Determinants of Mutual Funds Investment Intentions: Big Five Personality Dimension

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Abstract

Purpose:
Over the past several decades the behaviours of investors have been the focal point of many researchers to understand the psychological antecedents for investment decision. This paper attempts to examine the impact of specific personality traits on investment intentions to purchase mutual funds with specific focus on the Big Five personality taxonomy.

Design/Methodology/Approach:
To scrutinize the specific personality predictors, this study employs the multiple regression using theory of planned behaviour (TPB).

Findings:
The research indicated that individuals who are extraverted intend to engage in mutual fund investment, while those who are higher in neuroticism less intended to engage in this activity. In addition to this, Individuals who are higher on agreeableness are also intended to engage in mutual fund investment.

Managerial Implications:
The study will aid mutual fund providers to manage the portfolio of mutual fund according to investors' personality traits.

Scope for further research / Limitation:
Due to time constraints, the study is confined to Delhi-NCR only. The study can considered as a pilot study and could be further explored to more cities in India.

Keywords: Mutual Funds, Big Five Personality, Theory of Planned Behaviour, Investment Intention

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Introduction

In comparison to other countries like Australia (114 %), United States (91 %) and United Kingdom (51%), India has lowest (7%) mutual fund investment to gross domestic product ratios (MF: GDP) globally, and offers an immense untapped opportunity for mutual fund houses. A total financial investments of 3.4 % of total individual investors accounted by households and retail in 2014-15. It shows a huge space for growth for mutual fund industry. However according to Reserve Bank of India's annual report 2016, there has been sharp increase of rate of investment in financial savings in comparison to physical assets by Indian households and was 11 % of gross domestic product (GDP) in financial year (FY) 2016 in comparison to 10.2 % in FY 15. Physical assets accounted for about 58% of household savings in 2014-15 while it was 69% in 2011-12. The allocation to shares & debentures, which includes mutual funds, appreciably increased from 1.8% in FY12 to 6.6% in FY16. According to AMFI report retail investors are increasingly taking the mutual fund route to invest their financial savings. Total retail investment in mutual funds was at Rs 7.87 lakh crore as on November 2016 against just Rs 2.85 lakh crore in April 2008. The retail equity AUM was up from 1.8% of GDP in December 2008 to 3.6% in November 2016. The inflow into equity mutual funds also increased significantly from 2014 to 2016. Average monthly inflows into equity mutual funds since April 2014 increased substantially to around Rs 5200 crore in 2016 compared to just Rs 640 crore between 2007 and 2014. The data shows that retailers and households are getting interested towards mutual fund investment rather than iinvesting in physical assets. Now question arises what allured the investors towards mutual funds? What are the basic determinants for investment decision in mutual funds?

The previous literature tried to seek the answer of these questions in their different ideologies. The previous studies suggested that different determinants impact on individual financial investment behaviours (Lyons et al., 2007; Filbeck et al., 2005). One ideology says rationality of individual is the basic source of decision making in terms of mutual funds investment. The other says along with rational thinking socioeconomic factors like gender; age, income, education and knowledge are also main contributor of investment behaviour in mutual funds (Rosplock, 2008; Volpe et al., 1996; Norvilitis et al., 2006; Sutton, 2010; Bernheim et al., 2001). An extant study explained the impact of gender and biases on individual investment behaviour. The study finds that males are more involved in financial investment than females (Barber and Odean; 2001). Yilmazer and Lyons (2010) find a mixed result of impact of age and investment behaviour in financial literature.

A study emphasized positive relationship of age to debt (Norvilitis et al., 2006). A research revealed that younger age group respondents follow a less saving approach than the age group 36-40 years (Henry et al., 2001). According to Sutton (2010) there is a strong positive relation between level of income and total savings and investment. In the same line research also supported effects of financial education on financial behaviour. Bernheim et al., (2001) study revealed that financial education could improve financial behaviour. Research suggested that less financial education scores less financial literacy and this in turn influences financial behaviour. Perry and Morris (2005) measured a significant impact of financial knowledge on responsible financial behaviours.

But according to personal theorist individual's psychology or personal characteristics are the motivators of investment behaviour for mutual funds (McDougall, 1932; Davidson and Griffin,

2003). Notably, the growing literature in the field of behavioural finance constantly revealed the linkage of personality and cognitive thinking. The theorist revealed impact of cognitive biases as an indicator of personality using Myers-Briggs Type Indicator (MBTI) (Pompian and Longo, 2004). Hunter and Kemp (2004) investigated differences in personality while chose for investment in risky companies versus normal companies. Hunter and Kemp (2004) concluded that more openness to experience, more the risk preference in investors and that will lead finally to actual investment behaviour of the investors. With the supporting literature discussed this research examines two objectives.

Theoretical framework of behaviour intention decision model has been discussed in the first section. The behavioural intention is depicted by attitudes, subjective norms, and perceptions of behavioural self-control and if all the predictors support behaviour intention, it will lead to change in the actual behaviour of the individual. So this framework facilitates educators and financial counsellors to utilize the theory in practical field. This is the main managerial implication of this current study. The next part of the study focused on identifying two predictors namely perceived risk and personality using Big Five personality dimension for measuring behaviour intention to invest in mutual fund, which has also been supported by literature. The first objective is to identify impact of personality on investment intention and second one is to identify linkages of investment intention and perceived risk.

Theory of Planned Behaviour: Behaviour Intention Model

Theory of planned behaviour is given by Ajzen and Fishbein (1980). According to theory; behavioural intentions are cognitive in nature and intention can convert into specific behaviour due to the influence of attitude towards certain behaviour, subjective norms, and a perceived sense of behavioural control. This theory argues that behavioural intentions are strong predictors of behaviour.

Ajzen (1991) suggests in theory of planned behaviour, the more favourable the attitude, the subjective norm, and the greater the perceived behavioural control, the greater the behavioural intentions will be. And this will lead to the actual behaviour of the individual under volitional control. Therefore, the theory contends that behavioural intentions are highly related to targeted behaviours.

Several researchers have identified the impact of personality on mutual fund investment behaviour. The research on impact of personality traits (Big Five personality model) and individual risk tolerance on individual decision behaviour suggests that extraversion and openness to experience have a positive correlation and agreeableness, consciousness and neuroticism are negatively correlated with risk-tolerance behaviour (Olga, 2015). However, among these relationships, correlations between agreeableness and risk tolerance ($r = -0.194$, $p < 0.05$) and openness to experience and risk tolerance ($r = 0.238$, $p < 0.001$) are statistically significant. No significant correlations were found between personality traits and investment decisions. However, investment decisions appear to be significantly influenced by individual risk-tolerance behaviour. Higher levels of risk tolerance are positively associated with the intention to invest in stocks ($r = 0.526$, $p < 0.001$). The results of the first regressions reveal that the presence of the personality trait "openness to experience" has a significant positive effect (significant at 1 per cent) and "agreeableness" has a significant negative (significant at 5 per cent) effect on the level of risk tolerance. This implies that people who like to try new things and have strong personal opinions are more willing to invest in stocks. Men are less risk

averse than women (significant at 5 per cent), and the presence of previous investment experience makes people more risk averse (significant at 5 per cent). This may be explained by the fact that investors who have had negative investment experiences in the past become more prudent when making their investment decisions. Crysel et al. (2012) identified that personality traits influence individuals' investment decisions. Walia and Kiran (2011) found out the gaps in actual services provided by AMCs and the services offered by AMCs. The result indicates a significant gap between actual services and offered services provided by AMCs. The result also revealed that people are belief mutual fund as a risky instrument and they do not want to take very high or very low level of risk. Belcher (2010) examines the question of cross-domain risk-taking behaviour. Interestingly, "the mean responses of the portfolio choice variables were not statistically different". Kaleem et al (2009) illustrate relationship of decision making capability of financial advisors with portfolio management. The result reveals demographics such as age, education has a significant impact in determining decision making by financial advisors. Shollapur & Kuchanur (2008) explores relationship between degree of investor's agreeableness with the selected perception. Olsen (2008) suggests two attributes of perception to risk like cognitive and affective attributes and their relationship with investment decision making process of the investors. Mayfield et al (2008) examined the impact of different personality dimension using big five personality model on investment intention to invest both in short term investment and long term investment. The research used structural equation modeling (SEM) to identify the relationship between personality and long term and short term investment. The results indicate people more open to experience are high risk averse and has high intention to invest in short term investment. Individual having high Risk adverse do not involve

in long-term investing. Reliable with the literature, Mayfield et al (2008) finds that gender and investment intention a significant relationship, males are more intended to engage in both short-term (r = -.244; p < .01) and long-term (r = -.147; p <.05). Fascinatingly, results revealed that individuals who are already involved in personal finance are more intended to invest in short-term (r = 0.152; p < .05), but not their long-term investments (r = 0.119). It may be suggested that individuals may having prior experience but they are not interested in investing in long term investment. The theory also suggest that individuals low in risk aversion and more openness to experience are more intended to invest both in their short-term investments (risk aversion r = -.456; openness r = 0.189) and long-term investments (risk aversion r = -.352; openness r = 0.272), and significant at the p < .01 level). Filbeck et al. (2005) conducted study to identify the relationship between risk tolerance and personality traits using Myers-Briggs Type Indicator (MBTI). The results reveals that people who are more extraverted, intuitive, perceiver and thinker are having high risk tolerance. Olsen & Cox (2001) explored the investment behaviour of male and females. The result reveals that females give more weight age to risk than males.

Furthermore, researches on perceived risk in mutual funds have also been identified through several studies. According to Kaur and Kaushik (2016) risk belief, risk perception for mutual funds had no effect on the investment decision. The investors in mutual fund believe that mutual funds don't mitigate the risk associated with the stock market. But they understand the risks associated with investment in mutual funds. The variable like risks of mutual funds (beta=0.476); fundamental operational factor of investment criteria (beta= 0.548); and return perception for traditional-institutional investments (beta=0.440) are statistically significant for mutual fund investment

decision. And considerate of fundamental operational investment criteria, factors such as transaction cost, ease of investment, return and liquidity, negative return perception for traditional institutional investments (such as banks and post-office schemes) affect mutual funds investment. On the contrary to this, Singh & Bhowal (2010) find out the relationship between perception of risk and different classes of equity investment. The results revealed that perceived risk in its own companies share is higher than the risk in other companies. It is also found that there is a significant weak correlation between perceptions of risk with their own companies share In addition to this, Vlaev et al (2009) describes two factors affecting consumer belief of financial risk. In the same line of literature, Wang (2009) demonstrates that, a strong correlation among investors' objective knowledge, subjective knowledge, and risk taking. It is also important to notify that gender is also a determinant of investors' levels of objective knowledge, subjective knowledge, and risk taking, whereas subjective knowledge of investors will mediate the objective knowledge of the investors on taking risk. Bosner and Lakehal-Ayat (2008) measured the relationship between risk aversions to risk tolerance. It is also noted that males are more risk takers than females. Faff et al (2008) examined relationship between financial risk tolerance and risk aversion. Hanna et al (2008) discussed the relationship between risk aversion and portfolio recommendations based on an Expected Utility Theory. Shollapur & Kuchanur (2008) explores relationship between degrees of investor's agreeableness with the selected perception. Olsen (2008) suggests two attributes of perception to risk like cognitive and affective attributes and their relationship with investment decision making process of the investors.

Hypothesis 1:

There is a significant relationship between level of individuals' perceived risk, and their intentions to engage in mutual funds investment.

The available literature also suggests that those having high level of perceived risk, involving low degree of investing in mutual funds. So perceived risk is predictor of mutual fund investment intention to purchase mutual funds. The Big Five personality dimension, openness to experience, is characterized by perceived risk (Costa and McCrae, 1992). Thus, the following hypothesis is proposed:

Hypothesis 2:

There is a significant relationship among two personality dimensions; open to experience and conscientiousness with their intentions to engage in mutual funds investment.

Methodology

The present study uses multiple regression model that allows identifying the relationships of interest. A multiple regression analysis is carried out to predict the values of a dependent variable, Y, given a set of p explanatory variables (x1,x2,….,xp) (Bryman and Cramer , 1990). For the purpose of this study, a questionnaire based survey was conducted for 210 respondents from Delhi-NCR region. A total of 169 respondents have participated, of which a total of 154 useable questionnaires were collected. The respondents were asked to fill the questionnaire whether they are investing or not-investing in mutual funds as the idea of the research was to find out the intentions to invest in mutual funds. The focus of the study was to measure personality dimensions and perceived risk that are impacting investment intentions of mutual fund investor or non-investor. We operationalize all five Big five personality

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dimensions from the Big Five theory given by Costa and McCrae. A shortened version 12 items scale from NEO-FFI adopted from Costa and McCrae has been used to measure the personality dimension of big five model. Each item consist of five-point scale ranging from strongly disagree, disagree, neutral, agree, to strongly agree. Numerous items of the construct are reverse scored to avoid or reduce response biases. For measuring perceived risk , we adapted scale from Eroglu and Machleit (1990) and Stone and Gronhaug (1993) as theoretical framework .This scale uses five items with five point likert scale ranging from strongly agree, agree, neutral, disagree, to strongly disagree. These all items are rephrased for making them specifically for mutual funds investment intention. To measure the behavioural intentions to invest in mutual fund a scale was adapted from Schmidt (2010) and Mayfield et al (2008). The scale consists of four items with five point likert scale type ranging from strongly agree, agree, neutral, disagree to strongly disagree. A high score refers to higher degree of intention to invest in mutual funds in upcoming years.

Results

The descriptive statistics for the research variables are presented in Table 1. The sample means description given in the table for the perceived risk, intention to invest in mutual funds and personality variables are based upon five pointer Likert scale type ranging from (1 = strongly disagree; 5 = strongly agree). For awareness about mutual funds,

respondents answered either in yes or no. Majority of respondents (73.4 %) are aware of mutual funds. A surveyed varied in different age group. Majority of respondents (60.4%) are in the age group of 21-30 yrs. The sample consisted of 68.2 % males and 31.8 % females. Shown in Table 2 is the correlation matrix for study variables of interest. Our results reveals consistency with literature showing a significant relationship between gender and mutual fund investment intentions, reporting (r =0.170; p< .05). Surprisingly we find a significant relationship between age and intention to invest in mutual funds (r=0.185; p<0.05). This deducts that age group has an impact on investment decision shifting to younger generation rather than older. The age is also significantly related with awareness about the mutual funds with (r=-0.266; p<0.05).Interestingly, our results acclaim significant relationship between openness to experience and awareness about mutual funds. It shows that individuals who are ready to take new experience are aware of the new information regarding mutual funds. As table indicates, those individuals who are low in perceived risk have high intention to invest in mutual funds (r=-0.293; p<0.01) and those who are more conscious are more intended to invest in mutual funds (r=0.276; p<0.01). The results also suggest strong positive significant correlation between extraversion and openness to experience (r=0.608; p<0.01). However, supported with literature neither neuroticism nor extraversion had any impact, on mutual fund investment intentions.

Table 1 : Summarized Descriptive statistics of Respondents

Questionnaire	Percent	Mean	SD	Kurtosis	Skewness
Gender					
Male	68.2		0.467	-1.397	-.788
Female	31.8				
Age (in Yrs)			0.717	0.646	0.579
< 20	19.5				
21-30	60.4				
31-40	16.2				
>40	3.9				
Awareness			0.443	-0.870	1.068
Yes	73.4				
No	26.6				
Perceived Risk		2.97	0.666	1.115	-0.774
Intention to invest in Mutual Funds		3.07	1.23	20.98	3.478
Neuroticism		2.515	0.759	-0.554	-0.169
Extraversion		3.75	0.884	-0.226	-0.482
Openness to Experience		3.45	0.580	-0.238	-0.101
Agreeableness		2.98	0.601	0.406	0.040
Consciousness		3.40	0.654	0.272	0.951

Table 2 : Correlation Matrix for study variables

	1	2	3	4	5	6	7	8	9	10
Gender										
Awareness	0.128									
Perceived Risk	-0.190*	-0.038								
Intention to invest	0.170*	0.041	-0.293**							
Neuroticism	0.270**	0.083	0.048	-0.75						
Extraversion	0.075	-0.019	0.029	0.039	0.090					
Openness to Experience	-0.006	-0.181*	-0.006	0.165*	0.003	0.608**				
Agreeableness	-0.071	-0.266**	0.034	-0.297**	-0.107	-0.224**	-0.149			
Consciousness	-0.133	0.002	-0.099	0.276**	-0.258**	0.297**	0.170*	0.091		
Age	0.082	-0.079	0.060	0.1858	0.017	0.089	0.148	0.032	0.155	

Note. *Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed)

For testing the hypothesis formulated in this research to find out the impact of personality dimensions and perceived risk on investment intention to invest, we have conducted multiple linear regression method using SPSS V.20. Multiple regression depicts the relationship between dependent and independent variable using explanatory variables. The next portion will display the results of hypothesis testing through multiple linear regressions with different study variables.

1. Perceived Risk and Investment Intention

Hypothesis 1: There is a significant relationship between level of individuals' perceived risk, and their intentions to engage in mutual funds investment.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.383a	.147	.118	1.15535

a. Predictors: (Constant), Risky Decision, Investment Mistake, Fear about financial Losses, Negative Consequences, Risky Instrument

The result of this multiple regression analysis shows the impact of all five items of perceived risk on investment intention to invest in mutual funds. The result of the regression reveals perceived risk explains 14.7 % of investment behaviour of an individual (R^2 =0.147; p <0.05). Therefore, null hypothesis has been rejected that means greater the level of perceived risk, the less likely will be their intention to invest in mutual funds.

1. Personality and Investment Intentions

Hypothesis 2:

There is a significant relationship among two personality dimensions; open to experience and conscientiousness with their intentions to engage in mutual funds investment.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.480a	.230	.204	1.09722

a. Predictors: (Constant), Conscientiousness, Agreeableness, Openness to experience, Neuroticism, Extraversion

Multiple regression is given by equation (1) as.....

$$Y = \beta+\beta0+\beta1+\beta2+\beta3+\beta4……………….Eq\ (1)$$

In the similar line the current study shows the multiple regression of the five personality dimension as described in equation 2.....

Intention = 2.828 + (0.004)N + (-0.394)E + (0.473)O + (-0.735)A + (0.668)C…Eq (2)

Comparison of equation 1 with equation 2...

β =Constant

$\beta_0=$ Neuroticism (Coded as N)

β_1 = Extraversion (Coded as E)

β_2 = Openess to experience (Coded as O)

β_3 = Agrreableness (Coded as A)

β_4 = Concsciousness (Coded as C)

The result of this multiple regression analysis shows the impact of all five constructs of personality on investment intention to invest in mutual funds. The result of the regression reveals personality dimensions explains 23 % of investment behaviour of an individual's (R^2 =0.230; p <0.05). Therefore, null hypothesis has been rejected. Equation 1 represents the multiple linear regression equation which shows several independent variables impact on one dependent variable. In the same line our result shows that variables openness to experience (coded as O) explained 47.3% of total investment intention and consciousness (coded as c) explained 66.8 % of the total investment intention. It means that more those individuals are open to experience, conscientiousness the greater will be their intentions to engage in mutual funds investment.

Conclusion

The current study may be first to utilize the personality traits with mutual funds investment behaviour. Several studies have also used Big Five model for measuring the personality dimensions of the individuals in the similar line current study has made an attempt to study the personality trait along with their impact on mutual funds investment behaviour. Several studies have been conducted on investment behaviour but till then this study is among two studies which has been done specifically on mutual fund investment behaviour. The Big five taxonomy is very useful for the research as its validity and stability has been supported by (Barbaranelli and Caprara, 2000;

DeYoung, 2006; DeYoung et al (2007). This study thus extends the utility of the Big Five model as a viable approach for examining economic behaviour.

The result that gender are significantly related with investment intention to invest in mutual fund is supported by several other researchers (Bajtelsmit et al (1999); Hariharan et al, 2000; Olsen and Cox, 2001). The relationship age group and intention to investment is also has significant impact of future studies as well as in managerial field (Chawla 2014). Barber and Odean (2001) also state that women are less able as decision makers. As companies can focus on selected target segment and modify their products according to the needs of the target segments. The association of perceived risk with investment intention is also significant and supported by other researchers too. Personality dimensions especially openness to experience and consciousness shows a positive significant impact on investment intention of individuals. It shows that mutual funds portfolio should be modified based on personality testing of the target market. So the current study facilitates managerial implications of the result such as to maintain the high investment intention, portfolio of mutual fund should be managed on the basis of personality of an individual. Thus, future studies should also examine the moderating effect of demographic variable.

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