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IMPACT OF PERSONALITY TRAITS ON INVESTMENT DECISIONS TYPES: EVIDENCE FROM PAKISTAN STOCK EXCHANGE

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ABSTRACT- *The objectives of this study is to verify the effect of personality traits on investor's investment decision making power. For this purpose, a questionnaire was structured for collection of data from a sample of 350 respondents through convenience sampling method. The data was analyzed through Correlation analysis, normality tests and regression. Both individual and institutional investors in Pakistan Stock Exchange were included into the sample.We found that there is positive relationship between openness, consciousness and extroversion with investment decision. And our fourth and fifth hypothesis is rejected due to negative relationship between agreeableness and neuroticism.*

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1.INTRODUCTION:

1.1 Background of study:

For centuries, standard regular finance has frequently assumed that investors are sensitive and typical in making their investment decisions in stock markets and thus they are inexpressive about exploiting value and risk-return tradeoffs. While making sensible investment choices they must have to incorporate all the necessary data consistent with efficient market theory, hence impartial in evaluating securities and selecting stocks. But due to partial knowledge and improper procedural rational investors make satisfying choices rather than optimal ones; hence investment choices became opportunities as opposed to logical or rational. Investors have to make decisions on logical basis but unfortunately their choices are limited to cognitive capacity such as values, habits, knowledge, reflexes and outside environmental factors, and their impact has made decision making practice more complicated. Though, psychologists have proposed that individuals, in no way behave as logically as economists believe. However, with the emergence of stock-market irregularities new rising disciplines of behavioral finance become very important. Behavioral finance deemed that how psychological and personality traits differentiate among individuals from acting as advisors, portfolio managers, analysts and investors.

Today the characteristics of investor's personality are of the great deal in growing area of behavioral finance. Most economic decisions are depending on the utility function of an investor (Parent, 2002I). Hence this research study is intended to measure the direct relation between investment decision and Big Five Factors (BFF) pertaining to personality traits including openness, conscientiousness, extroversion, agreeableness and neuroticism. After

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scrutinizing the prior studies, it was found that no study has been done which directly has measured the relationship between the variables of concern. Owing to this fact the author decided to have a thorough investigation about the theme of study. The finding would definitely be beneficial for financial advisors and investors while making sensible investment decisions.

1.2 Objectives of study:

The objectives of study are stated as follows:-

● To identify the effect of Investor's personality traits on investment decisions competence

● To study relationship between investment, opportunities and investment decisions

● To analyze extroversion and investment decisions.

● To analyze neuroticism and investment decisions under uncertainty.

● To measure the direction and intensity of relationship with respect to individual and institutional investors, investing in Pakistan Stock Exchange.

1.3. Research Questions:

The research questions of the study are outlined as under: -

• Is there any relationship between openness and investment decisions?

• Is there any association between conscientiousness and investment decisions?

• Is there any relationship between extroversion and investment decisions?

• Is there any relationship between agreeableness and investment decisions?

• Is there any relationship between neuroticism and investment decisions?

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- Is there any mediating relationship between Investor type's traits and investment decisions?

1.LITERATURE REVIEW: -

.   We briefly examined previous relevant literature to our study in order to know how much research has been conducted on this topic and how we can make our research different from previous research studies. Now we discuss previous studies briefly.

Decision making can be characterized as there were a few decisions to pick as the best ones to meet the reason (Smriti Chand, 2015). For instance, the identity qualities, level of pay, investment information, sexual orientation of an individual (Aren and Aydemir, 2015). Durand (2013) showed that identity qualities of the investors are firmly identified with their investment decision making.

Extroversion is one of the identity characteristics from Big Five Factors. Zhang, Wang, Wang and Liu (2014); Camgoz, Karan and Ergeneli (2011); Durand et al. (2008); Sadi et al. (2011) expressed the normal for outgoing people want to include outside world, well disposed, warm blooded and agreeable which can likewise characterize as level of amiability. Jones, Woods and Hutchinson (2010) showed that outgoing individual can undoubtedly talk and be close to outsiders. As indicated by Charles and Kasilingam (2014) that daring, friendly and chatty disposition of a man can be measured through extroversion. Other than that, outgoing has connected with the characteristic of impulsiveness that may influence the investment decision making (Dewberry, Juanchich and Marendran, 2013). Furthermore, outgoing person singular settle on decision effectively and they more spotlight on investments which they can just join or quit (Sadi et al., 2011). A man with
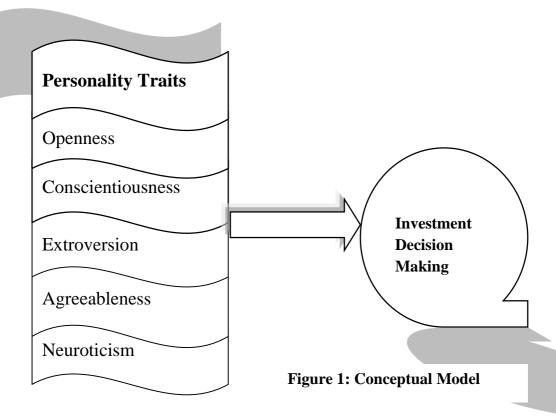
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high score in extroversion a bigger number of specialists in social exercises than low score in extroversion. As indicated by Krishan and Beena (2009) and Zhang et al. (2014) that people with high score in extroversion have a lot of constructive feeling whereby it prompts compelling investment decision making. There were a few analysts having the same result of study. Nga and Yien (2013) and Sadi et.al (2011) found that there were sure connections amongst extroversion and knowledge of the past predisposition on the decision making. Extroversion and risk avoidance had negative relationship. Risk avoidance indicated those financial specialists who apprehensive face the risk. On the other hand, the outgoing financial specialists have higher risk resilience on their investment (Nga and Yien, 2013). Furthermore, Lin and Lu (2015) said that extroversion financial specialists have the higher risk resilience as well. Outgoing investors were more probable in risk going out on a limb affinity (Camgoz et al., 2011). Person who score high extroversion will be assessed as a risk taking financial specialist. The findings show that there was significant relation between extroversion and risk taking. Extroversion is corresponded to quantify the risk resilience (Anic, 2007). Zhang et al. (2014) remarked that financial specialists with high score extroversion figured out how to do investment on balanced decision in spite of clamor in advertise. This is on the grounds that outgoing individual more dynamic in agreeable, so they ready to obtain more exact data for their decision making. Camgoz et al. (2011) likewise showed higher extroversion score investors make higher money related. High money related execution financial specialist related with outgoing trademark like do investment decision making with normal personality. Furthermore, we found that numerous specialists showed that there is noteworthy relation between extroversion and the investment decision

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making. The analyst Durand, Newby and Sanghani (2008) showed that there were sure and critical amongst extroversion and investment decisions.

Conscientiousness, one of the Big Five personality traits, comprises of two principle parts which is loyal, capable and composed, constancy reflecting being extensive and accomplishment speaking to the capacity to address the difficulties (McCrae and Costa, 1987). The obligation segment of conscientiousness, for example, unwavering quality, ponder, and dependable makes a man more plausible to do the right thing for other individuals and themselves. As a component of their obligation, reliable individuals see offering significant data to others. It additionally mirrors the penchant to take after the strategies and conventions or standards and systems thus do clutch sets of accepted rules (Kalshoven, Hartog and Hoogh, 2010). Nichelson (2005) said that conscientiousness factor can make people to enhance their risk potential. Chitra and Sreedevi (2011) portray conscientiousness as individual's psychological capacity in deciding. Henceforth, the financial specialist will be regarded either as "moral speculator" which mean the speculator in light of his faithful and assess whether it is right or wrong when taking decision, or "convenient speculator" which mean despite the fact that it is corrupt the speculator still settle on a brilliant decision. There is an example for conscientiousness which is "focus on points of interest" and "get things done by an arrangement" (Kalshoven, Hartog and Hoogh, 2010). As per Damasio (1994) who have examined the Neurobiological determinants expressed that individual's decision making procedure would highlight the point at which the decision winds up fundamental feeling will lead a person to a decision and feeling can help for the most vital decisions. Kaufman (1999) has reasoned that exceptional in feelings (to a great degree high or low enthusiastic

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excitement), the discernment of decision progressively constrained because of feeling will turn into a darken for decision maker's judgments. Charles and Kasilingam (2014) examined time need to settle on decision regularly influenced by feelings and sentiments around it and frequently prompting an alternate bearing of heavy expenses and advantages of another activity.

3. CONCEPTUAL FRAMEWORK:

A theoretical configuration is a standout amongst the most famous components of a research. A decent framework gives a solid and clear logical research base and offers help to whatever remains of the exploration. It is a course of action of factors that reinforce the hypothesis of research and portrays why the issue behind the investigation exists. The conceptual framework or research model is the exhibition of more multifaceted observable fact (Quinn, 1990). It is something which is greatly deserving of replication, a paradigm or an ideal. Kaplan, (1964). states that a model helps to convey considerations and aides in the better comprehension of a more many-sided phenomenon. The conceptual model of this study depends upon the literature about the factors under thought and judgments made by the prominent researchers about their view on investment decision making. The conceptual model of this study is shown in Figure 1:-

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Figure 1: Conceptual Model

On the left side of Figure 1 there are five independent variables while on the right side there is dependent variable. We will examine the effect of these independent variables on the dependent variable through data analysis.

4. Research Methodology:

4.1 Type of Data:

We have used primary data in this study. The collection of data took about three months.

4.2 Sample of study:

The number of respondents included into this study is 350. The persons included into the study are individual and institutional investors. The sample was taken through convenience sampling techniques.

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4.3 Selected Variables:

The dependent variable is investment decision while independent variables include: Openness, Consciousness, Extroversion, Agreeableness, Neuroticism.

4. 4. Hypothesis Development:

Hypotheses are the proposed declarations about the elucidation of the problem and mainly are developed for testing a theory. By and large hypotheses are established in favor of literature, and subsequent to their creation, these tentative statements are analyzed for their probable solution.

The following hypotheses were developed: -

H₁: Openness as the dimension of personality trait has a significant relationship with investment decision making.

H₂: Conscientiousness has a significant impact on investment decision making.

H₃: Extroversion has a significant relationship with investment decision making.

H₄: There is a significant relationship between agreeableness and investment decision making.

H₅: Neuroticism as the personality trait dimension has a significant impact on investment decision making.

4.5. Research Tool:

For this research, the data was collected through a questionnaire. The 5-point Likert scale containing 5 options from 5 to 1 strongly disagree, disagree, neutral, strongly agree and agree were used.

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Table 1: Questionnaire details

Variables	Scale Developed by	Year of Development	No. of Items
Openness	Mayfield et al.	2008	5
Conscientiousness	Mayfield et al.	2008	5
Extroversion	Mayfield et al.	2008	5
Agreeableness	Mayfield et al.	2008	5
Neuroticism	Mayfield et al.	2008	5

The survey questionnaire on investment decision was initially proposed by Nyamutein 2016. This survey instrument was employed in research paper "Investor behavior, characteristics, investor style and investor portfolio performance". Meanwhile, the scale on personality trait dimensions like openness, conscientiousness, agreeableness, extroversion, and neuroticism was created by Mayfield et al. in 2008 and was used in the thesis "The Effect of Personality Traits and Demographic Characteristics towards Risk Tolerance and Investment Decision".

6. DATA ANALYSIS:

6.1 Correlation Analysis:

Correlation analysis is the statistical tool employed to examine the intensity of the relationship between variables. The factors are said to be correlated when the movement of one variable is escorted by the movement of the other variable. Pearson's correlation coefficient (r) has been used to measure relationship between variables and it is shown in table 2:

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Table 2: Results of Correlations Analysis

		Investment Decision	Openness	Conscientiousness	Extroversion	Agreeableness	Neuroticism
ID	Pearson Correlation	1	.776**	.687**	.693**	-.464**	-.491**
	Sig.(2-tailed)		.000	.000	.000	.000	0.000
	N	350	350	350	350	350	350
Open	Pearson Correlation	.753**	1	.718**	.702**	-.643**	-.523**
	Sig.(2-tailed)	.000		.000	.000	.000	0.000
	N	350	350	350	350	350	350
Cons	Pearson Correlation	.791**	.786**	1	.777**	-.465**	.491**
	Sig. (2-tailed)	.000	.000		.000	.000	0.000
	N	350	350	350	350	350	350
Extra	Pearson Correlation	.593**	.732**	.897**	1	-.652**	-.652**
	Sig. (2-tailed)	.000	.000	.000		0.000	0.000
	N	350	350	350	350	350	350
Agree	Pearson Correlation	.653**	.822**	.767**	.605**	1	-.607**
	Sig. (2-tailed)	.000	.000	.000	0.000		0.000

		350	350	350	350	350	350
Neuro	Pearson Correlation	.551**	.623**	.496**	.743**	-.564**	1
	Sig.(2-tailed)	.000	.000	.000	.000	0.000	
	N	350	350	350	350	350	350
Correlation is significant at the 0.01 level (2-tailed).							

Correlation analysis is crucial to find out relations between variables. The correlation is ranged between -1 to zero and zero to +1. The -1 correlation statistics showed perfect negative association between variables whereas +1 indicates perfect positive association between variables. Similarly, the exact zero value means no relationship exists between variables. Table 2 indicates the direction of link between investment decision and openness, conscientiousness, extroversion, agreeableness and neuroticism. All variables have positive correlation between variables.

6.2 Regression Analysis:

The results of regression analysis regarding the relationship between openness and investment decion are shown in table 3:

Table 3: Model Summary – Openness

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.670[a]	.548	.510	.48164

a. Predictors: (Constant), Openness

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6.3 ANNOVA Technique:

The ANOVA results are shown in Table 4:

Table 4: ANOVA Result – Openness

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	25.268	1	25.268	42.834	.001[b]
Residual	54.341	348	.333		
Total	69.659	349			

a. Dependent Variable: Investment Decision

b. Predictors: (Constant), openness

Table 5: Regression Coefficients – Openness

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.569	.234		7.347	.001
Openness	.134	.054	.272	4.876	.000

a. Dependent Variable: investment Decision

The model summary shows that 54% discrepancies are occurred in Investment decisions because of alteration in openness. The ANOVA results explain the significance of the model with regard to openness as the P value is smaller than .001<0.05. Consequently, H_1 is accepted that openness has a considerable positive effect on investment decisions. Hence, the equation turns out to be: Investment Decision = 1.569+0.134*Openness

Regression equation presenting the unstandardized coefficient for openness is 0.134, implying that one unit changes in extroversion will likely to increase investment decision by 49.8%. Regression results about relationship between conscientiousness and investment decision

Table 6: Model Summary – Conscientiousness

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.545[a]	.423	.401	.55661

a. Predictors: (Constant), Conscientiousness

Table 7: ANOVA Result –Conscientiousness

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.934	1	16.934	69.654	.000[b]
	Residual	57.564	348	.284		
	Total	75.399	349			

a. Dependent Variable: Investment Decision

b. Predictors: (Constant), Conscientiousness

Table 8: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	2.347	.213		10.534	.000
	Conscientiousness	.346	.062	.486	7.766	.000

a. Dependent Variable: Investment Decisions

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The model summary in table 6 shows that   42% disparity is occurred in Investment decisions due to change in conscientiousness. The ANOVA results in table 7 shows the significance of the model with reference to conscientiousness as the P value is smaller than .000<0.05. As a result, H_2 is accepted that states conscientiousness has a substantial positive impact on investment decisions. As per coefficient table 8, unstandardized coefficient of conscientiousness is 0.346 indicating if conscientiousness is zero then investment decision will increase by 2.347. On the other hand, if conscientiousness changes by 1 unit, then investment decision is anticipated to increase by 0.346 percent: thus representing a significant relationship between these two variables. Therefore, the equation developed is;

Investment Decision = 2.347+0.346*Conscientiousness.

Regression equation shows that unstandardized coefficient for conscientiousness is 0.346, implying that for every extra one unit changes in conscientiousness will likely to increase in investment decision by an average by 34.6 %. The results of Regression Analysis about relationship between Extroversion and Investment Decision are shown in Table 9 and 10.

Table 9: Model Summary – Extroversion

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.542[a]	.487	.403	.48765

a. Predictors: (Constant), Extroversion

Table 10: ANOVA – Extroversion

Model	Sum of Squares	Df	Mean Square	F	Sig.

1	Regression	21.555	1	21.555	87.927	.000[b]
	Residual	59.086	348	.376		
	Total	79.433	349			

a. Dependent Variable: Investment Decision

b. Predictors: (Constant), Extroversion

a. Dependent Variable: Investment Decision

With regard to model summary 48% variations in Investment decisions are due to alteration in Extroversion. The ANOVA chart is explaining the authentication of the model with regard to extroversion as the significance value is smaller than $.002<0.05$. As a result, H3 is also accepted that extroversion has an extensive constructive effect on investment decisions. That's why, the equation became: Investment Decision = 2.835+0.498*Extroversion

Regression equation presenting the unstandardized coefficient for extroversion be 0.498, implying that for every additional alter in extroversion, it is expected investment decision will augmented by an average rate of 0.498.

Table 11: Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.835	.165		12.980	.000
Extroversion	.498	.188	.582	9.765	.002

The results of Regression Analysis about Agreeableness and investment decision are highlighted in Table 12:

Table 12: Model Summary – Agreeableness

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.542[a]	.447	.356	.35925

a. Predictors: (Constant), Agreeableness

Table 13: ANOVA – Agreeableness

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	31.490	1	31.490	87.765	.053[b]
Residual	50.059	348	.392		
Total	69.673	349			

a. Dependent Variable: Investment Decision

b. Predictors: (Constant), Agreeableness.

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Table 14: Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.615	.145		13.540	.000
Agreeableness	-.347	.113	-.582	-9.295	.054

a. Dependent Variable: Investment Decision

The model summary in Table 12 shows that 44% variation in Investment decisions is caused due to one unit changes in Agreeableness. As per ANOVA Results in Table 13 shows that the P value is greater .053>0.05. In Table 14 the coefficient, the beta and T values are negative along with significance value of 0.54, which is higher than 0.05 that's why H_4 is rejected by indicating that agreeableness has a negative effect on investment decisions. In such a negative relationship, the equation became;

Investment Decision = 2.615-0.347*Agreeableness

The above Regression equation shows the unstandardized coefficient for agreeableness is -0.347, which means that for one unit changes in agreeableness is expected to decrease investment decision by 34.7%. The results of Regression Analysis about the relationship between Neuroticism and investment decision are given in Table 15.

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Table 15: Model Summary – Neuroticism

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.645[a]	.521	.342	.85960

a. Predictors: (Constant), Neuroticism

Table 16: ANOVA Result –Neuroticism

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.603	1	15.603	59.974	.073[b]
	Residual	57.564	348	.302		
	Total	80.639	349			

a. Dependent Variable: Investment Decision

b. Predictors: (Constant), Neuroticism

Table 17: Regression Coefficient 1

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.934	.213		11.643	.000
	Neuroticism	-.520	.053	-.502	-6.533	.068

a. Dependent Variable: Investment Decisions

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As per model summary in Table 15 about 52% variations in Investment decisions are occurred due to changes in Neuroticism. As per ANOVA results in table 16 the P value is greater .073>0.05. From coefficient table 17, the beta and T values are negative along with significance value of 0.68, which is higher than 0.05 that's why H_5 is too rejected by indicating that neuroticism has a negative effect on investment decisions. In such a negative relationship, the equation became;

Investment Decision = 2.934-0.520*Neuroticism

Regression equation showing the unstandardized coefficient for neuroticism to be -0.520, implying that for every one unit changes in neuroticism is expected to decrease investment decision will also be decreased by 52.0%.

7. CONCLUSIONS:

This study has developed five hypotheses to measure relationship between investment decision and openness, conscientious, extroversion, agreeableness and neuroticism. H_1 is the first hypothesis was developed to measure the impact of openness on investment decision. By employing simple regression analysis, it was found that openness as the determinant of personality trait has a positive impact on investment decision, hence, the result of our study is not the exception to the results of previous researches. Openness as a personality trait symbolizes the difference between open thought and conventional thought (Zhang et al., 2014). Openness is an individual's predisposition to pursue flexible, artistic, intellectual, and novel factors. Individuals with high degree of openness are usually independent and think decisively in uncertain situations. Our results are consistent with the results of (Rasoul et al., 2011).

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The second hypothesis is to measure relationship between conscientiousness and investment decisions The results show that both conscientiousness and investment decision have positive association, the same relationship is also proved by other prior studies. Conscientiousness refers a person's propensity to proceed in a reliable, well-organized, self-disciplined and effective manner and is risk-aversive (Zhang et al., 2014; Rasoul et al., 2011; Pak & Mahmood, 2015). Individuals with high degree of conscientiousness are more realistic, reliable, determined, punctual, persistent, and pragmatic and make efforts in an organized way. Conscientious people make investment decisions with careful analysis, sufficient information and experience.

Hypothesis three explicate relation between extroversion and investor's investment decision making capability and it was concluded that both variables have positive association. These results are consistent with the studies of (Rasoul et al., 2011; Zhang et al., 2014; Pak &Mahmood, 2015). Extroversion implies that individuals feel engaged in external factors and external environment and remains beneath their pressure, take more risk precipitately than introverts (Sadi*et al.*, 2011). Therefore, those with high scores are sociable, warm-blooded, rational, friendly and energetic whereas those with low extroversion scores are introverted and independent. Extroverted individuals consider both intangible and tangible aspects of the environment and have strong decision power by living in their existing situation. These results are consistent with the results of (Zhang et al., 2014).
 Hypothesis 4 (H_4) states the relationship between agreeableness and investment decision and by regression analysis both variables were found to have negative relationship, consequently H_4 was rejected. Agreeableness

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reflects a person's tendency towards tolerance, trust, harmony, trustworthiness, tolerance, courteousness, generosity, cooperativeness, and compassion conduct. They are typically cooperative, dependable, and reliable as well as regard other's advice and opinion as stated by (Rasoul et al., 2011). High agreeable investor probably depends on financial advisors' judgment and finds it hard to make her/his own investment decision. Similarly, an individual with high degree of agreeableness sometimes exposes immature behavior, consequently misled through other individuals.

Hypothesis 5 (H_5) elucidates the correlation between neuroticism as personality trait indicator and investment decision and it was found that neuroticism has negative impact on investment decision, implying that the increase and decrease in neuroticism bring a reciprocal change in investment decision, hence both moves in opposite directions. Neuroticism refers an investors' propensity to have negative emotions; high neurotics ridiculously overreact toward bad feelings, ordinary situations, and tiny frustrations and hence experience psychosomatic issues such as pressure, anxiety, tension, depression, hostility and anger. It is related with emotional instability, projection in-capabilities, depression, and lack of convincing power, self-centeredness, theoretical comprehension and basic reasoning skills as explained (Pak & Mahmood, 2015).

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CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

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