EDITOR IN CHIEF

DEPUTY EDITOR IN CHIEF
DINH VAN SON

SECTRETARY OF EDITORIAL OFFICE
PHAM MINH DAT

EDITOR IN ENGLISH
NGUYEN THI LAN PHUONG

EDITORIAL SCIENTIFIC COUNCIL

Dinh Van SON - Thuong mai University, Vietnam - President
Pham Vu LUAN - Thuong mai University, Vietnam - Vice President
Nguyen Bach KHOA - Thuong mai University, Vietnam - Deputy President

THE MEMBERS

Vu Thanh Tu ANH - Fulbright University in Vietnam, USA
Le Xuan BA - Centural Institude for Economic Managerment, Vietnam
Hervé B. BOISMERY - University of La Reuinion, France
H. Eric BOUTIN - Toulon Var University, France
Nguyen Thi DOAN - Vietnam Learning Promotion Association, Vietnam
Haasis HANS - Dietrich - Institute of Shipping Economics and Logistics (isl) Bremen - Germany
Le Quoc HOI - National Economic University, Vietnam
Nguyen Thi Bich LOAN - Thuong mai University, Vietnam
Nguyen Hoang LONG - Thuong mai University, Vietnam
Nguyen MAI - Vietnam Economist Association, Vietnam
Duong Thi Binh MINH - University of Economics HoChiMinh City, Vietnam
Hee Cheon MOON - Korean Trade Research Association, South Korea
Bui Xuan NHAN - Thuong mai University, Vietnam
Luong Xuan QUY - Vietnam Economicst Association, Vietnam
Nguyen Van Song - Vietnam National University of Agriculture
Nguyen TAM - California State University, USA
Truong Ba THANH - University of Danang, Vietnam
Dinh Van THANH - Institude for Trade Research, Vietnam
Do Minh THANH - Thuong mai University, Vietnam
Le Dinh THANG - University of Québec à Trois Riviéres, Canada
Tran Dinh THIEN - Vietnam Institute of Economics, Vietnam
Nguyen Quang THUAN - Vietnam Academy of Social Sciences, Vietnam
Le Nhu TUYEN - Grenoble École de Managment, France
Washio TOMOHARU - Kwansei Gakuin University, Japan
Zhang YUJIE - Tsinghua University, China

Journal of Trade Science

ISSN 1859-3666

Volume 8 Number 4 June 2020

CONTENTS

Page

Journal of Trade Science 8:4 (2020) 18 - 28
ISSN 1859-3666
© TMU's JTS

THE IMPACTS OF THE BIG FIVE TRAITS ON THE INTENTION OF STOCK INVESTMENT THROUGH RISK, UNCERTAINTY, AND INVESTMENT PERFORMANCE PERCEPTION

Nguyen Huu Tho
University of Economics Ho Chi Minh City
Email: thonh@ueh.edu.vn
Tran Ha Minh Quan
University of Economics Ho Chi Minh City.
Email: quan.tran@isb.edu.vn

Received: *10th June 2020* ***Revised***: *9th July 2020* ***Approved***: *13th July 2020*

Personality traits recently are of interest to effects to individual investors on decision making by researchers. However, the literature holds little evidence of all the well-known Big Five traits have significant influence on future investment decisions. We, therefore, propose with mediating roles of risk perception, uncertainty perception and investment performance in the impact of each of the Big Five traits on intentions to invest in stocks. The results based on 465 individual investors shown that: (i) extroversion is positive influence on risk and uncertainty perception, Agreeableness affect positively on uncertainty perception and Neuroticism have negative influence on uncertainty perception, (ii) Risk and uncertainty perception affect to investment performance. (iii) Investment performance have influence on intentions to invest. (iv) mediating roles of risk perception, uncertainty perception and investment performance in the impact of each of the Big Five traits on intentions to invest in stocks.

Keywords: *Big Five traits, investment performance, investment intentions, risk perception, uncertainty perception.*

1. Introduction

Allport (1961) gave that an individual's thinking and behavioral patterns are determined by their personality and personality traits impact much of human behavior (Barber & Odean, 2000). Pompian (2012) observes that if investors can recognize the impact of their personality traits in their decision making, they will change their behavior and consequently improve financial goal achievement. Similarly, if advisors know their clients' personality traits, they can build better investment portfolios for those clients (Fung & Durand, 2014). There is a long history of personality trait research (Allport & Odbert, 1936). Cattell et al., (1970) proposed a sixteen-personality factor (16PF) model; However, despite becoming a standard measure, some trait items have been found to have low internal consistency (Matthews et al., 2003). Today, the Big Five traits (openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism) by Costa et al., (1995) is the leading instrument to assess the traits of an individual (Matthews et al., 2003). The Big Five personality traits are found to have direct associations with risk and uncertainty perceptions (Hoffmann et al., 2015; Phung & Mai, 2017)

Risk and uncertainty are related but different concepts, with risk referring to situations where

ISSN 1859-3666
© TMU's JTS

decision makers can predict the likelihood of a future outcome, while uncertainty refers to circumstances where they cannot predict the possibility of a future outcome (Knight, 1921). Investor perceptions of risk and uncertainty have been found to be significant predictors of risk-taking behavior in stock investment (Barber & Odean, 2013).

Investment performance refers to the benefit from investments. For the finance, performance measures are based on a combination of how satisfied are investors with their investment decisions in the past, previous version current rate of return, and a comparison of actual outcomes versus expected outcomes (Cadotte et al., 1990). Investment performance is found to have an impact on intentions to invest (Phung & Nguyen, 2017).

Behavioral intention is the perception of an individual towards performance of a certain behavior (Fishbein & Ajzen, 1977) in this case, investing intentions. Intentions are determined by three factors; attitude, subjective norms and perceived control (Ajzen, 1991). An understanding of one's behavioral intentions with respect to investing may help establish goals or strategies more accurately. The research on individual investors' investment intentions has, however, received a little of modest attention over the past three decades (Nandan & Saurabh, 2016; Phung & Nguyen, 2017).

In the present, The study will answer four issues as: (a) personal traits affect to risk and uncertainty perceptions, (b) risk and uncertainty perceptions impact to investment performance, (c) investment performance have influence to intentions to invest, (d) and mediating roles of risk perception, uncertainty perception and investment performance in the impact of each of the Big Five traits on intentions to invest in stocks.

This study is arranged as follows: After introduction is a review of the literature, methodology, results and discussion of those findings, implications, and limitations and of further research.

2. Literature review

2.1. The Big Five traits and their relationship with risk and uncertainty perception

2.1.1. Openness to experience

According to research of Costa et al., (1995), individuals who are open to experiences are imaginative, creative, curious, and ingenious. They are also deep thinkers, tend to take on high risk, and are less likely to diversify their portfolios (Durand et al., 2013). Phung and Mai (2017) found a positive relationship between openness to experience and uncertainty perception, and no association between openness to experience and risk perception. We give hypothesis as:

H1.1 The more open the investor is to experience, the higher the risk perception of investing in stocks

H2.1 The more open the investor is to experience, the higher the uncertainty perception of investing in stocks

2.1.2 . Conscientiousness:

Conscientious people are self-disciplined, responsible; they often have goal-oriented approaches and are very active in managing their lives (Costa et al., 1995). Highly conscientious people are less likely to accept risk because they focus on control, order and self-discipline (Soane & Chmiel, 2005). According to Durand et al., (2013), the more conscientious are people, the more disposition effect behavior they exhibit (through holding losing investments too long and selling winning investments too early). Phung and Mai, (2017) found no association between conscientiousness and the perception of risk or of uncertainty. We suggest as:

H1.2 The more conscientious the investor is, the higher the risk perception of investing in stocks

H2.2 The more conscientious the investor is, the higher the uncertainty perception of investing in stocks

2.1.3. Extroversion:

Extraverts are energetic, sociable, enthusiastic, adventurous and assertive (Costa et al., 1995).

ISSN 1859-3666
© TMU's JTS

Highly extraverted people tend to take more risk (Oehler et al., 2018). Moreover, extraverts have more overconfidence (trading excessively) and less overreaction to good or bad news (Durand et al., 2013). Phung and Mai (2017) uncovered that extroversion positively affects both risk and uncertainty perceptions of investing in stocks. Thus, two hypothesis are suggested as:

H1.3 The more extrovert the investor is, the higher the risk perception of investing in stocks

H2.3 The more extrovert the investor is, the higher the uncertainty perception of investing in stocks

2.1.4. Agreeableness

Costa et al., (1995) show that agreeable people are courteous, friendly and trusting. They also take less risk (Pak & Mahmood, 2015), have less overconfidence, more overreaction, and disposition effect behaviour in terms of stock investment (Durand et al., 2013). Phung and Mai (2017) found no association between agreeableness and perception of risk and uncertainty. We give two hypothesis:

H1.4 The more agreeable the investor is, the higher the risk perception of investing in stocks

H2.4 The more agreeable the investor is, the higher the uncertainty perception of investing in stocks

2.1.5. Neuroticism:

According to Costa et al., (1995), neurotics people are anxiety, anger, fear, and depression characterize. Neurotic people have riskier portfolios (Durand et al., 2013), due to less likely to accept risk and uncertainty perception to invest stocks . Two hypothesis are given as:

H1.5 The investor is less the neuroticism, the higher the risk perception of investing in stocks.

H2.5 The investor is less the neuroticism, the higher the uncertainty perception of investing in stocks.

2.2. Perception of risk and uncertainty, investment performance and future investment decisions

People averse to risk are less likely to undertake market activities (Fellner & Maciejovsky, 2007). Individuals with overconfidence who effect behavior tend to have suboptimal returns (Barber & Odean, 2013). Investors who perceive higher risk in their investments are more satisfied with their investment results (Hoffmann et al., 2015). Those who perceive higher risk and uncertainty in their investments also tend to choose safe investments; and those more satisfied with their investment performance are more likely to invest in the future (Phung et al., 2017). Given this evidence, we reexamine the direct relationships of risk perception, uncertainty perception to investment performance; investment performance and investment intentions. We suggest hypothesis as:

H3: The more aware the investor is of risks of investing in stocks, the more satisfied he is with the investment outcomes.

H4: The more aware the investor is of the uncertainty of investing in stocks, he more satisfied he is with the investment outcomes

H5: The more satisfied the investor is with the investment outcomes, the more likely he is to continue to invest in the future.

2.3. Mediating roles of perceptions of risk and uncertainty and perceived investment performance of the Big Five traits to future investment decisions

Durand et al., (2013), found that neurotic people tend to get highly investment performance. The Conscientious, agreeable people have negative effect to investment performance, While extravert people is positive one (Akhtar et al., 2017), individual people has open to experiences have influence of long-term investment intentions (Mayfiels et al., 2008). The most prior researchers found one, two or three out of the Big Five traits affecting investment decisions as: mediating factor for the relationship of individual 's extravert to positive mood (Trang et al., 2016), investors' uncertainty perception mediates the impact of openness to experience, extroversion and neuroticism on investment performance (Phung & Mai, 2017). These shown that, investors have openness and experience, extroversion, and neuroticism satisfy their investment decisions in uncertainty percep-

ISSN 1859-3666
© TMU's JTS

tion. Investment performance have mediating of risk perception to investment intention (Phung & Nguyen, 2017). We propose that:

H6.1 - H6.5: Risk perception, uncertainty perception and perceived investment performance mediate the relationship of the Big Five traits (open and experience, conscientious, extroversion, agreeableness, neuroticism) to investment decisions.

2.4. Model of research

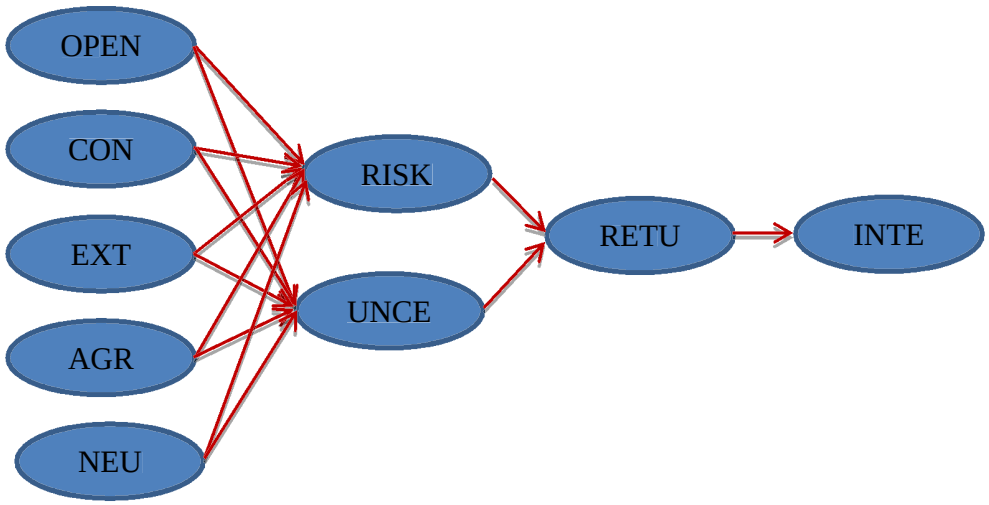


Figure 1: *Model by author*

Note:

OPEN: Open and Experience *CON: Conscientious* *EXT: Extroversion*
AGR : Agreeableness NEU: Neuroticism *RISK Risk perception*
UNCE: Uncertainty perception *RETU: investment return* *INTE: Intention*

3. Methodology

3.1. The stages of the research

The study employed the quantitative method with the following techniques:

Stage 1: In-depth interviews: the study conducted interviews to six investors who have ten years investment experience. The interview is about an hour and we perfected approximately a month. This interviews exploited individual's investors about risk, uncertainty perception, investment results and intention intentions.

Stage 2: Develop the factors of Big five traits, risk perception, uncertainty perception, investment results and intention decision as table 1:

Stage 3: A pilot survey conducted within a month with fifty investors. This pilot test aims to examine the questions in a questionnaire, test of reliability and validity of all factors about Big five traits, risk perception, uncertainty perception, investment results and intention decision.

Stage 4: Finally, the questionnaires were sent to 500 individual investors and 465 valid responses were returned in six months.

The study used SPSS and AMOS software for testing the reliability of all items of variables. In SPSS software, all variables were analyzed as Exploration Factor Analysis (EFA) to test Cronbach's alpha, KMO, Eigenvalues. Confirmation Factor Analysis (CFA) was applied to test the reliability and validity of all variables. Finally, all relationships (hypotheses) were tested by a method of maximum likelihood - Structural Equation Modelling (SEM) to find to effect on Big five traits, risk perception, uncertainty perception, investment results and intention.

ISSN 1859-3666
© TMU's JTS

Table 1: *Factors, Items and Authors*

No	Factors	Items	Authors
1	INTE	6	Dodds et al.,(1991); Sodelund và Ohman, (2003)
2	RETU	3	Oberlechner và Osler, (2008)
3	RISK	4	Developed based on Knight, (1921)
4	UNCE	4	
5	OPEN	5	Kovaleva et al., (2013)
6	CON	4	
7	EXT	4	
8	AGR	4	
9	NEU	4	

Source: collected by Authors

3.2. Investor characteristics

In the table 2: A summary of investor characteristics as: (1) Gender: Male investors made up approximately 56.6 percent. (2) Age: most investors aged in the range from 26 to 35, dominating around 49.9 percent. (4) Education: the number of investors who university degree (71.8 percent), (5) Work experience: Individual investors seemed to be young, with less than 5 years of work experience (50.5%), (6) Income per month get from 6 million to 12 million VND per month, 44.3%, and (7) investment experience is about 3 years (61.8%). (9) Investment courses: approximately 62 percent attended investment course. (10) Investment amount: around 26 percent had investment wealth from 100 million VND to 300 million VND.

Table 2: *A summary of investor characteristics*

Characteristics (N=465)	No. investors	%	Characteristics (N=465)	No. investors	%
I/ Gender			**VI/ Income per month (VND)**		
			< 6 million	133	28.6
Male	263	56.6	6-12 million	206	44.3
Female	202	43.4	> 12 -20 million	75	16.1
			>20 million	51	11.0
II/ Age			**VII/ Investment experience**		
18-25	141	30.4	< 1 year	144	31.0
26-35	232	49.9	1-3 years	143	30.8
36-55	79	17.9	> 3 – 5 years	96	20.6
>55	13	2.8	> 5 – 10 years	72	15.5
			> 10 years	10	2.1
III/ Marital status			**VIII/ Places for living**		
Single	234	50.3	Ho Chi Minh City	325	69.9
Married	205	44.1	Ha Noi	99	21.3
Divorced	26	5.6	Others	41	8.8
IV/ Education			**IX/ Investment courses**		
High school	15	3.2	Attended	288	61.9
College	65	14.0	No attendance	177	38.1
University	334	71.8	**X/ Investment amount (VND)**		
Master	48	10.3	< 100 million	220	47.3
Others	3	0.07	100-300 million	121	26.0
V/ Work experience			> 300-600 million	40	8.6
<5 years	235	50.5	> 600 – 1 billion	23	4.9
5-10 years	185	39.8	> 1-3 billion	28	6.0
> 10 years	45	9.7	> 3 billion	33	7.1

Source: collected by authors

ISSN 1859-3666
© TMU's JTS

4. Results and Discusses

4.1. Cronbach's alpha Results

Cronbach's alpha is the most widely used measure to assess the consistency of the entire factor. According to Hair et al. (2014), measure of reliability that is more than 0.6. In table 3, EXT have two items (removed EXT3 and EXT4), CON use three items (removed CON4), the rest of the factors have Cronbach's alpha more than 0.6.

Table 3: *Cronbach's alpha's Factors Results*

Factors	Items	Cronbach's alpha If item deleted
OPEN	5	0.76
CON	3	0.69
EXT	2	0.84
AGR	4	0.79
NEU	4	0.81
RISK	4	0.71
UNCE	4	0.69
RETU	3	0.78
INTE	6	0.91

Source: Collected by authors

4.2. Exploration factor loadings Analasys (EFA)

Factors have Cronbach's alpha > = 0.6 will be analyzed Exploration Factor Loadings (EFA)

The first: Test of data suitability: two tests on the suitability of data for structure detection are Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity (Bartlett) (Hair et al., 2014). Kaiser Meyer Olkin >= 0.5 and Bartlett's test >= 0.6 with (P)<= 0.05. The result of table 4 as following: KMO = 0.819>= 0.5 indicate that a factor analysis may be useful with the data and the Bartlett's test with significant value of .000 (less than 0.05), exhibiting that sufficient items for each factor and sufficient correlations between the variables. Given results of KMO and Bartlett's test, the factor analysis is very useful with data.

Table 4: *KMO and Bartlett's test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.819
Bartlett's Test of Sphericity	Approx. Chi-Square	7044.473
	df	325
	Sig.	.000

Source: Collecting by author

The second: To evaluate the value of the factors, we need to examine three important issues as: Test of total variance: eigenvalue represents the amount of variance accounted for by a factor, and should be greater than 1, and an orthogonal rotation sums of squared loading should be more than 40%, and total Extraction Sums of Squared Loading should be greater than 50% (Nguyen Dinh Tho, 2013). In the table 5, Total Extraction Sums of Squared Loading is 68.411%>50% and Initial Eigenvalues > 1 with night factors.

Table 5: *A summary of total variance explained*

Factor	Initial Eigenvalues			Extraction Sums of Squared Loading		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.262	24.085	24.085	6.002	23.084	23.084
2	3.301	12.694	36.780	3.007	11.566	34.650
3	2.464	9.479	46.258	2.133	8.204	42.854
4	1.835	7.056	53.314	1.540	5.924	48.777
5	1.706	6.563	59.887	1.456	5.600	54.377
6	1.581	6.080	65.957	1.201	4.621	58.998
7	1.322	5.083	71.040	0.972	3.740	62.737
8	1.109	4.267	75.307	0.797	3.066	65.804
9	1.053	4.052	**79.359**	0.678	2.607	**68.411**

Source: Collected by authors

EFA confirmed the model with night factors and the factor loading of the items and the corrected item-total correlation index should be 0.5 or more, Cronbach's alpha>0.6, KMO >= 0.5, and Bartlett's test >= 0.6 with (P)<= 0.05.

ISSN 1859-3666
© TMU's JTS

4.3. Confirmatory factor analysis (CFA)

After exploratory factor loading (EFA), the confirmatory factor analysis (CFA) was carried out to test: (a) overall model fit, (b) convergent and discriminant validity of all factors (and items).

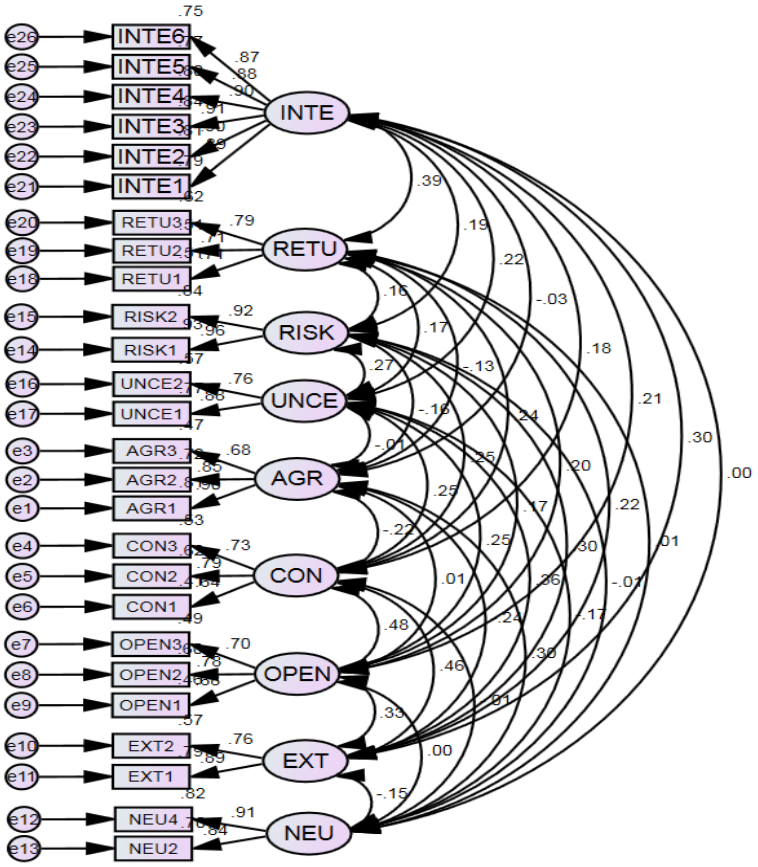
Model fit:

Goodness-of-fit (GOF), Degree of freedom = 263, Chi-square/df = 1.598 < 5, GFI = 0.936 > 0.9; TLI = 0.972 > 0.9; và RMSEA = 0.036 < 0.07. Thus, model is value of data in the table 6.

Table 6 demonstrated that the overall model X2 (Chi-square) was 420.361 with 263 degrees of freedom. Chi-square is defined as the difference in the observed and estimated covariance matrices. Chi-square/df = 1.598 < 5, GFI = 0.936 > 0.9; TLI = 0.972 > 0.9; and RMSEA = 0.036 < 0.07.

Convergent and discriminant validity:

Construct reliability (CR) which should be 0.7 or higher to indicate adequate convergent or internal consistency, and average variance extracted (AVE) which should be greater 0.5 to suggest adequate convergent validity



Source: Collecting by author

Figure 2: *CFA Standardized model*

Table 6: *A summary of guidelines for determining model fit*

GOF Index	Results
Chi-square	420.361
Degree of freedom	263
Chi-square/df	1.598
GFI	0.936
TLI	0.972
RMSEA	0.036

Source: Collecting by author

are useful in establishing convergent validity with P value <5%.

4.4. Results of Structural Equation Modeling (SEM)

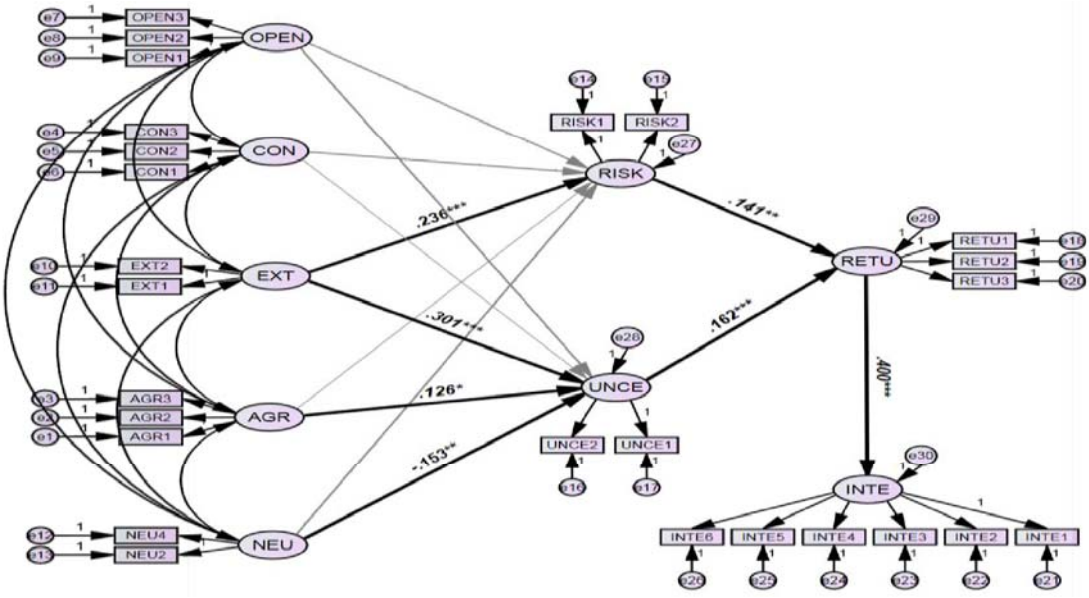
After EFA, Confirmatory factor analysis (CFA) was carried out. CFA is a way of testing how well measured variables represent a smaller number of constructs. The measurement theory may be combined with a structural theory to fully specify a structural equation modelling (SEM) (Hair et al., 2014) with AMOS software. Figure 3 provides a complete specification of the CFA model. The nine latent constructs are INTE, RETU, RISK, UNCE, AGR, CON, OPEN, EXT, and NEU. Finally, e1-e26 each represents the errors associated with each

ISSN 1859-3666
© TMU's JTS

Table 7: *Convergent and discriminant validity*

Factors	Construct Reliability	Average Variance Extracted
EXT	0.808	0.679
INTE	0.958	0.793
RETU	0.783	0.546
NEU	0.864	0.761
CON	0.763	0.519
OPEN	0.763	0.519
AGR	0.857	0.669
RISK	0.937	0.882
UNCE	0.801	0.669

Source: Collecting by author



Source: Collecting by author

Figure 3: *Standardized SEM Model*

measured item.

Figure 3 shows: extroversion had the positive impact on risk perception at standardized coefficient ($\lambda = 0.236$) ($p<0.001$), and uncertainty perception at 0.301 ($p<0.001$), they are suitable hypothesis H1.3 and H2.3. This result is consistent with some literature, extraverts had the high impact on risk perception to invest in stocks (Phung and Mai, 2017). On the other hand, this result is inconsistent with those of Durand et al., (2013); Pak & Mahmood, (2015); Soane & Chmiel, (2005), who contend that extravert and openness and experience people tend to take more risk.

Agreeableness had the positive effect to uncertainty perception (hypothesis H2.4) at standardized coefficient ($\lambda = 0.126$) ($p<0.05$) and neuroticism had the negative effect to uncertainty perception (hypothesis H2.5) at standardized coefficient ($\lambda = -0.153$) ($p<0.01$). We also documented significant effects of all five traits on uncertainty perception, particularly investors have high in conscientiousness, openness to experience, extroversion, and agreeableness, and low in neuroticism to tend to perceive stock investment as highly uncertain. Findings are consistent with Phung and Mai (2017), except Phung and Mai (2017) also found the

ISSN 1859-3666
© TMU's JTS

impact to relationship between neuroticism and uncertainty perception.

This study found no significant relationships between openness and experience, conscientiousness, agreeableness, neuroticism, and risk perception. This finding is similar to that of Phung and Mai (2017) and contrary to those of Durand et al., (2013) who showed that agreeableness and neuroticism affected risk-taking choices. We focused on risk perception of investing in stocks whereas Durand et al., (2013) stress risky choices. Another possible cause is the different cultural and contextual perspective of respondents.

In addition, the study found the positive relationship between agreeableness and uncertainty perception, Phung and Mai (2017) found no the relationship. This research no significant relationships were found between openness and experience, conscientiousness, agreeableness, neurocitism and risk perception; between openness and experience, conscientiousness and uncertainty perception.

Risk perception positively affected investment performance at 0.141 ($p<0.01$) and uncertainty perception at 0.162 ($p<0.001$), this result is similar to that of hypothesis H3 and H4. At the same time, investment performance positively influenced intentions to invest at 0.4 ($p<0.001$), and it is suitable with H5. These results are consistent with those of prior scholars (Hoffmann et al., 2015; Phung & Nguyen, 2017).

Mediating of risk and uncertainty perception, investment result between extroversion, agreeableness, neuroticism and intention to invest in the stocks (hypothesis H6.3, H6.4, H6.5).

Finally, we found mediating relationships between the Big Five traits and intentions to invest through risk and uncertainty perceptions and investment performance. This is similar to those of prior researchers Nandan & Saurabh, (2016); Phung & Mai, (2017) in which risk or uncertainty perception is a mediating element.

5. Implications

Our findings of research provide useful insights for individual investors, financial advisors, brokerage firms, policy makers and stakeholders, particularly in financial market where individual investors get majority 99% in Vietnam Stock Exchange.

Individual investors can recognize and adjust their intentions to invest in stocks. Financial advisors, brokerage firms can consult their customers more effectively by understanding personal traits, who can know level of risk and uncertainty perception to get happiness, investment results, and intentions to invest in stocks

The research support Securities Companies, Securities Commission of Vietnam give recommendation to individual investors, make good policies and conditions for growing stock market participation.

6. Limitations and further research.

The five hundred questionnaires were sent to individual investors living in Vietnam, but four hundred sixty-five (465) valid questionnaires were returned from most respondents living in Ho Chi Minh City (HCMC) known as the largest City in Vietnam, followed by Ha Noi Capital and then other provinces. Nearly fifty questionnaires were not returned mainly from individual investors living outside of HCMC, which may cause missed important data. The questionnaire was developed based on literature background, and then tested through in-depth interviews and a pilot test. However, misunderstandings can be inevitable because of the different demographics as geography and culture.

From the limitations of the study, the author proposes the next research to expand the investigation to individual investors in the big center city, each city have one hundred investors to find the relationship agreeableness and neurocitism in Big five traits

ISSN 1859-3666
© TMU's JTS

have influence to intention investment through risk perception and demographics.◆

References:

1. Ajzen, I. (1991), *The theory of planned behavior*, Organizational Behavior and Human Decision Processes, 50(2), 179-211.

2. Akhtar, F., Thyagaraj, K., & Das, N. (2018), *The impact of social influence on the relationship between personality traits and perceived investment performance of individual investors: Evidence from Indian stock market*. International Journal of Managerial Finance, 14(1), 130-148.

3. Allport, G. W. (1961), *Pattern and growth in personality*, New York: Holt, Rinehart & Winston.

4. Allport, G. W., & Odbert, H. S. (1936), *Trait-names: A psycho-lexical study*, Psychological Monographs, 47(1), 1-171.

5. Barber, B. M., & Odean, T. (2000), *Trading is hazardous to your wealth: The common stock investment performance of individual investors*, The Journal of Finance, 55(2), 773-806.

6. Barber, B. M., & Odean, T. (2013), *The behavior of individual investors*, In Handbook of the Economics of Finance (Vol. 2, pp. 1533-1570): Elsevier.

7. Cadotte, E. R., Woodruff, R. B., & Jenkins, R. L. (1987), *Expectations and norms in models of consumer satisfaction*, Journal of Marketing Research, 305-314.

8. Cattell, R. B., Eber, H. W., & Tatsuoka, M. (1970), *Handbook for the 16 personality factor questionnaire*, Champaign, IL: Institute for Personality and Ability Testing.

9. Costa, P. T., McCrae, R. R., & Kay, G. G. (1995), *Persons, places, and personality: Career assessment using the Revised NEO Personality Inventory*, Journal of Career Assessment, 3(2), 123-139.

10. Dodds, W. B., Monroe, K. B., & Grewal, D. (1991), *Effects of price, brand, and store information on buyers' product evaluations*, Journal of Marketing Research, 307-319.

11. Durand, R. B., Newby, R., Peggs, L., & Siekierka, M. (2013). *Personality*, Journal of Behavioral Finance, 14(2), 116-133.

12. Durand, R. B., Newby, R., Tant, K., & Trepongkaruna, S. (2013), *Overconfidence, overreaction and personality*, Review of Behavioral Finance, 5(2), 104-133.

13. Fellner, G., & Maciejovsky, B. (2007), *Risk attitude and market behavior: Evidence from experimental asset markets*, Journal of Economic Psychology, 28(3), 338-350.

14. Fishbein, M., & Ajzen, I. (1977), B*elief, attitude, intention, and behavior: An introduction to theory and research*, Philosophy and Rhetoric, 10(2), 130-132.

15. Fornell, C., & Larcker, D. F. (1981). *Structural equation models with unobservable variables and measurement error.* Journal of Marketing Research, 18(3), 39-50.

16. Fung, L., & Durand, R. B. (2014), *Personality traits, In Investor behavior: The Psychology of Financial Planning and Investing*, 99-115.

17. Hair, J., Black, W., Babin, B. J., & Anderson, R. E. (2014), *Multivariate Data Analysis* (7th Edition), Harlow, UK: Pearson.

18. Hoffmann, A. O., Post, T., & Pennings, J. M. (2015), *How investor perceptions drive actual trading and risk-taking behavior,* Journal of Behavioral Finance, 16(1), 94-103.

19. Knight, F. H. (1921). *Risk, Uncertainty and Profit*. New York: Hart, Schaffner and Marx.

20. Kovaleva, A., Beierlein, C., Kemper, C. J., & Rammstedt, B. (2013), *Psychometric properties of the BFI-K: A cross-validation study*, The International Journal of Educational and Psychological Assessment, 13(1), 34-50.

ISSN 1859-3666
© TMU's JTS

21. Nguyễn Đình Thọ, (2013), *Phương pháp nghiên cứu khoa học trong kinh doanh*, TP.HCM: NXB Tài chính

22. Nguyen, H. T., Phung, T. M. T., & Nguyen, V. H. (2018), *Avoidance of risk, ambiguity and uncertainty in investment choices*, Asian Journal of Scientific Research, 11, 522-531.

23. Trang, P. T. M., Khuong, M. N., & Tho, N. H. (2016), *The Big Five Traits, Moods, and Investment Decisions in Emerging Stock Markets*, International Journal of Business Research™, 99.

Summary

Nghiên cứu khám phá mối quan hệ giữa đặc điểm năm tính cách, nhận thức rủi ro, nhận thức sự không chắc chắn, kết quả đầu tư và dự định đầu tư trên thị trường chứng khoán Việt Nam. Nghiên cứu thu thập 465 bản câu hỏi của nhà đầu tư cá nhân. Kết quả nghiên cứu đã phát hiện (i) một vài tính cách cá nhân có ảnh hưởng đến nhận thức rủi ro, nhận thức sự không chắc chắn, (ii) nhận thức rủi ro và nhận thức sự không chắc chắn ảnh hưởng cùng chiều đến kết quả đầu tư, (iii) kết quả đầu tư ảnh hưởng đến dự định đầu tư, và (v) vai trò trung gian giữa đặc điểm năm tính cách ảnh hưởng đến dự định đầu tư thông qua nhận thức rủi ro, nhận thức sự không chắc chắn, và kết quả đầu tư.

NGUYEN HUU THO

1. Personal Profile:
- Name: ***Nguyen Huu Tho***
- Date of birth: 27th December 1975
- Title: Master
- Workplace: University of Economics Ho Chi Minh City
- Position: Lecturer

2. Major research directions:
Investment, Finance, Risk Management.

3. Publications the author has published his works:
- Journal of Asia-Pacific Business
- The International Journal of Learning in Higher Education
- Asia-Pacific conference on Economic Dynamics II (APCED2)
- Massey University