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Behavioural Factors Influencing Investment Decision Among Knowledge Workers in Bangalore

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Abstract

Purpose: The purpose of the study is to understand the behavioural factors influencing investment decision among knowledge workers in Bangalore. Heuristics, Overconfidence, Herding and Gamblers fallacy are the four factors of interest in the current study.

Design / Methodology: The current study is a quantitative research based on primary data collected from Knowledge workers specifically the Doctors, Academicians , Engineers and BFSI employees. Using the Kregcie-Morgan table for the calculation of sample size, a sample of 100 respondents at a 7.5% margin of error was considered. To account for non-responses, 120 questionnaires were distributed, and N= 99 responses were deemed suitable for the study. The sampling was done using convenience sampling. The questionnaire was also checked for its validity and reliability using the Gaskins master validity table. The AVE for all the four constructs was greater than 0.500, the Cronbach alpha and composite reliability were above 0.70. The discriminate validity was affirmed as the square root of AVE is greater than the interitem correlations.The Data interpretation was conducted using the Factor analysis using SPSS and confirmatory factor analysis using AMOS software

Findings: The findings of the study show that there is a significant impact of Heuristics, Overconfidence, Herding and Gamblers fallacy in investment decisions. Representativeness exerted a notable influence on investment selections, it was imperative for investors to additionally take into account other variables such as risk tolerance and market analysis in order to make informed and prudent choices.

Originality: The study's novelty stems from its examination of the behavioral aspects that impact investment decisions, with a specific emphasis on knowledge workers residing in Bangalore. Prior research has predominantly concentrated on examining investment decision-making among general populations or specific professional groups. The objective of this study is to address the existing research gap by investigating the distinct behavioral aspects that impact investment choices among knowledge workers in Bangalore, taking into account their specific attributes and preferences.

Implications: This study aims to enhance comprehension of investment behavior within this specific demographic and offer significant insights for financial advisors and policymakers to customize their tactics in order to meet the requirements and preferences of knowledge workers in Bangalore.

Keywords: Heuristics, Overconfidence, Herding, Gamblers fallacy, Behavioural factors, Investment decisions , Knowledge workers

INTRODUCTION

The process of making investment selections is intricate and necessitates meticulous deliberation. The process encompasses the evaluation of multiple variables, including but not limited to risk, return, and liquidity **Agarwal, A., Verma, A., & Agarwal, R. K. (2016).** Moreover, it is imperative for investors to do a thorough analysis of market trends, prevailing economic conditions, and the performance of various assets prior to reaching a choice. In addition, it is imperative for investors to consider their individual financial objectives, investment time frame, and capacity to bear risk **Bhattacharya, R. (2012).** The implementation of this comprehensive review procedure facilitates investors in making well-informed judgments that are in line with their investment objectives. Furthermore, it is imperative for investors to consistently evaluate and modify their investment portfolio in order to accommodate evolving market dynamics and guarantee alignment with their financial objectives **Deccax, R. A., &Campani, C. H. (2019).** In the realm of investing, the decision-making process necessitates the amalgamation of comprehensive study, meticulous analysis, and a lucid comprehension of one's individual financial circumstances. **Deshmukh, G. K., & Joseph, S. (2016).**

Heuristics pertain to cognitive methods or mental shortcuts employed by individuals to enhance decision-making or problem-solving efficiency. These heuristics frequently rely on prior experiences and can aid in simplifying intricate scenarios by offering a prompt and intuitive resolution **Fong, B. (2021).** Nevertheless, it is important to acknowledge that these methods can potentially introduce biases and inaccuracies in the process of decision-making, so compromising its overall accuracy and effectiveness. One instance of cognitive bias that can arise through the application of heuristics is the phenomenon of overconfidence in financial decisions. When individuals place excessive trust in their previous investment achievements, they may develop an inflated sense of confidence in their talents, leading them to engage in precarious or uninformed decision-making **Joo, B. A., &Durri, K. (2015).** This phenomenon has the potential to result in monetary deficits and an inability to effectively evaluate the prospective hazards implicated. It is imperative to possess an

understanding of the potential biases that may emerge from heuristics and to actively engage in the critical examination and assessment of our decision-making processes in order to guarantee outcomes that are more precise and ideal **Kandpal, V., &Mehrotra, M. R. (2018).** Representativeness is a cognitive shortcut that can lead to cognitive biases. When individuals employ the cognitive heuristic of representativeness, they may formulate judgments or reach choices by assessing the degree of resemblance between a given entity and a template or stereotype. This phenomenon might result in the neglect of crucial information or the establishment of unfounded assumptions. By cultivating an awareness of these biases and actively pursuing a range of various viewpoints and information, individuals can effectively reduce the potential adverse consequences of heuristics and enhance their ability to make well-informed and impartial judgments **Lakshmi, J., &Minimol, M. C. (2016).** The gambler's fallacy is a cognitive bias that has the potential to impact decision-making. The phenomenon in question arises when individuals hold the belief that the result of a stochastic event is impacted by preceding results, despite the fact that each outcome is statistically independent of one another **Virigineni, M., & Rao, M. B. (2017).** For instance, in the event that a somebody conducts a coin toss and observes five consecutive occurrences of heads, they can develop the belief that the subsequent flip is inclined to yield tails. Nevertheless, in actuality, the probability of obtaining either heads or tails on every coin flip remains constant, at 50/50. The recognition and comprehension of the gamblers fallacy can aid individuals in making more rational and logical decisions, particularly in circumstances that entail chance or probability. **Sahi, S. K., Arora, A. P., &Dhameja, N. (2013).**

Knowledge workers are persons who are primarily involved in activities that encompass the generation, examination, and utilization of knowledge. Professionals possess a range of specific skills, expertise, and information that enable them to effectively address intricate situations and arrive at well-informed conclusions **Vijaya, E. (2016).** These employees frequently depend on their intellectual capacities and cognitive reasoning rather than physical exertion, since their worth resides in their capacity to develop novel concepts and propel the advancement of the firm. In contemporary society, characterized by the prevalence of digital technology, the role of knowledge workers has gained significant importance across several sectors including technology, research, consulting, and education. These individuals play a crucial role in fostering innovation, enhancing productivity, and ultimately contributing to the overall success of these industries **Ramiah, V., Zhao, Y., Moosa, I., & Graham, M. (2016).** The relationship between knowledge workers and investment decisions is intricately interconnected. In the contemporary era characterized by digital advancements, knowledge workers assume a crucial function in the acquisition and examination of information, hence facilitating the formulation of informed investment choices. The proficiency and capacity to analyze huge quantities of data enable investors to make well-informed decisions and reduce potential risks. Furthermore, knowledge workers play a crucial role in the advancement of inventive investment methods through their ability to discern new trends and identify potential opportunities across diverse industries. Ultimately, the active participation of individuals in investing decisions has the potential to yield increased returns and foster long-term success for investors.

With this Background the current study is based on understanding the Behavioural factors influencing investment decision among knowledge workers in Bangalore. The study aims to identify the key factors that influence knowledge workers in Bangalore when making investment decisions. By understanding these behavioural factors, researchers hope to provide insights that can be used to develop effective strategies and interventions to improve investment decision-making among this group.

The first section of the study gives the rationale behind this study. The second section focusses on the review of literature. The research methods are specified in the third section and the fourth section presents the results of the study. The last section of this research concludes with limitations and scope for further research.

REVIEW OF LITERATURE

The current study employed a systematic literature review methodology to analyze previous scholarly publications that were pertinent to the research inquiries under investigation. The articles were acquired from esteemed scholarly journals and underwent thorough scrutiny to evaluate the degree of quality exhibited by each study. The databases that have been referenced encompass Elsevier, Routledge, and CRC Press Taylor and Francis. The databases employed in this study include the Emerald Group Publishing database, the Springer Nature database, and the Sage database. Several supplementary scholarly publications were acquired from reputable academic databases such as Wiley, Academia, JSTOR, and Guildford Press.

- **Dangol and Manandhar (2020)** The objective of this study is to evaluate the influence of heuristics on investment decision-making by examining the impact of four heuristic biases, namely representativeness, availability, anchoring and adjustment, and overconfidence bias, on the rationality of investment decisions made by Nepalese investors. Additionally, this research investigates the moderating role of internal locus of control in this relationship. The study employed a sample size of 391 participants, selected by a suitable selection method, and utilized a structured questionnaire survey. The findings of the study suggest a statistically significant association between irrationality in investing decision-making and all four heuristic biases. Furthermore, the research findings also indicate that locus of control has a substantial role in modulating the association between investment decisions and three heuristic biases, namely availability, representative, and anchoring bias. Nevertheless, the study does not provide evidence of a moderation effect in respect to the overconfidence bias.

- **Khan, I., Afeef, M., Jan, S., and Ihsan, A. (2021).** The primary objective of this study is to examine the impact of heuristic biases, specifically availability bias and representativeness bias, on the investment decisions made by investors in the Pakistan stock exchange. Additionally, this research aims to explore the potential moderating influence of long-term orientation on these biases. A comprehensive survey was conducted, employing a structured questionnaire, to gather data from a sample of 374 individual investors engaged in trading activities within the Pakistan Stock Exchange (PSX). The association was assessed by the utilization of the partial least squares structural equation model employing SmartPLS 3.2.2. Additionally, the data set was subjected to Henseler and Chin's (2010) product indicator technique for moderation analysis. The findings of the study indicate that the presence of availability bias and representativeness bias has a notable and favorable impact on the investment choices made by investors. Moreover, a noteworthy moderating influence of long-term orientation is revealed in relation to the impact of representativeness bias on investment decision-making. This finding implies that the long-term orientation of investors mitigates the impact of representativeness bias on investment decision-making. Nevertheless, the presence of availability bias did not yield any noteworthy moderating effect. This research presents original findings regarding the impact of heuristic-driven biases on the investing choices made by individual investors in the stock market. Specifically, it has improved the comprehension of the behavioral factors that influence investment decision-making in a developing market.
- **Saeed, K. (2019).** The primary objective of this study is to analyze the correlation between heuristic biases and investment decision-making. The authors' primary attention is on the important variable that played a moderating influence in relation to locus of control. The data collected for this study work was obtained through the use of structured questionnaires, which were completed by 250 individuals from various demographic backgrounds, including individuals with diverse levels of education, employment status, and social standing. This research demonstrates the significance of heuristic biases, such as mental accounting and price anchoring, in influencing investor decision-making. This implies that the presence of mental accounting and price anchoring biases significantly impact the decision-making process of individual investors. The main constraint of the study lies in the small sample size, which limits the reliability of the findings and restricts the potential for a broader range of inquiry. A larger sample would have yielded more robust results and allowed for a more comprehensive research. This article advocates for the implementation of certain activities within the corporate environment that can assist both individuals and households in mitigating biases and making optimal investment decisions. This work is a novel contribution to the existing literature, as it examines the relationship between heuristic biases and investment decision locus of control, with a particular emphasis on the moderating role of the latter.
- **Gupta and Shrivastava (2022).** There are numerous things that investors must evaluate before to making investments. While the significance of external factors cannot be disputed, there has been a growing recognition among experts in the past decade regarding the significance of internal factors in the realm of investment. This encompasses both behavioral and psychological variables. The examination of internal factors, commonly known as behavioral finance, is the subject matter under discussion. To what extent does behavioral finance play a crucial role and hold substantial significance in the context of investment decision-making? The objective of this study is to assess the influence of anchoring, herding bias, overconfidence, and ethical considerations on investing decision-making. A total of 149 questionnaires were disseminated among investors with diverse backgrounds in order to assess the influence of behavioral finance on investing decision-making. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to examine the study hypotheses. This research establishes that investment decisions are indeed influenced by behavioral and psychological biases and tendencies. Understanding behaviors in investing is crucial due to the possible negative impact of behavior biases and tendencies on investment outcomes. The comprehension of behavioral finance enables investors to mitigate the impact of behavioral biases and fix their investment errors.
- **Madaan and Singh (2019)** The conduct of individual investors is significantly influenced by a range of biases that have been emphasized in the emerging field of behavioral finance. Hence, this study serves as an additional endeavor to evaluate the influence of behavioral biases on investment decision-making within the National Stock Exchange. A questionnaire was developed and utilized to gather survey responses from a sample size of 243 investors. The current study has utilized both inferential and descriptive statistics methodologies. The present study examines four behavioral biases: overconfidence, anchoring, disposition effect, and herding behavior. The findings indicate that there is a notable positive influence of overconfidence and herding bias on investing decision-making. The findings of the study indicate that individual investors possess a restricted level of knowledge and are more susceptible to committing psychological errors. The study's findings also suggest that these four behavioral biases have an impact on individual investment decisions. This study will provide valuable insights for financial intermediaries seeking to offer informed guidance to their clients. Moreover, it is possible to expand the scope of research to investigate additional behavioral biases that may influence investing decision-making.
- **Nareswari, N., Balqista, A. S., and Negoro, N. P. (2021).** The primary objective of this study is to examine the influence of many behavioral factors, namely sentiment investor, overconfidence, salience, overreaction, and herd behavior, on the process of investing decision making. The data analysis technique employed in this study was partial least square structural equation modeling (PLS-SEM), with a sample size of 413 individual investors. The findings indicate that mood investors, overconfidence, salience, overreaction, and herd behavior have a beneficial impact on

investment decision making. The discovery made in this study holds significant significance for investors, as it emphasizes the importance of self-awareness in order to predict and mitigate biases that may influence financial decision-making.

- **Keswani, S., Dhingra, V., and Wadhwa, B. (2019).** Market anomalies and irrational conduct have been identified as elements that contribute to fluctuations in the stock market. As a result, there has been a growing interest in investigating the influence of different behavioral biases and factors on decision-making processes among individual investors. The primary objective of this study was to examine the impact of four distinct aspects, namely heuristic, prospect, market, and herding, on the decision-making process of investors within the context of the NSE (National Stock Exchange). The data are gathered from the questionnaire utilizing a Likert scale. In order to assess the questionnaire's reliability, the Cronbach alpha coefficient of 0.728 was employed. The application of EFA and numerous regression tests has been conducted. The Cronbach's alpha coefficient was employed to assess the internal consistency of the construct. The Cronbach's alpha coefficient was utilized to assess the internal consistency of each factor, namely Heuristic, Prospect, Market, Herding, Investment Performance, and Investors' Decisions, ensuring that the levels of consistency were deemed appropriate. The findings of the analysis indicate that the four variables have exerted a significant impact on both the investment choice and the return on investment. The decision-making process of investors is significantly influenced by behavioral variables, hence supporting the acceptance of assumptions regarding the extent to which behavioral elements impact decision making for individual investors.

Hypothesis Development

The influence of heuristics, overconfidence, gambler's fallacy, and representativeness on investment decisions can have substantial effects. Heuristics, also known as cognitive shortcuts, have the potential to prompt investors to make expeditious judgments relying on restricted information, which may not consistently exhibit accuracy or reliability. The phenomenon of overconfidence can lead to a tendency among investors to underestimate the potential dangers associated with their investing decisions, hence making excessively optimistic selections. The phenomenon known as the gambler's fallacy can result in investors developing the erroneous belief that previous outcomes would exert an influence on future outcomes, despite the absence of any causal relationship between the two. The cognitive bias of representativeness might lead investors to excessively depend on the perceived similarities between a prospective venture and a previously successful investment, while neglecting to evaluate other pertinent considerations. In general, cognitive biases have the ability to introduce distortions in investment decision-making processes, which may ultimately result in unfavorable financial results.

Hence, the Hypothesis

***H1*- Herding, overconfidence, Representativeness and Gamblers fallacy are behavioural factors influencing Investment decision**

RESEARCH METHODS

The current study is a quantitative research approach **Bloomfield, J., & Fisher, M. J. (2019),** based on primary data collected fromKnowledge workers specifically the Doctors, Academicians , Engineers and BFSI employees. Using the Kregcie-Morgan table **Chaokromthong, K., & Sintao, N. (2021)** for the calculation of sample size, a sample of 100 respondents at a 7.5% margin of error was considered. To account for non-responses, 120 questionnaires were distributed, and N= 99 responses were deemed suitable for the study. The sampling was done using convenience sampling. Convenience sampling **Stratton, S. J. (2021)** was chosen as it allowed for a quick and accessible way to gather data. A well-structured questionnaire was prepared by adapting previous studies and incorporating relevant demographic questions. The questionnaire consisted of various sections that aimed to assess different aspects of behavioral factors . The questions were carefully worded to ensure clarity and avoid bias, allowing participants to provide accurate and meaningful responses. Additionally, experts in the field to ensure its validity and reliability reviewed the questionnaire. The questionnaire was also checked for its validity and reliability using the Gaskins master validity table. The AVE for all the four constructs was greater than 0.500, the Cronbach alpha and composite reliability were above 0.70. The discriminate validity was affirmed as the square root of AVE is greater than the interitem correlations. **Shia, T. H.,et al (2023) and Hair Jr, J. F., et al (2020).**

The data was collected using the google forms and survey method. Participants were asked a series of questions regarding their preferences and opinions on various topics. The Google Forms platform allowed for easy distribution of the survey and efficient data collection. The method proved to be effective in gathering a large sample size and analyzing the responses accurately. The Data interpretation was conducted using the Factor analysis using SPSS and confirmatory factor analysis using AMOS software **Hair Jr, J. F., et al (2020).**. This allowed for a thorough examination of the underlying factors and patterns within the collected data. The results highlighted significant correlations and associations between different variables, providing valuable insights into the participants' preferences and opinions. Overall, the combination of the Google Forms survey method and advanced statistical analysis tools proved to be a robust and reliable approach for understanding the target population.

RESULTS AND DISCUSSION

Demographic Profile of the Knowledge workers

The incorporation of demographic factors is essential for an accurate examination and comprehension of the collected data. This methodology allows researchers to identify potential biases or discrepancies in perspectives, depending on factors such as age, gender, ethnicity, income, educational level, and geographic location. Researchers have the opportunity to improve the representativeness of their findings and draw conclusions that are more informed by taking into account the demographic characteristics of the study participants.

Table 1 – Demographic Profile of the Investors - knowledge workers

Gender	**Frequency**	**Percent**
Female	22	22.2
Male	77	77.8
Total	99	100.0
Age		
<= 30 years	62	62.6
>=61 years	1	1.0
31-40 years	27	27.3
41-50 years	7	7.1
51-60 years	2	2.0
Total	99	100.0
Marital status		
Divorced	1	1.0
Married	37	37.4
Single	61	61.6
Total	99	100.0
Qualification		
Above Postgraduation	4	4.0
Below Graduation	9	9.1
Graduation	49	49.5
Post Graduation	37	37.4
Total	99	100.0
Income		
10,00,001 and above	13	13.1
2,50,001-5,00,000	29	29.3
5,00,001-7,50,000	18	18.2
7,50,001-10,00,000	8	8.1
Less than 2,50,000	31	31.3
Total	99	100.0
Occupation		
Doctors	7	7.1
Academicians	12	12.1
Engineers	55	55.6
BFSI employees	25	25.3
Total	99	100.0
Investment experience		
Below 1 year	22	22.2

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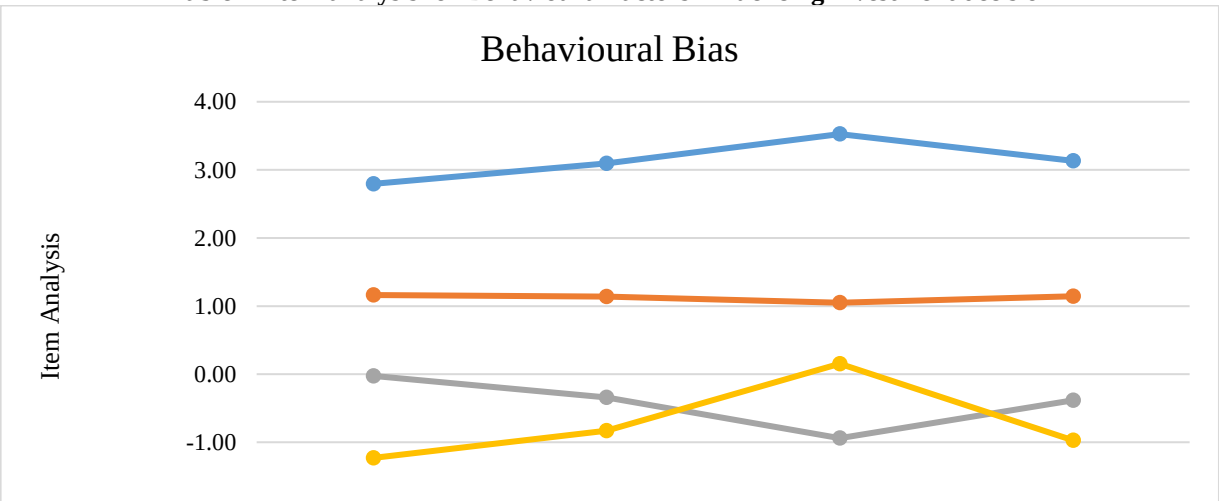
1-4 years	57	57.6
4-7 years	10	10.1
7-10 years	2	2.0
10 years and above	8	8.1
Total	99	100.0
Income percentage		
<10%	49	49.5
>30%	9	9.1
11-20%	34	34.3
21-30%	7	7.1
Total	99	100.0

Source- Author Created

Item Analysis for behavioral factors influencing investment decision

Item analysis involves the examination of descriptive statistics, including measures such as the mean, standard deviation, skewness, and kurtosis, in order to gain a comprehensive picture of the data. Conducting item analysis is crucial for evaluating the quality and reliability of a measurement equipment. Through the analysis of these descriptive statistics, researchers are able to ascertain if the items under investigation effectively capture the intended constructs and exhibit satisfactory operational characteristics. Furthermore, the utilization of item analysis facilitates the identification of items that exhibit problematic characteristics, hence necessitating potential revisions or removal from the instrument in order to enhance its validity and accuracy. Item analysis is of utmost importance in guaranteeing the integrity of study outcomes and the validity of the measurement tool employed.

Table 2- Item analysis for Behavioural factors influencing investment decision



	Herding	Over confidence	Representativeness	Gamblers Fallacy
Mean	2.79	3.10	3.53	3.13
Std. Deviation	1.16	1.14	1.05	1.14
Skewness	-0.03	-0.34	-0.94	-0.38
Kurtosis	-1.23	-0.83	0.15	-0.97

Source- Author created

The present study assesses behavioral characteristics using four subscales, namely Heuristics, Herding, Overconfidence, and Gamblers Fallacy. Table 2 presents the average scores for all the subscales of behavioural components, which are consistently higher than 2.50. This suggests that the responses fall within a range that spans from neutral to agreement. The findings of this study indicate that the participants tend to display moderate degrees of heuristics, swarming behavior, overconfidence, and belief in the gambler's fallacy. The range of responses from neutrality to agreement suggests that individuals often employ cognitive heuristics, conform to social norms, exhibit overconfidence, and subscribe to the belief that past events impact future probability. The provided information offers significant insights into the behavioral

inclinations of the participants, underscoring the necessity for additional investigation to comprehend the ramifications of these aspects in decision-making procedures. Moreover, the existence of cognitive heuristics implies that individuals may exhibit a tendency to create hasty judgments and disregard crucial facts. Conforming to the actions and opinions of others, as observed in the act of following the crowd, can result in the phenomenon of groupthink and a potential dearth of critical thinking. The presence of an abundance of self-assurance can lead to the manifestation of overconfidence bias, wherein individuals tend to underestimate potential hazards and overestimate their own capabilities. Ultimately, the adherence to the gambler's fallacy demonstrates a lack of comprehension regarding the principles of probability, which may consequently result in suboptimal decision-making predicated upon erroneous presumptions. Gaining a comprehensive understanding of these behavioral patterns is of utmost importance in enhancing decision-making processes and formulating effective solutions to mitigate biases.

H1- Herding, overconfidence, Representativeness and Gamblers fallacy are behavioural factors influencing Investment decision

Exploratory Factor analysis

The KMO measure of sampling adequacy, which is equal to 0.857, and Barlett's Test of Sphericity, which comes with a significance level of 5%, are statistically significant. It was found by chi-square analysis that the Chi-square value of the Bartlett test is 1392.875 with the significant value less than 0.05 and 253 degrees of freedom, which shows that correlation matrix, is not an identity matrix and that it looks to be factorable.

Communalities refer to the extraction values for each of the items and should be above 0.300 and the communalities for items under Behavioural factors influencing investment decision were between 0.419 and 0.815

The total of squared loadings that has been removed accumulates to about 64.365% of the original loadings. In social sciences, a cumulative Rotation Sums of Squared Loadings is considered good if it is above 50%. Four components are discovered while applying the approach of Factor Analysis, according to the results of the study.

The rotated component matrix showed that due to the appropriate factor loadings no items were deleted from the study. Herding factor has 6 items, Overconfidence has 8 items, Representativeness has 6 items and Gamblers fallacy has 3 items which is shown in the Table 3

Table 3 – Determinants of Behavioural factors influencing investment decision – Rotated component matrix

Rotated Component Matrix[a]

	Component			
	1	2	3	4
Representativeness_3	0.860			
Representativeness_4	0.816			
Representativeness_6	0.811			
Representativeness_5	0.791			
Representativeness_2	0.687			
Representativeness_1	0.621			
Gambler_Fallacy_2		0.826		
Gambler_Fallacy_1		0.783		
Gambler_Fallacy_3		0.733		
Herding_4			0.884	
Herding_3			0.880	
Herding_2			0.810	
Herding_1			0.805	
Herding_6			0.744	
Herding_5			0.629	
Overconfidence_2				0.781
Overconfidence_7				0.692
Overconfidence_1				0.673
Overconfidence_5				0.617
Overconfidence_4				0.584

Overconfidence_6	0.575
Overconfidence_3	0.572
Representativeness_1	0.538
Overconfidence_8	0.533

Source- Author created

6 items loading under the herding factor had factor loading between 0.884 to 0.629, Overconfidence has 8 items which had factor loading ranging between 0.781 to 0.533, Representativeness has 6 items with factor loading starting at 0.860 and closing at 0.621 and Gamblers fallacy has 3 item with factor loading ranging between 0.826 and 0.723. This indicates that the items in the study are fit for further analysis. This suggests that the items included in the study possess the necessary qualities to undergo further examination and can be regarded as dependable indicators of their respective constructions. The robust factor loadings indicate a good correlation between the items and their respective latent components, implying that they successfully measure the intended psychological constructs. The results of this investigation instill confidence in the reliability and validity of the measurement instruments employed, hence affirming their appropriateness for subsequent analysis and interpretation.

Model reliability and validity

Table 4 - Reliability and validity statistics – Determinants Behavioural factors influencing investment decision

	CR	AVE	MSV	MaxR(H)	Rep	OVc	Heu	GF
Rep	0.930	0.769	0.903	0.937	**0.877**			
OvC	0.820	0.503	0.082	0.887	0.149	**0.634**		
Heu	0.955	0.632	0.958	0.940	0.887	0.432	**0.764**	
GF	0.974	0.740	0.958	0.935	0.896	0.214	0.979	**0.455**

Rep – Representativeness, Ovc- Over Confidence, Heu – Heuristics , GF – Gamblers Fallacy

The table 4 shows the statistics for convergent and discriminate validity**.** The questionnaire's validity was assessed by many measures. Firstly, the composite reliability (CR) was examined, which needed to exceed a threshold of 0.70. Secondly, the average variance explained (AVE) was considered, which needed to be greater than 0.50. Additionally, the maximum shared square variance (MSV) was evaluated, which needed to exceed the AVE. Lastly, the maximum reliability (MaxR(H)) was assessed, which needed to be greater than the MSV. The second criterion for assessing validity is known as discriminant validity, which entails the evaluation of discriminant validity using the Fornell-Lacker criterion. **Afthanorhan, A., et al.(2021).**

Table 5 - Measurement Model – Determinants of Behavioural factors influencing investment decision

Model Fit Summary				
CMIN				
Model	NPAR	CMIN	Degrees of Freedom	CMIN/DF ($\chi 2$/df)
Default model	87	212.997	735.677	2.895
Criteria				<3.000
RMR, GFI				
Model	RMR	GFI	AGFI	PGFI
Default model	0.035	0.877		
Criteria	<0.100	>0.80		

Source – Author created using AMOS

The table 5 displays the essential statistics for model fit. The chi-square statistic divided by the degrees of freedom ($\chi 2$ / df) is observed to be within the permissible range of 3, precisely measuring at 2.895. The observed result for Goodness of Fit (0.877) exceeds the proposed criteria. The boundary estimation results in a calculated value of 0.035 for the resting metabolic rate (RMR). The aforementioned model has received substantial attention among scholars, and its measures of fit are deemed reasonably suitable.

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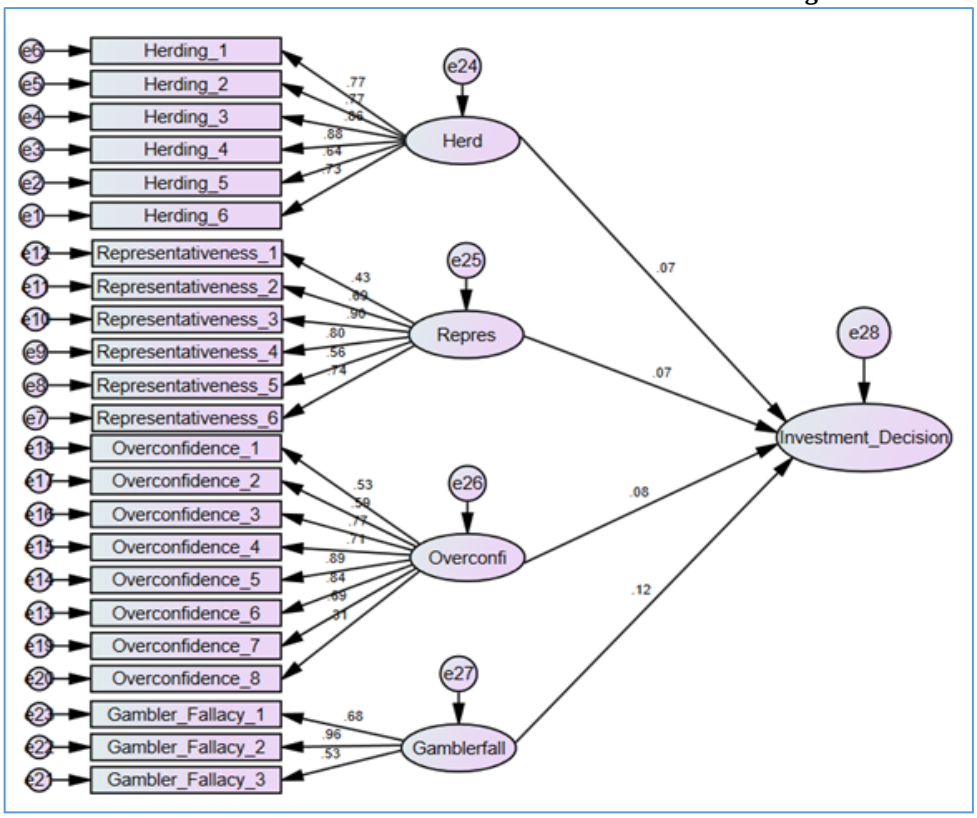
Table 6 – Structural relationship - Determinants of Behavioural factors influencing investment decision

			Unstd Estimate	Std Estimate	P value
Investment_Decision	<---	Herding	0.282	0.072	***
Investment_Decision	<---	Representativeness	0.398	0.073	***
Investment_Decision	<---	Overconfidence	0.188	0.082	***
Investment_Decision	<---	Gamblerfallacy	0.201	0.118	***

Source – Author created using AMOS

Table 6 presents an analysis of the influence of behavioral characteristics, namely Herding, Representativeness, Overconfidence, and Gambler's Fallacy, on investing decision-making. Both standardized and unstandardized estimates are included, together with the corresponding p-values, which serve as indicators of the importance of the association. The findings suggest that the three identified behavioral elements exert a noteworthy influence on individuals' investing decision-making processes. There exists a positive correlation between herding behavior, representativeness heuristic, and overconfidence in relation to investment decision-making. This implies that individuals tend to rely on the behavior of others, their own biased views, and an inflated sense of confidence when making investment choices. Moreover, the obtained p-values indicate that these associations possess statistical significance, hence providing additional support for the significance of behavioral factors in influencing investment choices.

Figure 1 - Structural Model - Determinants of Behavioural factors influencing investment decision



Source- Author created using AMOS

One unit increase in mean scores of herding will have a positive impact on investment decisions by 28% (B = 0.282, b = 0.072, p = 0.000). This suggests that as the mean scores of herding increase by one unit, investment decisions are likely to be influenced positively by 28%. The coefficient B of 0.282 indicates a strong relationship between herding and investment decisions. Additionally, the low p-value of 0.000 suggests that the relationship is statistically significant, further supporting the notion that herding has a significant impact on investment choices. These findings imply that investors are more likely to follow the crowd and make investment decisions based on the actions of others. The coefficient of 0.072 for b indicates a smaller, but still positive, impact of herding on investment choices. The statistically significant p-value of 0.000 strengthens the argument that herding plays a crucial role in shaping investment decisions and should be considered by investors when making their own choices.

One unit increase in mean scores of representativeness will have a positive impact on investment decisions by 40% (B = 0.398, b = 0.073, p = 0.000). The strong coefficient B of 0.398 suggests that there is a significant relationship between representativeness and investment decisions. This means that as the mean scores of representativeness increase, investment decisions are likely to be influenced positively by 40%. The low p-value of 0.000 further confirms the statistical significance of this relationship, solidifying the idea that representativeness plays a significant role in investment choices. These findings highlight the importance of considering representativeness when making investment decisions. Investors who rely heavily on representativeness may be more prone to biases and may be more influenced by past experiences or recent events when making investment choices. Therefore, it is crucial for investors to be aware of these biases and to consider other factors, such as diversification and long-term performance, in order to make well-informed investment decisions. Additionally, further research could explore the specific mechanisms through which representativeness influences investment choices and whether these effects are consistent across different market conditions.

One unit increase in mean scores of overconfidence will have a positive impact on investment decisions by 19% (B = 0.188, b = 0.082, p = 0.000). This suggests that individuals who exhibit higher levels of overconfidence are more likely to make riskier investment decisions. The statistical significance of the relationship, indicated by the low p-value, reinforces the notion that overconfidence has a noteworthy influence on investment choices. Therefore, it is crucial for investors to be aware of their overconfidence tendencies and to consider the potential biases they may introduce into their decision-making process. By being aware of their overconfidence tendencies, investors can take steps to mitigate their potential negative impact on their decision-making process. This may involve seeking second opinions or conducting thorough research before making investment choices. Additionally, education and self-reflection can be valuable tools in helping investors recognize and address their overconfidence biases. Ultimately, by understanding and managing their overconfidence, investors can make more informed and potentially less risky investment decisions.

One unit increase in mean scores of the Gambler Fallacy will have a positive impact on investment decisions by 20% (B = 0.282, b = 0.118, p = 0.000). This suggests that as individuals become more prone to the gambler fallacy, their overconfidence in making investment decisions increases by 20%. This finding further supports the idea that cognitive biases, such as overconfidence, can significantly affect the choices investors make. Therefore, it is essential for investors to recognize and address these biases in order to make more informed and rational investment decisions. By acknowledging the impact of the Gambler Fallacy on investment decisions, investors can take steps to mitigate its influence. This may involve seeking advice from financial professionals, conducting thorough research, and diversifying their portfolios. Additionally, education and awareness about cognitive biases can play a crucial role in improving decision-making processes. Ultimately, recognizing and addressing these biases can lead to more successful and profitable investment outcomes.

CONCLUSION

The investment decisions of knowledge workers are influenced by various factors, including herding behavior, heuristics, overconfidence, and the gambler's fallacy. Even persons who possess a high level of education and extensive knowledge, sometimes referred to as knowledge workers, are susceptible to the influence of psychological biases. One example of a behavioral bias that might influence investment decisions is herding behavior, wherein individuals tend to imitate the activities of others rather than conducting their own independent analysis. In a similar vein, the utilization of heuristics and the presence of overconfidence among knowledge workers may prompt them to depend on cognitive shortcuts and overrate their capacity to forecast market trends, so engendering the possibility of engaging in precarious investment decisions. The gambler's fallacy might potentially lead knowledge workers to make illogical decisions by mistakenly assuming that previous outcomes will have an impact on future ones, hence dismissing the actual probability of success. In general, the presence of psychological biases can exert a substantial impact on the investment choices made by individuals employed in knowledge-based professions. Consequently, it becomes imperative for these individuals to possess an understanding of these biases and effectively mitigate their effects. This study holds significance as it elucidates the significance of comprehending the psychological aspects that can influence investment decisions. By acknowledging these biases, individuals in knowledge-intensive professions can enhance their decision-making process and mitigate the probability of engaging in high-risk investments. This study highlights the importance of continuous education and training to cultivate effective approaches for mitigating biases and enhancing decision-making within the investing domain. In conclusion, this heightened level of consciousness has the potential to result in improved results and enhanced financial prosperity for individuals engaged in knowledge-based occupations.

The research strategy employed in this study is quantitative in nature. In future investigations, researchers may consider adopting a mixed methodology approach that integrates both quantitative and qualitative methodologies. This combined approach would provide a more comprehensive exploration of the biases and decision-making processes exhibited by knowledge workers in the investment domain. Researchers can enhance their understanding of the specific biases that impact decision-making and formulate focused strategies for mitigating them by gathering both quantitative data and qualitative insights through interviews or surveys. The utilization of a mixed methodological approach will facilitate a

more comprehensive comprehension of the intricacies associated with investment decision-making, hence contributing to the development of future educational programs and training initiatives targeted towards knowledge workers in this particular domain. One weakness of the study is its limited sample size. It is recommended that future researchers consider utilizing a larger sample size that is tailored to the population of knowledge workers being studied. This would provide a more thorough examination of the biases that impact decision-making within the investment domain. Furthermore, it is recommended that future investigations incorporate longitudinal study methodologies to analyze the progression of biases over an extended period and their influence on investment results. Subsequently, the aforementioned findings may be utilized to formulate customized interventions and training initiatives that precisely address the biases discerned within distinct cohorts of knowledge workers. This, in turn, has the potential to enhance their decision-making proficiencies within the realm of investing.

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