

Influence of Investment Objectives on Personality Traits and Behavioral Biases

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ABSTRACT - Behavioral finance is an emerging field to understand the psychology of the investor in various investment avenues. In the present scenario investment in stock market plays a vital role. Investment in this avenue is made by both individual and by institutions. This research was conducted for the purpose of which is to identify the relationship between Investor's Personality Traits, Demographics and Behavioral Bias in investment objectives. The data was collected from 545 investors by using a structured questionnaire as a convenient sampling and it was tested through SPSS 21 (Amos). The study proves that the personality traits and behavioral biases have much influence towards investment objective.

KEYWORDS: Investment objectives, Personality Traits, Behavioral Bias.

I. INTRODUCTION

“Personality is the dynamic and organized set of characteristics possessed by a person which uniquely influences the person's cognitions, motivations, and behaviors in various situations.” Investors' personality plays an important role in determining their behavior (Sadi et al., 2011; Charles and Kasilingam, 2014a; Zaidi and Tauni, 2012). Hence the investor's decision depends on the personality of the individual (Durand et al., 2008; Durand, Newby, Peggs, and Siekierka, 2013; Durand, Newby, Tant and Trepongkaruna, 2013). Personality traits, emotions and moods of the investor shape the investment decision of the investors.

To gain better understanding of the behaviour of investors they have been categorized in 5 major personality types using the “Big Five Model” given Lewis Goldberg. There are investors full of energy, positive emotions, assertive, social able, talkative and prone to heuristic and herding bias and are known as Extravert. Neurotic investors are found anxious, short tempered, moody, and sensitive. They are characterized by nervousness, anger, depression and can relay as prey to regret aversion and loss aversion. Agreeable investors are friendly, trustworthy tolerant and affable. They are rational in nature and do not lose in risky trades. Investors with personality type Conscientiousness are efficient, sincere, disciplined, planned, well-organized, goal oriented and self-sufficient. Though rational they miss the great investment opportunity due to absence of timely reaction. Last category of investor include people of open to experience and are creative, curious, open to change, sensitive to new changes intelligent and are flexible. However, they are over-confident and optimist as they trade on tailor made rules. This paper summarizes the impact of

personality traits discussed in the “Big Five Model” influences the investors investment objectives.

II. REVIEW OF LITERATURE

Investments are made with an proclaimed research in behavioural finance's objective of maximizing the wealth. The objectives of literature review are, it critically examines the information by identifying gaps regarding the limitations of theories and points of view and by articulating areas for further research and reviewing areas of controversy. The study of Investor's Behavior is a multi disciplinary subject, which is a combination of the theoretical concepts of economics, finance, investment and psychology. This research mainly focuses on the inter relationship between demographic factors, personality traits. The review of literature has been done with reference to the underlying concepts from the above said subjects.

Dr. D. Harikanth & B. Pragathi (2014) conducted a research on “Role of behavioral finance in investment decision making -a study on select districts of Andhra Pradesh, India.” and concluded that investors take quantitative investment decisions. The behavioral biases-cognitive bias and emotional bias take a predominant role in the investment decision of the individuals. Investment decisions primarily depend on the types of investors, risk tolerance capacity, education, occupation, age, sex, income, marital status, family back ground and living area. The concepts of behavioral finance are used in the present study and it explores the psychological concept in investment style of individual investors to different available investment avenues. This study reveals that there is a noteworthy influence of income and occupation in

investment avenue selection by the male and female investors.

Bashir et al. (2013) conducted a research to examine the relationship between personality traits, demographic factors and the confidence level. The Questionnaire was circulated among 100 respondents and data was examined with the help of statistical tools such as correlation, regression and chi square. The outcomes of the study revealed that all personality traits (conscientiousness, Emotional stability, agreeableness and openness to experience) are correlated with the behavior over-confidence. Regression results showed that there is non-linear relationship between personality traits and confidence level.

Zaidi & Tauni (2012) identified the relationship between investor's demographic factors, personality traits and overconfidence bias in the Lahore stock exchange. Data was collected from 200 convenient investors randomly through questionnaire survey method. The findings of this study proved that the personality traits such as extroversion, agreeableness and conscientiousness had a positive relationship with overconfidence bias whereas Neuroticism had negative relationship with overconfidence. The outcomes also indicated that education level and age don't have a significant impact with overconfidence bias while there is a positive bond between overconfidence bias and investment experience.

Jamshidinavid et al. (2012) in his research paper studied the impact of the demographic and personality traits on the financial behavior biases in Tehran stock exchange. 215 investors were chosen based on simple random sampling and the data was analyzed by using structural equation modeling through AMOS 6 software. The study identified that extraversion had a positive influence on confidence. Neuroticism was positively and significantly related with herding and disposition effect. Openness had a positive and significant relationship with herding and overconfidence. Agreeableness had a positive relationship with herding. Conscientiousness had a positive relationship with overconfidence and disposition effect. Age had a negative relationship with herding. Herding behavior was more common in woman than women. High confidence had a positive relationship with the education level.

Carrie H. Pan and Meir Statman (2012), in his research got a opinion that investors' high risk taking attitude is associated with high levels of Extraversion and Openness personality trait and t low level of risk taking ability incorporated with high levels of Conscientiousness. Overconfidence incorporated with high levels of Extraversion whereas low confidence is associated with high levels of Agreeableness. The tendency to regret was low among investors with high levels of Extraversion, but high among investors with high levels of Conscientiousness.

Cobb-Clark and Schurer (2012), concluded that the personality traits at working age were constant over four-year period, based on their findings of small changes in personality during the given periods and negative relation between intra-individual personality characteristics and life events.

Kabra et al. (2010) projected the various factors that regulated the investment risk tolerance and decision making process among men and women and among different age groups. The authors analyzed the behaviour of various types of investors engaging in the government or private sectors in India and also regarding their annual income and annual amount invested by them.

Sewell (2005) had construed behavioral finance as the study of the influence of psychology on the behavior of investors and investment consultants and this psychology subsequently affects the trading in the markets.

Bowles et al., (2001), several extant studies had attempted to elucidate how the personality traits act as major predictors of educational and labor market outcomes. As measures of non-cognitive skills, the Big 5 personality traits were the broadly accepted model of personality in the psychology and economics literature. As a brief measure of the Big 5 personality traits, many recent studies had used five- or ten-item inventories calculated by bipolar factor of five personality facets, namely extraversion, agreeableness, conscientiousness, emotional stability, and openness to experiences.

Kahneman and Mark W Riepe (1995), in a research paper titled "Aspects of Investor Psychology", revealed the fact that the beliefs, preferences and biases of human beings had influence on their investment decision making.

Nagy and Obenberger (1994) examined the factors influencing investor behaviour. A questionnaire that included 43 items was developed to assess the behaviour of investors.

Bhatty, Natarajan and Malvea (1991), in his research reported about the distribution of households by Socio-Economic Characteristics. The households were broadly classified into three income groups low income group (Rs11,000), Lower middle income groups (Rs, 11,001- Rs 22,000) and Middle and High income groups (above Rs. 22,000). It was inferred that the proportion of households in the lowest income class at the all India level had been declining. The proportion of households in the lowest income class was more in rural areas when compared to urban areas.

Barnewell (1987), found that investor behaviour can be predicted by life style characteristics, risk-aversion, control orientation and occupation, quick, stock marketability, past performance of the firm's stock, and government holdings, whereas the least influencing five factors by order of

importance were: Expected losses in other local investments, minimizing risk, expected losses in international financial markets, family member opinions and gut feeling on economy.

Narayana (1979), attempted to study the Income, Savings and Investment of Household Sector in Chittor District during the Period 1973-74. Primary data were used for the analysis Stratified sampling method was adopted for the selection of the sample households. The sample size taken for the study was 1650 households, out of which 1200 were from rural area and 450 from the urban area. The study pertains to the middle income group whose annual income ranged between Rs. 1,500 to Rs.25,000. It was examined from the study that the impact of demographic factors such as the size of household, the level of earners, the level of education, age of the head of the family and the occupation of the households on income generation, saving formation and on investment decision.

Chauhan and Agarwal (1970), conducted a research on, "Magnitude and Pattern of Form Investment in Rajasthan, multiple regression model was used to identify the factors influencing investment decision. The study found that age of the family's head and the number of members in the family had positive influence on investment decisions.

III. OBJECTIVES

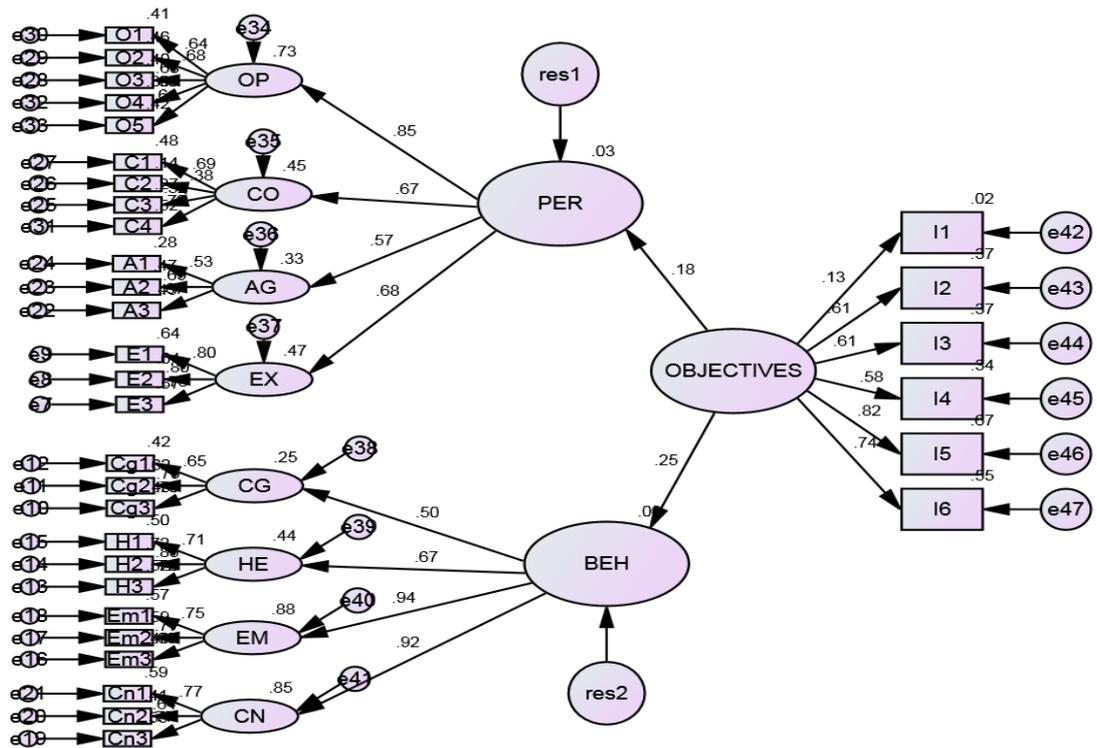
1. To study investment decision making process and to investigate about different personality traits influencing investor's attitude towards investment portfolio.
2. To find out the impact of investment objectives on personality traits
3. To find out the impact of investment objectives on behavioural factors.

ANALYSIS :

4. To find out the most influencing factor.

IV. METHODOLOGY

Research design is the strategy, plan and structure of conducting a research study. It is the outline that has been designed to seek responds to research questions. The study was done to find the influence of investment objectives on behavioral biases and personality traits .The design of the study is descriptive and cross sectional in nature. The recent study was a relational survey that seeked to explore the relationship between the investment objectives (OBJECTIVES), personality traits (PER) and behavioral biases (BEH). Data regarding the individual investor behavior and personality traits had been collected by a structured questionnaire. The Independent Variables considered in this study was Investment Objectives and the dependent variables werre the five personality dimensions enunciated by the Big Five Model of Personality and behavioral biases. The Cronbach's alpha was a measure of internal consistency which was developed by Lee Cronbach in 195. It is considered to be a measure of scale reliability. Cronbach's alpha was tested to see if multiple-question Likert scale surveys were reliable and the result also showed that satisfactory i.e Openness (OP-0.824) , Consciousness (CO-0.723), Agreeableness (AG-0.706), Extroversion (EX – 0.878), Cognitive (CG- 0.789), Herding (HE – 0.846), Emotional (EM – 0.808), Contextual (CN-0.814) and Investment Objectives (Objectives – 0.896) . The data collected were analyzed for the entire sample. Data analyses were performed with (AMOS) using techniques Structural Equation Modeling.



Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
PER <--- OBJECTIVES	1.091	.403	2.710	.007	par_31
BEH <--- OBJECTIVES	1.000				
OP <--- PER	1.008	.119	8.463	***	par_20
CO <--- PER	.679	.093	7.320	***	par_21
AG <--- PER	.714	.098	7.289	***	par_22
EX <--- PER	1.000				
CG <--- BEH	1.000				
HE <--- BEH	1.589	.208	7.656	***	par_23
EM <--- BEH	1.799	.222	8.109	***	par_24
CN <--- BEH	2.099	.246	8.519	***	par_25
E3 <--- EX	1.000				
E2 <--- EX	1.093	.064	16.981	***	par_1
E1 <--- EX	1.078	.063	17.000	***	par_2
Cg3 <--- CG	1.000				
Cg2 <--- CG	1.226	.095	12.957	***	par_3
Cg1 <--- CG	1.000	.082	12.249	***	par_4
H3 <--- HE	1.000				
H2 <--- HE	1.181	.074	15.992	***	par_5
H1 <--- HE	.989	.068	14.631	***	par_6
Em3 <--- EM	1.000				
Em2 <--- EM	1.124	.079	14.285	***	par_7
Em1 <--- EM	1.096	.078	14.121	***	par_8
Cn3 <--- CN	1.000				
Cn2 <--- CN	.795	.057	13.998	***	par_9
Cn1 <--- CN	.952	.057	16.823	***	par_10
A3 <--- AG	1.000				
A2 <--- AG	1.061	.109	9.769	***	par_11
A1 <--- AG	.783	.088	8.926	***	par_12
C3 <--- CO	1.000				
C2 <--- CO	.761	.114	6.651	***	par_13
C1 <--- CO	1.259	.131	9.603	***	par_14

	Estimate	S.E.	C.R.	P	Label
O3 <--- OP	1.000				
O2 <--- OP	1.142	.094	12.208	***	par_15
O1 <--- OP	1.037	.089	11.664	***	par_16
C4 <--- CO	1.569	.162	9.678	***	par_17
O4 <--- OP	.956	.086	11.184	***	par_18
O5 <--- OP	1.130	.096	11.757	***	par_19
I1 <--- OBJECTIVES	1.000				
I2 <--- OBJECTIVES	5.660	1.144	4.948	***	par_26
I3 <--- OBJECTIVES	4.771	.964	4.948	***	par_27
I4 <--- OBJECTIVES	4.896	.996	4.913	***	par_28
I5 <--- OBJECTIVES	7.701	1.510	5.100	***	par_29
I6 <--- OBJECTIVES	6.670	1.317	5.063	***	par_30

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
PER <--- OBJECTIVES	.178
BEH <--- OBJECTIVES	.253
OP <--- PER	.854
CO <--- PER	.672
AG <--- PER	.573
EX <--- PER	.684
CG <--- BEH	.500
HE <--- BEH	.667
EM <--- BEH	.939
CN <--- BEH	.924
E3 <--- EX	.757

			Estimate				Estimate
E2	<---	EX	.799	A1	<---	AG	.529
E1	<---	EX	.801	C3	<---	CO	.518
Cg3	<---	CG	.699	C2	<---	CO	.376
Cg2	<---	CG	.789	C1	<---	CO	.694
Cg1	<---	CG	.652	O3	<---	OP	.631
H3	<---	HE	.720	O2	<---	OP	.680
H2	<---	HE	.846	O1	<---	OP	.637
H1	<---	HE	.709	C4	<---	CO	.720
Em3	<---	EM	.653	O4	<---	OP	.602
Em2	<---	EM	.766	O5	<---	OP	.644
Em1	<---	EM	.753	I1	<---	OBJECTIVES	.127
Cn3	<---	CN	.770	I2	<---	OBJECTIVES	.609
Cn2	<---	CN	.638	I3	<---	OBJECTIVES	.609
Cn1	<---	CN	.771	I4	<---	OBJECTIVES	.581
A3	<---	AG	.670	I5	<---	OBJECTIVES	.816
A2	<---	AG	.689	I6	<---	OBJECTIVES	.739

Summary of the Various Goodness of Fit Statistics and other values

regarding the influence of Investment Objectives on the dependent factors personality traits and behavioral biases

S.No	Measures of fit	Output of Model	Acceptable level for good fit
1	Chi-square (χ^2) at p 0.01	3.895	
2	Degree of freedom (df)	486	
3	CMIN	1892.96	2-4
4	Comparative fit index (CFI)	0.937	>0.90
5	Bentler – Bonett Index or Normed Fit Index (NFI)	0.884	>0.90
7	HOELTER .05	155	<= 75 poor fit
8	HOELTER .01	162	Atleast 200
9	RFI	0.861	>0.90
10	IFI	0.938	>0.90
11	TLI	0.918	>0.90

Source: AMOS 21.0 output

V. STRUCTURAL EQUATION MODELLING

Since the dimensions taken for the study, Big five Personality traits and Behavioral biases were empirical constructs, the researcher had defined its dimensions based on the setting which was used to explore the construct. If investment decision model is to be applied in the Indian context, the dimensions and the sub dimensions taken must be reliable and valid in predicting the investment decision of individual investors. The model enquires the relative importance of dimensions, demographic factors (Demo), Personality Traits (PER) and Behavioral Biases (BEH) in influencing the investment decision of investors. The investment decision model included the sub-dimensions of the above said dimensions; they were tax benefit, safety, liquidity, retirement benefit, children’s education / marriage and wealth maximization for measuring the dimension objective factors (Objectives). Openness (OP), Consciousness (CO), Agreeableness (AG), Neuroticism (NU), Extroversion (EX) were the sub-dimensions to measure the dimension personality traits (PER). Cognitive bias (CG), Herding Bias (HE), Emotional Bias (EM) and Contextual Bias (CN) were the sub-dimensions taken to measure Behavioral biases. After identifying a potential model that explained the data in terms of theory and model fit, a structural equation modeling (SEM) was used to test the invariance of the factorial model. The data for all groups were analyzed simultaneously to obtain efficient estimates (Bentler, 1995). The constraints used include, from weaker to stronger: (1) model structure, (2) model structure and factor loadings and (3) model structure, factor loadings and unique variance.

VI. EVALUATION OF MODEL FIT

Several well-known goodness-of-fit indices were used to evaluate model fit. These include the chi-square χ^2 , the comparative fit index (CFI), the unadjusted goodness-of-fit

indices (GFI), the normal fit index (NFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA) and the standardized root mean square error residual (SRMR). Goodness-of-fit (GOF) indices provided

“rules of thumb” for the recommended cutoff values to evaluate data-model fit. Hu and Bentler (1999) recommended using combinations of GOF indices to obtain a robust evaluation of model fit. The criterion values they listed for a model with good fit are CFI > 0.90, TLI > 0.90, RMSEA < 0.08, and SRMR < 0.08 for assessing fit in structural equation modeling. Hu and Bentler offer cautions about the use of GOF indices, and current practice seemed to have incorporated their new guidelines without sufficient attention to the limitations noted by Hu and Bentler. Moreover, some researchers (Beauducel & Wittmann, 2005; Fan & Sivo, 2005; Marsh, Hau, & Wen, 2004; Yuan, 2005) believed that these cutoff values were too rigorous and the results by Hu and Bentler had limited generalizability to the levels of misspecification experienced in typical practice. In general practice, a “good enough” or “rough guideline” approach was that for absolute fit indices and incremental fit indices (such as CFI, GFI, NFI, and TLI), cutoff values should be above 0.90 (0.90 benchmark) and for fit indices based on residuals matrix (such as RMSEA and SRMR), values below 0.10 or 0.05 were usually considered adequate. All analyses were conducted using AMOS 18.0.

The above results also showed the regression and standard regression weights. It was understood that the factors which were considered in this study were clearly explained by the variables as the regression weights were more than 0.5 except few. The dependent variables personality traits and behavioural biases were influenced by the investment objectives as the R² value for personality traits was 0.32 and behavioural biases was 0.64. The goodness of fit indices shows accepted.

VII. MANAGERIAL IMPLICATION

As the empirically tested Structural Equation Model suggest there is significant influence of Investment objectives on personality traits and behavioural biases of the investor. The model suggested that the investor behavior will change based on their investment objectives and it is statistically tested. It is also found that the emotional biases are the most influential factor to behavioural biases and openness has the high impact on personality traits. It is clearly understood the investors are always curious and imagination earning return on investment and also they are emotionally bonded with investment. So the present model is reflecting the investment behavior of the investor. The individual constructs and their contents may be examined and suitably modified for further use in different situations. There are innumerable ways of using this baseline model.

VIII. CONCLUSION

The diversification of the financial services sector has provided individual investors opportunities to invest in various avenues. The individual's decision to invest in

various investment avenues is greatly influenced by the variety of each individual wants to yield the return from their investment. The result of this study implies that personality traits and behavioral bias have influenced the investment objectives of the investors. This study provides the valuable insights in understanding the relationships between personality traits, behavioral bias and investment objective. Thus the investors can invest in various portfolios regardless their personality, attitude and behavioral factors.

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