
Influence of Planning Fallacy and Herd Behaviors bias on Investors Decision Making Process in North Eastern Nigeria

Mohammed Alhaji Audu, PhD*
Idrisa Umar Manga**

Department of Banking and Finance, Faculty of Management Sciences, University of Maiduguri, Borno State, Nigeria

*(08033799254, maaudu3@gmail.com)

***(08031322226, idrisaumarmanga0164@gmail.com)

Abstract

The objective of this study is to examine the influence of planning fallacy and herd behaviors bias on investors' decision-making process in north eastern Nigeria. Structured questionnaire was used to collect primary data from investors in Nigeria. A sample size of 384 respondents was used. Multiple regressions were used with the aid of SPSS version 25 for data analysis. The results from the regression analysis show that the influence of the planning fallacy on investors' decision-making process is significant at 0.002 level of significant and herd behaviors bias is significant at 0.000 level of significant. Therefore, this study concludes that planning fallacy and herd behaviours bias has significant influence on investors' decision-making process in north eastern Nigeria, this is because investors are confidence of trading more in the market because their past experiences, companies' performance, following other successful investors and believe that for sure there will be positive outcome in the near future. Therefore, this implied that to be successful in trading in the financial market, investors should minimize the negative consequences of this bias and maximizing its beneficial aspects. The recommend that the solution to dealing with individual-level biases may lie in altering group decision-making processes, investors need to ask for and heed outsiders' advice. Investors need to take action to reduce any bad effects resulting from their prejudices even if they do not control their biases.

Key words: *Planning fallacy bias, Investors decision making process, Prospect theory*

1.1 Introduction

Making decisions is a multifaceted process that can be summed up as selecting a certain course of action from a range of options after carefully weighing each one. Making an investment decision is one of the most difficult tasks for investors due to differences in their profile, including socioeconomic, cultural, and religious background (Ahmed & Noreen, 2021). Both individuals and institutions invest with the goal of earning a higher return, acquiring an asset in the future, and building up sufficient retirement savings. When making investing selections, individual investors often consider their requirements, goals, and purposes. The mindset of investors is primarily shaped by a number of variables, including dividends, get-rich-quick schemes, investor success stories, investor education initiatives, firsthand investment experience, and market performance. Fama's (1970), state that efficient market hypothesis, there is a perfect market, investors make rational judgments, and information accurately reflects the values of assets. The fundamental tenets of rationality are that investors behave independently based on comprehensive and relevant market knowledge and those individuals and enterprises maximize profits and

utility, investors should be self-aware and act in their own best interests when making decisions (Fama 1970).

A number of behavioral economists, including Kahneman and Tversky (1979), Dash and Mahakud (2013), and Daniel (1998), have promoted the idea that people don't always make the best judgments. In fact, a lot of investors adopt behaviorally based portfolio methods, which aid in creating a risk-return profile. Even while information-driven rational investors adjust their views accordingly, they frequently encounter behavior-regulated beliefs. Integrating the irrational aspect of decision-making is the goal of behavioral finance, not refuting the theories of conventional finance. The goal is to combine emotion-based psychology with human behavior to create a human behavior-based approach to decision-making that is impacted by behavioral bias, which causes an individual to make less-than-ideal decisions that deviate from the framework for rational decision-making. Investment decisions are heavily influenced by emotions, which can also lead investors to make irrational plans and projections. Planning fallacies occur frequently in the lives of investors, governments, and corporations (Kahneman 2000). Investors' irrationality is the origin of the planning error; individual investor planning errors are frequent because investors frequently overestimate their present abilities while neglecting prior setbacks (Rebelo & Marques, 2022). The fundamental idea behind the planning fallacy is that investors tend to view the future as more promising than the past, which leads them to disregard realistically bad lessons learned from the past in favor of hopeful projections for the future (Kahneman, 2011). Investors still make many judgments that are greatly impacted by their worldview even though they have access to historical data and planning techniques (Rebelo & Marques, 2022). Investors tend to overestimate the advantages and underestimate the costs of risky investments by neglecting the distributional information that could lead to errors, miscalculations and choose options for investment that are unlikely to be completed on schedule, under budget, or ever yield the anticipated returns (Love et al., 2019).

Nayak and Kumar (2021), state that herd behavior is a behavioral bias in which investors are more prone to mimic the actions and conclusions of others than to establish their own ideas. This can also have an impact on investors' decision-making processes. When making financial decisions, investors often follow the herd, believing that the collective wisdom supersedes their own judgment. The term "herding effect" refers to the conduct of blindly following the actions of other investors. Herding is the term for the actions of investors in the capital market where a big number of people respond simultaneously and uniformly based on the choices or actions of a small number of people. Investors that exhibit herd mentality typically lack confidence and self-assurance. They also take market signals into account and think that following the advice of more experienced investors will help them make better investing selections; investors choose to follow the investment decisions of other investors without considering their own knowledge.

It occurs when an investor believes that the leaders or the crowd are wise even when they are unaware of the values of the assets they are buying. The main reason behind herding is ignorance of a desired investment opportunity. The general public's perception of an investment opportunity's viability is shaped by the thoughts of other investors in that same field. Therefore, depending on information they learn about an investment portfolio from other investors, investors who lack in-depth knowledge about the risk and returns and who have only a cursory understanding of it likely to develop biases either in favor of or against investing in that portfolio (Shiller, 2019). Financial inclusion is a critical tool for both economic growth and the reduction of poverty because it gives access to the hundreds of millions of investors worldwide, facilitating the creation of a sizable pool of

savings, investible funds, investments, and, ultimately, the creation of global wealth. Additionally, by providing investors with well-matched financial services, financial inclusion promotes massive capital growth, credit creation, and wealthy investment.

Financial inclusion in the Northeastern region of Nigeria is hampered by a number of issues, such as low awareness of available financial services, a lack of reliable and basic information about investment opportunities, rising financial illiteracy, high transaction costs, low interest in banking products and services in some northern Nigerian regions, a lack of bank branch penetration, banks' reluctance to continue financial inclusion programs because of their high costs, Boko Haram's rioting activities, theft, long-standing communal conflicts that have destroyed public property have discouraged investors from investing in the area and caused them to make irrational decisions about their plans, investments, and copying the successful investors in Northeastern Nigeria (Samuel, 2023). To help investors identify financial behaviors that support effective resource management and high returns on investments, financial literacy is crucial. It enables investors to comprehend key financial concepts like interest rates, risks, investment returns, inflation, and diversification. Lack of information about financial literature has caused investors to fail in their planning, and the majority of investors follow other investors when making investments. Financial literacy improves the ability of individuals investors and firms to study and improved financial planning (Samuel, 2023). As a result, there is much to learn about financial knowledge such as saving, investing, and money management since are responsible for their own financial management (Lusardi & Mitchell, 2014). In the financial markets, the impact of behavioral biases on investment decisions has been extensively studied. However, not much study has particularly looked at how behavioral biases, like herd mentalities and the planning fallacy bias, affect investment decisions in northeastern Nigeria. Therefore, the purpose of this study is to add to the body of knowledge on behavioral biases in financial decision-making by examining the influence of planning fallacy bias and herd behaviors bias on investment decisions in the in north eastern Nigerian. The majorities of Investors have a tendency to overestimate the likelihood of positive events and underestimate the likelihood of negative ones, which causes planning fallacy and also lead to herding effect where by some investors following other investor's action with no due meticulousness, these tendencies are the driving forces behind the study. Most investors believe that the future will be better than the past; hence, realistically dismal lessons from the past are forgotten in favor of optimistic future goals. The study seeks to answer the questions of how does planning fallacy bias influences investors decision making process in north eastern Nigeria and what is the effect of herd behaviors bias influences investors decision making process in north eastern Nigeria. Therefore, this study hypothesizes that planning fallacy bias has no significant influence on investors decision making in north eastern Nigeria and that herd behaviors bias has no significant influences on investors decision making process in north eastern Nigeria. A finding from this study is thus important for the development of the investors on how it equip with the right skills and knowledge to be able to make a rational investment decision in future in order to gain higher return on investment. Given the significance role investors play in the financial market, policymakers may find it essential to recognize the planning error bias as a factor that affects investors' actions. Policymakers could create strategies to promote a good investment environment for individual investors.

Policymakers are mainly interested in exploring the determinants of the stock market, and how the stock market reflects the changes in domestic and international macroeconomic variables of the economy. Thus, the study provides them with a background to determine the variables, which are expected to influence the stock market. The study would be beneficial to the financial advisors who guide their clients regarding

various financial solutions including investment in the stock market. The financial advisors generally assess the risk profile of their clients but ignore the psychological, social and personality factors that govern their financial decisions, therefore, this study would help financial advisors to assess their clients from a psychological point of view. Investors may be able to make informed decisions based on behavioral factors like planning fallacy bias, herd behavior, market factors, awareness factors and investors' sentiment. The study covers a period of two years (2022–2023). This is because most of the investors have fail and lost huge amount of money due to wrong planning and following other investors for investment decision.

2.1 Conceptual Review

2.1.1 Investors Decision Making Process

Investors make decisions voluntarily or in response to issues that fundamentally affect the existence and nature of an investment. Bennet et al (2012) state that a qualitative descriptive approach forms the foundation of the investment decision-making process. This implies that investors search for various investment options prior to making an investment. They move from opportunity discovery and evaluation to opportunity exploitation after they are confident that an opportunity will be profitable and will give a higher return on investment. Investment decision-making is a process of choosing a particular alternative from a number of alternatives," claim Ahmed and Noreen (2021).

2.1.2 Investors' Sentiment

One of the key components of behavioral finance is investor sentiment. It can be defined as an investor's favorable inclinations toward particular equities that enable them to profit from price fluctuations in the securities market. It might cover stock market forecast, investor engagement, and optimism. Three elements of investor sentiment are probably investor optimism, investor involvement, and investor expectation for the stock market. According to Baker and Wurgler (2006), investor sentiment refers to the views and assumptions that investors have about future cash flows or discounts that are not supported by the primary facts. The attitudes and opinions of investors on investing are referred to as investor sentiment, and they primarily impact future cash flow and investment risk. It may result in price fluctuations for securities on the market as well as market bubbles. Investor sentiment can be impacted by investment risk, returns, and emotions.

2.1.3 Planning fallacy Bias

Fallacy of Planning Bias looks at how people view a planned endeavor and demonstrates how they usually focus solely on their own capabilities. The planning fallacy bias mostly affects investors because of their propensity to look forward and overlook relevant past experiences. Because of this, people frequently blame external factors outside their control for unfavorable results while attributing favorable outcomes to their own skills and intentions (Abatecola et al., 2021). Investors who commit the planning fallacy either overestimate how much work they can accomplish in a particular period of time or underestimate how long it will take to finish their task. Overconfidence in estimates of the amount of work that can be able finished in a given amount of time is also linked to planning fallacy (Isabelle, 2021).

2.1.4 Herd Behaviours Bias

Herding is described by Kengatharan and Kengatharan (2014) as the tendency of investors to imitate the moves made by other investors in the market. They went on to say that experts are more concerned about investors who rely on group information than on information that has been thoroughly researched and collected privately. Because low-

level organizations may wish to emulate high-growth companies, some investors may only favor herding if this bias is able to extract reliable and important information. It may also be used to assess the performance of various financial institutions in comparison to their peers. When people mimic what others do when investing in the market, this is known as herding (Banerjee 1992). Herding in financial markets, according to Hirshleifer and David (2003), is the process of mutual imitation leading to a convergence of actions. This is the most typical error that occurs when investors blindly follow the judgments made by the majority.

2.2 Empirical Review and Hypotheses Development

2.2.1 Planning Fallacy Bias and Investors Decision Making Process

Fadhilla et al. (2021), conducted an investigation into Kopi Bon's decision-making process in Indonesia. Focus groups and group interviews, along with other data collection methods that included some social interaction to facilitate the observer's experience, were all employed as components of the qualitative research methodology, which aims to establish the study's empirical validity and integrate perspective to broaden the researcher's perspective. Six to ten participants in addition to a trained moderator who shares the characteristics, hobbies, or demographic that the observer is interested in examining took part in the activity. The study examines the possible impacts of internal business opinion on results like revenue from sales and marketing strategy using content analysis. According to the study, the planning fallacy has an impact on the kopi bon decision-making process, which in turn has an impact on the operational decisions made by the organization regarding the caliber of its goods and services as well as its reputation.

H01: Planning Fallacy Bias has no Significance influence on Investors Decision Making Process in Nigeria

2.2.2 Herd Behaviours Bias and Investors Decision Making Process

Haritha (2020) investigates how investor sentiment affects stock market volatility and investment decisions in Karnataka Surathkal Mangaluru. The research study employed a combination of descriptive and exploratory methodologies to offer a thorough analysis. Individual investors completed a self-administered questionnaire survey as the main method of data collection. Secondary data was gathered from the websites of SEBI, NSE, and RBI. Principal component analysis, partial least squares approach, Pearson's correlation, and the GARCH model are used to analyze data using SPSS, PLS, and Eviews. The study's findings suggest that investment decision-making is influenced by herding behavior, market considerations, and awareness factors (media, internet, social interaction, and advocate referral) on investor sentiment. The study's conclusions support the notion that investor mood has a significant impact on investors' decision-making. The outcome demonstrates that investor sentiment significantly affects people's decision-making when it comes to investing.

Salem (2019) investigated the behavior of Arab women investors, finding that it primarily influences risk tolerance, herding behavior, investment confidence, and investment literacy levels. The study's main findings are that investors are investing less in the stock market and that there is a greater tendency toward herding, as well as a decrease in confidence, investment literacy, and financial risk tolerance. Individual thinking and herding are comparable. It says that if an experienced investor buys any stock, other investors will presumably make the same kind of purchase. The impact of herding behavior on stock returns on the Nigerian Stock Exchange was examined by Adekoya and Olaomi (2021). The study found that retail investors exhibited a herding behavior, particularly during periods of extreme market volatility. The results indicated that

investors who follow the herd might not get the best returns on their investments and that herd mentality has a negative effect on stock returns.

H02: Herd Behaviours Bias has no Significance influence on Investors Decision Making Process in Nigeria

2.2.3 Researcher Framework

Independent Variables

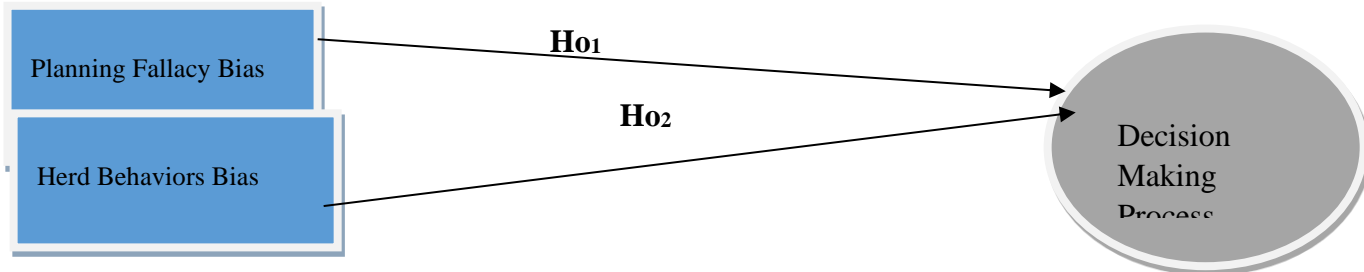


Figure 1: Influence of Planning Fallacy and Herd Behaviors Bias on Decision Making Process

2.3. Prospect and Herd Behaviors Theory

Prospect theory postulates how a specific person or set of people would typically act in an unpredictable environment. Behavioral finance is credited to the psychologists Kahneman and Tversky (1979), who put up the concept of prospect theory for the analysis of decision-making under risk. They show how people weigh and make decisions about uncertainties. Prospect theory states that people are comparing potential gains or losses to a reference point, wherein investors experience greater emotional distress from a loss than from an equivalent gain. According to Tversky's 1979 theory, investors have an illogical reluctance to spend less on profits than on losses, investors tend to bet less when they are winning than when they are losing. It is a known fact that investors are hesitant to take chances with their money and that investors prefer to be certain this has led to planning fallacy. This bias factor of planning fallacy has a major influence on investors' decision-making and option selection. The prospect theory backs up this study since it explains in great detail how certain investors act irrationally and make decisions in the face of uncertainty. Herding behavior theory proposed by Wilfred (1919) is the behavior of a person offers up his decision in favor of the group i.e. a large number of investors mimic the decisions made by other investors in the market with respect to investment. Experimental psychological science provides evidence that the majority people would follow decisions made by their group cluster whether or not they totally approve those decisions. In financial markets, investors are aforesaid to herd after they suppress their personal decisions in favor of the collective view of the market even when they do not suppose that this view is true (Christie and Huang, 2006). The existence of herding behavior has become more and more fascinating particularly within the aftermath of several financial crises as a result of the widespread of herding among market participants Chang et al (2013).

3. Research Methodology

This study adopted descriptive and survey research design, investors in north eastern Nigeria were the sources of data. The populations for this study are infinite since the researcher cannot lay it hands on the actual total number of investors, therefore, Krejcie and Morgan sampling techniques table was used, and from the table it indicates that a population of one million and above, the sample size is 384, as such 384 is the sample size of this study. Purposive and convenience sampling techniques was study for this study. Data for this study was obtained through structured questionnaire which were distributed

to the investors in six north eastern state with the aid of research assistant in each state. 5 – point Likert scale (Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree) was used to measure the responses collected. Data gathered was analyzed using both descriptive statistics through frequency distribution to determine mean, median and standard deviation and inferential statistics of multiple regressions was used to test the formulated hypotheses with the aid of SPSS Version 25. Independent variable = Planning Fallacy Bias (PFB), Herd behaviours Bias (HBB), Dependent variable =Investors decision making process (IDMP), $Y = \alpha + \beta X_1 + \beta X_2 + \varepsilon$, Where; Y = dependent variable (IDMP), α = intercept i.e the coefficient of independent variable to be estimated, β = slope, i.e constant, X = is the independent variable (Planning fallacy and Herd behaviours Bias) and ε = is the error term. Moreover, to test the effect of independent variable on dependent variable, the models for this study become;

$$IDMP = \alpha + \beta PFB + \beta HBB + \varepsilon \text{-----}$$

----- (1)

4.1 Descriptive Statistics

Table 4.1 Investors Decision-Making Process

| S/N | Statement | SA | AG | UD | DA | SD | TOTAL |
|-----|--|----------|----------|--------|---------|--------|-----------|
| 1. | I take my investment decision based on current market performance that will yield high returns | 111(37%) | 121(39%) | 10(3%) | 38(13%) | 24(8%) | 304(100%) |
| 2. | I trust my own judgment and express my view firmly in decision making process | 110(36%) | 122(40%) | 8(3%) | 40(13%) | 24(8%) | 304(100%) |
| 3. | I will increase my level of participation in the stock market based on my current expectations for higher returns | 106(35%) | 119(39%) | 11(4%) | 40(13%) | 28(9%) | 304(100%) |
| 4. | I beliefs that the stock market returns have a direct impact on my investment decisions | 109(36%) | 135(44%) | 9(3%) | 30(10%) | 21(7%) | 304(100%) |
| 5. | I find myself more confident in my ability when making investment decision to predict short-term stock market returns than the other investors | 106(35%) | 140(46%) | 7(2%) | 31(10%) | 20(7%) | 304(100%) |

Source: Field Survey, (2023)

Table 4.1 revealed that 111(37%) of the respondents strongly agreed that they take their investment decision based on current market performance that will yield high returns, 121(39%) of the respondents agreed that they take their investment decision based on current market performance that will yield high returns, 10(3%) of the respondents are undecided as to whether or not they take their investment decision based on current market performance that will yield high returns, 38(13%) of the respondents disagreed that they take their investment decision based on current market performance that will yield high returns, 24(8%) of the respondents strongly disagreed that they take their investment decision based on current market performance that will yield high returns. The inference from the table revealed that majority of the respondents agreed that they take their investment decision based on current market performance that will yield high returns.

It further revealed that 110(36%) of the respondents strongly agreed that they trust their own judgment and express their view firmly in decision making process, 122(40%) of the respondents agreed that they trust their own judgment and express their view firmly in decision making process, 8(3%) of the respondents are undecided as to whether or not they trust their own judgment and express their view firmly in decision making process, 40(13%) of the respondents disagreed they trust their own judgment and express their view firmly in decision making process, 24(8%) of the respondents strongly disagreed that they trust their own judgment and express their view firmly in decision making process. The inference from the table revealed that majority of the respondents agreed that they trust their own judgment and express their view firmly in decision making process.

It also revealed that 106(35%) of the respondents strongly agreed that they will increase their level of participation in the stock market based on their current expectations for higher returns 119(39%) of the respondents agreed that they will increase their level of participation in the stock market based on their current expectations for higher returns, 11(4%) of the respondents are undecided as to whether or not they will increase their level of participation in the stock market based on their current expectations for higher returns, 40(13%) of the respondents disagreed that they will increase their level of participation in the stock market based on their current expectations for higher returns, 28(9%) of the respondents strongly disagreed that they will increase their level of participation in the stock market based on their current expectations for higher returns. The inference from the table revealed that majority of the respondents agreed that they will increase their level of participation in the stock market based on their current expectations for higher returns. It further revealed that 109(36%) of the respondents strongly agreed that they believe that the stock market returns have a direct impact on their investment decisions, 135(44%) of the respondents agreed that they believe that the stock market returns have a direct impact on their investment decisions, 9(3%) of the respondents are undecided as to whether or not they believe that the stock market returns have a direct impact on their investment decisions, 30(10%) of the respondents disagreed that they believe that the stock market returns have a direct impact on their investment decisions, 21(7%) of the respondents strongly disagreed that they believe that the stock market returns have a direct impact on their investment decisions. The inference from the table revealed that majority of the respondents agreed that they believe that the stock market returns have a direct impact on their investment decisions. It further revealed that 106(35%) of the respondents strongly agreed that they find their self more confident in their ability when making investment decision to predict short-term stock market returns than other investors, 140(46%) of the respondents agreed that they find their self more confident in their ability when making investment decision to predict short-term stock market returns than other investors, 7(2%) of the respondents are undecided as to whether or not they find their self more confident in their ability when making investment decision to predict short-term stock market returns than other investors, 31(10%) of the respondents disagreed that they find their self more confident in their ability when making investment decision to predict short-term stock market returns than other investors, 20(7%) of the respondents strongly disagreed that they find their self more confident in their ability when making investment decision to predict short-term stock market returns than other investors. The inference from the table revealed that majority of the respondents agreed that they find their self more confident in their ability when making investment decision to predict short-term stock market returns than other investors.

Table 4.2 Influence of planning fallacy bias and Investors decision making process

| S/N | Statement | SA | AG | UD | DA | SD | TOTAL |
|-----|---|----------|----------|--------|---------|--------|-----------|
| 1. | I have negative lessons from the past on my investment but I am optimistic with good planning the future yield better returns on investment | 100(33%) | 131(43%) | 10(3%) | 36(12%) | 27(9%) | 304(100%) |
| 2. | I believed that my previous plan in financial market will help me in evaluating riskiness of my investment decision | 110(36%) | 122(40%) | 8(3%) | 40(13%) | 24(8%) | 304(100%) |
| 3. | I invest because I believed that with my good planning there will be higher returns on investment | 103(34%) | 120(39%) | 11(4%) | 42(14%) | 28(9%) | 304(100%) |
| 4. | Even though other investors failed, with my good planning I can succeed and get higher returns on investment | 97(32%) | 139(46%) | 8(3%) | 31(10%) | 28(9%) | 304(100%) |
| 5. | I plan to increase my investment in the stock market for the coming months in order to get higher returns in future | 104(43%) | 140(46%) | 7(2%) | 31(10%) | 22(7%) | 304(100%) |

Source: Field Survey, (2023)

Table 4.2 revealed that 100(33%) of the respondents strongly agreed that they have negative lessons from the past on their investment but they are optimistic with good planning the future yield better returns on investment, 131(43%) of the respondents agreed that they have negative lessons from the past on their investment but they are optimistic with good planning the future yield better returns on investment, 10(3%) of the respondents are undecided as to whether or not they have negative lessons from the past on their investment but they are optimistic with good planning the future yield better returns on investment, 36(12%) of the respondents disagreed that they have negative lessons from the past on their investment but they are optimistic with good planning the future yield better returns on investment, 27(9%) of the respondents strongly disagreed that they have negative lessons from the past on their investment but they are optimistic with good planning the future yield better returns on investment. The inference from the table revealed that majority of the respondents agreed that they have negative lessons from the past on their investment but they are optimistic with good planning the future yield better returns on investment.

It further revealed that 110(36%) of the respondents strongly agreed that they believed that their previous plan in financial market will help them in evaluating riskiness of their investment decision, 122(40%) of the respondents agreed that they believed that their previous plan in financial market will help them in evaluating riskiness of their investment decision, 8(3%) of the respondents are undecided as to whether or not they believed that their previous plan in financial market will help them in evaluating riskiness of their investment decision, 40(13%) of the respondents disagreed that they believed that their previous plan in financial market will help them in evaluating riskiness of their investment decision, 24(8%) of the respondents strongly disagreed that they believed that their previous plan in financial market will help them in evaluating riskiness of their investment decision. The inference from the table revealed that majority of the respondents agreed that they believed that their previous plan in financial market will help them in evaluating riskiness of their investment decision. It also revealed that 103(34%) of the respondents strongly agreed that they invest because they believed that with their good planning there will be higher returns on investment, 120(39%) of the respondents agreed that they invest because they believed that with their good planning there will be higher returns on investment, 11(4%) of the respondents are undecided as to whether or not they invest

because they believed that with their good planning there will be higher returns on investment, 42(14%) of the respondents disagreed that they are in this business because they invest because they believed that with their good planning there will be higher returns on investment, 28(9%) of the respondents strongly disagreed that they invest because they believed that with their good planning there will be higher returns on investment. The inference from the table revealed that majority of the respondents agreed that they invest because they believed that with their good planning there will be higher returns on investment. It also revealed that 97(32%) of the respondents strongly agreed that even though other investors failed, with their good planning they can succeed and get higher returns on investment, 139(46%) of the respondents agreed that even though other investors failed, with their good planning they can succeed and get higher returns on investment, 8(3%) of the respondents are undecided as to whether or not even though other investors failed, with their good planning they can succeed and get higher returns on investment, 31(10%) of the respondents disagreed that even though other investors failed, with their good planning they can succeed and get higher returns on investment, 28(9%) of the respondents strongly disagreed that even though other investors failed, with their good planning they can succeed and get higher returns on investment.

The inference from the table revealed that majority of the respondents agreed that even though other investors failed, with their good planning they can succeed and get higher returns on investment. It further revealed that 104(43%) of the respondents strongly agreed that they plan to increase their investment in the stock market for the coming months in order to get higher returns in future, 140(46%) of the respondents agreed they plan to increase their investment in the stock market for the coming months in order to get higher returns in future, 7(2%) of the respondents are undecided as to whether or not they plan to increase their investment in the stock market for the coming months in order to get higher returns in future, 31(10%) of the respondents disagreed that they plan to increase their investment in the stock market for the coming months in order to get higher returns in future, 22(7%) of the respondents strongly disagreed that they plan to increase their investment in the stock market for the coming months in order to get higher returns in future. The inference from the table revealed that majority of the respondents agreed that they plan to increase their investment in the stock market for the coming months in order to get higher returns in future.

Table 4.3: Summary of Descriptive Statistics on Planning Fallacy on Investors Decision Making Process

| | N | Minimum | Maximum | Mean | Std. Deviation |
|------|----------|----------------|----------------|-------------|-----------------------|
| IDMP | 304 | 0.06 | 0.95 | 0.3704 | 0.10699 |
| PFB | 304 | 0.9 | 1.13 | 0.4401 | 0.37459 |

Source: SPSS output, version 25

Table 4.3 shows that IDMP recorded mean value of 0.3704, standard deviation of 0.10699, minimum value of 0.06 and maximum value of 0.9 whereas PFB recorded mean value of 0.4401, standard deviation of 0.37459, minimum value of 0.9 and maximum value of 1.13 respectively. This indicates that PFB have significantly influence entrepreneur decision making process in Maiduguri. This is because PFB recorded high mean (0.4401) than IDMP within the study period.

Test of Hypothesis (H₀₁): Planning fallacy bias has no significant influence on decision making of investors in north eastern Nigeria.

Table 4.4: Influence of Planning Fallacy on Investors Decision Making Process

| Variables | B | Standard Error | t-value | p-value | Result |
|-----------------------|---------|----------------|---------|---------|--------|
| Planning Fallacy (PF) | -11.806 | 2.236 | -3.321* | 0.002 | S |
| Constant | 3.702 | 1.006 | 2.855 | 0.000 | |
| R ² | 0.813 | | | | |

Source: SPSS Computed data *Significant at 5% level, S= Significant

Linear model: $IDMP = \beta_0 + \beta_1 PFB + e$

Dependent variable: IDMP

Independent variable: PFB

Table 4.4 revealed a significant effect of planning fallacy bias on investors’ decision making process in north eastern Nigeria. This is because the probability values (P = 0.002) is less than alpha ($\alpha = 0.05$) levels of significance. Hence, the null hypothesis which states that planning fallacy bias has no significant influence on investors’ decision making process in eastern Nigeria is hereby rejected at 0.05 level of significance. This means that PFB has significant influence on investors’ decision making process in eastern Nigeria (P < 0.05). The R-Squared statistic indicates that the model is fitted as it explains 81.3% of the variability in SMEs investors’ decision making process in eastern Nigeria. The equation of the fitted model is defined as; $IDMP = 3.701 + 11.806PFB$.

Table 4.5 Influence of Herd Behaviors Bias on Investors Decision Making Process

| S/N | Statement | SA | AG | UD | DA | SD | TOTAL |
|-----|---|----------|----------|--------|---------|---------|-----------|
| 1. | Past success in the stock market contribute to my overconfidence in making future investment decisions | 92(30%) | 138(45%) | 12(4%) | 33(11%) | 29(10%) | 304(100%) |
| 2. | I am confident that my optimistic expectations for stock market returns align with historical performance of the stock market | 99(33%) | 126(41%) | 9(3%) | 39(13%) | 31(10%) | 304(100%) |
| 3. | Positive trends in specific industries or sectors contribute to my overall beliefs in the stock market's performance | 107(35%) | 128(42%) | 9(3%) | 33(11%) | 27(9%) | 304(100%) |
| 4. | My forecasts about stock market returns align with historical performance of the market | 102(34%) | 123(40%) | 8(3%) | 40(13%) | 31(10%) | 304(100%) |
| 5. | I am influenced by other traders that gain higher returns on investment | 109(36%) | 130(42%) | 9(3%) | 31(11%) | 25(8%) | 304(100%) |

Source: Field Survey, (2023)

Table 4.5 revealed that 92(30%) of the respondents strongly agreed that past success in the stock market contribute to their overconfidence in making future investment decisions, 138(45%) of the respondents agreed that past success in the stock market contribute to their overconfidence in making future investment decisions, 12(4%) of the respondents are undecided as to whether or not past success in the stock market contribute to their overconfidence in making future investment decisions, 33(11%) of the respondents disagreed that past success in the stock market contribute to their overconfidence in making future investment decisions, 29(10%) of the respondents strongly disagreed that

past success in the stock market contribute to their overconfidence in making future investment decisions. The inference from the table revealed that majority of the respondents agreed that past success in the stock market contribute to their overconfidence in making future investment decisions.

It further revealed that 99(33%) of the respondents strongly agreed that they are confident that their optimistic expectations for stock market returns align with historical performance of the stock market, 126(41%) of the respondents agreed that they are confident that their optimistic expectations for stock market returns align with historical performance of the stock market, 9(3%) of the respondents are undecided as to whether or not they are confident that their optimistic expectations for stock market returns align with historical performance of the stock market, 39(13%) of the respondents disagreed that they are confident that their optimistic expectations for stock market returns align with historical performance of the stock market, 31(10%) of the respondents strongly disagreed that they are confident that their optimistic expectations for stock market returns align with historical performance of the stock market. The inference from the table revealed that majority of the respondents agreed that they are confident that their optimistic expectations for stock market returns align with historical performance of the stock market.

It also revealed that 107(35%) of the respondents strongly agreed that positive trends in specific industries or sectors contribute to their overall beliefs in the stock market's performance, 128(42%) of the respondents agreed that positive trends in specific industries or sectors contribute to their overall beliefs in the stock market's performance, 9(3%) of the respondents are undecided as to whether or not positive trends in specific industries or sectors contribute to their overall beliefs in the stock market's performance, 33(11%) of the respondents disagreed that positive trends in specific industries or sectors contribute to their overall beliefs in the stock market's performance, 27(9%) of the respondents strongly disagreed that positive trends in specific industries or sectors contribute to their overall beliefs in the stock market's performance. The inference from the table revealed that majority of the respondents agreed that positive trends in specific industries or sectors contribute to their overall beliefs in the stock market's performance. It further revealed that 102(34%) of the respondents strongly agreed that their forecasts about stock market returns align with historical performance of the market, 123(40%) of the respondents agreed that their forecasts about stock market returns align with historical performance of the market, 8(3%) of the respondents are undecided as to whether or their forecasts about stock market returns align with historical performance of the market, 40(13%) of the respondents disagreed that their forecasts about stock market returns align with historical performance of the market, 31(10%) of the respondents strongly disagreed that their forecasts about stock market returns align with historical performance of the market. The inference from the table revealed that majority of the respondents agreed that their forecasts about stock market returns align with historical performance of the market.

It also revealed that 109(36%) of the respondents strongly agreed that they are influenced by other traders that gain higher returns on investment, 130(42%) of the respondents agreed that they are influenced by other traders that gain higher returns on investment, 9(3%) of the respondents are undecided as to whether or not they are influenced by other traders that gain higher returns on investment, 31(11%) of the respondents disagreed that a they are influenced by other traders that gain higher returns on investment, 25(8%) of the respondents strongly disagreed that they are influenced by other traders that gain higher returns on investment. The inference from the table revealed that majority of the respondents agreed that they are influenced by other traders that gain higher returns on investment.

Table 4.6: Summary of Descriptive Statistics on Herd Behaviors Bias on Investors Decision Making Process

| | N | Minimum | Maximum | Mean | Std. Deviation |
|------|-----|---------|---------|--------|----------------|
| IDMP | 304 | 0.04 | 0.85 | 0.2702 | 0.11690 |
| HBB | 304 | 0.8 | 1.03 | 0.5401 | 0.47456 |

Source: SPSS output, version 25

Table 4.6 shows that IDMP recorded mean value of 0.2702, standard deviation of 0.11690, minimum value of 0.04 and maximum value of 0.04 whereas HBB recorded mean value of 0.5401, standard deviation of 0.47456, minimum value of 0.8 and maximum value of 1.03 respectively. This indicates that HBB have significantly influence on investors’ decision making process in north eastern Nigeria. This is because HBB recorded high mean (0.5401) than IDMP within the study period.

Test of Hypothesis (H₀₂): Herd behaviour bias has no significant influence on decision making process of investors in north eastern Nigeria.

Table 4.7: Influence of Herd Behaviors Bias on Investors Decision Making Process

| Variables | B | Standard Error | t-value | p-value | Result |
|-----------------------|---------|----------------|---------|---------|--------|
| Planning Fallacy (PF) | -12.826 | 2.236 | -3.321* | 0.000 | S |
| Constant | 4.782 | 1.006 | 2.855 | 0.010 | |
| R ² | 0.750 | | | | |

Source: SPSS Computed data *Significant at 5% level, S= Significant

Linear model: $IDMP = \beta_0 + \beta_1 HBB + e$

Dependent variable: IDMP

Independent variable: HBB

Table 4.7 revealed a significant effect of herd behaviour bias has significant influence on decision making process of investors in north eastern Nigeria. This is because the probability values (P = 0.000) is less than alpha ($\alpha = 0.05$) levels of significance. Hence, the null hypothesis which states that herd behaviour bias has no significant influence on decision making process of investors in north eastern Nigeria is hereby rejected at 0.05 level of significance. This means that herd behaviour bias has significant influence on decision making process of investors with (P < 0.05). The R-Squared statistic indicates that the model as fitted explains 75% of the variability in decision making process of investors in north eastern Nigeria. The equation of the fitted model is defined as; $IDMP = 4.782 + 12.826HBB$.

4.3 Discussion of Findings

Evidence from the primary data collected and analyze revealed that planning fallacy bias has significant influence on investors’ decision-making process in north eastern Nigeria. The hypotheses tested on the basis of the discussion in this study and the observed regression values have shown that there is a positive significant influence between the dependent and independent variable. The analysis of hypothesis revealed that planning fallacy bias has significant and positive influence on investors north eastern Nigeria. This finding is in line with the study of Fadhillah et al. (2021), which found that the planning fallacy influences the kopi bon decision-making process, which affects the company's operational decisions about the quality of its products and services as well as its brand. The findings also revealed that herd behaviours bias has significant influence on investors’ decision-making process in north eastern Nigeria. This finding is also in line with the study of Adekoya and Olaomi (2021) investigated how herding behavior affected stock returns on the Nigerian Stock Exchange. A herding pattern among retail investors was seen,

especially during times of severe market volatility, according to the research. The findings suggested that herding behavior has a detrimental impact on stock returns and that investors who follow the herd may not achieve the best results from their investments.

5. Conclusions and Implications

The finding documented in this study revealed that planning fallacy and herd behaviours bias has significant influence on investors' decision-making process in north eastern Nigeria. The study tested the hypothesis and the result shows that the independent variables of planning fallacy and herd behaviours bias has significant influence on investors' decision making process in north eastern Nigeria. Therefore, this study concludes that planning fallacy and herd behaviours bias has significant influence on investors' decision making process in north eastern Nigeria, this is because investors' are confidence of trading more in the market because their past experiences, companies performance, following other successful investors and believe that for sure there will be positive outcome in the near future. Therefore, this implied that to be successful in trading in the financial market, investors should minimize the negative consequences of this bias and maximizing its beneficial aspects. On the other hand, it is crucial to recognize and minimize the negative impacts of this bias that could result in mistakes in investors judgments and consequent of planning failure. Although it will still be quite challenging for investors to reduce biases in their decision-making processes despite the aforementioned ideas, in reality, investors frequently aren't aware that they have prejudices. The solution to dealing with individual-level biases may therefore lie in altering group decision-making processes. Similar to this, investors would need to ask for and heed outsiders' advice. Investors need to take action to reduce any bad effects resulting from their prejudices even if they do not control their biases.

The results of the study would be relevant to providers of finance, venture capitalists, business agents and banks might find it useful to include the psychological characteristics of the investors not only in their risk assessments but also when developing support services for investors. The results of the study would also be relevant to policy makers for more effective economic and financial policies; this research provides policymakers with insights into the transmission mechanisms of monetary policy within the financial market. This knowledge will assist policymakers in taking into account global economic considerations when drafting monetary and fiscal policies, which will be necessary for executing monetary policies that support larger economic goals while limiting unexpected repercussions in financial markets. In order to preserve investors protection and market stability, policymakers can foresee potential behavioural biases that cause weaknesses in the market, it can put regulations in place to lessen these biases, systemic risks and stop excessive market volatility.

This study contribute to the literature through adding knowledge to the existing literature by providing more insight on overconfidence bias theory that emphasize the vital role this theory play in explaining overconfidence bias and entrepreneur decision making process that is to understand the dynamics in businesses.

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