Educational
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An application of the theoretical framework of behavioural biases of retail investors in the Indian stock market

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ARTICLE INFO	ABSTRACT
	Biases can be seen as reflections of an investor's mindset, explaining the underlying reasoning for irrational investment decisions. Retail investors can mitigate risk by basing their choices on a mix of rational and irrational considerations. This study aims to achieve two objectives: first, to examine the impact of mental accounting, availability, and anchoring biases on investment decisions, and second, to identify the most influential factor affecting these decisions. Data was collected using a survey method with an adapted questionnaire designed to measure these factors. A sample of 459 participants was selected through convenience sampling. The data was analyzed using SPSS software to measure the correlation and regression between the independent and dependent variables. The findings indicate that among all the biases studied, anchoring bias had the most significant influence on the investment decisions of retail investors. **Keywords:** Behaviour Biases, Mental accounting, Loss aversion, Regret aversion, Disposition effect, Prospect theory

Introduction

Financial markets are vital for economic development, facilitating the movement of scarce resources from providers to seekers (Chawla, 2014). According to finance theory, rational investors should evaluate all available information before making investment decisions. However, many studies have found that investors often behave irrationally when making these decisions. Over the past few decades, a new field called Behavioral Finance has emerged, examining how human psychology influences financial decisions. This field merges psychological and economic theories to explain the reasoning behind investor behavior (Shankar et al., 2014).
For individual investors, investing is an engaging activity that involves making decisions and experiencing the outcomes, which can result in either gains or losses. Investing is a serious endeavour, and poor decisions can have significant consequences for one's future financial well-being. Investment includes not only financial assets but also other forms such as life insurance policies or gold, which all share attributes like risk and return. The uncertainty of future outcomes forces investors to evaluate the expected returns against the associated risks (Pandian, 2011).This paper aims to conduct an empirical study to understand investors' perceptions of various investment avenues in Delhi. By analysing individual investor behaviour, this study seeks to profile and identify the attributes and preferences of these investors concerning their investment choices.

Literature Review

Cognitive biases are errors in judgment stemming from memory or information processing mistakes and personal or emotional influences, as described by Kahneman and Tversky (1972). These biases are related to mental processes such as thinking, logical reasoning, problem-solving, and decision-making (Shefrin, 2002;

Baker & Ricciardi, 2014; Singh & Bhowal, 2010). Research in behavioural psychology has introduced new concepts in finance, including financial knowledge, cognitive biases, and risk perception (Bazley et al., 2021). Dahiman Khan (2020) studied the effect of cognitive biases, such as herding, disposition, and mental accounting, on investment decisions, finding that financial literacy moderated these effects. The study used correlation and regression analysis to identify that herding, disposition, and mental accounting biases impacted individual investment decisions, with financial literacy positively moderating the disposition effect and negatively moderating herding and mental accounting biases. Saif Ullah et al. (2020) examined the influence of behavioural biases on investment decisions and the moderating role of investor type using multiple regression analysis and two-stage least square regression. Their results showed that behavioural biases, including the disposition effect, herding, and overconfidence, positively affected investment decisions, with investor type moderating herding bias and positively influencing overconfidence.Katrini et al. (2021) investigated the effects of anchoring, representativeness, loss aversion, overconfidence, and optimism on investor decisions using a one-sample t-test, demonstrating that all these factors significantly impacted investment decisions. Etse Nkukpornu et al. (2020) explored the impact of overconfidence, regret, belief, and snakebite on investment decisions through multiple regression tests, finding that all four factors strongly influenced investment decisions. In the current study, four behavioural biases—mental accounting; disposition bias, regret aversion, and loss Aversion—are examined to understand their impact on individual investment decision-making. This framework aims to provide insights into behavioural biases using the behavioural finance model

Statement of Problem
The influence of behavioral biases, as described by prospect theory, on individual decision-making processes, particularly in financial contexts, has been widely observed but remains inadequately addressed in practical applications. Behavioral biases such as loss aversion, regret aversion, and disposition effect can lead to suboptimal decisions that negatively impact financial well-being. This research seeks to examine the prevalence and impact of these behavioral biases on investment decisions and explore strategies to mitigate their adverse effects. By understanding and addressing these biases, it is possible to enhance decision-making frameworks, improve financial outcomes, and contribute to the development of more effective educational and intervention programs for investors.

IV. Behavioral biases based on prospect theory

Many biases affect the retail investor's behavior but according to the literature review research has taken behavioral biases based on prospect theory.

4.1 Prospect Theory: This theory is part of economic behavior that describes how investors make decisions between the different possible outcomes and the risk involved in the unknown possible outcomes. This theory was first proposed by Kahneman and Tversky in 1979 which proves that investor does not always thinks rationally as it is often affected by psychological behavior.

4.2 Different behavior biases based on prospect theory
a) Mental Accounting: It is a concept related to behavioral economics and defined as investors classifying funds into different categories and making irrational decisions while spending that money.
b) Disposition effect: In this bias, investors tend to sell investments that have high winning chances instead of investments showing losses. In other words, assets that have high value can be sold first instead of assets having low value.
c) Regret Aversion: It is a concept from prospect theory introduced by Kahneman and Tversky in 1979, describing a negative emotional bias that drives investors to steer clear of regret, which can sometimes lead to poor decision-making. Tsiros and Mittal (2000) also examined regret aversion, finding it to be a significant negative emotion. Additionally, Zeelenberg et al. (1996) argued that regret theory is centered around actions, suggesting that the anticipation of regret is closely linked to the actions people take or avoid.
d) Loss Aversion: Loss aversion in behavioral economics refers to the tendency for individuals to perceive the pain of a loss as more intense than the pleasure of an equivalent gain. For example, losing $100 typically feels much more distressing than the happiness experienced from finding $100.

V. Objectives

- To identify the relationship between different behavioral biases and retail investor's investment decision pattern
- To analyze the level of behavioral factors that can impact the investment performance of retail investors.

VI. Research Methodology

The Study follows the survey research methodology. A questionnaire has been prepared based on previous research and it is made to examine the trading patterns of retail investors are affected by the different behavioral biases. This section also describes the sample size, questionnaire used, method of analysis

6.1 Size of the sample
The sample size of 575 provided with estimated error at 95 percent confidence level (CL) with 4.0 percent error. The size of the sample is calculated by using the formula $n=z^2p(1-p)/e^2$, where z= alpha value of the level of significance at 95 percent confidence level (1.96),p=proportion of the occurrence of a variable of interest (considered as 0.5),e=level of error. Convenience Sampling has been used to collect data through Questionnaire. The respondents are selected based on the following points
i.   Respondent should belong to the area of Delhi NCR region.
ii. Respondents should acquire basic knowledge about the stock market and also invest in same.
iii. Respondent should have pursued graduate and above while conducting the study

The survey was conducted on one basis through Google Forms and in total 677 questionnaires were distributed out of which 575 were taken for this study. The Response rate is 84.93%.

6.2 Survey Instrument
A questionnaire is divided into 3 parts. First part consists of the Demographic profile of the investors. Second part consists of profile of the investors. The last and most important part consist of 16 statements out of which 4 pertain to Mental Accounting, 4 to Disposition Effect, 4 to Loss Aversion and 4 to Regret Aversion. A five point Likert Sclae is used ranging 1(Strongly Agree) to 5(strongly Disagree).Likert Scale is preferred as it most convenient scale then other scales in terms of reliability and scaling

6.3 Survey procedure
The questionnaire was given to small group of 50 investor for pilot study. Preliminary analysis of pilot study helped to improve the statements in the questionnaire. After doing the required changes the questionnaire was ready for distribution among the investors and personal interview has also been conducted.

6.4 Method of Analysis
6.4.1 One Sample t-test
 It is a parametric test that helps in comparing the mean of the sample to known values. This test is conducted when there are two experimental conditions and the same participants took place in both the condition of the experiment. In the present study researcher applied t-test to know that all the statements having behavioral biases to analyses that whether the mean responses are significantly different from neutral response. This helps us in sorting out underlying biasness in each statement of the respondent.

6.4.2 One-way ANOVA
The One-way ANOVA test is another parametric test that help in determining whether there are significant difference between the means of Three or more independent group. In this study it help researcher to identify that impact of behavioral biases is same among all the respondents with respect to age, occupation and education.

Hypothesis
$H1_0$: There is no substantial association between age and Behavioral biases.
$H1_1$: There is a substantial association between age and Behavioral biases.
$H2_0$: There is no substantial association between level of education and Behavioral biases.
$H2_1$: There is a substantial association between level of education and Behavioral biases .
$H3_0$: There is no substantial association between level of income and Behavioral biases.
$H3_1$: There is a substantial association between level of income and Behavioral biases

Results and Discussions

The data collected in survey through questionnaire was analysed by using SPSS (22.0) package and following are the results obtained:

Table 1: Demographic Details of the respondents

Demographic Variables	Category	No. of Respondents	Percentage%
Gender	Male	210	36.5
	Female	365	63.5
Age	Below 30	460	80.0
	30-40	70	12.2
	40-50	10	1.7
	50-60	25	4.3
	above 60	10	1.7
Job Sector	Government Sector	35	6.1
	Private Sector	270	47.0
	Self Employed	270	47.0
Education	Undergraduate	265	46.1
	Graduate	145	25.2
	Post Graduate	140	24.3
	Professional Level	20	3.5
	Ph.D	5	0.9

Table 1 presents the demographic detail of the retail investors. The male respondent are 36.5% and Female respondents are 63.5%.The proportion of female investors are more than male investors.

7.2 Reliability of Scale
The Cronbach alpha is the most widely used index for determining internal consistency. This test is conducted to know that measurements are reliable for future use. According to general rule,if the coefficient is showing value greater than or equal to 0.5 that is considered as accepted and good indication of construct reliability of 16 items, which is categorized under four heads.The Cronbach's alpha for all 16 attributes is 0.856.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.856	16

7.3 Descriptive Statistics
Table 3 exhibits about the ranking of the behavioral biases among the retail investors.The investors are highly influenced by the Mental Accounting followed by Regret Aversion and Loss Aversion. However the impact of Disposition effect is less on the investors

Table 3: Descriptive Statistics

S No.	Biases	Mean	Rank
1	Mental Accounting	3.4275	1
2	Disposition Effect	3.0869	4
3	Regret Aversion	3.3195	2
4	Loss Aversion	3.1087	3

7.4 One Sample T-test
Table 4: One-Sample Test

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Mental Accounting	85.369	574	.000	10.71304	10.4666	10.9595
Disposition Effect	75.344	574	.000	9.34783	9.1041	9.5915
Regret Aversion	80.240	574	.000	10.27826	10.0267	10.5299
Loss Aversion	71.348	574	.000	9.43478	9.1751	9.6945

Table 4 depicts the results of one sample T-test for all the behaviour biases.The results rejects the null hypothesis for all biases at significance level of 1%. Hence the study concluded that the investor gets affected by the mental accounting, disposition effect, Regret Aversion and Loss Aversion

7.5 One-way ANOVA

Table 5: One Way ANOVA with regards to Age and Investors Behavior

		Sum of Squares	df	Mean Square	F	Sig.
Mental Accounting	Between Groups	293.761	4	73.440	8.536	.000
	Within Groups	4903.891	570	8.603		
	Total	5197.652	574			
Disposition Effect	Between Groups	115.620	4	28.905	3.319	.011
	Within Groups	4964.815	570	8.710		
	Total	5080.435	574			
Regret Aversion	Between Groups	50.728	4	12.682	1.347	.251
	Within Groups	5364.750	570	9.412		
	Total	5415.478	574			
Loss Aversion	Between Groups	48.022	4	12.005	1.196	.312
	Within Groups	5723.283	570	10.041		
	Total	5771.304	574			

Table 5, provides that there is a significant difference between the investor's behavior biasness and age with respect to Mental accounting and Disposition Effect. However, there is no significant difference between Regret Aversion, Loss aversion .

Table 6: One way ANOVA with Job Sector and Investors Behavior

		Sum of Squares	df	Mean Square	F	Sig.
Mental Accounting	Between Groups	251.250	2	125.625	14.527	.000
	Within Groups	4946.402	572	8.648		
	Total	5197.652	574			
Disposition Effect	Between Groups	2.049	2	1.024	.115	.891
	Within Groups	5078.386	572	8.878		
	Total	5080.435	574			
Regret Aversion	Between Groups	34.182	2	17.091	1.817	.164
	Within Groups	5381.296	572	9.408		
	Total	5415.478	574			
Loss Aversion	Between Groups	20.259	2	10.130	1.008	.366
	Within Groups	5751.045	572	10.054		
	Total	5771.304	574			

Table 6 Shows that there is a significant difference between investors job sector and different biasness with relation to Mental Accounting. However, there is no significant difference between Disposition Effect, Regret Aversion and Loss aversion and investors behavior.

Table 7 : One way ANOVA with Education and Investors Behavior

		Sum of Squares	df	Mean Square	F	Sig.
Mental Accounting	Between Groups	336.796	4	84.199	9.873	.000
	Within Groups	4860.856	570	8.528		
	Total	5197.652	574			
Disposition Effect	Between Groups	46.230	4	11.557	1.309	.265
	Within Groups	5034.205	570	8.832		
	Total	5080.435	574			
Regret Aversion	Between Groups	77.843	4	19.461	2.078	.082
	Within Groups	5337.636	570	9.364		
	Total	5415.478	574			
Loss Aversion	Between Groups	268.651	4	67.163	6.957	.000
	Within Groups	5502.653	570	9.654		
	Total	5771.304	574			

Table 7 depicts that investors behavior are affected by mental accounting, Regret aversion and loss aversion. However, there is no significant difference between Investors behaviour and disposition effect.

7.6 Post Hoc Tests
7.6.1 Post Hoc with Age

Table 8 Post Hoc with Age and Investors Behavior

Dependent Variable		(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Mental accounting	Tukey HSD	Below 30	30-40	-.80435	.37631	.206	-1.8341	.2254
			40-50	1.19565	.93757	.707	-1.3700	3.7613
			50-60	2.49565*	.60236	.000	.8473	4.1440
			Above 60	-2.80435*	.93757	.024	-5.3700	-.2387
		30-40	Below 30	.80435	.37631	.206	-.2254	1.8341
			40-50	2.00000	.99158	.259	-.7135	4.7135
			50-60	3.30000*	.68340	.000	1.4299	5.1701
			Above 60	-2.00000	.99158	.259	-4.7135	.7135
		40-50	Below 30	-1.19565	.93757	.707	-3.7613	1.3700
			30-40	-2.00000	.99158	.259	-4.7135	.7135
			50-60	1.30000	1.09748	.760	-1.7033	4.3033
			Above 60	-4.00000*	1.31174	.020	-7.5896	-.4104
		50-60	Below 30	-2.49565*	.60236	.000	-4.1440	-.8473
			30-40	-3.30000*	.68340	.000	-5.1701	-1.4299
			40-50	-1.30000	1.09748	.760	-4.3033	1.7033
			Above 60	-5.30000*	1.09748	.000	-8.3033	-2.2967
		Above 60	Below 30	2.80435*	.93757	.024	.2387	5.3700
			30-40	2.00000	.99158	.259	-.7135	4.7135
			40-50	4.00000*	1.31174	.020	.4104	7.5896
			50-60	5.30000*	1.09748	.000	2.2967	8.3033
Disposition Effect	Tukey HSD	Below 30	30-40	.35870	.37864	.878	-.6775	1.3948
			40-50	-.14130	.94337	1.000	-2.7229	2.4403
			50-60	.55870	.60609	.888	-1.0999	2.2173
			Above 60	-3.14130*	.94337	.008	-5.7229	-.5597
		30-40	Below 30	-.35870	.37864	.878	-1.3948	.6775
			40-50	-.50000	.99772	.987	-3.2303	2.2303
			50-60	.20000	.68763	.998	-1.6817	2.0817
			Above 60	-3.50000*	.99772	.004	-6.2303	-.7697
		40-50	Below 30	.14130	.94337	1.000	-2.4403	2.7229
			30-40	.50000	.99772	.987	-2.2303	3.2303
			50-60	.70000	1.10428	.970	-2.3219	3.7219
			Above 60	-3.00000	1.31986	.155	-6.6118	.6118
		50-60	Below 30	-.55870	.60609	.888	-2.2173	1.0999
			30-40	-.20000	.68763	.998	-2.0817	1.6817
			40-50	-.70000	1.10428	.970	-3.7219	2.3219
			Above 60	-3.70000*	1.10428	.008	-6.7219	-.6781
		Above 60	Below 30	3.14130*	.94337	.008	.5597	5.7229
			30-40	3.50000*	.99772	.004	.7697	6.2303
			40-50	3.00000	1.31986	.155	-.6118	6.6118
			50-60	3.70000*	1.10428	.008	.6781	6.7219
Regret Aversion	Tukey HSD	Below 30	30-40	.25000	.39359	.969	-.8271	1.3271
			40-50	-1.25000	.98063	.707	-3.9335	1.4335
			50-60	-.15000	.63003	.999	-1.8741	1.5741

				Mean Diff.	Std. Error	Sig.	Lower	Upper
			Above 60	-1.75000	.98063	.384	-4.4335	.9335
		30-40	Below 30	-.25000	.39359	.969	-1.3271	.8271
			40-50	-1.50000	1.03713	.598	-4.3381	1.3381
			50-60	-.40000	.71479	.981	-2.3561	1.5561
			Above 60	-2.00000	1.03713	.303	-4.8381	.8381
		40-50	Below 30	1.25000	.98063	.707	-1.4335	3.9335
			30-40	1.50000	1.03713	.598	-1.3381	4.3381
			50-60	1.10000	1.14789	.874	-2.0412	4.2412
			Above 60	-.50000	1.37199	.996	-4.2545	3.2545
		50-60	Below 30	.15000	.63003	.999	-1.5741	1.8741
			30-40	.40000	.71479	.981	-1.5561	2.3561
			40-50	-1.10000	1.14789	.874	-4.2412	2.0412
			Above 60	-1.60000	1.14789	.632	-4.7412	1.5412
		Above 60	Below 30	1.75000	.98063	.384	-.9335	4.4335
			30-40	2.00000	1.03713	.303	-.8381	4.8381
			40-50	.50000	1.37199	.996	-3.2545	4.2545
			50-60	1.60000	1.14789	.632	-1.5412	4.7412
Loss Aversion	Tukey HSD	Below 30	30-40	.47826	.40653	.765	-.6342	1.5907
			40-50	-1.52174	1.01287	.561	-4.2935	1.2500
			50-60	-.12174	.65074	1.000	-1.9025	1.6590
			Above 60	.97826	1.01287	.870	-1.7935	3.7500
		30-40	Below 30	-.47826	.40653	.765	-1.5907	.6342
			40-50	-2.00000	1.07123	.336	-4.9314	.9314
			50-60	-.60000	.73829	.927	-2.6204	1.4204
			Above 60	.50000	1.07123	.990	-2.4314	3.4314
		40-50	Below 30	1.52174	1.01287	.561	-1.2500	4.2935
			30-40	2.00000	1.07123	.336	-.9314	4.9314
			50-60	1.40000	1.18563	.762	-1.8445	4.6445
			Above 60	2.50000	1.41710	.396	-1.3779	6.3779
		50-60	Below 30	.12174	.65074	1.000	-1.6590	1.9025
			30-40	.60000	.73829	.927	-1.4204	2.6204
			40-50	-1.40000	1.18563	.762	-4.6445	1.8445
			Above 60	1.10000	1.18563	.886	-2.1445	4.3445
		Above 60	Below 30	-.97826	1.01287	.870	-3.7500	1.7935
			30-40	-.50000	1.07123	.990	-3.4314	2.4314
			40-50	-2.50000	1.41710	.396	-6.3779	1.3779
			50-60	-1.10000	1.18563	.886	-4.3445	2.1445

*. The mean difference is significant at the 0.05 level.
- **Mental Accounting:** Several significant differences between age groups. Age group (50-60) has significantly higher scores compared to age groups (below 30) and (30-40), while age group (above 60) has significantly lower scores compared to age groups (below 30), (40-50), and (50-60).
- **Disposition Effect:** Age group (above 60) consistently shows significantly lower scores compared to age groups (below 30),(30-40), and (50-60).
- **Regret Aversion and Loss Aversion:** No significant differences between any age groups.

These results highlight significant variations in mental accounting and disposition effect scores across different age groups, whereas regret aversion and loss aversion do not show significant differences.

7.6.2 Post Hoc Test with Education
Multiple Comparisons

Dependent Variable		(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Confidence Upper Bound
Mental Accounting	Tukey HSD	Undergrad.	Graduate	-1.31034*	.30165	.000	-2.1358	-.4849
			Post Grad.	-1.53571*	.30511	.000	-2.3707	-.7008
			Professional	.50000	.67718	.947	-1.3531	2.3531
			Ph.D	-3.00000	1.31824	.154	-6.6074	.6074
		Graduate	Undergrad	1.31034*	.30165	.000	.4849	2.1358
			Post Grad.	-.22537	.34601	.966	-1.1722	.7215
			Professional	1.81034	.69657	.072	-.0958	3.7165
			Ph.D	-1.68966	1.32830	.709	-5.3246	1.9453
		Post Grad.	Undergrad	1.53571*	.30511	.000	.7008	2.3707
			Graduate	.22537	.34601	.966	-.7215	1.1722
			Professional	2.03571*	.69807	.030	.1254	3.9460
			Ph.D	-1.46429	1.32909	.806	-5.1014	2.1728
		Professional	Undergrad	-.50000	.67718	.947	-2.3531	1.3531
			Graduate	-1.81034	.69657	.072	-3.7165	.0958
			Post Grad.	-2.03571*	.69807	.030	-3.9460	-.1254
			Ph.D	-3.50000	1.46012	.118	-7.4957	.4957
		Ph.D	Undergrad	3.00000	1.31824	.154	-.6074	6.6074
			Graduate	1.68966	1.32830	.709	-1.9453	5.3246
			Post Grad.	1.46429	1.32909	.806	-2.1728	5.1014
			Professional	3.50000	1.46012	.118	-.4957	7.4957
dispostioneffect	Tukey HSD	Undergrad.	Graduate	-.38777	.30698	.714	-1.2278	.4523
			Post Grad.	.08760	.31050	.999	-.7621	.9373
			Professional	1.05189	.68915	.546	-.8340	2.9378
			Ph.D	-.69811	1.34153	.985	-4.3693	2.9730
		Graduate	Undergrad	.38777	.30698	.714	-.4523	1.2278
			Post Grad.	.47537	.35213	.660	-.4882	1.4390
			Professional	1.43966	.70888	.253	-.5002	3.3795
			Ph.D	-.31034	1.35178	.999	-4.0095	3.3888
		Post Grad.	Undergrad	-.08760	.31050	.999	-.9373	.7621
			Graduate	-.47537	.35213	.660	-1.4390	.4882
			Professional	.96429	.71041	.655	-.9798	2.9083
			Ph.D	-.78571	1.35258	.978	-4.4871	2.9157
		Professional	Undergrad	-1.05189	.68915	.546	-2.9378	.8340
			Graduate	-1.43966	.70888	.253	-3.3795	.5002
			Post Grad.	-.96429	.71041	.655	-2.9083	.9798
			Ph.D	-1.75000	1.48593	.764	-5.8163	2.3163
		Ph.D	Undergrad	.69811	1.34153	.985	-2.9730	4.3693
			Graduate	.31034	1.35178	.999	-3.3888	4.0095
			Post Grad.	.78571	1.35258	.978	-2.9157	4.4871
			Professional	1.75000	1.48593	.764	-2.3163	5.8163
RegretAversion	Tukey HSD	Undergrad.	Graduate	-.69226	.31610	.185	-1.5573	.1728
			Post Grad.	.24124	.31973	.943	-.6337	1.1162
			Professional	.41981	.70961	.976	-1.5221	2.3617
			Ph.D	-.83019	1.38137	.975	-4.6104	2.9500
		Graduate	Undergrad	.69226	.31610	.185	-.1728	1.5573
			Post Grad.	.93350	.36259	.076	-.0587	1.9257
			Professional	1.11207	.72993	.548	-.8854	3.1095
			Ph.D	-.13793	1.39192	1.000	-3.9470	3.6711
		Post Grad.	Undergrad	-.24124	.31973	.943	-1.1162	.6337
			Graduate	-.93350	.36259	.076	-1.9257	.0587
			Professional	.17857	.73151	.999	-1.8232	2.1804

			Ph.D	-1.07143	1.39275	.939	-4.8827	2.7399
		Professional	Undergrad	-.41981	.70961	.976	-2.3617	1.5221
			Graduate	-1.11207	.72993	.548	-3.1095	.8854
			Post Grad.	-.17857	.73151	.999	-2.1804	1.8232
			Ph.D	-1.25000	1.53005	.925	-5.4370	2.9370
		Ph.D	Undergrad	.83019	1.38137	.975	-2.9500	4.6104
			Graduate	.13793	1.39192	1.000	-3.6711	3.9470
			Post Grad.	1.07143	1.39275	.939	-2.7399	4.8827
			Professional	1.25000	1.53005	.925	-2.9370	5.4370
LossAversion	Tukey HSD	Undergrad.	Graduate	-1.43006*	.32095	.000	-2.3083	-.5518
			Post Grad.	-1.01011*	.32463	.017	-1.8985	-.1217
			Professional	.31132	.72050	.993	-1.6603	2.2830
			Ph.D	-3.18868	1.40256	.155	-7.0268	.6495
		Graduate	Undergrad	1.43006*	.32095	.000	.5518	2.3083
			Post Grad.	.41995	.36815	.785	-.5875	1.4274
			Professional	1.74138	.74113	.131	-.2867	3.7695
			Ph.D	-1.75862	1.41327	.725	-5.6261	2.1088
		Post Grad.	Undergrad	1.01011*	.32463	.017	.1217	1.8985
			Graduate	-.41995	.36815	.785	-1.4274	.5875
			Professional	1.32143	.74273	.387	-.7111	3.3539
			Ph.D	-2.17857	1.41411	.536	-6.0483	1.6912
		Professional	Undergrad	-.31132	.72050	.993	-2.2830	1.6603
			Graduate	-1.74138	.74113	.131	-3.7695	.2867
			Post Grad.	-1.32143	.74273	.387	-3.3539	.7111
			Ph.D	-3.50000	1.55353	.162	-7.7513	.7513
		Ph.D	Undergrad	3.18868	1.40256	.155	-.6495	7.0268
			Graduate	1.75862	1.41327	.725	-2.1088	5.6261
			Post Grad.	2.17857	1.41411	.536	-1.6912	6.0483
			Professional	3.50000	1.55353	.162	-.7513	7.7513

*. The mean difference is significant at the 0.05 level.
- Mental **accounting** and **Loss Aversion** show significant differences across various education levels, indicating that education can impact these cognitive biases.
- Disposition **effect** and **Regret Aversion**, on the other hand, do not show significant differences based on education level in this analysis.

The significance of these findings suggests that higher education levels may influence certain cognitive biases differently compared to lower education levels, which could be due to differences in decision-making processes, risk perception, or other factors associated with education.

7.6.3 Post Hoc with Job Sector
Multiple Comparisons

Dependent Variable		(I) JobSector	(J) JobSector	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Mental Accounting	Tukey HSD	Govt.	Private	-1.69312*	.52830	.004	-2.9345	-.4517
			Self Employed	-.43386	.52830	.690	-1.6753	.8076
		Private	Govt.	1.69312*	.52830	.004	.4517	2.9345
			Self Employed	1.25926*	.25309	.000	.6645	1.8540
		Self Employed	Govt.	.43386	.52830	.690	-.8076	1.6753
			Private	-1.25926*	.25309	.000	-1.8540	-.6645
Disposition Effect	Tukey HSD	Govt.	Private	.25661	.53530	.881	-1.0013	1.5145
			Self Employed	.21958	.53530	.911	-1.0383	1.4774

				Mean Diff	Std. Error	Sig.	Lower	Upper
		Private	Govt.	-.25661	.53530	.881	-1.5145	1.0013
			Self Employed	-.03704	.25645	.989	-.6396	.5656
		Self Employed	Govt.	-.21958	.53530	.911	-1.4774	1.0383
			Private	.03704	.25645	.989	-.5656	.6396
Regret Aversion	Tukey HSD	Govt.	Private	-.53704	.55104	.593	-1.8319	.7578
			Self Employed	-.05556	.55104	.994	-1.3504	1.2393
		Private	Govt.	.53704	.55104	.593	-.7578	1.8319
			Self Employed	.48148	.26398	.163	-.1388	1.1018
		Self Employed	Govt.	.05556	.55104	.994	-1.2393	1.3504
			Private	-.48148	.26398	.163	-1.1018	.1388
Loss Aversion	Tukey HSD	Govt.	Private	-.73545	.56965	.401	-2.0740	.6031
			Self Employed	-.49471	.56965	.660	-1.8333	.8439
		Private	Govt.	.73545	.56965	.401	-.6031	2.0740
			Self Employed	.24074	.27290	.652	-.4005	.8820
		Self Employed	Govt.	.49471	.56965	.660	-.8439	1.8333
			Private	-.24074	.27290	.652	-.8820	.4005

*. The mean difference is significant at the 0.05 level.

- **Mental accounting** is influenced by job sector, with significant differences observed between certain pairs of sectors.
- **Disposition effect, Regret Aversion, and Loss Aversion** do not show significant differences across job sectors in this analysis.

Conclusion

According to the study, investors don't always respond logically. The old financial theories still hold true to some extent since behavioral biases still have an impact on investors. According to the study, mental accounting has the most impact on investors, followed by regret aversion and the disposal effect. On investors, however, loss aversion has virtually little effect. Therefore, it is advised that investors develop a check list prior to investing and take biases into account while making stock market investments. These studies can be expanded to include other nations and biases.

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