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"Examining The Relationship Between Financial Behavioural Bias And Demographic Variables: A Study In The Hubli-Dharwad Region"

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Abstract

This paper aims to look into the relationship between behavioral biases and demographic factors like gender, age, income level, educational attainment, occupation, marital status, and investment experience. 120 individual investors in Bangalore were surveyed for the study, using a one-way variance analysis (ANOVA). Overconfidence and self-attribution, the disposition effect, mental accounting, and emotional biases in Indian investors are among the behavioral biases revealed by the findings. Findings show that individual investors do not always act rationally, which supports the theory. Despite the wealth of information available on behavioral finance, only a small number of academic studies have attempted to establish the link between behavioral biases in different demographic groups. By attempting to fill this void, this research adds to the body of knowledge.

Keywords: Behavioral biases, Investment experience, ANOVA, Demographic variables,

Introduction:

The contrast between conventional and behavioral finance has been highlighted by recent market developments. Individuals, institutions, and markets are viewed as rational in the context of traditional finance (Bake & Filbeck, 2013) . Contrary to popular belief, behavioral finance holds that investors consistently deviate from the path of most profitable financial decisions (Tourani-Rad & Kirkby, 2005). According to behavioral finance (Yoong & Ferreira, 2013) , which investigates market behavior that deviates from conventional assumptions, the market is inefficient (Shiller, 2003) . Cognitive illusions or biases are the terms used to describe these irregularities in judgment. It's essential to understand how behavioral biases influence investment decisions because reasoning errors are difficult to overcome (Kahneman & Riepe, 1998).

A growing body of research shows that consumers' willingness to use financial products and services is best served by providing them with financial education. Investor financial literacy is examined by Takeda et al. (2013). Some researchers believe that a person's ability to make sound financial decisions is tied to their personality type (Dhar & Zhu, 2006) . Investing behavior can also be explained by demography, according to another line of research (Barber & Odean, 2000) . However, there is a lack of evidence on the link between financial literacy and behavioral bias.

Indian stock investors' behavioral biases are examined in this study. In India, behavioral finance has received very little attention. India's stock market has nine times as many individual investors as any other equities market in the world, making individual investors a vital part of the country's economy (Ramadorai, 2013)

Behavioral bias research generally uses investor trading data (Barber & Odean, 2000) ; (Dhar & Zhu, 2006). The study uses survey data from 516 Indian stock market investors to get a new perspective. Primary data, according to (Lin, 2011) , better reflect investor behavior than secondary data.

There is a lack of research on how financial knowledge and demographics affect behavioral biases among Indian investors. However, the Indian financial services sector today offers a wide choice of investment and savings solutions. With minimal skills and financial understanding, Indian investors rely on their opinions and inclinations to drive their financial decisions. Individual investment behavior in India must be studied. This work contributes to the behavioral finance literature by filling that gap. The remainder of this research is organized as follows. The following section discusses research techniques and hypotheses before reviewing relevant literature and theory on individual investor investment behavior. A summary and conclusions follow the data analysis and findings.

Literature Review

(Mouna & Jarboui, 2015) The goal of this research is to examine financial illiteracy as a possible explanation for insufficient portfolio diversification. The authors adjust for socioeconomic and behavioral disparities among particular investor groups. This paper proposes multivariate models to investigate the relationship between financial literacy and portfolio diversification. A questionnaire used to assess investors' biases included questions about portfolio fragmentation, financial literacy, and socioeconomic factors. There are 256 small investors on the Tunisian stock exchange. The findings indicate that investors' experience, financial literacy, age, availability heuristic, familiarity bias, and portfolio size all have an impact on the asset variety in their portfolios. The empirical study has a small sample size. Uncertainty and analysis would have been improved with a larger sample. The author recommends investors make their decisions based on knowledge and experience rather than emotion. A financial literacy program for individuals is suggested. The current study is the first of its kind in Tunisia.

(Ateşa, Coşkunb, Şahinc, & Demircan, 2016)Investors' judgments and behaviors are influenced by their financial knowledge and behavioral biases. A survey of 596 individual stock investors looked at financial literacy, behavioral biases, and the link between the two. Many investors lack basic financial literacy and rely on advice from family or friends. The findings also show a significant level of behavioral biases. Financial literacy affects many behavioral biases, yet some are unrelated to financial literacy.

(Özen & Ersoy, 2019) Individuals, according to Markowitz (1952), make reasonable decisions when it comes to their finances. People's psyches have a substantial influence over their financial decisions, according to Kahneman and Tversky (1979). Factors such as age, gender, and the educational position may play a role in these decisions. The researcher is interested in finding out if financial literacy affects the cognitive bias of individuals when it comes to making investments. A total of 444 people were interviewed for this study. People who lack financial literacy have distinct cognitive biases than people who have received financial education and business experts, according to a study. According to the findings, raising one's degree of financial literacy has a positive impact on financial market investor behavior by reducing cognitive biases and heuristics.

(Rasool & Ullah, 2020) Individual investor behavior in areas like budgeting, house finance, stock investing, and retirement planning are all influenced by a person's level of financial literacy. In other words, the purpose of this research is to see if there is any correlation between investor behavior and financial literacy in Pakistan. This research included a survey of Lahore-based investors on the Pakistan Stock Exchange. Cronbach's Alpha and EFA were then applied to the data (EFA). Using Chi-Square and Ordinal Regression Analysis, we looked at the research question's central claim. The study hypothesis was investigated using

Chi-square and Ordinal Regression Analysis. The study found a link between financial literacy and investor behavioral biases. Financial education reduces investor behavioral biases. More financially literate males than females? There are several factors impacting Pakistani investors' financial decisions, but none have focused on the essential relationship between financial literacy and behavioral biases. Thus, this study's unique empirical methodology stresses financial literacy as a factor that reduces investor behavioral biases.

(Suresh, 2021)The ability of investors to make logical investment decisions while avoiding the cognitive illusions, heuristic bias, framing effect, and herd mentality aspects that influence their decision-making is an important part of their financial literacy. Financial literacy and behavioral biases are examined in this study to see how they affect investment decisions. A Likert-scaled questionnaire was used to collect data for the study, and the results were analyzed using SEM. Researchers found a strong link between heuristic bias and decision-making that exhibited a behavioral bias. Cognitive illusions, framing effect, and herd mentality, on the other hand, are associated with the development of behavioral biases. Heuristic biases, in particular, are frequently used by investors to make investing decisions. This means that stock market investment decisions are heavily influenced by the financial literacy of individual investors.

Theoretical background

Behavioral biases and investment decisions

Researchers in the fields of behavioral psychology and finance have discovered investment biases. Individual investor irregularities are often caused by behavioral biases. According to Kahneman and Tversky, when faced with risk and uncertainty, people make irrational decisions (1979). Behavioral biases are critical to understanding individual investment decisions, according to Sahi and colleagues (2013).

Overconfidence and self-attribution

Investors who are overconfident in their abilities, intuition, and judgments make poor investment decisions (Pompian, 2006) Excessive self-confidence and self-attribution bias go hand in hand (Mishra and Metilda, 2015). The overconfidence bias of individual investors, according to Barber and Odean, leads to excessive trading and bad results (2000). According to Hoffmann and Post (2014), there is a self-attribution bias based on survey data and customer transaction records.

Disposition effect

The disposition effect is empirically supported by Fogel and Berry (2006). According to the research, people feel guilty about keeping a losing investment for too long and selling a winning one too early. Individual investors prefer to sell equities that have increased in value over those that have decreased in value, according to the findings of Barber and Odean (2013).

Mental accounting

Individual investors are affected by behavioral biases, such as mental accounting. Using a mental accounting bias is a method of investing in which an investor views each component of their portfolio as a distinct entity. They prefer to focus on each stock or asset rather than the portfolio as a whole.

Availability

To put it another way, Tversky and Kahneman (1974) claim that people can estimate the likelihood of an event or class based on how easy it is for them to recall previous examples. When it comes to making financial decisions, investors often use the availability heuristic, which can be detrimental to their long-term success.

Emotional bias

As well as sensitivity to loss, emotional bias also covers a dislike of reflecting on the past and feeling guilty about mistakes made. According to Kahneman and Tversky, people suffer twice as much as they would if they had gained as a way of making up for what they've lost (1979). Thus, regret is an emotional component that is produced when people commit a mistake and remember their past mistakes when making current judgments.

Investor characteristics and behavioral biases

There is evidence to suggest that an investor's behavior is influenced by his or her age and gender. According to Cronqvist and Siegel (2014), investors' investment behavior varies significantly due to their own experiences and circumstances. Demographic factors and the behavioral biases examined in this study have been linked in several studies, some of which are listed below:

Many studies have found that male investors are more likely than female investors to be overconfident in their abilities to make money (Barber et al. 2001; Studying demographic characteristics (age in particular), Prosad et al. (2015) looked at whether overconfidence and the disposition effect were linked to demographic characteristics like age, gender, income, professions, and experiences. Their findings show that age, profession, and experience are more strongly linked to behavioral biases than the other variables studied. According to Tekçe et al. (2016), individual investors' overconfidence and familiarity bias decrease with age and wealth.

The level of over-optimism, overconfidence and loss aversion among unmarried investors is significantly higher than among married investors, according to Ates and colleagues (2016).

According to Goo et al. (2010), investors with a higher level of education had a smaller effect on their disposition. According to Bhandari and Deaves (2006) and Deaves et al. (2007), overconfidence increases with education (2010). Investors with less education were more likely to demonstrate representational bias according to Ates et al. (2016).

As far as overconfidence, optimism, and the "disposition effect" are concerned, one's profession has a stronger link than the "herding bias."

Annual income: On the other hand, Dhar and Zhu (2006) discover that low-income group investors have a larger disposition effect than other investors. Similarly, Kumar and Goyal (2016) discover that individual investors' overconfidence bias varies depending on their income. Upper-income investors are less confident than lower-income investors. Income has little to do with the disposition effect, herding bias, and overconfidence, says Lin (2011).

Glaser et al. (2004) discovered that more experienced persons are more overconfident than less experienced people. Ates et al. found that more experienced investors have overconfidence, self-attribution, and anchoring biases (2016).

Research methodology

There are questions about the financial literacy of individual Indian investors, as well as about their demographics and behavioral biases. Both academics and business professionals looked over the survey to make sure it was accurate. The five behavioral bias is measured across demographic characteristics. The data is collected from a well-structured questionnaire through an email survey from the investor's list obtained from one of the brokerage firms from 2022 January to February 2022 in Bengaluru. A sample of 120 respondents is considered for the study.

Data analysis and findings

To test the hypothesis that there is a significant difference in different behavioral biases such as Overconfidence and self-attribution, Disposition effect, Mental accounting, Availability, and Emotional bias concerning demographic characteristics such as gender, age, marital status, education, occupation, Annual income and investment Experience in the stock market One Way ANOVA is applied. The frequency table of demographic variables and descriptive statistics of Behavioural bias is depicted in tables 1 and 2.

Table 1: Descriptive Statistics of different Indicators of Behavioural Bias

Behavioral Bias	N	Mean	Std. Deviation
Over confidence and self attribution	120	4.2667	.64474
Disposition effect	120	4.2083	.67233
Mental accounting	120	4.1500	.68169
Availability	120	4.1000	.73793
Emotional bias	120	2.9333	1.45944

Table 2: Sample Structure

Gender	Frequency	Percent	Cumulative Percent
Male	83	69.2	69.2
Female	37	30.8	100
Total	120	100	
Age	Frequency	Percent	Cumulative Percent
18-30 Years	61	50.8	50.8
31-45 Years	36	30	80.8
41-60 Years	20	16.7	97.5
> 60	3	2.5	100
Total	120	100	
Marital Status	Frequency	Percent	Cumulative Percent
Married	82	68.3	68.3
Unmarried	38	31.7	100
Total	120	100	
Education	Frequency	Percent	Cumulative Percent
Up to Schooling	18	15	15
Graduate	58	48.3	63.3
Postgraduate	40	33.3	96.7
Doctorate	4	3.3	100
Total	120	100	
Occupation	Frequency	Percent	Cumulative Percent
Private Sector	59	49.2	49.2
Public Sector	29	24.2	73.3
Self Employed	21	17.5	90.8
Others	11	9.2	100
Total	120	100	
Annual Income	Frequency	Percent	Cumulative Percent
Less than 3 Lakhs	24	20	20
3-6 Lakhs	50	41.7	61.7
> 6-10 Lakhs	32	26.7	88.3
> 10 Lakhs	14	11.7	100
Total	120	100	
Investment Experience	Frequency	Percent	Cumulative Percent
Less than 2 Years	27	22.5	22.5
2-5 Years	61	50.8	73.3
> 5-10 Years	21	17.5	90.8
>10 years	11	9.2	100
Total	120	100	

The output of descriptive statistics of different behavioral biases is depicted in the table. The average value of different behavioral biases is more than 4 except for emotional bias. To examine whether the mean difference of behavioral bias across demographic variables is statistically significant, an independent sample t-test based and one-way ANOVA is applied.

Table 3: Test Statistics

Gender		
	t	Sig.
Overconfidence and self attribution	-0.652	0.515
Disposition effect	-0.672	0.503
Mental accounting	-0.13	0.897
Availability	2.958	0.004
Emotional bias	-2.706	0.008
Marital Status		
	t	Sig.
Overconfidence and self attribution	-0.263	0.793
Disposition effect	1.442	0.152
Mental accounting	0.201	0.841
Availability	0.477	0.634
Emotional bias	-0.608	0.544
Age		
	F	Sig.
Over confidence and self attribution	0.343	0.794
Disposition effect	0.564	0.64
Mental accounting	0.498	0.684
Availability	4.353	0.006
Emotional bias	0.48	0.697
Education		
	F	Sig.
Overconfidence and self-attribution	2.96	0.035
Disposition effect	1.004	0.394
Mental accounting	2.041	0.112
Availability	2.684	0.05
Emotional bias	1.99	0.119
Occupation		
	F	Sig.
Overconfidence and self-attribution	1.253	0.294
Disposition effect	1.598	0.194
Mental accounting	0.305	0.822
Availability	2.257	0.085
Emotional bias	0.384	0.765
Income		
	F	Sig.
Over confidence and self attribution	0.223	0.88
Disposition effect	0.203	0.894
Mental accounting	1.011	0.391
Availability	0.34	0.797

Emotional bias	0.124	0.946
Investment Experience		
	F	Sig.
Overconfidence and self-attribution	3.425	0.02
Disposition effect	9.429	0.000
Mental accounting	4.262	0.007
Availability	2.814	0.042
Emotional bias	2.52	0.061

The Presence of Overconfidence and self-attribution differs significantly with education, Income, and Investment Experience, disposition effect, and Mental accounting bias differ significantly with Investment Experience, Availability bias differs significantly with age, and Investment Experience and Presence of Emotional bias differ significantly with regard to gender.

Conclusion

The current research aims to fill this gap in the behavioral finance literature. India's economy is one of the world's fastest-growing. Individual investors can benefit from India's deep and efficient financial markets. Regulators and policymakers are worried about investor conduct. This study examined behavioral biases in a sample of Indian individual investors. The poll found that Indian investors have overconfidence, self-attribution, disposition effect, mental accounting, and emotional biases. A new study shows that individual investors are not always reasonable. Emotions and other biases influence investment decisions. According to the survey results, Indian investors have a variety of cognitive biases including overconfidence and self-attribution, the disposition effect, mental accounting, and emotional biases. Individual investors do not always act rationally, according to this study's findings. Investment decisions are influenced by emotions and other biases. Individual investors' behavioral biases are strongly influenced by their age, gender, education, and investment experience, according to the findings of this study. Educators of financial literacy may benefit from this study's findings, which could help individuals better understand their finances. With an understanding of their clients' decision-making processes, financial advisors may be able to provide tailored financial services based on their clients' preferences. People's financial well-being and the health of the economy as a whole can benefit from the findings of this study, which can be used to improve financial education and other policy initiatives.

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