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Investment Decisions in Retirement Planning for Lecturers in Indonesia: Overconfidence and Representativeness Bias

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A B S T R A C T

Main Purpose - This study aims to examine the influence of overconfidence bias and representativeness bias on decision-making in retirement planning. Method - This study is a cross-sectional study using an explanatory method. Main Findings – The findings of this study showed that investment decision in retirement planning for lectures was influenced by overconfidence bias and representativeness bias. Based on the significance test results, the influence had a negative direction, meaning that the lower the overconfidence bias and representativeness bias, the better the retirement planning with investment decisions. This shows that in making investment decisions for retirement planning, individuals will be more careful and will avoid mistakes to do better retirement planning. Theory and Practical Implications - The financial behavior theory explains that cognitive biases, like overconfidence and representativeness bias, can lead to irrational investment decisions. Biased investors often overestimate their abilities and overlook accurate statistical data. Practically, this means individuals should carefully seek reliable information and avoid judgment errors when planning for retirement to make better investment decisions. Novelty - This study put investment decisions in the context of Indonesian lecturers' plans for retirement.

1. INTRODUCTION

Various profitable and sustainable benefits are desired by many individuals in facing retirement, but the will can be implemented in a country with a good system of retirement. According to Index Retirement Globally (2020), ten countries have the best retirement system in the world, namely the Netherlands, Denmark, Israel, Australia, Finland, Norway, Singapore, Sweden, Canada, and New Zealand (Kata Data, Mercer CFA Institute, 2020). Therefore, with a good retirement system, various profitable benefits can be provided by these countries, and ultimately a sense of security can be received by retirees.

Based on the results of the study conducted by Hinrichs (2021), the retirement system in the European Union member states has been reformed in the last 30-year period. The analysis results showed that if the focus on retirement reform is more on sustainable finance in the long term, the risk of old-age poverty will increase, which will result in an uncomfortable retirement for individuals. Likewise, in England (Yen, 2018), research shows that at the time of retirement, there is an increasing sense of insecurity caused by market fluctuations, so they still feel a lack of money, even after making investments.

Indonesia is in the 92nd position out of 150 countries surveyed for ranking global retirements (Natixis Global Asset Management survey results). Indonesia's ranking is still far below, if compared to ASEAN countries, especially when compared with countries with a good retirement system. Thus, from an early age, the working individual has already made financial plans by setting aside around 30%-40% of their monthly income for investment to prepare for retirement (Puspitaningtyas, 2012). Therefore, working individuals should plan retirement through investment by setting aside their income to enjoy a decent life during the old days (Pompian, 2012).

According to PT Kustodian Sentral Efek Indonesia (KSEI) from the results of a survey conducted in Indonesia (July 2020), the number of investors in Indonesia has increased by 22% compared to the previous year. However, if it is compared to the amount of the Indonesian population, it shows that the number of investors is still low. This shows that the culture of Indonesian society in making decisions to invest is still low.

Previous studies show that cognitive bias (overconfidence bias and representativeness bias) affects decision investment (Novianggie & Asandimitra, 2019). It is supported by Badshah and Irshad (2016) and Addinpujoartanto and Darmawan (2020) who revealed that overconfidence bias affects investment decisions. This study is also supported by Jamshidi, N et al. (2019) who found that representativeness bias and overconfidence bias affect investment decisions. On the other hand, the results of the study conducted by Anwar et al., (2017) show different results in which overconfidence bias harms investment decisions. What distinguishes this study from previous studies is that the investment decision is for the retirement planning of lecturers in Indonesia.

2. METHODS

This study is a cross-sectional study conducted through an explanatory method that describes an object from the sample data that has been obtained and to know the connection causality between variables with testing hypotheses so that it can prove the hypothesis rejected or accepted. This research examines the influence of overconfidence bias and representativeness bias on investment decisions in retirement planning for lecturers in Indonesia.

Variables in this research are retirement planning as a bound variable, and overconfidence bias and representativeness bias as a free variable. The unit of analysis in this research is all the lecturers in Indonesia, with a population of 525,381 lecturers. After using the non-probability sampling technique (convenience sampling), a sample obtained was as many as 549 lecturers.

This study consists of one free variable and two bound variables; therefore, the data processing used multiple regressioon analysis with regression equality:

$$Y = \beta 0 + \beta 1 X 1 + \beta 2 X 2$$

Information:

Y $\quad$ = Retirement planning

X 1 $\quad$ = Overconfidence Bias

X 2 $\quad$ = Representativeness Bias

3. RESULTS AND DISCUSSION

3.1 Results

The analysis techniques used in this study are descriptive analysis and multiple linear regression analysis. Based on the descriptive data processing results for each variable, the obtained results are shown in the following table below.

Table 1. Lecturer Overconfidence Bias

Range	Category	Amount	%
7 – 16	Low	178	32.42
17 – 16	Currently	311	56.65
27 – 36	High	60	10.93
Amount		549	100

Source: Data processing (2024)

Overconfidence bias is individuals who tend to exaggerate ability or knowledge in doing assessment, which can appear in aspects of life, like in making decisions and planning. Someone who experiences overconfidence bias will tend to believe that he has more above-average abilities.

Table 1 shows that the most common overconfidence bias of lecturers is in the moderate category, which is 56.65%. This means that as many as 311 lecturers are not too

excessive in evaluating their ability or knowledge. It shows that the individuals have strong enough confidence in evaluating their abilities but are still more moderate so that they are more open to feedback and correction.

Table 2. Representativeness Bias of Lecturers

Range	Category	Amount	%
5 – 11	Low	208	37.9
12 – 18	Currently	304	55.4
19 – 25	High	37	6.74
Amount		549	100

Source: Data processing (2024)

Representativeness bias is the behavior of an individual who makes judgments or decisions based on the similarity of something to a prototype or stereotype in their mind, rather than using relevant information or data. This bias will cause errors in judgment because it tends to ignore more accurate statistical information.

Table 2 shows that the representative bias of most lecturers is in the moderate category, which is 55.54%. This means that 304 lecturers are not strong enough in their assessment and decision-making. These individuals may still tend to rely on certain prototypes, stereotypes, or similarities, but are more open to considering additional information or relevant data.

Table 3 Investment Decisions in Planning Lecturer Retirement

Range	Category	Amount	%
5 – 11	Low	17	3.10
12 – 18	Currently	180	32.79
19 – 25	High	352	64.12
Amount		549	100

Source: Data processing (2024)

Retirement planning is the best thing to do for working individuals so that when they retire, they can expect a worthier life. This can be done by deciding to invest so that it is expected to obtain additional income to fulfill their need in the retirement time.

Table 3 shows that the investment decisions in the retirement planning of lecturers are mostly in the high category, which means that as many as 352 lecturers have carried out retirement planning and are confident in making investment decisions to obtain additional income to be able to meet their living needs when they retire.

The results use multiple linear regression analysis, indicating that the influence of overconfidence bias and representativeness bias on decision investment in retirement planning shows a negative direction. It means that the lower the overconfidence bias and

representativeness bias, the better the investment decision in lecturers' retirement planning. The data results can be seen in Table 4 and Table 5 as follows.

Table 4. *Summary Output*

R	R-square	F	P
0.687	0.472	244,028	0.0000

Source: Data processing (2024)

Table 4 shows that the result obtained is an R^2 equal to 0.472 or 47.20%, which means that decision investment in retirement planning is influenced by overconfidence bias and representativeness bias by 47.20%. While the rest, 52.80%, is influenced by other factors.

Table 5. Significance Test Results

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	28,376	0.462	61,461	0.0000
X1	-0.359	0.035	-10,338	0.0000
X2	-0.267	0.053	-5,039	0.0000

Source: Data processing (2024)

After conducting a significance test, it can be seen in Table 5 that the influence of overconfidence bias and representativeness bias is known to be significant as $p < 0.05$. This suggests that overconfidence and representativeness biases have a detrimental effect on the investment decision in retirement planning.

3.2 Discussion

Retirement is a time that must be faced by every individual who works, but not all of them are always ready to face it. This is because retirement is considered a thing that ends activities carried out for years. Besides that, individuals who have retired will experience a decline in income. Therefore, every working individual should think about the future after retirement to make their future life more prosperous.

Future individuals who are already retired will be more prosperous if they have a plan to face their retirement. So that the need to live in retirement can be fulfilled and the problems that will be faced after retirement can be resolved. Problems found during retirement are the amount of income reduced, the routine of working activities missed, the authority that has been unowned (post-power syndrome), the problem of finances being increasingly unstable, and the health condition that is not like before. Thus, working individuals should plan retirements by set aside their income to enjoy a decent life during old age (Pompian, 2012).

Therefore, in order to have a decent income without depending on others after retirement, every working individual needs to do retirement planning. However, some individuals still have not done that, especially if they have an allowance for old age. This is

because they still have an income, even though their income is already far reduced compared to when they still worked.

An individual who is not working anymore tends to be more forgetful, showing that they are already approaching old age. In general, there is a decline in health, so life needs are increased because part of his income is used for routine health checks. This can result in increased expenses, while income has declined. Therefore, retirement planning from the beginning of work needs to be done as best as possible.

One of the retirement planning options that can be done is to decide to invest. Through investment, it is expected to obtain additional income. Therefore, income earned from the investment can be used for additional needs during retirement.

Individuals who decide to invest will be influenced by behavioral bias. The influence of behavioral bias in retirement planning can influence their decision-making. Some previous studies state that this bias can cause investment decision become not optimal, as explained by the research from Baulkaran, V., and Jain, P. (2024), namely behavioral bias, impact on funding strategies, and retirement with prioritizing sale investment rather than utilizing home equity so that it influences their retirement results. Meanwhile, the results study by Bajtelsmit, V., and Coats, J. (2023) said that low behavioral bias will push the evaluation of future needs, which will cause increasing decision investment. Research from Bebbington, C., Durand, R.B., and Khuu, J. (2024) shows that behavioral bias indicates a response to market volatility, with trends chosen of risky behavior. This will result in lower retirement savings as time goes by. This result is in accordance with Pompian's (2021) opinion that behavioral bias influences investment decisions.

Individuals (investors) who behave irrationally believe in their ability to evaluate accurately, including making evaluations of investment decisions. Decisions in investment can be influenced by overconfidence bias, and this happens when investors feel more confident that the situation warrants it (Thaler & Shefrin, 1981).

Based on the results, the study shows that the p-value < 0.05 (significant), which means overconfidence bias has a negative influence on decision-making investment in retirement planning. This shows that the lower the overconfidence bias, the better for decision-making to invest in retirement planning. This is because someone who has a low overconfidence bias can evaluate the situation to decide to invest, so they can plan investment well. In addition, individuals will be careful to get information about investments so that they can choose the right investment.

To make investment decisions in retirement planning, individuals not only influenced by overconfidence bias but can also be influenced by representativeness bias. It shows in the study that the p-value < 0.05 (significant), which means representativeness bias has a negative influence on decision-making investment in retirement planning. This indicates that the lower the representativeness bias, the better it will be to use relevant information or data so that errors in assessment can be avoided because they do not ignore accurate statistical information.

The results of this study are supported by research conducted by Anwar et al., (2017), which states that overconfidence bias has a negative effect on investment decisions. Whilst

the results of research from Fitri, HK and Cahyaningdiyah, D. (2021) show that representativeness bias does not affect investment decisions and overconfidence bias has a positive effect on investment decisions. Meanwhile, research by Aigbovo, O. and Ilaboya, OJ. (2019) provides conflicting results that representativeness bias and overconfidence bias are not significant in influencing individual investor decisions.

Another study (Novianggie & Asandimitra, 2019) shows that overconfidence bias and representativeness bias affect investment decisions. This study is also supported by Jamshidi, N et al., (2019) which states that representativeness bias and overconfidence bias influence investment decisions.

4. CONCLUSION

Based on the testing results and previous discussion, it can be concluded that overconfidence bias and representativeness bias had a negative influence on decision-making investment.

Based on the theory of financial behavior, this study suggests that investment decisions in retirement planning can be influenced by deep cognitive bias including overconfidence bias and representativeness bias. Therefore, individuals who make an investment decision can examine the circumstances and be cautious with the information they receive, prevent errors in evaluation, and do not neglect reliable statistical information to plan their investments well.

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