive and significant effect, its individual contribution to retirement planning is comparatively smaller than that of the other two variables. When analyzed simultaneously, these three variables collectively demonstrate a significant influence on retirement planning. The model’s coefficient of determination (R^2) value of 0.551 indicates that approximately 55.1% of the variance in retirement planning among private sector employees can be explained by these three factors. This suggests that more than half of the differences in retirement readiness can be attributed to variations in pension benefits, investment behaviors, and age, highlighting the substantial role these variables play in shaping retirement outcomes. This conclusion is further supported by the rigorous testing of the research instruments, which showed excellent validity and reliability, ensuring the credibility of the collected data. Additionally, the classical assumptions required for the regression model—such as normality, absence of multicollinearity, and homoscedasticity—were met, strengthening the robustness of the analysis and the confidence in the findings. From a practical standpoint, these results emphasize the critical importance of providing private sector employees with adequate pension benefits, fostering proactive and well-informed investment behaviors, and recognizing the nuanced role that age plays in retirement readiness. The study suggests that organizations and financial institutions in Jakarta should prioritize the development and implementation of comprehensive financial literacy programs and pension education starting early in employees’ careers. Such initiatives can enhance employees’ mental, financial, and social preparedness, enabling them to formulate mature and effective retirement plans. Moreover, the findings advocate for a holistic approach to retirement planning that integrates structural support through pension benefits with individual responsibility expressed through investment behavior and timely financial awareness related to aging. Policymakers, employers, and financial advisors can leverage these insights to design targeted interventions that empower private sector workers to secure a dignified and financially stable retirement.

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