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Impact of Personality Traits on Investment Decision with Moderating Role of Financial Literacy

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Abstract- The objective of this study to assess the impact of personality traits (extraversion and neuroticism) on investment decision with moderating role of financial literacy. The questionnaire survey was being conducted for this study in order to obtain primary data from the targeted respondents with sample size of 204 investors and master level students. This survey had been done by using the SPSS software. Statistical tools which include mean, standard deviations, correlation and regressions were applied in data analysis and hypotheses testing. The results from the analysis revealed that there is a significant effect of Neuroticism, Extraversion and on investment decision and the financial literacy has positive and significant Impact on investment decision but financial literacy not moderate the relationship of Neuroticism, Extraversion and on investment decision . Our results indicate that individuals who are more extraverted intend to engage in short-term investing, while those who are higher neuroticism avoid short term activity and go for the long term investment.

Keywords: Personality traits, financial literacy, financial decision.

I. Introduction

Investment decision making is very important part of any economic development. Investment decision is important for investors to invest their funds to earn higher profit on their investment. A number of factors involve in decision making on the investment. These factors may be, financial knowledge, skills to manage the funds, role of friends and family and personality traits (Sadiq & Khan, 2019). They have the strong influence on investment decision.in this present study, we explain the personality traits will influence the behaviour of investors. Decision making is a process of selecting the best one form the number of opportunities to meet the purpose who is under consideration (Chand, 2015). From past decades researchers analyse the behaviour of investors and improve the understanding why people use different ways to manage the investments (Mayfield, Perdue & Wooten, 2008). Today's literature explain how personal characteristics influence the investor's behaviour. The common point in this literature is that the personality influence the individual's perception of risk and their willingness to take the risk and risk averse (Mayfield et al., 2008).

The literatures on traditional finance suggest that investor maximize the return by making rational investment decision which is based on expected utility theory (Savage, 1953). But behavioural finance contradict and explains an investor's decision effected by number of behavioural factors like cognitive and psychological factors which move them to act as irrationally (Kahneman & Tversky, 1979; Fama, 1998; Ritter, 2003; Tiwana et al., 2007). The perception of risk determines the behaviour of investors. The foundation of risk in economics and finance for many years provided by von Neumann and Morgenstern (1995). The important concept in their model is that the sole factor in decision making is the maximization of expected utility.

According to Allais (1952) the maximization of utility as a one concern when making the risky selection, a person raising the issue who faced with the trading off of expected return. In 1952, Markowitz propose the two criterion approach when an investor desire for higher returns but not willing the uncertainty of return. Mutswenje (2014) reported that the individual investments behaviour are focus on their selection and preferences to buying securities for their own account in small amount. He also told that some of the investors make investments by using, fundamental analyses, technical analyses and by their own observations. Investors always assumed that rational wealth-maximization is a basic financial rule (Mutswenje, 2014). There is indifferent level of risky investors are willing to initiate and it depends upon their attitude or personality.

Personality is a feelings, thoughts, behaviours and motives to every individuals and determined how individuals recognize and react to the environment (Gillen & Kim, 2014). Ahmed (2020) define the personality traits as combination of cognitive, perceptual, distinguishing emotional and motivational characteristics. These personality traits will affect the decision making of every investors according to the circumstances. With the actualization about behavioural finance, that has end up honestly axiomatic to that amount an investor's strengthen adapt is abundantly bend with the aid of his personality (Bapat, 2020). Durand, Newby and Sanghani (2008), Durand, Newby, Peggs and Siekierka (2010), identified that there is a relationship between personality, investment choices, and outcomes (investment performance). JALAL, ZEB, and FAYYAZ, (2019) recommend that personality traits are composed of five principles, namely, replicability, comprehensiveness, external correlates, source traits and multiple levels. The five principles were later renamed as Big-Five factors or Five-Factor Model (FFM). The FFM classifies personality traits into Extraversion (E), Conscientiousness (C), Agreeableness (A), Neuroticism (N) and Openness to experience (O) (Ahmad, 2020). It has been observed that thinking and behavioural pattern of individuals determined by individuals personality (Allport, 1961). According to researchers the financial literacy influence the potential investor's decision. Financial literacy is most commonly viewed as a specialized kind of consumer expertise pertaining to how one manages one's financial affairs successfully (cf. Alba and Hutchinson 1987) or a personal finance-specific form of human capital. Remund (2010) argues "Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions".

This study focusing only two personality traits Extraversion and Neuroticism because these two traits are more expressive in Pakistan. So the study can be traced that how financial literacy moderate the relationship between personality traits (Extraversion and Neuroticism) and investment decision. So the core object of this study is to dig out the correlation between personality traits (Extraversion and Neuroticism) and investment decision with moderating effect of financial literacy.

II. LITERATURE REVIEW

2.1 Investment Decision

Investment decision is the accountability of individuals and how much capital is invest in the search of making profit. With the passage of time Investment decision making changes in terms of variegations and trading frequencies (He, Liao, Bi & Guo, 2019). However, an effective decision making strategy is essential for investment decision. Experienced and aged investors prefer high diversification, hold low risk portfolios, trade less frequently and this investment skill becomes worse at an age of 70 (Hadi, 2017). The reliability of investment decisions is based on effective investment return strategy development (Rutkauskas & Stasytyte, 2008). It is not necessary that agents behave rationally on several aspects of decision making process that is not completely understood so far (Scalliet, Karoui, Jeanblanc, & Martellini, 2008). Investors need to know the combined distributions that show possible results of their investment decisions since they don't know the final outcome of their investment decisions (Weber, 2005; Zhou, & Xu, 2020).

2.2 Extraversion and Investment Decision

Extraversion is one of the personality traits from big Five Factor. Zhang, Wang, Wang and Liu (2014); Camgoz, Karan and Ergeneli (2011); Durand et al. (2008); Kumari, Chandra, & Pattanayak, (2019). define the characteristics of extraverted individuals that they are lively, friendly and social able. Woods and Hutchinson indicated to that amount extroverted alone perform easily discuss and keep close to in accordance with strangers. An extrovert is externally oriented and would be at ease socializing in a large crowd (Leary et al., 2009). Extraversion has been discovered after pretend a considerable affect over hindsight bevel into investment selection (Sadi, 2011). According to Charles and Kasilingam (2014) had mentioned that through extraversion the sociable and talkative attitude of the individual can be dimension. According to Krishan and Beena (2009) and Zhang et al. (2014) showed that individuals have great emotions when they perform well, it leads the investors to effective investment decision.

Nga and Yien (2013) and Sadi et.al (2011) found that there were positive relationships between extroversion and hindsight bias on the decision making. Extroversion and risk aversion had negative relationship. Because individuals who have extravert personality they are risk taker and confidently make the investments. Those investors who afraid to face the risk are pointed as risk aversion and avoid to make the investment decision. On the other mean, the extroverted investors have higher risk tolerance on their investment (Nga & Yien, 2013). Lin and Lu (2015) also reported that extroversion investors have the higher risk taker and they are willing to mke the investment decision. Zhang et al. (2014) remark on investors with high score extroversion managed to do investment on rational decision. Because the extravert individuals are active in sociable and they acquire more information when they make the decision. From previous studies researchers indicated that extroversion is positively correlated with investment decision making but negatively correlated with risk aversion. Durand, Newby and Sanghani

(2008) also showed that there were positive and significant between extroversion and investment selection.

***H1:** There is positive and significant relationship between extraversion and investment decision.*

2.3 Neuroticism and Investment Decision

"Neuroticism concerns the degree to which the individual is insecure, depressed, and emotional versus calm, self-confident, and cool (Salgado, 1997)". "Neuroticism refers to degree of emotional stability, impulse control, and anxiety (Komarraju, Karau, Schmeck & Avdic, 2011)". They explained that when the need situation becomes bad tremendously neuroticism individuals tend according to overrate the risk however when the market circumstance is proper he have a tendency to underrate the gain concerning investment. According to Durand (2018) neuroticism's personality people tend to receive negative feeling, sad guilt, worried and instability. Chirat & Sreedevi, (2011) stated that the investors make the decision on the base of their emotions. Wang et al. (2014) found that negative emotion lead to narrow assessment of risk. Mayfield, Perdue and Wooten (2008) investigated that individuals who have highly neurotic and risk averse and feel insecurity to invest in short term investment. So the individuals will not willing to make investment in short-term investment. Those individuals who are risk averse in some how they invest in short term investments which indicates that the neurotic investors may be risk averse in investment decision.

Durand (2018) conducted a research to understand the individual's psychology on their return and investment behaviour. In his study they indicated that here is a positive and significant relationship between neuroticism and investment decision. Sadi et al. (2010) concluded that investors‟ decision will based on their personality and indicated that there are relationship between neuroticism and cognitive biases which means these biases influence neuroticism investor investment decision. Brown and Taylor (2017) in his study they investigated that neuroticism personality trait does not have significant relationship with unsecured debt and financial assets they indicate that if the individual has neuroticism personality, economic decision-making may not be influence.

***H2:** There is a significant positive impact of neuroticism on investment decision.*

2.4 Financial literacy and Investment Decision

Zvaríková and Majerová, (2013) stated that money is an important for social life and source of finance. To make the money effective the individuals should have financial information to trading the financial products in the market. Altman, (2018) said that to make liable financial decision, knowledge, skills and confidence is necessary. All these are the combination of financial literacy. According to Duca & Kumar (2014) the general education is strongly related to the financial literacy. Social relations together with colleagues, friends, and then household individuals have considerably influenced individuals' financial knowledge or decision in accordance with actively absorb among financial markets. Educated people well known about the changing behaviour of financial markets than uneducated individuals. Marcolin and Abraham (2006), stated that after the advancement in financial markets the financial literacy become significant. From the past studies, researcher examined the financial literacy has significant and positive influence on investment decision (Bongomin, Munene, Ntayi & Malinga, 2018). Different studies also stated that financial literacy positively affect the investment decision and help individuals to earn maximum return from their investment (Lusardi & Mitchell, 2007; Lusardi, Mitchell, & Curto, 2010; Jappeli & Padula, 2013).

***H3:** Financial Literacy has significant positive effect on investment decision making.*

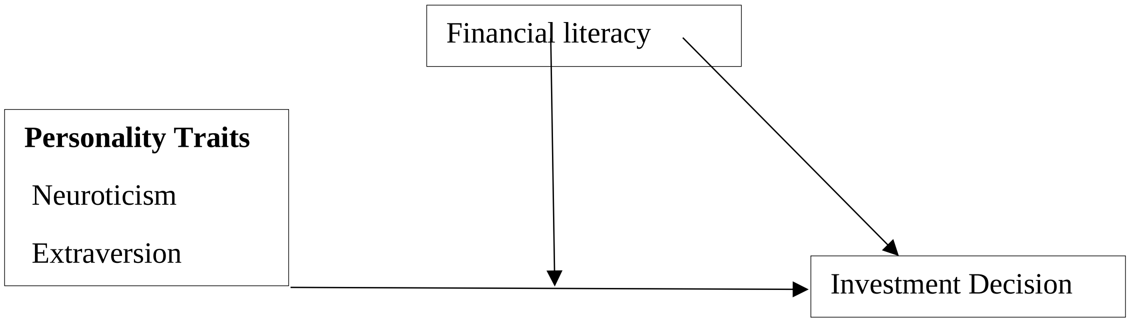
2.5 Moderating role of Financial Literacy

The level of education is determinant of risk taking investors with great level of education are more likely to take risk than the investors with low level of education (Riley & Chow, 1992). In the same way the study of reports that individual investment decision making ability depend upon his financial knowledge regarding rules of investment, wealth level and gender (Dulebohn, 2002; Khan, 2020). Great level of education regarding diminish the risk averse tendency of investors because education provides variety of ways to make the investment decision (Jung, 2015).

Low level of financial literacy in individual leads to lower the confidence and they get confuse while making financial dealings (Disney & Gathergood, 2013). The financial literacy in investors in positively correlated with investment diversification (Abreu & Mendes, 2010). The results indicates that the household with trust and literate about stock market are more likely to participate in the stock market (Balloch, Nicolae & Philip, 2014). Individuals with overconfidence and overoptimistic are significantly associated with investment behaviour (Breuer, Riesener, & Salzmann, 2014). The overconfidence personality bias stimulate investors to make investment in risky assets (Dittrich, Güth & Maciejovsky, 2005). The individuals with overconfidence are more optimistic regarding future than the rational investors (Kliger & Levy, 2010). Extrovert spend less time on judging the things so because of this they are apt to be more risk taker and make the investments (Li & Liu, 2008).

***H4a:** Financial literacy moderate the relationship of extravert and investment decision.*
***H4b:** Financial literacy moderate the relationship of neuroticism and investment decision.*

Figure 1. *Research Model*



III. METHODOLOGY

For the validity of research process Sampling and Data collection is an important step. The objective of this study is to investigate the impact of personality traits (extraversion and neuroticism) on investment decision with moderation of financial literacy. Data is collected from targeted sample of students and investors and About 300 questionnaires were distributed among targeted areas and 230 questionnaires were retrieved and out of these 230, only 204 questionnaire were in useable form. The respond rate was 67% which is above the threshold level as suggested by prior studies ((Hafeez et al., 2018; Hameed et al., 2019; Muneer et al., 2019; Nisar et al., 2021; Nuseir et al., 2020; Zahra et al., 2019: Asada et al., 2020: Yan et al., 2020)

3.1 Measurement

3.1.1 Extraversion and Neuroticism

These are independent variables in the current study. Costa and McCrae (2003) 5-item scale is used for measurement of Neuroticism, the 4-item scale is used for measurement of Extraversion. , Sample items for these variables are "I often feel inferior to others, "I often feel tense and jittery" and "I really enjoy talking to people" In this study, Cronbach's alpha for these scales were 0.721 for neuroticism and 0.749 for extraversion.

3.1.2 Investment Decision

In the current research, investment decision is dependent variable and measured by ten item scale developed by Grable, and Lytton, (1999) and Cronbach's alpha was 0.757.

3.1.3 Financial literacy

This variable is used as a moderator in this study. 4 item scale developed by Lusardi, A. (2015) to measure financial literacy was used in this research work. A sample item was — "if the interest rate goes up, what should happen to bond prices?" Cronbach's alpha for that scale was 0.699.

IV. RESULTS

Correlation analysis in table 1 indicates neuroticism has a significant positive correlation with investment decision (r=0.298, p<0.01). There is a significant positive degree of association between the extraversion and investment decision (r=2.38, p<0.01). There is no significant relationship between the financial literacy and investment decision. Financial literacy not moderating the relationship of neuroticism, extraversion and investment decision.

Table 1: Mean, Standard Deviation, Reliabilities and Correlations

		Mean	S.D	1	2	3	4	5	6	7
1.	G	0.79	0.41	**1**						
2.	Age	1.35	0.68	-.003	**1**					
3.	Edu	2.16	0.76	.025	.216**	**1**				
4.	N	3.25	0.89	.068	-.269**	.152*	**1(.749)**			
5.	Ex	3.70	0.73	.120	-.119	.198**	.311**	**1(.721)**		

6.	Fl	2.56	0.74	.222**	.019	-.120	.109	-.108	**1(.699)**	
7.	ID	3.18	0.61	-.124	-.209**	.125	.298**	.238**	.016	**1(.757)**

Where n= 204, G= "Gender", Edu= Education", N= Neuroticism, Ex= Extraversion, Fl= Financial literacy, ID= Investment Decision **p<0.01, *p<0.05.
For gender: 1 "male"; 2, "female". Age ranges from 1, "20-25"; 2, "26-30"; 3, "31-35"; 4, "36-40"; 5, "41 or above". For Qualification 1, "Graduate"; 2, "Master"; 3, "MS/MPhil"; 4, "PhD".

Results indicate that neuroticism has a significant positive correlation with investment decision (r=0.298, p<0.01). There is a significant positive degree of association between the extraversion and investment decision (r=2.38, p<0.01). There is no significant relationship between the financial literacy and investment decision. Financial literacy not moderating the relationship of neuroticism, extraversion and investment decision.

Table 2: Moderated Regression Analysis

Predictor	**Financial Literacy**		
	β	**R²**	**ΔR²**
Step 1			
Control Variable		0.044**	0.39**
Step 2			
Neuroticism	0.146**	0.128**	0.111**
Extraversion	0.132*		
Financial literacy	0.010ns		
Step 3			
Int1	0.075ns	0.135**	0.109**
Int2	0.026ns		

*Where n=204, Int1= (Neuroticism X Financial Literacy), Int2= (Extraversion X Financial Literacy),*p<0.01,*p<0.05 ns=not significant*

In the light of result, Extraversion has significant positive impact on investment decision which means hypothesis 1 is supported. Similarly, Neuroticism has significant positive impact on investment decision (β=0.132, p<0.01) which means hypothesis 2 is supported. But the results indicate that there is no significant impact of financial literacy on investment decision and does not support the hypothesis 3. Furthermore, the results indicates that there is no moderation. The financial literacy dose not moderate the relationship of extraversion and neuroticism on investment decision which means there are lack of financial knowledge exist in the targeted sample. The results not supported the hypothesis 4a and 4b.

V. DISCUSSION

In the first hypothesis, extraversion is positively and significantly related to investment decision. The extravert investors are sociable and talkative in nature and they are willing to invest in every condition. Before investing they get lot of information then make the investment decision. Neuroticism is positively and significantly related to investment decision. Mayfield, Perdue and Wooten (2008) also stated that the neuroticism is positively and significantly related to investment decision and the neurotic individuals make the long term investment. Similarly, financial literacy is positively and significantly related to the investment decision, which means that the individuals have financial knowledge they make the investment through the proper financial information.
Moderation hypothesis was proposed to investigate that whether financial literacy moderates the relationship among extraversion, neuroticism and investment or not, i.e. does it strengthens the relation or not. The result of the current study revealed that extraversion, neuroticism and investment decision not moderated by financial literacy. Which means there is deficiency of financial awareness. In Pakistan there is no practical implication of finance theories. Individual have not knowledge about finance and does not make the investment decision in effective manner.

VI. IMPLICATION LIMITAION AND FUTURE DIRECTIONS

There may be the implication of this research is that investors should be sufficiently well-equipped with financial knowledge for taking investment decision in order to enhance their return. This can be done by providing proper training to the investors of stock market along with the students of finance. It must be noted that the sample size in this study was less, so in future this study can be tested with large sample size and the impact of neuroticism and extraversion can also be tested on investment decision and risk aversion moderating role of financial literacy. As far as through the contribution of this study investors manager and other researchers can take advantage from the finding. On the basis of findings of study managers and institutional investors can select neurotic and extravert personalities for appropriate job. So, this study may play a vital role in this regard. Managers can conduct personality test before offering someone a specific job.

So, for this purpose universities, government and stock exchange must play their role in implementing this study. As we have reported that there is no moderation of financial literacy but it does not mean that financial literacy does not moderate the relationship it may be due to less sample size.

In future impact of big five personality traits on risk aversion with moderation role of financial knowledge and impact of extraversion and neuroticism on risk aversion or on cognitive biases can also be checked.

REFERENCES

1. Ahmad, F. (2020). Personality traits as predictor of cognitive biases: moderating role of risk-attitude. *Qualitative Research in Financial Markets*.
2. Allais, P. M. (1953). Le Comportment de l'Homme Rationnel devant Le Risque: Critique des Postulats et Axiomes. *de L'Ecole Americaine. Econometrica*, 21, 503–546.
3. Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart & Wilson.
4. Altman, M. (2018). Implications of behavioural economics for financial literacy and public policy. *The Journal of Socio-Economics*, 41(5), 677-690.
5. Asada, A., Basheerb, M. F., Irfanc, M., Jiangd, J., & Tahir, R. (2020). Open-Innovation and Knowledge Management in Small and Medium-Sized Enterprises (SMEs): The role of External Knowledge and Internal Innovation. Revista Argentina de Clínica Psicológica, 29(4), 80-90.
6. Awais, M., Laber, M. F., Rasheed, N., & Khursheed, A. (2016). Impact of Financial Literacy and Investment Experience on Risk Tolerance and Investment Decisions: Empirical Evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(1), 73-79.
7. Ballantine, J., & Stray, S. (1998). Financial appraisal and the IS/IT investment decision making process. *Journal of Information Technology*, 13(1), 3-14
8. Bapat, D. (2020). Antecedents to responsible financial management behavior among young adults: moderating role of financial risk tolerance. *International Journal of Bank Marketing*.
9. Blanchet-Scalliet, C., El Karoui, N., Jeanblanc, M., & Martellini, L. (2008). Optimal investment decisions when time-horizon is uncertain. *Journal of Mathematical Economics*, *44*(11), 1100-1113.
10. Bongomin, G. O. C., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2018). Nexus between financial literacy and financial inclusion. *International Journal of Bank Marketing*.
11. Camgoz, S. M., Karan, M. B., & Ergeneli, A. (2012). Relationship between the Big-Five personality and the financial performance of fund managers. *Diversity, Conflict, and Leadership*, *1*(13), 137-152.
12. Charles, A., & Kasilingam, R. (2014). Do framing effects of investors determine their investment personality? *Anvesha, 7(2),* 38-45.
13. Disney, R., & Gathergood, J. (2013). Financial literacy and consumer credit portfolios. *Journal of Banking & Finance*, *37*(7), 2246-2254.
14. Durand, R. B., Newby, R., Peggs, L., & Siekierka, M. (2010). Personality (Working Paper). *Crawley: University of Western Australia*.
15. Durand, R.B., Newby, R., & Sanghani, J. (2018). An intimate portrait of the individual investor. *The Journal of Behavioral Finance*, 9(4), 193–208.
16. Eysenck, H. J. (1991). Dimensions of personality: 16, 5 or 3?—Criteria for a taxonomic paradigm. *Personality and individual differences*, *12*(8), 773-790.
17. Gillen, M., & Kim, H. (2014). Older adults' receipt of financial help: Does personality matter?. *Journal of Family and Economic Issues*, *35*(2), 178-189.
18. Grable, J., & Lytton, R. H. (1999). Financial risk tolerance revisited: the development of a risk assessment instrument☆. *Financial services review*, *8*(3), 163-181.

19. Hafeez, M. H., Basheer, M. F., Rafique, M., & Siddiqui, S. H. (2018). Exploring the Links between TQM Practices, Business Innovativeness and Firm Performance: An Emerging Market Perspective. *Pakistan Journal of Social Sciences (PJSS)*, *38*(2).
20. Hameed, W. U., Basheer, M. F., Iqbal, J., Anwar, A., & Ahmad, H. K. (2018). Determinants of Firm's open innovation performance and the role of R & D department: an empirical evidence from Malaysian SME's. Journal of Global Entrepreneurship Research, 8(1), 1-20.
21. Hameed, W., Nawaz, M., Basheer, M. F., & Waseem, M. (1819). The Effect of Amanah Ikhtiar Malaysia (AIM) on Microenterprise Success in Sabah State Malaysia. Dialogue, 6462(14), 2.
22. He, Y., Liao, N., Bi, J., & Guo, L. (2019). Investment decision-making optimization of energy efficiency retrofit measures in multiple buildings under financing budgetary restraint. *Journal of Cleaner Production*, *215*, 1078-1094.
23. JALAL, R. N. U. D., ZEB, N., & FAYYAZ, U. E. (2019). The effect of personality traits on employee job satisfaction with moderating role of Islamic work ethics. *The Journal of Asian Finance, Economics, and Business*, *6*(2), 161-171.
24. Keller, C., & Siegrist, M. (2006). Investing in stocks: The influence of financial risk attitude and values-related money and stock market attitudes. *Journal of Economic Psychology*, *27*(2), 285-303.
25. Khan, D. (2020). Cognitive Driven Biases, Investment Decision Making: The Moderating Role of Financial Literacy. *Investment Decision Making: The Moderating Role of Financial Literacy (January 5, 2020)*.
26. Komarraju, M., Karau, S. J., Schmeck, R. R., & Avdic, A. (2011). The Big Five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, *51*(4), 472-477.
27. Krishnan, R., & Beena, F. (2009). Measurement of conformity to behavior finance concepts and association with individual personality. *IUP Journal of Behavioral Finance*, *6*(3/4), 25.
28. Kumari, S., Chandra, B., & Pattanayak, J. K. (2019). Personality traits and motivation of individual investors towards herding behaviour in Indian stock market. *Kybernetes*.
29. Lauriola, M., Gioggi, A., & Saggino, A. (2001). The Big Five and the intention to choose a university faculty: An exploratory study of high school students. *Rassegna di psicologia*, *18*, 133-141.
30. Lusardi, A. (2015). Financial literacy: Do people know the ABCs of finance?. *Public understanding of science*, *24*(3), 260-271.
31. Marcolin, S., & Abraham, A. (2006). Financial literacy research: Current literature and future opportunities.
32. Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, VII, 77–91.
33. McCrae, R. R., & Costa, Jr, P. T. (2007). Brief versions of the NEO-PI-3. *Journal of individual differences*, *28*(3), 116-128.
34. Muneer, S., Basheer, M. F., Shabbir, R., & Zeb, A. (1819). Does Information Technology (IT) Expeditethe Internal Audit System? Determinants of Internal Audit Effectives: Evidence from Pakistani Banking Industry. Dialogue, 14(2), 145.
35. Neumann, J. V., & Morgenstern, O. (2004). *Theory of games and economic behavior*. Princeton Univ. Press.
36. Nga,J. K.H., & Leong, K.Y. (2013). The influence of personality trait and demographic on financial decision making among generation Y. *Young Consumers, 14(3),* 230-243.
37. Nisar, Q. A., Basheer, M. F., Hussain, M. S., & Waqas, A. (2021). The Role of Leaders' Emotional Sincerity towards Followers' Trust: Leaders' Integrity & Quality Relationship. Journal of Contemporary Issues in Business and Government, 27(1), 472-479.
38. Nuseir, M. T., Basheer, M. F., & Aljumah, A. (2020). Antecedents of entrepreneurial intentions in smart city of Neom Saudi Arabia: Does the entrepreneurial education on artificial intelligence matter?. Cogent Business & Management, 7(1), 1825041.
39. Pak, O., & Mahmood, M. (2015). Impact of personality on risk tolerance and investment decisions. *International Journal of Commerce and Management, 25(4),* 370-384.
40. Riley Jr, W. B., & Chow, K. V. (1992). Asset allocation and individual risk aversion. *Financial Analysts Journal*, *48*(6), 32-37.
41. Sadiq, M. N., & Khan, R. A. A. (2019). Impact of Personality Traits on Investment Intention: The Mediating Role of Risk Behaviour and the Moderating Role of Financial Literacy. *Journal of Finance and Economics Research*, *4*(1), 1-18.
42. Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, *82*(1), 30-43.
43. Wang, H., Zhang, J., Wang, L., & Liu, S. (2014). Emotion and investment returns: Situation and Personality as moderators in a stock market. Social Behaviour and Personality: *An International journal*, 42(4), 561-570.

44. Yan, R., Basheer, M. F., Irfan, M., & Rana, T. N. (2020). Role of Psychological factors in Employee Well-being and Employee Performance: An Empirical Evidence from Pakistan. Revista Argentina de Clínica Psicológica, 29(5), 638.
45. Zahra, M., Hameed, W. U., Fiaz, M., & Basheer, M. F. (2019). Information technology capability a tool to expedite higher organizational performance. UCP Management Review (UCPMR), 3(1), 94-112
46. Zhou, W., & Xu, Z. (2020). Investment Decision Making Based on the Asymmetric Hesitant Fuzzy Sigmoid Preference Relations. In *Qualitative Investment Decision-Making Methods under Hesitant Fuzzy Environments* (pp. 21-48). Springer, Cham.
47. Zvaríková, K., & Majerová, J. (2014). Financial literacy in the Slovak Republic. *Procedia-Social and Behavioral Sciences*, *10*, 1106-1115.