

Majors: FIN

No. FIN/23

**“Impact Of Personality Traits on Investment Decision of The Real Estate
Investors with Mediating Effects Of Risk Tolerance”**



By:

(Muhammad Waleed Manzoor)

(01-220182-021)

Supervisor:

(Dr Taqadus Bashir)

(MBA 3.5 years)

Department of Business Studies

Bahria University Islamabad

Fall 2021.

Acknowledgement

In the name of Allah, the most beneficial and merciful. Alhamdulillah, all praises to Allah for the strengths and his blessing in completing this thesis. I would like to express my deepest gratitude and are thankful to my supervisor Dr Taqadus Bashir for giving me an opportunity to work on this emerging field of finance, for supervising this thesis and for providing guidance to make this thesis successful. I would also like to express my gratitude to my parents for their unfailing emotional support. May Allah bless them all (Ameen).

Muhammad Waleed Manzoor
Bahria University,
Islamabad.

Abstract

The purpose of the study is to examine the impact of personality traits such as openness to experience, agreeableness and neuroticism on the investment decision of real estate investors of Islamabad and Punjab and also take risk tolerance as a mediating variable. Investors have different personality traits and their risk tolerance levels are according to their personality traits like openness investors are more willing to take the risk when they invest somewhere, agreeable investors are also risk-taker but they take risks after some calculations and sometimes they avoid risk because they listen to others advice when making an investment decision, and neurotic investors are risk-avoider because they feel insecure, worried and anxious, and they are confused when making investment decisions. To check their personality traits and risk tolerance and the impact of these variables on the investment decision of real estate investors questionnaire was developed and asked investors to fill it online or by hand. The sample size is 385 investors and questionnaires are sent to 385 investors but 216 responses are collected. SPSS is used to analyze the data and findings of the study indicates that openness to experience has a positive association with risk tolerance and investment decisions, agreeableness has a positive relation with risk tolerance but negative relation with investment decisions, neuroticism has a negative association with risk tolerance and investment decisions, and risk tolerance has a strong positive relationship with the investment decisions.

Keywords: Personality Traits, Risk Tolerance level, and Investment Decisions.

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1 Chapter 01:

1.1 Introduction

This chapter includes the background of the study, gap analysis, problem statement, research objectives and question, and significance of the study.

1.2 Background of The Study

Successful real estate investments require effective decision-making (Isaac and O'Leary, 2011). The process of decision-making of an individual investor is dependent upon the complex pool of different personal characteristics (personality traits, risk tolerance, values, emotions, etc.) (Chitra and Sreedevi, 2011; Mishra et al., 2010; Young et al., 2012), markets (i.e. rate of return, expected risk, market environment, transaction cost, etc.) (Ferguson et al., 2011; Chang, 2008; Morse, 1998), demographic factors (i.e. gender, age groups, level of education, and income level) (Ozmen and Sumer, 2011; Mayfield and Shapiro, 2010; Bali et al., 2009; Hallahan et al., 2003) and other related factors. Traditional theories of finance such as Modern Portfolio Theory (Markowitz, 1952) and Efficient Market Theory (Fama, 1965, 1970) suggest that individuals are logical and their decisions are based on the relevant information available in the market. Traditional financial theorists further suggest that investment markets and their participants are rational and realistic people. However, various factors such as past experiences, beliefs, and feelings can influence investment decisions, causing investors to make irrational and unwise selections. A new field of finance has evolved to better understand the impact of these factors on investor decisions. This new area of finance is called behavioural finance.

The scope of behavioural finance increases day by day. In the past studies, Traditional finance holds that rational behaviour investors who made investments, evaluate financial risk and return on investment before making a decision in order to maximise profit. However, behavioural finance challenges traditional finance by introducing psychological factors that influence decision making. According to existing financial theories, both behavioural and traditional finance are essential for the process of investment decision-making (Olsen, 1998). According to Ferreira (2019), both the financial advisor and the individual who invest must be aware of important personality features as well as the degree of financial risk tolerance. Personal characteristics such as financial risk

tolerance (Kumari & Pandey, 2020a; Nguyen, Gallery, & Newton, 2016) and personality traits are frequently used to impact investment decisions (Ferreira, 2019; Lai, 2019; Mathur & Nathani, 2019; Pak & Mahmood, 2015a). This study aims to analyze how different personality traits influence the investment decision-making of potential real estate investors of Islamabad and Punjab, in the presence of uncertainty.

Numerous studies have demonstrated the impact of investors' personality traits on financial decision-making. The findings of the study by Back and Seakers (2004) have shown that personality traits affect an investor's decision-making behaviour under uncertain and risky situations. The association between personality traits and financial decisions has been extensively researched during the last few decades (Oehler et al., 2018; Lin, 2018). Different approaches have been used to characterise traits (Baumert et al., 2017), but the Big-Five personality model (which includes Openness to Experience, Agreeableness, Extraversion, Conscientiousness, and Neuroticism) has a large study base (Jayawickreme et al., 2018; Ashton & Lee, 2009). Most researchers used all big five personality traits in their studies, but some only used a few of them, such as Jamal and Ahmed (2016), who examine the impact of neuroticism, agreeableness, and openness to experience on long-term investment intention. However, Parveen, Ahmed, Usman, & Liaqat (2020) studied only introversion and extraversion traits. Our research also focuses on the three personality traits: openness to new experiences, agreeability, and neuroticism. Openness to experience individuals are creative, open-minded, and eager to try new things (Martins, 2002). These individuals are flexible in their decision-making (Robie et al, 2005). Moreover, research further revealed that people who have traits like openness to new experiences are more likely to take risks (Dhiman & Raheja, 2018). These people are more optimistic when making an investment decision. The agreeableness trait reflects a person's warmth, friendliness, and willingness to cooperate with others in society (McCrae & Costa, 1997). People who are highly agreeable have a kind heart, are forgiving, good in nature, and are well accepted by others (Martins, 2002). These individuals have a high level of empathy, which is why they consider the interest of others when making a decision. When it comes to investing, these people are also risk-takers and optimists. People with neuroticism are emotionally unstable, and they experience more stress and anxiety (Migliore, 2011). These people are insecure, unpredictable and short-tempered (McCrae & Costa, 1997). When making investment decisions, neurotic people take very low risks and are pessimistic.

(Kakkakunnan & Athira, 2020). Even though all investors assess risk before investment decisions, their reactions toward risk are different due to personality differences.

The most important aspect of behavioural finance is not how risk is assessed, but how it is tolerated, perceived, and how to be desirous of the aversion. This subjective risk evaluation is crucial. Risk tolerance refers to an investor's behaviour when assessing risk. In this scenario, the risks are related to the uncertainty regarding return on investment. Those who are willing to take the risk or risk-tolerant are more likely to invest in high-risk assets. Risk tolerance, according to Septi et' al., (2019), is defined as a person's willingness to accept risks associated with financial investments. It can also be defined as how a person acts on and reacts to risks during the process of investment decision-making. Some investors, according to Wulandari and Iramani (2014), might be classified as risk-seekers, risk avoiders, or risk indifference (who don't think about the risk). Real estate is often seen as a highly risky investment. Risk refers to the possibility that the actual return on an investment will differ from the predicted return (Thilini & Wickramaarachchi, 2019). The risk may have an impact on the entire management team or a project. According to (Delisle, 2010), Risk in the decision-making of real estate investment could be affected by various factors, including insufficient information, incorrect data, a poor understanding of market fundamentals, alteration in real estate laws, other regulatory changes such as increased property tax, and any change in the competitive environment. Personality traits, in addition to these factors, impact real estate investors' risk tolerance levels, which in turn influences their investment decisions.

1.3 Gap Analysis:

Most Researchers examined the relationship between all the five personality traits and investment decisions while some consider the impact of only a few personality traits such as introversion, and extroversion on the process of investment decision-making through risk tolerance (Parveen, Ahmad, Usman, & Liaqat, 2020), and Jamal & Ahmed (2016), investigates the effects of openness to experience, agreeableness, and neuroticism on long-term investment intention with risk aversion as a mediator variable. but yet no one has studied the impact of these personality dimensions such as openness to experience, agreeableness, and neuroticism on investment decision-making of real estate investors of Pakistan.

1.4 Problem Statement:

Keeping in view the gap analysis. This study focuses on the impact of three personality traits (i.e. openness to experience, agreeableness and neuroticism) on the investment decision of real estate investors of Islamabad and Punjab, along with risk tolerance level as a mediator. Previous studies emphasize, the impact of different personality traits on the investment decision-making of stock exchange investors around the world. The purpose of these studies was to examine the behaviour of stock exchange investors and how they made investment decisions? and what are those factors that influenced their decisions? but they ignore the real estate investors. Real estate is an emerging field in Pakistan. In recent years, the dynamics of real estate has been changed, big companies like Zameen.com and Agency 21 etc have impacted the real estate market in Pakistan, so it is important to study the behaviour of real estate investors and examine their investment decisions along with personality traits.

1.5 Research Objectives:

- To determine the impact of different personality traits on investment decision-making among real estate investors of Islamabad and Punjab.
- To analyze the relationship between risk tolerance and personality traits.
- To examine the association between risk tolerance and investment decisions.
- To investigate the role of risk tolerance level as a mediating variable in the relationship between personality traits and investment decisions of real estate investors.

1.6 Research Questions:

- How do different personality traits impact investment decision-making among real estate investors of Islamabad and Punjab?
- What is the relationship between risk tolerance and personality traits?
- What is the association between risk tolerance and investment decision-making?
- Does risk tolerance level perform a mediating role in the relationship between personality traits and investment decisions of real estate investors?

1.7 Significance:

The finding of this research will help the real estate agencies to study how the real estate investors' personality traits such as openness To experience, agreeableness, and neuroticism have an influence on the investment decision-making through risk tolerance level. It also helps the new investors to study different behaviours that would affect the process of investment decision-making. Moreover, This study will also be helpful for the students of behavioural finance who want to conduct further research on the impacts of these personality traits and risk tolerance levels on investment decision-making.

2 Chapter 02:

2.1 Literature Review

In this chapter, variables are defined and discussed with the help of existing literature. In this study, the dependent variable is an investment decision. The term dependent variable refers to a variable whose value is influenced by the independent variable. When there are changes in the independent variable, the dependent variable would also change as well. In this study, independent variables are personality traits. We choose three out of the big five personality traits. These three personality dimensions are Openness to Experience, Agreeableness, and Neuroticism. Independent variables are those, that have a direct impact on the dependent variables (Zhuan, Ying, Boon, Hui, Hong, 2016). In this research, risk tolerance is used as a partial mediator. A mediating variable is the one that connects the dependent and the independent variables and describes the association between the two variables. A mediating variable that acts as a bridge between two variables is also called the intervening variable or the mediator variable. There are two types of mediating variables:

1. Fully Mediation:

A full mediator describes the link between the dependent and independent variables but there is no association between the two variables when the mediator is not present in the model.

2. Partially Mediation:

Even when the mediator variable is removed from the model, but still relationship exists between the dependent and independent variables.

Based on the existing research, The purpose of this study is to look at the function of risk tolerance in the relationship between the decision regarding investments and personality characteristics (Perveen, Ahmad, Usman, & Liaqat, 2020; Sadiq & Amna, 2019).

2.2 Investment Decision:

Decision-making may be described as choosing the best option among different alternatives to achieve the objectives (Zhuan, Ying, Boon, Hui, & Hong, 2016; Chand, 2015). Investors made investment decisions to achieve higher future returns at the expense of current benefits. For each investment, a set of specific goals must be met. In practice, there are numerous objectives,

including control on inflation, protection against liquidity, and growth as well as a variety of risk and return options. Before making a decision, most investors do a thorough analysis of the investment instruments (Rahman & Gan, 2020; Kishori & Kumar, 2016). Adair et al. (1994) point out that investment in real estate has lately been acknowledged as a vital decision for a portfolio of multi-assets and individuals are adopting it as a technique for protecting against inflation along with diversification. For some investors, the maximum degree of entry cost and cultural differences act as a hindrance to investment. Property taxes, exchange rates, and fluctuation in currency are just a few of the other factors that might make an investment decision more difficult.

Traditionally, the investment decision-making of real estate has been seen as a reasonable and logical process (Hargitay & Yu, 1993; Diaz, 1999; Gigerenzer & Selten, 2001). Recent research has suggested that information about the investment is not fixed (Gallimore & Gray, 2002; Nsibande & Boshoff, 2017). Some study has shown in recent decades that logical and ideal decision making is based on financial knowledge. Therefore a person who has more financial knowledge can make better rational decisions (Merton, 1987). On the other hand, over the last two decades, many researchers focused on the behavioural aspects of an individual's psychology through cognitive unconsciousness which refers to memories, ideas without awareness and perceptions and has utilized this study to explain that in investment decisions, why do rational investors make mistakes (Rasheed, Rafique, Zahid, & Akthar, 2016; Hilton, 2001). According to Baker & Nofsinger (2002), investors' emotions and thoughts might influence their process of decision-making from reasonable to unreasonable. Investors whose financial literacy is high can make better decisions than those investors who don't have financial literacy. These people well understand both long-term and short-term financial planning and can effectively handle different economic conditions. Financial competency is decided by an individual's capability, needs and knowledge, all of which influence the financial system's engagement (Waheed, Ahmed, Saleem, Din, & Ahmed, 2021; Johnson & Sherraden, 2007).

As per the traditional financial theories, people who are investing, are rational but in reality, they are influenced by a variety of elements, including behavioural and psychological aspects, which obstruct the rational decision-making process. Behavioural finance tries to figure out the cause for this by connecting various characteristics of financial models and human nature (Barber and Odean, 1999). A study by Jain, Walia, and Gupta (2019) investigated that behavioural biases

influence the investment decisions of investors. According to Lim (2012) and Javed et al. (2017), overconfidence bias has a favourable effect on the decision-making process of the investor which contradicts the results of Kengatharan (2014), who found that investment decision making negatively influenced by the overconfidence bias. According to Grether (1980) and Chen et al. (2007), representative bias is more prevalent in naive investors. Javed et al. (2017) observed that representative bias has a favourable substantial influence on overall investment performance. Loss aversion bias influences the decision-making process of the investor in a positive way (Lim, 2012; Kengatharan, 2014; Luu, 2014; Khan, 2017). The observations of Bashir et al. (2013) contradict those of prior studies. He discovered that investors' making-decision is unaffected by loss aversion bias. Investors' decision-making process is positively influenced by regret aversion bias (Khan, 2017; Kengatharan, 2014; Luu, 2014; Lim, 2012). Herding bias has a significant favourable influence on the decision-making of investors. According to Kengatharan, 2014, out of several herding variables, the stock variable has little influence on individual investing decisions. Research of Lim (2012) was discovered to be incompatible with those earlier research, implying that herding bias did not affect the decision making of investors. Kengatharan (2014) discovered that investor decision-making has been significantly influenced by the anchoring bias. Mental accounting bias influences investment decision-making (Chandra, 2008) and as a result of mental accounting bias, investors continue to retain losing shares and trade winning shares (Grinblatt & Han, 2005; Shefrin & Statman, 1985). Waweru et al. (2008) discovered that institutional investors' decision-making is influenced by availability bias. According to Javed et al. (2017), availability bias has a positive substantial influence on perceived investment performance, which contradicts Khan (2017) and Rehan & Umer (2017) results that availability bias has an adverse impact on investment decision making.

According to a study conducted in Rajashtan, demographic factors influenced investment decisions. They have various approaches to making decisions, with some being risk-takers and others being risk-avoider. People of various income groups, educational levels, occupations, ages, gender, and marital status make various judgements (Jain & Mandot, 2012). Another study was carried out on the investors of the Karachi stock exchange to check which factors influenced their decision-making. The choice to buy stocks is based on maximizing one's wealth. Investors consider advice from friends and family as well as accounting data, but the majority of their decisions are made solely on their own will and are not affected by others. Investors who lack

expertise causing suffer while making investment decisions (Bashir et al., 2013; Iqbal & Usmani, 2011). The study by Lucey, (2005) have found the impact of investor emotions on the process of decision-making. This research observes the impact of different moods on the investment decision-making of an investor. He examined investor sentiments in two different areas. The first area includes misinterpretation of mood. The impact of environmental (external) factors like weather, social factors on the price of equity was investigated in this study. Because of pleasant weather, people in a happy mood make more favourable decisions. In the second section, the effects of stock's image on the decision-making process of investor is studied. Investors' emotions are influenced by the stock image, which is in turn influenced by their investing behaviour. According to the findings of this study, an investor would sometimes invest in the firm based on their liking and disliking of a company. Similarly, real estate investors also made investments based on their liking and disliking of location.

Real estate investment decisions are based on opportunity and risk, according to Fraser (1993), who believes that both unusual and evident disruptive events in the market environment can impact property investment decisions. Real estate is often seen as a high-risk investment so these investors should have risk tolerance. The risk tolerance level of investors and investment decision-making process is affected by other demographic characteristics, such as level of education, family member, and age groups. The study also revealed that young investors (those under the age of 30) take more risks while making an investment decision (Lufti, 2011; Evans, 2004). According to Crysel et al. (2012), the investment decisions of investors are influenced by personality traits. He suggested that an individual with a prominent trait of extraversion may understate the loss and overstate the profit. An individual investor with a high level of agreeableness is more inclined to trust an expert's advice and find it harder to take his or her decision regarding investment. Conscientious people are more likely to have well-defined investment objectives. A high level of neurotic people tends to understate the profit when there is a favourable market condition and may overstate the risk when the market condition is unfavourable. Highly open to experienced investors are more likely to absorb new information about the market and modify their investment portfolios often when market conditions change.

2.3 Personality Traits:

Personality dimensions of an individual describe the behaviour, thoughts, and feelings that distinguish one person from another and reflect how an individual reacts in a particular way under different situations (Baker, Kumar, & Goyal, 2018; Roberts, 2009). Personality dimensions are the blend of different emotional, motivational, and cognitive attributes which have an impact on the decision-making behaviour and environment of an individual (Naga & Yien, 2013; Dole & Schroeder, 2001; Smith, 1999a). Investment management, Spendings, and risk tolerance level of the individual are influenced by personality traits (Naga & Yien, 2013; Krishnan & Beena, 2009; Mayfield et al., 2008; Smith, 1999a). Research also shows that, in uncertain situations, the decision-making behaviour of an individual is guided by personality traits (Back & Seaker, 2004).

The Myer-Briggs types indicator is also known as MBTI. Further, categorized personality into four states namely feeling versus thinking, perceiving versus judging, intuition versus sensing, and introvert versus extrovert (Naga & Yien, 2013; Leary et al., 2009; Smith, 1999a). The MBTI expresses personality as preferences in such a manner, individuals make decisions instead of personal attributes. Following MBTI, the big five personality model is also known as OCEAN comprising of Openness to Experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism was developed (McCrea & Costa, 1997). The study shows that the big five personality model is the most extensive model particularly in the context of applied research (Barrick & Mount, 1991). After the years of statistical analysis, these five personality traits were derived. In this research, we used three personality dimensions out of the big five to explain the impact on the investment decision of real estate investors and financial risk tolerance and find the relationship between them. These traits are Openness to Experience, Agreeableness, and neuroticism.

2.3.1 Openness to Experience:

In openness to experience, people usually try activities that are different from others or think about unconventional ideas. These individuals are more creative and will attempt various approaches in their domains. Individuals with a high level of tolerance for uncertainty and who want change are considered to have prosperity toward taking the risk and sensation seeking (Zhuan, Ying, Boon, Hui, & Hong, 2016; Camgoz et al., 2011). Subsequently, individuals with high openness to

experience have more capacity for risk-taking and risk tendency (Zhuan, Ying, Boon, Hui, & Hong, 2016). These investors are flexible while making a decision (Nga & Yien, 2013; Robie et al., 2005). But, sometimes they may appear in the imagination and depend on the emotions in their decision making (Nga & Yien, 2013; McCrae & Costa, 1997).

People with openness to experience traits are more broad-minded, imaginative, smart, intellectual, creative, knowledgeable, and open to innovation (Aren & Hamamci, 2019; Tauni et al., 2017a, 2017b; Pinjisakikool, 2017; Akhtar & Batool, 2012; Becker et al., 2012; Durand et al., 2008; Costa and McCrae, 1992). Openness to experience also has a significant positive association with overconfidence and herding behaviour (Lin, 2011). This show that individual with openness to experience trait prefer to look for information about new investment, including advice from institutional investors or newspaper, which can ultimately affect their behaviour. Furthermore, Dehghanan et al. (2016) also reveal that there is a positive association between emotional intelligence and openness to experience. Because of the high propensity of people in openness to experience to take a part in intellectual and reflective activities and to look for the opportunity to learn different fields, it is natural that openness to experience is related to intelligence in a favourable way.

Individuals, who possess an openness to experience trait appear to be related with the acquisition of financial assets and borrowing (Brown & Taylor, 2014). Different studies show that these investors invest in risky investments. According to Akhtar & Batool (2012), investors with openness to experience personality traits are willing to take more risks. Durand e al. (2008) and Pinjisakikool (2017) observed that they like more risk. Hunter & kemp (2004) found that these investors invest in risky firms. Mayfield et al. (2008) state that people with an openness to experience are more successful in financial matters, they do not run away from the risk, and they go with investments that are usually long term in nature. Another study reveals that such investors are over-confidence and willing to invest in investments that include a higher amount of risk. Moreover, these individuals invest in both short term and long term assets (Jamal & Ahmend, 2016; Barber & Odean, 1999). Nicholson (2006) investigated that there is a positive relationship between risk-taking and openness to experience. Garling (2010) also found that investors with personality traits like openness to experience easily take more financial risk as compared to other traits.

2.3.2 Agreeableness:

Agreeableness means supportiveness, soft-heartedness, friendliness, selflessness and empathy for others (Mayfield et al., 2008). Agreeableness personality traits indicate an individual who is more cooperative, friendly, and easy-going (McCrae & Costa, 2003). People with high agreeableness traits are forgiving in nature, sympathetic, kind and they are accepted well by their peers (Nga & Yien, 2013; Martins, 2002). They are generally unselfish and respect the norms and values of society. Therefore, these individuals are more straightforward and humble while making a decision (Nga & Yien, 2013; McCrae & Costa, 1997).

According to McCrae & Costa (1992), An agreeable person depends on the judgement of the financial analyst and find it difficult to make personal financial decisions. These people try to ignore conflicts and arguments with other people and they consider the information and knowledge provided by others positively without any critical evaluation (McCrae & Costa, 1997). Digman (1997) investigated that individuals with high agreeableness traits are more flexible in their decision making. These people are honest and have good intentions for others. They are more helpful and friendly with other people. Individuals with a high level of agreeableness, borrow more from others and save less (Jamal & Ahmed, 2016; Nyhus & Webley, 2001). Furthermore, studies revealed that risk aversion and agreeableness are positively related to each other (Jamal & Ahmed, 2016; Borghans et al., 2009). According to Byrne et al. (2015), decision making has an inverse relationship with agreeableness.

Dehghanan et al., (2014) reported evidence of a favourable connection between emotional intelligence and personality trait like agreeableness. At the same time, Pak & Mahmood (2015) revealed that agreeableness has an adverse effect on risk tolerance level (Hidayat,& Kustina, 2020). In the case of stockholding, agreeableness has adverse effects (Hidayat, & Kustina, 2020; Zarri, 2017). Another study found that these investors have a high level of risk (Aren and Hamamci, 2019; Dohmen et al., 2010). On the other hand, Pinjisakikool (2017) found the opposite result (Aren & Hamamci, 2019).

The study shows that the agreeableness personality trait is linked with interpersonal orientation in which agreeable individuals are more group-oriented instead of self-centred (Zhuan, Ying, Boon, Hui, & Hong, 2016). Buccioli & Zarri (2015) stated that individuals with low agreeableness tend

to find faults in others, focus less on others' well-being, unhelpful, and selfish. Therefore, they will be more likely to think about themselves and take financial risks while making investment decisions. The outcome of the study of Soane & Chmiel (2005) revealed that investors, who have a higher score in agreeableness are more consistent in risk-aversion and those, whose scores are low in agreeableness are more inconsistent in risk preferences.

2.3.3 Neuroticism:

Neuroticism is also a part of the big five personality traits. Neurotic individuals are depressed, Emotionally unstable, and egocentric (Zhuan, Ying, Boon, Hui, & Hong, 2016; Kleine, Wagner & Weller, 2015; Pak & Mahmood, 2013). These individuals are unconfident, impulsive, unpredictable, and short-tempered (Nga & Yien, 2013; McCrae & Costa, 1997). An individual with personality trait like neuroticism has the ability to undergo negative emotions like mentally disturbed, worried, delicate, reserved, hopeless, lack of self-control and lack of self-confidence (Aren & Hamamci, 2019; Tauni et al., 2017a, 2017b; Pinjisakikool, 2017; Becker et al., 2012; Durand et al., 2008). Because of their pessimistic point of view, their investment decisions are affected by their willingness to take the risks. Emotionally stable investors are more investing in derivatives and equity (Nga & Yien, 2013; Chitra & Sreedevi, 2011).

A person with high neuroticism trait tends to underrate gains when the market conditions are good or favourable and may overrate the risks when market conditions are unfavourable/unstable. This is happen due to poor analytical skills, weak cognitive skills and a lack of critical thinking and conceptual understanding (Hidayat, & Kustina, 2020; Pak & Mahmood, 2015). These deficiencies also make neurotic people more frightened and anxious while making a risky decision (Young et al., 2012; McCrae & Costa Jr, 1997). Gambetti & Giusberti (2012) stated that these investors are kept away from indecision, avoid foreign equities and debt securities, and also avoid taking risks. Therefore, neurotic investors invest in portfolios with an appetite for lower risk. Furthermore, according to Niszczoła (2014), these investors avoid investing in an uncertain situation and foreign security. Pak & Mahmood (2015) found that neuroticism and risky behaviour are inversely related to each other.

Becker et al., (2012) investigated that individuals with personality traits like neuroticism are more risk avoider. On the other hand, some researchers observed that neurotic individuals want more

risk (Aren & Hamamci, 2019; Tauni et al., 2017a; Pinjisakikool, 2017; Durand et al., 2013; Durand et al., 2008). Lin (2011) found that due to high levels of stress, mental disturbance, and low control on emotions, these investors sell their productive stocks too earlier but when the prices of these stocks are continuously falling they do not sell them. Investment decisions of these investors are overturned in most cases because they follow the advice of professional investors and their friends.

Neuroticism is associated with mental activities that are linked with adverse effects, withdrawn attitude and risk avoider (Fung & Durand, 2014). According to Dehghanan et al. (2014), neuroticism and emotional intelligence have a negative relationship with each other. Moreover, in terms of making a decision, investors with high neuroticism promote the process of decision making towards risk aversion (Jamal & Ahmend, 2016; Fessler et al., 2004). Neurotic individuals point out the existence of possible threats while making any type of financial decision making is influenced by the risk aversion to minimize the weakness threat (Butler & Mathews, 1987). Further explained by Zhang et al. (2014), highly neurotic investors are always overreacted and sensitized towards normal conditions like small changes in the price of a stock, hence they may start trading too much because of facing high emotions which leads to irrational behaviour. Furthermore, Sadi et al., (2010) found that the decision making of these investors would be depending on their personality and show that availability bias, randomness bias, and hindsight bias have a relationship with neuroticism which specify that the investment decision of neurotic individuals is influenced by these biases.

2.4 Risk Tolerance:

Risk is well-considered as an integral part of investment behaviour (Kiev, 2003). The term risk is associated with the uncertainty that an investor would receive when he makes an investment decision (Grable, 2008). There are three types of investors, one who likes to take risk, the second who avoid risk and the third who don't care about the risk (Wulandari & Iramani, 2014). Risk tolerance and risk aversion are the two levels of risk that are important in behavioural finance (Aren & Hamamci, 2019). Gustafsson & Omark (2015) describe the risk tolerance level as the highest level of risk or uncertainty that an investor wishes to take while making an investment. Risk tolerance level is also defined as a person's willingness to take the risk while making an investment. This also shows the way an individual takes action and responds to risk in the

investment decision (Wulandari & Iramani, 2014). Three fundamental ways are used to test the financial risk tolerance: measuring via questionnaires and survey forms, examining the real investment behaviour, and studying different behaviours of the investor in an experimental environment (Aren & Hamamci, 2019; Faff et al., 2008). Risk tolerance level can improve the understanding of risk in the investment decisions and help an individual to be capable to harmonize and bear the risk that will be acceptable for the investment goals and because of that, an individual has been ready to take the risk consistent with the rate of return which he will receive in the coming times. When selecting other alternatives of the investment, an individual decision is effecting by the risk tolerance (Lutfi, 2019; Pak & Mahmood, 2015; Snelbecker, Roszkowski, & Cutler, 1990). Some investors with a high level of risk tolerance are strong enough to invest in more risky assets such as stock, while some investors with a low level of risk tolerance are avoiding to invest in these assets (Nguyen et al., 2016; Pompian, 2012; Corter & Chen, 2006).

A study found that investors who have financial literacy are generally more broad-minded towards financial risk tolerance (Grable & Roszkowski, 2008). There is a favourable association between financial risk tolerance and financial literacy (Gibson et al., 2013; Grable, 2008; Frijns et al., 2008; Grable & Joo, 2004; Beal & Delpachitra, 2003). Moreover, research by Beal and Delpachitra (2003) on the financial literacy of Australian students observed that individuals who have more financial skills and knowledge are usually high risk-tolerant. Frijns et al., (2008) found that investors who consider themselves as weak in financial literacy are more investing in low-risk assets. According to Ishfaq et al. (2020), Decision making of the investment has been significantly influenced by the risk tolerance in different financial markets. Grable and Roszkowski (2008) found that risk tolerance is an important characteristic that investors needed in order to succeed. Furthermore, Samsuri et al. (2019) observed that risk tolerance level positively influenced the investment decision.

There is a conflict in the literature, whether women are less or more risk-tolerant. Ho, Milevsky, & Robinson (1994) point out that women invest more in the riskier portfolio as compared with men due to their more life expectancy than males. On the other hand, Yao & Hanna (2004) revealed that women are low risk-taker while making investment decisions. Furthermore, most of the studies show that females take less risk than males, and married households are more risk-taker as compared with singles (Heo, Grable, Nobre, & Menjiver, 2016; Grable, 2008). Kubilay &

Bayrakdaroglu (2016) found that the risk-taking behaviour of individuals are influenced by psychological biases which they faced. Gustafsson & Omark (2015) point out that investors who take more risk are more overconfident. Ahmad (2020) investigated that risk-tolerant investors have a high degree of overconfidence and are often disposed towards showing heuristic biases. He added more that these investors ignore current information about the market and use heuristics depending on prior experience. The results further revealed that investors who avoid risk are followed a more systematic process of making decisions instead of risk-tolerant who uses a heuristic approach.

The investor's financial risk tolerance has been researched from different points of views. The most important perspective is from the examination of consistency in making decisions under doubtful and risky situations (Weber et al., 1992; Tversky & Kahneman, 2002). The study further revealed that risk perception is significantly influenced by the personality traits of the investors (Sitkin & Pablo, 1992). Another study has observed that decision making attitude of an investor is guided by personality traits during uncertain situations (Pak & Mahmood, 2015; Back & Seaker, 2004). Personality traits like Openness to experienced and extravert are generally more risk-tolerant, on the other hand, agreeable, conscientious, and neurotic investors are less risk-taker (Nicholson et al., 2005; Kowert & Hermann, 1997). Dhiman & Raheja (2018) studied whether emotional intelligence and personality characteristics have an impact on the risk tolerance level of an individual investor. The results of this study further revealed that individuals, who are highly open to experience, agreeable, and extravert are more likely to take risks. The findings of the research which is based on emotional intelligence show that individuals who know their weaknesses and strengths, handle emotions well, and are motivated choose more risky investments and make better decisions than others. Another research found that the risk tolerance level is a partial mediation in the connection between investment decisions and personality traits (Perveen, Ahmad, Usman, & Liaqat, 2020; Sadiq & Amna, 2019).

2.5 Hypothesis:

Hypotheses have been developed to test whether these personality traits have a significant positive impact or negative impact on the investment decisions of real estate investors and also find the role of a mediator between the independent and dependent variables. Based on the above-mentioned variables, the following four hypotheses have been developed:

H1. Personality traits has a positive impact on investment decisions.

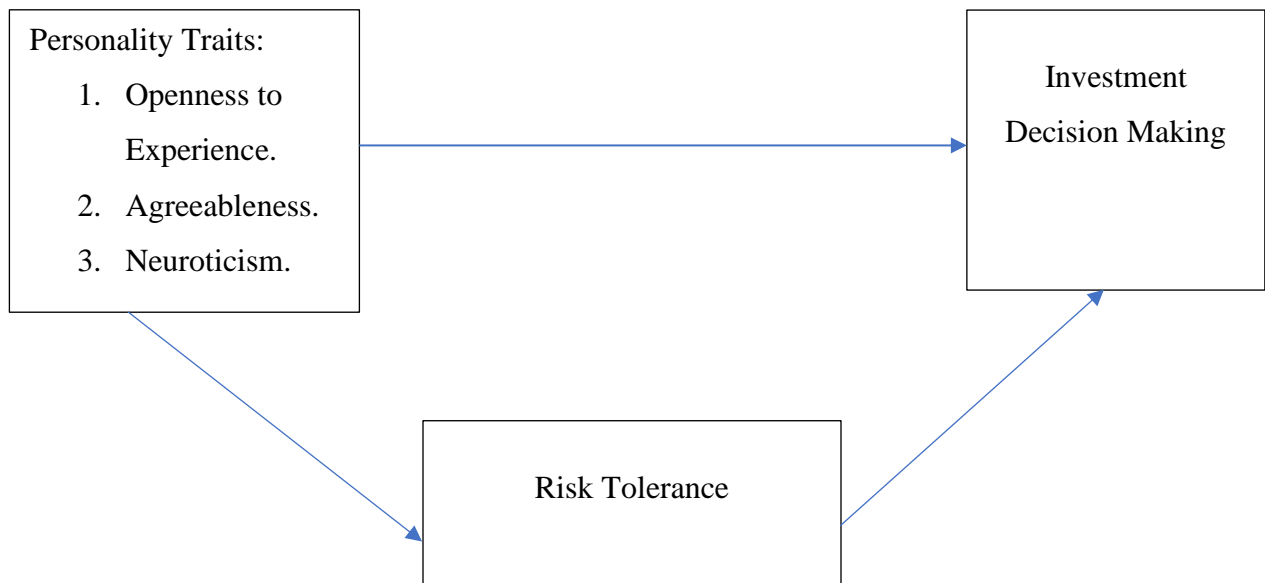
H2. Personality traits has a positive impact on risk tolerance.

H3. Risk tolerance has a positive influence on investment decisions.

H4. Risk tolerance partially mediates the association between personality traits and investment decisions.

2.6 Theoretical Framework:

A conceptual framework is a structure that helps to explain the concept behind as well as the connection between dependent and independent variables, and the role of mediator or moderator variable. After reviewing the existing literature and formulating a hypothesis, the following model of the theoretical structure which is obtained from the research hypothesis is proposed.



3 Chapter 03:

3.1 Methodology

This chapter includes research philosophy, research approach, research design, data source, the population of the study, sample size and techniques, and measurement in which scales are used in the development of a questionnaire are discussed.

3.2 Research Philosophy:

The philosophy used in this study is positivism. Qualitative study and experiments are commonly used in positivism and the data should be real. According to Phillips & Burbules (2000), knowledge in positivism should be objective and free of biases, which means that it should be free from the researcher's beliefs and values. This study also took real data which is collected from questionnaires.

3.3 Research Approach:

A deductive approach is used in this research to identify the most influential variables impacting the investment decisions of real estate investors. Bryman (2008) described deductive reasoning that first, find a theory and then based on this theory developed hypotheses and then measure/observe/experiment these hypotheses to prove or disprove. The main goal of this study is to investigate behavioural factors that influence the real estate investors' decision-making that is already "available today," rather than collecting and constructing theory. The deduction approach appears to be the most optimal option. The study begins by examining behavioural finance theories in general, as well as real estate market theories in particular, in order to gain a conceptual and theoretical context as well as empirical results from previous studies, from which the research framework and hypotheses are presented. The questions for interviews and questionnaires are then developed.

3.4 Research Design:

To identify the relationship between personality traits, investment decisions and risk tolerance level, and the factors influencing the investment decisions of real estate investors, the study

employs an exploratory research design and a descriptive research design. The research design for the study used a questionnaire as the primary data collection tool, allowing the researcher to extrapolate the results to a larger population. It enables the collection of quantitative data that can be used to analyze with inferential statistics. The research questionnaire consisted of four parts: Demographics, Personality traits, risk tolerance and investment decisions.

3.5 Data Source:

Two types of data sources can be used in the research: primary data source and secondary data source. In this research, a primary source of data is used. Primary data refers to the data that is newly obtained by the researchers and has not yet been published in previous studies. In addition, according to Leeuw (2005), there are different methods for the collection of primary data including questionnaires, survey forms, interviews, observation, focus groups and experiments. A questionnaire was used to collect the data for this study because, in behavioural finance, data is collected from the investors through questionnaires, survey forms or interviews.

3.6 Population:

The population for this study is real estate investors. These investors are from different areas of Islamabad and Punjab. There is no age limit for these investors. Both males and females are part of this research. These investors have a wide range of educational backgrounds and work experience.

3.7 Sample Size and Sampling Technique:

To calculate the sample size, the following formula is used (Nargundkar, 2003).

$$n = p (1-p) (Z/e)^2$$

$$n = 0.50 (1-0.50) (1.96/0.05)^2$$

$$\mathbf{n = 385}$$

Where,

N = Sample size

Z = Value of z is 1.96 at the confidence level of 95% which is assumed.

P = The proportion is 0.50, which represents the frequency with which something occurs.

E = This is the tolerance error that the researcher determined. The tolerance error for this study is 0.05.

The sample size for the study is 385 investors of real estate. But out of 385, only 216 questionnaires are filled by the investors. These investors belong to different areas of Punjab and Islamabad. The technique used in this study is snowball sampling which is a part of non-probability sampling. Snowball sampling is also known as network sampling or chain-referral sampling. In this technique, respondents refer the questionnaire to other relevant persons. This technique is used when data is not easily collected. Most real estate investors do not disclose their investments easily. They only provide information to trustworthy people and real estate agents. In this study, real estate agents from different real estate agencies provide help in the collection of data.

3.8 Measurement:

In this research, a questionnaire has been used as a measuring instrument. The questionnaire consisted of four sections: section A, section B, section C and section D. Section A contain demographic information of the respondents such as age, gender, marital status, education, work experience and real estate investment experience. Section B includes questions related to personality traits. Section C involves questions linked with investment decisions. Last section D comprises questions related to the risk tolerance level of an individual investor. The questionnaire was developed using Microsoft Word and Google Forms, and it was then sent to various real estate investors via email, WhatsApp, and physically.

3.8.1 Personality Traits:

The independent variables for this research are three personality traits comprising Openness to experience (OTE) which has 07 items, Agreeableness (AGG) which has 04 items and neuroticism (NEU) which has 05 items. Question number 7, 8, 10, and 13 are revise-scored questions. All the

16 items are adapted from Big Five Inventory (BFI). To measure these items six-point Likert scale (6=strongly agree, 5=agree, 4=somewhat agree, 3=somewhat disagree, 2=disagree, 1=strongly disagree) is used in this research, which was also used by Pak & Mahmood (2013). This scale is also known as the balanced scale.

3.8.2 Investment Decision:

An investment decision (ID) is a dependent variable in this research which contain 10 items from different studies. The first 5 items are adopted from Kourtidis et al. (2011) and other items are adapted from Waheed, Ahmed, Saleem, Din & Ahmed (2020), six-point frequency scale is used to measure these items where 6=Always, 5=Often, 4=Average, 3=Sometime, 2=rarely, 1=Never. A person who chooses always gets the highest 6 score and a person who chooses never gets the lowest score of 1.

3.8.3 Risk Tolerance:

Risk tolerance (RT) performs the role of partial mediation between personality traits and investment decisions. There are 8 items involved in risk tolerance. The scale of risk tolerance is adapted from Grable & Lytton (1999), which is widely used in many research. There are six options included in this section and respondent should choose only one option out of six. 1 represent the lowest score and 6 represent the highest score. The lowest score means a person is a risk avoider and the highest score means a person is willing to take the maximum amount of risk.

4 Chapter 04:

4.1 Data Analysis

SPSS software is used for the analysis of this study. Frequencies of the respondents are calculated through SPSS to check all the responses are recorded or not. Frequencies calculated of demographics section. SPSS also calculate the reliability of the instrument. To check the reliability, Cronbach's alpha is calculated. Correlation and regression analysis are also run through SPSS software which explains the relationship and impact of the variables on each other.

4.2 Demographics Profile:

The following section will describe the sample statistics of the 216 respondents who took part in this research. In the research, there are no missing values. The following tables show the statistics:

4.2.1 Gender:

Item		Frequency	Percent
Gender	M	181	83.8
	F	35	16.2
	Total	216	100.0

Male real estate investors filled 181 questionnaires and their response rate is 83.8 percent. On the other hand, female investors filled out only 35 questionnaires with a 16.2 percent response rate. The percentage of male investors is higher than female investors because male investors are more interested in real estate than females.

4.2.2 Age:

Item		Frequency	Percentile
Age	26-30 yrs	26	12.0
	31-35 yrs	33	15.3
	36-40 yrs	25	11.6

	41-45 yrs	55	25.5
	>=46 yrs	77	35.6
	Total	216	100.0

These investors are from different age groups, but mature people usually invest more in real estate than young investors who are immature. Response rate also indicates that investors whose ages are above the 40s filled 132 questionnaires out of 216 with 61.1 percent. However, the response rate of below 40-year investors is 28.1 percent. The reason is that real estate's investment needs a huge amount of capital which most people have when they are reached the late 30s or above 40s years of their age because they are more financially stable.

4.2.3 Marital Status:

Item		Frequency	Percent
Marital Status	Single	15	6.9
	Married	198	91.7
	Divorced	3	1.4
	Total	216	100.0

People who are married invest more in real estate than singles and divorced. The marital status table shows that the response rate of married investors is 91.7 percent and the combined response rates of both single and divorced investors are 8.3 percent because in the age section we observed that most real estate investors are above 35 years and at that age, people are usually married.

4.2.4 Educational Qualification:

Item		Frequency	Percent
Educational Qualification	School	8	3.7
	College	40	18.5
	Graduation	80	37.0

	Post-Graduation	63	29.2
	Doctorate	20	9.3
	Others	5	2.3
	Total	216	100.0

This table shows the educational qualifications of our respondents are different. 37.0 percent of real estate investors are graduates, 29.2 percent of real estate investors are post-graduate, 18.5 percent of real estate investors attend college, 9.3 percent of investors are PhD doctors, 3.7 percent investors attend school and only 2.3 percent of investors have other qualifications.

4.2.5 Work Experience:

Item		Frequency	Percent
Work Experience	1-3 yrs	19	8.8
	4-6 yrs	34	15.7
	7-9 yrs	36	16.7
	10-12 yrs	50	23.1
	>12 yrs	77	35.6
	Total	216	100.0

Investors have different types of work experience some have only real estate experience while others have different work experiences. Investors with greater work experience invest more in real estate. According to collected data, 35.6 percent of investors have more than twelve years of work experience, 23.1 percent of investors have ten to twelve years of work experience, 16.7 percent of investors have seven to nine years of work experience, 15.7 percent of investors have four to six years of experience and 8.8 percent investors have equal to or less than three years of work experience.

4.2.6 Real Estate Investment Experience:

Item		Frequency	Percent
How many years of real estate experience do you have?	<1	62	28.7
	1-3	59	27.3
	4-6	50	23.1
	7-9	21	9.7
	10-12	18	8.3
	>12	6	2.8
	Total	216	100.0

The investment experience table shows that 28.7 percent of investors have less than one year of real estate experience, 27.3 percent of the real estate investors have one year to three years of experience, 23.1 percent of investors have four to six years of experience, 9.7 percent of investors have seven to nine years of experience, 8.3 percent of real estate investors have ten to twelve years of experience, and only 2.8 percent investors have more than twelve years of real estate experience.

4.3 Reliability Analysis:

<u>Variables</u>	<u>Cronbach's Alpha</u>	<u>N of Items</u>
Investment Decision	0.832	10
Risk Tolerance	0.846	08
Personality Traits	0.680	16

According to Zikmund (2003), reliability refers to the degree to which data is error-free and produces consistent results. Internal consistency and reliability of the questions are measured by Cronbach's alpha (Nunnally et al., 1967). According to Kline (2005), Cronbach's alpha has a range of acceptable values between 0 to 1, with 0.7 being the threshold value. However, According to Sekaran & Bougie (2011), reliability values below 0.60 are considered as poor, those between 0.70 and 0.80 are acceptable values, and those greater than 0.80 are excellent. Moreover, according to Bashir et al. (2013), When the alpha is equal to or greater than 0.5, it indicates that the questions

are reliable. George & Mallery (2003) found that if a value is greater than 0.6 then results are satisfactory and acceptable. On the other hand, if the result is below 0.6, it would be considered unacceptable. In this study, investment decision has a Cronbach's alpha of 0.832 which is very good and acceptable. Risk tolerance has a Cronbach's alpha of 0.846 which is also excellent but Cronbach's alpha value of personality trait is 0.680 which is less than the value investment decision and risk tolerance. But still, fall in the range of acceptable values. These values show that questionnaire is valid and reliable.

4.4 Correlation:

The strength and direction of the relationships between the variables are investigated using correlation analysis. The range of the value of correlation is between 1 to -1. 1 indicates a strong positive relationship and -1 indicates a strong negative relationship between variables. The results of the correlation are shown in the correlation analysis table:

Correlations

		Openness to Experience	Agreeableness	Neuroticism	Risk Tolerance	Investment Decisions
Openness to Experience	Pearson Correlation	1				
	Sig. (2-tailed)					
Agreeableness	Pearson Correlation	.151*	1			
	Sig. (2-tailed)	.027				
Neuroticism	Pearson Correlation	.057	.479**	1		
	Sig. (2-tailed)	.403	.000			
Risk Tolerance	Pearson Correlation	.391**	.004	-.203**	1	
	Sig. (2-tailed)	.000	.954	.003		
Investment Decisions	Pearson Correlation	.410**	-.038	-.206**	.685**	1
	Sig. (2-tailed)	.000	.578	.002	.000	

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

** Correlation is significant at the 0.01 level (2-tailed).

Openness to experience has positively correlated with agreeableness and neuroticism (at $r = 0.151$ and $r = 0.057$ respectively) and significantly positively correlated with risk tolerance and investment decision (at $r = 0.391$, $p < 0.05$ and $r = 0.410$, $p < 0.05$ respectively) which shows that

there is a strong relationship between openness to experience and mediating variable risk tolerance and dependent variable investment decision. The result supports the H1 hypothesis.

Agreeableness has significantly positively correlated with neuroticism (at $r = 0.479$ and $p < 0.05$) and positively correlated with risk tolerance (at $r = 0.004$) which indicates that there is a weak positive relationship between agreeableness and risk tolerance. Agreeableness has also negatively correlated with investment decisions (at $r = -0.038$), supporting the H1 hypothesis.

Neuroticism has significantly negatively correlated with risk tolerance and investment decision (at $r = -0.203$, $p < 0.05$ and $r = -0.206$, $p < 0.05$ respectively) which shows that neuroticism has a negative relationship with risk tolerance and investment decision. These results also support the H1 hypothesis.

Risk tolerance also has significantly positively correlated with investment decision (at $r = 0.685$, $p < 0.05$). it indicates that there is a strong positive relationship between risk tolerance and investment decision. The results also support the H3 hypothesis.

4.5 Regression Analysis:

Correlation has given the preliminary support for the hypothesis of the research, but it only tells us about the strength and direction of the relationship between the variables. To see more concrete results, the researcher used regression analysis to prove the hypothesis of the study. We can't run a linear regression on this model because there is a mediating variable in this study.

Regression Coefficients:

Model	<u>Coefficient</u>		
	Beta	T	Sig
PT	0.6350	2.7552	0.0045
RT	0.5837	13.5133	0.0000

Mediation Analysis:

Mediation Analysis Between Personality Traits and Risk Tolerance

IV	DV	Beta	S.E	T	P	LLCI	ULCI
PT	ID	0.6350	0.0841	2.7552	0.0045	0.1023	0.2294
RT	ID	0.5837	0.0432	13.5133	0.0000	0.4985	0.6688

The regression analysis for this study has been executed using Andrew F. Hayes' regression model. We start by downloading and installing the Process macro file in SPSS, and then we run the test. Model 4 has been used, with investment decision (id) as the dependent variable (Y), personality traits (pt) as the independent variable, and risk tolerance (rt) as the mediating variable (M). Results shows the impact of personality traits on risk tolerance and Investment Decision. The results are acceptable because the signs of LLCI and ULCI are same but if signs are different then its means our results are not acceptable. T value is also acceptable because it should be grater than |2| which means greater than +2 and -2. The results are significant because the value of p is (0.0045) for personality traits, which is less than 0.05. The value of R square is 0.1820 which indicate that an 18.20 percent variation in risk tolerance is explained by the change in personality traits. The value of p for rt is (0.0000) which is less than 0.05, which indicates the overall results are significant. The value of R square is 0.4707 which means that 47.07 percent change in the investment decision is explained by personality traits and risk tolerance. The value of beta for personality traits is 0.6350 which shows that a 1 unit change in personality traits will bring 0.6350 units to change in the investment decision and the value of beta for risk tolerance is 0.5837 which shows that a 1 unit change in risk tolerance will bring 0.5837 units to change in the investment decision. Risk tolerance level partially mediates between personality traits and investment decisions. The results also support the H4 hypothesis.

4.6 Hypothesis Results:

In this study, eight hypotheses are tested and the results of all the hypotheses are supported.

NO.	Hypothesis	Results
1	Personality traits has a positive impact on investment decisions.	Supported
2	Personality traits has a positive impact on risk tolerance.	Supported
3	Risk tolerance level has a positive influence on investment decisions.	Supported
4	Risk tolerance level partially mediates the association between personality traits and investment decisions.	Supported

5 Chapter 05:

5.1 Discussion

5.2 Findings:

In previous research, researchers find the relationship between personality traits and investment decisions of the stock exchange investors. According to Pak and Mahmood (2013), openness to experience has a positive- correlation with risk tolerance while agreeableness and neuroticism has a negative correlation with risk tolerance. Further findings stated that there is no significant relationship found between investment decisions and personality traits. Individual risk-tolerance attitude, on the other hand, appears to have a significant impact on investment decisions. The intention of investing in the stock exchange market is positively related to a higher risk tolerance level ($r = 0.526$, $p = 0.001$). Warneryd (2001), Clark-Murphy & Soutar (2004), and Wood & Zaichkowsky all reported similar findings (2004). Another study by Jamal & Ahmed (2016) revealed that Openness to experience and neuroticism are positively correlated with long term investment decisions but agreeableness has a negative correlation with long term investment decisions. The findings of our study are different from these two studies. In our study agreeableness is positively correlated with risk tolerance and neuroticism has a negative correlation with long term investment decisions, both these results contradict the findings mentioned above.

5.3 Conclusion:

Although there is no commonly used model for the investment decision-making of the real estate sector, there are several ideas and concepts in the real estate literature that attempt to simplify the process of decision-making in order to maximise the outcomes of real estate investments. Investment decisions of real estate can be viewed through either a traditional or behavioural perspective. From a traditional perspective, people think that all the investment decisions are systematic and rational but they some ignore the importance of the behavioural aspect. From a behavioural perspective, investors make rational decisions but their decisions are affected by personality traits, risk tolerance levels and behavioural biases. Investors make decisions according

to their risk tolerance level, some are willing to take high risks, some are risk-avoider, and some investors don't care about the risk.

The research examined the mediating role of risk tolerance between personality traits and investment decision-making of real estate investors in Islamabad and Punjab. The target population is the investors who invest in the real estate sector of Pakistan. The data collection was done by using a questionnaire and the size of the sample was 385 real estate investors and only 216 respondents filled the questionnaire correctly. SPSS software is used to test and run the data. The Cronbach's alpha of all the variables is under the range of reliability. According to the frequency, male investors respond more frequently than female investors. It also shows that investors over the age of 35 and who have more work experience are more likely to invest in real estate. The study concluded that the openness to experience trait has significantly positively correlated with risk tolerance and investment decision. The agreeableness trait has a weak positive relationship with risk tolerance and a negative relationship with the investment decision. Neuroticism has a significantly negative relationship with risk tolerance and investment decision and risk tolerance has a strong positive relationship with investment decision and result of the correlation is also significant because the value of p is equal to 0.000 which is less than 0.05. risk tolerance also partially mediates between personality traits and investment decisions.

5.4 Limitations and Future Scope:

This research was carried out in Islamabad and different states of Punjab, which is largely dominated by the business class. If the research was performed in a different geographical area, the outcome might be different because geographical factors also influenced the risk tolerance level and personality traits of the individual investors. It is suggested that future studies emphasize the entire country, assessing the differences and similarities among Pakistani investors based on cultural differences and the availability of a variety of investment options.

The size of the sample for the study is small, the researchers should study the large size of the sample to get more accurate results. Furthermore, because this research only focused on the three personality traits (openness to experience, agreeableness, and neuroticism), future researchers included the other two personality traits (extroversion and conscientiousness) to get more concrete results in relation to the big five models. Other personality models could be used to examine the

psychology of individual investors in terms of investment decisions, allowing the upcoming researchers to investigate the other dimensions of personality.

There are more factors that mediate the relationship between personality traits and investment decisions; future researchers may try to study other mediating variables besides risk tolerance that influences this relationship between personality traits and investment decisions. Like risk aversion and financial literacy etc. Future researchers also used moderating variables like demographic factors. The use of snowball sampling techniques for data collection is another limitation of this research.

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7 Appendix

Research Questionnaire:

Dear respondent! Your valuable input is required to conduct research in behavioural finance. Please share your opinion and experience, your input will be used entirely for academic purposes.

A. Demographics:

1. Age:
 - Up to 25
 - 26-30
 - 31-35
 - 36-40
 - 41-45
 - 46 and Above
2. Gender:
 - Male
 - Female
 - Other
3. Marital Status:
 - Single
 - Married
 - Divorced
4. Educational Qualification:
 - School
 - College
 - Graduation
 - Post-Graduation
 - Doctorate
 - Others
5. Work Experience:
 - Less than 1 year
 - 1-3 years
 - 4-6 years
 - 7-9 years
 - 10-12 years
 - Above 12 years
6. How many years of real estate experience do you have?
 - Less than 1 year
 - 1-3 years
 - 4-6 years
 - 7-9 years
 - 10-12 years
 - Above 12 years

B. Personality Traits:

Follow the given scale (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = agree, and 6 = strongly agree).

S.No	Questions	1	2	3	4	5	6
OTE1	I come up with new ideas						
OTE2	I am curious about many different things						
OTE3	I am ingenious and a deep thinker						

OTE4	I have an active imagination						
OTE5	I am inventive						
OTE6	I value artistic and aesthetic experience						
OTE7	I prefer routine work						
AGG8	I tend to find faults in others						
AGG9	I am helpful and unselfish with others						
AGG10	I start arguments with others						
AGG11	I generally trust others						
NEU12	I am depressed and often blue						
NEU13	I am relaxed and can handle stress well						
NEU14	I worry a lot						
NEU15	I can be moody						
NEU16	I get nervous easily						

(Question # 7, 8, 10, and 13 are revise-scored questions)

C. Investment Decision:

Follow the given scale (1 = Never, 2 = rarely, 3 = sometime, 4 = Average, 5 = often, 6 = Always).

S.No	Questions	1	2	3	4	5	6
ID1	In most cases, my investment decisions support my investment objective						
ID2	My reaction towards losses are normal						
ID3	Usually, I get my expected return on my investment decision						
ID4	I have risk tolerance towards my investment decisions						
ID5	My investment holding periods are spread over a long span of time						
ID6	A fluctuation in the real estate market does not concern me						

ID7	I put half of my investment money in the real estate						
ID8	I think the benefits of choosing risky investments will influence the decisions						
ID9	I prefer to invest in less developed areas, as I am confident about my investment decision						
ID10	I prefer to invest in completed projects instead of investing in ongoing (continued) projects						

D. Risk Tolerance:

1. In general, how would your best friend describe you as a risk-taker?
 - a. A real risk avoider
 - b. Cautious
 - c. Willing to take risks after completing adequate research
 - d. Average Level of risk is OK to me
 - e. Chooser of high-risk, high return instead of low risk, low return investment
 - f. A real gambler

2. You are on a TV game show and can choose one of the following, which would you take?
 - a. Rs 100,000 in cash
 - b. A 90% chance at winning Rs 150,000
 - c. A 75% chance at winning Rs 250,000
 - d. A 50% chance at winning Rs 500,000
 - e. A 25% chance at winning Rs 1,000,000
 - f. A 5% chance at winning Rs 10,000,000

3. You have just finished saving for a “once-in-a-lifetime” vacation. Three weeks before you plan to leave, you lose your job. You would:
 - a. Cancel the vacation
 - b. Take a much more modest vacation
 - c. Extend your vacation, because this might be your last chance to go first-class
 - d. Go as per scheduled, reasoning that you need the time to prepare for a job search
 - e. Will go for the vacations by borrowing from somebody (relatives or friends etc.)
 - f. Will go for the vacations and forget about the consequences

4. In terms of experience, how comfortable are you investing in real estate?
 - a. Highly uncomfortable
 - b. Uncomfortable
 - c. Somewhat Uncomfortable
 - d. Somewhat Comfortable
 - e. Comfortable
 - f. Highly comfortable

5. When you think of the word “risk”, which of the following words comes to your mind first?
 - a. Ambiguity
 - b. Loss
 - c. Uncertainty
 - d. Opportunity
 - e. High return
 - f. Thrill
6. Suppose a relative left you an inheritance of Rs 1,000,000 stipulating in the will that you invest ALL the money in ONE of the following choices. Which one would you select?
 - a. A saving account or money market mutual fund
 - b. A mutual fund that owns stocks and bonds
 - c. Housing societies or projects approved by the government
 - d. A portfolio of 15 common stocks
 - e. Commodities like gold, silver, and oil
 - f. Acquire property in rural areas
7. If you had to invest Rs 2,000,000 which of the following investment choices would you find most appealing?
 - a. 90% in low-risk investments, 10% in medium-risk investments, 0% in high-risk investments
 - b. 70% in low-risk investments, 25% in medium-risk investments, 5% in high-risk investments
 - c. 60% in low-risk investments, 30% in medium- risk investments, 10% in high-risk investments
 - d. 30% in low-risk investments, 40% in medium-risk investments, 30% in high-risk investments
 - e. 10% in low-risk investments, 40% in medium-risk investments, 50% in high-risk investments
 - f. 0% in low-risk investments, 30% in medium-risk investments, 70% in high-risk investments
8. Your trusted friend and neighbour, an experienced geologist, is putting together a group of investors to fund a big shopping mall in Islamabad. The venture could pay back 50 to 100 times the investment if the soil test passed, if the soil test failed, the entire investment is worthless. Your friend estimates the chance of success in only 20%. If you had the money, how much would you invest?
 - a. Nothing
 - b. One month’s salary
 - c. Three months’ salary
 - d. Six months’ salary
 - e. 50% of savings
 - f. Whole savings and borrowed from somewhere

Scoring

1. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
2. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
3. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
4. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
5. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
6. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
7. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$
8. $a = 1; b = 2; c = 3; d = 4; e = 5; f = 6$

