

Influence of Personality Traits on Herding Bias of Individual Investors in Indian Capital Market

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Abstract

The purpose of this research is to discuss the relationship between personality traits and Herding bias on the financial behaviour of Investors in the Indian Capital Market 2016. About 200 people of individual investors are chosen based on simple random sampling as the suitable and reliable samples/ the essential data are used by a questionnaire with the reliable co-efficient of 0.892 for evaluating the influence of big five personality traits on herding bias. The results shows that except Neuroticism and herding bias all the other four personality traits viz., Extraversion, Agreeableness, Conscientiousness and Openness has a strong relationship with herding bias. Multiple regressions also prove that herding bias is influenced by the independent variable except to the extent of 73.4%. The analysis proves that herding bias of individual investors is significantly related to the above said four personality traits. Hence, it was concluded that investors are not purely rational in taking investment decisions in the capital market.

Key words: *Personality traits, financial behaviour, Herding bias, Capital market, rational.*

Introduction

Traditional theories of varying complexities have existed and evolved over the past several decades, which made the investors to understand the financial markets using models and to take rational decision. A rational investor can be defined as a one that always (i) updates his beliefs in a timely and appropriate manner on receiving new information. (ii) Makes choices that are normatively acceptable. (Thaler, 2005). Theoretical and experimental works of two psychologists Daniel Kahneman and Amos Tversky which contributed to psychology literature in 1970s served as foundation and gave rise to a new paradigm in the 1980s called Behavioural Finance, which “studies how people actually behave in a financial setting, specifically, it is the study of how psychology affects financial decisions, corporations and the financial markets”, (Nofsinger, 2001). Behavioural researchers found that the EMH cannot entirely explain the extraordinary phenomenon of the market and though their investment decisions were not completely rational. When investors face uncertain conditions, for benefit of high return they are likely to make decisions or they may follow the recommendations of professional investors. The decisions taken by individual investors are not completely rational. It is because of existence of investment biases. According to the financial behavioural theory, some evidence shows that significant relationships among personality traits and financial behavioural biases. For example, the financial market bubble in the 1990s results in the herding of Mutual Fund managers. Generally speaking, investors with herding behaviour are usually lack of confidence and professional competence to make a better investment decision. The main causes of forming investment biases are due to human’s behaviour which is formed by psychological factor and external factor. This study adopts Big Five Personality Traits which is easy to distinguish measures and how it influences on investment biases.

Literature Review:

Phares (1991) defines personality as, “It is a pattern of characteristic thoughts feelings and behaviours that distinguishes one person from another and that persists over time and situation’. Bailard, Biehli and Kaiser (BB&K) developed the five way model of personality. They

classified investors in two dimensions- Level of confidence and method of action. Based on these two dimensions Bailard, Biehli and Kaiser, (1986) classified investors as Adventure, Celebrity, Individualistic, Guardian and Straight Arrow. Psychographic model of Myers-Briggs type indicator (MBIT) test the investor's personality by using certain personality questionnaires Big Five Personality model is given by P.T.Costa and Mc Crae, (1992). It is the pioneering model of all personality research. They categorize investor's personality as Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. The taxonomy of Big Five model is the most inclusive and accepted.

Study conducted by O'Connor Melissa C. and Paunonem Sampo V (2007) reviewed empirical literature on the relation between the Big Five personality dimensions and post secondary academic achievement. A meta-analysis showed that conscientiousness seems to be most strongly and consistently associated with academic success. Also, Openness was sometimes associated positively with scholastic achievement whereas Extraversion was negatively associated with it. The study also found that narrow personality traits or facets are generally stronger predictors of academic performance than the Big Five Personality factors themselves.

Empirical results based on daily, weekly, and monthly data indicate that during periods of extreme price movements, equity return dispersions tend to increase rather than decrease, hence providing evidence against the presence of herding in the Indian stock market for the years 2000–2013. No evidence of herding was found during the extremely high and extremely low trading volume days. Owing to the regulatory reforms of the Indian equity market and the intense presence of the foreign institutional investors, investors' behavior seems more rational, that validates the application of rational pricing models in the Indian stock markets.

Research Methodology:

The type of the study is analytical, the objective of which is to find out the relationship between investors' Personality traits and Herding bias.

Target population:

Target population was individual investors of three leading share trading company located in three division of Chennai city namely North, South and Central Chennai. The Multistage random sampling method is used in the study. Sample size was 200 and the respondents were randomly selected from three leading share trading companies, located in three divisions of Chennai city respectively. The sampling category was probability and chosen from strata of three division of Chennai city in first stage, one leading stock trading company which is in existence for more than ten years from each division was chosen in the second stage. In the third stage respondents were randomly selected as follows:

South Chennai - 75Nos

North Chennai – 50Nos

Central Chennai – 75Nos

Data collection tool:

This study has used survey as a mode of questionnaire used for data collection. The questionnaire was divided into three sections as shown in Appendix I. First section includes the questions related to demographics of the respondents in which gender, age, educational background, occupation and residing zone were asked. The second section contains the statements used to measure various personality traits on individual investors. The third section contains the statements used to measure the Herding bias of the individual investors.

Variables of the study:

1) **Investors Traits:** This refers to qualities or characteristics of investors with reference to investment decision making. The qualities include investors Personality traits – Big five model such as Openness Conscientiousness Extraversion, Agreeableness and Neuroticism.

2) **Investment Biases:** This is one of independent variable used in the study. It is used in the study to understand how far investors in the capital market are affected in taking the right decision. It proves how far investors are irrational in taking decision in investing in the capital market.

Research Objectives:

1. To analyse the demographic and investment profile of individual investors in Chennai city.
2. To identify the relationship between big five personality and the Herding bias among the individual investors.

Based on the objective of the study following research hypothesis is formulated:

1. Ho: There is no association between various Personality traits and Herding bias of Investors.
2. Ho: there is no relationship between various Personality traits and Herding bias of Investors.

Demographic Profile

TABLE I

(Sample Size = 200)

VARIABLES	OPTIONS	FREQUENCIES	(%)
Gender	Male	147	73.5
	Female	53	26.5
Age in years	23 – 40 Years	Open ended Question (Scale Variable)	31
	41 – 50 Years		46
	51 – 70 Years		23
Marital Status	Married	125	62.5
	Unmarried	75	37.5
Qualification	School Level	25	12.5
	Diploma	35	17.5
	UG / PG	77	38.5
	Professional / Ph.D.	63	31.5
Monthly Family Income (INR)	Upto Rs.50,000	50	25.0
	Rs.50,001 – Rs.1,00,000	30	15.0
	Rs.1,00,001 – Rs.2,00,000	45	22.5
	Above Rs.2,00,000	75	37.5
Occupation	Salaried	80	40.0
	Business / Self-employed	40	20.0
	Profession	45	22.5
	Home maker/Retired	35	17.5
Area of Living	South Chennai	75	37.5
	Central Chennai	75	37.5
	North Chennai	50	25.0

Source: Primary Data

The value of Pearson’s correlation between various personality traits and Herding bias is as follows:

TABLE 11

Relationship between the Various Personality Traits and Herding Bias

VARIABLES	N	'r' VALUE	P - VALUE	RELATION SHIP	REMARKS	
					SIGNIFICANT	RESULT
Extraversion Herding Bias -	200	0.346**	0.000	Positive	Significant	REJECTED
Agreeableness Herding Bias -	200	0.538**	0.000	Positive	Significant	REJECTED
Conscientiousness - Herding Bias	200	0.621**	0.000	Positive	Significant	REJECTED
Neuroticism Herding Bias -	200	-0.053	0.072	Negative	Insignificant	ACCEPTED
Openness Herding Bias -	200	0.369**	0.000	Positive	Significant	REJECTED
Overall Personality Traits - Herding Bias	200	0.678**	0.000	Positive	Significant	REJECTED

****.** Correlation is significant at the 0.01 level (2-tailed).

1. Ho: There is no association between various Personality traits and Herding bias of Investors.

The above table explains that the correlation between Extraversion and Herding bias is 0.346 at 0.000 of significance level which means that there is a positive relationship between the above said variables. Hence it is inferred that the investors who have the characteristics of zeal, accessibility, optimism and volubility seem to be prone with Herding bias.

There is a positive relationship between Agreeableness and Herding bias as the value of Pearson’s correlation is 0.538 at 0.000 significance level. It means that investors who are friendly, kind, generous, helpful who like to compromise and co-operate with others rely on more market information that would lead to herding bias.

There is a positive relationship between Conscientiousness and Herding bias, as the value of Pearson’s correlation is 0.621 at 0.000 of significance level. It means that investors who are highly disciplined, organized, dutiful and responsible for their work have higher risk tolerance. Hence they are likely to form herding bias.

There is a negative relationship between Neuroticism and Herding bias, as the value of Pearson’s correlation is -0.053 at 0.072 of significance level. It means that the investors, who are emotionally suffered, tensed and have worries sell the earning stock too early but hold losing one.

There is a positive relationship between Openness trait and Herding bias, as the value of Pearson’s correlation is 0.369 at 0.000 of significance level. It means that the investors who are modesty, tolerance and friendliness often make their investment decisions on more market information that would lead to Herding.

Finally it is concluded that the null hypothesis is rejected with Extraversion, Agreeableness, Conscientiousness and Openness trait and Herding bias. But the null hypothesis is accepted in case of Neuroticism and Herding bias.

2. Ho: there is no relationship between various Personality traits and Herding bias of Investors.

Multiple Regressions

Independent Variables:

Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness

Dependent Variable: Herding Bias

Table III

Descriptive Statistics

	Mean	SD	N
HERDING INVESTMENT BIAS	18.67	3.301	200
EXTRAVERSION	18.23	3.319	200
AGREEABLENESS	18.65	3.297	200
CONSCIENTIOUSNESS	19.62	3.310	200
NEUROTICISM	15.27	3.008	200
OPENNESS	18.85	3.304	200

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.353	.512		-11.854	.000
	EXTRAVERSION	.232	.021	.148	5.364	.008
	AGREEABLENESS	.381	.035	.265	11.259	.000
	CONSCIENTIOUSNESS	.563	.042	.432	15.123	.000
	NEUROTICISM	.247	.038	.184	6.984	.000
	OPENNESS	.298	.024	.346	13.842	.000

a. Dependent Variable: HERDING INVESTMENT BIAS

F (5, 644) = 537.234, p = .000 which is lesser than .001 (Sig. Value 2-tailed) and Adjusted R Square = 0.734.

The regression model above revealed an acceptable fit of adjusted R Square (0.734). It indicates that the big five Personality traits used for the study are influenced by Herding bias. According to the result presented in the above table, those big five Personality traits (Extraversion: b=0.230, p = 0.008, Agreeableness: b=0.381, p=0.000, Conscientiousness: b=0.563,p=0.000, Neuroticism: b=0.247,p=0.000, and Openness: b=0.298,p=0.000) do have significant influence on Herding bias. Hence it is inferred that all the five Personality traits variables have influence on Herding bias, hence the null hypothesis is not supported, and it is proved that there is relationship between Personality traits and Herding bias. Moreover Adjusted R Square (0.734) indicates that the various Personality traits can explain 73.4% of the variance which is influenced by Herding bias.

Findings from Descriptive Statistics

1. Demographic Profile

The size of the Sample is 200. Totally 200 respondents who made investments in Capital Market in India situated in Chennai City are taken for this research. The sample consists of a sizeable preponderance (73.5%) of male respondents. The range of Age of the respondents is 23 to 70 years. 46% of the respondents fall in the age group between 41 to 50 years. Majority of the respondents are Married (62.5%). In terms of academic qualifications, majority (38%) of the respondents are UG/PGs.

37.5% of the respondents are earning income upto Rs.50,000 (monthly) followed by Rs.50,001 – Rs.1,00,000 (25%). In terms of Occupation, the majority of them are salaried employees (40%). Majority of the respondents belong to South Chennai (37%) and in North Chennai with 37.5% and remaining (25%) belong to Central Chennai.

Investment Profile

51% of the respondents say that they started to invest when they receive income first. 30% of the respondents say that the influencing persons for Investments are their Financial Advisors followed by their Family Members (24%). Children's Education (16%), Marriage of Children (14%) and Repayment of Loan/Reduction of Loan (14%) are the top three objectives of the investments for the respondents.

Growth (26%), Returns (23%) and Safety (21%) are the top three important Characteristics of Investment perceived by the respondents. The major source of funds used to invest is "Savings" (59%) followed by "Earnings" (33%). Majority of the respondents (55%) prefer to invest in Equity followed by Mutual Funds (28%) and Debts/Bonds (17%). Majority of the respondents (64%) invested in investment Up to Rs.2, 00,000 (Small Investors) and remaining 36% invested in investment more than Rs.2, 00,000 (Large Investors).

Personality Traits of the Investors

Conscientiousness (M =18.62) is the top most Personality Trait and Neuroticism (M = 16.58) is the least Personality Trait perceived by the investors. The Perception on the Personality Traits of the Investors is above the average (73%) level.

Conclusion:

In this paper it is clearly examined the relationship between big five Personality traits and Herding bias of individual investors through correlation and multiple regression. The results show that except Neuroticism all the other four Personality traits are positively correlated with Herding bias. Based on the findings it is concluded with the following suggestions:

The investor with stronger Neuroticism personality should set up a lock-gain point to avoid loss by taking decision without any emotion and tensed. These types of investors can take help from investor's advisors and to attend various training programs to minimize their loss in their investment.

The investors should also be able to interpret the market and economic indicators since they influence the performance of the share on the market. They should evaluate all the variables in the environment instead of considering only one variable.

This research has only considered investors Personality traits and Herding bias. There are still more 26 biases which can be considered for further researches which affect the investors while taking the investment decision.

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APPENDIX - I

QUESTIONNAIRE

INFLUENCE OF PERSONALITY TRAITS ON INVESTMENT BIAS OF INDIVIDUAL INVESTORS IN INDIAN CAPITAL MARKET

Please answer the following questions by putting a tick mark/value in the appropriate box.

1. DEMOGRAPHIC PROFILE

1. Name :
1. Gender : Male Female
1. 3 Age : Years
1. 4 Marital Status : Married Unmarried
1. 5 Qualification : School Level Diploma UG/PG
ional
1. 6 nthly Family Income (INR) : Upto Rs.50,000 Rs.50,001 – Rs.1,00,000
 Rs.1,00,001 – Rs.2,00,000 Above Rs.2,00,000
1. 7 Occupation : Salaried Business/Self-employed
 Profession Home maker/Retired
1. 8 Area of Living : South Chennai Central Chennai i Chennai

2. INVESTMENT PROFILE

2.1 Stage of life when you started to invest:

- When incomes are more than expenses When I receive incomes first When everything for life is obtained Others (Specify)

2.2 Who/Which influence your investment?

- Family Members Relatives/Friends Colleagues/Neighbours Your Financial Position
 Financial Advisors Myself

2.3 Main objective of your Investment: (Choose any one)

- For Children's Education For Marriage of children To meet contingencies
 For purchase of assets For tax benefits To repay/reduce Loan To provide for retirement To extend investment Plan a major holiday

2.4 What is the most important characteristic do you compare when picking an investment option?

- Returns Risk associated Safety Time period Liquidity Growth Stability Diversification Tax benefits Flexibility

2.5 What is the source of funds do you use to invest?

- Savings Earnings Borrowings closing other investment

2.6 What type of investment do you make? Equity Debts/Bonds Mutual Funds

2.7 What is the amount of investment made during this year (in INR)?

- Up to Rs.2, 00,000 (Small Investor) More than Rs.2, 00,000 (Large Investor)

3. Personality Traits of the Investors

Please indicate your level of agreement regarding your Personality traits by ticking in the appropriate box.

(SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree & SA = Strongly Agree)

S. No.	PERSONALITY TRAITS OF THE INVESTORS	SD (1)	D (2)	N (3)	A (4)	SA (5)
1. EXTRAVERSION (outgoing and social a person)						
1.	I am talkative.					
2.	I am energetic/active.					
3.	I have enthusiasm.					
4.	I am assertive.					
5.	I am sociable.					
2. AGREEABLENESS (warm, friendly, tactful and have an optimistic view of human nature)						
6.	I am helpful.					
7.	I generally trust others.					
8.	I like to cooperate with others.					
9.	I take care of others/show kindness to all.					
10.	I am polite and treat others with respect.					
3. CONSCIENTIOUSNESS (careful, vigilant, efficient and organized)						
11.	I am careful.					
12.	I am reliable.					
13.	I am well organized.					
14.	I do things efficiently.					
15.	I make plans and follow through with them.					
4. NEUROTICISM (negative emotional state, anxiety, worry, envy, frustration and loneliness)						
16.	I am depressed.					
17.	I am so tense.					
18.	I am stressful person.					
19.	I am moody.					
20.	I get nervous easily.					

5.OPENNESS (transparency, cooperative, unrestricted access to knowledge and information)						
21	I come up with new ideas					
22	I am creative and deep thinker					
23.	I like to reflect and play with ideas					
24.	I am curious about many different things					
25.	I prefer work that is routine					

4. Investment Biases

Please indicate your level of agreement regarding the Investment Biases while making decisions regarding investments by ticking in the appropriate box.

(SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree & SA = Strongly Agree)

HERDIING BIAS (mimic/imitate others without taking into consideration of their own judgment)						
1	I often use information gained from news or any other sources when making investment decisions.					
2	I feel public opinion about profit- making investment avenues is often correct.					
3	I never take any hasty decisions without consulting my friends and my investment advisor.					
4	Other investor’s decisions of choosing have impact on your investment decisions					
5	I follow other investors to avoid loss					