Trading practice &Behavioral Biases of Individual Investors in Nepalese Stock Market

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ABSTRACT

The paper was based on survey research design. There is significant association between experience group with herding bias and optimism bias and there is no significant association between experience group with investment decision bias, disposition effect bias, and overconfidence bias. Similarly there is significant association between trading frequency with herding bias, optimism bias, investment decision bias, disposition effect bias, and overconfidence bias.Heuristics may make investors overconfident as they overlook risks causing security price to move away from fundamentals. Investors tend to be overconfident and hence overestimate the accuracy of their forecast due to illusion of knowledge and illusion of control.

Key words: Behavioral Bias, Heuristics theory, Trading practice variable, Optimistic

I. Introduction of study

Behavioral finance attempts to explain and increase understanding of the reasoning patterns of investors, including the emotional processes involved and the degree to which they are influenced by the decision-making process. Essentially, behavioral finance attempts to explain the what, why, and how of finance and investing, from a human perspective.

Behavioral finance studies the psychological and sociological factors that influence the financial decision making process of individuals, groups, and entities. Small investors, portfolio manager and board of trustee member are included in individual, portfolio investors (Mutual fund) and a group of shareholders are included in the group and financial institutions and nonprofit organizations are included in entities.

The way investors think and feel affects the way they behave when making investment decisions. These influences can be categorized and identified as behavioral biases.

Behavioral Finance closely combines individual behavior and market phenomena and uses the knowledge taken from both the psychological field and financial theory. Behavioral finance attempts to identify the behavioral biases commonly exhibited by investors and also provides strategies to overcome them.

II. Literature Review

Lee, Wang, Kao, Chen and Zhu (2010) investigate the investment behavior and decision factor affect performance from survey questionnaire and conclude that there indeed existed significant differences on investors decision making on market selection according to their assets. Similarly other variable such as gender, age, martial-status, education, career and job lever income and average amount for quarterly investment appeared not have significant differences.

Quan and Phuc (2012) examine the individual's investor behavioral biases at individual level and investigate the relationship between demographic variable and behavioral biases and conclude that there are relationship between gender and illusion of control bias, gender and optimism bias, gender and self- control bias. It also found that there is a relationship between average value per trading times and investment experience, average value per trading times and loss aversion bias, trading frequency and optimism bias, investment experience and optimism bias, monthly income and optimism, age and cognitive dissonance bias.

Wamae (2013) had investigated the behavioral factors influencing investment decisions in Kenyan Stock market

focusing on investment banks from the 17 banks from 47 respondents. The behavioral factors investigated were herding, prospecting, risk aversion and anchoring. She found out that all the factors affect investment decision, with herding having the most impact, followed by prospecting anchoring and finally the risk aversion factors has the least impact.

Bashir et al. (2013) investigate the influence of behavioral biases on investment decisions made by students and employees from 100 samples with questionnaire and empirical data from graduate & post graduate students and employees, with two statistical techniques were used to analyze collected data. Correlation was used to analyze the relationship of overconfidence bias with illusion of control bias, familiarity bias, loss aversion bias and confirmation bias. Conclude that weak negative correlation between overconfidence bias and other behavioral bias discussed in the study. This study concludes there is no significant difference between the responses of male and female decision making regarding overconfidence bias.

Bogan, Just & Dev (2013) Investigate whether the gender composition of a fund management team influences investment decision making behavior on portfolio choice. Also examines the relationship between gender diversity and investment decisions. Revealed that the team composition influence financial decision with regard to the assessment of risk and loss and present evidence that a male presence increases the probability of selecting a higher risk investment. However, the all- male teams are not the most risk seeking. Moreover, having a male presence can increase loss aversion.

Shusha and Touny (2016) investigated the attitudinal and demographic determinants of herd behavior of individuals investors on decision accuracy, hasty decision, overconfidence and investor mood and explored that overconfidence have no effect on adopting herd behavior. Decision accuracy seems to have positive impact on adopting herd behavior for more experienced investors; however the decision of investors with low level of experience is determine by hasty decision and their mood. Gender does not play a moderating role between attitudes of investors and their tendency to adopt herd behavior. The effect of attitudinal variables on adopting herd behavior does not differ with the gender of investor.

Kengatharan & Kangatharan (2014) had investigated in the behavioral factors influencing individual investor's decision and also examine the investment performance at the Colombo Stock Exchange. The results revealed that herding, heuristics (overconfidence and availability bias), prospect and market factors all have effect on the investment decisions of individual investors. Most of the factors have moderate impacts except for the anchoring variable from heuristic factor that exhibits high influence on investment decision. On the other hand, only three of the variables examined have influence on investment performance. The variable are the desire of stock from herding factor with negative influence on the performance , overconfidence variables from heuristics with negative influence and lastly anchoring from heuristic with positive influence on investment performance. There is also appositive correlation between investment decision with risk- averse, prospect, anchoring and herding.

Prosad, Kapoor, & Sengupta (2015) had conducted the survey India/New Delhi-NCR from 410 respondents and conclude that that behavioral bias are dependent on investors' demographics and their trading sophistication with highest influencing factors being age, profession and trading frequency. Each bias corresponds to a specific set of investor characteristics and overconfidence comes out to be the most important bias in the Indian context.

III. Statement of problem

Various studies have shown the relationship of several biases and individual investor's decision making in several countries such as Prosad, Kapoor and Sengupta (2015), Wamae (2013), Babajide & Adetiloye (2012), Sukanya & Thimmarayappa (2015), Arora & Kumari (2015), Waruw, Munyoki, & Uliana (2008), Bakar & Chui Yi (2015), Feng & Seasholes (2005), Bashir et al (2013). Wamae (2013) investigated the behavioral factors influencing investment decisions in Kenyan stock market focusing on investment banks. The behavioral factors investigated were herding prospecting, risk aversion and anchoring. Babajide & Adetiloye (2012) examined the effect of behavior biases in performance of stock market in Nigeria for last twenty years and the variables they studied were overconfidence, loss aversion, framing, anchoring and status quo bias.

. The major researches issued raised in this study are as follows:

- Are behavioral biases dependent on trading experience of Nepalese investors?
- Are behavioral biases dependent on trading frequency of Nepalese investors?

IV. Objectives of the Study

The basic objective of the study is to examine the trading practice and behavior biases of individual investors in investment decision in Nepalese stock market.

The objectives of the study are as follows:

- To analyze the impact of trading experience on behavioral biases of Nepalese Investors.
- To analyze the impact of trading frequency on behavioral biases of Nepalese Investors.

V. Hypothesis of study

The statements of hypotheses are as follows:

There is no significant association between the Trading practice variables and behavioral   biases of the investors.

Further following Null hypotheses being developed on the basis of above hypotheses statements:

H_{01}: There is no significant association between trade frequency and behavioral biases of the investors.

H_{02}: There is no significant association between trade experience and behavioral biases of the investors.

VI. Data Analysis

Associationbetween Trading Frequency and Herding Bias

Table 1 : Associationbetween Trading Frequency and Herding Bias

Trading Frequency	Mean	Std. Error Mean	N
Intraday	14.9386	.25228	277
0 to 3 Months	14.2911	.51025	79
Above 3 Months	12.6290	.47141	62
F- Value from ANOVA= 7.762 and p- value = 0.000			

Test result significant with p value 0.000 and F score equal to 7.762 hence accept alternative hypothesis. Further post hoc analysis resulted significant association between Intraday and above 3 Months group and there is significant association between above 3 Months and o to 3 Months, But there is no significant association between intraday and 0 to 3 Months.

Association between Trading Frequency and Investment Decision Bias

Table 2 : Associationbetween Trading Frequency and Investment Decision Bias

Trading Frequency	Mean	Std. Error Mean	N
Intraday	13.5776	.20477	277
0 to 3 Months	13.8734	.39772	79
Above 3 Months	12.4516	.28876	62
F- Value from ANOVA= 3.709 and p- value = 0.025			

Test result significant with p value 0.025 and F score equal to 3.709 hence accept alternative hypothesis. The mean values of three groups are 13.5776, 13.8734 and 12.4516 respectively.

Further post hoc analysis resulted significant association between Intraday and above 3 Months group and there is significant association between above 3 Months and o to 3 Months, But there is no significant association between intraday and 0 to 3 Months.

Association between Trading Frequency and Disposition Effect Bias

Table 3 : Associationbetween Trading Frequency and Disposition Effect Bias

Trading Frequency	Mean	Std. Error Mean	N
Intraday	11.0181	.26609	277
0 to 3 Months	11.3544	.28086	79
Above 3 Months	9.6129	.39387	62
F- Value from ANOVA= 3.922 and p- value = 0.021			

Test result significant with p value 0.021 and F score equal to 3.922 hence accept alternative hypothesis at 5% level of significance. The mean values of three groups are 11.0181, 11.3544 and 9.6129 are respectively. Further post hoc analysis resulted significant association between Intraday and above 3 Months group and there is significant association between above 3 Months and 0 to 3 Months, But there is no significant association between intraday and 0 to 3 Months.

Association between Trading Frequency and Overconfidence Bias

Table 4 : Associationbetween Trading Frequency and Overconfidence Bias

Trading Frequency	Mean	Std. Error Mean	N
Intraday	10.3682	.14984	277
0 to 3 Months	9.4684	.29319	79
Above 3 Months	11.4032	.29311	62
F- Value from ANOVA= 10.514 and p- value = 0.000			

Test resulted significant with p value 0.000 and F score equal to 10.514. Hence accept alternative hypothesis at 1 % level of significance. The mean values of three groups are 10.3682, 9.4684 and 11.4032 respectively. Further Post Hoc analysis resulted significant association between Intraday and above 3 Months group and there is significant association between above 3 Months and 0 to 3 Months, and there is significant association between intraday and 0 to 3 Months.

Association between Trading Frequency and Optimism Bias

Table 5 : Associationbetween Trading Frequency and Optimism Bias

Trading Frequency	Mean	Std. Error Mean	N
Intraday	10.5271	.13313	277
0 to 3 Months	9.9873	.26014	79
Above 3 Months	11.4032	.16814	62
F- Value from ANOVA= 7.761 and p- value = 0.000			

Test result significant with p value 0.000 and F score equal to 7.761 hence accept alternative hypothesis at 1 % level of significance. The mean values of three groups are 10.5271, 9.9873 and 11.4032 are respectively. Further post hoc analysis resulted significant association between Intraday and above 3 Months group and there is significant association between above 3 Months and 0 to 3 Months, and there is significant association between intraday and 0 to 3 Months.

Association between Experience and Herding Bias

Table 6 : Association between Experience and Herding Bias

Experience	Mean	Std. Error Mean	N
Less than 3 year	13.9781	0.41228	137
3 year to 5 year	13.8681	0.39105	91
More than 5 year	15.1211	0.28991	190
F- Value from ANOVA= 4.091 and p - value = 0.017			

Test result highly significant with p value .017 and F score equal to 4.091 hence accept alternative hypothesis at 5% level of activity. The mean value are less than 3 year, 3 to 5 year group and more than 5 year group are 13.9781, 13.8681 and 15.1211 are respectively.Further post hoc analysis resulted significant association between less than 3 years experienced group and more than five year experienced group, 3-5 years experienced group with more than 5 year experienced group but there is no significant association between the less than 3 years experienced group and 3-5 years experienced group.

 Association between Experience and Investment Decision Bias

Table 7 : Associationbetween Experience and Investment Decision Bias

Experience	Mean	Std. Error Mean	N
Less than 3 year	13.1606	.23608	137
3 year to 5 year	14.0330	.38420	91
More than 5 year	13.4158	.25232	190
F- Value from ANOVA= 1.946 and p- value = 0.144			

Test result no significant association with p value 0.144 and F score equal to 1.946 hence there is no strong evidence for the significant association between experience groups and investment decisions bias variable at up to 5% level of significance i.e. failed to reject Null hypothesis. Mean value are all most same for all groups. Mean value of less than 3 year , 3 to 5 year and more than 5 year are almost same i.e. 13.1606, 14.0330 and 13.4158 respectively.

Association between Experience and Disposition Effect Bias

Table 8 : Associationbetween Experience and Disposition Effect Bias

Experience	Mean	Std. Error Mean	N
Less than 3 year	10.9124	0.27925	137
3 year to 5 year	11.2088	0.34041	91
More than 5 year	10.6842	0.34155	190
F- Value from ANOVA= 0.543 and p- value = 0.581			

Test result no significant association with p value .0.581 and F score equal to 0.543 hence there is no strong evidence for the significant association between Experience group and Disposition effect variable up to 5% level of significance i.e. failed to reject Null hypothesis.   Mean value of all group are all most same.

Association between Experience and Overconfidence Bias

Table 9 : Associationbetween Experience and Overconfidence Bias

Experience	Mean	Std. Error Mean	N
Less than 3 year	10.4088	.22853	137
3 year to 5 year	10.0440	.23068	91
More than 5 year	10.4579	.18888	190
F- Value from ANOVA= 0.864 and p- value = 0.422			

Test result no significant association with p value 0.422 and F score equal to 0.864 hence there is no strong evidence for the significant association between Experience group and Overconfidence bias at up to 5 % level of significance i.e. failed to reject Null hypothesis. Mean value of all groups have all most same. Mean value of three groups are 10.4088, 10.0440 and 10.4579 are respectively.

Association between Experience and Optimism Bias

Table10 : Associationbetween Experience and Optimism Bias

Experience	Mean	Std. Error Mean	N
Less than 3 year	10.8686	.17729	137
3 year to 5 year	10.9121	.18794	91
More than 5 year	10.1579	.16847	190
F- Value from ANOVA= 6.029 and p- value = 0.003			

Test result highly significant with p value .003 and F score equal to 6.029 hence accept alternative hypothesis at 1 % level of significance. Further post hoc analysis result significant association between less than 3 years experienced group and more than five year experienced group, 3-5 years experienced group with more than 5 year experienced group but there is no significant association between the less than 3 years experienced group and 3-5 years experienced group.

VII. Summary table of Null Hypothesis for accept and reject.

S.N.	Hypothesis statement	Accept/ Reject
1	There is no significant association between Experience group and Herding bias.	Reject
2	There is no significant association between Experience group and Investment decision bias.	Accept
3	There is no significant association between Experience group and Disposition effect bias.	Accept
4	There is no significant association between Experience group and Overconfidence bias.	Accept
5.	There is no significant association between Experience group and Optimism bias.	Reject
6	There is no significant association between Trading Frequency and Herding bias.	Reject
7	There is no significant association between Trading Frequency and Investment decision bias.	Reject
8	There is no significant association between Trading Frequency and Disposition effect bias.	Reject
9	There is no significant association between Trading Frequency and Overconfidence bias.	Reject
10	There is no significant association between Trading Frequency and Optimism bias.	Reject

VIII. Finding of the study

Out of total respondent 78% respondents are male and 22% respondents are female.66.3% respondents are actively trading in intraday (65.3% of male respondent and 69.6% of female respondent), trade 0 to 3 months by approx. 19% respondent and more than 3 by 14% of total respondent.

.There is significant association between trade experience groups and herding bias variable with p value 0.017 and F score 4.091 and trade experience groups and optimism variable with p value 0.003 and F score value 6.029. Meaning that, Herding bias and optimism bias depends on trade experience and impacts on investment decision. Investment decision bias, disposition effect and overconfidence bias have no any association with trade experience, meaning that three biases do not depend on trade experience and do not impact on investment decision.

There is significant association between Trade frequency group and Herding bias variable with p value 0.000 and f value 7.762, Investment decision bias variable with p value 0.025 and f value 3.709, Disposition effect bias variable with p value 0.021 and f value 3.922, Overconfidence bias variable with p value 0.000 and f value 10.514 and Optimism bias variable with p value 0.000 and f value 7.761. Meaning that, behavioral biases depend on trading practice variable (trade frequency) and impact on investment decision of individual investor in the context of Nepal.

From the chi-square test with 29 behavioral perception statement it is found that 27 statement with trade experience and 28 statement with trade frequency are association respectively variable and other statement don't have any association.

From the investment experience point of view 55% of total respondent have less than five year of experience and remaining 45% of total respondent have more than five year of experience.Professionals pointed out a fact that fundamental analysis, technical analysis, skill and knowledge are required for outperform the market .Actually maturity helps investors make effective decision to outperform the market. From the discussion with some broker it was assumed that most of the investors show the symptoms of herding bias, optimism bias, overconfidence bias and disposition effect bias.

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