

GROUP A045

THE EFFECT OF PERSONALITY TRAITS AND
DEMOGRAPHIC CHARACTERISTICS TOWARDS
RISK TOLERANCE AND INVESTMENT DECISION
MAKING

BY

ANG SHIAO ZHUAN
CHUAH CHEA YING
KUI SIEW BOON
SOO LI HUI
WONG CHIN HONG

A Research project submitted in partial fulfillment of the
requirement for the degree of

BACHELOR OF FINANCE (HONS)

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE
DEPARTMENT OF FINANCE

AUGUST 2016

Copyright @ 2016

ALL RIGHT RESERVED. No part of this paper may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, graphic, electronic, mechanical, photocopying, recording, scanning, or otherwise, without the prior consent of the authors.

DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end of our own work and that due to acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the research project.
- (4) The word count of this research report is 25,249 .

Name of Student	Student ID	Signature
1. Ang Shiao Zhuan	13ABB07105	_____
2. Chuah Chea Ying	13ABB08041	_____
3. Kui Siew Boon	13ABB07230	_____
4. Soo Li Hui	13ABB08430	_____
5. Wong Chin Hong	13ABB08429	_____

Date: 25th August 2016

ACKNOWLEDGEMENT

This research project has been successfully completed with the assistance of various authorities. The research group would like to thank all those who have helped in carrying out this research and have offered comments and suggestions. First of all, the research group would like to thank to University Tunku Abdul Rahman (UTAR) for giving this opportunity to conduct this research project as partial fulfilment of the requirement for the degree of Bachelor of Finance (Hons).

Secondly, the research group would like to express the deep gratitude to the research supervisor, Pn. Nurul Nabila Binti Jasli for her patient guidance, enthusiastic encouragement and useful critiques of this research work. During the period of completing this research, Pn. Nurul provided guidance, advice, valuable suggestion, constructive comment and commitment to reply queries promptly throughout this research work. Her willingness to give her precious time so generously has been highly appreciated.

Next, the research group extends acknowledgement towards the UTAR lecturers and tutors who have guided the group directly and indirectly with new knowledge and ideas on the process of completing this research. Furthermore, the research group is grateful for the support from parents and friends who helped a lot in finalizing this research within the limited time frame.

Lastly, the cooperation and support received from all group members of this research group who has contributed to this research project are vital for the accomplishment of this project. The ideas, suggestions, and perspective from the group members have greatly enhanced this research project's content. Once again, the research group is in grateful and in appreciation of all the assistance contributed from every party in this research.

TABLE OF CONTENT

	PAGE
Copyright Page -----	II
Declaration -----	III
Acknowledgement -----	IV
Table of Content -----	V
List of Tables -----	VIII
List of Figures -----	X
List of Appendices -----	XI
List of Abbreviations -----	XII
Preface -----	XIII
Abstract -----	XIV
CHAPTER 1 RESEARCH REVIEW	
1.0 Introduction -----	1
1.1 Research Background -----	2
1.2 Problem Statement -----	3
1.3 Research Objectives and Questions -----	6
1.4 Hypothesis of Study -----	7
1.5 Significant of Study -----	9
1.6 Chapter Layout -----	10
1.7 Conclusion -----	11
CHAPTER 2 LITERATURE REVIEW	
2.0 Introduction -----	12
2.1 Review of Literature	
2.1.1 Dependent Variable -----	12
2.1.1.1 Investment Decision-----	12
2.1.2 Moderating Variable -----	14
2.1.2.1 Risk Tolerance -----	14
2.1.3 Independent Variables -----	15
2.1.3.1 Extroversion -----	15
2.1.3.2 Agreeableness -----	17

2.1.3.3	Conscientiousness	19
2.1.3.4	Neuroticism	21
2.1.3.5	Openness to Experience	24
2.1.4	Demographics Variables	25
2.1.4.1	Investment Experience	25
2.1.4.2	Financial Literacy	27
2.1.4.3	Gender	29
2.2	Review of the Relevant Theoretical Models	30
2.3	Conceptual Framework	33
2.4	Hypothesis Development	35
2.5	Conclusion	36
CHAPTER 3: METHODOLOGY		
3.0	Introduction	37
3.1	Research Design	37
3.2	Data Collection Methods	38
3.3	Sampling Design	38
3.3.1	Target Population	38
3.3.2	Sampling Frame and Sampling Location	39
3.3.3	Sampling Element	39
3.3.4	Sampling Technique	39
3.3.5	Sampling Size	40
3.4	Research Instrument	41
3.5	Constructs Measurement	42
3.5.1	Scale of Measurement	42
3.5.1.1	Nominal Scale	42
3.5.1.2	Ordinal Scale	43
3.5.1.3	Likert Scale	43
3.6	Data Processing	44
3.6.1	Checking	44
3.6.2	Editing	44
3.6.3	Coding	44
3.6.4	Transcribing	45
3.7	Data Analysis	45
3.7.1	Descriptive Analysis	45

3.7.2 Scale Measurement -----	46
3.7.3 Multiple Linear Regression Analysis -----	47
3.8 Conclusion -----	48
CHAPTER 4: DATA ANALYSIS	
4.0 Introduction -----	50
4.1 Descriptive Analysis -----	50
4.1.1 Respondent Demographic Profile -----	50
4.1.2 Central Tendencies Measurement of Construct -----	52
4.2 Scale Measurement -----	62
4.3 Inferential Analysis -----	63
4.4 Multiple Linear Regression Analysis -----	74
4.5 Conclusion -----	77
CHAPTER 5: DISCUSSION AND CONCLUSION	
5.0 Introduction -----	78
5.1 Summary of Statistical Analysis -----	78
5.2 Discussion of Major Findings -----	81
5.3 Implication of Study -----	87
5.4 Limitation of Study -----	88
5.5 Recommendation for Future Study -----	89
5.6 Conclusion -----	89
References -----	91

LIST OF TABLES

	PAGE
Table 1.0: The Defination of the Youth and Young people by different organization -----	5
Table 2.0: Expected Effect on Risk Attitude of Personality Traits -----	30
Table 3.1: Rule of Cronbach’s Alpha Coefficient Value -----	47
Table 4.1: Demographic Profile of the Respondents -----	50
Table 4.2: Personality Traits – Extroversion -----	53
Table 4.3: Personality Traits – Agreeableness -----	54
Table 4.4: Personality Traits – Conscientiousness -----	55
Table 4.5: Personality Traits – Neuroticism -----	56
Table 4.6: Personality Traits – Openness to Experience -----	57
Table 4.7: Risk Tolerance -----	58
Table 4.8: Investment Decision -----	60
Table 4.9: Cornbrash’s Alpha -----	62
Table 4.10: Summary of Multiple Regression Model (1) -----	63
Table 4.11: The impact between extroversion personality and the young potential investor’s risk tolerance -----	65
Table 4.12: The impact between agreeableness personality and the young potential investor’s risk tolerance -----	66
Table 4.13: The impact between conscientiousness personality and the young potential investor’s risk tolerance -----	67
Table 4.14: The impact between neuroticism personality and the young potential investor’s risk tolerance -----	68
Table 4.15: The impact between openness to experience personality and the young potential investor’s risk tolerance -----	69
Table 4.16: Correlation between risk tolerance and investment experience ---	70
Table 4.17: Correlation between risk tolerance and financial literacy -----	71
Table 4.18: Correlation between risk tolerance and gender -----	72
Table 4.19: Correlation between risk tolerance and investment decision -----	73
Table 4.20: Summary of Multiple Regression Model (1) -----	74

Table 4.21: Model (2) Summary of Multiple Regression Model -----	75
Table 4.22: Model (2) Summary of Multiple Regression Model -----	76
Table 5.1: Summary of Hypothesis Testing -----	81
Table 5.2: Summary of Demographic Characteristics Hypothesis -----	84
Table 5.3: Summary of Model (2) -----	86

LIST OF FIGURES

	PAGE
Figure 2.1: Expected Return of Each Bond -----	13
Figure 2.2: The Factors Affect Investment Decision -----	32
Figure 2.3: The Factor Affect Investment Decision -----	33
Figure 2.4: Factors Contribute on the Investment Decision Making in Capital Market -----	34

LIST OF APPENDICES

	PAGE
Appendix A: Research Questionnaire Sample -----	102
Appendix B: Respondent Demographic Profile -----	108
Appendix C: Multiple Regression Analysis -----	113

LIST OF ABBREVIATIONS

RISK	Risk Tolerance
EXTRO	Extroversion
AGREE	Agreeableness
CONSCIENT	Conscientiousness
NEURO	Neuroticism
OPENNESS	Openness to Experience
INVSEXP	Investment Experience
FL	Financial Literacy
INVSDEC	Investment Decision

PREFACE

This researcher paper is submitted in partial fulfilment of the requirement for Bachelor of Finance (HONS). This research project unit UBFZ 3026 Research Project is completed by five Bachelor of Finance (HONS) students to fulfil their degree programme. The title of this research project is The Effect of Personality Traits and Demographic Characteristics towards Risk Tolerance and Investment Decision Making. Our supervisor is Puan Nurul Nabila Binti Jasli.

There were many past researcher studies on related to topic of personality traits and demographic on risk tolerance; and also effect of risk tolerance on investment decision making. Thus, this motivates our group to conduct this paper. This paper is conducted to examine the significance of the personality traits and demographic characteristics that can influence the decision making in the investment.

For the following investigation in this research paper, we apply various statistical methods to analyse and understand the significance and relationships of the factors that may affect to investment decision making of the young potential investors in Kampar. The data arrange within this study is primary data collected from conducting a questionnaire in Kampar, Perak.

ABSTRACT

The purpose of this study is to identify the relationship and significance of the independent variables towards dependent variable. In this research, there are total eight independent variables which combined of five personality traits and three demographic characteristics. The five personality traits are extroversion, agreeableness, conscientiousness, neuroticism and openness to experience while demographic characteristics are gender, investment experience and financial literacy. Our study also investigates the relationship between independent variables and dependent variable base on the moderating variable. The moderating variable in this study is risk tolerance.

The questionnaire survey was being conducted for this study in order to obtain primary data from the targeted respondents in Kampar, Perak. The age of targeted respondents for this study between 18 to 29. These respondents help us to do the analysis on the risk tolerance and investment decision making. There were total 340 questionnaires being conducted for this research. This survey had been done by using the SPSS software.

The results from the SPSS have shown that personality of extroversion, agreeableness, neuroticism, openness to experience, financial literacy are significant to the risk tolerance of the young potential investors. There is insignificant relationship to the risk tolerance based on the independent variables of gender and investment experience. However, there is significant relationship between investment decision and the young potential investor's risk tolerance.

CHAPTER 1 : RESEARCH REVIEW

1.0 Introduction

Chapter 1 represents to introduce the beginning of the research. Seven parts has been separated in this chapter 1 started with research background, problem statement, research objective and question follow by hypothesis of the study and significance of study, then chapter layout and lastly the short conclusion of this chapter.

1.1 Research Background

Investment is a process for investors to invest their extra fund to earn higher return. There are many factors affecting investor's decision making on their investment. Those factors may covered by efficiency of fund, knowledge on investment field, personality traits and influence of friends and family. Regardless the factors attracted them to make investment decisions; they have the same purpose which is to earn more profit. According to Mutswenje (2014) stated that individual investments behavior are more focus on their choices and preferences of buying some small amounts of securities for their own account. He also stated half of the investors mostly perform their investment analysis by using fundamental analysis, technical analysis and judgment. When making investment decision, they are usually using some decision tools to assume the information structure and seek about the factor of market systematically that will influence individuals' investment decision such as market outcomes. He proves that investors always assumed that rational wealth-maximizer is a basic financial rule. However, the

study concluded that there is indifference level of risk investors are willing to undertake and it depends on their personal attitudes or personality.

Personality is a structure of feelings, thoughts, behaviors and motives to every person and determined how individuals recognize and react to the environment (Gillen & Kim, 2014). Dole and Schroeder (2001) define the personality traits as combination of cognitive, perceptual, distinguishing emotional and motivational characteristics. These combinations will affect individual's decision-making according to their environment. Furthermore, Krishnan and Beena (2009) found that the effect on risk tolerance, investment management and spending are come from the individual personality traits. So, there is a relationship between personality of an individual and his propensity to perform as per behavioral finance concepts. Based on Back and Seaker (2004), they proved that personality traits give guidance for reaching a solution in an uncertain condition. To support this statement, Kanadhasan (2015) has indicated that the younger potential investors have higher risk tolerance compare to the veteran potential investors. For those investors who have less wisdom in the investment field will have lower risk tolerance. Moreover, result from the researcher of Kanadhasan (2015); Falahati and Paim (2012); Chen and Volpe (2002) mentioned that male has higher risk tolerance compared to female. There has a linkage exist between personality traits and risk tolerance. Personality traits of a human may affect an individual's risk tolerance (Bye & Lamvik, 2007).

The range of the risk tolerance normally can be defined by personality on the investors. Financial risk tolerance is one of the major issues for an investor to make decision on investment. Risk tolerance refers to the willingness of an investor to suffer the negative impact of the investment, or the return earns different with expectation (Grable & Lytton, 1999). Besides that, Davies (2014) stated that risk tolerance as a wide psychological trait and also fundamental degree for the individual ready to accept the risk could reduce their profit. Many researchers proved that the investors with high-risk tolerance more addicted to riskier investment (Pak & Mahmond, 2015; Kannadhasan, 2015). As opposed to the risk averse, they are investors who refuse to take the risk. From the other way, we can say that range of risk tolerance of the risk averse is lower than risk takers.

The personality of risk takers will be more aggressive, high venturesome in investment, whereby in comparison to risk taker, personality of risk averse much less aggressive (Mishra & Lalumiere, 2011; Lauriola, Panno, Levin & Lejuez, 2013).

In general, as we know that the veteran investors are knowledgeable and more experienced in investment field such as refer to the efficiency of market. For example, efficiency market divided into two types which are bull market and bear market. When bull market occurs, the fund will increase in investment while for bear market the investment of fund will decrease. According to Grable (2013), the risk tolerance of the investors will increase if the stock price increased. By the way, consideration of experienced investor may be difference with newbie potential investors in decision making in investment. The potential investor is stated that individual possible hand over money to invest in products with their expectation of financial return. In this research, we target that 18-29 years old young adults who are undergraduate students, fresh graduated and some working adults as our targeted respondent. In additions, respondents who lack involve in financial investment will more likely to depend their personality traits when exposed to investment decision. However, some respondent who have relevant investment knowledge also one of the factors to influence their investment decision making. Therefore, this will bring us motivation to conduct our study.

1.2 Problem Statement

In recent few years, the online forex trading has been arising by through social media (Facebook, Instagram) ‘they’ used high return to attract people to invest in forex trading (according to sinchew.com.my, 2013). Although the forex trading has been banned by Bank Negara it still attracted a lot of young adults especially those adults who born in 1980~1990s. According to the Malaysia’s Exchange Control Act of 1953, only commercial bank and assigned forex dealer has the authority to trade forex and the other forex trading platform or offshore companies

is illegal in Malaysia (The Rakyat Post, 2014). Therefore, individual forex trading is illegally in Malaysia.

Online forex trading has been identified as high risk investment due to the fluctuation of currency and the duration (short-term) of online trading market can be 5 days a week 24 hours, hence, the volume of trading could be huge (according to sinchew.com.my, 2013). So, online forex trading has more speculative nature due to the small capital investor cannot stay longer for the same position. The only way to earn speculative profit is from the spread within few minutes or hours for small capital investor.

The issue has been figure out “how the online forex trading can be arise and attract a lot of young investor to get involved even it is illegal and very high risk?” That can be concluded as the “almost impossible” high return with low capital requirement, Ponzi scheme and those fake forex investment agent used luxury things to attract people for example, BMW, Mercedes Benz or branded goods (Leinvest, 2013). According to The Rakyat Post (2015) reported that those forex agent target on university and college (such as Utar and Ktar) student and their colleague mostly are those student’s classmate or graduated from the same university or college. The Raykat Post (2013) also reported that the agent would like to aim on student due to no social experience and mind set no yet mature especially those students who love luxury thing are easier to recruit.

Therefore, we believe that if young potential investor known their own risk tolerance should be helpful for them to keep away for such scheme and make a better consort investment decision. The risk tolerance is very personal, everyone should have different acceptable degree of risk. This is because personality is different between each other and the personality could affect a person risk tolerance. Moreover, risk tolerance can help investor to identify what investment tools they really need.

Fidelity Investments has the view of Generation Y is the age from 19 to 37 which is a group of people growth up and potentially control the future of financial market. Moreover, Chen and Volpe (1998) also stated the range of age from 18 to

29 consider as student investor in U.S. Jekielek and Brown (2005) had concluded that the range of age for young adults is from 18 to 24. The range of age for youth has also been identifying by different organization which will show on table 1.0 below:

Table 1.0 The Defination of the Youth and Young people by different organization

Entity/Instrument/ Organization	Age
UN Secretariat/UNESCO/ILO**	Youth: 15-24
UN Habitat (Youth Fund)**	Youth 15-32
UNICEF/WHO/UNFPA**	Young People: 10-24; Youth: 15-24
UNICEF/ The convention on rights of the Child**	Child until 18
The African Youth Charter**	Youth:15-35

** All sources are generated from the organization or Union.

Overall, we have expanded the study area (Bakar & Ng, 2016) in order to help and study how personality traits affect the young potential investor's risk tolerance ultimately led to affect investment decision in Malaysia. Also, we narrow down the respondents towards the potential investors. Therefore, our study are focus on young potential investor which can be identified as student (post-graduate student, under-graduate student, and high-school graduate student), young worker which are those who finish high school education and directly go to work and young adults also become one of potential investor, in other words, is the range of age from 18 to 29 (Chen & Volpe, 1998). Besides that, we are not concern about whether they have investment experience or not, hence, our study can provide a much more specify result toward the range of young potential investor against their personality on risk tolerance and effect on the investment decision.

On the other hand, we also found that in previous study (Zhang et al., 2014; Durand, Newby and Sanghani, 2008) concluded that Big Five Factor (BFF) should be consort on measurement of the personality traits and they also concluded that it has some effect on people risk tolerance. Moreover, BFF is one of the common measurement of personality and easier to understand, hence, it bring contribution to our study. In addition, our study more concern about risk tolerance on different personality rather than risk-taking behavior and emotional situation against investment decision. Furthermore, we included financial literacy as one of the demographic variable in our study. This is because of several; studies had concluded that different degree of financial literacy will influence potential investors' decision. The results of the combination of BFF and financial literacy should be more comprehensive to study the relationship between personality traits and investment decision.

1.3 Research Objectives and Questions

Research Questions:	Research Objectives:
General: Does the personality trait and demographic characteristics on risk tolerance has impact on young potential investors' decision making process in Kampar?	General: To study personality and demographic characteristics on risk tolerance has impact on young potential investors' decision making process in Kampar.

<p>Specific: What is the relationship between the personality traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) and risk tolerance among the young potential investor?</p>	<p>Specific: To identify the relationship between the personality traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) and risk tolerance on the young potential investor.</p>
<p>Does the demographic characteristic (financial literacy, gender and investment experience) has impacted on the young potential investor's risk tolerance? What is the relationship between risk tolerance and investment decision making among the young potential investor in capital market?</p>	<p>To determine whether demographic characteristic (financial literacy, gender and investment experience) has impacted on the young potential investor's risk tolerance. To identify the relationship between the risk tolerance and investment decision making among the young potential investor in capital market.</p>

1.4 Hypothesis of Study

The dependent and independent variables was contributed by the conceptual framework. This study's dependent variable is investment decision making, with moderating variable is risk tolerance and the independent variables are financial literacy, neuroticism, extroversion, agreeableness, conscientiousness and openness to experience. The gender, financial literacy and investment experience are will be taken as moderating variable. These factors will affect potential investors' decision in investment. Based on all of the variables we mention above, there are 9 hypotheses had been developed which has shown on the following:

1. H₀: No significant relationship between extroversion personality and the young potential investor's risk tolerance
H₁: A significant relationship between extroversion personality and the young potential investor's risk tolerance
2. H₀: No significant relationship between agreeableness personality and the young potential investor's risk tolerance.
H₁: A significant relationship between agreeableness personality and the young potential investor's risk tolerance.
3. H₀: No significant relationship between conscientiousness personality and the young potential investor's risk tolerance.
H₁: A significant relationship between conscientiousness personality and the young potential investor's risk tolerance.
4. H₀: No significant relationship between neuroticism personality and the young potential investor's risk tolerance.
H₁: A significant relationship between neuroticism personality and the young potential investor's risk tolerance.
5. H₀: There is no significant relationship between openness to experience personality and the young potential investor's risk tolerance.
H₁: There is a significant relationship between openness to experience personality and the young potential investor's risk tolerance.
6. H₀: No investment experience has higher risk tolerance than with investment experience
H₁: with the investment experience has higher risk tolerance than no investment experience.
7. H₀: The financial literacy has no impacted on the young potential investor's risk tolerance.

H₁: The financial literacy has impacted on the young potential investor's risk tolerance.

8. H₀: Female has higher risk tolerance in investment decision than male.

H₁: Male has higher risk tolerance in investment decision than female.

9. H₀: There is no significant relationship between investment decision and the young potential investor's risk tolerance

H₁: There is a significant relationship between investment decision and the young potential investor's risk tolerance

1.5 Significant of Study

Our study provided some theoretical contribution by improving the area of study in order for future researchers who want to estimate personality and the investment decision for whole Malaysia's situation. Besides that, our study focuses on the young potential investors who are at the range of age 18 to 29 which has lesser investigated on specific range of age, and also provided the information of the age of young adult's personality against various investment decision-making processes. This study has been conducted by using Big Five Factor of the measurement on personality which is different with the similar study. Furthermore, the study provided some information or reference for future researchers when doing the relevant study. Moreover, our study provides a better understanding of the personality of risk tolerance affected investment decision in the area of Malaysia among the potential investor.

On the other hand, this study also alerts the financial products provider such as financial intermediates and investment bank. Thus, this study can be a reference for investment bank of financial intermediary on providing a various strategy to fulfill the risk acceptance of different personality of investors, alternatively, can improve the performance and services. Moreover, our study allows future financial service and product provider to understand more about their future client.

According to our study result, we can base on the different personality of the potential investor and given advice by proposing with financial product which is suitable for them.

1.6 Chapter Layout

This research consists of five chapters which are research overview, literature review, methodology, data analysis also discussion, conclusion, and implication. Research overview will conduct research background and problem statement. Besides objective, research question, hypothesis and significant of the study will be carried out in a first chapter.

In chapter 2 literature review, we will identify the dependent variable, independent variable and moderating variables of the research. We also will review the previous researcher study and summarize the theory that had adopted. Conceptual framework and hypothesis development to examine the usefulness of the theory adopted.

Chapter 3 are discuss about research design and data collection method with primary data and sampling design, follow by construct measurement and research instrument, lastly data analysis and processing will be indicate in methodology part.

Chapter 4 which is data analysis will illustrate the data results to observe the relationship between the individual variables and others variable. We are going to use primary data with Ordinary Least Square (OLS) regression in our research.

The last chapter of this research included discussion, implication and conclusion. The finding of the previous study will be summarized. In the discussion part, we will discuss the major finding of the research to prove the objective and hypothesis. Then, the implications and limitations of the research will be

conducted in the last part of this chapter. Moreover, the appropriate recommendation is listing for future research.

1.7 Conclusion

In conclusion, personality on risk tolerance is significant for an investor as it will affect young potential investor's decision in investment directly. Hence, the young potential investor should bring up good and positive personality to improve their risk tolerance for better investment decision making. In this research, we identify that conscientiousness, openness, extraversion, agreeableness and neuroticism are the major personality traits to measure risk tolerance of an individual. They have a significant relationship to affect risk tolerance. Thus, financial planner or advisor can base on the personality traits to meet the potential investor's financial needs and investment decision. In chapter 2, the literature review will provide more theories to support these factors.

CHAPTER 2 : LITERATURE REVIEW

2.0 Introduction

In this chapter, we have include literature review about the definition, discussions, methodologies and finding for the researchers based on our dependent variables, independent variable and moderating variables; review the theoretical models for several researchers; determine which variable more important to research and develop proposed theoretical or conceptual framework and last is hypotheses development.

2.1 Review of Literature

2.1.1 Dependent Variable

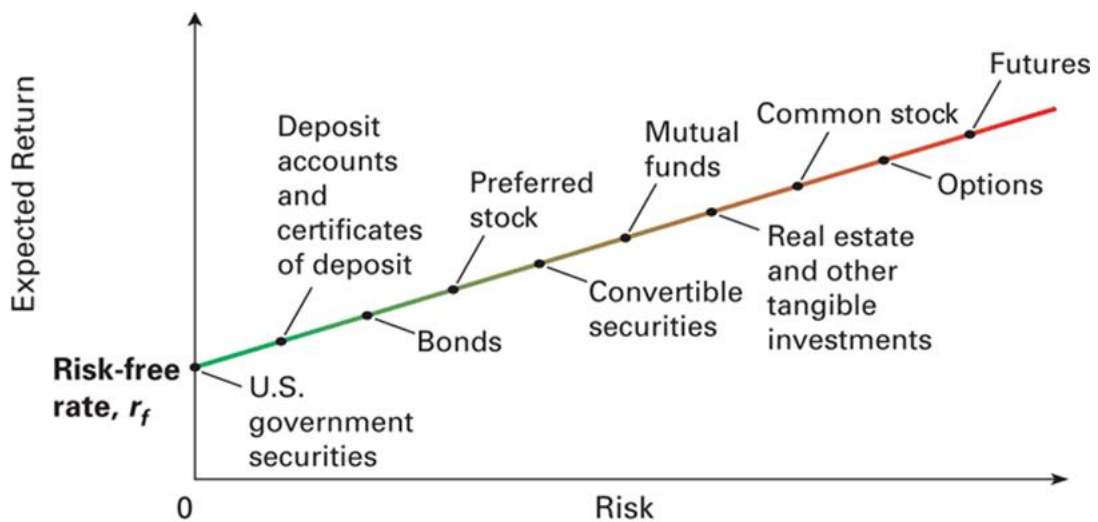
Dependent variable is a factor that will change by the effect of an associated factor or phenomenon called independent variables. In mathematical equation or model, the dependent variable is the variable whose value is to be determined by the equation or model. Other than that, the values of the dependent variable that result are from the independent variables.

2.1.1.1 Investment Decision

Investment decision making is the dependent variable in our study. Decision making can be defined as there were several choices to choose as the best action to meet the purpose (Smriti Chand, 2015). For example,

the personality traits, level of income, investment knowledge, gender of an individual (Aren & Aydemir, 2015). Durand (2013) illustrated that personality traits of the investors are closely related to their investment decision making.

Figure 2.1 Expected Return of Each Bond



Source: Adapted from Fundamentals of Investing (13th Edition) Smart.S, Gitman.L and Joehnk.M (2014).

The above graph has been shown each type of investment tools with their relative risk and expected return. The graph indicated that risk of bond is far more less than the common stock's risk. There are three type of assets that investors can make investment decision based on the asset riskiness level which are low-risk and high-risk. High risk asset include stock and derivatives trading, in contrast, low-risk assets associated with high rating bond and saving account (Pak and Mahmood, 2013). They also stated that stock generally has higher return as compare with bond due to the higher risk in long term. By supporting, Stivers and Sun (2002) found that stock and bond return move positively during periods of lower stock market uncertainty whereas negative relationship indicated during high stock market uncertainty. Based on the study above mention we notice that stock can consider as a "risky" investment and bond as a lower risk investment.

2.1.2 Moderating Variable

Moderator variable is qualitative (e.g. gender, race) or quantitative (e.g. level of reward) variables that influence the direction and/or strength of the relationship between dependent variable and independent variable (Baron, R. M., & Kenny, D. A., 1986). Our moderating variable in our research is risk tolerance.

2.1.2.1 Risk Tolerance

Gustafsson and Omark (2015) defined risk tolerance as the maximum amount of uncertainty (or risk) that an individual willing to accept when making an investment decision. Moreover, Mayfield, Perdue and Wooten (2008) proposed that willingness of an individual to accept the risk and perception of risk could be influenced by their own personal characteristics. They suggested that the perception of risk influence investing behavior. Furthermore, the researcher study that the financial risk attitude of the investor has a positive influence on investment risk tolerance and invest in stocks in individual's portfolio.

Soane and Chmiel (2005) was assessed the consistency of risk preferences with three routine decision domains which are work, health and personal finance. The researcher used five factor models to measure personality and the some other factor that had impact on risk-related decision-making. The empirical results show there was a significant role to play for both the perception of risk and the process of making decisions in shaping risk taking in the some domain. The research suggested personality factors has different connection with different domain due to the patterns of relationships between the predictor variables and preferences for risk taking are different in each domain.

According to Pak and Mahmond (2015) and Kannadhasan (2015) said that high risk tolerance investors have risk taking behavior. Research concluded that those people tend to invest in riskier investment. Risk taking overall was positively related with extroversion and openness to experience, and negatively with neuroticism, agreeableness and conscientiousness (Nicholson et al., 2005). In other words, personality traits has relationship either positive or negative relationship with risk tolerance. Further explanation will discuss in next part.

Investment decision of the investors may affected by risk tolerance that combined of few components. Those components included demographics, personality traits, emotion, education and others (Pak & Mahmood, 2015). There are positive relationship between risk tolerance and investment decision. The speed of the investors in the financial planning and investment management will slow down if they are low in risk tolerance (Grable & Lytton, 1999).

2.1.3 Independent Variables

Independent variable is the variables to assume to have a direct effect on the dependent variable. In our research, our independent variables have extroversion, agreeableness, conscientiousness, neuroticism and openness to experience.

2.1.3.1 Extroversion

Extroversion is one of the personality traits from Big Five Factors. Zhang, Wang, Wang and Liu (2014); Camgoz, Karan and Ergeneli (2011); Durand et al. (2008); Sadi et al. (2011) stated the characteristic of extroverted individuals prefer to involve outside world, friendly, warm blooded and sociable which can also define as level of sociability. Jones,

Woods and Hutchinson indicated that extroverted individual can easily talk and be near to strangers. According to Charles and Kasilingam (2014) had mentioned adventurous, sociable and talkative attitude of a person can be dimension through extroversion. Besides that, extroverted has link with the trait of impulsivity that may affect the investment decision making (Dewberry, Juanchich & Marendran, 2013). In addition, extrovert individual make decision easily and they more focus on investments which they can simply join or quit (Sadi et al., 2011).

From review by many researchers, a person with high score in extroversion more experts in social activities than low score in extroversion. According to Krishan and Beena (2009) and Zhang et al. (2014) showed that individuals with high score in extroversion have plenty of positive emotion whereby it lead to effective investment decision making.

There were some researchers having same the outcome of study. 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. Risk aversion pointed those investors who afraid to face the risk. On the other mean, the extroverted investors have higher risk tolerance on their investment (Nga & Yien, 2013). In addition, Lin and Lu (2015) said that extroversion investors have the higher risk tolerance too. Extroverted investors were more likely in risk taking and also greater risk propensity (Camgoz et al., 2011). Individual who score high extroversion will be estimated as a risk-taking investor. The finding showed there were positive relationship between extroversion and risk taking. Extroversion is significant correlated to measure the risk tolerance (Anic, 2007).

Zhang et al. (2014) commented investors with high score extroversion managed to do investment on rational decision despite of noise in market. This is because extroverted person more active in sociable, so they able to acquire more accurate information for their decision making.

Moreover, Camgoz et al. (2011) also indicated higher extroversion score investors make higher financial performance. High financial performance investor associated with extroverted characteristic like do investment decision making easily with rational mind.

In addition, we found that many researchers indicated that there are significant relationship between extroversion and the investment decision making. Result of the researcher Durand, Newby and Sanghani (2008) showed there were positive and significant between extroversion and investment choices. The positive sign between this two variables lead to the higher stock and portfolio exposure.

Moreover, there were positively significant of extroversion and investment performance and also risk of the investors.

2.1.3.2 Agreeableness

Agreeableness reflects a person who is good-natured, easy-going, cooperative characteristic (McCrae & Costa, 2003). Gambetti and Giusberti (2012) also discuss that agreeableness view the personality differences with social co operations and the personality tendency to respect the others; they can easily attract people's trustfulness. In this personality traits, the person is straightforward and truthful and deceiving people is hard for them and they will restrict their demand and will give the other people's needs as priority.

Findings by Byrne et al. (n.s.) discuss that high agreeableness related to social pressure alone and combined social and time pressure is unanticipated in the decision making. However, given lack of a priori predictions about the agreeableness and decision-making under pressure, the effect of researchers observed should be considered exploratory and examined in future work. According to Durand, Newby and Sanghani

(2008), when the person have a high agreeableness scale tend to be more cheerful, value and respect in beliefs of others are helpful and essentially altruistic. Moreover, agreeability also describes as how a person responds the information he receives on investments. Studies noted that prior research suggests that basic personality characteristics related to ethical decision-making in the sciences (Murphy, 2000; Barrick, Mount and Judge, 2001).

Byrne, Silasi-Mansat & Worthy (n,s,) concluded agreeableness was negatively correlated with decision making performance when a person under pressure. It shown that agreeableness did not estimate decision-making performance in the low pressure condition while higher levels of agreeableness were related when the performance is decline under high pressure, although the effect was not significant. While prior research has shown that more agreeable individuals are less risk-taking (Nicholson et al., 2005), the results of the present study suggest that trait agreeableness may relate with choking under pressure in decision-making contexts.

As Nicholson, Soane, Fenton-O'Creevy and Willman (2005) suggest that when the consistent risk takers require resilience which it means that it low in control their emotional, implicating the agreeableness tough to tender-mindedness dimension. Other than that, factor level of analysis the relationship between personality and risk taking suggest that it can predict the risk taking when make investment decision making. Research shows that impact of agreeableness in taking financial risk concern about individual preferences rather than the beliefs. Agreeableness is associated about interpersonal orientation which the individual agreeable is extremely group-oriented rather than self-centered. In previous study, individuals who are low in agreeableness will be rough, oversensitive and have manipulative characteristics. Buccioli and Zarri (2015) indicated that investors who are low agreeableness will analog others in negative light, less concern other well-being, self-centered and uncooperative. Thus, they will think more about themselves and are bold to take the financial risk when making investment decision.

The result from the Soane and Chmiel (2005) found that their participants categorized in two groups which is those who consistent in risk preferences and those who inconsistent or in risk preference. Consistent group has taking higher significant on agreeableness to weighting up the cost and benefits of risk than inconsistent group. Researchers say that majority of consistent group is risk averse. Their findings show that different combinations of personality and decision-making factors estimate risk preferences when domain-specific risk preferences of inconsistent group were examined. Soane and Chmiel (2005) result prove that investors who consistent in risk averse significantly have higher score of agreeableness and the inconsistency is greater in risk preferences was estimate by low scores in agreeableness. It concludes that higher scores in agreeableness is consistent in risk averse investors.

2.1.3.3 Conscientiousness

Conscientiousness, one of the Big Five personality traits, consists of two main parts which is dutiful, responsible and organized, dependability reflecting being comprehensive and achievement representing the ability to meet the challenges (McCrae & Costa, 1987). The duty component of conscientiousness such as reliability, deliberate, and responsible makes a person more probable to do the correct thing for other people and themselves. As part of their duty, conscientious people see sharing relevant information with others. It also reflects the propensity to follow the policies and protocols or rules and procedures and so do hold on to codes of conduct (Kalshoven, Hartog & Hoogh, 2010). Nicholson (2005) said that conscientiousness factor can make individuals to improve their risk potential. Chitra and Sreedevi (2011) describe conscientiousness as individual's cognitive ability in making decisions. Hence, the investor will be categorized either as "moral investor" which mean the investor based on his conscientious and evaluate whether it is correct or wrong

when taking decision, or “expedient investor” which mean although it is immoral the investor still make a smart decision. There is a sample term for conscientiousness which is “pay attention to details” and “do things according to a plan” (Kalshoven, Hartog & Hoogh, 2010).

Conscientious people are likely to be goal-oriented, self-disciplined, trusted, high competent, dutifulness, actively and cautious in decision making (Joyce & Leong, 2013; Sadi et al., 2011; Charles & Kasilingam, 2014). Based on Krisknan and Beena (2009), they defined a person with conscientious is goal-oriented and achievement oriented. They prefer to finish a mission before engaging on a new task and is not liable to multitasking. They are prepared and have strong desire for achievement. Tauni, Xing and Iqbal (2016) said that conscientious persons will work hard to achieve the best results with the highest probability by relying the information they found and they work in their own skills confidently. Therefore, conscientiousness is adverse to these qualities and can be expect to be inversely related to risk-propensity.

Individuals who are highly conscientious before acting they tend to think carefully and stay closely to perceived responsibilities and their moral obligation. Besides, they focused on achievement through own effort rather than deputation of power and responsibilities (Kalshoven, Hartog & Hoogh, 2010; Krisknan & Beena, 2009). However, individuals who are low on this dimension is not achievement-oriented, more impulsive, and can change task easily (Krisknan & Beena, 2009). Low score in conscientiousness associate with risk-taking and likely to engage in multiple risky behaviors. Hence, conscientiousness inversely linked with risk-taking (Anic, 2007).

According to the research of Tauni, Xing and Iqbal (2016), they found that when they use specialized press to obtain information by themselves, the conscientious investors trade more often because they have confidence in their own work capability while when they acquire some professional advice they will trade less. In conclusion, conscience

investors tend to more trust the information get by their own than based on financial advice.

In addition, Brown and Taylor (2011) mentioned that personality traits such as conscientious tend to be insignificant in influencing the grade of financial asset holding and unsecured debt which representing that these personality traits are not important in affecting an individual's economic decision making, *ceteris paribus*.

Furthermore, conscientious people are more likely to prevent huge failures by taking too much risk which will unfavorably affect their dependents' welfare. Higher risk can make higher return and yet also cause higher probability of large losses that could lead to undesirable adverse consequences that prick an individual's conscience. Hence, there is a negative relationship between conscientiousness with financial risk tolerance (Wong & Carducci, 2013).

Sadi et al. (2011) defined randomness bias as a person's perception is affected by luck or superstitious. The researchers found that conscientious investors are negatively association with randomness bias. It means that conscientious investors less relying on luck or superstitious and meticulous in their investment choices. Thus, high conscientiousness can lead them more specific about the kind of investment made and risk that they willing to take.

2.1.3.4 Neuroticism

Emotional instability, depression and self-centeredness have been defined by Pak and Mahmood (2013); Kleine, Wagner and Weller (2015). They explained that when the market condition becomes poor highly neuroticism people tend to overrate the risk but when the market condition is good they tend to underrate the gain on investment. Charles

and Kasilingam (2014) discussed neuroticism play with emotional control and affect. He stated that someone with less neuroticism has stable emotion but those with high neuroticism influence lead to experience in negative emotion. Moreover, Durand et al. (2008) stated that the opposite of negative emotion is emotional stability, people who have neuroticism's personality tend to receive more negative feeling, for example, sad, guilt, worried, low self-esteem, pessimism and instable on emotion. Therefore, when the investor is emotional investor will make the decisions based on their emotions (Chirat & Sreedevi, 2011). Besides, Zhang et al. (2014) has further explained that highly neuroticism individual always overact or sensitive to normal situation such as tiny price change on the stock, thus, they may trade too much due to experience extreme emotions and lead to irrational behaviour. Wang et al. (2014) found that negative emotion lead to pessimistic estimation of risk.

Mayfield, Perdue and Wooten (2008) have concluded that people with higher neuroticism and risk aversion tend to avoid short-term investment due to neuroticism individual might experience anxious and it will let them feel insecurity. Thus, they will not be willing to involve in short-term investment. They also concluded those individuals who are risk aversion will less likely to join short-term investment which means that neuroticism individual may be risk averse in investment decision. Nicholson et al. (2005) study the relationship between personality and risk propensity which indicated there is a strong relationship between them. The researcher suggested that risk-taker need resilience (e.g less fear and anxiety) hence need to score low neuroticism or emotion insensitive, in other words, risk averse with higher neuroticism characteristic. Moreover, the empirical result also found there is negative significant relationship (at $p < 0.001$) between financial risk and neuroticism personality that means the higher the financial risk the fewer the neuroticism people engaged (Nicholson et al., 2005; Nicholson et al., n/s); same result generated by Soane and Chmiel (2005). The empirical analysis also proven by Anic (2007) generated similar result on the

relationship between personality and risk-taking behaviour, individual score low in neuroticism indicated that seeking for higher risk.

According to Damasio (1994) who have study the Neurobiological specify stated that individual's decision making process would improve by emotion in two features which are when the decision becomes paramount emotion will lead an individual to a decision and emotion can help for the most favourable decisions. Kaufman (1999) has concluded that intense in emotions (extremely high or low emotional arousal), the rationality of decision increasingly limited due to emotion will become an obscure for decision maker's judgments. Charles and Kasilingam (2014) discussed about the time need to make decision often affected by emotions and feelings at that time and often leading to a different direction of the long-term costs and benefits of another action.

Durand et al. (2008) conducted a research about understanding individual's psychology on their investment behaviour and the portfolio return. The data focus on the investors who hold Australian equities in all regions of Australia. They indicated that the positive and significant relationship between negative emotion (i.e neuroticism) and risk-taking propensity to trading activity and consistence with their expectation. Besides, they concluded the situation increase anxious and nervousness of neurotic investor could lead to more trading in order to reduce annoying feeling. Furthermore, Sadi et al. (2010) concluded that investors' decision will based on their personality and indicated that there are relationship between neuroticism and randomness bias, hindsight bias and availability bias which means that those bias influence neuroticism investor investment decision.

However, Zhang et al. (2014) has added on the neuroticism's individual faced unilaterally price rising situation did not trade excessively which indicated that no significant relationship between neuroticism personality and trade excessively decision-making. In additional, Wong and Carducci (2013) also stated no significant relationship between risk tolerance and

emotional stability which also known as low neuroticism. Moreover, Brown and Taylor (2014) have conducted a study related to big five personality traits and household finance which are unsecured debt and financial assets. They were using British Household Panel Survey to collect data on U.K Household personality traits and its attitude toward finance. They have found neuroticism personality trait does not have significant relationship with unsecured debt and financial assets which mean that the economic decision-making may not be influence if the individual has neuroticism personality.

2.1.3.5 Openness to Experience

Openness to experience relates to willingness to try different activities or to consider unconventional idea. Individuals with high degree of openness to experience are more creative and will attempt different approaches in their field. People with high tolerance for uncertainty and demand for change are considered having tendency towards sensation seeking and risk-taking (Camgoz et al., 2011). Therefore, people with high openness to experience have greater risk tendency and risk-taking. Study by Camgoz et al. (2011) found that fund manager with high openness to experience exhibit better financial performance, meaning that better decision making based on Modern Portfolio Theory.

According to Mishra (2010), the previous researcher predicted that the risk aversion shift to risk preference is named as the risk sensitivity. In many situations, the low risk options are not easily to meet their needs. On the other hand, openness positively significant influences risk taking. Investors should prevent formation of the herding bias with trait of openness to make their investment decision (Bashir, 2013). Openness of experience is expected to be risk-taker (Soane and Chmiel, 2005). Supported by Garling (2010) stated that openness to experience was easy to take higher financial risks as compare to the others personal trait that

take less financial risk. Openness to experience is related to a need for awareness therefore leads to a high risk-seeking proclivity.

Dyke (2010) found that when the contracts were shown as a potential gain due to high openness it has predicted the greater risk-taking. Openness has significantly estimated risk-taking when the goal was to achieve a gain. For those individuals with high openness qualities were more likely to make a choice of a riskier option. People are more likely to take risks to prevent a loss rather than take risks for just a gain.

Risk taking is associated positively with openness. The correlation analysis for task factors shows a statistically-significant positive relationship with openness (Filiz, 2014). According to Niszczoła, openness to experience shows the strongest potential of explaining in financial decision-making. Openness to experience is the personality trait showing that the strongest correlation with risk propensity. It is positively and significantly related to the propensity to take financial risks.

2.1.4 Demographics Variables

2.1.4.1 Investment Experience

According to the research of Cooper, Kingyens and Paradi (2014), they found that a person who has higher level of education, investment experience and financial literacy are more agreeable and likely to take risk in investment. Experience is the factor to forecast real life investment decision except seek in risk preferences and the investment duration. It is concern on predictability of stock trend and risk attitude (Gambetti & Giusberti, 2012). The research also mentioned that the person who had more investment experience, will be more risk-tolerant. Moreover, high risk portfolio is more relatively with the less experience investors. Result

found that if a person is anxious, it has negative link with experiences and less chance to take experience and knowledge when conduct investment decision.

On the other hand, investment experience can enhance confidence level of an investor and act as a best tool to deal with risky investments. Chou et al., (2010) said that the experience of investor no matter is good or bad will bring effect to risk tolerance and investment decisions. A wise investor will learn from the past experience to manage the risky condition and can handle it properly, hence, able to jump into investment to earn high returns. Therefore, the past investment behavior is positively connected with risk tolerance which can effect investment decisions (Awais, Laber, Rasheed & Khursheed, 2016).

In a nutshell, a better investment decision can assemble by experienced investors by building confidence, utilization of experience and managing risk appropriately (Awais et al., 2016). Besides, higher investment experience will lead to higher risk tolerance and investors have to choose risky investment securities to deal with their high level of risk tolerance.

When making investment decision, investors will concern few factors which are risk, ambiguity and choice overload. Investor also will based on their experience to chase the risk in their investment decisions to lead them earn more profit. Besides that, the decision made by investors with less investment experience may lead to imperfect outcomes (Awais et al., 2016). Experience investor can make a good investment decision by their confidence and experience to manage the risk. Research found that investment experience is the important factor impact in risk tolerance and investment decisions. In their study, they found that investment experience is a good tool to deal the risky investment based on level of confidence investors. When the investors have more experience in investment, they will use their past experience to handle the risk when the face the situation. Awais, Laber, Rasheed and Khursheed (2016) stated that higher investment experiences will lead to higher risk tolerance.

Based on the research, the investor will choose the risky investment securities to match the high level of risk tolerance experience which the investor experience is good or bad.

2.1.4.2 Financial Literacy

According to Aren and Aydemir (2015), there is a positive relationship between financial literacy and individual return expectation and also risk demand. When financial literacy increases, individuals' return expectations and risk demands increase. This research has found that when an individual conscious of the investment risk will aspect to be loss, hence he may think there is a risky investment alternative.

We found that there is a major difference between financial literacy of business and non-business students. The findings shows that business students display higher financial literacy level as compare with non-business students. This is important that a student have a sufficient financial literacy which this result shows major of the business students more clear than non-business major students in the investment (Ansong & Gyensare, 2012).

Awais et al. (2016) shown that financial literacy has significant impact on risk tolerance and investment decisions. This is proven when people has financial literacy will lead to greater risk tolerance and cause investor to choose risky investment securities. Thus, those people with financial literacy more likely to choose risky investments in order to earn higher profit. Financial literacy can determine the risk diversification which can also lead to appropriate decisions.

In contracts, with financial literacy according to Huzdik et al. (n.d.), students will illustrate suitable financial behavior in making less risky financial decisions. For young people which will makes actual risk

assessment and risk taking possible are risk averse when they hold the actual knowledge of finance and economics.

Gustafsson and Omark (2015) conclude that differ in financial risk tolerance due to different level of financial literacy. The results shows that, when an individual's financial literacy increase this will lead his or hers financial risk tolerance increase, thus financial literacy has an enhancing impact on financial risk tolerance. Besides that, through the stock market experience, those people with higher financial risk tolerance and financial literacy will gain higher profit.

In addition, James, Andrew and Craig (2010) highlighted that individual investor who have insufficient of financial literacy will have trouble in making personal financial decisions. This also proven by Chen and Volpe (1998) in their study has based on students in U.S has indicated that they will make an improper decision when they are lack of financial literacy. Thus, in adverse, potential investors will make a good decision by invest in a good investment which leads them to gain in return. According to Ibrahim, Harun and Isa (2009), the potential investors especially age 21-24 are lack of the financial literacy and their money management skill is very weak too. The study also stated that the most important is need to improve the financial literacy of individuals, for example for the students at university level, they may by having some learning investment programs or activities such as budgeting, saving, investing and insuring to add in their learning process. Hence, it has indicated that the importance of financial literacy which will affect potential investors investment decision.

As a conclusion, financial literacy showed positive relationship on financial risk tolerance while there are positive relationship between financial literacy and investment decision.

2.1.4.3 Gender

Two type of gender: male and female have different level of risk tolerance, so decision making in investment also different.

Most of the studies mentioned that male were higher risk tolerance compared to female. From the point of view of the biological characteristic, it can be explained as female will more concern for their child bearing. So they were more in risk averse in order to foster their child and female are less sensation seeking and more averse to uncertain condition. Investment decision making of female will less frequent compared with male (Cooper, Kingyens & Paradi, 2014; Anbar & Eker, 2010).

According to Mishra and Lalumiere (2011) shown that there is significant relationship between gender and risk propensity of an individual. From all the measurement, male get higher score than female. In addition, the gender of male also resulted in a higher risk performance level than female (Lauriola, Panno, Levin & Lejuez, 2013).

Moreover, Lin and Lu (2015) also indicated the same result with Cooper et al. (2014) which is the frequency and amount of investment invest by male were significant greater than female. Lin and Lu (2015) mentioned that the neuroticism of personality traits of the male investors were more steady than female investors. This is because they found that female investors were more prefer to deal with informational herding behavior than male investors. Kannadhasan (2015) also declared that females have more conservatism thinking than males.

Based on the study of Hallahan, Faff and McKenzie (2003); Thanki (2015), they found that females have lower preference risk than males. Therefore, there is significant relationship between gender and financial risk tolerance. Faff, Hallahan and McKenzie (2010) mentioned that

women are less confident, less aggressive and less interest and willing to learn about personal finance subject. They are more probable to look for financial advisor for some advice. Besides, the researchers also said that gender was positively related to proportion of risky assets held and female investors hold less risky portfolio and had low ratios of risky assets to wealth.

2.2 Review of the Relevant Theoretical Models

The theoretical models we are adapted from Pak and Mahmood (2013) (see Figure 2.2) and Awais et al. (2016) (see Figure 2.3) which the first research study on personality traits, risk taking behaviour and investment decision and the second research are focus on the relationship between risk tolerance and financial literacy, and between investment experience and how financial literacy and investment experience on risk tolerance affected investment decision.

The research carried by Pak and Mahmood (2015) has illustrated the relationship between the big five personality traits and expected effect on risk attitude. The result summarized as below:

Table 2.0 Expected Effect on Risk Attitude of Personality Traits

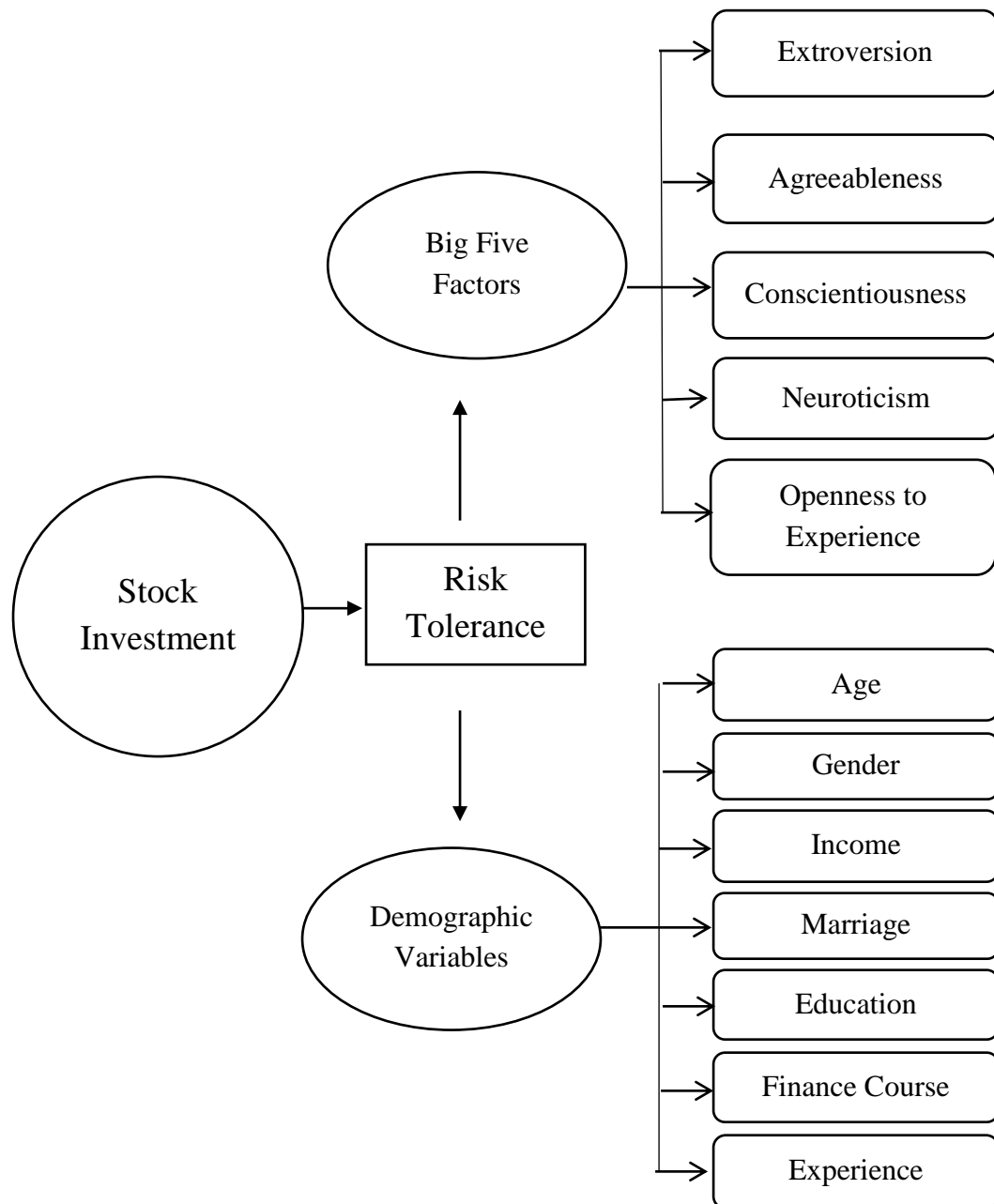
Personality trait	Expected effect on risk attitude
Extraversion (EXTRA)	Positive
Agreeableness (AGREE)	Negative
Conscientiousness (CONS)	Negative
Neuroticism (NEURO)	Negative
Openness to the experience (OPEN)	Positive

The extroversion and openness to experience are positive associated with risk tolerance behavior. Contrary, agreeableness, conscientiousness and neuroticism are negative associated with risk tolerance behavior. There were insignificant relationship between personality traits and investment decision but significant relationship exist in between risk tolerance and investment decision. The

personality traits of investors are important to influence their risk tolerance level and also relate to their intention to do investment. So, risk tolerance can be explained as the mediating variable to provide the linkage for the personality traits and investment decision.

For the demographic variables, the researchers found only gender and investment experience are significant to risk tolerance. Investment experience of the investors is also significant to the investment decision. They mentioned that female were more risk averse than male, and those investors who had go through from the negative investment experience were also more risk averse. Others variables were no significant relationship on risk tolerance. However, investment decision and income have relationship at 5% level of significant.

Figure 2.2 The Factors Affect Investment Decision

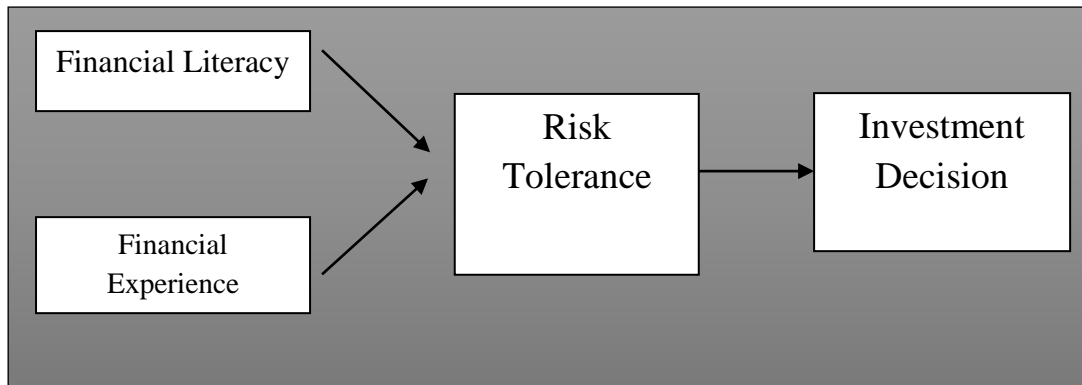


Adopted from Pak and Mahmood (2015), Impact of personality on risk tolerance and investment decisions, International Journal of Commerce and Management Vol. 25(4), pp. 370-384. DOI 10.1108/IJCoMA-01-2013-0002

Awais et al. (2016) conducted this study in Pakistan focus on estimating the relationship between investment decision and financial literacy, and between financial experiences due to risk tolerance. The empirical result concluded that higher investment experience and financial literacy will lead to larger risk

tolerance and direct investor to make right decision to avoid losses in future. This study has shown the important of those variables which indicated that individual has greater investment experience and higher level of financial literacy lead to larger risk tolerance which mean that risk-taking behavior appear

Figure 2.3 The Factor Affect Investment Decision



Adopted from 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.

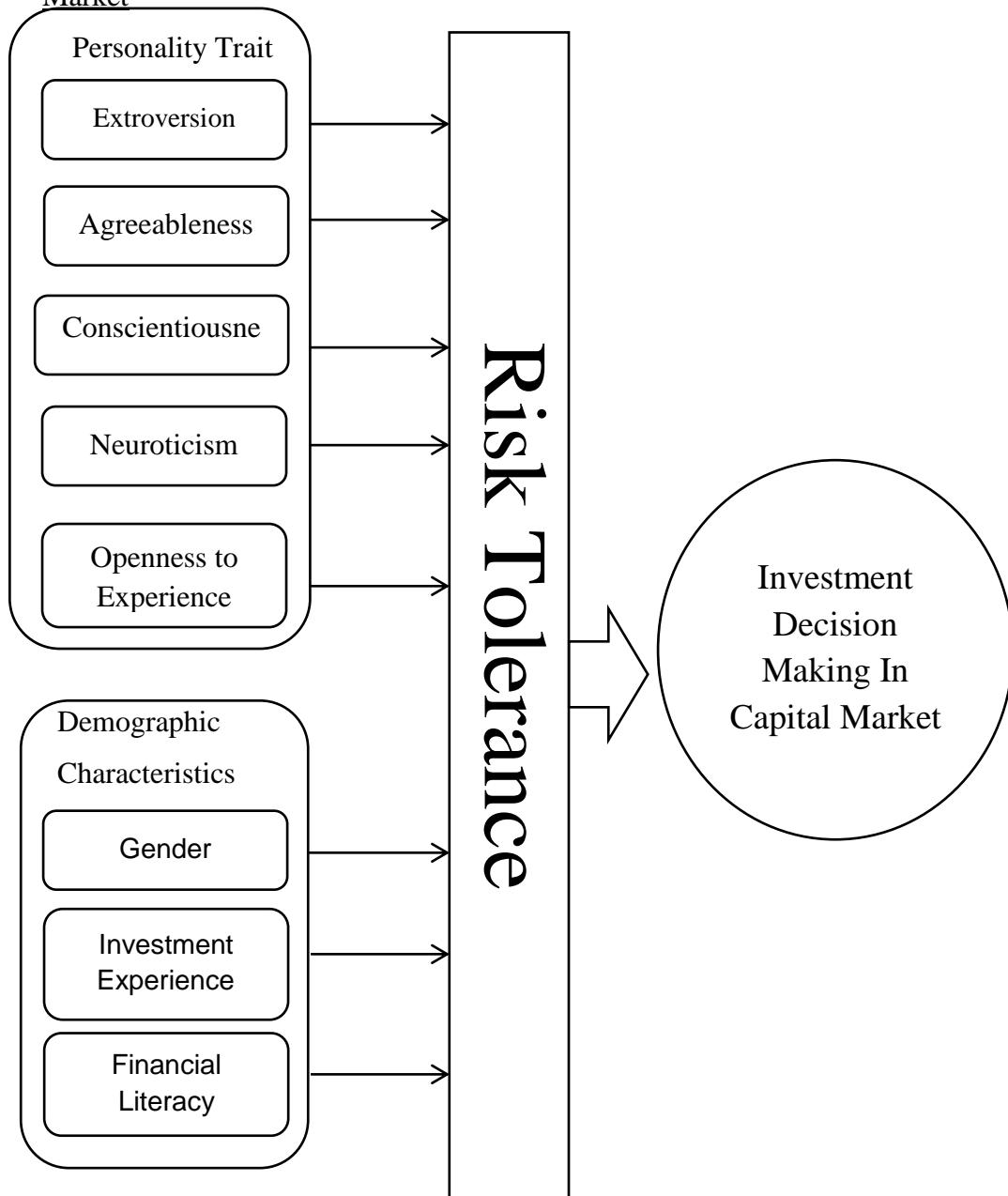
2.3 Conceptual Framework

A conceptual framework is a pattern to explain the theory behind as well as the relationship between independent variables and dependent variable of the study. We obtain some guidelines approach to this research from the theoretical framework. We based on the theoretical framework to evaluate independent variables on the risk tolerance (mediating) to affect the dependent variable. In our research, we include five personality traits variables and three demographic variables.

Independent variables consist of extroversion, agreeableness, conscientiousness, neuroticism and openness to experience. Gender, experience and financial literacy categorize as the moderating variables. The

diagram below shows the relationship between dependent variable and independent variables of our research.

Figure 2.3 Factors Contribute on the Investment Decision Making in Capital Market



Adopted from Pak and Mahmood (2015), Impact of personality on risk tolerance and investment decisions, International Journal of Commerce and Management Vol. 25(4), pp. 370-384. DOI 10.1108/IJCoMA-01-2013-0002 and 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.

2.4 Hypotheses Development

1. H₀: There is no significant relationship between extroversion personality and the young potential investor's risk tolerance
H₁: There is a significant relationship between extroversion personality and the young potential investor's risk tolerance
2. H₀: There is no significant relationship between agreeableness personality and the young potential investor's risk tolerance.
H₁: There is a significant relationship between agreeableness personality and the young potential investor's risk tolerance.
3. H₀: There is no significant relationship between conscientiousness personality and the young potential investor's risk tolerance.
H₁: There is a significant relationship between conscientiousness personality and the young potential investor's risk tolerance.
4. H₀: There is no significant relationship between neuroticism personality and the young potential investor's risk tolerance.
H₁: There is a significant relationship between neuroticism personality and the young potential investor's risk tolerance.
5. H₀: There is no significant relationship between openness to experience personality and the young potential investor's risk tolerance.
H₁: There is a significant relationship between openness to experience personality and the young potential investor's risk tolerance.
6. H₀: No investment experience has higher risk tolerance than with investment experience

H₁: With the investment experience has higher risk tolerance than no investment experience.

7. H₀: The financial literacy has no impacted on the young potential investor's risk tolerance.

H₁: The financial literacy has impacted on the young potential investor's risk tolerance.

8. H₀: Female has higher risk tolerance in investment decision than male.

H₁: Male has higher risk tolerance in investment decision than female.

9. H₀: There is no significant relationship between investment decision and the young potential investor's risk tolerance

H₁: There is a significant relationship between investment decision and the young potential investor's risk tolerance

2.5 Conclusion

In conclusion, we have been discussed the literature of the past researches which including the definition and theories of risk tolerance affect potential investors' investment decision and also the eight independent variables. Therefore, we found that individual high score in extroversion and openness to experience; low score in agreeableness will lead to risk taker while high score in conscientiousness and neuroticism will lead to risk adverse. This had provided a better understanding of the concept of the variables which had been discussed in this study. Besides that, a theoretical framework had formed and shows the relationships of the independent variables and dependent variables. Next, research methodology will be discussed in chapter 3.

CHAPTER 3 : METHODOLOGY

3.0 Introduction

In this chapter we will discuss the overview of the research methodology. It consist of research design, data collection methods, sampling design, research instrument, constructs measurement data processing and data analysis.

3.1 Research Design

We have chosen quantitative research to determine the relationship and effect between personality traits, risk tolerance and investment decision due to this methods provide us enough and able to testing our study hypothesis. According to Castellan (2011) concluded that quantitative research method is useful and effectively on examine the correlation, descriptive analysis, causal comparative and other. Moreover, we were examined independent and dependent variables through quantitative research techniques, which is descriptive statistics and the Ordinary Least Square (OLS) regression analysis model.

Besides that, based on our objective which is to study the relationship and effect between personality traits, risk tolerance and investment decision and hence causal research has been adopted and should be the most suitable for our study. The concept of the causal research is use to determine the level and nature of the cause-and-effect relationships. Moreover, it will also to evaluate the impacts of particular changes on existing standard and various processes can also conducted in causal research.

3.2 Data Collection Methods

In the research study, there are two sources can be used which is primary data and secondary data. While in our research, we used primary data to carry out our research in order to make sure that there is enough information and data to support our research project. Primary data is defined as the data which is original research study by the researchers and it is newly obtained and collected which are not yet published by previous study. Besides, Leeuw (2005) said that there are some methods to conduct primary data such as questionnaires, observation, experimentation, interviews, and focus group.

Primary data have strong control on procedures, research design and examination the effect of dependent variables and independent variables to reach researcher's specific purpose and needs. Hence, we use questionnaires survey as our main data collection method in our research study. The data was collected through a designed questionnaire which consists of four parts. The first part is demographic variables; second part deals with personality traits; third is risk tolerance while the last part is investment decision.

3.3 Sampling Design

3.3.1 Target Population

Our research is study the personality on risk tolerance affect young potential investors' decision in investment. According to the GeoNames geographical database stated that population in Kampar, Perak which have 19,056 residents. As Gough (2013) stated in Ipoh echo which is the online newspaper that estimated that over 14000 students in UTAR expected to increase average 10% each year while 2000 students in TARC. Our target populations are included Kampar residents and students from UTAR and

TARC which sum up have around 35,056. In this research, we more concern about the young potential investors which their age 18-29.

3.3.2 Sampling Frame and Sampling Location

Sampling frame shows the list for all people in the appropriate population. Therefore, to figure out the personality on risk tolerance affects young potential investors' decision in investment. We set residents in Kampar, Perak as these research respondents. The sampling location of this research has been targeted in Kampar area.

3.3.3 Sampling Element

In this research, we distributed our questionnaire to the respondent who in between the age of 18 to 29. We targeted on those adults such as fresh graduated students, few years working experience young people, tutors in UTAR and anyone from different field who fulfill age of our research required. Besides that, the middle-aged adults and underage youth are not suitable to be our respondent.

3.3.4 Sampling Technique

In sampling technique, there are two sampling procedure which are probability sample and non-probability sample. Probability sample is subject of the sample are chosen based on probabilities. For example, simple random samples, systematic sample, stratified samples and cluster samples all is based on probability sample. Besides that, non-probability sample is based on number of survey, respondents are selected in such a way that calculable chance of inclusion cannot be determined. Generally,

there is some judgment on who or what to include. There is judgmental, quota, snowball and convenience.

In our study the simple random sampling method we have applied. We will choose Kampar area and selected the residents with the age 18 - 29 as our respondents. In this samples, we can more easily to determine every member of population has an equal chance of being selected and it also can determine that probability is highest that sample is representative of population than for other sampling method. Thus, there also least chance to cause sample bias.

3.3.5 Sampling Size

According to James, Joe and Chadwick (2001), is a general task for many researchers to determine the sample size. With a good quality and accuracy of research, the research should include appropriate and adequate sample sizes. The sample size can be confident to formulate a desired result when the researchers use the larger n as the sample size. According to Elizabeth and Leanne (N/A) has used a formula to calculate sampling size based on the number of parameters. They also stated the sample size to the number of parameters in a regression model should be based on 20 to 1. If the a variable has two potential selection, for example, gender (male and female), must be count as two parameters no one only. The formula stated as below:

$$n = (P-1) * 20$$

Where n=sample size; P= Parameters.

For our study, $n = (12-1) * 20 = 240$, hence 340 respondent should be more than enough for this research. Moreover, Green (1991) also provide the method of sample size calculation which is:

$$N = 50 + 8p$$

Where n =sample size; P = Parameters.

For our study, $N > 50 + 8(12) = 146$. In theory, our respondent is much larger than the calculation of sample size, hence, can achieve a more accurate result.

3.4 Research Instrument

In this research, our questionnaire data is collected which in the form of self-administered questionnaire from few journals. The questionnaire categorized into four groups whereas Section A show respondent's demographic profile, section B measure the personality traits of the respondent, section C measure risk tolerance of respondent and the section D ask for respondent's investment decision in capital market.

Mayfield et al. (2008) used five point Likert scales to develop questionnaire in measure the individual personality traits. However, each of the personality's question asked in the research is inconsistent, for instance, neuroticism ask for 5 question to measure but agreeableness for only ask for 4 question. Hence, we adopted and developed the questionnaire from this research to measure the big five factor personality traits which covered in section B. Further, we change the sentence that set as the reverse scored to non-reverse scored for the consistency and handy for analysis when collect the data.

For the questionnaire of section C and section D, we developed from the research of Grable and Lytton (1999). According to Grable and Lytton (1999), the questionnaire they developed in ordinal scale with four options to choose and in United States currency. Besides that, they also prepared it into eight different dimensions of risk access to measure the risk personality. By referring to their questionnaire, we changed the currency into our home currency (Ringgit Malaysia) and modified it into Likert scale to show the consistency. From the eight

dimensions, we choose two dimensions suitable for our research which are investment risk and speculative risk.

In this study target population in the research is young potential investor in Kampar which is under the age range from 18 to 29. Therefore, we will distribute questionnaires by using web survey methods through google form. The questionnaires estimated will consume respondents 15 minutes. Before that, we will select 30 respondents do the pilot test to test the reliability of the study before we start to test on the relationship between dependent variable and independent variables.

3.5 Constructs Measurement

3.5.1 Scale of Measurement

Measurement scales are used to categorize and/or quantify variables. Level of measurement can help us decide how to interpret the data from that variable. Hence, we were used nominal scale, ordinal scale, ratio scale and Likert scale apply in our research.

3.5.1.1 Nominal Scale

Nominal scale is classifies data into the distinct categories which no ranking is implied. According to the McIntyre (2005), their research stated that it allows assigned subjects to groups or categories such as race, gender, nationality and religion. In our questionnaire, there were two questions in part a design according to nominal scale.

3.5.1.2 Ordinal Scale

Ordinal scale is classifies data into distinct categories in which categories in which ranking is implied. Besides that, the ordinal scale is raking. Based on our questionnaire, part a question 1 and question 5 were considered as our ordinal scale.

For example, we will rank our respondents in the age 18-21, 22-25 and 26-29 as our young potential investors.

3.5.1.3 Likert Scale

Likert scales involve a series of statement, which the respondents are asked to agree or disagree either each statement. Each respondent is given a numerical score to reflect their degree of attitudinal favorableness.

In our questionnaire, we have used five-point of Likert-type scales to measure the personality traits, risk tolerance and investment decision of respondents to show the consistency. Which is used to allow the individual to express how much they agree or disagree with a particular statement.

Likert scale was as following:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

3.6 Data Processing

Data processing is a description of data preparation processes such as checking, editing, coding, and transcribing. The main reason for data processing is to convert the data obtained into useful information which can answer to research question. There are few require steps we need to follow in order to complete the questionnaire. Hence, the mistake or error can be avoided if the researchers implement with those several processes.

3.6.1 Checking

First of all, the researchers need to check whether there is any specialized language and the wording might be hard to understand by the respondents. Researchers also need to check whether there is grammar mistake found and the questions may be imperfect or incomplete. Therefore, the researchers must ensure all the respondents understand the entire question in order to obtain accurate information.

3.6.2 Editing

Second is editing the data. It is an action to correct and edit those error data. For those respondents who are not consistent with the majority, the omission will be deleted by the researchers. Malhotra (2006) said that unacceptable and unsatisfactory responses will be abandoned or returning the questionnaire back. Thus, the aim of editing is to make sure the following step will not be interrupted.

3.6.3 Coding

Coding is the data that collected into variable that are acceptable in Statistical Package for Social Science (SPSS) to run it. When the system run, each respondent will be distributed a certain code. In process, there have some editing sequences are plot specifically to reduce the process of coding. Therefore, in previous activities we must edit carefully because it can make the coding work more easy and fast.

3.6.4 Transcribing

In this process, after done all the correction, data can be ready to examine. Firstly, the first step is to assign all the responses of the respondent and then entered and transferred it into the database where the researched used as to resolved by the SPSS program.

3.7 Data Analysis

The purpose of data analysis is to gather the sources of data, reviewed and then analysis them to form a conclusion. The sources we used mostly were found from the past research. In our study, Statistical Package for Science Social (SPSS) will be adopted to analyze the collected data. This program can come out with the result on descriptive, reliability and inferential analysis. Therefore, our study was distributed 340 questionnaire to residents of Kampar, Perak which to test the hypothesis by using the SPSS.

3.7.1 Descriptive Analysis

Based on the past researcher, descriptive analysis is can let the reader to summarize and analyze the large number of the data which is easier to

understand and interpret; rearranging; ordering, and manipulating data to form descriptive information. The data can present by mean, median, percentage, average and frequency in research (Kelechi, 2012). Scharf (2004) stated that, this method is suitable for measuring human perception in specific case which will also depend on the objective of study. Besides that, it also can determine people with the desirable ability. Therefore, we used this analysis to interpret the results generated from the respondents of our research questionnaire and provided a clearer picture for both reader and researcher. It is also can let the reader reduce troublesome in understanding raw data generated from respondents ultimately transfer the raw data become easier to understand the overall data.

3.7.2 Scale Measurement

Reliability Test

Zikmund (2003) defined that reliability is referring to which degree of data is free from error and hence yield consistent results. For reliability test, Cronbach's Alpha test coefficient was used to determine the reliability of data that researcher collected from the questionnaire. According to George and Mallery (2003), if the result showed more than 0.7, it is considered acceptable or good. While if the result is less than 0.6, then it is unacceptable. A good internal consistency of the question in the scale show high value for Cronbach's Alpha reliability. In this study, 31 questionnaires will be distributed to the respondents to run the pilot test. After passing the pilot test with Cronbach's Alpha, we will distribute 335 questionnaires to the respondents and collect all back successfully. The following table shows the rule of Cronbach's alpha coefficient value.

Table 3.1 Rule of Cronbach's Alpha Coefficient Value

Alpha Coefficient range	Strength of association
Less than 0.6	Poor
0.6-0.7	Moderate
0.7-0.8	Good
0.8-0.9	Very good
0.9 and above	Excellent

Adopted from: Hair, Babin, Money, & Samouel, (2003). *Rules of Thumb about Cronbach's Alpha Coefficient Size*

3.7.3 Multiple Linear Regression Analysis

Multiple Linear Regression (MLR) is a regression with two or more explanatory variables and a statistical tool to examine how the multiple independent variables related to dependent variable. Moreover, it also known as a method to estimate the significance of the dependent variable (unknown value) and two or more independent variables (known value). R-squared is known as coefficient of determination. The statistical to test how close the data fitted to the regression line. Other than that, R-square is always between 0 and 100%.) 0% is shown that the model is none of the variability of the response data around its means while 100% is show that the model explain all the variability of the response data around its means (Frost, 2013). Furthermore, low R-square are not always bad and high R-square values are not always good stated by Frost (2013). For example, if the R-square value low that are more predict in human behavior, such as psychology. It will mostly get lower than 50% in R-square. This is because

human behavior more hard to predict. Other than that, when the R-square value is high, it does not mean it meet a model in a good fit. It will mostly look for the fitted line plot and residual plot (Frost, 2013). Other than R-square can determine how well the linear model fits the observation, F-test also can determine whether the relationship is statistically significant.

Regression Model (1) for this study:

$$\text{RISK} = \beta_1 + \beta_2 \text{EXTRO2} + \beta_3 \text{AGREE3} + \beta_4 \text{CONSCIENT4} + \beta_5 \text{NEURO5} + \beta_6 \text{OPENNESS6} + \beta_7 \text{INVSEXP} + \beta_8 \text{FL} + \beta_9 \text{GENDER} + \mu$$

Whereas:

RISK = risk tolerance;

EXTRO = extroversion;

AGREE = agreeableness;

CONSCIENT = conscientiousness;

NEURO = neuroticism;

OPENNESS = openness to experience;

INVESEXP = investment experience (if yes 1, no 0);

FL = Financial literacy;

GENDER = if Male 1, Female 0.

Regression Model (2):

$$\text{INVSDEC} = \beta_1 + \beta_2 \text{RISK} + \mu$$

Whereas:

INVSDEC = investment decision

RISK = risk tolerance.

3.8 Conclusion

In conclusion, we used normality and reliability test to conduct our questionnaire from 340 respondents. The 340 respondents are Kampar residents. We will run

those tests in order to get the results from questionnaire. Besides, it also lead us to study whether there are significant relationship between independent variables on risk tolerance and dependent variables.

We will further discuss on the results and analysis of each test and also interpret our collected data in our coming chapter four.

CHAPTER 4 : DATA ANALYSIS

4.0 Introduction

The outliners for this chapter are included descriptive analysis, scale measurement, inferential analysis and multiple linear regression analysis.

4.1 Descriptive Analysis

Descriptive represent to the characteristics of the respondents and leak out the pattern of responses.

4.1.1 Respondent Demographic Profile

Table 4.1 Demographic Profile of the Respondent:

		Frequency	Percentag s
Age	18 - 21	67	19.80%
	22 - 25	212	62.30%
	26 - 29	61	17.90%
Gender	Male	169	49.71%
	Female	171	50.29%

Do you have any investment experience?	Yes	70	20.59%
	No	270	79.41%
Do you have attended any financial course or training before?	Yes	76	22.35%
	No	264	77.65%
Which of the following best describes your level of investment knowledge?	Very limited knowledge	174	51.18%
	Basic knowledge	83	24.41%
	Fair amount of knowledge	55	16.18%
	Considerable knowledge	25	7.35%
	Extensive knowledge	3	0.88%

Source: Developed for the research

In our study we have been identified the ages range of potential young investor which is from 18 to 29. From the table above (table 4.1), the total number of respondents have 340 respondents separated to 3 range of age which are 18 – 21 have 67 respondents (approximately 19.80%); 22 – 25 have 212 respondents (approximately 62.3%) and 26 – 29 have 61 respondents (approximately 17.90%).

Next, we also classified the respondents by gender. The table 4.1 presented the gender of respondents have 340 respondents. Our target of respondents is the Kampar residents and students from UTAR and TARC. There have 169 male respondents which is 49.71% and the rest of 171 respondents which is 50.29%.

For the questions “Do you have any investment experience?” and “Do you have attend any financial course or training before?” we serve into 2 options which is “Yes” and “No”. As the result shown in table 4.1 there are 70 respondents have investment experience while 270 respondents do not have investment experiences. There are 20.59% and 79.41% respectively. Besides that, there have 76 respondents attending their financial course or training before, which is 22.35%; whereas 264 respondents do not attend any financial course and training which is also 77.65%.

Finally, the level of financial literacy have been separated into 5 categories: “very limited knowledge”, “basic knowledge”, “fair amount of knowledge”, “considerable knowledge” and “extensive knowledge”. Refer to the table 4.1, there are majority of respondents which is approximately 51.18% (174 respondents) have limited investment knowledge. Next, 83 respondents (24.41%) are classified in the basic knowledge categories which means they just understand the differences between stocks, bonds and GICs. For the fair amount of knowledge categories, have 55 respondents (16.18%) who aware of different investment options and their risks. Then, for the result we know that there are 25 of respondents (7.35%) have considerable knowledge in understand the different investment philosophies. Unfortunately, there are only 3 respondents (0.88%) think that he/she owned extensive knowledge. In other words, they have fully understanding of investment products and strategies.

4.1.2 Central Tendencies Measurement of Construct

Central tendencies measurement of construct is measure the statement of dependent variable and independent variable by the means and ranking in our result. The objective of using central tendency is to define and calculate each dependent and independent variables by single value.

Table 4.2 Personality Traits - Extroversion

IDV1	Extroversion	Mean	Ranking
	I love make new friends and able maintain good relationship with them.	3.6088	1
	I am a very positive person.	3.5529	2
	I am friendly and sociable.	3.5	3
	I am a joyful and brave.	3.4206	4
	I often feel as if I'm bursting with energy.	3.2706	5

Source: Developed for the research

Table 4.2 shows that 5 personality traits by the ranking and measurement of the central tendency of independent variable which is extroversion, agreeableness, conscientiousness, neuroticism and openness to experience. The first ranking in table extroversion is “I love make new friends and able maintain good relationship with them.” And the mean value is 3.6088. Next, the second highest is “I am a very positive person.” and the mean value is 3.5529. Moreover, third and fourth ranking in extroversion is “I am friendly and sociable.” and “I am a joyful and brave.” and the means is 3.5 and 3.4206 respectively. Lastly, the last ranking of the extroversion is “I often feel as if I'm bursting with energy.” and the means value is 3.2706.

Table 4.3 Personality Traits - Agreeableness

IDV2	Agreeableness	Mean	Ranking
	I am willing to listen others advice.	3.7088	1
	Some people think of me as generous and kind	3.6441	2
	I seldom get into arguments with my family and co-workers.	3.6	3
	Some people think I'm not selfish and cheerful.	3.5529	4
	I generally try to be thoughtful and careful.	3.4324	5

Source: Developed for the research

The first ranking in the table 4.3 of agreeableness is “I am willing to listen other advice” and the means value is 3.7088. Next, the second highest ranking is “Some people think of me as generous and kind” and the means value is 3.6441. Furthermore, third and fourth ranking in table agreeableness is “I seldom get into arguments with my family and co-workers.” and “Some people think I'm not selfish and cheerful.” And the means is 3.6 and 3.5529 respectively. Lastly, “I generally try to be thoughtful and careful.” is the last ranking in table agreeableness and the means is 3.4324.

Table 4.4 Personality Traits - Conscientiousness

IDV3	Conscientiousness	Mean	Ranking
	I'm pretty good about myself so as to get things done on time.	3.7	1
	I'm think that I am dependable or reliable as I should be.	3.7	1
	I keep my belongings tidy and clean.	3.5824	3
	I think I am able to get organized.	3.4382	4
	I manage my time well before setting down to work.	3.4088	5

Source: Developed for the research

In table 4.4 demonstrate conscientiousness, the first ranking have 2 statement which is "I'm pretty good about myself so as to get things done on time." and "I'm think that I am dependable or reliable as I should be." while the means value is 3.7. Moreover, the third ranking in this table is "I keep my belongings tidy and clean." and the mean value is 3.5824. Next, "I think I am able to get organized." is fourth ranking in table and mean value is 3.4382. Lastly, the fifth ranking "I manage my time well before setting down to work." Which is the mean value is 3.4088.

Table 4.5 Personality Traits - Neuroticism

IDV4	Neuroticism	Mean	Ranking
	I often feel no as good as others.	3.1853	1
	I often feel nervous and sensitive on emotion.	3.1294	2
	I often feel blue.	2.8441	3
	Sometimes I feel completely worthless.	2.7265	4
	I am easy to giving up when the things go wrong.	2.4941	5

Source: Developed for the research

The first ranking in table 4.5 neuroticism is “I often feel no as good as others.” And the means value is 3.1853. Next, “I often feel nervous and sensitive on emotion.” is the second highest ranking and the means value is 3.1294. Furthermore, third and fourth ranking in table neuroticism is “I often feel blue.” and “Sometimes I feel completely worthless.” and the means is 2.8441 and 2.7265 respectively. Lastly, the last ranking in table agreeableness is “I am easy to giving up when the things go wrong.” and the means is 2.4941.

Table 4.6 Personality Traits – Openness To Experience

IDV5	Openness To Experience	Mean	Ranking
	I love to learn new knowledge.	3.9353	1
	I often try new and foreign foods.	3.8735	2
	I am curious by the patterns I find in art and nature.	3.6824	3
	I am often enjoy playing with theories and abstract ideas.	3.4971	4
	I am creative and enjoy in different field.	3.4265	5

Source: Developed for the research

In table openness to experience, the first ranking is “I love to learn new knowledge.” and the means value is 3.9353. Next, “I often try new and foreign foods.” is second highest ranking in table and the means value is 3.8735. Moreover, the third ranking in this table is “I am curious by the patterns I find in art and nature.” and the mean value is 3.6824. While “I am often enjoy playing with theories and abstract ideas.” is fourth ranking and mean value is 3.4971. Lastly, the fifth ranking in table is “I am creative and enjoy in different field.” and the mean value is 3.4265.

Table 4.7 Risk Tolerance

DV1	Risk Tolerance	Mean	Ranking
	I inherit a mortgage-free house worth RM80 000 that believe will increase in value faster than inflation. However, the house needs repairs and rent out with the higher rental. I will repair the house and rent it.	3.7559	1
	I will invest in hard assets (i.e. gold, jewels, collectibles and real estate) that predict to increase in value rather than invest in low risk low return investment.	3.5412	2
	When I think of the word “risk”, the word OPPORTUNITY comes to my mind first.	3.4088	3
	I am willing to take risk when choosing an investment.	3.3676	4
	I more prefer invest in 50% gain RM, 000 but 50% chance gain nothing; than a sure gain of RM200 with capital of RM1 000.	3.2029	5
	If I on a TV game show, I will choose 5 % chance to win RM 500 000 rather than RM 5000 in cash.	3.1765	6
	Assume that I have RM 150 000 to invest. I will NO attract to the allocation of capital into 80% in a low-risk, 15% in an average-risk & 5% in a high-risk investment.	3.1706	7
	I have a chance to invest in gold that given very high return (i.e. return in 50 to 100 times) but the probability of success is 20%. I will invest it.	3.1088	8

	I prefer invest in high risk high return investment rather than low risk low return investment.	3.0353	9
	Assume that I have RM 150 000 to invest. Allocation of capital into 10% in low-risk, 40% in average-risk & 50% in high-risk investment MORE attractive to me.	3.0118	10

Source: Developed for research

Table 4.7 illustrates the ranking and the measurement of central tendencies of dependent variables which is risk tolerance. There are 10 statements in this category. The highest ranking in mean value is “Inherit a mortgage-free house worth RM80 000 that believe will increase in value faster than inflation. Yet, the house needs repairs and rent out with the higher rental. I will repair the house and rent it” and the mean value is 3.7559. The second highest ranking of mean value (3.5412) is “Invest in hard assets that predict to increase in value rather than invest in low risk low return investment”. Meanwhile, “When think of the word “risk”, the word OPPORTUNITY comes to my mind first” and “I am willing to take risk when choosing an investment” is ranked as third and fourth statement. Their mean value is 3.4088 and 3.3676 respectively. It followed by “Prefer invest in 50% gain RM1 000 but 50% chance gain nothing; than a sure gain of RM200 with capital of RM1 000” which have 3.2029 of mean value. The mean value in ranking sixth and seventh have slightly difference, which is 3.1765 and 3.1706 with the statement of “If I on a TV game show, I will choose 5 % chance to win RM 500 000 rather than RM 5 000 in cash” and “Assume that I have RM 150 000 to invest. I will NO attract to the allocation of capital into 80% in a low-risk, 15% in an average-risk & 5% in a high-risk investment.” Furthermore, “I have a chance to invest in gold that given very high return (i.e. return in 50 to 100 times) but the probability of success is 20%. I will invest it” and “I prefer invest in high risk high return investment rather than low risk low return

investment” are the eighth and ninth ranking statement with the mean value of 3.1088 and 3.0353. The last ranking statement is “Assume that I have RM 150 000 to invest. Allocation of capital into 10% in low-risk, 40% in average-risk & 50% in high-risk investment MORE attractive to me” with the only 3.0118 of mean value.

Table 4.8: Investment Decision

DV2	Investment Decision	Mean	Ranking
	I prefer to invest in corporate stock.	3.1618	1
	I will invest in collection of bond security in my portfolio investment.	3.1471	2
	Corporate bond security is much more safety investment for me.	3.1441	3
	If I have extra money, I will invest in bond.	3.1000	4
	For the portfolio investment I rather invest in collection of stock	3.0853	5
	If I unexpectedly receive RM20 000, I will invest in stock.	3.0265	6
	I feel very comfortable invest in stock.	3.0059	7
	Currently my investment assets mostly are high interest government bond. Stock price and return expect to increase, I will sell the government bond and invest in stock market even stock has higher risk.	2.9618	8
	As same situation with Question 5, I will continue hold the government bond.	2.9441	9
	I prefer invest in government bond instead of stock.	2.8529	10

Source: Developed for research

Based on the table 4.8, it describes the ranking and measurement of central tendencies of dependent variables which is investment decision. The

highest ranking is “I prefer to invest in corporate stock” with the mean value 3.1618 while the lowest ranking statement is “I prefer invest in government bond instead of stock with the mean value 2.8529. The differences of the mean value between these two ranking is 0.3089. Meanwhile, the second and third rankings mean value have merely differences which is 0.0033 only, with the statement of “I will invest in collection of bond security in my portfolio investment” and “Corporate bond security is much more safety investment for me.” The fourth ranking statement is “If I have extra money, I will invest in bond” with 3.1 of mean value. Next is followed by “For the portfolio investment i rather invest in collection of stock”, “If I unexpectedly receive RM20 000, I will invest in stock” and “I feel very comfortable invest in stock.” The mean values of these three statements are 3.0853, 3.0265, and 3.0059 respectively. Then, mean of the eighth and ninth ranking are less than 3.0, which is 2.9618 and 2.9441, and the statement are “Currently my investment assets mostly are high interest government bond. Stock price and return expect to increase, I will sell the government bond and invest in stock market even stock has higher risk” and “As same situation with Question 5, I will continue hold the government bond.”

4.2 Scale Measurement

Table 4.9 Cornbrash's Alpha

Variables	Reliability Statistics	No. of items
Extroversion	0.904	5
Agreeableness	0.730	5
Conscientiousness	0.767	5
Neuroticism	0.796	5
Openness to experience	0.851	5
Risk tolerance	0.769	10
Investment decision	0.703	10

In our study, our variables included extroversion, agreeableness, conscientiousness, neuroticism, openness to experience, gender, risk tolerance and investment decision. Reliability was tested and 45 items were measured in our study.

We have obtained the range of Cornbrash's Alpha in between 0.703 to 0.904 from SPSS. Extroversion has obtained the highest Cornbrash's Alpha reached 0.904 and it categorized under excellent from the table of alpha coefficient range. There are under good categories for agreeableness, conscientiousness, neuroticism, risk tolerance and investment decision is 0.730, 0.767, 0.796, 0.769 and 0.703 respectively which fall within the range of 0.70 to 0.80. Next, 0.851 for openness to experience, it was falls under very good categories from 0.80 to 0.90.

Conclusion, there are mostly categorized under good Alpha coefficient range which is 0.70-0.80. According to George and Mallery (2003), if the result showed more than 0.70, it is considered acceptable or good. Therefore, our entire alpha is above the average of 0.70.

4.3 Inferential Analysis

Table 4.10 Summary of Multiple Regression Model (1)

Model (1)	Coefficients				Sig.
	Unstandardized coefficients		standardized t	Beta	
	B	Std. Error			
(constant)	1.420	.291		4.881	.000
Extro	.167	.063	.139	2.646	.009**
Agree	.221	.081	.149	2.729	.007**
Conscient	.042	.052	.044	.808	.420
Neuro	.231	.057	.249	4.054	.000**
Openness	.117	.058	.118	2.015	.045**
invesExp	-.016	.054	-.018	-.291	.772
FL	.087	.042	.112	2.102	.036**
Gender	.073	.048	.084	1.536	.125

Notes: Dependent variable: Risk Tolerance

** Significant in 5% level

Source: Developed for research

Based on the table 4.10, our major variables of interest which are all personality traits have positive relationship with risk tolerance. On the other hand, two out of three demographic variables have positive relationship only for investment experience have negative relationship. Moreover, most of the personality variables have significant relationship which is the p-value is lesser then the significant level 5% except for conscientiousness has insignificant relationship ($0.42 > 0.05$). Two out of three demographic variables have shown an insignificant relationship with risk tolerance which those variables are investment experience and gender. However, financial literacy has shown a significant relationship with the risk tolerance.

$$\text{Risk} = \beta_0 + 0.167\text{Extro} + 0.221\text{Agree} + 0.042\text{Conscient} + 0.231\text{Neuro} + 0.117\text{Openness} - 0.016\text{invesExp} + 0.087\text{FL} + 0.073\text{Gender}$$

Whereas,

Risk = Risk Tolerance

Extro = Extroversion

Agree = Agreeableness

Conscient = Conscientiousness

Neuro = Neuroticism

Openness = Openness to experience

InvesExp = investment experience (if yes =1 otherwise 0)

FL = Financial literacy

Gender = Gender (if male = 1, otherwise 0)

The equation above shows that the relationship between dependent variables and the overall independent variables. The overall positive relationship has shown at the above equation except for the investment experience. Moreover, the further explanation and discussion are in the following.

Table 4.11 The impact between extroversion personality and the young potential investor's risk tolerance

	Beta	T-Test (P-value)
Extroversion	.167	2.646 ** (0.009)

** Correlation is significant at 0.05 levels (2-tailed).

Source: Developed for the research

Hypothesis 1: Relationship between extroversion personality and the young potential investor's risk tolerance.

H₀: No significant relationship between extroversion personality and the young potential investor's risk tolerance

H₁: A significant relationship between extroversion personality and the young potential investor's risk tolerance

If the P-value is less than significant level, hence reject H₀, otherwise do not reject H₀. Based on the table 4.11 above, the P-value (0.009) is lower than significant level (0.05). Hence, reject H₀. As a result, there is a positive relationship within extroversion personality and young potential investor's risk tolerance.

While for the coefficient is 0.167 which mean that for every one score increase in extroversion will let to 0.167 increase in young potential investor risk tolerance, holding other variables constant. As the estimated output, there is a positive correlation between extroversion personality and the young potential investor's risk tolerance.

Table 4.12 The impact between agreeableness personality and the young potential investor's risk tolerance.

	Beta	T-Test (P-value)
Agreeableness	.221	2.729** (0.007)

** Correlation is significant at 0.05 levels (2-tailed).

Source: Developed for the research

Hypothesis 2: Relationship between agreeableness personality and the young potential investor's risk tolerance.

H₀: No significant relationship between agreeableness personality and the young potential investor's risk tolerance.

H₁: A significant relationship between agreeableness personality and the young potential investor's risk tolerance.

If the P-value is less than significant level, hence reject H₀, otherwise do not reject H₀. Based on the table 4.12 above, the P-value (0.007) is lower than significant level (0.05). Hence, reject H₀. As a result, there is a significant relationship between agreeableness personality and young potential investor's risk tolerance.

While for the coefficient is 0.221, in other word, for every one score increase in agreeableness personality, the young potential investor's risk tolerance will increase at 0.221. Therefore, there is a significant positive correlation between agreeableness personality and the young potential investor's risk tolerance.

Table 4.13 The impact between conscientiousness personality and the young potential investor's risk tolerance.

	Beta	T-Test (P-value)
conscientiousness	.042	.808 (0.420)

Source: Developed for the research

Hypothesis 3: Relationship between conscientiousness personality and the young potential investor's risk tolerance.

H₀: No significant relationship between conscientiousness personality and the young potential investor's risk tolerance.

H₁: A significant relationship between conscientiousness personality and the young potential investor's risk tolerance.

If the P-value is less than significant level 0.05, hence reject H₀, otherwise do not reject H₀. Based on the table 4.13 above, the P-value (0.042) is higher than significant level (0.05). Hence, do not reject H₀. As a result, there is a positive insignificant relationship within conscientiousness personality and young potential investor's risk tolerance. In other words, high score on the personality of conscientiousness will not have impact on the young potential investor's risk tolerance.

Table 4.14 The impact between neuroticism personality and the young potential investor's risk tolerance.

	Beta	T-Test (P-value)
Neuroticism	.231	4.054** (0.000)

** Correlation is significant at 0.05 levels (2-tailed).

Source: Developed for the research

Hypothesis 4: Relationship between neuroticism personality and the young potential investor's risk tolerance.

H₀: No significant relationship between neuroticism personality and the young potential investor's risk tolerance.

H₁: A significant relationship between neuroticism personality and the young potential investor's risk tolerance.

If the P-value is less than significant level 0.05, hence reject H₀, otherwise do not reject H₀. Based on the table 4.14 above, the P-value (0.000) is smaller than significant level (0.05). Hence, reject H₀. As a result, there is significant positive relationship between neuroticism personality and young potential investor's risk tolerance.

While for the coefficient is 0.231 indicated that the young potential investor with one more score in neuroticism personality, the risk tolerance of young potential investor will increase 0.231. In conclusion, there is a positive significant relationship between neuroticism personality and the young potential investor's risk tolerance.

Table 4.15 The impact between openness to experience personality and the young potential investor's risk tolerance.

	Beta	T-Test (P-value)
Openness to experience	.117	2.015** (0.045)

** Correlation is significant at 0.05 levels (2-tailed).

Source: Developed for the research

Hypothesis 5: Relationship between openness to experience personality and the young potential investor's risk tolerance.

H₀: There is no significant relationship between openness to experience personality and the young potential investor's risk tolerance.

H₁: There is a significant relationship between openness to experience personality and the young potential investor's risk tolerance.

If the P-value is less than significant level 0.05, hence reject H₀, otherwise do not reject H₀. Based on the table 4.15 above, the P-value (0.045) is lower than significant level (0.05). Hence, reject H₀. As a result, there is a positive significant relationship between openness to experience personality and young potential investor's risk tolerance.

While for the coefficient is 0.117 shows that for every one score increase on openness to experience, the young potential investor's risk tolerance will increase 0.117. In conclusion, there is a positive significant relationship between openness to experience personality and the young potential investor's risk tolerance.

Table 4.16 Correlation between risk tolerance and investment experience

	Beta	T-test (P-value)
Investment	-0.016	-.291
Experience		(.772)

** Correlation is significant at 0.05 levels

Source: Developed for the research

Hypothesis 6: Relationship between investment experience and young potential investor’s risk tolerance.

H₀: No investment experience has higher risk tolerance than with investment experience

H₁: With the investment experience has higher risk tolerance than no investment experience.

According to the decision rule, we will reject H₀ when the p-value is less than 0.05. Therefore, based on the result the above P-value is more than significant levels 5% (0.772 > 0.05), hence, we do not reject the H₀. In conclusion, the person who no investment experience has higher risk tolerance than with investment experience.

In the table 4.16, the coefficient as -0.016 which has shown a negative insignificant relationship. In other words, if the investors have investment experience do not means that they have a greater risk tolerance compare with no investment experience.

Table 4.17 Correlation between risk tolerance and financial literacy

	Beta	T-test (P-value)
Financial Literacy	.087	2.102**
		.036

** Correlation is significant at 0.05 levels

Source: Developed for the research

Hypothesis 7: Relationship between financial literacy and young potential investor's risk tolerance.

H₀: The financial literacy has no impacted on the young potential investor's risk tolerance.

H₁: The financial literacy has impacted on the young potential investor's risk tolerance.

According to the decision rule, we will reject H₀ when the p-value is less than 0.05. Therefore, based on the result the above P-value is less than significant levels 5% (0.036<0.05), hence, we reject the H₀. In conclusion, financial literacy has impacted on the young potential investor's risk tolerance.

The result stated that the coefficient as 0.087 which shows a positive significant relationship. For every level increase in financial literacy, the young potential investor's risk tolerance will increase 0.087, holding other variables constant. In other words, if the investors have higher financial literacy will generally have a greater risk tolerance as compare with lower financial literacy.

Table 4.18 Correlation between risk tolerance and gender

	Beta	T-test (P-value)
Gender	.073	1.536
		.125

** Correlation is significant at 0.05 levels

Source: Developed for the research

Hypothesis 8: Gender has impact on young potential investor's risk tolerance.

H₀: Female has higher risk tolerance in investment decision than male.

H₁: Male has higher risk tolerance in investment decision than female.

According to the decision rule, we will reject H₀ when the p-value is less than 0.05. Therefore, based on the result the above P-value is more than significant levels 5% ($0.125 < 0.05$), hence, we do not reject H₀. In conclusion, female has higher risk tolerance in investment decision as compare with male.

Moreover, the table shows that coefficient value as 0.073 in positive insignificant relationship. This has been indicated that there is no relationship between the gender and the young potential investor risk tolerance. In other words, gender does not have impact in young potential investor's risk tolerance.

Model 2:

Table 4.19 Correlation between risk tolerance and investment decision

	Beta	T-Test (P-value)
Risk tolerance	.419	8.406** (0.000)

** Correlation is significant at 0.05 levels (2-tailed).

Source: Developed for the research

Hypothesis 9: Relationship between investment decision and the young potential investor's risk tolerance.

H0: There is no significant relationship between investment decision and the young potential investor's risk tolerance

H1: There is a significant relationship between investment decision and the young potential investor's risk tolerance

According to the decision rule, reject H_0 when the p-value is less than 0.05. Therefore, based on the result the above P-value is lesser than significant levels 5% ($0.000 < 0.05$), hence, we reject the H_0 . In conclusion, there is a significant relationship between investment decision and the young potential investor's risk tolerance

The table shows that correlation is positive 0.419. It means that there is positive significant relationship between the risk tolerance and investment decision. In other words, for every one level increase in young potential investor risk tolerance, the investment decision will affected by 0.419. This also means that when the level of risk tolerance is higher, the investment decision making by young potential investor will more trend in stock market and the risk also higher.

4.4 Multiple Linear Regression Analysis

Table 4.20 Summary of Multiple Regression Model (1)

Model	R-squared	Adjusted R-squared	F-statistic	S.E. of estimate
1	0.177	0.157	8.905 [0.0000**]	0.5518

Notes: [] represent p-value of F-statistic; ** significant at 5% level (2 tail)

Source: Developed for research

Hypothesis F(1) : Relationship between Independent Variable and risk tolerance.

H_0 : There is no significant relationship between personality traits, demographic variable and Risk tolerance.

H_1 : There is significant relationship between personality traits, demographic variable and Risk tolerance.

Based on table 4.20 above, coefficient of determination value (R^2) is 0.177. This means that it has 17.7% of the total variation in average risk tolerance explained by 8 independence variables (gender, financial knowledge, investment experience, extroversion, agreeableness, neuroticism, conscientiousness and openness to experience). Other than that, the adjusted R^2 is 0.157 shows that the model 1 explains 15.7% of the total variation in risk tolerance after taken into account the degree of freedom. Next, the table also shows that the F-value is 8.905 and the p-value is 0.000. When the p-value (0.000) less than 0.05, it will be reject H_0 . And it also means that all independence variables have the significant relationship and impact with the dependence variable (risk tolerance).

Table 4.21 Model (2) Summary of Multiple Regression Model

Coefficients

Model (2)	Unstandardized coefficients		Standardized t	Sig.	
	B	Std. Error	Beta		
1	(Constant)	1.670	.166	10.059	.000
	Risk	.419	.050	.416	8.406

Notes: Dependent variable: Investment decision

** Significant at 5% level

Source: Developed for research

$$\text{InvesDec} = \beta_0 + 0.419\text{Risk}$$

Whereas,

InvesDec = investment decision

Risk = Risk Tolerance

Based on the equation above, we can conclude that the risk tolerance on young potential investor will affect the investment decision in capital market. In short, for every one degree of risk tolerance increase, the young potential investor will trend to more invest in high risk asset in our study that is stock market.

Table 4.22 Model (2) Summary of Multiple Regression Model

Model	R Square	Adjusted R Square	F- statistic	Std. Error of the Estimate
2	0.173	0.170	70.668 [0.0000**]	0.55136

Notes: [] represent probability of p-value of the F-statistic; **significant at 5% level (two-tails)

Source: Developed for research

The coefficient of determination value (R^2) is equal to 0.1729. That shows that the model (2) explains 17.3% of the total variation in average investment decision. While for the adjusted R^2 is 0.1704 shows that the model explain 17% of the total variation in investment decision after taken into account the degree of freedom. Besides that, it shows that the F-value is 70.67 with a p-value 0.0000. Since the p-value of ANOVA is less than the significance level which is 0.05, it means that the independent variable (risk tolerance) has significant relationship with the dependent variable (investment decision).

Hypothesis F(2) : Relationship between Independent Variable and investment decision.

H_0 : No significant relationship between Risk tolerance (IV) and investment decision (DV).

H_1 : There is significant relationship between Risk tolerance (IV) and investment decision (DV).

Based on the table 4.6.4 indicated that the relationship between risk tolerance and investment decision are positive related. The estimated output also indicated that the p-value is lesser then significant level 5% ($0.000 < 0.05$), hence, there is significant relationship between them. In other words, for every one level of risk

tolerance increase the young potential investor will more trend to invest in high risk asset in our study that is stock market.

4.5 Conclusion

Summary of this chapter, there were total 340 questionnaires collected from the young potential investors of the residents in Kampar, Ipoh to carry on several tests. Those tests we had conducted included reliability test, descriptive analysis, scale measurement and inferential analysis. From that, we found that there were negative relationship between conscientiousness with risk tolerance while outcome from others four personalities were positive. Furthermore, the relationship between risk tolerance with investment decision were positive. The results of the tests have been demonstrated clearly in the table form with the explanations. We will present the major findings and discussion of our whole research in Chapter 5.

CHAPTER 5 : DISCUSSION AND CONCLUSION

5.0 Introduction

From the previous chapter, we have shown clearly the results and explanations of the test that we have been done. In this chapter, we are going to discuss the major findings, implications, and limitation of research. Thus, we will also comment some recommendation on it for better future study. We will make an overall conclusion in this topic.

5.1 Summary of Statistical Analysis

In our research, we have been distributed around 340 sets of questionnaire to our targeted respondents which are Kampar residents at the age from 18 to 29 years old. According the result of demographic profile in the chapter, it stated that have 19.80% is under 18 – 21 years old, 62.30% is under 22 – 25 years old and 17.90% is under 26 – 29 years old. In the previous chapter, we get that the number of males and females is 169 and 171. Other than that, we get from the result stated that most of respondents do not have any investment experience and attend the financial course or talk which is 79.41% or 270 respondents and 77.65% or 264 respondents. It also means that level of the respondent knowledge is limited which is 51.18%.

Moreover, our dependent variable is investment decision and moderating variable is risk tolerance while independent variables are our personality traits which are extroversion, agreeableness, conscientiousness, neuroticism and openness to experience and demographic variables are gender, investment experience, and financial literacy. In our research, we have conducted the means value of each

statement of variables. We stated in the central tendencies measurement of construct in previous chapter. Based on our result, risk tolerance have the highest means values compare to the investment decision which is “I inherit a mortgage-free house worth RM80,000 that believe will increase in value faster than inflation. However, the house needs repairs and rent out with the higher rental. I will repair the house and rent it.”, 3.7559 while “I prefer to invest in corporate stock.”, 3.1618.

Furthermore, the independent variable of extroversion the highest means value statement is “I love make new friends and able maintain good relationship with them.”, 3.6088 while the lowest means value is “ I often feel as if I'm bursting with energy.”, 3.2706.

Besides that, at the independent variable of agreeableness the highest means value is “I am willing to listen others advice.” whereas “I generally try to be thoughtful and careful.” is lowest means value statement which is 3.7088 and 3.4324 respectively.

For conscientiousness independent variables, it have two highest means value statements which is “I'm pretty good about myself so as to get things done on time.” and “I'm think that I am dependable or reliable as I should be.” , 3.7 while “I manage my time well before setting down to work.” is the lowest means value statement 3.4088.

Other than that, for the neuroticism independent variable the highest means value statement is “I often feel no as good as others.” whereas “I am easy to giving up when the things go wrong.” is the lowest means value statement which is 3.1853 and 2.4941 respectively.

For the last independent variable is openness to experience, the highest means value statement is “I love to learn new knowledge.”, 3.9353 while the lowest means value is “I am creative and enjoy in different field.”, 3.4265.

Based on our result from the internal reliability test, the Cronbach's Alpha value in our dependent variables (risk tolerance and investment decision) and independent variables (extroversion, agreeableness, conscientiousness, neuroticism and openness to experiences) are acceptable in the level of reliability. This is because we get the result between the ranges 0.703 to 0.904 from SPSS.

Lastly, based on the previous chapter result stated we can know that the independent variable of conscientiousness have the negative relationship with the risk tolerances. The other four personality traits which are extroversion, agreeableness, neuroticism and openness to experience have the positive relationship with risk tolerance. Except for financial literacy the other two demographic variables are not significant in our study. Furthermore, the relationship between risk tolerances and investment decision is positives.

5.2 Discussion of Major Findings

Table 5.1 Summary of Hypothesis Testing

Hypothesis	Result	Supported/Not Supported
H1: There is an impact between extroversion personality and the young potential investor's risk tolerance.	Coefficient = 0.167 P-value = 0.009	P-value < 0.05 Supported
H2: There is an impact between agreeableness personality and the young potential investor's risk tolerance.	Coefficient = 0.221 P-value = 0.007	P-value < 0.05 Supported
H3: There is an impact between conscientiousness personality and the young potential investor's risk tolerance.	Coefficient = 0.042 P-value = 0.420	P-value > 0.05 Not Supported
H4: There is an impact between neuroticism personality and the young potential investor's risk tolerance.	Coefficient = 0.231 P-value = 0.000	P-value < 0.05 Supported
H5: There is an impact between openness to experience personality and the young potential investor's risk tolerance.	Coefficient = 0.117 P-value = 0.045	P-value < 0.05 Supported

Source: Developed for research

5.2.1 Relationship between extroversion personality and the young potential investor's risk tolerance.

Based on table 5.1, the findings show that there is significant and positive relationship between the extroversion personality and the young potential investor's risk tolerance with the coefficient value of 0.167 and the p-value of 0.009 (less than significant level 0.05). Hence, a person with high extroversion has higher risk tolerance. This result is consistent with the studies done by Nga and Yien (2013); Lin and Lu (2015); Anic (2007). A person who is high score in extroversion has positive emotion and this may lead to higher risk tolerance. Extrovert individual can make decision easily and more focus on investments which they can simply join or quit. This shows that extroversion and risk aversion have negative relationship.

5.2.2 Relationship between agreeableness personality and the young potential investor's risk tolerance.

According to the research, the findings show that there is significant and positive relationship between the agreeableness personality and the young potential investor's risk tolerance with coefficient value of 0.221 and the p-value of 0.007 (less than significant level 0.05). Therefore, an individual who is high in agreeableness will has high risk tolerance. The result is inconsistent with the studies of Soane and Chmiel (2005); Buccioli and Zarri (2015); Nicholson et al. (2005). An individual who has high agreeableness scale tend to have higher risk tolerance because they are cheerful and easy going. In addition, agreeableness person who is an optimist may also cause the high risk tolerance.

5.2.3 Relationship between conscientiousness personality and the young potential investor's risk tolerance.

The following findings illustrate that conscientiousness personality have positive correlation but negative relationship towards young potential investor's risk tolerance. It has coefficient value of 0.042 and p-value of 0.420 where the p-value is larger than significant level 0.05. This result is consistent with the studies of Anic (2007); Wong and Carducci (2013). Conscientiousness people who is careful, responsible and reliability can adversely affect their dependents' welfare by prevent huge failures from taking too much risk as we know that higher risk can produce higher return but also have higher chance of losses that can cause to unfavorable consequences. In conclude, an individual who score high in conscientiousness will have insignificant relationship with risk tolerance.

5.2.4 Relationship between neuroticism personality and the young potential investor's risk tolerance.

The findings of the research represent that neuroticism personality and the young potential investor's risk tolerance have significant and positive relationship with the coefficient value of 0.231 and p-value of 0.000 (less than significant level 0.05). The result is not consistent with the studies of Wong and Carducci (2013); Nicholson et al. (2005); Soane and Chmiel (2005). These researchers had examined that a person who score low in neuroticism are seeking for higher risk and they are risk-taker need resilience. However our result showed that score high in neuroticism have higher risk tolerance. People with high scores on neuroticism tend to receive more negative feeling such as gets angry easily and quickly,

worries a lot, and self-esteem. For example, when the situation is anxious, the investor who is nervousness of neurotic could lead to trade more.

5.2.5 Relationship between openness to experience personality and the young potential investor’s risk tolerance.

Based on the research, it explains the openness to experience personality and the young potential investor’s risk tolerance have a significant and positive relationship with a coefficient value of 0.117 and p-value of 0.045 where the p-value is less than significant level 0.05. The result is consistent with the studies of Camgoz et al (2011); Bashir (2013); Soane and Chmiel (2005). A person with high openness level would like to try or experience something new and like to bump into the thrill that high profits or losses which might happen in financial domain. Because of his openness, he will have better knowledge about various ideas and experience. Besides that, openness to experience is expected to be risk-taker. Hence, people with high openness to experience have higher risk tolerance.

Table 5.2: Summary of Demographic Characteristics Hypothesis

Hypothesis	Result	Supported
Hypothesis 6: The impact between investment experience and young potential investor’s risk tolerance.	Coefficient = -0.16 P-value = 0.772	P-Value > 0.5 Not supported
Hypothesis 8: Gender has impact on young potential investor’s risk tolerance.	Coefficient = 0.073 P-value = 0.125	P-Value > 0.5 Not supported

Source: Develop from our study

5.2.6 Relationship between investment experience and young potential investor's risk tolerance.

From Chapter 4 results, we found that the Hypothesis 6 was not supported which is an insignificant and negative (-0.016) relationship at 5% significant levels. Our result is inconsistent with the Awais et al. (2016); Chou et al. (2010) who found significant relationship between investment experience and risk tolerance. However, we can explain that as many young potential investors with no investment experience will not affect their risk tolerance. One of the reason behind might be due the young potential investor has lesser investment opportunity than the older investor so the investment experience does not affect much on the young potential investor's risk tolerance because they never experience before.

5.2.7 Relationship between financial literacy and young potential investor's risk tolerance.

Based on table above we obtain the result which indicated that the hypothesis 7 is supported. There is significant relationship between financial literacy and young potential investor's risk tolerance. The higher the degree of financial literacy results the higher the risk tolerance. The result shows that by through increase financial literacy the young potential investor will also increase their ability to analysis information lead them to expend the risk tolerance. Our finding is consistent with Gustafsson and Omark (2015) who found that there is positive significant relationship between risk tolerance and financial literacy. The empirical study also concluded high rate on financial literacy the more risk they willing to undertake. By supporting, Aren et al. (2015) explained that if financial literacy increases lead to individual risk-return demands increases which will causes them to more prefer on stock product.

5.2.8 Gender has impact on young potential investor’s risk tolerance.

In our study, gender was found not significant relationship with risk tolerance. This result is consistent with Nga and Leong (2013). However, Mishra and Lalumiere (2011); Lauriola et al. (2013) was found that the gender has positive significant relationship which mean that male generally has higher risk tolerance than female. Based on our result we can conclude that gender does not bring effect on young potential investor’s risk tolerance. The reason behind might be the education level increase and the female has become more knowledgeable than before.

Table 5.3: Summary of Model (2)

Hypothesis	Result	Supported
Hypothesis 9: Relationship between investment decision and the young potential investor’s risk tolerance.	Coefficient = .419 P-value = .000	P-Value < 0.5 Supported

Source: Develop from our study

5.2.9 Relationship between investment decision and the young potential investor’s risk tolerance.

The hypothesis 9 was supported which mean that the risk tolerance has relationship with the investment decision. Moreover, our result is consistent with the Pak and Mahmond (2015) which is also indicated that there is positive significant relationship. It can be explained that the young potential investor with higher risk tolerance will more trend to make high risk investment decision in our study that is stock investment. In addition,

Nguyen and Linh (2015) also found that risk tolerance affect their respondent perceives risk of an investment tools and which will affect the respondent investment decision. Our output shows that the risk tolerance will affect investment decision among young potential investors, when their risk tolerance is high they will more trend to invest in risky asset, and vice versa.

5.3 Implication of Study

As a results of our study, it provide us for understanding personality and demographic characteristics on risk tolerance and which has impact on young potential investors' decision making process in Kampar, Perak. Besides that, our study provided some theoretical contribution by enhancing the area of study in order for future researchers who want to estimate personality and the investment decision. From the age between 18-29 which are less experience and knowledge on investment can have a guideline or some concepts in their mind through our study. The potential investor can make a better investment decision.

In this study, there is positive correlation between extroversion personality and the young potential investor's risk tolerance. This is mean by with high extroversion personality it will then more to higher risk tolerance. While for agreeableness, there is significant correlation between agreeableness personality and the young potential investor's risk tolerance. Next, for the personality traits of conscientiousness, it shows insignificant correlation between conscientiousness personality and the young potential investor's risk tolerance. There is also positive correlation between openness to experience personality and the young potential investor's risk tolerance. In conclusion, personality traits (extroversion, agreeableness, neuroticism and openness to experience) have positive significant relationship towards young potential investor's risk tolerance. In contrast, there is a positive insignificant relationship between conscientiousness personality and the young potential investor's risk tolerance.

On the other hand, for the relationship between investment experience and young potential investor's risk tolerance the result shown it have negative insignificant in our study. Financial literacy is also one of our independent variable which has positive impacted on the young potential investor's risk tolerance. Lastly is gender, it also positive insignificant relationship in our study.

5.4 Limitation of Study

There are few limitations in this research. Sample size is one of the limitations in our research. We get to find the population of Kampar but cannot get the real number population of young potential investors in Kampar, Perak. So, we do not know how much respondents needed for our study. We success collected 340 sets of the questionnaire from the respondents as our sample size. The sample size may not exactly represent the effect of personality traits and demographic characteristics towards risk tolerance and investment decision in Kampar, Perak.

Besides that, there are quite less respondents from the category age of 26 to 29 as mostly respondent around Kampar are students. Most of our respondents come from the students of UTAR and TARC which belong to the category age of 22 to 25. There were quite many people refuse to do survey for us due to they are rushing time and lazy to entertain us.

In addition, another limitation in this research is financial literacy on investment. There are different coarse and level educations among of the respondents. They do not fully understand the questions. For example, respondents from different course like engineering or marketing do not have any idea on investment. This might bring them choose an unsuitable answer randomly. Besides, there are not everyone can fully understand those financial words we using in questionnaire. This may cause to the result from our collected questionnaires not reliable.

5.5 Recommendation for Future Study

From this study, we recommend future researcher should increase their sample size to get more accurate result as it represented to Kampar, Perak. By the way, future researcher should get the number population of the targeted respondents before decide the study title.

Furthermore, future researcher should choose the right time to distribute the questionnaire. For example, we not encourage future researcher distribute the survey form when the target respondents having their meal, doing revision in library, after working hour as they rush to home. We suggest they should distribute when target respondents chat chit with their friends after meal. In addition, those targeted respondent more willing to help us filled in the survey form when they are free waiting class.

Moreover, the future researcher should distribute to the right person who know be familiar in investment in order to avoid inappropriate answer choose by them. They can ask and mention that before start distribute to them fill in. Researcher encourage to stay beside the respondents when they fill in the form to translate and explain the statement if needed. Thus, respondents will choose more accurate answer.

5.6 Conclusion

In our study, our general objective is to study personality traits and demographic characteristics on risk tolerance has impact on young potential investors' decision making process in Malaysia. Which we used 340 respondents to fulfilled our study and we analyzed the results that we have been tested in SPSS, pilot test and

multiple regression. With high personality traits, they tend to take higher risk of investment which will gain higher return. While for low personality traits, they tend to take much lower risk compare to high personality traits. As conclusion, personality traits, investment experience and financial literacy has impact on young potential investor's risk tolerance

REFERENCES

- Al-Kalbani, M. S., Salleh, A., & Mastor, K. A. (2011). Career Decision Making Constructs and Five-Factor Model in Adolescents. *World Applied Sciences Journal 14 (Learning Innovation and Intervention for Diverse Learners)*, 34-39.
- Ames, D. R., & Bianchi, E. C. (2008, December). The Agreeableness Asymmetry in First Impressions: Perceivers' Impulse to (Mis)judge Agreeableness and How It Is Moderated by Power. *Society for Personality and Social Psychology, Inc., Vol. 34(12)*, 1719-1736.
- Anic, G. (2007). *The Association between risk taking and personality*. (Graduate Theses and Dissertations, University of South Florida, 2007).
- Antes, A. L., Brown, R. P., Murohy, S. T., Waples, E. P., Mumford, M. D., Connelly, S., & Devenport, L. D. (2007). Personality And Ethical Decision-Making In Research: The Role Of Perceptions Of Self And Others. *Journal of Empirical Research on Human Research Ethics*, 15–34.
- Aren, S., & Aydemir, S. D. (2015). The factors influencing given investment choices of individuals. *Procedia-Social and Behavioral Sciences*, 210, 126-135.
- Ashton, M. C., Lee, K., & Vries, R. E. (2014). The HEXACO Honesty-Humility, Agreeableness, and Emotionality Factors: A Review of Research and Theory. *Personality and Social Psychology Review*, 18(2), 139-152.
- 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.
- Bailey, C. J. (2002). Applying the Five-Factor Model of Personality to Undergraduate Career Attitudes and Beliefs: Maturity, decision Making Self-Efficacy, and Control. (University of Missouri-Kansas City).
- Bakar, S., & Yi, A. N. C. (2016). The Impact of Psychological Factors on Investors' Decision Making in Malaysian Stock Market: A Case of Klang Valley and Pahang. *Procedia Economics and Finance*, 35, 319-328.

- Bashir, T., Azam, N., Butt, A. A., Javed, A., & Tanir, A. (2013). Are Behavioral Biases Influenced by Demographic Characteristics & Personality Traits? Evidence from Pakistan. *European Scientific Journal*, 9 (29), 277-293.
- Brau, J. C., Holmes, A. L., & Israelsen, C. L. (2010). Financial Literacy among College Students: An Empirical Analysis. *Journal of Financial Education*, 1-34.
- Brown, S., & Taylor, K. (2011). *Household finance and the 'Big Five' Personality Traits*. (Discussion Paper, Institute for the study of labor (IZA)).
- Brown, S., & Taylor, K. (2014). Household finances and the 'Big Five' personality traits. *Journal of Economic Psychology*, 45, 197-212.
- Burmeister, E., & Aitken, L. M. (2012). Sample size: How many is enough?. *Australian Critical Care*, 25(4), 271-274.
- Byrne, K. A., Mansat, C. D., & Worthy, D. A. (n.d.). Who Chokes Under Pressure? The Big Five Personality Traits and Decision-Making under Pressure.
- Byrne, K. A., & Worthy, D. A. (2015). Gender differences in reward sensitivity and information processing during decision-making. *Journal of Risk and Uncertainty*, 50(1), 55-71.
- Camgoz, S. M., Karan, M. B., & Ergeneli, A. (2011). Relationship Between The Big- Five Personality and The Financial Performance of Fund Managers. *Current Topics in Management*, 15, 137-152.
- Charles, A., & Kasilingam, R. (2014). Do framing effects of investors determine their investment personality? *Anvesha*, 7(2), 38-45.
- Chen, H., & Volpe, R. P. (2002). Gender Differences in Personal Financial Literacy Among College Students. *Financial Services Review*, 11, 289-307.
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial services review*, 7(2), 107-128.
- Chitra, K., & Sreedevi, V. R. (2011). Does personality traits influence the choice of investment?. *IUP Journal of Behavioral Finance*, 8(2), 47-57.

- Contessa, J., Suarez, L., Kyriakides, T., & Nadzam, G. (2013). The Influence of Surgeon Personality Factors on Risk Tolerance: A Pilot Study. *Journal of Surgical Education, 70*(6), 806-812.
- Cooper, C. C., Kingyens, A. T., & Paradi, J. C. (2014). Two-stage financial risk tolerance assessment using data envelopment analysis. *Journal of Operational Research, 233*, 273-280.
- Cooper, W., Kingyens, A. T., & Paradi, J. C. (2014). Two-stage financial risk tolerance assessment using data envelopment analysis. *European Journal of Operational Research, 233*, 273 - 280.
- Damasio, A. (2005). *Descartes' Error: Emotion, Reason, and the Human Brain*. Penguin.
- Davies, G. B., & Brooks, P. (2014). Risk tolerance: Essential, behavioural and misunderstood. *Journal of Risk Management in Financial Institutions, 7*(2), 110-113.
- Deck, C., Lee, J., Reyes, J., & Rosen, C. (2012). Risk - Taking Behavior: An Experimental Analysis of Individuals and Dyads. *Southern Economic Journal, 79*(2), 277-299.
- Deniz, M. E. (2011). An Investigation of Decision Making Styles and the Five-Factor Personality Traits With Respect To Attachment Styles. *Educational Sciences: Theory & Practice, 11*(1), 105-113.
- Dewberry, C., Juanchich, M., & Narendran, S. (2013). Decision-making competence in everyday life: The roles of general cognitive styles, decision-making styles and personality. *Personality and Individual Differences, 55*(7), 783-788.
- Dhanani, A., Fifield, S., Helliard, C., & Stevenson, L. (n.d.). Interest rate risk management - an investigation into the management of interest rate risk in UK companies. *Research Executive Summaries Series, 2*(4).
- Durand, R. B., Newby, R., Peggs, L., & Siekierka, M. (2013). Personality. *The Journal Of Behavioral Finance, 14*, 116 - 133.
- Durand, R. B., Newby, R., & Sanghani, J. (2008). An Intimate Portrait of the Individual Investor. *The Journal of Behavioral Finance, 9*, 193-208.

- Dyke, D. C. (2010). The Five-Factor Model as Predictor of Performance on Decision-Making Tasks. (University of North Dakota).
- Falahati, L., & Paim, L. (2011). Gender Differences In Financial Well-Being Among College Students. *Journal of Basic and Applied Sciences*, 5(9), 1765-1776.
- Falahati, L., & Paim, L. (2012). Gender Differences in Saving Behavior Determinants among University Students. *Journal of Basic and Applied Sciences*, 2(6), 5848- 5854.
- Filiz, E. (2014). The Affects of Personality on Executive Decision Making from the Five Factor Model and the Naturalistic Decision Making Perspectives: The Case of District Governors in Turkey. (University of Texas at Dallas).
- Gambetti, E., & Giusberti, F. (2012). The effect of anger and anxiety traits on investment decisions. *Journal of Economic Psychology*, 33, 1059 - 1069.
- Goetz, J. W., Cude, B. J., Nielsen, R. B., Chatterjee, S., & Mimura, Y. (2011). College-based personal finance education: Student interest in three delivery methods. *Journal of Financial Counseling and Planning*, 22(1), 27-42.
- Goldberg, L. R. (1990). An alternative" description of personality": the big-five factor structure. *Journal of personality and social psychology*, 59(6), 1216-1229.
- Grable, J. E. (2013). Is Risk Tolerance Stable? The Role of Projection Bias. *Journal of Financial Service Professionals*, 14-16.
- Grable, J., & Lytton, R. H. (1999). Financial risk tolerance revisited: the development of a risk assessment instrument. *Financial Services Review*, 8, 163-181.
- Grinblatt, M., & Keloharju, M. (2009). Sensation seeking, overconfidence, and trading activity. *The Journal of Finance*, 64(2), 549-578.
- Gustafsson, C & Omark, L. (2015). Financial literacy's effect on financial risk tolerance. (Universitet UMEA) *Ume å School of Business and Economics*.
- Ibrahim, D. I. D., Harun, R., & Isa, Z. M. (2010). A study on financial literacy of Malaysian degree students. *Cross-cultural communication*, 5(4), 51-59.

- Jagongo, A., & Mutswenje, V. S. (2014). A Survey of the Factors Influencing Investment Decision: The Case of Individual Investment at the NSE. *Journal of Humanities and Social Science*, 4 (4), 92-102.
- Jekielek, S., & Brown, B. (2005). The transition to adulthood: Characteristics of young adults ages 18 to 24 in America. *Baltimore, MD: Annie E. Casey Foundation*.
- Jochemczyk, Ł., Pietrzak, J., Buczkowski, R., Stolarski, M., & Markiewicz, Ł. (2016). You Only Live Once: Present-hedonistic time perspective predicts risk propensity. *Personality and Individual Differences*.
- Kalshoven, K., Den Hartog, D. N., & De Hoogh, A. H. B. (2011). Ethical leader behavior and big five factors of personality. *Journal of Business Ethics*, 100(2), 349-366.
- Kannadhasan, M. (2015). Retail investors' financial risk tolerance and their risk-taking behaviour: The role of demographics as differentiating and classifying factors. *IIMB Management Review*, 27, 175-184.
- Kelechi, A. C. (2012). regression and Principal Component Analyses: a Comparison Using Few Regressors. *Journal of mathematics and Statistics*, 2 (1), 1-5.
- 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.
- Kowert, P. A., & Hermann, M. G. (n.d.). Who Takes Risks? Daring and Caution in Foreign Policy Making. *The Journal of Conflict Resolution*, 41(5), 611-637.
- Krishnan, R., & Beena, F. (2009). Measurement of conformity to behavior finance concepts and association with individual personality. *IUP Journal of Behavioral Finance*, 6(3), 25-40.
- Krishnan, R., & Beena, F. (2009). Measurement of Conformity to Behavior Finance Concepts and Association with Individual Personality. *The IUP Journal of Behavioral Finance*, 6(3&4).

- Lauriola, M., Panno, A., Levin, I. P., & Lejuez, C. W. (2013). Individual Differences in Risky Decision Making: A Meta-analysis of Sensation Seeking and Impulsivity with the Balloon Analogue Risk Task. *Journal of Behavioral Decision Making*.
- Leinvest. (2013, August 4) 解析外汇：外汇不是享受，名牌和跑车. *Leinvest*. Retrieved from http://www.leinvest.com/ch/forex.html#.V7Rf_5h97IV
- Lemaster, P., & Strough, J. (2014). Beyond Mars and Venus: Understanding gender differences in financial risk tolerance. *Journal of Economic Psychology*, 42, 148-160.
- Lin, H. W., & Lu, H. F. (2015). Elucidating the association of sports lottery bettors' socio-demographics, personality traits, risk tolerance and behavioural biases. *Personality and Individual Differences*, 73, 118-126.
- Malhotra, N. (2006). *An Applied Approach*, 3/E. In D. Birks, *Marketing Research* (3rd ed.). Georgia Institute of Technology: Pearson Education Ltd. Retrieved from <http://catalogue.pearsoned.co.uk/educator/product/Marketing-Research-An-Applied-Approach/0273706896.page>
- Mayfield, C., Perdue, G., & Wooten, K. (2008). Investment management and personality type. *Financial Services Review*, 17(3), 219-236.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52, 81-90.
- McGhee, R. L., Ehrler, D. J., Buckhalt, J. A., & Phillips, C. (2012). The Relation between Five-Factor Personality Traits and Risk-Taking Behavior in Preadolescents. 3(8), 558-561.
- Mehdi, K., Khiruddin, R., & Omar, F. (n.d.). Personality Traits as Predictors Decision Making towards. *European Scientific Journal*.
- Mishra, S. (2010). *The Motivational Effect Of Need On Decision-Making Under Risk*. University of Lethbridge.
- Mishra, S., & Lalumiere, M. L. (2011). Individual differences in risk-propensity: Associations between personality and behavioral measures of risk. *Personality and Individual Differences*, 50, 869-873.

- Mishra, S. (2014). Decision-Making Under Risk Integrating Perspectives From Biology, Economics, and Psychology. *Personality and Social Psychology Review*, 18(3), 280-307.
- Mishra, S., Lalumière, M. L., & Williams, R. J. (2010). Gambling as a form of risk-taking: Individual differences in personality, risk-accepting attitudes, and behavioral preferences for risk. *Personality and Individual Differences*, 49(6), 616-621.
- Mukaka, M. M. (2012). A guide to appropriate use of Correlation coefficient in medical research. *Malawi Medical Journal*, 24(3), 69-71.
- 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.
- Nguyen, T. M. L. (2015). The influence of financial risk tolerance and risk perception on individual investment decision-making in a financial advice context.
- Nicholson, N., Fenton-O'Creevy, M., Soane, E., & Willman, P. (2002). Risk propensity and personality. *London Business School, Open University Business School and Saïd Business School Oxford, London*.
- Nicholson, N., Soane, E., Fenton - O'Creevy, M., & Willman, P. (2005). Personality and domain - specific risk taking. *Journal of Risk Research*, 8(2), 157-176.
- Nidar, S. R. & Bestari, S.. Personal Financial Literacy among University Students and Analyze Factors that Influence it. (University of Padjadjaran Bandung Indonesia). *Economic Faculty*.
- Niszczoła, P. (n.d.). Cross-country differences in personality and the foreign bias in international equity portfolios. (*University of Economics Department of International Finance*).
- Pak, O., & Mahmood, M. (2015). Impact of personality on risk tolerance and investment decisions. *International Journal of Commerce and Management*, 25(4), 370-384.
- Papaiouannou, M. (2006, November). Exchange Rate Risk Measurement and Management: Issues and Approaches for Firms. *South Eastern Europe Journal of Economics*.

- Poole, M. A., & O'Farrell, P. N. (1970). The assumptions of the linear regression model. *Transactions of the Institute of British Geographers*, 145-158.
- Rahaman, H. S. (2014). Personality and Decision Making Styles of University Students. *Journal of the Indian Academy of Applied Psychology*, 40 (1), 138-144.
- Rose, S., Spinks, N., & Canhoto, A. I. (2015). Tests for the assumption that a variable is normally distributed. (Routledge Taylor & Francis Group). *Management Research: Applying the Principles*.
- Rzeszutek, M., Szyszka, A., & Czerwonka, M. (2015). Investors' Expertise, Personality Traits and Susceptibility to Behavioral Biases in the Decision Making Process. *Contemporary Economics*, 9(3), 337-352.
- Sadi, R., Asl, H. G., Rostami, M. R., Gholipour, A., & Gholipour, F. (2011). Behavioral finance: The explanation of investors' personality and perceptual biases effects on financial decisions. *International Journal of Economics and Finance*, 3(5), 234-241.
- Seo, M. G. (2007). Being Emotional During Decision Making-Good Or Bad? An Empirical Investigation. *Academy of Management Journal*, 50(4), 923-940.
- Smart, S., Gitman, L., and Joehnk, M (2014). Fundamentals of investing. (13thed.). Boston: Pearson
- Soane, E., & Chmiel, N. (2005). Are risk preferences consistent? The influence of decision domain and personality. *Personality and Individual Differences*, 38(8), 1781-1791.
- Sin Chew. (2013, July 7). 炒外匯致富? 小心變貧. *Sin Chew*. Retrieved from <http://www.sinchew.com.my/node/372165>
- Tauni, M. Z., Hong, X. F., & Iqbal, A. (2016). "Information sources and trading behavior: does investor personality matter?" *Qualitative Research in Financial Markets*, 8(2), 94-117.
- Thanki, H. (2015). Risk Tolerance Dependent on What? Demographics or Personality Type: Findings from an Empirical Research. *Journal of Marketing and Consumer Research*, 6, 48-56.

- The Rakyat Post. (2014, July 10). 炒外匯犯法嗎？國行有答案. *The Rakyat Post*. Retrieved from <http://ch.therakyatpost.com/national-news/13388>
- The Rakyat Post. (2014, July 8). 揭開網路炒外匯騙局黑幕. *The Rakyat Post*. Retrieved from <http://ch.therakyatpost.com/national-news/13267>
- The Rakyat Post. (2015, October 15). 名車鈔票炮製聲勢！炒匯歪風襲華青. *The Rakyat Post*. Retrieved from <http://ch.therakyatpost.com/national-news/186679>
- Vandeskog, B. (2015). The Legitimacy of Safety Management Systems in the Minds of Norwegian Seafarers. *International Journal on Marine Navigation and Safety of Sea Transportation*, 9(1), 101-106.
- Wang, H., Zhang, J., Wang, L., & Liu, S. (2014). Emotion and investment returns: Situation and personality as moderators in a stock market. *Social Behavior and Personality: an international journal*, 42(4), 561-570.
- Winning Younger Investors: Six Ways to Help Attract High-Potential Gen-X and Gen-Y Clients*. (2013) From <https://fiws.fidelity.com/app/literature/log?literatureURL=9584533.pdf>
- Wong, A., & Carducci, B. (2013). Does personality effect personal financial risk tolerance behavior? *IUP Journal of Applied Finance*, 19(3), 5-18.
- Wong, A., & Carducci, B. (2016). Do sensation seeking, control orientation, ambiguity, and dishonesty traits affect financial risk tolerance?. *Managerial Finance*, 42(1), 34-41.
- Xiao, Z., Wang, D., & Liu, Y. (2009). Economic environment and personality: how do they influence investment decisions and regret?. *Social Behavior and Personality: an international journal*, 37(10), 1297-1304.
- Young, S., Gudjonsson, G. H., Carter, P., Terry, R., & Morris, R. (2012). Simulation of risk-taking and it relationship with personality. *Personality and Individual Differences*, 53(3), 294-299.
- Zhang, J., Wang, L. M., Wang, H. C., & Liu, S. Y. (2014). *Plos One*. Retrieved from Is There Any Overtrading in Stock Markets? The Moderating Role of Big Five Personality Traits and Gender in a Unilateral Trend Stock Market: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0087111>.

Zikmund, W. G. (2003). Business research methods (7thed.). South-Western
Publishing.

Appendix A: Research Questionnaire Sample



**UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF BUSINESS AND FINANCE
UNDERGRADUATE RESEARCH PROJECT**

**BACHELOR OF FINANCE (HONS)
FINAL YEAR PROJECT**

**TITLE OF TOPIC: THE EFFECT OF PERSONALITY TRAITS AND
DEMOGRAPHIC CHARACTERISTICS TOWARDS RISK TOLERANCE
AND INVESTMENT DECISION MAKING**

SURVEY QUESTIONNAIRE

Dear respondents,

We are Year Three students from Faculty of Business and Finance, studying Bachelor of Finance (HONS) in University Tunku Abdul Rahman. We conduct this survey questionnaire for our final year project. The purpose of this survey is to study the personality on risk tolerance affect investment decision. Please answer all the questions in four sections. All the response from the survey is completely keep confidential for our research only. Thanks for your cooperation.

NAME	STUDENT ID
ANG SHIAO ZHUAN	13ABB07105
CHUAH CHEA YING	13ABB08041
KUI SIEW BOON	13ABB07230
SOO LI HUI	13ABB08430
WONG CHIN HONG	13ABB08429

Part A: Demographic

1. Age

18-21

22-25

26-29

2. Gender:

Male

Female

3. Do you have any investment experience?

Yes

No

If yes, please specify the years

4. Do you have attend any financial course or training before?

Yes

No

If yes, please specify

5. Which of the following best describes your level of investment knowledge?

Very limited (few knowledge)

Basic knowledge (understand the differences between stocks, bonds and GICs)

Fair amount of knowledge (aware of different investment options and their risks)

Considerable knowledge (understand different investment philosophies)

Extensive knowledge (complete understanding of investment products and strategies)

Part B: Personality Traits (** 1 represented strongly disagree to 5 represented strongly agree)

Extroversion					
1. I am friendly and sociable.	1	2	3	4	5
2. I often feel as if I'm bursting with energy.	1	2	3	4	5
3. I am a joyful and brave.	1	2	3	4	5
4. I am a very positive person.	1	2	3	4	5
5. I love make new friends and able maintain good relationship with them.	1	2	3	4	5
Agreeableness					
1. I seldom get into arguments with my family and co-workers.	1	2	3	4	5
2. Some people think I'm not selfish and cheerful.	1	2	3	4	5
3. Some people think of me as generous and kind.	1	2	3	4	5
4. I generally try to be thoughtful and careful.	1	2	3	4	5
5. I am willing to listen others advice.	1	2	3	4	5
Conscientiousness					
1. I keep my belongings tidy and clean.	1	2	3	4	5
2. I'm pretty good about myself so as to get things done on time.	1	2	3	4	5
3. I manage my time well before to setting down to work.	1	2	3	4	5
4. I'm think that I am dependable or reliable as i should be.	1	2	3	4	5
5. I think I am able to get organized.	1	2	3	4	5
Neuroticism					

1. I often feel no as good as others.	1	2	3	4	5
2. I often feel blue.	1	2	3	4	5
3. I often feel nervous and sensitive on emotion.	1	2	3	4	5
4. Sometimes I feel completely worthless.	1	2	3	4	5
5. I am easy to giving up when the things go wrong	1	2	3	4	5
Openness To Experience					
1. I am curious by the patterns I find in art and nature.	1	2	3	4	5
2. I often try new and foreign foods.	1	2	3	4	5
3. I am often enjoy playing with theories and abstract ideas.	1	2	3	4	5
4. I love to learn new knowledge.	1	2	3	4	5
5. I am creative and enjoy in different field.	1	2	3	4	5

Part C: Risk Tolerance (**1 represented strongly disagree to 5 represented strongly agree)

1. When I think of the word “risk”, the word OPPORTUNITY comes to my mind first.	1	2	3	4	5
2. I am willing to take risk when choosing an investment.	1	2	3	4	5
3. I prefer invest in high risk high return investment rather than low risk low return investment.	1	2	3	4	5
4. I inherit a mortgage-free house worth RM80,000 that believe will increase in value faster than inflation. However, the house needs repairs and rent out with the higher rental. I will repair the house and rent it.	1	2	3	4	5
5. If I on a TV game show, I will choose 5 % chance to win RM 500 000 rather than RM 5000 in cash.	1	2	3	4	5

6. Assume that I have RM 150 000 to invest. Allocation of capital into 10% in low-risk, 40% in average-risk & 50% in high-risk investment MORE attractive to me.	1	2	3	4	5
7. Assume that I have RM 150 000 to invest. I NO attract to the allocation of capital into 80% in a low-risk, 15% in an average-risk & 5% in a high-risk investment.	1	2	3	4	5
8. I have a chance to invest in gold that given very high return (i.e return in 50 to 100 times) but the probability of success is 20%. I will invest it.	1	2	3	4	5
9. I will invest in hard assets (i.e gold, jewels, collectibles and real estate) that predict to increase in value rather than invest in low risk low return investment.	1	2	3	4	5
10. I more prefer invest in 50% to gain RM1,000, 50% to gain nothing than a sure gain of RM500 with capital of RM1,000.	1	2	3	4	5

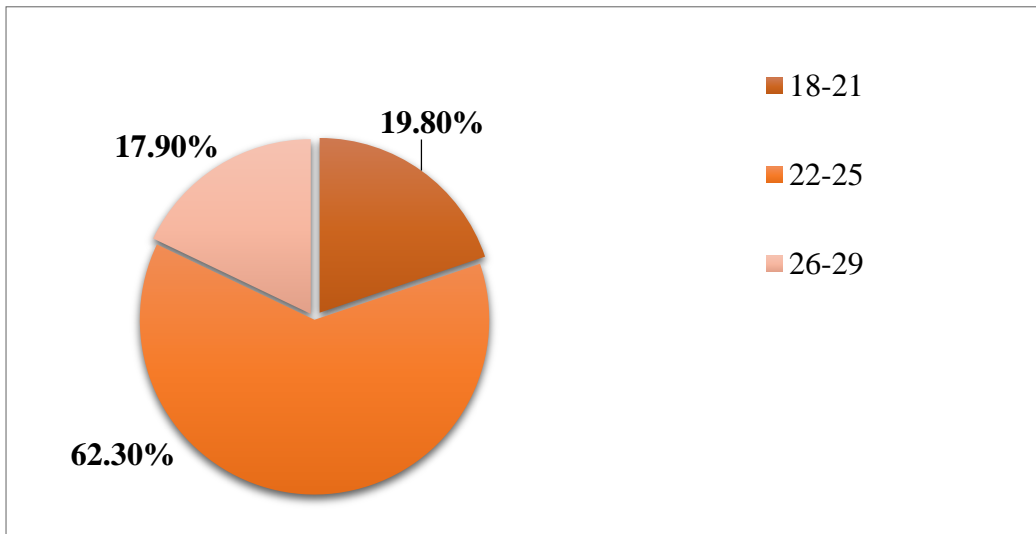
Part D: Investment Decision (**1 represented strongly disagree to 5 represented strongly agree)

1. I feel very comfortable invest in stock.	1	2	3	4	5
2. If I unexpectedly receive RM20,000, I will invest in stock.	1	2	3	4	5
3. Currently my investment assets mostly are high interest government bond. Stock price and return expect to increase, I will sell the government bond and invest in stock market even stock has higher risk.	1	2	3	4	5
4. For the Portfolio investment i rather invest in collection of stock	1	2	3	4	5
5. I prefer to invest in corporate stock.	1	2	3	4	5
6..I prefer invest in bond instead of stock.	1	2	3	4	5

7. If I have extra money, I will invest in bond.	1	2	3	4	5
8. As same situation with Question 3, I will continue hold the government bond.	1	2	3	4	5
9. I will invest in collection of bond security in my portfolio investment.	1	2	3	4	5
10. Corporate bond security is much more safety investment for me.	1	2	3	4	5

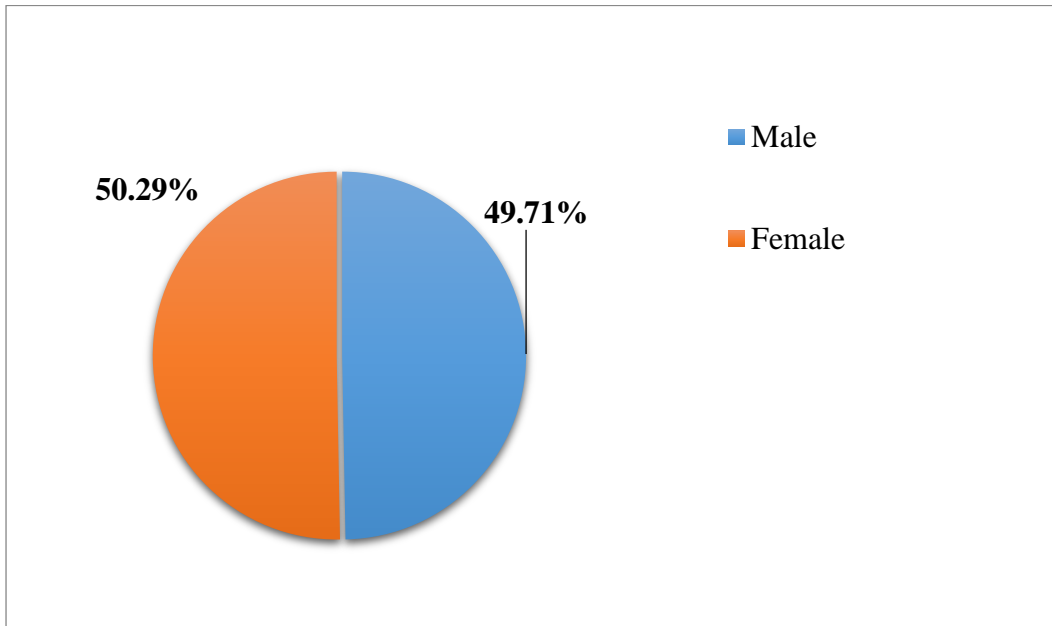
Appendix B: Respondent Demographic Profile

1. Age



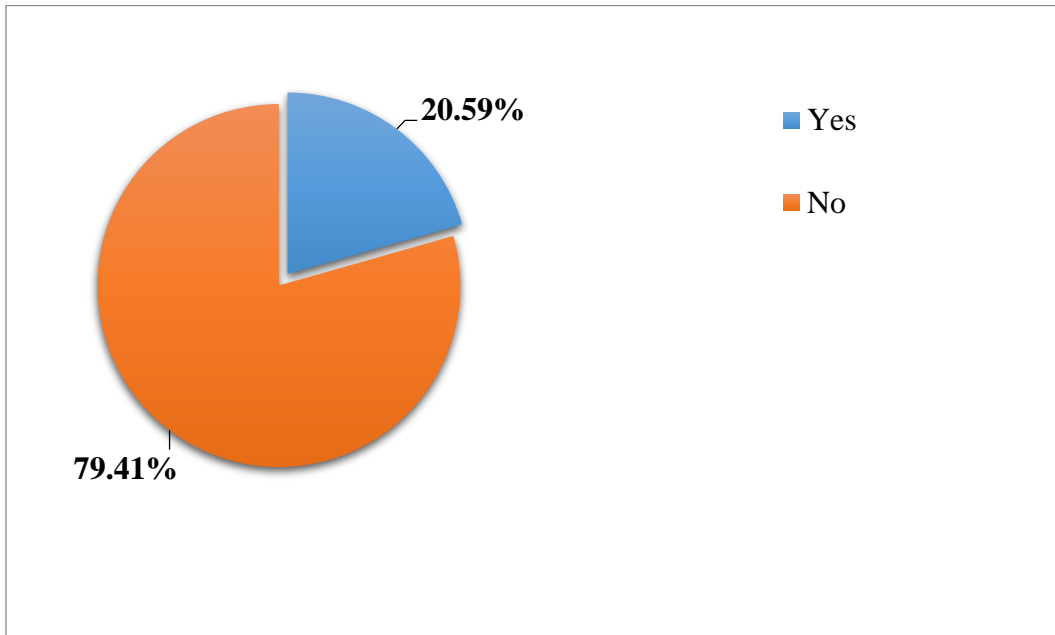
Age	Frequency	Percentages
18-21	67	19.80%
22-25	212	62.30%
26-29	61	17.90%
Total	340	100

2. Gender



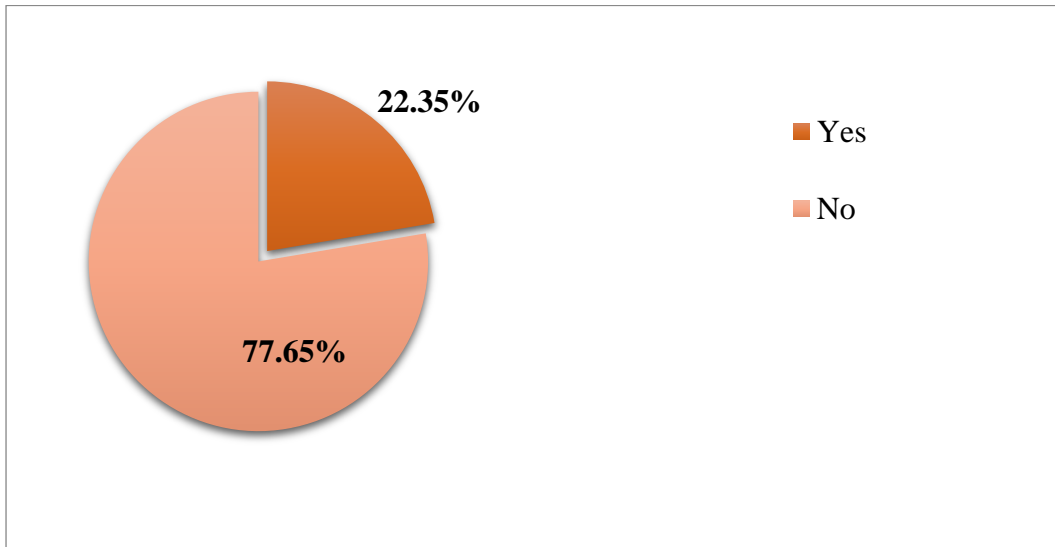
Gender	Frequency	Percentages
Male	169	49.71%
Female	171	50.29%
Total	340	100

3. Do you have any investment experience?



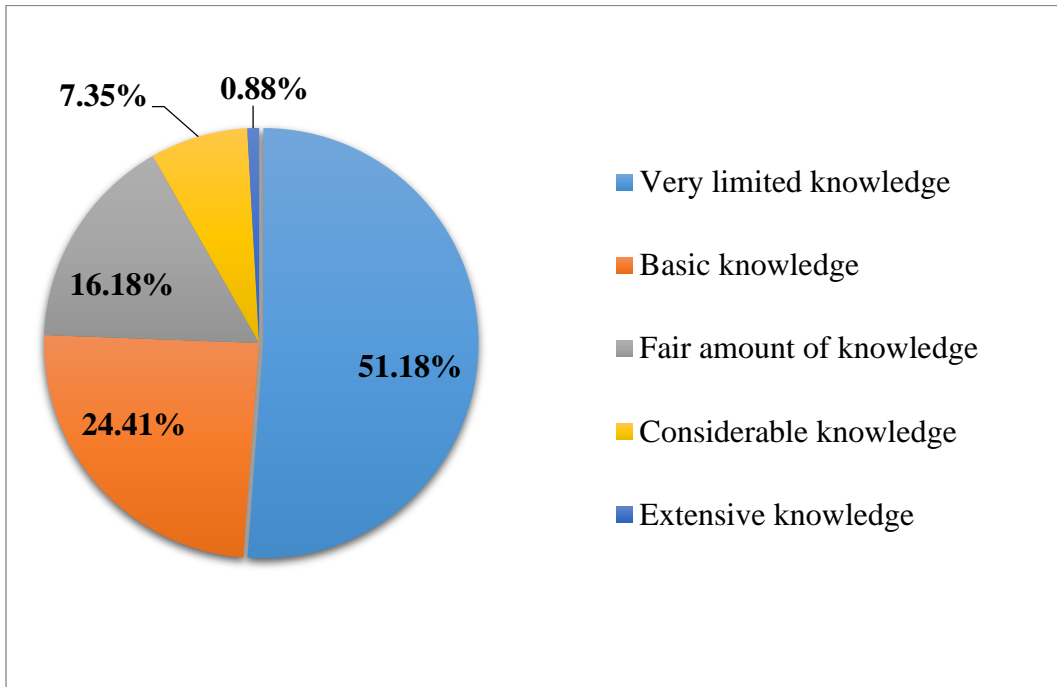
Do you have any investment experience	Frequency	Percentages
Yes	70	20.59%
No	270	79.41%
Total	340	100

4. Do you have attended any financial course or training before?



Do you have attended any financial course or training before?	Frequency	Percentages
Yes	76	22.35%
No	264	77.65%
Total	340	100

5. Which of the following best describes your level of investment knowledge?



Which of the following best describes your level of investment knowledge?	Frequency	Percentages
Very limited knowledge	174	51.18%
Basic knowledge	83	24.41%
Fair amount of knowledge	55	16.18%
Considerable knowledge	25	7.35%
Extensive knowledge	3	0.88%
Total	340	100

Appendix C: Multiple Regression Analysis

Model	R-squared	Adjusted R-squared	F-statistic	S.E. of estimate
1	0.177	0.157	8.905 [0.0000**]	0.5518

Coefficients						
Model (1)		Unstandardized coefficients		standardized coefficients	t	Sig.
		B	Std. Error	Beta		
	(constant)	1.420	.291		4.881	.000
	Extro	.167	.063	.139	2.646	.009**
	Agree	.221	.081	.149	2.729	.007**
	Conscient	.042	.052	.044	.808	.420
	Neuro	.231	.057	.249	4.054	.000**
	Openness	.117	.058	.118	2.015	.045**
	invesExp	-.016	.054	-.018	-.291	.772
	FL	.087	.042	.112	2.102	.036**
	Gender	.073	.048	.084	1.536	.125
Notes: Dependent variable: Risk Tolerance						

Model	R Square	Adjusted R-Square	F- statistic	Std. Error of the Estimate
2	0.173	0.170	70.668 [0.0000**]	0.55136

Coefficients						
Model (2)		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.670	.166		10.059	.000
	Risk	.419	.050	.416	8.406	.000**
Notes: Dependent variable: Investment decision						