

FINANCIAL LITERACY, INVESTMENT EXPERIENCE, AND SELF-EFFICACY AS DETERMINANTS OF INVESTMENT DECISION MAKING BEHAVIOR

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Abstract

Purpose – The purpose of the study is to identify the impact of FL, IE, and FSE on IDMB; mediating role of RT and PI and FRP as moderators.

Methodology & Design – The quantitative research design was used to achieve the objective of the study. The survey technique was used and questionnaire. The cross-sectional data was gathered from the respondents. The population of the study is business graduates of Karachi, Pakistan. The total number of observations was used for data analysis. The PLS-SEM software was applied for analysis purposes. The questionnaire was also modified with slight adjustments from the already existing validated instruments to suit the context of this research.

Findings – The research found that FL, IE and FSE has a impact on IDMB with RT as mediating variable and what is the role of the moderator that is PI and FRP. The study shows how these variables impact each other in the presence of mediating and moderating variable.

Limitations – The research was limited by geographical scope, cross-sectional designs and reliance on self-reported data. Certain limitations were imposed intentionally to make it vast and timely. The future researcher could make it broader according to their reach and willingness of expansion in the study.

Recommendations – The institutions should focus on strengthening FL, FSE and providing IE to students so it can positively impact their IDMB. The reliance on basic three independent variables were studied in the research which influences investment decision making behavior to the greatest extent. The additional focus on is advised along with the further study of mediating and moderating variables.

1.1 INTRODUCTION

Among the most essential and crucial is the process of deciding on investments. It varies from person to person and depends on several elements (Ricciardi & Simon, 2000). It has become essential to manage personal finances in today's world. The financial environment is now more complex. FL is

the understanding and knowledge about finance. Studies reflect that FL helps with improved decision-making. Individual's belief in their capabilities allows them to make proactive decisions regarding investments. Knowledge, experience, and appropriate risk management can

make a good decision. Research has indicated that better FL is linked to better actual investment outcomes and investment behaviors.

Individuals with an understanding of the market and trends develop more confidence and competence in evaluating the investment opportunities. The decision-making is much more effective when an investor identifies the variables and how they correspond with it. Risk tolerance, a mediating variable, is considered as a central factor in asset allocation decisions and portfolio selection. Students with a lack of FL are more risk-averse and tend to favor safer and lower-yield investment options. Business students, particularly those with backgrounds in finance, economics, and management, represent a growing segment of potential investors. In the context of the Pakistani financial growth sector, there are multiple challenges to an investor, be it an individual, family, or organization. Challenges like uncertainty, dependency, and risk arise due to a lack of FL and limited or no experience in the market.

Students need more financial understanding and knowledge than ever. It has become important to plan for long-term investments, short-term savings, and understanding the use of money in daily life. PI and FRP, alongside the RT, involve the emotional response to the risk and involve the perception of friends and family regarding investment decision behavior. Peer groups can act as informal financial consultants for students, guiding them with knowledge of financial risk, which impacts their investment behavior. The investment behaviors are multidimensional. With RT serving as a mediating element, the study seeks to explore how FL, IE, and FSE affect investment decision behavior; PI and FRP serve as moderating factors. It will examine the behavior of the students regarding investment decisions and will explore a detailed understanding of investor behaviors and perceptions regarding investment decisions.

1.2 Background

Financial markets have become more accessible to individual investors through digital platforms and increased financial technology (Lusardi &

Mitchell, 2014). The young generation, however, is interested in spending and lacks investment decisions and savings options. People with the understanding related to finance, IE, and FSE are more likely to participate in financial planning and investments. Multiple elements impact the complex process of making an investment. This research focuses on educated young individuals, particularly business graduates. In Pakistan, a developing nation, the capital markets are constantly changing, and the level of FL is significantly uneven. Pakistan's financial center, Karachi, generates a sizable number of business graduates each year.

Considering the economy of Pakistan, it is fragile and politically unstable. People lack information, expertise, and confidence, which limits their ability to handle their financial matters. Many studies on FL have been done by focusing Asian countries but with limited scope of study. While this research is considering the behavior and perception of the students, more specifically the business graduates of Karachi, Pakistan. Students with knowledge and positive risk perception can plan to jump into riskier investment decisions, and with great learning, they are able to generate large returns. This research will be helpful in examining such effects as well and allowing future researchers to investigate multiple dimensions that can put a significant impact on the investment decisions and to explore other demographics to understand their behavior and perceptions regarding investment decisions.

The study will focus on variables like IE along with FSE and FL that would influence the investment decision behaviors. Then further, the study will analyze how the mediating factor of RT, along with the moderating factors of PI and FRP, impacts investment decisions. The results would help to understand how FL and knowledge can be used to manage risk capacity, increase investment, and create more investment opportunities.

1.3 Problem Statement

Increased financial education and investment opportunities encourage individuals to make effective investment decisions (Lusardi & Mitchell, 2014). However, business graduates

often fail to apply their academic financial skills and knowledge to make sound investment decisions. Business education does not provide them with knowledge of FL and practical knowledge of investments; as a result, they lack FSE. The dynamics like PI and FRP within the local business graduates in Karachi are scarce. A global issue is lack of FL; according to the Standard & Poor Global Financial Survey, just 33% of the population worldwide are financially knowledgeable. According to the Brookings Institution, among the 26 countries with lowest FL scores, Pakistan ranks 16th. The economic condition of Pakistan is making investors more risk-averse and lose confidence to make investments. There is a significant awareness gap caused by a lack of defined understanding. Legislators, educators, and financial institutions may lack an extensive awareness of how financial knowledge and experience combine with social and psychological factors, which is necessary to create strategies that successfully encourage young professionals to make rational decisions related to investment. The lack of investment-related opportunities is hindering economic growth, resulting in negative impacts on the economy. The study will therefore examine business graduate's behavior and perceptions to determine how self-efficacy, FL, and IE, affect their investment decisions together with mediating and moderating effects.

1.4 Research Objectives

The following are the research objectives:

- i. To determine the impact of financial literacy on investment decision making behavior.
- ii. To determine the impact of investment experience on investment decision making behavior.
- iii. To determine the impact of financial self-efficacy on investment decision making behavior.
- iv. To investigate how risk tolerance mediates between financial literacy and investment decision making behavior.
- v. To investigate how risk tolerance mediates between investment experience and investment decision making behavior.

vi. To investigate how risk tolerance mediates between financial self-efficacy and investment decision making behavior.

vii. To examine the moderating effects of peer influence and financial risk perception among the constructs.

1.5 Research Questions

- i. To what extent does financial literacy influence investment decision making behavior?
- ii. To what extent does investment experience influence investment decision making behavior?
- iii. To what extent does financial self-efficacy influence investment decision making behavior?
- iv. Does risk tolerance play a mediating role between financial literacy and investment decision making behavior?
- v. Does risk tolerance play a mediating role between investment experiences and investment decision making behavior?
- vi. Does risk tolerance play a mediating role between financial self-efficacy and investment decision making behavior?
- vii. How does peer influence and financial risk perception as a moderator influence the constructs.

1.6 Significance of the Study

Emphasizing the changing issues connected to financial education and investment practices, this study is significant. Previous research in Pakistan has looked at only a few aspects (Awais et al., 2016), but this study includes a complete model that covers IE, FSE, RT, PI, and FRP. The study incorporates the theory of planned behavior, which helps further understand investment behaviors. Three key elements form the foundation of the theory. The first component is attitude, which includes IE, FSE, FL, and investment decision making behavior. The second is subjective norms, notably PI and perceived financial risk. Lastly, the theory relies on perceived control behavior (PCB), also known as RT (Ajzen, 1991). This theory enables the linking of these variables and their impact on investment behaviors.

Considering the research practically, this study is significant for the policymakers, students,

financial advisors, and financial institutions in Pakistan. Policymakers can create investment policies by considering the behaviors and mindsets of the young students and individuals. They can create options with better returns and minimum risk. Business schools can incorporate behavioral finance into their educational programs to foster not just the acquisition of knowledge but also the development of decision-making abilities and financial confidence.

Moreover, this study focuses on business graduates of Karachi, Pakistan. Many graduates in this region exhibit risk-averse or inexperienced investment behavior despite their academic expertise in finance and business. There is a lack of investment due to peer pressure or fear of market volatility. This study addresses a gap and provides insights that might direct future research in other developing markets with comparable features.

1.7 Scope of the Research

The study is based on TPB and examines the investment decision behaviors among the business graduates of Karachi, Pakistan. The study is restricted to Karachi and to focus on business schools, who are the potential entrants to the investment markets. The study emphasizes examining the variations in FL, knowledge, and behaviors between students in business schools. Within the broader context of the TPB (Ajzen, 1991), the study incorporates social constructs (PI) and psychological constructs (FSE, RT, and risk perception). The model seeks to reflect ways in which social norms, individual attitudes, and PCB influence real investment behaviors. The research collected data from the survey designs and responses from students at business schools. The use of surveys helped to collect data in assessing perceptions of whether and how these variables, like FL, IE, and FSE, can influence investment decision making behaviors. Additionally, the study explored the roles that mediating and moderating variables play in influencing investment decisions. The study does not include non-business students and professionals in its scope. However, it provides room for other researchers in the future to understand their investment decisions' context

along with other variables. The findings of the study provided beneficial ground for students to make wiser investment decisions and bring their knowledge into practical applications.

1.8 Organization of the Thesis

Chapter 1 - Introduction: The context is thoroughly covered in this chapter, which also emphasizes how essential financial decision-making is becoming for young people, particularly Pakistani business graduates. This chapter also outlines the significance, scope, and theoretical underpinnings of the study, particularly the TPB. It also outlines the problem statement, questions, and objectives. The conclusion of the chapter deals with the framework of the study.

Chapter 2 - Literature Review: The literature review emphasizes the key constructs and gets into further details about the relationships between them. This part reflects the previous study and supports it with the current research. It also includes the details of the keywords and factors. It justifies the need for study. This chapter develops the knowledge of how investment decision behaviors are influenced by IE, FL, and FSE as well as mediating role of RT and moderating factors which are PI and FRP.

Chapter 3 - Research Methodology: This contains the details of the type and design of the research (qualitative/quantitative). This chapter covers sampling techniques. This chapter also mentions the reliability and validity of the research.

Chapter 4 - Results: This chapter present the result from gathered insights which was collected quantitatively. Data was gathered through survey targeting all the business graduates of Karachi, Pakistan. The data was analyzed using smart PLS software. It identified the measurement model and structural model. This chapter involves understanding of the data analysis and its interpretation.

Discussion

This includes the discussions of all the hypothesis. The part consists of all hypothesis along with its detailed discussion. The discussions are supported by previous studies. The accepted and rejected hypothesis are well explained in this chapter. This

chapter involves explanation of the p-values, t-values along with its beta value to show the significance of the hypothesis.

Chapter 6 – Conclusion and Recommendation: This part consists of all the summary of proposed research and includes all the findings and results. This part provides the complete overview of the study along with suggestions and limitations. Those constraints and recommendations are elaborated with broader scope allowing future researchers to look for it and get into a deeper understanding of the research for future research.

LITERATURE REVIEW

1.9 Theoretical Background

The study stems from the philosophy of TPB. The theory shows that the performance of a behavior is a simultaneous function of intentions and PCB (Ajzen, 1991). The three elements of the theory are subjective norm, attitude, and PCB. This theory shows how these factors influence decision-making behavior. The first is attitude, which refers to how positively or negatively a person evaluates the behavior in question. The next factor is the subjective norm, which refers to the perception of an individual linked with social pressure to either perform or refrain from performing a behavior. In this research, PI and FRPs influence decision-making behavior as moderators and act as subjective norms. Then comes the perceived control behavior, so the greater the PCB, the greater an individual's positive intention to make investment decisions. Positive attitudes result from increased exposure and knowledge, which improve comprehension of financial instruments, market dynamics, and risk-return trade-offs. Having FSE helps make more sound investments, as the students believe in themselves and invest confidently. Such an attitude of self-efficacy is likely to contribute to accomplishment and, thus, more positive personal outcomes in investment decisions (Farrell et al., 2016). RT is the perceived control behavior and acts as a mediating variable for investment decision making behavior. Individuals with high RT have more intentions to make investment decisions (Weber et al., 2002).

So, overall, the TPB provides the framework that investment decision making behaviors are based on psychological and social factors along with financial knowledge and understanding. This further helps to innovate and boost the economy's growth. According to (Komalasari & Mulyadi, 2023) saving and investment practices are strongly influenced by financial knowledge and PI. These frameworks work together to give a solid theoretical foundation for understanding how investment decisions are made.

1.10 Empirical Studies

Different empirical studies explore FSE, FL, and IE, with dependent variables in relation to the mediating and moderating variables. Several research papers have shown positive correlation, whereas a few highlights different aspects as well. While other variables, like PI and FRP, work as moderators between the constructs, others, such as RT, serve as mediating variables, affecting the link between the dependent and independent variables.

Lusardi & Mitchell (2014) conduct an analysis of an expanding collection of economic studies on FL. The mentions theoretical research that positions financial knowledge as a sort of human capital investment. It reflects that financial information has significant consequences for both welfare and strategies, which aims to increase FL among the population. Next, the study determine how much (or little) people know and identify the population segments which are least financially educated. This phase is followed by an investigation of how FL influences economic decision-making in the United States and worldwide. While literature is still developing, conclusions can be reached regarding the causes and implications of financial illiteracy, as well as what works to close these gaps. The final section explores the knowledge that researchers must acquire to enhance theoretical and empirical models.

Farrell et al., (2016) highlights that substantial policy emphasis has been directed into improving individual's understanding related to FL, mostly through education programs related to finance. However, managing personal finances requires

financial knowledge and literacy both. An individual should have trust in themselves and have self-belief in their talents. The literature refers to this personal trait as 'self-efficacy.' This research uses a psychometric instrument to investigate the importance of an individual's FSE in understanding their own financial behavior. According to a 2013 survey, FSE is one of the biggest predictors of the type and quantity of financial products that a woman owns. The findings show that women with better FSE have greater confidence in their financial management abilities and are more likely to hold investment and savings and less likely to carry debts. Even when other key factors such as education, financial risk preferences, age, and household income are considered, FSE is revealed to have strong explanatory power at the 1% crucial level. Furthermore, the impact of FSE is distinct from that of FL variables.

Kanagasabai & Aggarwal (2020) report on how FL affects investment choices, with RT serving as a mediating variable. The data collection was done by using a questionnaire survey of individual investors in Chennai, India. Results showed a significant and a positive relationship between FL and investment performance, with RT as a partial mediator in this regard. This study represents a pioneering effort in examining the mediating role of RT. The more financially literate a person is, the more risk they take and the more satisfied they are with their investment. The results of the study reflected several implications for investors, financial planners, and regulators. The work also contributes to comprehending the importance of FL for investors and enhancing awareness and intention to invest among those who do not currently invest.

Sharma (2020) undertook a thorough study of the interactions between FL, RT, and investing choices. The response from the study generates that individuals prefer the safety of their money as a top priority over the possibility for greater profits. Investing choices are influenced by several elements including income level, financial knowledge, financial stability, and other demographic and social traits. Investors typically make their decisions based on their RT. The

researcher in this paper uses exploratory research techniques to examine the interplay between RT, literacy, and investment decision-making. The researcher offers a mediation theory to clarify this relationship. This mediation model allows the researcher to examine both the direct and indirect connection between FL and investment decisions via RT.

Aisjah et al., (2024) supports that in recent years, the younger generation has often considered investment in financial assets. Reflecting on the Single Investor Identification data, this trend fits the expansion of investors. This study looks at how financial knowledge and EI influence investment decisions both directly and indirectly. The study also aims to examine how risk perception and RT serve as mediators between the constructs. This paper applies to a quantitative method while focusing on Generation Z. Purposive sampling is the method used, which consists of 500 respondents. They used an online survey distribution system to gather data. This work applied the PLS structural equation modeling. With risk perception having a major effect on investment decisions, the outcome of this study revealed that FL notably affects investment decisions, risk perception, and RT. Emotional intelligence significantly impacts an individual's risk perception, tolerance and choices. The research further highlights that the relationship between investment decisions and FL is not mediated by risk perception and tolerance. Particularly for Generation Z young investors, this study suggested that financial education should be aligned with emotional intelligence. Moreover, financial institutions and legislators want to think about including risk management techniques and emotional intelligence training in their programs on investor education. The findings of this study emphasize that people need to know the psychological components of investing behavior, as they could improve decision-making and encourage more sustainable investment practices among young investors.

Based on the findings of different researchers, the subject continues to find the conclusion. The following research defines relationships and covers many aspects. It highlights various factors that

differ from each other. Also, these factors in different demographics perform differently. A deeper knowledge of these factors will thus enable smarter investing choices.

1.11 Definition of Key Terms

1.11.1 Investment Decision Making Behavior (D.V)

Investment decisions involve selecting different opportunities, like real assets or financial instruments, and considering the risks, returns, and timing. Examining the probable risks and advantages of various investment options, which include mutual funds, corporate bonds, equity market, and other options, allows an individual to make effective investment decisions. Individual financial objectives, RT, FL, market circumstances, and psychological elements like confidence and risk perception contributes to decisions related to investment. During the investment decisions, investors encounter highly complex factors such as risk, ambiguity, and overloaded choices (Awais et al., 2016). Investment decision making behavior depends on how much risk an individual can tolerate, and as a result, investments are highly risky or less risky. There is a certain trend that is followed by individual investors based on their investment behavior. Furthermore, they consider certain financial instruments' specific features, like a fixed rate of return (Sharma, 2020). IDMB have direct, mediating, and moderating effects, which are highlighted in the research; those variables affect the investment decision making behavior.

1.11.2 Financial Literacy (I.V)

The term describes an individual's ability to understand and apply financial concepts to generate reasonable and realistic decisions related to investment. It focuses on knowledge about investment, risk management, and returns. The next step involves applying this knowledge in a practical context. Also, to have confidence to take actions. Having FL shapes positive or negative behavior and attitude toward investment decisions. According to (Mahdzan & Tabiani, 2013), FL and competence help to improve

investment decision-making, therefore enabling better planning and management of life events which can include education, savings, personal assets, or retirement. Lack of financial knowledge creates struggle for business graduates to apply academic knowledge in real investment; they rely on peers or family members to get financial advice and avoid investing. The gap between academic knowledge and practical financial behavior is a major impediment to making effective investment decisions. (Sharma, 2020) suggests that two aspects can characterize FL: knowledge and application dimension. Either through the experience of investing in various financial assets or through reading books, articles, and other relevant literature, one can gain knowledge. The application dimension is characterized as efficiently utilizing the knowledge gained from several distinct sources to generate benefit.

1.11.3 Investment Experience (I.V)

The term describes the extent and quality of an individual's previous involvement in financial markets and investment activities. IE shows not only involvement in financial markets but also the confidence and learning that comes with it, which affects future investment decision making behavior. It also influences investment attitudes. It shapes the attitude toward investment decisions and indirectly influences behavioral intentions by enhancing the understanding of market dynamics. Business graduates in Pakistan usually lack access to investment platforms and face economic uncertainty as a result; the IE is not that much success. As per research, individuals with prior IE have high RT, better FSE, and positive market opportunities. Evidently, individuals with successful prior IE tend to have higher RT, leading to expectations of high returns (Awais et al., 2016). Therefore, IEs positively influence investment decision making behaviors. According to (Hani et al., 2020), individuals who lack experience may result in poor planning because their insufficient skills stem from low utilization of knowledge in decision-making practices.

1.11.4 Financial Self-Efficacy (I.V)

This term describes a person's belief in their capacity to make sensible investment choices and handle financial obligations. It asserts that self-confidence affects behavior, motivation, perseverance, and investment decisions. As per the TPB perspective, higher self-efficacy tends to perceive investing as an opportunity rather than a threat. Self-efficacy has seemed to be low among business graduates of Karachi, Pakistan, due to cultural norms where financial decisions are mostly made by the elder members of the family and there is limited practical engagement in investments. (Farrell et al., 2016) claims that such a mindset of self-efficacy is probably going to lead to success and, thus, more positive personal financial results.

1.11.5 Risk Tolerance (MED.V)

RT is the personal capacity of an individual to accept uncertainty and possible losses to gain a return on their investment. It is psychological characteristics that affect the attitudes and behavior of the individual investor. It acts as perceived behavioral control, as an individual with higher tolerance believes they are better able to deal with unpredictable investment results. RT varies among individuals. It reflects that individuals with the same knowledge might behave differently when it comes to investing and risk measurement. According to (Trimpop, 1994), risk seekers are psychologically elastic. They typically possess a strong understanding of risk, have a track record of successful RT, can tolerate ambiguity, seek new experiences, and respond quickly to stimuli. RT impacts investment performance (Kanagasabai & Aggarwal, 2020).

1.11.6 Peer Influence (MOD.V)

PI is the psychological effect that individuals of a similar age and educational background have on one another's behavior, decisions, and views. When it comes to financial decision-making, peer pressure is critical, particularly for young people, as it shapes their views on risk, investment tactics, and financial conduct. This variable directly contributes to the subjective norm construct. As

students observe their peers planning and investing, they perceive it as beneficial. However, when they observe that their peers are risk-averse, it discourages them from investing and their investment behavior is affected. According to (Zaighum & Karim, 2019), PI also serves as a medium to create a social multiplier effect. Under such an effect, the actions of individuals or entities directly influence each other, potentially leading to large-scale change.

1.11.7 Financial Risk Perception (MOD.V)

FRP is the psychological assessment of uncertainty and potential loss in financial decision-making. It entails a personal assessment of the likelihood and severity of financial outcomes, which is frequently influenced by cognitive biases, emotions, education, and prior experience. Risk perception plays a fundamental role in investors' behavior (Zhang et al., 2022). Individuals who perceive the market as highly risky are less likely to make a positive investment intention. If individuals are financially literate and have self-efficacy, their intentions to make investments will be strong and effective. Financial risk arises due to economic instability, foreign exchange fluctuations, limited investment platforms, and lack of awareness, and as a result, individuals opt for low-risk assets. FRP is crucial in affecting investment behavior, particularly among young and first-time investors. According to (Saputro & Lestari, 2019), risk perception is highly crucial. Students who have knowledge and are aware of the possible advantages and risks of an investment can perceive it accordingly.

1.12 Hypothesis Development**1.12.1 Investment Decision Making Behavior and Financial Literacy**

FL helps us to use information to understand the market. Investors with low FL hold less risky assets. Even if transaction costs are minimal and financial advisers are there to offer more information regarding the investment opportunities, investors with a lack of FL are less inclined to invest in highly risky assets (Calcagno & Monticone, 2013). Individual financial habits are greatly influenced

by FL as it provides positive outcomes (Awais et al., 2016). As described by (Capuano & Ramsay, 2011) FL creates financial efficiency. Being financially literate allows an individual to smartly use financial goods and make wise investment decisions. FL, then, creates a positive behavior towards investment. Investors with financial knowledge can have more understanding about the world of finance. When making investment selections in a portfolio diversification and investigating alternative possibilities, individual investors must have adequate know-how of FL (Balagobei & Prashanthan, 2021).

H₁: Financial literacy has a significant effect on investment decision making behavior.

1.12.2 Investment Decision Making Behavior and Investment Experience

IE caters to both real market participation and experience. With better experience, students can navigate uncertainties and make investment decisions accordingly. (Hani et al., 2020) supports that IE shapes investment choices and decision-making behavior. This indicates that those with greater investing expertise are better able to make their investment choices. (Roszkowski & Davey, 2010) argue that investors with greater IE tend to hold higher-risk portfolios compared to less experienced investors. According to (Kalsum et al., 2018), IE has proven as a tool to improve the investor trust level. An experienced investor has bad and good experiences. A wise investor learns from past experiences to handle any risk situation and solve it correctly. When individuals learn many things, they can go to invest to obtain high profits with effective management.

H₂: Investment experience has a significant effect on investment decision making behavior.

1.12.3 Investment Decision Making Behavior and Financial Self-Efficacy

It is a psychological element that makes an individual feel self-assured in their financial investing choices. Students with a higher FSE are more likely to see financial obligations as reasonable, which encourages investment participation and risk-taking when suitable. Individuals with a great degree in FSE, according

to (Netemeyer et al., 2018) are confident in their capacity to acquire knowledge to guide financial choices and are confident in their ability to make smart judgments and are financially disciplined. Furthermore, FSE governs one's money, which show a person's competence and capacity to affect his or her financial concerns. Thus, FSE is the confidence of a person arising from his or her financial knowledge, which finally leads to financial well-being (Lone & Bhat, 2024).

H₃: Financial self-efficacy has a significant impact on investment decision making behavior.

1.12.4 Investment Decision Making Behavior, Financial Literacy, and Risk Tolerance

While low tolerance usually leads to conservative or no investments, high risk-tolerant people are more likely to seek higher-return investment possibilities. According to (Awais et al., 2016), investors pursue risk when making investment decisions. FL leads to increased RT, which allow individuals to pick risky investments to meet their high degree of RT. So, individuals who are financially literate and have high RT have a portfolio of good and bad IEs. (Sharma, 2020) claims that, although increased education, better finances, and higher self-employability enhance RT, people tend to lose their ability to tolerate risk over time. Studies also show that, like demographic and socioeconomic factors, macroeconomic conditions influence the RT level. A person's ability to take risks increases with their level of knowledge. People who depend on intuition rather than financial knowledge, meanwhile, may show less tolerance for financial risk (Kanagasabai & Aggarwal, 2020). As a result, (Sages & Grable, 2010) claims that those with high degrees of financial understanding can manage to mitigate the risk. Drawing on the above, this paper seeks to identify the mediating function of RT in FL and investing decision making behaviors.

H₄: Risk tolerance is a mediating variable between financial literacy and investment decision making behavior.

1.12.5 Investment Decision Making Behavior, Investment Experience, and Risk Tolerance

It has been revealed by the work of (Awais et al., 2016) that an investor with experience is much more confident about their skills, which makes them aware of the condition. When an individual is more experienced, they can manage their investments more effectively and align them with their preferences, which allows them to accommodate a higher degree of RT. According to (Ye & Kulathunga, 2019), RT is considered as an important factor while making decisions related to investments. Investors with higher RT tend to be more cautious and capable of evaluating both potential gains and risks in a proportional manner (Aisjah et al., 2024). (Corter & Chen, 2006) support the idea that IE is a significant predictor, with more experienced investors exhibiting more risk-tolerant attitudes and riskier investment portfolios. RT behavior greatly affects the IE and hence the investment choices (Perveen et al., 2020).

H₅: Risk tolerance mediates the relationship between investment experience and investment decision making behavior.

1.12.6 Investment Decision Making Behavior, Financial Self-Efficacy, and Risk Tolerance

Grable & Lytton (1999) found that people who were categorized as having low RTs were less confident and more cautious in their investment behaviors. As a result, they avoid securities that are highly risky. On the other hand, people with high RT are much more confident and are classified into a higher risk-tolerance category. High self-efficacy and improved investing choices result from being very risk tolerant. According to (Tripopsakul, 2025) those with high RT may act on their self-efficacy beliefs, hence allowing them to put their confidence into action amid uncertainty. Those that lean toward risk-taking are better able to turn their confidence into action.

H₆: Risk tolerance mediates the relationship between financial self-efficacy and investment decision making behavior.

1.12.7 Investment Decision Making Behavior, Risk Tolerance, and Peer Influence

Individuals with high RT tend to allocate their investments toward a portfolio that yields a higher return. Peer pressure influences how much RT affects actual investing behavior. Students with a high tolerance for risk can even delay or alter their investment behavior based on peer feedback. (Bursztyn et al., 2014) support that PI is very important because the person's investment choices are somehow affected by his/her peers. It also reflects that both investment choices are influenced by learning from one's peer's buying decision and changing behavior resulting from a peer's ownership of an asset. According to (Komalasari & Mulyadi, 2023), PI shapes saving behaviors and encourages people to avoid spending.

H₇: Peer influence moderates the relationship between risk tolerance and investment decision making behavior.

1.12.8 Investment Decision Making Behavior, Risk Tolerance, and Financial Risk Perception

The study of (Indrawati et al., 2025) supports that risk perception is based on a person's psychological traits and behavior. Individual perceptions arise from human processes including insight, knowledge, and emotions. Risk perception is split into risk knowledge, which reflects a person's ability to assess financial risks depending on past information and experiences, and risk-bearing, which assesses the capacity to handle the outcomes of risky financial decisions. According to (Roszkowski & Davey, 2010) investment decision making behaviors are based on possible outcomes. Self-assessment indicates the risk perception, which in turn allows an individual to measure his/her RT.

H₈: Financial risk perception moderates the relationship between risk tolerance and investment decision making behavior.

1.13 Conceptual Framework

The study examines investment decision making behavior by understanding the elements that influence them through the conceptual

framework. FL, FSE, and IE are the independent factors shaping investment choices of an individual. RT's mediating function influences investment behaviors directly and indirectly. RT integrates financial knowledge, confidence, and experience into investment decisions, which shows investors' willingness to face uncertainty. Moreover, this model includes two moderating factors, FRP and PI that shape the link between

RT and investment choices. FRP denotes an individual's subjective assessment of possible financial loss, whereas PI pertains to the social aspects of decision-making. This paradigm provides a thorough knowledge of the interaction of personal, psychological, and societal elements in forming investing choices. The following framework is: -

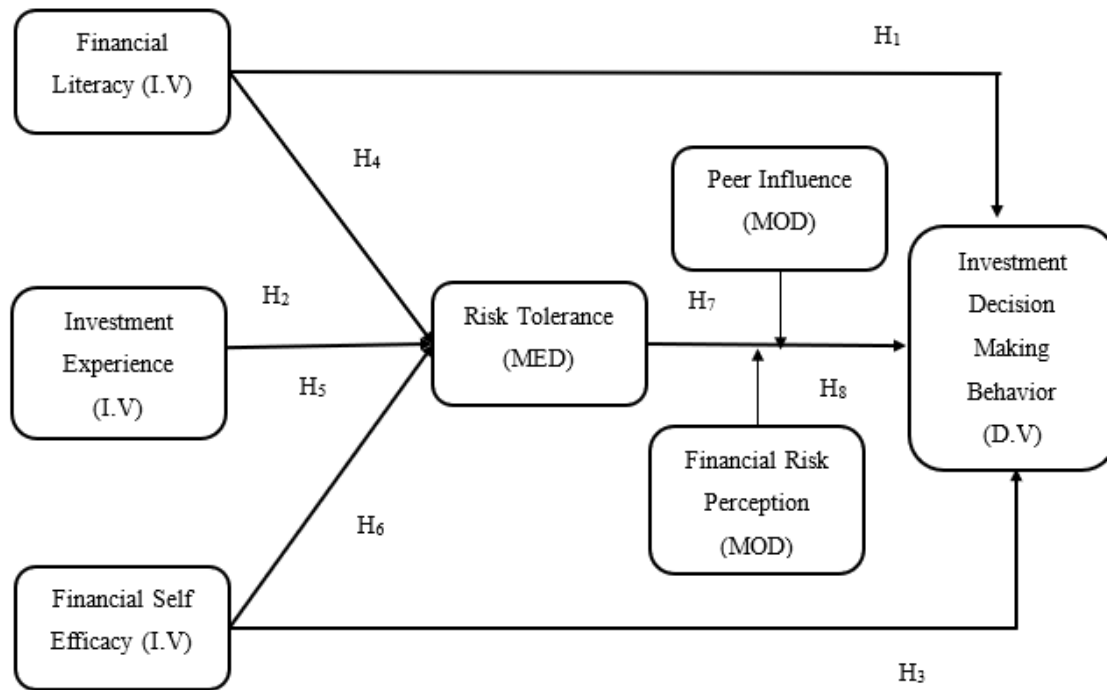


Figure 1 Conceptual Framework

Source: Author Construction

1.14 Summary of Literature Review

Table 2.1 Summary of Literature Review

Construct	Definition	Source
Financial Literacy	FL is the knowledge required for sensible and efficient money management. This includes the capacity to apply traditional techniques of exchanging money as well as the management of revenue and spending.	(D.A.T, 2020)
Investment Experience	IE is a phase where individuals undergo several investments with thoughtful consideration.	(Hani et al., 2020)
Financial Self-Efficacy	FSE is the ability to manage one's finance and have confidence in managing. Hence, it shows one's knowledge and skill over his or her financial issues.	(Lone & Bhat, 2024)

Risk Tolerance	RT refers to the degree of risk an individual is ready to accept in the pursuit of a goal.	(Roszkowski & Davey, 2010)
Peer Influence	PI is when one person affects another or is affected by one or more people of the same age.	(Laurson & Veenstra, 2021)
Financial Risk Perception	FRP is an evaluation by an individual who generates a risky situation, which depends on an individual's psychological characteristics and behaviors.	(Indrawati et al., 2025)
Investment Decision Making Behavior	Choosing a certain option among several possibilities is an investing decision. It is also a task that comes after an appropriate assessment of all the options. It is a process of choosing a particular alternative from a number of alternatives.	(Ahmed and Noreen, 2021)

RESEARCH METHODOLOGY

1.15 Research Approach & Type

The approach of the study is to compile insights for an assessment of our theory. Usually before the study, identification is done by looking at the issue that either currently exists or the topic that is unknown or has little to no information available, which determines whether it should be deductive or inductive. The study used a deductive approach for the study, adhering to the onion research method. This strategy allows us to first look at the existing theory, which is TPB. Then the next step of the research is hypothesis testing through empirical data. The approach was based on the context of Pakistan, especially the city of Karachi and its business graduates. The main goal was to get involved in the current study about how FL, IE, and FSE (IV) affect investment decisions (DV). The approach will use quantitative analysis of the data.

1.16 Research Design

This basically defines the research scope, whether to analyze the current situation and its obstacles or considering the long-term prospect. It summarizes the overall phenomena observed during our testing. This study carried out research by identifying three independent variables along with mediating and moderating effects on the dependent variable, which is investment decisions. The questionnaire research design was used for analysis. Therefore, the research analyzed the data using cross-sectional time horizons to capture the current investment behavior of business graduates.

Additionally, this study adopted a positivism philosophy. This approach will view the reality as measurable and objective. The study focus on developing the cause-and-effect relationship between the constructs through measurable data collected from business graduates in Karachi.

1.17 Research Population

The population for the study consists of business graduates which includes undergraduate and postgraduate students as well as fresh alumni in Karachi, Pakistan. The purpose was to identify respondents who have studied finance, management, or economics. This population was selected to gain a deeper understanding of their investment decision-making process, based on their knowledge and experiences.

1.18 Sample Size & Sampling Technique

The sample is considered the core of the research. The population for this research consists of business graduates from Karachi. So, for accurate hypothesis testing and results, this study used survey techniques. A structured questionnaire was used to gather the data. The use of purposive sampling took non-random collection of samples which helped to focus on those students with academic backgrounds in management, finance, and economics. To ensure a representative sample, a sample size of 384 respondents was chosen based on the recommendations in Ume Sekaran's book, "Research Methods for Business" and Gujrati sample size chart which allows for a structural equation modelling. The questionnaire was self-

administered and total 394 responses were collected.

developed based on previous research that highlighted the independent, dependent, mediating, and moderating variables.

1.19 Research Instrument

The Mono method will be used for research as we are using the questionnaire. Questionnaire was

Table 3.1 Summary of Research Instrument

Variable	Authors / Source	No. of items	Scale
Financial Literacy	(Utami et al., 2025)	6	1-5
Investment Experience	(Mahat & Lau, 2023)	6	1-5
Financial Self-Efficacy	(Lown, 2011)	6	1-5
Risk Tolerance	(Kanagasabai & Aggarwal, 2020)	3	1-5
Peer Influence	(Hoffmann & Broekhuizen, 2009)	4	1-5
Financial Risk Perception	(Mayfield et al., 2008)	4	1-5
Investment Decision Making Behavior	(Gill et al., 2018)	4	1-5

1.20 Data Collection

The data was collected through a survey, and it was a cross-sectional database. Various methods exist for analysis, including questionnaires, surveys, content analysis, observations, and personal experiences. The most approachable of all seems to conduct it with a survey using the multiple grid method (5-point Likert scale). The data was analyzed with student responses regarding what they find relevant and need more of it to consider while making investment decisions, as well as how important these variables are and how they affect them.

1.21 Data Analyses Method

The following tool was used to analyze the findings:

PLS-SEM: A partial least squares structural equation model via Smart PLS.

PLS-SEM was used for measurement, complex, structural analysis, reliability, and validity. These tools help to ensure error-free results. It allows the researchers to estimate the complex models involving multiple constructs and hypotheses. This investigated the direct influence of FL, IE, and FSE on investment choices. This study also explored the role of RT as a mediator and evaluated the moderating effects of FRP and PI.

RESULTS

1.22 Respondent Profile

Table 4.1: Respondent Profile

		Frequency	Percentage (%)
Age Group	18–20 years	24	6.1
	21–25 years	118	29.9
	26–30 years	160	40.6
	31–35 years	54	13.7
	Above 35 years	38	9.6
Total		394	100.0

		Frequency	Percentage (%)
Gender	Male	218	55.3
	Female	176	44.7
Educational Background	Bachelor's	246	62.4
	Master's	132	33.5
	MPhil / PhD	16	4.1
City of Residence	Karachi	394	100

The table 4.1 shows the demographic information about the people who answered the survey from Karachi, Pakistan. The age group indicates that majority of respondents were in the 21–25 years age group, followed by the 26–30 years group. This suggests that the sample predominantly comprises young adults who are likely to be current or potential investors. There were 55.3% of the male respondents, while the female were 44.7%. It overall reflected a balanced representation suitable for examining investment decision-making behavior.

1.23 Measurement Model

Factor Loading

Factor loading is a term applied in factor analysis, a statistical approach commonly utilized in

research to determine which underlying relationships exist between the observed variables and the hidden (unobserved) factors. Factor loadings are the strength and direction of the relationship between each of the observed variables and the underlying factor. Factor loading should be greater than equal to 0.7 for better reliability and validity (Kim et al., 2016). During the assessment of the measurement model, one item showed a low outer loading which was removed to improve the overall fit and validity. According to (Hair et al., 2019), items showing weak impact should be removed. The results below show based on the retained items in the model. The outer loadings are greater than 0.70, which are considered acceptable.

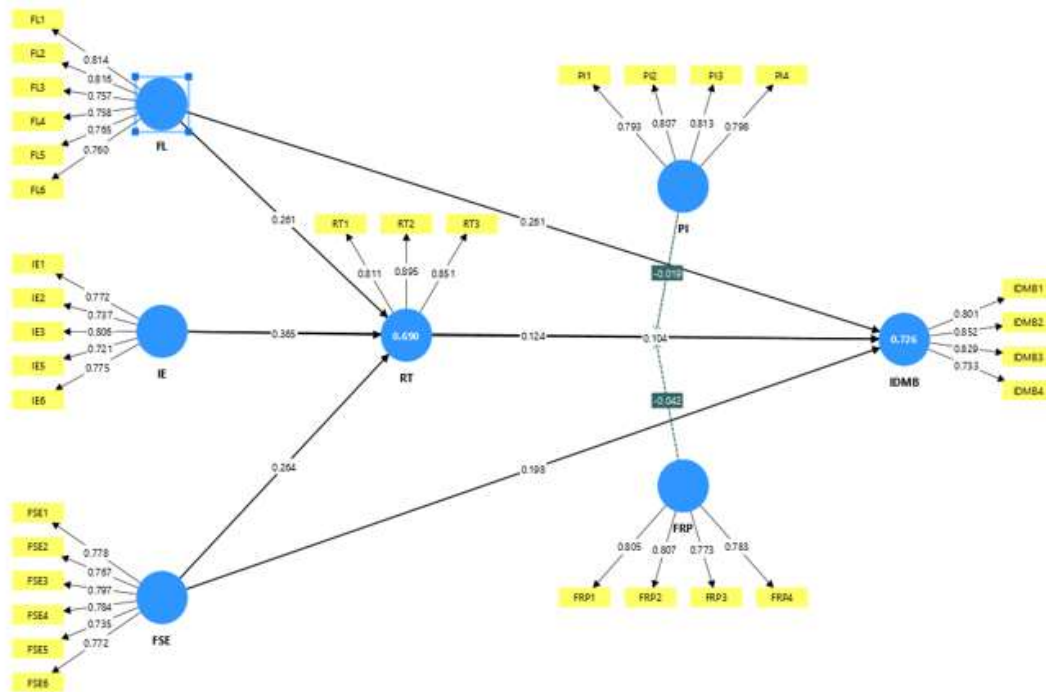


Figure 2 The Measurement Model

Table 4.2: Factor Loadings

	FL	FRP	FSE	IDMB	IE	PI	RT	PI x RT	FRP x RT
FL1	0.814								
FL2	0.816								
FL3	0.757								
FL4	0.758								
FL5	0.765								
FL6	0.760								
FRP1		0.805							
FRP2		0.807							
FRP3		0.773							
FRP4		0.783							
FSE1			0.778						
FSE2			0.767						
FSE3			0.797						
FSE4			0.784						
FSE5			0.735						
FSE6			0.772						
IDMB1				0.801					

IDMB2	0.852	
IDMB3	0.829	
IDMB4	0.733	
IE1	0.772	
IE2	0.737	
IE3	0.806	
IE5	0.721	
IE6	0.775	
PI1	0.793	
PI2	0.807	
PI3	0.813	
PI4	0.798	
RT1	0.811	
RT2	0.895	
RT3	0.851	
FRP x RT		1.000
PI x RT		1.000

The indicators strongly represent their respective constructs. The loadings for FL range from 0.757 to 0.816, which shows that the construct is being measured consistently and reliably. Also, the FRP indicators have high loadings between 0.773 and 0.807, which means that they are a good way to show how respondents feel about financial risk. The FSE indicators have good loadings between 0.735 and 0.797, which shows that the people who answered the questions were confident in their ability to handle money. The IDMB indicators show substantial loadings between 0.733 and 0.852, which shows that they are a good way to measure investment behavior. The factor loadings for IE are between 0.721 and 0.806, which shows that they are reliable. The PI construct also has substantial loadings between 0.793 and 0.813, which means it is a reliable way to measure. The RT construct shows very high factor loadings, from 0.811 to 0.895. This means that the

indicators are very good at showing how much risk a person is willing to take.

1.23.1 Construct Reliability and Validity

According to (Tavakol & Dennick, 2011), Cronbach's alpha is an internal consistency or reliability measure of a group of items, widely employed in psychometrics and social sciences. It is applied to test the reliability of the variables. It should be between 0.7 and 0.95. Since the table below shows values greater than 0.7, it is considered acceptable and a good indication of construct reliability (Balagobei & Prashanthan, 2021). The following results confirm that each construct passes the reliability and validity, which helps in ensuring accuracy and dependability of further analysis. According to (Hair et al., 2019), the reliability consistency meets the rule of thumb ($CA \leq \text{Rho}_a \leq \text{Rho}_c$).

Table 4.3 Summary of Reliability Analyses

	Cronbach's alpha	Composite (rho_a)	reliability	Composite (rho_c)	reliability	Average variance extracted (AVE)
FL	0.870	0.872		0.902		0.607
FRP	0.803	0.804		0.871		0.628
FSE	0.865	0.866		0.899		0.597
IDMB	0.818	0.821		0.880		0.648
IE	0.820	0.823		0.874		0.582

PI	0.816	0.816	0.879	0.644
RT	0.812	0.813	0.889	0.728

All constructs show great internal consistency since the values are in between 0.803 to 0.870, which is higher than the acceptable minimum of 0.70. All constructs have AVE values that are greater than 0.70. RT has the greatest AVE score 0.728, which shows that it has strong convergent validity. In general, the results show that the measurement model meets the standards for internal consistency, reliability and validity, and that all constructs are measured well. Consequently, no indications needed to be

eliminated, and the model is appropriate for additional structural model research.

1.23.2 Discriminant and Validity

The study uses the Fornell-Larcker Criterion to assess the discriminant and validity. This reflects how well a construct is empirically distinct from the other construct (Hair et al., 2019). It is research concept, which is the extent to which a construct is separate from the other constructs.

Table 4.4 Fornell-Larcker Criterion

	FL	FRP	FSE	IDMB	IE	PI	RT
FL	0.779						
FRP	0.774	0.792					
FSE	0.797	0.802	0.772				
IDMB	0.798	0.731	0.784	0.805			
IE	0.818	0.768	0.799	0.772	0.763		
PI	0.812	0.737	0.797	0.766	0.783	0.803	
RT	0.770	0.769	0.763	0.739	0.789	0.717	0.853

The findings demonstrate that for all constructs, the square root of the AVE values (spanning from 0.763 to 0.853) surpasses the respective inter-construct correlations. The square root of AVE for FL is (0.779), which is greater than the square roots of its associations with FRP (0.774), FSE (0.797), IDMB (0.798), IE (0.818), PI (0.812), and RT (0.770). RT has the highest square root of AVE value (0.853), which is different from other constructs. In general, the diagonal values for all the variables are higher than the off-diagonal correlation coefficients for each variable. This shows that each construct is different from the others. Consequently, the findings validate the establishment of sufficient discriminant validity according to this table, and the measurement

model satisfies the necessary criteria for subsequent structural model analysis.

1.23.3 Collinearity Statistics

Collinearity is a term used in statistics to describe when more than two IVs in a regression model are extremely correlated with one another. It can be dangerous because it causes it to become hard to precisely estimate the association between the separate predictors and the DV. The values must be below 5 to refrain from multi collinearity (Kock & Lynn, 2012). (Hair et al., 2019) supports that VIF values 5 and above indicates collinearity issues. So, the values should be close to 3 and lower.

Table 4.5 Collinearity Statistics

Variance Inflation Factor	
FL1	2.130
FL2	2.162
FL3	1.697
FL4	1.739
FL5	1.778
FL6	1.725
FRP1	1.656
FRP2	1.700
FRP3	1.595
FRP4	1.587
FSE1	1.826
FSE2	1.808
FSE3	1.935
FSE4	1.877
FSE5	1.640
FSE6	1.777
IDMB1	1.680
IDMB2	2.048
IDMB3	1.898
IDMB4	1.446
IE1	1.639
IE2	1.550
IE3	1.796
IE5	1.482
IE6	1.655
PI1	1.614
PI2	1.716
PI3	1.771
PI4	1.691
RT1	1.594
RT2	2.277
RT3	1.904
FRP x RT	1.000
PI x RT	1.000

The VIF values range from 1.446 to 2.227, which meets the range required. All these indicators demonstrate acceptable VIF values and does not reach the critical levels. Also, the stronger the VIF is, the better it shows that respondents understood the meaning of the questions asked and answered consistently in accordance with the items,

strengthening the content validity of the questionnaire. Hence, the calculated variance inflation factor shows no multicollinearity between the predicted variables as all the calculated values is below 5.

1.23.4 R – Square

According to (Saputro & Lestari, 2019), the R square measures the influence of the DV.

Table 4.6 R – Square

	R-square	R-square adjusted
IDMB	0.726	0.720
RT	0.690	0.687

R² value for IDMB (dependent variable) is 0.726, with an adjusted R² of 0.720, indicating that 72.6% of the variance in IDMB is explained by its predictor constructs. This value can be interpreted as substantial explanatory power, suggesting that the model strongly explains investment decision-making behavior. RT (mediator) reports an R²

value of 0.690 and an adjusted R² of 0.687, indicating that 69.0% of the variance in RT. This also reflects substantial predictive accuracy within the context of behavioral finance research. This suggests that the predictors together have a large, combined effect on investment decision making behavior.

1.24 Structural Model

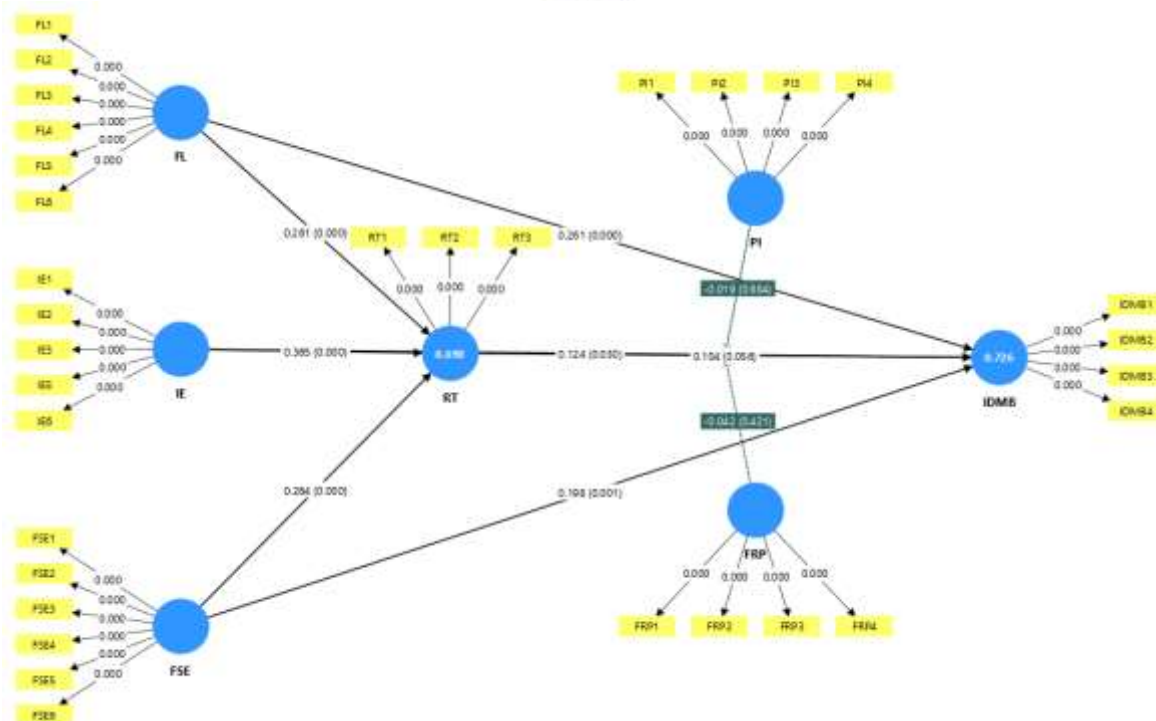


Figure 3 The Structural Model

1.24.1 Path Coefficient Analysis

The structural model evaluates how FL, IE, FSE, RT, FRP, PI predicts IDMB through path coefficients. It shows indirect and direct effects which helps to analyze the effect of one variable over the other. For more detailed analysis of mediation & moderation the bootstrapping

technique in SmartPLS 4 is used, which helps to directly check if the indirect effect is significant or not. (Hair et al., 2019) suggests that a researcher should look for bootstrap in order to further test the significant level of path coefficients. Accordingly, if bootstrap confidence interval does not have zero value, the path coefficient is still significant.

Table 4.7 Path Coefficients Analysis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
FL → IDMB	0.261	0.259	0.060	4.394	0.000
IE → IDMB	0.124	0.122	0.057	2.173	0.030
FSE → IDMB	0.198	0.199	0.057	3.466	0.001
FL → RT → IDMB	0.261	0.262	0.059	4.416	0.000
IE → RT → IDMB	0.365	0.366	0.060	6.039	0.000
FSE → RT → IDMB	0.264	0.262	0.059	4.444	0.000
PI × RT → IDMB	-0.019	-0.015	0.046	0.407	0.684
FRP × RT → IDMB	-0.042	-0.048	0.052	0.805	0.421

The path analysis results shows that FL has significant effect on IDMB, the p-value is less than 0.05. Similarly, FSE also have a significant effect on IDMB as it is less than 0.05. The findings show RT mediated the FL and IDMB (beta = 0.261, T = 4.416, P < 0.05). Similarly, FSE (beta = 0.264, T = 4.444, P < 0.05) and IE (beta = 0.365, T = 6.039, P < 0.05) significantly enhance individuals RT. Among these, Investment Experience demonstrates the strongest effect on RT. The moderation analysis reveals that the interaction term FRP × RT does not significantly influence IDMB (beta = -0.042, T = 0.805, P = 0.421). Similarly, the interaction effect of PI × RT on IDMB is also statistically insignificant (beta = -0.019, T = 0.407, P = 0.684).

1.25 Hypothesis Testing

According to (Aisjah et al., 2024), the study uses Smart PLS and the bootstrapping approach to test the hypothesis. It helps to indicate the effects of each variable. The summary shows the results of hypothesis.

H₁: FL has a positive and significant effect on IDMB. The p-value is less than 0.05, hence the hypothesis is accepted.

H₂: IE has a positive and significant effect on IDMB. The p-value is less than 0.05, hence the hypothesis is accepted.

H₃: FSE has a positive and significant impact on IDMB. The p-value is less than 0.05, hence the hypothesis is accepted.

H₄: RT is a mediating variable between FL and IDMB. The p-value is less than 0.05, hence the hypothesis is accepted.

H₅: RT is mediating variable between IE and IDMB. The p-value is less than 0.05, hence the hypothesis is accepted.

H₆: RT is a mediating variable between FSE and IDMB. The p-value is less than 0.05, hence the hypothesis is accepted.

H₇: PI does not support as a moderator between RT and IDMB. The p-value is greater than 0.05, hence the hypothesis is rejected.

H₈: FRP does not support as a moderator between RT and IDMB. The p-value is greater than 0.05, hence the hypothesis is rejected.

The hypothesis testing outcomes indicate that FL, FSE, and IE substantially influence IDMB (dependent variable), mediated by Risk Tolerance. However, the moderating influence of RT on the relationships between FRP and PI was not

validated. So below the summary shows that six hypotheses were accepted, while two moderation hypotheses were dismissed.

1.26 Summary of Hypotheses Testing

Table 4.8 Summary of Hypotheses Testing

Hypothesis	Path	Original sample (O)	T statistics (O/STDEV)	P values	Results
H1	FL -> IDMB	0.261	4.394	0.000	Accepted
H2	IE -> IDMB	0.124	2.173	0.030	Accepted
H3	FSE -> IDMB	0.198	3.466	0.001	Accepted
H4	FL -> RT -> IDMB	0.261	4.416	0.000	Accepted
H5	IE -> RT -> IDMB	0.365	6.039	0.000	Accepted
H6	FSE -> RT -> IDMB	0.264	4.444	0.000	Accepted
H7	PI x RT -> IDMB	-0.019	0.407	0.684	Rejected
H8	FRP x RT -> IDMB	-0.042	0.805	0.421	Rejected

2.1 Discussion

The following chapter analyzes the findings of the study in connection with the TPB. TPB asserts that behavior is shaped by attitudes, subjective norms, and PCB, which collectively influence individuals' intentions and their actions (Ajzen, 1991). In the context of this study, FL, FSE, IE, FRP, PI, and RT are critical psychological and experiential variables that influence IDMB.

2.1.1 Hypothesis 1 Discussion

The results indicates that there is a significant and positive relationship between FL and IDMB ($\beta = 0.261$, $p < 0.05$ and $t\text{-value } 4.394$). (Ahmed & Noren, 2021) supports that the $t\text{-value}$ is greater than 1.96 (for two-tailed test), which indicates the acceptance of the H1. The hypothesis is further supported from the research of (Lusardi & Mitchell, 2014). According to (Aisjah et al., 2024), higher FL influence the investment behaviors of business graduates. For every individual, FL is a basic requirement to avoid financial problems and involve in positive investment behavior (Saputro & Lestari, 2019). This study is in line with a

research conducted by (Saputro & Lestari, 2019), which stated that FL has a significant and positive impact on IDMB. This study also gets support from a research conducted by (D.A.T, 2020), which shows that FL is very important for an business graduate and a main construct as well. The result is also supported from (Ahmed & Noreen, 2021), FL has an important impact on investing in stocks, planning for retirement, managing money, saving, and making money. (Capuano & Ramsay, 2011) supports that FL gives students understanding about financial terms. Business graduate with FL will be considering for an investment will have a positive behavior towards choosing a stock and will have understanding that which investment will provide optimal returns and minimum risk (Kalsum et al., 2018). FL enhances an individual's attitude towards investment behavior, which leads to more informed investment decisions. The significant relationship shows that FL has a positive attitude towards IDMB.

2.1.2 Hypothesis 2 Discussion

The results indicate that there is a significant and positive relationship between IE and IDMB ($\beta = 0.124$, $p < 0.05$ and $t\text{-value} = 2.173$). Expertise in investment gives real-world expertise with financial markets, which helps us to learn and make better decisions. In TPB, experience enhances attitudinal beliefs, which helps an investor make better and more confident judgments over time. The study shows a positive significant relation and it is supported by a research (Hani et al., 2020), which proves that individuals with more experience of the market and investment have more positive investment behavior. Also, it supports that IE is a factor that influences investor competence. (Kalsum et al., 2018) supports that having an investment experience allows you to have some knowledge in dealing with different uncertainties that might occur. Individuals who have been investing for a long time say that they are better at making decisions than investors who are new to the game. This is because individuals who have been investing for a long time will know how to handle specific situations that may come up. The result is further supported by (Mahat & Lau, 2023) that investment behavior is relied on the previous experience for future decisions.

2.1.3 Hypothesis 3 Discussion

The results indicate that there is a positive relationship between FSE and IDMB ($\beta = 0.198$, $p < 0.05$ and $t\text{-value} = 3.466$). (Lone & Bhat, 2024) supports that individuals with higher FSE can overcome challenges and achieve long-term goals. Business schools which focus on financial knowledge of students helps them to have greater FSE and as a result students are able to make more sound investment decisions and have a positive IDMB. Moreover, (Triopsakul, 2025) supports that students having confidence on their ability to have positive investment behavior succeed in making better investment decisions. FSE has a significant impact on the IDMB and is consistent with TPB and positive attitude means positive FSE and as a result positive investment behavior (Hassan et al., 2024). Furthermore, another

research by (Tripathi et al., 2022) supports the study that higher financial self-efficacy have better and positive financial behavior and outcomes. Another finding shows that people who have a lot of control over their money are confident in their abilities and are more inclined to invest (Nadeem et al., 2020).

2.1.4 Hypothesis 4 Discussion

The results show that RT mediates between FL and IDMB ($\beta = 0.261$, $p < 0.05$ and $t\text{-value} = 4.416$). Students who have higher FL, have higher RT, which affects their IDMB. RT plays an indirect role between FL and IDMB. So higher FL means students are aware of the market fluctuations, they understand investment risks, which raises their willingness to take calculated risks. The study is supported by the research of (Ahmed & Noreen, 2021), that proves that individuals who are financially literate have high RT while performing financial activities. Also, study of (Awais et al., 2016) supports that RT is an important construct in IDMB. Furthermore, the study is also supported by (Lusardi & Mitchell, 2014) that increased RT allows an individual to have more positive behavior towards investment this is also supported by (Grable & Lytton, 1999). (Raheja & Dhiman, 2019) supports that RT plays a vital role as mediator between the constructs. The study is in line with the study of (Kanagasabai & Aggarwal, 2020) that risk tolerant investors usually face better investment results and positive attitude. Also, RT along with FL helps students to have a positive investment intention and choose their investment portfolio wisely. Financial behavior is determined mainly through FL and RT. Being financially literate helps to be risk taker or being risk averse (Indrawati et al., 2025).

2.1.5 Hypothesis 5 Discussion

The results show that RT mediates between IE and IDMB ($\beta = 0.365$, $p < 0.05$ and $t\text{-value} = 6.039$). The effect is positive and significant. Higher investment experience, higher risk tolerance and so higher IDMB. Investors with good experience are more comfortable in handling and evaluating risk and as a result they have positive behavior

towards the investment. The mediation of RT explains that an individual with more experience of investment can make more rational, and confident investment decisions. The result of this hypothesis is consistent with other relevant studies. Research by (Grable & Lytton, 1999), that individuals with an investment experience more confident. The current study in the context of Karachi, Pakistan reflects that RT is a crucial and important mediating variable for IDMB. The study of (Aslam et al., 2020) supports that mediation of RT exist between the IE and IDMB. Under RT the relationship between the construct becomes more significant. Moreover the study of (Awais et al., 2016) supports that IE allows an individual to have a higher degree of risk which eventually results in higher returns. So IDMB and IE is mediated through RT. Also the study is consistent with the research of (Corter & Chen, 2006), which reflects that IE not only makes an individual more risk tolerant but leads to more risk tolerant behavior. Another study reflects that RT allows an individual to make more thoughtful decisions and they have multiple factors to consider (Mahat & Lau, 2023). These results suggest that financial institutions and educators could improve the quality of IDMB by providing opportunities for simulated or actual IE that incrementally increase risk tolerance. This would ultimately lead to students being more confident and knowledgeable.

2.1.6 Hypothesis 6 Discussion

The results shows that RT mediates between FSE and IDMB ($\beta = 0.264$, $p < 0.05$ and $t\text{-value } 4.444$). Individuals who are more confident can tolerate risk, and as a result they have higher IDMB. The path is significant, which shows that RT mediates and creates a link between FSE (attitude) and IDMB. With respect to the TPB, RT mediates to affect the investment behavior. So, this study and the hypothesis reflects that along with financial knowledge, confidence and skills development is very important to develop constructive RT that helps in better decision outcomes. The study is supported by the research of (Khan et al., 2023), which supports that RT mediates between the FSE

and intentions to invest. This study is also in context with the research of (Shah et al., 2024) which defines that RT allows an individual to undertake a behavior to attain a specific goal. Taking higher risk can lead to higher FSE.

2.1.7 Hypothesis 7 Discussion

The results shows that PI does not moderate between RT and IDMB ($\beta = -0.019$, $p > 0.05$ and $t\text{-value } 0.407$). The effect is negative and insignificant. The hypothesis is rejected. The proposed hypothesis was that the moderator PI would strengthen the effect between RT and IDMB. However, the results are insignificant. The PI does not reduce the effect of RT. The study of (Bursztyn et al., 2014) identifies that peer effects is very important because it influences the choices of an individual when making any investment decisions. However, it does not directly and strongly strengthen the RT and IDMB. Another study by (Komalasari & Mulyadi, 2023) reflects the determinant of PI, as it helps an individual to focus on their actions and behaviors. It reflects that PI can positively and negatively influence the IDMB of individuals. Choosing right peer is very important. According to (Zaighum & Karim, 2019) PI is somehow new to influence the financial decisions and related constructs. RT is the certain level of risk an individual can tolerate. So, PI does not reduce or amplify levels of RT on IDMB. The empirical evidence supporting the moderating role of PI is limited. The prior studies reflects PI as a direct predictor of investment behavior. According to TBP, PI is aligned with the SN which indicates that PI direct influence on investment behavior. So, the theory supports that PI is not effective moderator. Also, RT is a PCB and a psychological trait, and it can be developed through experience, confidence, and knowledge in an individual rather than any social influence. It cannot be concluded that PI is completely insignificant, as prior studies shows that PI has a significant role as an IV for investment decisions and behaviors (Duflo & Saez, 2003). Its role as moderator between RT and IDMB is weaker in the emerging market such as Karachi, Pakistan.

2.1.8 Hypothesis 8 Discussion

The results shows that FRP does not moderate between RT and IDMB ($\beta = -0.042$, $p > 0.05$ and t -value 0.805). The effect is negative and insignificant. The hypothesis is rejected. The FRP is considered an important construct towards investors attitude and behavior, but it does not strengthen the relationship between RT and IDMB in the current study. According to the study of (Weber et al., 2002) RT is a psychological trait, whereas FRP is a situational SN. An individual can manage and identify its level of RT for its IDMB. However, subjective perceptions can be secondary. According to a previous study of (Aisjah et al., 2024) FRP results in better investment decisions and it is a crucial construct. Also, this study reflects that when FRP of an individual consider losses more than gains, they avoid risks. Moreover, previous studies have shown individuals perceive risk and then form behavior and attitude for RT. So, this shows that FRP plays a direct or indirect role not as a moderator. The study of (Saputro & Lestari, 2019), specifies that FRP highlights the information related to risk. An individual, while making financial decisions, can encounter psychological factors. As per the TPB, risk perceptions can influence more directly rather than modifying the strength of behavior and psychological factors. This hypothesis contributes to the current study as it allows future research to understand and analyze the positioning of FRP.

RECOMMENDATIONS AND CONCLUSION

3.1 Recommendations

Guided by empirical research evidence verifying the FL, IE, and FSE as factors supporting IDMB, RT as a mediating factor and PI, FRP as moderators in the process. These recommendations aims to promote confident, rational decision making, and positive investment behaviors. The following recommendations are as follows:

- Enhancing financial literacy programs. FL helps to understand how people decide to take risks and invest. Because of this, colleges, universities, and professional groups should

integrate practical financial literacy modules into their business courses. These programs should focus on practical applications and experience which would help students to get exposure to investments opportunities, work on their level of RT and understand the market dynamics. Helping graduate students learn more about money can help them make better choices about where to put it.

- Promote experimental learning. As per the results of the study we see that IE can play a vital role in investment decisions. So, institutions and organizations should focus on learning programs and finance related societies which can allow students to experience investment related activities which would give them real-life experience like investment simulations, trading labs, platforms to through which can work on their investment behaviors. These initiatives would help students gain more exposure and experience and it can contribute positively to the market and enhance decision making capabilities.
- Moreover, workshops, mentorship programs, and financial coaching and sessions should be provided to improve individual's abilities to manage their financial matters and increase their FSE. This would allow them to become proactive and manage their RT. Counselling and sessions on how to increase FSE would help students to have a positive IDMB. Also, institutions should arrange campaigns and visits to advisory services, brokerage firm, and financial markets which would give them guidance help students understand market uncertainties, risks and returns. Business graduates should be trained to critically evaluate peer-based information and market rumors rather than relying on social cues.
- Moreover, regulatory bodies should launch programs with academic institutions and organizations to encourage young investors. These measures can help make investors more educated, more financially aware, i.e. portfolio management, risk management and diversification. Also, financial institutions should expand their financial products and allow investors to have better pool of investment.

3.2 Limitations of the Research

Though this study is a helpful contribution to the literature in comprehending the role of FL, IE, and FSE as the determinants of IDMB along with mediator and moderator. There are some limitations that can limit universal aspects:

- The study was based within a single geographic area and only specific to business graduates of Karachi, Pakistan. Therefore, the results do not fully represent the non-business background students, and different geographic areas of Pakistan due to time constraint and scope of research. The detailed insights from various backgrounds and cities could yield greater and beneficial results. Furthermore, the sample collection was quantitative and the qualitative aspects such as interview could have added depth in insights.
- The information for the current study were collected through self-report questionnaires that could lead to response bias and cross-sectional data. The participants might have provided socially desirable answers or exaggerated the case to suit their actual experiences. Respondent could also fail to understand the point that could impact the reliability of data too.
- It also measured key measures: FL, IE, FSE directly with the investment decision and the RT. Though other constructs like income level, overconfidence bias, herding behavior and other key financial constructs were not measured. Also, the moderation did not supported due to measurement limitations and constructs was not used as a direct variable to explore the market so result of moderator was not significant, allowing other researchers to better investigate on it.
- The study is not generalized to the developed markets because of different market conditions and environments. The variables in this study have been seen in the other researches, but still, there is a need to work further on it on a wider scale.

3.3 Future Research

Considering the outcome and limitations of this research, the following potential areas for further

research to better develop the search for IDMB and the probable impact of FL, IE, FSE, RT, PI, and FRP are discussed below:

- Expanding research to non-business professionals and larger geographic areas can be imagined as one of the avenues of future research. That would provide a great comparison and generalizability. The future researcher can also opt for longitudinal design, which would help them to explore more dynamic behavioral shifts and would provide stronger evidences and relationships among the constructs.
- The future researcher should work on the moderator construct and can re-examine the structural framework to understand and provide the positioning of PI and FRP. Also, include psychological and other behavioral traits which can provide a better understanding of investors' behavior. RT is a mediating variable. Along with more mediating variables can be included in future studies.
- While this research being conducted now was quantitative in approach, quantitative data backed up by qualitative method via interview or focus group could be useful.
- Also, future researchers can link the and explore the IDMB with emerging fintech and digital platforms. To analyze how digital finance interacts with RT and FSE to influence investment decisions.

3.4 Conclusion

The objective of the research was to study role of FL, IE, and FSE as the determinants of IDMB along with mediating role of RT and moderating role PI and FRP. The findings provided strong evidences and contributions, which shows that these independent constructs are strong determinants of IDMB. The study is aligned with TPB, which provides the understanding of how psychological and behavioral constructs influences investment decisions and behavior of the investors. The theory aligned with these construct shows the determination to engage in certain behavior of the students related to investment and suggest researchers to work on adding more variables to attain broader context of IDMB.

Further, the research highlights how important these constructions are in managing these financial uncertainty and making decisions. PI and FRP are theoretical constructs which are widely used in previous studies to examine behavioral finance. But those studies shows that they have more direct and influential impact on IDMB, rather than a moderator. This research work appears to be the first to explore the moderating role of PI and FRP in relationship with RT and IDMB. However, it provides future research to examine these constructs further.

Moreover, the study carries implications for financial institutions and business graduates of Karachi, Pakistan that there is a strong need for FL, learning, and self confidence to determine investment behavior and make rational decisions. By considering and working on these constructs and framework, it allows the stakeholders to prepare and encourage the young potential investors to explore and contribute to the market more confidently and effectively.

The study concludes that investment decision making behavior plays a significant role in individual investors. This study is a guideline for the institutions and the business graduates to improve their knowledge and education and put it into practical application become a better investor and contribute positively to the economy.

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