



DOES RISK ATTITUDE MODERATES OR MEDIATES THE CONTRIBUTION OF PERSONALITY TRAITS IN INDIVIDUAL INVESTMENT DECISION

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Does Risk Attitude Moderates or Mediates the Contribution of Personality Traits in Individual Investment Decision

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Abstract

Keeping in view various theories of behavioral finance, the current study aims to examine the impact of personality traits including extrovert, neuroticism, openness to experience, agreeableness and conscientiousness, on investment decisions of individuals with the contribution of risk attitude as either a moderator or a mediator. The study used convenience sampling technique. A total of 210 complete responses were taken from both private and public institutions of Punjab and the capital territory in cross section horizon were used to complete the analysis. The study reflects that risk attitude strongly moderates the impact of personality traits on investment decision and has a partial mediation effect as mediator. Theoretical and practical implications are also discussed.

Keywords: Risk attitude, investment decision, agreeableness, contentiousness, extrovert, openness to experience.

1. Introduction

Individual investors are perfectly rational and wealth maximizers while making investment decisions, an idea that is supported by conventional finance, had become less popular because in efficient markets investors are unbiased and inclined to make efficient decisions without the interference of their psyche and emotions (Hayat et al, 2006). A new field in 1980's was emerged known as Behavioral Finance that is a combination of psychological and conventional financial theories to explain why and how people make irrational decisions due to the differences in their personality types and their attitude towards risk (Phung,2008). It also has put forth the cognitive and emotional factors that either plays a major role or may become a barrier in the decision making

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process of individual, groups and organizations (Ricciardi & Simon, 2011). Due to variations in mental processes and behaviors including perception, cognition, emotions, intelligence, and personality people behave differently in different situations (Simon,2000).Similarly decision making process varies from person to person due to variation in their personality types and this phenomena is covered by Behavioral Finance, which is an extension of Standard Finance. It explores to support the standard theories of Finance with the help of introducing behavioral aspects (personality) to their decisions (Bashir et al, 2017). Recent studies made in the field of finance show that although individual investors can minimize their risk by investing in diversified portfolios but they fail to do so because human behavior don't always rely on a logics and reasoning specified by standard financial theories and may deviate from rational behaviors in time (Kahneman and Tversky 1979). For this reason Behavioral finance helps us understand that how and why rational people take irrational decisions based on their personality trait.

This research will evaluate that how investment decisions are influenced by personality traits including openness to experience, agreeableness, extroversion, neuroticism, consciousness, and the mediating role of risk attitude. The purpose of current research is: (1) to identify the impact of above mentioned personality traits on investment decisions and (2) to identify the mediating role of risk attitude in both personality traits and investment decision and (3) to identify the moderating role of risk attitude.

Openness to experience trait reflects people with creativity, imagination, artistic, and are inclined towards seeking new experiences. People with a high level of openness to experience usually enjoy risky tasks if even they are beyond their comfort zone. Move over, they should be innovative, curious, and creative (McCrae, 1987). They are more focused to new experiences, travelling to new places and are curious about different cultures and practices which results in novelty and newness in ideas and viewpoints. People with neuroticism in their personality tend to focus on the negative aspects of any situation rather than the positives. When they feel that other people are in advantaged positions as compared to their positions, they feel jealous and become their enemies. They have high tendency to become frustrated, irritated and angry. Besides negative aspects, neuroticism includes disturbed thoughts and aggressive behaviors that might result in emotional distress (McCrae and Costa, 1987). Extrovert people are center of

attention. They are socialized, more interactive, excited to introduce themselves to new people and energized by crowds (Carl Jung, 1960). These people seek opportunities to engage with other people and are most likely to start a conversation themselves in groups and gatherings. They are full of life, energy and positivity. Extravert people are more diverse and use almost all resources for information search that are available to them for specific purpose (Onwoegbuzie & Jaio, 1998). Agreeable people are compassionate, detail oriented, straight forward and are more concerned with the needs and desires of others (Coatae & Macrae, 2002). High level agreeable individuals thoroughly retrieve information that is best, more critical and authentic (Halder et al, 2010). They are more obedient and often adjust their behavior according to the prevailing circumstances (Graziano & Eisenberg, 1997). Conscientiousness are ultra-careful individuals who are achievement oriented and willing to work hard in an organized and efficient way to meet challenges (Digman, 1990; Mount & Barrack, 1995). Before taking any decision they get into details, pros and cons of the decision to be taken and think carefully before action. They are methodical, self-controlled and hardworking (Roberts et al, 2009).

Risk attitude refers to people's intentions to evaluate uncertainty about an event and outcome that may lead to a loss. Risk has two sides, first one is uncertainty, the likelihood of the event, and second is impact, how much it matters. Basically we are going to study the contribution of risk attitudes i.e. risk attitudes moderates or mediates the contribution of personality traits in individual investment decision and which impact is stronger either mediation or moderation. Both these dimensions need to be considered in order to go for good decision making. Risk attitude is basically of three types

- Risk aversion: risk averse people dislike high risk and they usually don't prefer to invest in highly risky stocks or securities and are ready to forgo higher return rates.
- Risk seeking: people who usually prefer to take high risk as long as they receive positive high return on their investments.
- Risk neutral: risk neutral individuals will not pay extra to transfer risk to someone else nor will they engage in risky endeavors like risk seekers.

Objectives:

- To study the effect of agreeableness on an individual's investment decisions.
- To identify the impact of extroversion on an individual's investment decisions.

- To study the impact of consciousness on an individual's investment decisions.
- To analyze the impact of neuroticism on an individual's investment decisions
- To investigate the impact of openness to experience on an individual's investment decisions.
- To examine the mediating role of risk attitude on personality traits and investment decision of investors.
- To identify the moderating role of risk attitude on personality traits and investment decisions of investors.

Significance and Contribution of Study:

The aim of the study is to explain the influence of different personality traits on the investment decision of an individual. The outcomes of the study are helpful for academic purposes, investors, and financial advisors.

2. Literature Review

Personality is basically the mixture of feelings, emotions and thoughts and become one of the reason why people differentiate from one another as personality describes how one should act, react in different situation and also interact with different people. Some people behave differently within the same situation as their personality composed of more than one trait. As personality predict our behavior and also put strong impact on our decision making ability. As decision making sense vary from person to person is just because of personality. (Phrase, 1991.)

As some studies describes the role of personality in explaining investors behavior as this research use The personality frame work i.e. Big Five Model given by Costa and McCrae , extraversion: very talkative energetic, neuroticism : depressed , moody ,conscientiousness : highly organized ,openness to experience: very creative, agreeableness: kind and generous. As he uses the questionnaire based on personality which supports the five factor model extensively and also its applicability across observer and culture. (Costa and McCrae, 1992.)

Those who are well organized, highly creative and easily think and understand ideas and information are good in managing personal financial matters and investment decision .openness to experience one of the dimension of big five model contain both creative and thoughtful expression . Another important dimension of this model also put impact on the investment

decision i.e. conscientiousness in which great efforts for expertise and achievements are involved. (Costa and McCrae, 1992a.)

A research was conducted in south Florida to study the association between risk taking and personality by taking the sample of 461 older adults. the main objective of this primary study to identify the impact of big five personality traits on risk taking in older adults after applying linear regression test and using questionnaire as a data tool he found that high in extrovertness, openness to experience and low in conscientiousness, agreeableness, neuroticism associated with risk taking . Finally he concluded that risk taking is influenced by personality traits in which risk taking is directly affected by extrovertness and openness to experience and inversely effected by neuroticism, agreeableness and conscientiousness. (Aric, G., 2007.)

A research was conducted in USA in which they uses short term and long term investment as dependent variable and big five personality trait as independent variable .the main objective of this research to identify the long term and short term intention with focus on big five personality trait by using structural equation modeling using structured questionnaires he found that extrovert put impact in short term investments while neuroticism and risk averse avoid to invest mostly while long term investment effected by openness to experience.(Mayfield, Perdue, & Wooten, 2008.)

In order to find the personality trait among the successful investors a study was conducted in USA stock market in which they use personality traits as independent variable and investment decision as dependent variable and found that conscientiousness , openness to experience and extrovertness are highly skilled or we can say that overconfidence in their skills while on the other hand neuroticism and penness to experience look towards more returns they conclude that openness to experience and neuroticism was found more in successful investors. (Peterson et al, 2011.)

In 2012 a research was conducted in USA basically the main purpose of the research was to find link between Big 5 personality traits and risk taking attitude in preadolescents by using multiple regression and using questionnaires as a data tool he found that extrovertness and openness to experience are highly linked with the risk taking attitude while conscientiousness, neuroticism and agreeableness cannot predict the risk taking attitude. Thus this study concluded that greater

degree of extrovertness and openness to experience and lower level of conscientiousness linked with greater degree of risk taking attitude. (McGee et al, 2012.)

In order to study the impact of individual investment personality on the investment success a research was conducted in India as they collect the sample of 742 investors from the top five brokerage firms of Tamilnadu. The main purpose of this research was to study the role of individual personality on investment decision and found that it is necessary for the investor to understand their personality and change it if needed in order to optimize their investment return and finally conclude that individual investment decision was highly influenced by the individual wants the returns from investment.

(Charles, & Kasi lingam, 2014.)

In Kazakhstan a research was conducted to study the impact of personality trait on risk attitude and investment decision. As they hypothesize that H1: personality trait influence risk tolerance ability of a person while making financial decision H2: high level of financial risk tolerance has positive impact on the intention to invest in bonds and stocks. By using multiple regression it was found that personality trait influence the financial risk tolerance to some extent which in turn put impact on individual investment decision so investment advisor should first study the personality trait and risk tolerance level of an individual and government should take measure to control such behavior. (Olga & Mahmood, 2015)

Attitude of an investor affected by personality trait and risk attitude to see this impact a primary research was conducted in Chennai. The main purpose of the research was to study the impact of personality trait on investment decision secondly to study the impact of risk tolerance on investment decision and finally the investor locus. Applying correlation and linear regression they found that agreeableness and risk attitude put impact on investment decision while rest of the personality traits and locus of control cannot influence the attitude towards investments. (Parameshwari, 2015.).

The effects of personality traits on financial decisions above and below cognitive abilities, risk aversion, demographic and financial factors. First, he show that it is not necessarily the most resourceful, but the most strong-minded and planned of the spouses takes the charge for financial decisions. Second, he detect an age-related shift in financial managing of the household finances:

for older households, higher score on conscientiousness is one of the most noteworthy forecasters of stock ownership and of higher share of wealth capitalized in stocks, while for younger ones descriptive power lays with mental abilities and education. Third, the influence of the spouse on the financial decisions is recognized. The first main discovery is that two personality traits Conscientiousness and Agreeableness have very strong prognostic power on determining who the head of the households in financial matters is. The higher score on Conscientiousness trait and lower score on Agreeableness have nearly decisive effect on the chances to handle the finances. This is instinctively understandable, as financial tasks require discipline and dutifulness, as expressed by Conscientiousness, as well as certain strength of opinion – as indicated by lower scores of Agreeableness. (Goldfayn, 2016.)

To study the impact of big five trait on investment performance. To study the impact of OCEAN on positive and negative mood and finally to study the impact of personality trait on investment performance through mediation of positive and negative moods. "Conscientiousness and openness to experience, and agreeableness directly influence investment performance. Additionally, the study also found out that conscientiousness and openness to experience, and extraversion directly impacted a positive mood; agreeableness and neuroticism directly affected a negative mood. Finally, the paper discovered that conscientiousness and openness to experience, and extraversion affect investment performance through positive mood (Trang, & Khoung, 2016.)

A research was conducted in turkey to study the role of investor biases in decision making related to finance and also study the relation between financial risk tolerance and personality by using chi square and logistic regression analysis they found that that relationship exist between psychological biases and personality and also personality had a great impact on financial risk tolerance .those who face psychological biases are more agreeable while those who face psychological biases least were neurotic.(Kubilay & Bayrakdaruglu, 2016.)

In order to study the influence of introversion and extroversion on financial decision making primary research was conducted in Saudi Arabia. by using regression analysis and Eysenck personality Questionnaire as a data tool they found that introvert rely on their gut feelings and intuition so they are better at decision making as they double check their information but they need someone to show the right direction while making important decision (KHALIL, 2016.)A

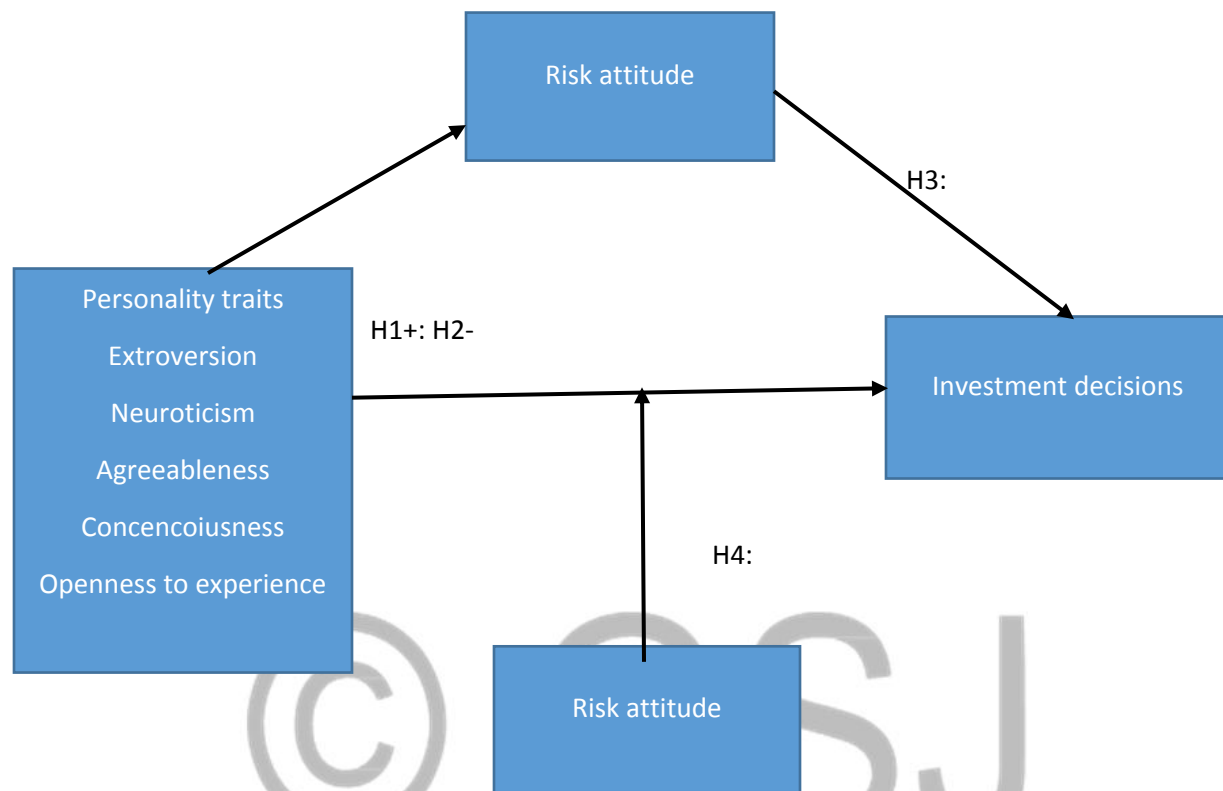
primary research was conducted to study the influence of personality on socially responsible regression analysis and reliability test on a sample of 300 they found that agreeableness, neuroticism and openness to agreeableness control financial decision in regards to socially responsible investment.(Ali, Hashmi, & Rizvi, 2017.)

A primary research was conducted to see the influence of personality on investment decision by using regression and correlation they found that extroversion and neuroticism had an impact on individual behavior in the experiment asset market they found that extrovert people hold more risky security in their portfolio and pay higher prices for financial assets as compared to neurotic person who hold less risky assets and higher the number of overpriced assets. (Oehelera, et al, 2018.)

A research was conducted to study the influence of extrovert personality on the working professional stock investment decision they found that those extrovert who warm up quickly is not correlated to those who likely to purchase investment that have been recommended by friend and colleague.(Shanker &Kallarakar, 2018.)

As personality is composed of more than one trait and put strong impact on the decision making ability of a person .literature shows that those who have openness to experience and conscientiousness in their personality are good in making financial decisions ,while those who are high in extrovertness, openness to experience and low in conscientiousness , agreeableness, neuroticism take more risk. Also extrovert put impact on short term investments while neurotic and risk averse person avoid long term investments. Extrovert, openness to experience and conscientiousness are more skilled but study shows that neurotic and openness to experience are more successful investor. Agreeableness and risk attitude put impact on investment decision while rest of the personality traits and locus of control cannot influence the attitude towards investments. Study also found out that conscientiousness and openness to experience, and extraversion directly impacted a positive mood; agreeableness and neuroticism directly affected a negative mood. Finally, the paper found that conscientiousness and openness to experience, and extraversion affect investment performance through positive mood.

Conceptual Framework:



HYPOTHESIS:

H1: Each Personality traits positively impacts investment decision.

H2: Risk attitude moderates the contribution of personality traits in individual investment decision.

H3: Risk attitude mediates the contribution of personality traits in individual investment decision.

3. Methodology

3.1 Participants

Various investors from different private and public institutions responses were collected, from different regions of Punjab including Gujrat, Faisalabad and Islamabad the capital. The population of the study comprised of all investors in Pakistan but the sample was collected from

few regions mentioned before. 300 questionnaires were floated in various companies out of which 250 were received back and from them 30 were discarded because of incomplete data responses. Among the sample 36.7% people were of age 20-28, 49.5% individuals were single, 31.9% have a salary scale between 60,000 to 90,000 and 91% of them were post graduate.

3.2 Procedures

The deductive approach has been used in present study based on cross sectional time horizon. In order to prove the already existing theory the deductive method is the most common approach (Silverman, 2011). The data has been collected through a comprehensive survey questionnaire which was previously delivered to the acquaintances. The survey strategy is used for cross sectional data while collecting data from a large number of population. (Cohen & Azelaei, 2011).

3.3 Instruments and Measures

The central variables of this study are personality traits, investment decisions and risk attitude. The demographics included age, gender, marital status, income, and investment type and investment experience of the participants. All the variables were measured on five point Likert scale in order to measure frequency from 1) Never 2) Rarely 3) Sometimes 4) Frequently 5) Always. The Cronbach's alpha for all the variables showed significant results. The scales used in the study are well validated. Their discriminant and content validity is well established and their reliability values also fall within the standard range.

4. Data Analysis and Results

Data analysis was done using SPSS 20 software package, AMOS 20 and Process Macro by Hayes. Data was entered into SPSS 20 package for analysis purposes. This section consists of two parts for testing the hypothesized model. First part consists of descriptive statistics, reliability and multicollinearity. The second part second consists of structural validation of direct and indirect effect of model proposed by Byrne (2001).

4.1 Preliminary Analysis:

In the preliminary analysis, the reliability tests are displayed in table 1. The alpha reliability for the independent variable, dependent variable and both mediator and moderator is significant at level which shows that there is high internal consistency and the questionnaire is also reliable

Table 1

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.506	.534	3

Table 2

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between People	767.392	209	3.672		
Within People	Between Items	2	10020.950	5519.570	.000
	Residual	418	1.816		
	Total	20800.792	420	49.526	
Total	21568.184	629	34.290		
Grand Mean = 8.6612					

Cronbach alpha is used to measure the reliability of data. The above results show that all three variables have Cronbach alpha greater than 0.5.

Table 3

Correlations				
		P	IVM	RA
P	Pearson Correlation	1	.360**	.240**
	Sig. (2-tailed)		.000	.000
IVM	Pearson Correlation	.360**	1	.229**
	Sig. (2-tailed)	.000		.001
RA	Pearson Correlation	.240**	.229**	1
	Sig. (2-tailed)	.000	.001	
**. Correlation is significant at the 0.01 level (2-tailed).				

Correlation were computed among three variables on data for 210 investors both male and female. The results suggests that all the correlations were statistically significant at .01 level, two tailed. This indicates that personality traits, individual's investment decisions and risk attitude

are positively correlated. Similarly the inter item correlation matrix shows that all the items of dependent and independent variables are positively correlated to all the other items. In the table the correlation for identical items is perfectly 1. If all of the items are measuring the same concept, we would expect them all to correlate well together. Any items that have consistently low correlations across the board may need to be removed from the questionnaire to make it more reliable.

4.2 Descriptive

Skewness is usually described as a measure of a dataset's symmetry or lack of symmetry. A perfectly symmetrical data set will have a skewness of 0. The normal distribution has a skewness of 0. Karl Pearson (1895) first suggested measuring skewness by standardizing the difference between the mean and the mode.

Table 4

	N	Std.Deviation	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Std.Error	Statistics	Std.Error
RA	210	.83379	-.093	.168	-.386	.334
P	210	2.03759	.032	.168	.514	.334
IVM	210	1.56710	.018	.168	1.005	.334

The above table shows that all variables exhibit normality as their skewness is within the range. The distribution of Risk Attitude is highly distributed because its skewness is less than -1.

Table 5

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.692
Bartlett's Test of Sphericity	Approx. Chi-Square	1385.574
	Df	496
	Sig.	.000

The Kaiser-Meyer-Olin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with data. Bartlett's test of

sphericity tests the hypothesis that your correlation matrix is an identity matrix, which would indicate that variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with your data. The table above shows that KMO value is .692 means factor analysis is useful for data and is highly significant.

Table 6

		N	Mean	Std. Deviation	Std. Error	Maximum
Extrovert	female	54	3.5370	.81323	.11067	5.00
	male	155	3.6226	.82295	.06610	5.00
	Total	209	3.6005	.81936	.05668	5.00
OE	female	54	3.3296	.68091	.09266	4.80
	male	155	3.3523	.88658	.07121	9.80
	Total	209	3.3464	.83677	.05788	9.80
CN	female	54	3.0889	.60522	.08236	4.20
	male	155	3.1716	.59759	.04800	4.60
	Total	209	3.1502	.59921	.04145	4.60
AG	female	54	3.1343	.73445	.09995	4.75
	male	155	3.2774	.68706	.05519	5.00
	Total	209	3.2404	.70064	.04846	5.00
RA	female	54	3.0185	.88602	.12057	5.00
	male	155	3.2710	.79872	.06415	5.00
	Total	209	3.2057	.82742	.05723	5.00
NEU	female	54	3.2444	.66579	.09060	4.80
	male	153	3.0706	.64786	.05238	4.60
	Total	207	3.1159	.65544	.04556	4.80

The above table shows that male have more extrovertness, agreeableness and conscientiousness in their personality as compared to females. Moreover results show that they have high risk attitude as compared to females. The above results also found that male are more risk averse as compared to female when making investment decision.

Table 7

		N	Mean	Std. Deviation	Std. Error
ST	female	54	2.9185	.80143	.10906
	male	155	3.0103	.86303	.06932
	Total	209	2.9866	.84661	.05856
Longterm_Investmnt	female	54	3.1704	.86212	.11732
	male	155	3.4723	.97418	.07825
	Total	209	3.3943	.95372	.06597

The results also show that males have risk attitude for both short and long term investment decisions as compared to female. This also shows that the males who are more extrovert tend to engage in long term investments.

4.3 Moderation through Hayes

Table 8

ZRA	Effect	SE	t	p	ULCI	LLCI
-1.4364	-.0451	.1267	-.3563	.7220	-.2949	.2046
-1.1965	.0074	.1136	.0650	.9482	-.2165	.2313
-.9566	.0599	.1011	.5923	.5543	-.1395	.2593
-.7167	.1124	.0897	1.2535	.2115	-.0644	.2893
.0029	.2700	.0663	4.0741	.0001	.1393	.4007
.2427	.3225	.0644	5.0122	.0000	.1957	.4494
1.2022	.5326	.0893	5.9667	.0000	.3566	.7086
1.4421	.5852	.1007	5.8128	.0000	.3867	.7836
2.1617	.7427	.1397	5.3148	.0000	.4672	1.0183

The above table shows that as the value of ZRA increases the moderation results become more significant, the negative value of ZRA also shows that because of the absence of moderator the results are less significant at p value and t value. The value of t also increases significantly.

Table 9

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.4426	.1959	.8158	16.7303	3.0000	206.0000	.0000
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	-.0522	.0642	-.8129	.4172	-.1788	.0744	
ZP	.2694	.0663	4.0620	.0001	.1386	.4001	
ZRA	.1367	.0645	2.1186	.0353	.0095	.2638	
Int_1	.2190	.0648	3.3788	.0009	.0912	.3467	
Product terms key:							
Int_1	:	ZP	x	ZRA			
Test(s) of highest order unconditional interaction(s):							
	R2-chng	F	df1	df2	p		
X*W	.0446	11.4165	1.0000	206.0000	.0009		

The results show that 19.59% dependent variable is explained by independent variable. One percent change in Risk Attitude causes 13.67% change in investment decisions and a unit change in Personality Traits causes 26.94% change in Investment Decision. The value of R square change is .0446 this shows that after the addition of moderator the value of R square increases 0.3469.

4.4 Mediation through Hayes:

Table 10

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.2395	.0574	.9472	12.6592	1.0000	208.0000	.0005
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	.0000	.0672	.0000	1.0000	-.1324	.1324	
ZP	.2395	.0673	3.5580	.0005	.1068	.3722	
OUTCOME VARIABLE:							
ZIVM							
Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.3890	.1513	.8568	18.4584	2.0000	207.0000	.0000
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	.0000	.0639	.0000	1.0000	-.1259	.1259	
ZP	.3236	.0659	4.9066	.0000	.1936	.4536	
ZRA	.1519	.0659	2.3040	.0222	.0219	.2820	

The above results show that 5.74% dependent variable is explained by independent variable. one percent change in risk attitude causes 15.19% change in investment decision. Similarly one percent change in personality traits causes 32.36% change in investment decision.

5. Findings and Conclusions

Although this study was a descriptive one but the use of five big personality traits was very useful, the current study made very useful results between the personality traits and the risk attitude of individuals as moderators and mediator. The findings of the study are based on 210 investors from public and private institutions of Pakistan provided substantial evidence to prove that risk attitude has more contribution as a moderator while studying the impact of personality traits on investment decision while mediator does not have strong impact. The results also show that males have risk attitude for both short and long term investment decisions as compared to female. This also shows that the males who are more extrovert tend to engage in long term investments. Similarly a high number of females is also found as extrovert whereas a low number is found in conscientiousness. Moreover the results also show that females also prefer long term investments rather than short term investment decisions.

The present study also indicates that there is a partial mediation because a direct significant impact of personality traits is found on investment decision and a full moderation has been captured because risk attitude has strong direct significant impact on the relationship between personality traits and investment decisions.

Our findings support that personality trait has significant impact on investment decision (H1) and risk attitude plays a moderating role supports (H2) and rejects that risk attitude does not significantly mediate the relationship between personality traits and investment decision (H3).

The present study results will help the financial sectors to identify individuals with different personality types and their attitudes towards short term and long term investments in order to create wealth and fulfil their needs.

Appendix Big five personality measures (revised scales)

Neuroticism

1. I often feel inferior to others.
2. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.
3. I often feel tense and jittery.
4. Sometimes I feel completely worthless.
5. Too often, when things go wrong, I get discouraged and feel like giving up.

Extraversion

1. I really enjoy talking to people.
2. I often feel as if I'm bursting with energy.
3. I am a cheerful, high-spirited person.
4. I am a very active person.

Openness to experience

1. I am intrigued by the patterns I find in art and nature.
2. I often try new and foreign foods.
3. I have little interest in speculating on the nature of the universe or the human condition.¹
4. I have a lot of intellectual curiosity.
5. I often enjoy playing with theories or abstract ideas.

Agreeableness

1. I often get into arguments with my family and co-workers.
2. Some people think I'm selfish and egotistical.
3. Some people think of me as cold and calculating.
4. I generally try to be thoughtful and considerate.

Conscientiousness

1. I keep my belongings neat and clean.
2. I'm pretty good about pacing myself so as to get things done on time.
3. I waste a lot of time before settling down to work.¹
4. Sometimes I'm not as dependable or reliable as I should be.¹
5. I never seem to be able to get organized.

Risk aversion

1. I am not willing to take risk when choosing a stock or investment.
2. I prefer a low risk/high return investment with a steady performance over an investment that offers higher risk/higher return.
3. I prefer to remain with an investment strategy that has known problems rather than take the risk trying a new investment strategy that has unknown problems, even if the new investment strategy has great returns.
4. I view risk in investment as a situation to be avoided at all cost. Items used to measure investment intentions

Short-term investment intentions

1. I intend to invest in an IRA every year.
2. I intend to put at least half of my investment money into the stock market.
3. I intend to engage in portfolio management activities at least twice per week.
4. I intend to perform my own investment research instead of using outside advice.
5. I intend to compare my portfolio performance to that of professional managers.

Long-term investment intentions

1. I intend to save at least 10% of my gross earnings for investing/saving/retirement purposes.
2. I intend to have a portfolio that focuses on multiple asset classes (i.e., stocks, bonds, cash, real estate, etc.).
3. I intend to take an investments course.

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