Behavioral Traits and Investment Decisions: An Empirical Study on Executives of Financial Service Sector

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Abstract: The economic and financial theories presume that people act rationally in all the given situations by using the account of all available information while making decisions. In contrast to this, there is an evidence to illustrate the recurring patterns of quasi-rationalism in the way people proceed while making decisions and choices in the given uncertain situations. The thrust of this study is to share the findings of doctoral thesis on the theme of impact of behavioural traits on investment decisions which is limited to investors of Rajasthan only. The results explored that the ability to understand how money works and Investment Experience in the market parallel with cognitive dissonance, disposition and gambler's fallacy (negatively) and familiarity bias (positively) affects investment decision making.

Keywords: Quasi-rationalism, behavioural traits, financial literacy, cognitive dissonance, disposition, gambler's fallacy, familiarity

I. INTRODUCTION

Behavioural Finance is a rapidly evolving field of finance which studies economic decision making behaviour and the intervention of psychology into finance. The notion behind the concept is to combine the data structure with the market behaviour which influences the choice of investor. Traditional finance assumes investor to be rational, but modern finance or behavioural finance assumes investor to be quasi-rational or irrational. The lobes of investor's mind frequently operates with the sentiments which gets affected by the real time happenings in the stock market environment. In 1969, Eugene Fama declared through Efficient Market Hypothesis (EMH) that one cannot beat the market as security prices reflect all available information. This also supports that no irrational decision can also take place but if that so there would not have been irregularities and anomalies in efficient markets. On the other side, Behavioural Finance is the facet which comprehends psychology related theories to apprehend stock market anomalies.

Psychology plays an important role in decision making but this decision making act is influenced with cognitive and emotional errors. Behavioural Finance theories conceive the tactic to follow the logical procedures backed with the statement of problem, timing of decision and necessary resources. Other than EMH, varied studies were done by eminent researchers in the field of behavioural finance. Kahneman and Tversky in 1979 devised the concept of 'Prospect Theory' which asserts the decision making behaviour in respective circumstances. They added the

dimensions of regret aversion, self-attribution, risk aversion and locus of control. (Shefrin, 2007), proposed that bias leads to failure as individual make decisions in credence or belief which is backed with self-attribution, overconfidence and over optimism.

Inclusively, decision making is distorted by emotional and cognitive errors as cognitive errors connects with faulty reasoning and emotional errors are lined up with lacking control over emotions in a particular situation. Thus, investors are not completely rational due to the presence of behavioural finance biases.

II. REVIEW OF LITERATURE

Behavioural Finance theories endeavour to analyse the impact of cognitive and emotional errors on decision making. Behavioral bias as a comprehensive definition of 'irrationality' includes repetitive pattern in cognitive distortion, erroneous judgement and meaningless interpretation (Babajide & Adetiloye, 2012). The cognitive and emotional lobes of mind have their own limitations in order to give input, process and output in terms of biased judgements (Ackert, Church & Deaves, 2003). The natural phenomenon exclaims that rationality is the ultimate output of mind exercise on the other side of the coin emotional bias arouse due to feelings, mood, emotions being influenced by cognitive process. Ultimately this ends up with irrational decision making (Pompian, 2006).

The uniqueness of demographic factors is associated with every individual which distinguishes one person from another. The demographics are the prominent drivers for investments which keep on changing as per the prevailing economic conditions. Thus, the need of the hour is to build the thorough understanding of demographic factors which have affected the investment decisions of investors with the help of the preceding piece of research works (Bhargava & Swarankar, 2013), (Prince, 1993), (Bajtelsmit & Berasek, 1996, (Mittal & Vyas, 2011), (Fish, 2012), (Hanna & Lindamood, 2005), (Yih, 2011), (Watters, 2011), (Nguyen & Schuessler, 2012). (Demirel, 2011), (Lutfi, 2010).

The behavioural biases in the form of cognitive and emotional biases pass the distortion in effective decision making. The available literature serves the purpose of understanding the interconnection between the variables which are associated with individuals (Bhattacharya, 2012), (Frank & Campanale, 2012), (Lin & Lee, 2004), (Chira, Adams & Thornton, 2011), (Benett, Selvam & Shalin,

Revised Manuscript Received on April 05, 2019.

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2011), (Shaik et.al. 2012), (Bata, 2010), (Shiller, 2003), (Pomeranz, 2011).

III. PROBLEM OF STATEMENT & RESEARCH METHODOLOGY

This research work is a hard endeavour to assess the bearing of behavioural traits on making investment choices. It aims to evaluate whether the investor making choices in the market is sensible all the times. The core of the research will travel around seventeen behavioural traits: Anchoring, Illusion of Control, Gambler's Fallacy, Familiarity, Self-Attribution, Disposition, Cognitive-Dissonance, Endowment, Mental Accounting, Herding, Ambiguity-Aversion, Hindsight, Regret Aversion, Self-Control, Optimism, Loss-Aversion and Overconfidence. The effects of these factors, along with demographic factors such as work experience, age, income, marital status, gender, occupation, financial literacy and experience in the market on the decision making process of financial service sector executives of Rajasthan, were analysed in the study. The study was limited to the stock market investors (equity investors) only.

IV. OBJECTIVE & HYPOTHESES OF THE STUDY

The determination of doing this research work is to establish the relevance of fundamental biases driven by varied demographic factors and behavioural traits during the investment decision making process. Many a times behavioural economists have evidenced that psychological factors does affect the decision making. The ideation is to examine whether the investors in the stock market make logical and bias less choice every time which ultimately make investors' standstill for making the correct decision for maximizing the wealth. The behavioural biases are prone to link with the notion that rational human does not exist, but quasi-rational and irrational does exist.

V. RESEARCH METHODOLOGY

The orientation of research is layered in the dimensions with a cover page of Descriptive Statistics for Demographic Factors and Behavioural Traits followed by Binary Logistic Regression Analysis.

VI. DATA COLLECTION AND DATA ANALYSIS

The fresh responses for the study was taken from the investors of seven divisions of Rajasthan, such as Bharatpur, Udaipur, Ajmer, Jaipur, Kota, Bikaner and Jodhpur. With increasing efforts sample size was locked at 523 investors who were working in financial service sector and invests in stock market. The sampling method used is convenience sampling. The questionnaire used for the study was situation based for which investors had to respond being in a live situation. The score method was used for the responses to calculate the total behavioural trait score in each investor.

Thus, the purpose was to identify whether the participants are full of behavioural traits.

Those 36 strings of questions later on converted into the form of 17 behavioural traits or biases as stated earlier. The nature of the dependent variable was dichotomous in nature with 'Yes' or 'No' options therefore, Binary Logistic Regression Analysis model has been used for deriving the results. Demographic Factors and Behavioural Traits participated as independent variables in decision making process.

VII. HYPOTHESES OF THE STUDY

For evaluating the impact of demographic factors and behavioural traits on investment decisions.

- There is no significant impact of Demographic Factors (Age, Gender, Income, Education, Occupation, Years of Experience, Financial Literacy & Marital Status) on investment decisions.
- There is no significant impact of Cognitive and Emotional Traits on investment decisions.

VIII. FINDINGS & RESULTS FROM DESCRIPTIVE STATISTICS & RESULTS

- Age wise distribution of the sample indicates that there are 56% respondents in the age category of 21-30 followed by 30-38 years with 36%. 8.2% of the respondents were totally in the slab of 38 to 58 years taken jointly for the sample of 523 active investors.
- Gender wise distribution of the respondents show that there are 37.5% females and 62.5% males in the study.
- The noted income group was with 55% having a slab of Rs 2 lakh to Rs. 4 lakh of income. The second prominent group was from Rs. 4 lakh to Rs. 6 lakh with around 20%.
- In continuation, 43% of respondents were having less than 3 years of experience and 48% were having 5 years of experience in the financial service sector.
- The recorded responses show that 37.3% were not having knowledge how money works and 62.7% were knowing the tactics of financial markets.
- The generated responses stated that 37.3% were single and 62.7% were married.
- Out of the surveyed respondents, 41% executives of financial service sector belong to mutual fund companies followed by 35% who were working in banks. The broking firm and insurance jointly having 14% and other intermediaries were having 9.8%.
- In terms of having experience in the market, 50% of the investors were in the category of 1 to 5 years, nearly 45% of investors were having 5 to 10 years of experience in the market, and remaining 5% were having more than 10 years of experience as working in stock market.

Table 1.1: Output Table of Binary Logistic Regression

Independent Variables							
Beta		**Standard Error**	**Wald**	**DoF**	**Significance.**	**Exp of (B)**	**95% Confidence Interval for Exponential (B)**	
							Lower Bound	**Upper Bound**
Financial Literacy	1.421	.324	19.266	1	.000	4.140	2.195	7.807
Experience in Market			61.138	2	.000			
Experience in Market	3.397	1.322	6.605	1	.010	9.883	2.240	398.651
Experience in Market	.391	1.305	.090	1	.765	1.478	.114	19.077
Familiarity Bias	.071	.032	4.967	1	.026	1.074	1.009	1.143
Cognitive Dissonance Bias	-.065	.035	3.453	1	.043	.937	.875	1.004
Disposition Bias	-.086	.040	4.589	1	.032	.917	1.007	1.179
Gamblers Fallacy Bias	-.194	.057	11.472	1	.001	.824	1.085	1.359
Constant	17.515	23205.056	.000	1	.899	4.040		

IX. FINDINGS & RESULTS FROM BINARY LOGISTIC REGRESSION ANALYSIS

- Financial Literacy was observed as significant demographic variable. This depicts that the standard of financial literacy is having a direct association with a possibility of making profits in a portfolio. The study is evidencing that the investor adds returns if he/she knows the working of finance.

- Years of experience of trading in the financial markets was too observed as a significant demographic factor. The respondents were divided into three groups: 1 to 5 years of experience, 5 to 10 years of experience, and more than 10 years of experience. It was explored that first group i.e. having experience of 1 to 5 years in the market, investors benefited with the returns but as investor goes to next level it is not compulsory that they will earn more and more profits rather it is also not certain that investor will have losses in the portfolio. Therefore, the group which was having more experience was not observed significantly different. The first group had the probability of earning 9.833 times extra.

- The familiarity bias is subsidizing profits in the portfolio. This bias supports that there is no harm in having local or known stock in the portfolio or understanding of geographical area or other background information. The table 1.1 is asserting that if familiarity trait increases by 0.71 times, there is a possibility to increase profits by 1.074 times.

- The cognitive dissonance trait is depicting that presence of this bias reduces the profits by 0.937 times. It attracts the losses in the portfolio because mind jumbles like anything.

- The disposition bias too inclined towards the chances of fetching loses in the portfolio by 0.990 times. This figure was observed significant at 95% confidence interval.

- Gambler's Fallacy asserts that if gambling notions change by 0.194 times it would directly have impact with 0.824 times to get losses in the portfolio. Few investors believe that if the market is rising continuously, it would get a fall in the next trading session. This affects the loss of opportunity in gaining profits in the existing situation. Contrast to this, some may hold the stock assuming that next fall is impossible. This results in losses in the portfolio.

Table 1.2: Testing of Hypotheses (Results)

	Alternative Hypothesis	Result
H₁	There is an impact of demographic factors on investment decision making.	Cannot be Rejected
H₂	There is an impact of behavioral traits (cognitive and emotional) on investment decision making.	Cannot be Rejected

X. DISCUSSION AND SUGGESTIONS FOR OVERCOMING BIASES

The executives who were under experimental study in the subject observed significantly biased for familiarity trait, cognitive-dissonance trait, disposition trait and gambler's fallacy trait. Even if out of these four significant observed traits, familiarity trait resulted in profits in portfolio but 'excess of everything is bad' as it invites unsystematic risk in a portfolio. Rest three of the significant biases all resulted in fetching losses in a portfolio. Following are the suggestions for overcoming the biases:

A Familiarity Bias

The output of binary logistic regression is expressing that familiarity bias resulted in profits in a portfolio, but this bias need to be controlled. As it is an old saying 'invest in what you know'. Before investing hard earned money, investor must know the stock movement properly. The presence of this trait compels individuals to hold undiversified and risky portfolio. To overcome this bias, investors need to widen their portfolio apportionment decisions for diversifications advancements which ultimately would have impact on reduction of the risk.

B Cognitive Dissonance Bias

This bias fetched losses in the portfolio. This theory assumes that lobes of human mind finds difficult to separate expectations and reality. The easiest way to eliminate cognitive dissonance is to change the beliefs or opinions. This requires practice as it is a long holding belief, but if these beliefs are conflicting that are needed to be dropped from the cognition.

C Disposition Bias

This bias too resulted in losses in a portfolio. The Disposition bias is accountable for missed profits. In place of putting logics, investor plays and ends up by selling winners and holding losers. The balanced strategy is to hold a constant and regular assessment and take an emotionless and authentic look towards portfolio. At a particular time, we can assess each stock in spite of the historical prices. We must ask question to ourselves: Is this stock worth enough to own?

D Gambler's Fallacy Bias

The biggest way to avoid the gambler's fallacy is to rationally understand the difference between an independent event and a dependent event. An investor must know the odds associated with the event. Ignorance is not always bliss so do not take risk by ignoring the fine details. Do not depend on luck because the odds are against you. So, to avoid the gambler's fallacy, investors have to make it sure that they look at trends from a number of angles.

XI. CONCLUSION, LIMITATIONS & FURTHER SCOPE OF THE STUDY

In order to find out the bearing of demographic factors and behavioural traits on investment decisions the alternative hypotheses for impact of financial literacy, years of experience in the stock market, cognitive dissonance, familiarity trait, gambler's fallacy and disposition trait were failed to reject. Thus, there is a significant impact of years of experience, financial literacy, cognitive dissonance, familiarity trait, gambler's fallacy and disposition trait on investment choices. The behavioural pattern of an investor was explored through a disguised structured questionnaire. The respective respondents' might have a different set of mind while filling up the questionnaire and this is too psychologically evidenced that emotional quotient matters. The study leaves scope for financial behavior modelling for eliminating the non-significant variables in a fashionable way. Future studies can contribute to the assessment of other behavioral, psychological and demographic dimensions along with the wider market approach

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