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Financial literacy on behavioral biases and risk avoidance towards investment decisions

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Abstract

This research aims to determine the influence of behavioral biases, and risk avoidance on investment decisions through financial literacy women entrepreneurs in Bengkulu Province. These researches used primary data obtained through questionnaire. The population in this study is women entrepreneurs in Bengkulu Province, and the sampling technique used is snowball sampling. The data obtained was analyzed using SmartPLS 4.0 software. The results suggest that investment decisions are affected by financial literacy and overconfident bias, but representativeness bias, anchoring bias, availability bias, and risk avoidance don't directly affect investment decisions. And availability bias, overconfidence bias, representativeness bias, and risk avoidance can affect financial literacy, but anchoring bias cannot affect financial literacy. As well as financial literacy can mediate the interaction of overconfident bias, representativeness bias, availability bias, and risk avoidance, investment decisions. In addition, financial literacy hasn't been able to mediate the interaction among anchoring bias and indirect investment decisions.

Keywords: financial literacy, investment decisions, behavioral bias, risk avoidance

INTRODUCTION

Entrepreneurship is one of the important factors for the economic growth of a country (Irwansyah et al., 2019). Especially women entrepreneurs who have the potential to improve the economy, as one proof that there have been many women who are economically empowered even as leaders (Putra, 2022a). Women entrepreneurs have received widespread recognition as economic builders as well as in creating jobs (Rashid & Ratten, 2020). Thus, when it comes to investment women can also be driving actors in increasing investment figures (Putra, 2022b). Therefore, women entrepreneurs need to be equipped with knowledge and skills, thus they can invest their wealth (Kappal & Rastogi, 2020a). And the government must encourage women to be brave in investing. The investment in question is not only buying gold, land, stocks and others, but also in the production of products or services that can be traded so that it is expected to improve the economy. So that it can reduce the level of dependence on other parties and become an independent country in the development process (Kurniasi & Halimatusyadiah, 2019).

Investors' investment preferences cannot only be explained using financial figures (Aren & Nayman Hamamci, 2020). Based on a study conducted by (Iram et al., 2023) explains that without adequate business knowledge and financial literacy, it allows women entrepreneurs to make irrational investment decisions that will affect the returns they get. Cognitive errors result in illogical decision making and lead to errors in the entire investment process if not immediately known and corrected (Iram, Bilal, et al., 2021) With complete and relevant financial information as needed, it is able to improve economic decisions taken by entrepreneurs (Fachruzzaman et al., 2021) Financial literacy plays an important role in investment decision making, because it can help investors access reliable information such as market prices, trends in the market and can avoid investor behavior bias (Iram, Qazi, et al., 2021) More careful decision making will result in good returns such as profitability and performance of SMEs, and vice versa if the decisions taken by women entrepreneurs are bad, it will lead to losses and failures (Iram et al., 2023) According to research (Iram et al., 2023) shows that financial literacy has a rush to investment decisions. Supported by

(Adil et al., 2022; Iram, Qazi, et al., 2021; Putri & Halmawati, 2020). However, it is inversely proportional to the research conducted (Muhammad & Andika, 2022; Pendapatan & Keputusan, 2021).

Thus someone with high financial literacy have a propensity to be wiser and bolder in making high-risk investment decisions (Ellen & Yuyun, 2019a). However, women entrepreneurs in investing tend to avoid high-risk instruments because they consider these investments to provide uncertain returns. This is due to a lack of financial literacy, time to understand investment and its characteristics (Kappal & Rastogi, 2020b). Women investors who have high financial literacy tend to avoid risk (Adil et al., 2022). As the results of (Adil et al., 2022) explained that risk avoidance has an influence on investment decisions, but this is inversely proportional to research (Ellen & Yuyun, 2019b; Saraswati & Rusmanto, 2022).

Investment decision making is closely related of financial literacy (Iram et al., 2023). However, investment decision making is closely related to behavioral biases such as overconfident behavior that considers itself to have more knowledge and understanding than it actually has (De Zwaan et al., 2017). According to (Baker et al., 2019) suggests that the behavioral biases often occur by investors are overconfident bias and representativeness biases. An investor in making investment decisions unwittingly only considers the knowledge and understanding possessed, to the exclusion of other available information (Wendy, 2021). Research conducted (Sartika & Humairo, 2021) states that investor behavior biases affect investment decisions. While according to (Fitra, 2023) explains that behavioral biases has no impact on investment decisions.

Investment decisions taken by investors become uncertain due to biased behavior. Thus, a tool (media) is needed to explain investors' biased behavior towards investment decisions, therefore it can reduce the impact as a result of behavioral bias towards investment decisions. Through improving financial literacy, be able reduce the affect of bias on investment decisions taken by women entrepreneurs (Iram, Bilal, et al., 2021b). Therefore, in this study consider financial literacy. As research results (Iram et al., 2023) it suggests that financial literacy can intervene overconfident biases, and availability biases towards investment decisions. (Iram, Qazi, et al., 2021) affirms that financial literacy can mediate the interaction among overconfident bias, representativeness biases, and availability biases towards investment decisions. However, these results are inversely proportional to the study (Kasoga, 2021).

In addition to the inconsistent research results, the next novelty in this study is to pay attention to other female entrepreneurs' behavioral factors, namely risk avoidance by considering financial literacy as a mediation variable. And this research was conducted in Bengkulu Province with culture, customs and other geographical conditions, as a differentiator from previous research conducted in Punjab, Pakistan. Where the level of women's participation in the economy in Bengkulu Province shows a significant increase (Putra, 2022b). However, not a few women are less empowered, due to low financial literacy that can hinder the development of women entrepreneurs. This research is to determine the intervening role of financial literacy on behavioral biases and risk avoidance in investment decision making by women entrepreneurs.

LITERATUR REVIEW

Heuristic Behavioral Theory

Heuristic theory is a practical theory that makes uncertain and complex investment decisions easier (Mahadevi & Asandimitra, 2021). Heuristic theory explains a person's behavior in managing persuasive information (Chaiken & Trope, 1999). Heuristic theory explains how a person makes investment decisions influenced by individual literacy and behavioral biases (Iram et al., 2023). (Tversky & Kahneman, 1974) introduced three heuristics which could be utilized by individual investors in their decision-making: anchoring, availability and representativeness. Afterward (Waweru, N.M., Munyoki, E. and Uliana, 2008) added overconfidence to the list. In addition, Yechiam and Hochman in (Alteza, 2021) added risk avoidance. Heuristics themselves are not the Source of bias, but biases often arise because heuristics involve simplifying information. And the reliability of investors in making investment decisions is closely related to their ability and understanding of financial literacy (Iram et al., 2023).

Overconfident Bias and Investment Decisions

Overconfidence bias is an individual's tendency to believe they have excessive abilities to the exclusion of other information (Rona & Sinarwati, 2021) Based on heuristic theory, overconfidence bias is a cognitive heuristic bias, which can be interpreted as an overassessment of one's abilities that will result in irrational investment decisions (Shah et al., 2018). Investors with excessive confidence will overestimate their knowledge. Women entrepreneurs who have high self-confidence with adequate financial literacy are able to make accurate investment decisions (Iram et al., 2023) Overconfidence bias is not good because it will result in irrational decision making (Ellen & Yuyun, 2019)

H1 Overconfidence bias has an influence on investment decisions

Overconfidence Bias and Financial Literacy

Based on heuristic theory, overconfidence bias can affect the way investors evaluate financial risk, make investment decisions, and plan their finances. Investors with an excessive level of trust are less likely to utilize their financial knowledge which will result in their investment plans (De Zwaan et al., 2017) Overconfidence can increase investor interest in accessing investments, risk preferences, risk correspondence and risk intensity calculations (Ahmad & Shah, 2022) Women entrepreneurs who are more confident can make investment decisions accurately with their financial literacy (Iram, Qazi, et al., 2021) This is supported by (Iram et al., 2023) suggesting that investors who are too confident need adequate financial literacy in order to make rational decisions.

H2 bias overconfidence has an impacts financial literacy

Representativeness Bias and Investment Decision

According to heuristic theory, representativeness bias is a shortcut in assessing opportunities by performing certain classifications (Tversky & Kahneman, 1974). Representativeness bias can affect an individual's assessment of the decision he will make, this is because it does not consider other factors that affect the intended outcome (McDonough, 2023) Representativeness bias has several implications for investment decision making, which causes investors to misunderstand characteristics such as product quality, reliable managers, and expected development as one of the characteristics of a good investment (Putri & Halmawati, 2020) Based on research conducted by (Novwedayaningayu & Saputri, 2020) it was found that representativeness bias has an influence on investment decisions.

H3 Representativeness bias has an impacts investment decision

Representativeness Bias and Financial Literacy

According to heuristic theory, individuals in making investment decisions tend to make financial decisions based on a general picture that may not reflect the complexity of the actual financial situation (McDonough, 2023). Because, investors in making decisions are based on experience or information that is easiest to remember or most striking, without considering more complete or relevant information. Women in making investment decisions tend to consider the risks they will receive, thus they have a high representation bias (Mahwan & Herawati, 2021) Research conducted by (Iram, Qazi, et al., 2021) found that representation bias affects financial literacy.

H4 Representativeness bias has an impacts financial literacy

Anchoring Bias and Investment Decisions

According to heuristic theory, anchoring bias is a strategy in determining starting points that are then adjusted to find the final answer with the information obtained (Peña & Gómez-Mejía, 2020; Tversky & Kahneman, 1974) In research, (Festus Babarinde, 2019) describes anchoring bias as the use of irrelevant information as consideration in evaluating or estimating value or uncertain information. Based on research conducted by (Din et al., 2021) states that each individual in making decisions considers previous knowledge or evidence. Thus, women entrepreneurs in business-related investment decision making may experience a anchoring bias during entrepreneurship (Iram et al., 2023) This is also supported by Badri (Badri & Putri, 2021)

H5 Anchoring bias has an impacts investment decision

Anchoring Bias and Financial Literacy

A person with experience with investing can predict future investment returns, but is also influenced by anchoring bias. Based on heuristic theory, someone with a high level of knowledge can evaluate information, and ss who has low cognitive abilities will produce a high anchoring bias because they do not have enough knowledge to assess financial information appropriately. Anchoring bias cannot rely solely on cognitive abilities but must pay attention to the emotional (Aren & Nayman Hamamci, 2021) Based on Jameel's research (Jameel & Siddiqui, 2020) suggests that anchoring bias affects financial literacy.
H6 Anchoring bias has an impacts financial literacy

Availability Bias and Investment Decisions

Based on heuristic theory, availability bias is the making of investment decisions based on information available or thought by individual (Tversky & Kahneman, 1974). This is supported by (Hayati et al., 2022) Availability bias is a way of making one's decisions based on available information, something remembered, something new done, even something new heard. According to (Iram et al., 2023) availability bias affects investment decisions.
H7 Availability bias has an impacts investment decision

Availability Bias and Financial Literacy

Availability bias is investor behavior in making investments by relying on information that has been available (Khan et al., 2017) According to heuristic theory, individuals with a good level of financial literacy will be able to access and understand financial information better. Thus, investors tend to make more informed financial decisions. According to (Iram et al., 2023) stated that women entrepreneurs who have a high tendency towards availability bias have low financial literacy. Research conducted by (Iram, Qazi, et al., 2021) shows that availability bias has an impact on financial literacy.
H8 Availability bias has an impacts financial literacy

Risk Avoidance and Investment Decisions

Risk avoidance is the tendency of investors in investment decision making to avoid uncertainty. Based on heuristic theory, it can be stated that risk avoidance can influence investment decisions made, because it allows investors in making decisions to ignore information that may be relevant. Risk avoidance can overlook opportunities related to greater return on investment (Sakinah et al., 2021) Women in making investment decisions tend to avoid risk. According to (Kappal & Rastogi, 2020) women in investing tend to choose investments that are safe and with little or no known risk. Based on research conducted (Adil et al., 2022; Subramaniam & Velnampy, 2017) found that risk avoidance influences investment decisions.
H9 Risk avoidance has an impacts investment decision

Risk Avoidance and Financial Literacy

Someone with adequate financial literacy can make wiser investment decisions and dare to take risks (Kappal &; Rastogi, 2020). Based on heuristic theory, individuals who lack financial literacy tend to avoid risk excessively for fear of incurring losses, even if the potential long-term gains are significant. An investor who focuses on avoiding risk, then allows investors to ignore information or options regarding investment thus that the investment decisions taken are not optimal (Aren &; Nayman Hamamci, 2020). Low risk avoidance only occurs in entrepreneurs who have low financial literacy (Riepe et al., 2022).
H10 Risk avoidance has an impacts financial literacy

Financial Literacy as an Intervening

Financial literacy is the concept of financial knowledge and financial products, thus that it can be used as a reference in rational decision making and obtaining financial welfare (Budiarto & Susanti, 2017) Based on heuristic theory, literacy can act as a mediator between financial behavior biases, risk avoidance and investment decisions. An individual's ability to manage their finances can be hampered if an individual's cognitive abilities decline. (Ahmad & Shah, 2022) suggests that overconfident behavior can lead to irrational

investment decision making, but adequate financial literacy can help investors to make better investment decisions. With adequate financial literacy, it is able to expand rational investment choices (Tuffour et al., 2022) According to (Iram et al., 2023) it is explained that the impact between overconfidence bias and investment decisions is mediated by financial literacy.
H11 Financial literacy mediates the relationship between overconfident bias and investment decisions

Financial literacy resulted in an increased impact of dependence on representation bias. Investors who have a representative bias in making investment decisions are based on past experience, because they believe that good performance will be sustainable (Kasoga, 2021) Representation bias tends to occur in women entrepreneurs in decision making, but with adequate financial literacy can minimize representation bias (Novianggie & Asandimitra, 2019) According to (Iram, Qazi, et al., 2021) financial literacy can mediate between representativeness bias and investment decisions.
H12 Financial literacy mediates the relationship between representativeness bias and investment decisions

Anchoring bias has an important influence on investment decisions. Investor anchoring bias affects investment decisions differently, due to each individual's level of financial literacy. (Iram et al., 2023) show that financial literacy can be an intermediary between investment decisions and the anchoring bias of women entrepreneurs. According to (Kasoga, 2021) low financial literacy can increase the impact of anchoring bias on women's investment decisions.
H13 Financial literacy mediates the relationship between anchoring bias and investment decisions

Availability bias describes an individual's condition in making investment decisions based on previously available information. (Iram et al., 2023) explained that various information and communication capabilities can encourage investors to obtain the latest information, thus that the investment decisions taken are rational. (Kasoga, 2021) justifies that the lack of financial literacy makes investors consider information from friends and relatives, as a reliable reference in investment decision making, thereby increasing availability bias.
H14 Financial literacy mediates the relationship between availability bias and investment decisions

Risk avoidance is a condition in which an investor avoids risk in investment decisions. Risk Avoidance can be minimized with adequate financial literacy, this happens because Risk Avoidance allows investors to miss investments with high returns. High financial literacy motivates investors to invest by accepting risk, because they believe that in every decision there will be risks to bear.
H15 Financial literacy mediates the relationship between risk avoidance and investment decisions

Financial Literacy and Investment Decisions

Financial literacy is a benchmark for individual understanding of financial concepts, which results in the ability to manage finances thus that they can make rational decisions evenly in the short and long term. Individuals with adequate financial literacy, have an understanding of the financial sector, risks that may occur in the future, and have the skills and abilities of funds owned (Novianggie & Asandimitra, 2019) With financial literacy encourages rational investment decision making, thus as to improve business efficiency (Tuffour et al., 2022) As well as in increasing financial literacy can encourage influence on investors' investment decisions (Iram et al., 2023) In addition, knowledgeable investors are more accurate in making investment decisions (Agustin & Lysion, 2021)
H16 Financial literacy impacts investment decisions

The Conceptual Framework

Based on the following literature, the conceptual framework of this study is illustrated in Figure 1.

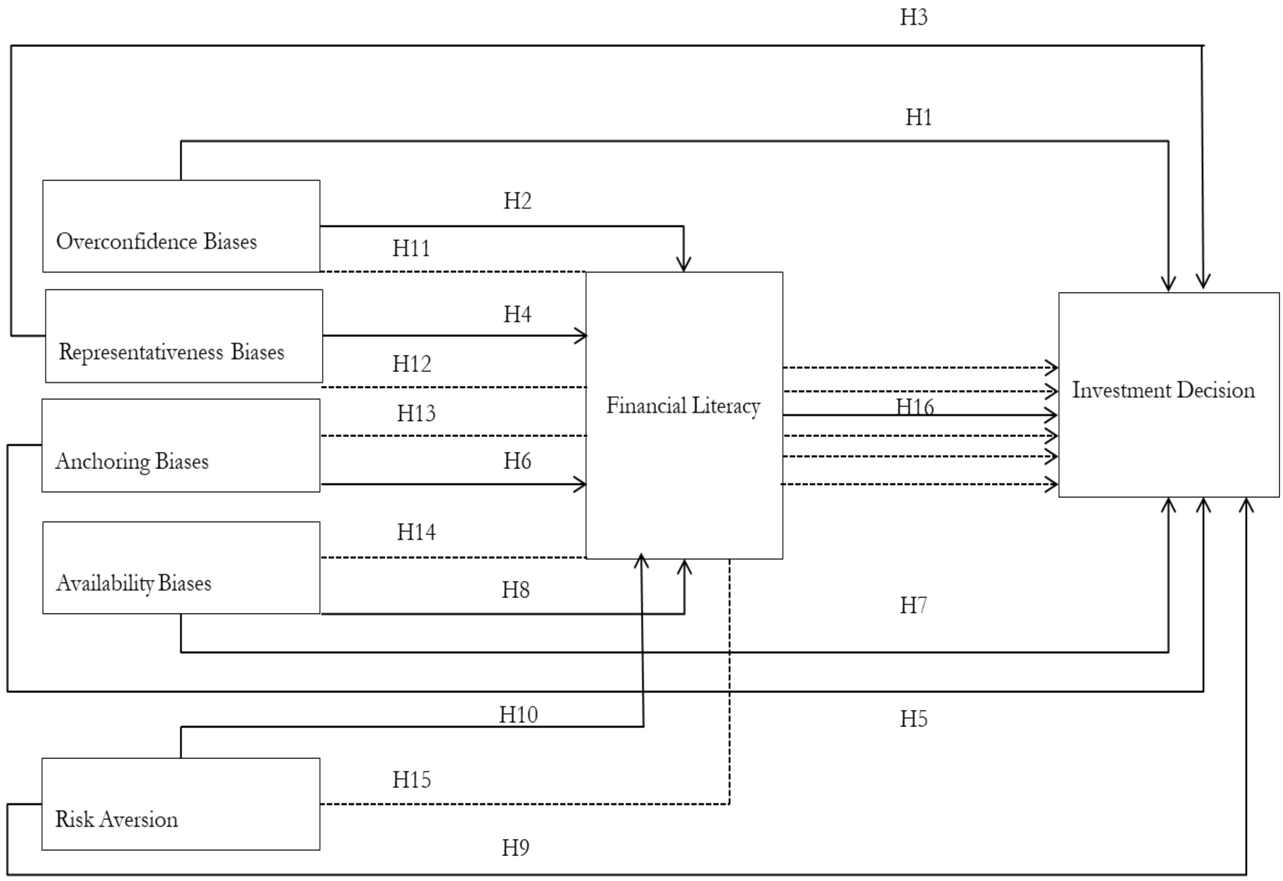

Figure 1. Conceptual Framework

RESEARCH METHODS

Research Design and Data Collection Methods

This study was conducted using a quantitative method approach to explain the influence of behavioral biases, and risk avoidance on investment decisions through financial literacy. The object of this analysis is women entrepreneurs in Bengkulu Province. And in this study using a sample collection technique namely snowball sampling, because with the use of this technique, it is expected that research will be easier to do and complete. This paper used primary data obtained from questionnaires distributed directly or through other online media (Google form). The measurements in these questioners used a five-point Likert scale. The sample that will be used is as many as 100 respondents, this is based on (Sugiyono, 2017) states that if the research will conduct analysis with multivariate (multiple correlation or regression), then the number of sample is at least 10 times the number of variables studied. As well as in (Chin, 2010) the sample size is between 100 and 200 respondents to improve accuracy. The demographic characteristics of women entrepreneurs, including business type, business time and in the next section, questionnaires were on overconfidence bias, representativeness bias, anchoring bias, availability bias, risk avoidance, financial literacy and investment decisions.

Measurement and Analysis

Data processing in this study uses the help of SmartPLS computer program version 4.0 or Partial Least Square; this is due to the complicated research model and small sample size. Data analysis of this research uses structural equation modeling based on partial least square (SEM PLS) by analyzing measurement models (outer model), structure models (inner model) and finally testing hypotheses using bootstrapping analysis.

RESULTS AND DISCUSSIONS

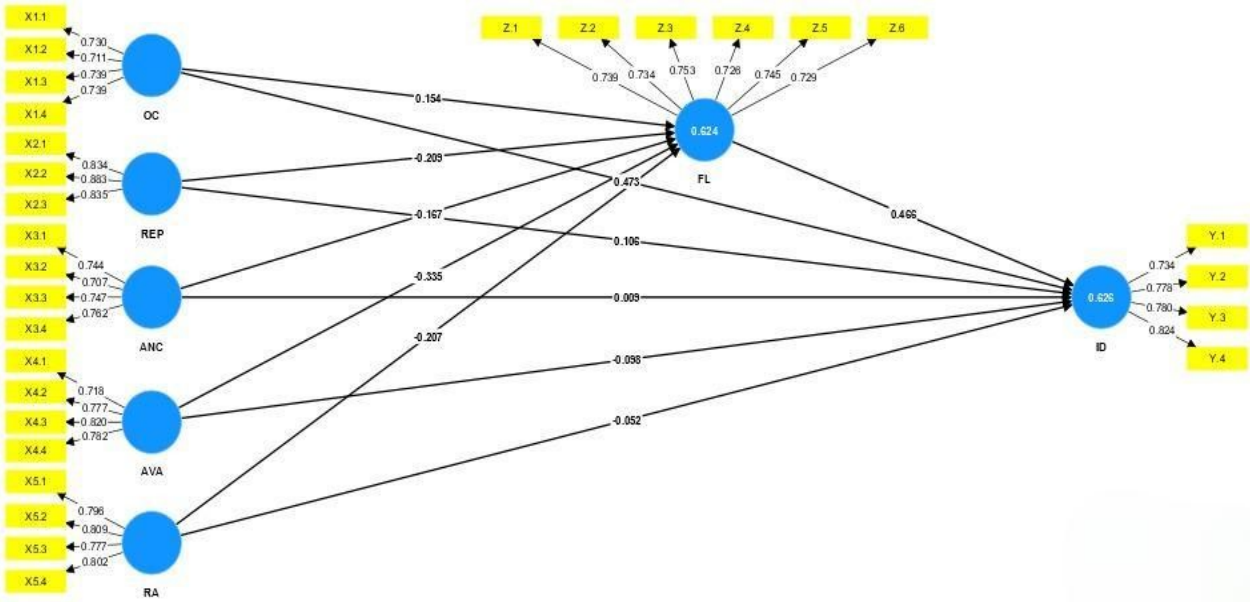

Figure 2. Structural Equation Modeling (Algorithm PLS)
Source: Processed data 2023

Convergent Validity Test

The convergent validity test is used to ensure that statements on latent variables can be understood by respondents according to the intent of the researcher. This is done by collating the score contained in each item with a construct score that will produce a loading factor value. The loading score value is good if it has a correlation of >0,70 (Chin & Dibbern, 2010), based on data processing using SmartPLS 4.0 produces an outer loading value exceeding 0,70. Therefore, the instruments used in the study have met the convergent or valid validity test.

Discriminant Validity Test

The discriminant validity test is used to determine whether or not it is valid among variables. The discriminant validity test can be performed with the value of Heterotrait Monotrait Ratio. Based on the Heterotrait Monotrait Ratio analysis shows that all values on the indicator <0.90 (Hair et al., 2018), it can be said that the results of the Heterotrait Monotrait Ratio analysis have met the requirements. Discriminant validity test results are as follows:

Table 1. Correlation of latent variables matrix

	ANC	AVA	FL	ID	OC	RA	REP
ANC	1						
AVA	0.589	1					
FL	0.716	0.806	1				
ID	0.473	0.558	0.807	1			
OC	0.284	0.249	0.470	0.842	1		
RA	0.658	0.598	0.709	0.539	0.328	1	
REP	0.709	0.724	0.771	0.503	0.418	0.564	1

Source: Processed data 2023

Reliability Test

Reliability tests are used to measure the extent to which variables are consistent with what they want to measure, if there are several measurements made, then all measurements will be consistent in value (Ngwabebhoh et al., 2020). In measuring reliability can use composite reliability and cronbach alpha. A reliability test is declared reliable if the composite reliability and cronbach alpha values are >0.70 (Chin & Dibbern, 2010).

Table 2. The Composite Reliability

	Cronbach's alpha	Composite reliability (rho_c)
ANC	0.729	0.829
AVA	0.778	0.857
FL	0.833	0.878
ID	0.785	0.861
OC	0.708	0.820
RA	0.808	0.874
REP	0.811	0.887

Source: Processed data 2023

On table 2, it is known that the value of cronbach alpha and composite reliability has met requirements, which is >0.70. Thus, that the results of data processing in this study are considered reliable and consistent.

Determinant Coefficient Test (R^2)

The determinant coefficient test (R^2) is used to gauge the degree of variation in change among the dependent variable and its independent variable. The closer the R-Square value is to 1, more than better. By (Chin et al., 1998) R-Square with a value of 0.67 determinant coefficient value is said to be strong, 0.33 value of determinant coefficient value is said to be moderate, and 0.19 determinant coefficient value is said to be weak. Here is the output of SmartPLS in assessing the inner model through R-Square:

Table 3. Inner Model (R-Square)

Variable	R-Square adjusted
Financial Literacy	0.604
Investment Decisions	0.602

Source: Processed data 2023

Based on table 3 R-Square values show that the variables of overconfidence biases, representativeness biases, anchoring biases, availability biases and risk avoidance affect investment decisions by 60.2% can be categorized as moderate, and the remaining 39.8% is explaining by other variables outside the research model. As well as financial literacy can mediate the connection among variables of overconfident biases, representativeness biases, anchoring biases, availability biases and risk avoidance on investment decisions by 60.4% and the left over 39.6% mediated by other variables outside the study model.

Apart from using R-Square, goodness of fit testing can also use Q-Square values. If the Q-Square test result is more than zero, then the model is declared feasible and has relevant predictive value.

$Q^2 = 1 – [(1-R^2)\ (1-R^2)]$

$Q^2 = 1 – [(1-0,604)\ (1-0,602)]$

$Q^2 = 1 – [(0,396)\ (0,398)]$

$Q^2 = 1 – 0,158$

$Q^2 = 0,842$ or 84,2 percent

The results of the predictive-relevance value calculation showed a value of 0,842, this means that 84,2 percent of the studies can explain variations in investment decision variables. With these results, thus, be decided that the research model has good predictive-relevance value.

Hypothesis testing

Hypothesis testing can be done using bootstrapping analysis by considering t-statistic values and p values. A research hypothesis is accepted if the t-statistic value >1.96 and the p value <0.05. The output of bootstrapping analysis gives the following results:

Table 4. Test the Direct Impact Hypothesis

	Original sample (O)	T Statistics (|O/STDEV|)	P Values
ANC -> FL	-0.167	1.594	0.114
ANC -> ID	0.009	0.121	0.904
AVA -> FL	-0.335	4.013	0.000
AVA -> ID	-0.098	1.373	0.173
FL -> ID	0.466	5.090	0.000
OC -> FL	0.154	2.224	0.028
OC -> ID	0.473	7.640	0.000
RA -> FL	-0.207	3.071	0.003
RA -> ID	-0.052	0.583	0.561
REP -> FL	-0.209	2.469	0.015
REP -> ID	0.106	1.331	0.186

Source: Processed data 2023

Table 4 shows that overconfidence biases have an influence on investment decisions and financial literacy of women entrepreneurs, thus accepted H1 and H2. An investor who has excessive trust will affect his investment decisions. Someone with excessive overconfident biases tends to ignore useful information, because they consider themselves to have better abilities than others. In addition, individuals with a high self-confidence bias tend to be more courageous in making decisions, causing irrationality. And the bias of overconfidence affects the financial literacy of the individual. It is supported by (Iram et al., 2023; Qamar & Lodhi, 2023) positing that overconfidence biases has an effect on investment decisions and financial literacy of women entrepreneurs.

Furthermore, it is known that the bias of representativeness biases hasn't affect on investment decisions, thus H3 is rejected. It's supported study (Dias et al., 2019; Iram et al., 2023) that representativeness biases hasn't effect on investment decisions among women entrepreneurs. It is also known that representativeness biases have an affected on financial literacy, H4 is accepted. That is the bias of representation in women entrepreneurs does not make maximum use of information that is likely to be useful in decision making, because it only uses some information as representation or based on experience.

On these results, it is also known that the anchoring biases has no influence on the financial literacy and investment decisions of women entrepreneurs, thus rejecting H5 and H6. Anchoring bias does not affect decisions investment, this is allegedly because investors have done careful planning about investment decisions to be taken. It's supported by (Iram et al., 2023; Iram, Qazi, et al., 2021), and inversely proportional to research (Puspawati & Yohanda, 2022).

In addition, availability bias is also known to have an impact on financial literacy. Thus, that H8 is accepted, this means that the availability bias in women entrepreneurs can affect their financial literacy, it is suspected because someone with availability bias only considers available information. The results are reinforced by (Iram, Qazi, et al., 2021). Furthermore, it was discovered that availability bias had no affect on investment decisions, thus H7 was rejected. This is suspected because female entrepreneurs have in-depth knowledge of investment decisions to be taken, where based on questionnaires women entrepreneurs will look for relevant information if they lack information. The supported by (Hariono et al., 2023; Suci Sudani & Putri Pertiwi, 2022; Wendy, 2021) positing that availability bias has no impact on investment decisions.

Furthermore, it is known that risk avoidance has no impact on investment decisions. Thus, that H9 was rejected, this is allegedly because women entrepreneurs have awareness that every investment decision, they make has risks. The results are supported by (Saraswati & Rusmanto, 2022). In addition, it is also known that risk avoidance has an impact on financial literacy, thus H10 is accepted. This is thought to be because someone with a low level of literacy does not understand about investment decisions thus, they tend to avoid risk. An individual's level of financial literacy can influence risk perception and management related to investment decisions. The results of this findings are in buttressed with (Riepe et al., 2022).

Finally, financial literacy has an impact on investment decisions, therefore that H16 is accepted. This means that women entrepreneurs who have high financial literacy will be able to make investment decisions wisely and rationally. Individual who has great financial literacy tends to be more careful and wise in making investment decisions (Siregar et al., 2022). The results of this findings supported by (Iram et al., 2023; Iram, Qazi, et al., 2021).

Table 5. Mediation Analysis

	Original sample (O)	T Statistics (|O/STDEV|)	P Values
AVA -> FL -> ID	-0.156	3.176	0.002
RA -> FL -> ID	-0.096	2.558	0.012
REP -> FL -> ID	-0.097	2.182	0.031
ANC -> FL -> ID	-0.078	1.443	0.152
OC -> FL -> ID	0.072	2.089	0.039

Source: Processed data 2023

On table 5, the results of the study can be concluded that financial literacy influence is able to mediate availability bias towards investment decisions indirectly, thus accepted H14. Financial literacy can help individuals understand risk and return on investment better. With a better understanding of the risk and return framework, one may be better able to assess relevant information rather than relying solely on the availability of easily accessible information. Thus, it is vulnerable to the misuse of information in investment decisions. Therefore, an investor must have adequate financial literacy to minimize bias when making investment decisions (Sartika & Humairo, 2021). The result of findings supported by (Iram et al., 2023; Iram, Qazi, et al., 2021).

In addition, it is also known that financial literacy can influence risk avoidance to investment decisions indirectly. Thus, that H15 is accepted, it can be interpreted that financial literacy can affect risk avoidance indirectly to investment decisions. With high financial literacy will minimize risk avoidance made by an investor because someone understands that in decisions there will always be risks that are borne.

Based on table 5, financial literacy is able to mediate the interaction among representativeness biases and investment decisions, thus H12 is accepted. This means that financial literacy can influence representativeness bias towards investment decisions indirectly. This can happen because someone with high financial literacy will be able to use information optimally, thus as to minimize representativeness bias, and will indirectly affect more accurate investment decisions.

It is also known that financial literacy hasn't been able to mediate the relationship between anchoring bias and indirect investment decisions, thus H13 is rejected. The results of this study findings are supported by (Iram, Qazi, et al., 2021) which suggests that financial literacy has not been able to mediate the relationship among anchoring bias towards indirect investment decisions.

Finally, it is known that financial literacy is able to mediate the interaction among the biases of overconfidence in investment decisions indirectly, thus that H11 is accepted. Based on the test results, it can be interpreted that financial literacy can affect the bias of overconfidence in decisions indirectly, this is because someone with a high level of self-confidence allows more courage to make decisions and if accompanied by high financial literacy, the investment decisions taken will be wiser, compared to someone who has low financial literacy. The result of study support by (Iram, Qazi, et al., 2021).

CONCLUSION

Based on the results of analyses that has been conducted on behavioral bias and risk avoidance to investment decisions intermediated by financial literacy in Bengkulu Province, it can be concluded that behavioral biases such as overconfident bias and financial literacy has an affect rational investment decision. However, anchoring bias, representativeness bias, and availability bias and risk avoidance cannot impact investment decisions. And availability bias, overconfidence bias, representativeness bias and risk avoidance can affect financial literacy, but anchoring bias cannot affect financial literacy. As well as financial literacy can mediate the interaction among overconfidence biases, representativeness bias, availability bias and risk avoidance can impact investment decisions indirectly. However, financial literacy cannot mediate the anchoring bias towards investment decisions indirectly.

In practice, the results of this research are able to assist the government in determining policies with the aim of reducing poverty, this can be done by increasing the entrepreneurial knowledge of women entrepreneurs. This can be realized by education, as well as training for women in managing their finances. Thus, this helps women understand and minimize the bias that will occur when they make investment decisions, thus as to minimize risk and maximize the benefits they get. Theoretically, the results of this study are expected to contribute to the development of heuristic behavioral theory. A theory that explains the factors that cause a person to behave biasedly in making investment decisions

The results of the research that has been conducted cannot be generalized optimally, this is because the scope of the population in this study is only focused on women entrepreneurs in Bengkulu Province. Thus, for future research, it is recommended to expand the scope of research, because there are differences in women's behavior influenced by culture and ethnicity to maximize generalization. Furthermore, the author also suggests for future researchers to conduct comparative studies between genders and make compareson about women entrepreneurs in developing and developed countries.

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