EDSU Journal of Business and Management
Vol. 1. No. 1

www. edsubusinessjournal.com

Behavioural Finance and Investment Performance of SMES in the Federal Capital Territory (FCT)

Ahmed Abdullahi Ibrahim

Abstract

This study examined the effect of Behavioral Finance on Investment Performance of SMEs in the Federal Capital Territory. Specifically, the study examined the effect of herding, heuristics, and prospect factors on investment performance of SMEs in the Federal Capital Territory.The population of the study was 38,003 owners and managers of SMEs in FCT. A sample size of 436 was selected using Taro Yamane formula for sample size determination. Simple random sampling was employed in selecting the respondents. Data was collected through primary sources using a structured questionnaire on a five-point Likert scale. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to analyse the data and test hypotheses. The results show that Herding has an insignificant negative effect on investment performance of SMEs in the FCT. The study found heuristics to have a positive and significant effect on investment performance of SMEs in the FCT while prospect factors exhibited an insignificant negative effect on investment performance of SMEs in the FCT. The study concludes that Behavioral Finance has a significant effect on Investment Performance of SMEs in the Federal Capital Territory. The study recommends that SME owners and managers should resist the urge to simply follow the crowd in their investment decisions. Instead, cultivate a habit of independent thinking. SME owners and managers should develop and utilize simple, effective decision-making rules that work for their business context. For example, create a checklist of key financial indicators to review before making investment decisions, or establish clear thresholds for return on investment that guide your choices. SME owners and managers, when evaluating investment opportunities, should be aware of their natural tendency to overweigh potential losses compared to potential gains. To counter this, adopt a long-term perspective on their investments and focus on overall portfolio performance rather than individual investment outcomes.

Keywords: Behavioral, Finance, Herding, Heuristics, Prospect

Introduction

In recent years, the field of behavioral finance has gained significant attention in explaining investment decisions and market phenomena that traditional finance theories often fail to elucidate. This is particularly relevant for Small and Medium Enterprises (SMEs), which play a crucial role in economic development, especially in emerging economies like Nigeria (Gbandi & Amissah, 2014). The Federal Capital Territory (FCT), as a rapidly developing urban center, presents a unique context for studying the investment behaviors of SMEs. Behavioral finance challenges the assumptions of rational decision-making in traditional finance theories by incorporating psychological insights into financial analysis. It suggests that investors, including SME owners and managers, are subject to cognitive biases and emotional factors that influence their financial decisions (Baker & Ricciardi, 2014). These behavioral factors can significantly impact investment performance, potentially leading to suboptimal outcomes. Three key aspects of behavioral finance are particularly relevant to SME investment behavior: herding, heuristics, and prospect factors (Goud et al., (2024). These three proxies capture key aspects of decision-making that are particularly pertinent to SMEs in the Federal Capital Territory context. Herding refers to the tendency of investors to follow the actions of others, often leading to market inefficiencies (Chauhdary, et al., (2021). In the context of SMEs in the FCT, herding behavior might manifest in the form of mimicking investment strategies of perceived successful peers or following market trends without adequate analysis.

Heuristics, or mental shortcuts, are often employed by decision-makers to simplify complex problems, especially under conditions of uncertainty Raveendra, et al., (2022). SMEwners and managers in the FCT may rely on heuristics

**Department of Business Administration,
Faculty of Administration,
Nasarawa State University, Keffi, Nasarawa State, Nigeria
ibrahimahmedabdullahi@nsuk.edu.ng**

such as representativeness or availability when making investment decisions, potentially leading to biased judgments. Prospect factors, derived from Prospect Theory (Kahneman & Tversky, 1979), encompass elements such as loss aversion and reference point dependence. These factors can explain why SME investors might exhibit risk-seeking behavior in the face of losses or risk-averse behavior when confronted with potential gains, even when such behaviors may not be objectively optimal. The investment performance of SMEs is critical for their growth and sustainability, as well as for the broader economic development of the FCT and Nigeria as a whole. In the Federal Capital Territory, the SME sector has been experiencing significant growth and transformation in recent years. The FCT, as the seat of Nigeria's federal government, presents a unique ecosystem for SMEs, characterized by a mix of opportunities and challenges. Recent observations suggest that behavioral finance factors are playing an increasingly important role in shaping the investment landscape for these enterprises. For instance, there has been a noticeable trend of herding behavior among SME owners, particularly in sectors like real estate and technology startups (Okafor & Ede, 2021). This herding tendency has led to concentration risks in certain industries, potentially impacting the overall stability of the SME sector in the FCT. Additionally, the use of heuristics in decision-making has been observed, especially in rapidly evolving markets where SME owners often rely on rule-of-thumb approaches due to limited time and resources for comprehensive market analysis (Nwankwo & Akinsanmi, 2022). Moreover, potential factors have become relevant, as numerous small and medium-sized enterprise (SME) investors are showing tendencies towards avoiding losses, especially due to economic uncertainties resulting from worldwide events and domestic policy modifications. These behavior patterns can greatly affect the investment outcomes of SMEs in the FCT, possibly resulting in inefficient distribution of resources and overlooked chances for development and creativity.

The economic growth and development of the Federal Capital Territory (FCT) of Nigeria heavily rely on the investment performance of Small and Medium Enterprises (SMEs) in the region. Nevertheless, despite their significance, SMEs have not consistently performed well in terms of investments, often falling short of optimal outcomes (Gbandi & Amissah, 2014). While traditional finance theories have attempted to explain these performance variations, they often fall short in accounting for the complex decision-making processes of SME owners and managers, particularly in dynamic environments like the FCT (Ayyagari et al., 2011). Behavioral finance offers a promising lens through which to examine these investment performance issues. However, the impact of behavioral finance factors on this performance has not been extensively studied in this specific context. Previous research has shown that behavioral biases can significantly affect investment decisions and outcomes in various settings (Barberis & Thaler, 2003), but the unique characteristics of SMEs in the FCT warrant focused investigation. Although behavioral finance has been studied in different situations, there is a noticeable scarcity of research dedicated to SMEs in the FCT. Chauhdary, et al., (2021) examined how Behavioral finance affects the Investment Performance of Individual Investors at Pakistan Stock Exchange. Likewise, Raveendra, et al., (2022) conducted a study on Behavioral Finance and how it affects the poor financial performance of SMEs in Karnataka, India. In a separate research, Goud, et al., (2024) analyzed how Behavioral Finance impacts investment decision-making and Performance in India, however, their results may not translate directly to the Nigerian environment because of cultural and economic variations. Motivated by these factors, this study aims to bridge the gap in our understanding of how behavioral finance factors – specifically herding, heuristics, and prospect factors – influence the investment performance of SMEs in the Federal Capital Territory. By doing so, it seeks to contribute to both the theoretical understanding of behavioral finance and its practical applications in enhancing SME investment strategies and performance.

The primary aim of this study is to assess the effect of behavioral finance on investment performance of SMEs in the Federal Capital Territory. The study pursued the following specific objectives:

i. to examine the effect of herding on investment performance of SMEs in the Federal Capital Territory.

ii. to evaluate the effect of heuristics on investment performance of SMEs in the Federal Capital Territory and;

iii. to examine the effect of prospect factors on investment performance of SMEs in the Federal Capital Territory

The following hypotheses guided the study:

Ho_1: herding has no significant effect on investment performance of SMEs in the Federal Capital Territory.

Ho_2: heuristics has no significant effect on investment performance of SMEs in the Federal Capital Territory.

Ho_3: prospect factors have no significant effect on investment performance of SMEs in the Federal Capital Territory.

Literature Review

Behavioural finance is the examination of influences on investors' choices when it comes to the financial markets. Behavioral finance is a useful tool for understanding the effectiveness of financial markets and promoting innovation. The main emphasis of this area of study is on human psychology in relation to the stock market and investment decisions. Behavioral finance offers insights and remedies for inquiries into the emotional influences on stock prices. The discipline of behavioral finance was founded in the 1970s and 1980s by economist Robert J. Shiller, psychologists Amos Tversky and Daniel Kahneman, and other experts. Extensive research has been done on heuristics and unconscious biases to understand how people make financial decisions based on their mental processes. There has been a discussion among academics on whether the efficient market hypothesis is fixed or variable. Investors frequently misunderstand the connection between price and risk because of the market's numerous inefficiencies and challenges. Experts specializing in behavioral economics, a discipline that combines economic principles with psychology, have become increasingly popular among financial institutions in recent years (Goud, et al., 2024).

Behavioral finance can assist in creating improved decisions and setting more rational predictions. Behavioral economics combines understanding of economic behavior and psychology. It discusses why investors may rely on emotions rather than logic and the consequences for economic models. This article will explain why experienced investors sell their shares when the market is high and buy them back when it's low, as well as why ordinary individuals don't use their savings to pay off significant debts. Investors will be unable to make informed decisions if they do not have a good understanding of the market. Behavioural economics has discussed the possible systemic errors and biases that could occur in specific situations, while also providing a foundation for investors to prevent repeating past mistakes (Goud, et al., 2024). According to Gleason, et al., (2004), herding refers to the inclination to imitate the behaviors of other investors. Past information on the investment trend from other investors can help a new investor in making their current investment decision (Ferruz, et al., 2008). This trend is expected to be most pronounced when there is a high degree of uncertainty in the market. Investors are mimicking crowds when they adjust their investment choices in response to the actions of other investors (Ferruz & Vargas, 2007). If investors adhere to market trends, it could lead to increased volatility in returns and potentially destabilize financial systems, particularly in times of crisis (Demirer & Kutan, 2006; Hadiwibowo, 2010). Herding behavior occurs when investors are influenced by others, often experienced investors, as references in making investment decisions, as stated by Rahayu et al. in 2021. Herding refers to conformity to a shared way of behaving, which is seen as a "resemblance in behavior" resulting from the "mutual observation" of actions and their outcomes among people (Hirshleifer & Teoh, 2003). In the context of the stock market, herding is when investors ignore their own private information and instead follow the observable "consensus" (Bikhchandani, et al., 2000) regardless of fundamentals. The reasons behind this behavior can be attributed to various factors, whether they are psychological or rational. Heuristics is defined as an investor's behaviour when making the decision to purchase or sell certain stocks without undertaking company fundamental analysis nor proper technical analysis (Hascaryani, & Maski 2021). Heuristics are defined as mental shortcuts or rules of thumb that individuals use to make judgments and decisions quickly and efficiently, especially in complex or uncertain situations. These cognitive strategies allow for rapid processing of information but can sometimes lead to systematic biases or errors in judgment (Rosas & Gigerenzer, 2022).

Prospect factors are conceptualized as the cognitive biases and heuristics that systematically affect how individuals perceive and respond to financial prospects. These factors encompass loss

aversion, reference dependence, and probability weighting, which collectively influence risk attitudes and financial decision-making in ways that often deviate from traditional rational choice models (Dhami & al-Nowaihi, 2020). According to Barberis (2023) prospect factors are defined as the elements that influence an individual's decision-making process when faced with choices involving risk and uncertainty. These factors shape how people evaluate potential outcomes and make choices based on perceived gains or losses relative to a reference point, rather than absolute outcomes. Investment performance is defined as the financial outcome of investment decisions, measured not only by absolute returns but also by returns adjusted for the level of risk taken. This concept encompasses both the magnitude of gains or losses and the efficiency with which an investment or portfolio generates those returns given its risk profile (Ferson & Mo, 2023). According to Alda and Ferruz (2022) investment performance is conceptualized as a multifaceted measure that goes beyond traditional financial metrics to include broader economic, social, and governance (ESG) impacts. This holistic view of performance considers not only financial returns but also the sustainability and long-term value creation of investments, reflecting a growing emphasis on responsible investing.

Empirical Study

Apochi and colleagues (2024) investigated how financial literacy influences the impact of herding bias and financial risk tolerance on investment performance for individuals in Nigeria. As of the first quarter of 2023, there were 460 active individual investors in Kaduna city. 349 out of 460 questionnaires distributed were considered valid. The sampling technique utilized was a census approach, with primary data obtained through a self-administered survey and an online Google form. A 7-point Likert scale was utilized, with the options ranging from '1' as "Extremely Agree" to '7' as "Extremely Disagree". The data was analyzed using Smart-PLS version 4. The research found that the tendency to follow the crowd positively impacts investment performance, while financial risk tolerance has a small and unimportant negative impact on investment performance. Having financial knowledge has a small and positive influence on how well investments perform. Additionally, financial literacy was shown to moderate the impact of herding bias on investment performance, resulting in an insignificant and negative effect. Risk tolerance negatively impacts investment performance to a great extent. This research found that following the herd improves investors' ability to make smarter investment choices.

Nayak and Kumar (2021) investigated how the herding factor affects the investment performance of retail investors in the Indian stock market. The research utilized either quantitative or qualitative data. A sample was taken from a population of 375 individuals. 375 surveys were distributed to participants, resulting in the receipt of 310 valid responses. Out of the 75 questionnaires randomly distributed to individual investors from five top share broking houses, a total of 375 were received, with 310 validly completed questionnaires selected as the sample size for the study. The period during which data was collected ranged from January 2018 to March 2019. The research employed the Multiple Regression Model with assistance from the SPSS statistical tool. The study results showed that following the herd had a small beneficial effect on investment returns, but was not very important. However, conducting thorough research had a substantial impact on the satisfaction levels associated with investment decisions.

Rehan and colleagues (2021) investigated how herding behavior affects investment performance in the Pakistan stock market. The research utilized a self-administered survey, with information gathered from domestic investors in Pakistan. Out of the 300 questionnaires that were handed out, 155 were returned by the participants. The data gathered was processed utilizing SPSS and Smart-PLS 3.0. The analysis that was conducted involved both descriptive statistics and structural equation modeling. According to the analysis of the data sample, the research discovered that the factor of herding had a beneficial and notable effect on investment results. Shaukat, et al., (2022) investigated the Impact of Heuristic Factors on Investment Performance. The research was carried out in a free environment and is categorized as cross-sectional due to the data being gathered at a single moment. The investigation focused on cause and effect relationships between variables, making it causal. The audience included individual and institutional investors who put their money in the Pakistan stock market. The Pakistan stock market consists of three sections: the Karachi stock

market, Lahore stock market, and Islamabad stock market. Information was gathered with the assistance of brokers and stock market managers. Data was gathered through the use of questionnaires that were personally administered. Furthermore, a portion of the data was gathered through an online Google form survey. The goal was to reach 400 participants, but only 250 responses were collected. The survey consisted of 21 questions rated on a five-point Likert scale. A practical sampling method was employed. Surveys from various researchers were utilized. The survey included two parts: the initial part included 21 statements for evaluating factors using a five-point Likert scale, while the second part focused on providing descriptive details. The data was evaluated using SPSS software. Factor analysis, reliability analysis, t-test, ANOVA, and multivariate analysis were carried out. The results of this research indicate that heuristic factors, availability, conservatism, and illusion of control are directly related to investment performance in a significant and positive manner. Anchoring and the gambler's fallacy have shown no significant direct impact on investment performance due to heuristic factors.

Deng, et al., (2020) examined how heuristics impact the performance of financial institutions in South Sudan through analyzing measures of heuristics and institutional performance. Employing the ARDL model, we find that cognitive biases like anchoring, availability, and halo effect have a detrimental impact on the performance of financial institutions in South Sudan, whereas disaster neglect and overconfidence do not have a significant influence on their performance. However, confirmation appears to have a substantial impact on the performance of financial institutions in the nation. Apochi, et al., (2023) assessed how the prospect factor (PF) impacts investment performance. The study consisted of 3,706 participants, all of whom were active investors living in Kaduna metropolitan area in the first quarter of 2023. Therefore, 460 questionnaires were distributed in a structured manner and 349 of them were deemed valid upon their return. This study utilized a convenient sampling method to collect primary data from participants through online Google forms and self-administered questionnaires assisted by research aides. A 7-point Likert-type scale, with options ranging from '1' for “Extremely Agree” to '7' for “Extremely Disagree”, was utilized. The data was analyzed using Smart-PLS 4 and SPSS 20, which helped to illustrate the demographic traits of the participants. The results of this research show that prospect factor and financial literacy positively impact individual investment performance, while the herding effect negatively impacts individual investment performance. Oyaro and Nasution (2021) evaluated how the prospect factor affects the investment performance of individual investors at Nairobi Security Exchange. The research utilized a survey method to reach 1,196,995 individual investors in Nairobi Securities Exchange. The researcher utilized the Slovin's formula to calculate the sample size of 400, opting for a higher limit of 500 individual investors. The research utilized a structured survey containing closed-ended inquiries to gather primary data from individual investors in the stock market. The study utilized a convenient sampling method. The study data was assessed through the use of simple linear regression and hierarchical linear regression analysis, with the assistance of SPSS statistical analysis tools. Results from the research confirmed that the prospect factor has a beneficial yet not significant impact on investment returns.

Barno and Tuwei (2020) aimed to explore how prospect bias impacts investment choices in small and micro businesses in Nairobi County. The study aimed to assess how overconfidence, anchoring, prospecting, and herding impact investment decisions, while also examining how financial literacy influences this relationship among Small and Micro Enterprises. The research was based on the theory of prospects. The positivism paradigm was utilized. The research utilizes an explanatory study design. There were 102,821 firm owners in the target population. 383 participants were chosen through the method of stratified random sampling. Results from the regression model indicated that prospect factors had a significant and negative impact on investment decisions.

Theoretical Foundation

The Prospect Theory, introduced by psychologists Daniel Kahneman and Amos Tversky in 1979, transformed our comprehension of decision-making when faced with uncertainty. The theory originated as a descriptive option to the prevailing Expected Utility Theory, providing a more psychologically accurate representation of how individuals assess possible gains and losses (Kahneman & Tversky, 1979). The main idea of

Prospect Theory is that individuals base their decisions on the potential losses and gains rather than the final outcome, assessing them using specific mental shortcuts. Important components of the theory involve reliance on reference points, fear of losses, decreasing sensitivity, and consideration of probabilities (Barberis, 2013). Proponents argue that Prospect Theory provides a more accurate description of real-world decision-making, explaining phenomena that traditional economic theories fail to account for, such as the disposition effect in investing. It has been successfully applied in various fields, including finance, marketing, and political science (Dhami & al-Nowaihi, 2020). Critics, however, contend that the theory's complexity makes it difficult to apply in some contexts and that its descriptive nature limits its prescriptive value. Some argue that the theory's parameters are not stable across different decision contexts, potentially limiting its generalizability (Birnbaum, 2008). In the context of Effect of Behavioral Finance on Investment Performance of SMEs in the Federal Capital Territory, Prospect Theory offers valuable insights. It can explain why SME owners might exhibit risk-averse behavior when facing potential gains from investments but become risk-seeking when confronting potential losses. This behavior could significantly impact investment performance. For instance, SME managers might hold onto underperforming investments too long (due to loss aversion) or prematurely sell profitable investments (due to diminishing sensitivity to gains), both of which could negatively affect overall investment performance. Prospect Theory also suggests that SME investors might overweight small probabilities, potentially leading to overinvestment in high-risk, high-reward opportunities, or excessive investment in insurance-like financial products. This behavior could result in suboptimal allocation of resources and impact overall investment performance (Barberis, 2023). The theory's emphasis on reference point dependence could explain why past performance or industry benchmarks might disproportionately influence SME investment decisions in the Federal Capital Territory. This could lead to herd behavior or trend-chasing, potentially affecting market efficiency and individual firm performance (Abdellaoui et al., 2021).

Methodology

This research study utilized a survey research design to gather and analyze data from a diverse sample of participants relevant to the topic under investigation. The value of this research design lies in its ability to provide broad coverage and representation of the population being studied, offering a holistic understanding of the research problem. The study population comprises small and medium enterprises in the FCT that are registered with the Small and Medium Enterprises Development Agency (SMEDAN). According to SMEDAN's 2021 survey report, there are 38,003 registered small and medium enterprises in this area. The sample size for this study was determined using formula suggested by Taro Yamane (1967). The assumption is that the sample is representative of the population.

Sample size formula:

$$n = \frac{N}{1+N(e)^2}$$

Where: n= sample size

N= population size

e= sample error level of significance 5% (0.0025)

1 = constant

Therefore.

$$n = \frac{38,003}{1 + 38,003\ (0.05)^2}$$

$$n = \frac{38,003}{1 + 38,003\ (0.0025)}$$

$$n = \frac{38,003}{96.0075}$$

n = 395.83 approximately 396

The study minimum sample size is 396. Simple random sampling was employed to select the respondents. According to Israel (2013), it is advised to add 10% - 30% to the minimum sample size to account for potential non-respondents or unreturned questionnaire. Therefore, an additional 10% of the sample size, which is 40 respondents, was added, resulting in a total of 436 copies of the questionnaire administered to owners/managers of SMES in the FCT. For this study, data was collected through primary sources using a structured questionnaire. The questionnaire utilized a five-point Likert scale, ranging from "strongly agree" to "strongly disagree," as the response format. Simple random sampling was employed in selecting the respondents. The study employed Partial Least Square – Structural Equation Modeling (PLS-SEM) to examine the effect of each independent

variable on the dependent variable. Smart PLS was used to code and analyze the data for this study to achieve all the set objectives.

Result and Discussion

Table 1: Distribution and Retrieval of Questionnaire

Questionnaire	Frequency	Percent (%)
Returned	407	93.35
Not returned	29	6.65
Total	**436**	**100**

Source: Field Survey, 2024

The distribution and retrieval of the questionnaire administered to managers and owners of Small and Medium Enterprises (SMEs) in the Federal Capital Territory (FCT) are presented in Table 4.1. A total of 436 questionnaires were distributed to the target respondents. Of these, 407 questionnaires were successfully completed and returned. Notably, these recovered questionnaires represent 93.35% of the overall distributed copies, thus constituting the foundation for the data analysis of this study. This response rate satisfies the threshold in research as stated by Fincham (2008), that a response rate of at least 50% is generally considered acceptable in many social science studies. Higher response rates, such as 60-70%, are preferable as they can increase the reliability and validity of the findings

Construct Reliability

Table 2: Construct Reliability and Validity of the indicators

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Herding	0.85	0.83	0.91	0.68
Heuristics	0.91	0.85	0.94	0.77
Prospect factors	0.89	0.82	0.92	0.69
Investment Performance	0.83	0.93	0.93	0.75

Source: **Researcher's Computation using SMART PLS.**

From Table 4.2, all composite reliability indicators exceeded the acceptable threshold of 0.7, indicating strong reliability. Additionally, internal consistency was evaluated using Cronbach's Alpha, with all values surpassing the 0.8 benchmark, reflecting a high level of confidence in the reliability of the constructs studied. Dijkstra and Henseler (2015) introduced Rho_A as an alternative metric for construct reliability, positioned between Cronbach's alpha and composite reliability. An analysis of the average extracted variance (AVE) for each construct also showed values significantly above the recommended threshold of 0.5 suggested by Chin (1988). Therefore, it can be concluded that the constructs analyzed demonstrate a substantial amount of extracted variance.

Descriptive Statistics

Table 3: Descriptive Statistics

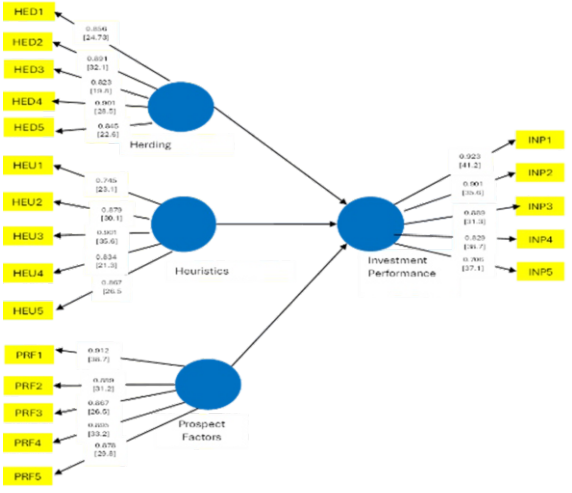
Statistic	INP	HED	HEU	PRF
Mean	3.323	3.364	3.818	3.342
Median	4.104	4.211	4.324	4.431
Maximum	5.000	5.000	5.000	5.000
Minimum	1.000	1.000	1.000	1.000
Std. Dev.	1.141	1.224	1.324	1.163
Skewness	0.034	0.854	0.739	0.631
Excess Kurtosi	1.996	3.142	2.098	3.053

Source: Researcher's Computations from Smart PLS3, 2024

Table 4.3 presents the descriptive statistics for four key variables in our study: Investment Performance (INP), Herding (HED), Heuristics (HEU), and Prospect factors (PRF). The mean scores for all variables fall between 3.3 and 3.8 on a 5-point scale, with Heuristics (HEU) showing the highest average at 3.818, followed by Herding (HED) at 3.364, Prospect factors (PRF) at 3.342, and Investment Performance (INP) at 3.323. This suggests that, on average, respondents reported moderately high levels of all four factors, with Heuristics being the most prominent. All variables share the same minimum (1.000) and maximum (5.000) values, indicating that the full range of the scale was utilized by respondents. The median values for all variables are higher than their respective means, ranging from 4.104 to 4.431, which suggests a slight negative skew in the distributions. Standard deviations range from 1.141 (INP) to 1.324 (HEU), indicating a moderate spread of responses across all variables. Heuristics (HEU) shows the highest variability among respondents. Skewness values are positive for all variables, ranging from 0.034 (INP) to 0.854 (HED). This indicates that all distributions are right-skewed, with Herding (HED) showing the most pronounced rightward skew. Investment Performance (INP) is nearly symmetrical with a skewness very close to zero. Excess kurtosis values are all positive, ranging from 1.996 (INP) to 3.142 (HED). This suggests that all distributions have heavier tails and higher peaks compared to a

normal distribution, with Herding (HED) showing the most pronounced leptokurtic characteristics. The distributions of all variables deviate from normality, showing right-skewness and leptokurtosis to varying degrees.

STRUCURAL MODEL



Hypotheses Testing

To assess the hypotheses formulated in this study, structural equation modeling (SEM) analysis was conducted using Smart PLS 3 software. Table 4.4 presents the results of the path coefficients along with their associated t-values, p-values, and f^2 values.

Table 4.4: Path Coefficient of the Model for Hypotheses Testing

Hypothesis	Beta	t-value	p-value	Decision	f^2
H_{o1}: Herding → Investment Performance	-0.084	-1.245	0.213	Accepted Ho	0.010
H_{o2}: Heuristics → Investment Performance	0.345	3.721	0.000	Rejected Ho	0.153
H_{o3}: Prospect Factors → Investment Performance	-0.278	-2.967	0.003	Rejected Ho	0.098

Source: Researcher's Computation from SmartPLS 3 2024

Table 4.4 presents the path coefficients and associated statistics for the structural equation model testing the relationships between Herding, Heuristics, Prospect Factors, and Investment Performance. The results provide insights into the factors influencing investment decisions and performance. The analysis reveals that Herding does not have a statistically significant effect on Investment Performance ($\beta = -0.084$, $t = -1.245$, $p = 0.213$). The negative coefficient suggests a slight inverse relationship, but the lack of statistical significance prevents the rejection of the null hypothesis (Ho_1). The effect size ($f^2 = 0.010$) is small, indicating that Herding explains only a minimal amount of variance in Investment Performance (Cohen, 1988). The findings from the study are supported by research of Apochi, et al., (2024). However, this contradicts the study of Nayak and Kumar (2021) that herding had a positive and insignificant impact on investment performance.

In contrast, Heuristics demonstrate a significant positive relationship with Investment Performance ($\beta = 0.345$, $t = 3.721$, $p < 0.001$). This result leads to the rejection of the null hypothesis (Ho_2). The moderate positive coefficient suggests that as the use of heuristics increases, investment performance tends to improve. The effect size ($f^2 = 0.153$) is medium, approaching the threshold for a large effect, indicating that Heuristics explain a substantial portion of the variance in Investment Performance (Hair et al., 2017). The findings from the study are supported by research of Shaukat, et al., (2022) while it contradicts that of Deng, et al., (2020) who established that Heuristics had negative and significant effect on performance of financial institutions.

Prospect Factors exhibit a significant negative relationship with Investment Performance ($\beta = -0.278$, $t = -2.967$, $p = 0.003$), resulting in the rejection of the null hypothesis (Ho_3). This moderate negative effect implies that as the influence of prospect factors increases, investment performance tends to decrease. The effect size ($f^2 = 0.098$) falls between small and medium, suggesting a notable but not dominant influence on Investment Performance. The findings from the study are supported by research of Barno and Tuwei (2020). It however contradicts the study of Oyaro and Nasution (2021) who found a positive and insignificant effect of prospect factors on investment performance.

These findings offer valuable insights into the dynamics of investment behavior and performance. The significant positive impact of Heuristics on Investment Performance aligns with cognitive theories in behavioral finance, suggesting that certain mental shortcuts or rules of thumb may enhance investment outcomes in specific contexts (Kahneman & Tversky, 1979). However, this result should be interpreted

cautiously, as excessive reliance on heuristics may also lead to biased decision-making in some situations. The negative relationship between Prospect Factors and Investment Performance supports the notion that risk perceptions and loss aversion, as described in Prospect Theory, can potentially hinder investment performance. This finding underscores the importance of managing psychological factors in investment decisions. Interestingly, the non-significant result for Herding challenges some previous research on social influence in financial markets. This outcome may suggest that, in the current sample, individual cognitive processes (represented by Heuristics) play a more crucial role in determining Investment Performance than social factors (Herding). The effect sizes (f^2) for all relationships range from small to medium, with Heuristics showing the largest effect. This indicates that while these factors are important determinants of Investment Performance, there may be other variables not included in this model that also contribute significantly to explaining the variance in investment outcomes.

Conclusion and Recommendations

The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the effect Behavioral Finance on Investment Performance of SMEs in the Federal Capital Territory and it reveals critical insights. Firstly, Herding showed an insignificant negative effect on investment performance. The study found heuristics to have a positive and significant effect on investment performance while prospect factors exhibited an insignificant negative effect on investment performance. The study concludes that Behavioral Finance has a significant effect on Investment Performance of SMEs in the Federal Capital Territory. Based on the findings of this study, it is therefore recommended that;

i. SME owners and managers should resist the urge to simply follow the crowd their investment decisions. Instead, cultivate a habit of independent thinking. Seek out diverse, reliable sources of financial information and invest in your own financial education. This approach can help you make more informed decisions tailored to your specific business needs, rather than potentially harmful choices based on what others are doing.
ii. SME owners and managers should develop and utilize simple, effective decision-making rules that work for their business context. For example, create a checklist of key financial indicators to review before making investment decisions, or establish clear thresholds for return on investment that guide your choices. These practical heuristics can help them make quicker, more consistent decisions that positively impact your investment performance.
iii. SME owners and managers when evaluating investment opportunities, should be aware of their natural tendency to overweigh potential losses compared to potential gains. To counter this, adopt a long-term perspective on their investments and focus on overall portfolio performance rather than individual investment outcomes. Consider working with a financial advisor to develop a diversified investment strategy that aligns with their risk tolerance and business goals, helping to mitigate the negative effects of loss aversion on decision-making.

References

Abdellaoui, M., Bleichrodt, H., & l'Haridon, O. (2021). Measuring loss aversion under ambiguity: A method to make prospect theory completely observable. *Journal of Risk and Uncertainty*, 62(1), 1-26.

Alda, M., & Ferruz, L. (2022). New insights into investment performance evaluation: An ethical and sustainable perspective. *Journal of Sustainable Finance & Investment*, 12(3), 719-739.

Apochi, G.J., Ahmed, N.M., Okpanachi, J., & Agbi, S.E. (2023). Effect of Prospect Factor and Herding Effect on Individual Investment Performance in Nigeria: Moderating Role of Financial Literacy, *European Journal of Accounting, Auditing and Finance Research* 11(7);1-15.

Apochi, J.G., Ahmed, N.M., Okpanachi, J. & Agbi, S.E. (2024) Herding Bias and Financial Risk Tolerance on Individual Investment Performance in Nigeria: Moderated by Financial Literacy, *International Journal of Business and Management Review*, 12 (3);1-17.

Baker, H. K., & Ricciardi, V. (2014). Investor Behavior: The Psychology of Financial Planning and Investing. John Wiley & Sons.

Barberis, N. C. (2023). Prospect theory in the wild: Evidence from the field. *Annual Review of Financial Economics,* 15, 419-440.

Barberis, N. C. (2023). Prospect theory in the wild: Evidence from the field. *Annual Review of Financial Economics*, 15, 419-440.

Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. Handbook of the Economics of Finance, 1, 1053-1128.

Barno, L. J. & Tuwei, J. K. (2020). Effect of Prospecting Bias on Investment Decision Making among Small and Medium Enterprise in Nairobi County. *Journal of Business Management and Economic Research (JOBMER)* 4 (3); 253-266.

Bikhchandani, S., & Sharma, S. (2000). Herd behavior in financial markets. *IMF Staff papers,* 47(3), 279-310.

Bikhchandani, S., Hirshleifer, D., & Welch, I., (2000). A theory of fads, fashion, custom, and cultural change as informational.

Birnbaum, M. H. (2008). New paradoxes of risky decision making. *Psychological Review*, 115(2), 463-501.

Chauhdary, N. S., Ghufran, B. & Khakwani, M. S. (2021). Impact of Behavioral Biases and Decision Analysis Methods on Investment Performance of Individual Investors at PSX. *Journal of Accounting and Finance in Emerging Economies,*7 (4),1003-1017.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), Modern methods for business research (pp. 295–336). Lawrence Erlbaum Associates.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum Associates.

Demirer, R., & Kutan, A. M., (2006). Does herding behavior exist in Chinese stock market? *Journal of International Financial Markets, Institutions and Money*, 16, 123-142.

Deng, A. S., Rono, L., & Sang, J. (2020). Heuristics and the Performance of Financial Institutions in South Sudan. *Modern Economy*, 11, 1641-1651.

Dhami, S., & al-Nowaihi, A. (2020). Prospect theory, risk and return in the stock market. *Journal of Economic Behavior & Organization*, 179, 674-696.

Dhami, S., & Al-Nowaihi, A. (2020). Prospect theory, risk, and return in the stock market. *Journal of Economic Behavior & Organization,* 179, 674-696.

Ferruz, L. & Vargas, M. (2007). A bet on passive investment strategies. *The Int. J. Applied Econ. Finance*, 1: 67-78.

Ferruz, L., Sarto J.L., & Andreu, L. (2008). Behavioural patterns in German and Spanish equity funds: A comparative study. *The Int. J. Applied Econ. Finance*, 2: 1-12.

Ferson, W. E., & Mo, H. (2023). Performance measurement with selectivity, market timing, and factor models. *Journal of Financial Economics*, 147(3), 538-557.

Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the Journal. *American Journal of Pharmaceutical Education*; 72(2), 43.

Gbandi, E. C., & Amissah, G. (2014). Financing options for small and medium enterprises (SMEs) in Nigeria. *European Scientific Journal*, 10(1), 327-340.

Gleason, K. C., Mathur, I., & Peterson M. A., (2004). Analysis of intraday herding behaviour among the sector ETFs. *Journal of Empirical Finance*11, 681-694.

Goud, K.A., Kumar, K. V. R., & Chakradhar, P. (2024). A Study on Behavioural Finance and its impact on Decision Making of an Investment. *EPRA International Journal of Economics, Business and Management Studies* (EBMS) 11 (3); 104-115.

Hadiwibowo, Y., (2010). Capital inflows and investment in developing countries: The case of Indonesia. *Int. J. Applied Econ. Finance*, 4: 220-229.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.). Sage.

Hascaryani, T.D., & Maski, G. (2021). Heuristic, Herding and Disposition Effect in Investor's Risk-Taking Behavior. *International Journal of Economics, Business and Management Research* 5 (12); 276-291.

Hirshleifer, D. & Teoh, S. H. (2003). Herd Behaviour and Cascading in Capital Markets: A Review and Synthesis.

European Financial Management, 9 (1), 25-66.

Isreal, G. (2013). Determining sample size, program evaluation and organizational development, University of Florida. PEOD-6.ISSN: 2151-6219.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-291.

Kung'u, M.N., & Kinyua, H.W. (2024). Effect Of Herding Behavior on Stock Market Liquidity at Nairobi Securities Exchange. *International Journal of Economics, Commerce and Management* 12 (2); 330-352.

Nayak, R., & Kumar, Y. (2021). Do market and herding effect really impact on investment decision making in the indian share market? *Turkish Journal of Computer and Mathematics Education,* 12(3), 5540–5555.

Nwankwo, O., & Akinsanmi, T. (2022). Heuristics and biases in SME financial decision-making: Evidence from the Federal Capital Territory. *Nigerian Journal of Management Sciences*, 23(2), 112-128.

Okafor, R. G., & Ede, F. O. (2021). The role of behavioral finance in investment decisions: A study of SMEs in Abuja, Nigeria. *Journal of Economics and Business Research*, 27(1), 157-172.

Oyaro, J., & Nasution, E. J. (2021). Analysis of behavioral factors influencing investment performance of individual investors in Nairobi securities exchange. *International Journal of Scientific and Research Publications*, 11(11), 37–51.

Rahayu, S., Rohman, A., & Harto, P. (2021). Herding Behavior model in investment decision on emerging markets: experimental in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(1), 53–59.

Raveendra, P.V., Singh, J.E., Singh, P., & Santhosh, K.S. (2022). Behavioral Finance and its Impact on Poor Financial Performance of SMEs: A Review. *International Journal of Mechanical Engineering and Technology (IJMET)* 9 (5); 341–348.

Rehan, M., Alvi, J., Javed, L., & Saleem, B. (2021). Impact of behavioral factors on investment decisions and performance: evidence from Pakistan stock exchange. *Market Forces College of Management Sciences* 16(1), 1–22.

Rosas, J. M., & Gigerenzer, G. (2022). Heuristics: A primer. In The Cambridge Handbook of Cognitive Science (pp. 324-340). Cambridge University Press.

Shaukat Malik, M., Irfan, M., Ullah Malik, K., & Mehdi, H. (2022). The Role of Heuristic Factors in Investment Performance: Exploring the Market Anomalies in a Volatile Environment. *Apuntes del Cenes*, 41(73); 61 - 82.

Siraji, M. (2019). Heuristics bias and investment performance: does age matter? Evidence from Colombo Stock Exchange. *Asian Journal of Economics, Business and Accounting*, 12(4), 1–14.