INTERNATIONAL JOURNAL OF BUSINESS AND MANAGEMENT (IJBM)
ISSN: 2815-9330 (Online)

VOL. 4, NO. 2 2025 https://iessociety.org/

Financial literacy as a catalyst for rational investment behavior: Evidence among university students in a crisis-affected economy

Sélim Mekdessi[1*], George Saliba[2], Elena Makdissi[3] and Riad Makdissi[4]

[1 2 3 4]Lebanese University, Lebanon

Email: [2]george.saliba500@gmail.com; [3]makdissielena@gmail.com; [4]riad.makdissi@ul.edu.lb

*Correspondence: [1]mekdessi@ul.edu.lb

Abstract

This study investigates how financial literacy functions as a determinant of rational investment behavior among university students living in a crisis-affected economy. Although young adults increasingly confront complex financial choices, their capacity to navigate investment decisions remains uneven, particularly in contexts marked by economic volatility and institutional uncertainty. Drawing on a quantitative design, data were collected through a structured questionnaire administered to university students and analyzed using descriptive statistics, reliability testing, correlation analysis, t-tests, and simple linear regression. Financial literacy was examined through three interrelated dimensions, financial knowledge, financial behaviors, and financial attitudes, while investment-related decision tendencies served as outcome variables. The results reveal that higher levels of financial literacy are consistently associated with improved financial decision-making, stronger budgeting and saving practices, greater risk awareness, and more coherent investment attitudes. Students with formal exposure to financial education exhibited significantly more rational investment behavior than those without such training. These findings underscore the role of financial literacy as a critical capability that enables young individuals to evaluate investment opportunities, manage financial risks, and adopt informed financial strategies, even under adverse macroeconomic conditions. The study offers implications for universities, policymakers, and financial institutions seeking to enhance youth financial capability. Recommendations include integrating structured financial education programs and developing targeted interventions to strengthen students' decision-making competencies.

***Keywords*:** Financial Literacy; Investment Behavior; Financial Knowledge; Financial Attitudes; Financial Behaviors; University Students; Crisis-Affected Economy; Financial Decision-Making

1. Introduction

The accelerating digitalization of financial services, the expansion of fintech platforms, and the increasing accessibility of investment tools have fundamentally transformed how individuals interact with financial markets. These structural changes require users, particularly young adults, to interpret complex financial information, evaluate heightened risk–return trade-offs, and exercise judgement in environments marked by uncertainty (Lusardi & Mitchell, 2014; Hasler & Lusardi, 2022). The burden is especially pronounced in emerging and crisis-affected economies, where institutional instability and macroeconomic volatility can distort behavioral responses and undermine rational financial decision-making. Lebanon represents a critical case. Since 2019, the country has experienced one of the most severe economic collapses worldwide, marked by hyperinflation, loss of banking sector credibility, and prolonged currency devaluation. These conditions complicate the financial choices faced by university students, many of whom are at the onset of financial autonomy and yet must manage resources in an environment with rapidly shifting financial norms. Their exposure to financial risks, combined with limited formal education in financial matters, raises concerns regarding their ability to make informed, rational investment decisions. Recent evidence on Lebanese SMEs indicates that financial literacy acts as a protective mechanism during episodes of acute economic instability (Makdissi & Mekdessi, 2024). Against this backdrop, this study examines whether financial education serves as a lever that enhances students' financial knowledge, shapes prudent behaviors, and fosters attitudes conducive to rational investment choices in a crisis-affected economy.

The relevance of this research is anchored in both theoretical advancements and pressing societal needs. Theoretically**,** contemporary financial literacy models conceptualize literacy as a composite of knowledge, behavior, and attitude dimensions (OECD, 2020; Atkinson & Messy, 2012). Recent studies demonstrate that financial literacy is strongly predictive of financial resilience, investment participation, and risk comprehension, even after accounting for socioeconomic factors (Klapper, Lusardi & van Oudheusden, 2022; Stolper & Walter, 2022). Yet, most empirical evidence originates from stable or advanced economies. Much less is understood about how financial literacy operates under crisis conditions, where decision-making may be shaped by heightened emotional biases, reduced institutional trust, and constrained opportunity structures (Batsaikhan & Demertzis, 2021). Practically**,** strengthening financial capability among young adults is an essential component of long-term economic resilience. University students in Lebanon navigate a financial environment characterized by uncertainty, limited liquidity, and frequent exposure to informal or high-risk investment propositions. Enhancing their ability to budget, save, assess financial products, and interpret risk is therefore crucial. Recent international assessments highlight persistent literacy gaps among youth worldwide (OECD, 2020; Kalmi, 2022), underscoring the need for targeted financial education interventions.

Similar crisis-driven shifts in financial behavior have been documented among public school teachers in Beirut, whose saving, spending, and investment patterns were significantly altered by the financial collapse (Awada, Makhoul, & Mekdessi, 2025).

This study contributes to both global and regional discussions by providing empirical evidence on how financial education predicts literacy outcomes and investment behavior among students operating in a deeply distressed economic context. Extensive research has established that financial literacy is a key determinant of long-term financial well-being and investment success. Lusardi and Mitchell (2014) show that individuals with higher financial literacy make more informed financial choices, while recent studies confirm that literacy enhances financial resilience during crises such as COVID-19 (OECD, 2020; Hasler & Lusardi, 2022). Behavioral finance research further demonstrates that decision-making is susceptible to biases, such as loss aversion, overconfidence, and present bias, that can be mitigated through financial education (Kahneman & Tversky, 1979; Nicolini et al., 2020). Within the student population, earlier research found substantial literacy gaps (Chen & Volpe, 1998), but more recent studies confirm that structured education significantly improves financial capability among young adults (Xiao & O'Neill, 2018; Amagir et al., 2020). Furthermore, large-scale global assessments (OECD/INFE) reveal that youth populations remain inadequately prepared to engage with financial markets. However, few empirical studies investigate how financial education functions in contexts of profound institutional and economic crisis. Lebanon's complex financial environment allows this research to address an important gap by analyzing whether the conventional pathways linking financial education to financial knowledge, behavior, and attitudes hold under extreme macroeconomic stress. Drawing on the OECD framework, behavioral finance theory, and empirical gaps identified in global research, this study advances the following hypotheses:

- **H1:** Financial education positively affects students' financial knowledge**,** enhancing their understanding of financial concepts critical to investment decisions.
- **H2:** Financial education positively affects students' financial behaviors**,** including budgeting, saving, and cautious engagement with investment products.
- **H3:** Financial education positively affects students' financial attitudes**,** influencing their perceptions of money management, risk, and long-term financial planning.

These hypotheses reflect contemporary models (OECD, 2020; Lusardi, 2019) and align with recent findings highlighting the behavioral and attitudinal pathways through which literacy influences decision-making. To test these hypotheses, this study employs a quantitative design using a structured questionnaire administered to university students. The instrument captures students' financial education exposure, literacy components, and investment tendencies. Data were analyzed through descriptive statistics, correlation analysis, reliability testing, independent-samples t-tests, and linear regression, methods well-suited for assessing how financial education predicts literacy

outcomes and investment-related behaviors. The methodological structure ensures a robust evaluation of how financial literacy functions as a catalyst for rational investment behavior in a crisis-affected economy.

2. Literature Review

2.1 Overview of the Literature and Conceptual Boundaries

The rapid evolution of financial systems, marked by digitalization, growing product sophistication, and the democratization of investment platforms, has fundamentally reshaped the financial landscape for individuals. These developments have amplified the importance of financial education as a foundational competence for responsible financial behavior and long-term economic well-being (OECD, 2020; Klapper et al., 2022). Theoretical and empirical studies converge on the notion that financial literacy, encompassing knowledge, behavior, and attitudes, constitutes a form of human capital essential for participation in modern financial markets (Lusardi & Mitchell, 2014; Amagir et al., 2020). In crisis-affected settings, the stakes are even higher. Economic instability can distort risk perceptions, erode trust in formal institutions, and magnify behavioral biases that undermine rational financial decision-making (Batsaikhan & Demertzis, 2021). The Lebanese context, characterized by acute financial collapse, offers a unique environment for examining how financial literacy operates under systemic stress. While literature addressing financial literacy in stable economies is abundant, research exploring its mechanisms in volatile or crisis conditions remains limited. This scarcity underscores the value of exploring how financial knowledge, behaviors, and attitudes interact to shape investment decisions among university students, an emergent demographic adopting financial autonomy. Accordingly, this literature review synthesizes theoretical frameworks, empirical findings, and contemporary debates surrounding financial literacy and investment decision-making. It provides the conceptual foundation for understanding how financial education influences youth behavior in contexts where uncertainty and institutional fragility shape economic choices.

2.2 Financial Education: Foundations, Frameworks, and Contemporary Perspectives

Financial education refers to the process through which individuals acquire the knowledge, skills, and behaviors required to make informed financial decisions (OECD, 2020). It encompasses competencies related to budgeting, saving, credit management, risk evaluation, and investment planning. Over the past decade, the construct has expanded to include behavioral and attitudinal dimensions, reflecting an understanding that financial decisions are not solely rational but also shaped by psychological and contextual factors (Nicolini & Cude, 2021). Contemporary definitions emphasize *capabilities* rather than mere *knowledge acquisition*, aligning financial literacy with broader human capital and financial well-being frameworks (Hasler et al., 2023). This shift reflects emerging evidence that individuals require more than factual understanding, they need the ability to apply financial principles, interpret uncertainty, regulate emotions, and engage

in long-term planning. Financial education has become indispensable in an environment characterized by product complexity, technological innovation, and heightened individual responsibility for financial outcomes. The shift toward market-based pension systems, proliferation of online trading, and increased accessibility of speculative assets (e.g., cryptocurrencies) place individuals at greater risk when literacy is insufficient (Stolper & Walter, 2017; Kalmi & Rahko, 2022).

Recent studies highlight that financial education plays a pivotal role in strengthening individuals' financial capability by improving the quality of economic decisions, particularly through enhanced understanding of risk, compounding, diversification, and fees (Klapper et al., 2022). It also contributes to greater financial resilience, enabling households to better withstand economic shocks, navigate liquidity constraints, and reduce vulnerability to misinformation during periods of instability (Hasler et al., 2023). Moreover, financial education promotes broader participation in formal financial markets by increasing engagement in structured savings, retirement schemes, and low-risk investment products, thereby fostering more secure and informed long-term financial behavior (Xiao & O'Neill, 2016). In crisis-affected economies, financial education takes on additional significance. When institutional credibility deteriorates, as seen in Lebanon's banking crisis, individuals must rely more heavily on their own competencies to protect assets, evaluate alternative strategies, and discern predatory schemes. Thus, strengthening financial capability becomes not only a personal asset but a mechanism of socio-economic protection. Empirical findings from Lebanese SMEs further show that higher levels of financial literacy enhance actors' capacity to assess risk and build resilience in unstable environments (Makdissi, Saliba, Makdissi, & Mekdessi, 2025). Scholars widely recognize financial literacy as a multidimensional construct encompassing three core components: financial knowledge, which reflects an individual's understanding of key concepts such as interest rates, inflation, risk–return trade-offs, diversification, and the time value of money; financial behavior, which includes practical actions such as budgeting, saving, debt repayment, investment planning, and ongoing portfolio monitoring; and financial attitudes, which refer to underlying beliefs and dispositions toward money management, risk, long-term planning, and future orientation (Atkinson & Messy, 2012).

These dimensions operate collectively to influence financial decision-making. For example, knowledge informs behavior, but attitudes regulate consistency and motivation. A student may learn diversification principles, but without a long-term attitude toward planning, they may not apply them effectively. As emerging literature suggests, attitudes often mediate the relationship between knowledge and behavior, especially among young adults whose financial habits are still forming (Amagir et al., 2020; Kalmi & Rahko, 2022). Financial education can be acquired through multiple learning channels, ranging from formal instruction to digital platforms and informal social environments. Recent research highlights the effectiveness of formal curriculum integration, which provides structured and validated financial learning that generates long-term improvements

in financial behavior (Bernheim et al., 2001; Xiao & O'Neill, 2016); digital financial tools, such as mobile applications, robo-advisors, and interactive simulations, which enhance engagement and facilitate skill development (Hasler et al., 2023); social media and online communities, which have become influential yet often unregulated sources of informal financial education (Park et al., 2021); and experiential learning opportunities, including student investment clubs and stock-market simulations, which reinforce the practical application of financial concepts and decision-making skills (Amagir et al., 2020). However, the quality of financial education varies considerably. Digital content can be misleading; informal learning may perpetuate biases or misinformation. Thus, structured financial education, especially at the university level, remains the most reliable mechanism for building foundational competencies.

Despite widespread recognition of its importance, financial education continues to confront multiple structural and behavioral barriers. The growing complexity of financial systems, characterized by derivative instruments, algorithmic trading, decentralized finance, and intricate fee structures, places heavy cognitive demands on novice learners. Information overload and the proliferation of misinformation further complicate learning, as young individuals often struggle to distinguish credible sources from speculative or manipulative content, increasing their exposure to risky schemes and influencer-driven financial claims. Behavioral biases such as overconfidence, herding, present bias, and loss aversion also hinder rational decision-making, underscoring the need for financial education to incorporate psychological insight rather than rely solely on content transmission (Kahneman & Tversky, 1979; Nicolini & Cude, 2021). These challenges are compounded by rapidly evolving financial technologies, which frequently outpace curriculum updates and create gaps between taught material and the practical competencies required in contemporary financial environments. Socioeconomic and contextual constraints, particularly in crisis economies, further limit the application of financial knowledge as individuals may prioritize short-term survival over long-term planning due to liquidity pressures and institutional distrust. Together, these obstacles illustrate that financial education must be dynamic, adaptive, and context-sensitive, especially for populations operating under macroeconomic instability.

2.3 Investment Decisions: Theoretical Foundations, Cognitive Mechanisms, and Determinants

Investment decision-making is a multidimensional process that integrates cognitive assessments, behavioral predispositions, and contextual market dynamics. Modern investment research emphasizes that individuals, especially inexperienced investors such as university students, must navigate uncertainty, evaluate alternatives, and balance trade-offs between risk and return. This section synthesizes theoretical perspectives, core conceptual definitions, and empirical insights to construct a rigorous foundation for understanding how investment decisions are formed.

Investment is traditionally defined as the allocation of monetary resources into assets with the expectation of generating future income or capital appreciation. Assets include tangible assets (real estate), financial securities (stocks, bonds, ETFs), intangible ventures (start-ups, crowdfunding), and digital innovations (cryptocurrencies). Contemporary perspectives expand the conceptual boundary to include autonomous investing (robo-advising), ESG-driven investment, and behavioral portfolio construction (Baker et al., 2022). Foundational financial theory, including the Efficient Market Hypothesis (Fama, 1970) and Modern Portfolio Theory (Markowitz, 1952), assumes rational investors who optimize expected utility. However, real-world evidence increasingly demonstrates that individuals deviate systematically from rationality due to limited literacy, cognitive biases, and emotional factors (Barberis, 2018). This becomes especially relevant for students, whose financial experiences and knowledge structures are still developing.

Investment decisions, often referred to as capital allocation decisions, involve selecting financial instruments, formulating diversification strategies, managing risk, determining appropriate timing, and revising portfolios in response to market conditions. These choices are shaped by expected financial outcomes, individual risk profiles, the availability and quality of market information, levels of uncertainty, investment horizons, and a range of psychological and behavioral influences. For novice investors, the decision-making process is seldom linear; it typically requires iterative learning, reducing uncertainty, experimenting with initial choices, and adjusting decisions based on accumulated market feedback. Recent behavioral research shows that inexperienced investors frequently rely on heuristics such as anchoring, herding, and overconfidence, which can distort judgment and lead to suboptimal investment outcomes (Baker et al., 2022; Nicolosi et al., 2021). Investment decisions follow a structured yet cognitively demanding process that unfolds across several interrelated stages, each of which integrates financial knowledge, behavioral tendencies, and contextual cues. The process typically begins with financial self-assessment and resource evaluation, during which individuals examine their income, expenses, liquidity reserves, debt obligations, and existing savings. This stage establishes personal financial constraints and determines a realistic investment budget, and research shows that accurate self-assessment is strongly associated with financial literacy and predicts disciplined investment behavior (Xiao & O'Neill, 2016; Amagir et al., 2020). Following this, investors articulate their financial goals and define their time horizon, whether short-, medium-, or long-term, which in turn shapes their risk tolerance and guides the selection of suitable asset classes. Prior studies confirm that clear goal-setting enhances investment discipline, reduces impulsive portfolio adjustments, and contributes to long-term financial well-being (Klapper et al., 2022).

Once goals are established, individuals engage in information search and market analysis, gathering data on available asset classes, historical performance, market trends, fee structures, and broader macroeconomic indicators. The capacity to critically assess information is central to rational investment decision-making, yet many novice investors rely on social media, peer advice,

or influencers, sources that frequently contain bias or misinformation (Park et al., 2021; OECD, 2020). The next stage involves portfolio construction and diversification, a foundational principle of modern investment theory first formalized by Markowitz (1952). Diversification reduces unsystematic risk by allocating capital across multiple assets, sectors, or markets, and empirical evidence suggests that individuals with stronger financial literacy diversify more effectively, make greater use of low-cost instruments such as exchange-traded funds (ETFs), and avoid highly concentrated or speculative positions (Nicolini & Cude, 2021). Finally, investors must engage in ongoing monitoring, evaluation, and rebalancing of their portfolios to ensure continued alignment with their objectives. Inexperienced investors are often prone to emotional decision-making, such as panic selling during periods of volatility, but studies indicate that financial education improves monitoring discipline and mitigates detrimental short-term reactions (Hasler et al., 2023).

Investment decisions arise from the interaction of multiple determinants. We explore hereby the major categories shaping investment choices, with particular relevance for university students.

- *Risk Tolerance and Risk Perception:* Risk tolerance refers to an individual's willingness to accept uncertainty and potential loss in pursuit of higher returns. It is influenced by age, income, financial experience, psychological traits, and economic context. Risk perception, how risky an investment *feels*, often differs from the actual risk and is strongly shaped by financial literacy (Kahneman & Tversky, 1979). Among students, risk tolerance is typically lower due to limited income and shorter financial experience. Yet paradoxically, studies find that students may engage in high-risk speculative investments (e.g., cryptocurrencies) due to social influence and optimism bias (Kalmi & Rahko, 2022).
- *Market Conditions and Macroeconomic Environment:* Interest rates, inflation, stock market cycles, currency stability, and geopolitical events significantly affect investment decisions. In crisis environments, such as Lebanon's financial collapse, uncertainty amplifies emotional responses, increases liquidity preference, and reduces trust in formal institutions. Research shows that individuals in high-volatility economies rely more heavily on informal knowledge sources and exhibit more conservative or reactionary investment patterns (Batsaikhan & Demertzis, 2021). Evidence from Lebanese entrepreneurs similarly shows that crisis conditions reshape financial behavior and encourage more cautious, adaptive financial strategies (Makdissi, Arja, & Mekdessi, 2023). For students navigating such environments, these pressures strongly shape both real and perceived investment opportunities.
- *Financial Situation and Resource Availability:* Income level, debt burden, savings capacity, and access to financial services directly influence investment choices. Students often experience liquidity constraints, making small-scale, low-cost investments, such as ETFs, micro-investing apps, or savings products, more feasible.

Recent research highlights that financial inclusion (access to banking and investment accounts) interacts with financial literacy to determine investment market participation (OECD, 2020; Klapper et al., 2022).

- *Investment Goals and Time Horizon:* Goals structure investor choices. Short-term goals Favor low-risk, high-liquidity assets, while long-term goals facilitate risk-taking and growth-oriented investments. Students often focus on:building emergency funds, developing investment skills, saving for postgraduate studies and accumulating future home-down-payment savings. Time horizon strongly correlates with risk tolerance: longer horizons allow greater volatility absorption (Markowitz, 1952).
- *Behavioral Biases and Heuristics:* Behavioral biases systematically influence investment decisions. Key biases include overconfidence**:** Excessive trading, underestimation of risk, Present bias**:** Preference for immediate gratification over long-term benefits, Herding: Following peers or market trends without analysis, Loss aversion: Avoiding losses more strongly than valuing equivalent gains. Behavioral finance research demonstrates that financial education reduces susceptibility to biases by strengthening analytical reasoning and moderating emotional responses (Nicolini & Cude, 2021; Barberis, 2018).
- *Diversification Strategies**:*** Diversification reduces idiosyncratic risk and remains a key determinant of portfolio stability. Students often under-diversify due to: limited financial knowledge, lack of awareness of low-cost diversification tools (e.g., Exchange-Traded Funds), small initial investment amounts. Evidence shows that diversification increases with financial literacy, suggesting a strong link between education and responsible investment practices (Xiao & O'Neill, 2016).
- *Taxation and Regulatory Influences:* Tax regimes influence portfolio optimization and investment preferences. Although many students invest in products where taxation is limited (e.g., savings accounts, education-linked savings schemes), knowledge of taxation affects investment selection and expected returns (Baker et al., 2022). In crisis economies, uncertainties around capital controls, inflation-adjusted taxation, and regulatory shifts intensify the complexity of student investment decisions.
- *Technological Tools, Fintech Platforms, and Algorithmic Guidance:* Fintech innovations have democratized investment access. Mobile trading, robo-advisors, micro-investing apps, and blockchain-based assets significantly lower entry barriers. Recent research shows that young investors adopt digital platforms more rapidly, but digital literacy and financial education determine whether fintech usage leads to informed or risky behavior (Park et al., 2021; Hasler et al., 2023).
- *Economic Outlook and Sentiment:* Expectations about GDP growth, future employment opportunities, inflation trends, and currency stability strongly shape investment behavior. Positive sentiment encourages risk-taking; negative sentiment leads to liquidity hoarding.

Students in Lebanon, facing uncertain employment prospects and institutional collapse, frequently adopt defensive investment strategies, emphasizing capital preservation overgrowth.

2.4 Investment Decisions in the Context of University Students

University students constitute a distinctive category of emerging investors whose financial behaviors, attitudes, and decision patterns differ from those of more financially established adults. This stage of life is marked by limited income, high uncertainty about future earnings, and developmental transitions that shape long-term financial capabilities (Xiao & O'Neill, 2016). As higher education increasingly integrates digital technologies and entrepreneurial training, students are more exposed to financial decision-making opportunities, but often without the knowledge required to navigate these decisions responsibly (OECD, 2020). This section examines the unique features, challenges, and opportunities associated with investment decision-making among university students. Early investment behavior holds strategic importance in shaping individuals' long-term financial trajectories, as evidence shows that those who begin investing earlier accumulate greater wealth through compounding returns, improved risk-adjusted decision-making, and iterative learning from market experiences (Hasler et al., 2023). For university students, early engagement in investing generates several reinforcing benefits: it allows them to harness the power of compounding and long-term growth, since younger investors can tolerate short-term volatility and leverage extended time horizons, one of the strongest yet often underappreciated determinants of wealth accumulation (Klapper et al., 2022); it supports the formation of financial discipline and durable behavioral habits, as practices such as budgeting, saving, and routine portfolio monitoring adopted during university years tend to persist into adulthood (Amagir et al., 2020); it strengthens financial security and resilience by enabling diversification of income sources and creating buffers against economic shocks, a particularly critical dynamic in crisis-affected environments such as Lebanon; and it enhances financial self-efficacy, as early exposure to investment activities increases confidence, competence, and perceived control over financial outcomes, with research showing that self-efficacy mediates the relationship between financial literacy and behavior among young populations (Nicolini & Cude, 2021).

Research on Lebanese university students likewise underlines that strengthening entrepreneurial and economic competencies is essential for improving the quality of their financial decision-making (Masri & Al., 2022). Financial management during emerging adulthood involves learning to allocate limited resources, evaluate trade-offs, and establish saving and investment routines at a time when students face competing financial demands such as tuition fees, living expenses, and leisure consumption, all of which require deliberate and informed financial planning (OECD, 2020). Core competencies in this period include budgeting and cash-flow control, building emergency savings, understanding debt obligations, recognizing investment opportunities, and

setting realistic financial goals. Empirical research shows that students who develop stronger financial foundations are more likely to participate in investment activities, display lower levels of impulsive spending, and respond more resiliently to market volatility (Amagir et al., 2020; Kalmi & Rahko, 2022). These foundational competencies depend heavily on financial education, whether acquired formally through academic programs or informally through personal experience and social learning.

For students to participate effectively in financial markets, several essential preconditions must be in place. First, they must be able to accurately assess their personal financial capacity, including income, expenses, emergency reserves, and debt obligations; research shows that misperceptions in these areas often result in excessive risk-taking or premature commitments to illiquid investments (Barberis, 2018). Second, students need the ability to recognize and evaluate investment risks, as many tend to underestimate market volatility, particularly in speculative domains such as cryptocurrencies, due to optimism bias and limited experiential learning (Kalmi & Rahko, 2022). Third, familiarity with key investment terminology is critical; understanding concepts such as exchange-traded funds (ETFs), price-to-earnings (P/E) ratios, diversification, and risk premia enables informed decision-making, whereas students lacking this foundational knowledge are more likely to rely on intuition, peer influence, or social media, behaviors consistently associated with poor investment outcomes (Park et al., 2021). Finally, access to formal and informal learning resources, such as online courses, university finance modules, investment clubs, or market simulations, plays a central role in developing investment readiness, with structured educational environments shown to significantly enhance students' preparedness to engage with financial markets (OECD, 2020).

Despite increasing interest in investing, student investors face several recurring pitfalls that can undermine their financial outcomes. A common issue is the tendency to hold undiversified portfolios, often concentrating investments in familiar asset classes, such as technology stocks or cryptocurrencies, due to familiarity bias, which substantially increases exposure to idiosyncratic risk (Markowitz, 1952). Students also frequently engage in high-risk assets without sufficient knowledge, driven by speculative motives or "fear of missing out" (FOMO); research indicates that social media environments amplify herd behavior and overconfidence, making young investors especially vulnerable to losses (Park et al., 2021). Short-termism and emotional trading represent additional challenges, as students often react impulsively to market fluctuations, selling during downturns or buying during hype cycles, patterns that behavioral finance consistently associates with poor long-term performance (Barberis, 2018). Finally, many students rely heavily on informal advice from peers or online influencers who may lack expertise or credibility, further increasing the likelihood of misguided investment decisions.

Investment options available to students span a broad spectrum of risk and accessibility, reflecting both empirical patterns of youth investing and conceptual frameworks in financial decision-making. Low-risk instruments such as savings accounts, treasury securities, and other regulated products offer capital preservation, a feature particularly valuable in high-inflation environments where protecting purchasing power is a priority. Market-based products, including exchange-traded funds (ETFs), diversified index funds, micro-investing platforms, and low-cost digital investment applications, have significantly democratized access to financial markets, with studies showing that students gravitate toward these digital platforms because they allow small investment amounts and provide user-friendly interfaces (Hasler et al., 2023). Real estate exposure, while traditionally limited by high entry costs, has become more accessible through fractional ownership models and real estate investment trusts (REITs), which enable students to participate in property markets without requiring full ownership. At the higher end of the risk spectrum, cryptocurrencies continue to draw student interest due to perceptions of innovation, rapid returns, and social visibility; however, empirical research cautions that low financial literacy significantly increases vulnerability to loss in these markets (Kalmi & Rahko, 2022). Entrepreneurial and crowdfunding investments represent another avenue, appealing to students interested in start-ups, innovation, and social impact. Although these opportunities involve substantial risk, they align with learning-based investing and provide exposure to real-world financial decision-making.

Strategic investment approaches for students emphasize disciplined planning, gradual engagement, and informed decision-making. A foundational element is setting clear and realistic investment objectives, as goal-setting enhances discipline and supports long-term consistency. Beginning with small investment amounts and scaling gradually allows students to develop market familiarity while limiting financial exposure. Diversification across instruments and markets remains essential, as spreading investments reduces volatility and improves the stability of long-term returns (Markowitz, 1952). Continuous financial education is also critical, requiring students to stay informed about market developments, emerging financial technologies, and evolving regulatory environments. In addition, leveraging fintech tools, such as robo-advisors, automated savings applications, and micro-trading platforms, can facilitate structured investment habits, provided these tools are used with informed caution and adequate financial understanding.

2.5 The Link Between Financial Education and Investment Decisions

Understanding the relationship between financial education and investment behavior requires an integration of economic theory, behavioral models, and empirical research. A growing body of literature demonstrates that financial education plays a central role in shaping how individuals interpret information, assess risk, and make investment choices (Lusardi & Mitchell, 2014; OECD, 2020).

Strategic investment approaches for students emphasize disciplined planning, gradual engagement, and informed decision-making. A foundational element is setting clear and realistic investment objectives, as goal-setting enhances discipline and supports long-term consistency. Beginning with small investment amounts and scaling gradually allows students to develop market familiarity while limiting financial exposure. Diversification across instruments and markets remains essential, as spreading investments reduces volatility and improves the stability of long-term returns (Markowitz, 1952). Continuous financial education is also critical, requiring students to stay informed about market developments, emerging financial technologies, and evolving regulatory environments. In addition, leveraging fintech tools, such as robo-advisors, automated savings applications, and micro-trading platforms, can facilitate structured investment habits, provided these tools are used with informed caution and adequate financial understanding.

Without structured financial education, students are more likely to make fundamental financial errors that undermine their long-term stability. They often fail to track spending or maintain emergency savings, misuse credit due to limited understanding of interest costs, and engage in speculative trading without evaluating underlying risks. Students also tend to underestimate long-term financial needs, such as retirement planning, and are more vulnerable to financial misinformation or fraudulent schemes circulating through social networks and digital platforms. These patterns are consistently documented in global studies on youth financial literacy, which highlight a persistent gap between financial responsibility expectations and actual financial capability among young adults (OECD, 2020; Hasler et al., 2023). The relationship between financial education and investment behavior is grounded in several core theoretical frameworks. Cognitive learning theory proposes that acquiring financial knowledge enhances individuals' mental models, enabling them to better interpret financial information and apply concepts effectively, with active learning approaches proving particularly impactful for young adults. Behavioral finance theory emphasizes that cognitive biases systematically distort investor decisions, and financial education helps reduce susceptibility to these biases by strengthening analytical reasoning and emotional regulation (Barberis, 2018). The financial capability model further explains that financial behavior emerges from the interaction of knowledge, skills, confidence, and available opportunities; education therefore builds both competence and self-efficacy, expanding individuals' capacity to act on financial information (Xiao & O'Neill, 2016). Together, these frameworks provide strong theoretical justification for the proposition that financial education acts as a catalyst for rational investment behavior.

2.6 Empirical Studies on Financial Literacy and Investment Decisions

Empirical research on financial literacy and investment decision-making has expanded considerably over the past decade, driven by global financial disruptions, rapid technological change, and the increasing engagement of young adults in financial markets. Foundational studies established the critical role of financial literacy in shaping investment outcomes, while more recent

research has explored how digital finance, behavioral biases, and macroeconomic instability influence financial decision-making. Together, these studies demonstrate that financial capability is a multidimensional construct influencing how individuals interpret financial information, manage resources, assess risks, and make investment choices. Early empirical evidence laid the groundwork for understanding these dynamics. Lusardi and Mitchell (2014) demonstrated across multiple national datasets that individuals with higher financial knowledge exhibit superior investment behavior, greater diversification, and more effective retirement planning. Similarly, Chen and Volpe (1998), in their survey of U.S. university students, identified substantial gaps in investment, insurance, and credit knowledge, yet found that students exposed to financial education performed significantly better on financial management tasks, highlighting the importance of education for investment readiness. Longitudinal research by Bernheim, Garrett, and Maki (2001) further showed that students who received mandated financial education in high school exhibited stronger saving and investment behaviors as adults, providing one of the most compelling cases for early intervention in financial education.

Contemporary studies from 2020 to 2024 have expanded these insights, particularly in the context of digital finance and global uncertainty. OECD's (2020) PISA findings revealed persistent global deficiencies in youth financial literacy, showing that knowledgeable students were better prepared to compare financial products, manage risk, and evaluate investment opportunities. Amagir et al. (2020) reported strong links between financial education, self-efficacy, and diversification intentions among Dutch adolescents, while Hasler et al. (2023) demonstrated that financial literacy enhances household resilience, reduces panic-driven investment errors, and supports long-term portfolio maintenance in crisis contexts. Kalmi and Rahko (2022) found that game-based financial education improves analytical ability and risk assessment among youth, and Nicolini and Cude (2021) showed that financial education mitigates behavioral biases such as herding and overconfidence. Park et al. (2021) documented the influence of digital media on investment behavior, noting that financial literacy moderates' susceptibility to misinformation. Finally, Klapper, Lusardi, and van Oudheusden (2022) confirmed that financial literacy predicts wealth accumulation, investment participation, and reduced financial stress across global populations. Although limited, empirical evidence from crisis-affected economies further underscores the heightened value of financial literacy in unstable environments. Batsaikhan and Demertzis (2018) found that financially literate individuals in fragile economies exhibit greater resilience to inflationary pressures and institutional failures. OECD (2020) highlighted that youth in unstable financial contexts frequently rely on informal and often unreliable knowledge sources, increasing vulnerability to high-risk investments. Complementing these insights, Hasler et al. (2023) reported that financial education reduces emotional reactivity and supports more rational, risk-based investment decisions during crises. These studies directly parallel the Lebanese context, where students must navigate extreme volatility, limited institutional reliability, and substantial financial uncertainty.

Complementing these insights, a recent Lebanese study on university students reports that higher financial literacy is associated with more deliberate and informed investment decisions, even under severe macroeconomic stress (Makdissi, Makdissi, & Mekdessi, 2024). Across global, contemporary, and crisis-specific research, the empirical literature consistently demonstrates that financial literacy enhances risk comprehension, promotes investment diversification, and supports long-term financial planning. Educational interventions have measurable effects on investment behavior, influencing cognitive, behavioral, and attitudinal dimensions of decision-making. Moreover, crisis environments amplify the value of financial literacy by moderating emotional responses and improving decision stability. University students, given their developmental stage, exposure to digital finance, and proximity to major life transitions, represent a critical population for understanding how financial literacy shapes investment behavior. These converging insights provide strong empirical grounding for the present study's hypotheses and analytical framework.

The literature reviewed demonstrates that financial literacy is a multidimensional construct shaping investment decision-making through interconnected cognitive, behavioral, attitudinal, and contextual mechanisms. Collectively, the evidence shows that financial education functions as a critical form of human capital, equipping individuals to navigate complex financial systems, interpret uncertainty, and make rational investment choices. University students emerge as a particularly important demographic, as early exposure to financial concepts and investment practices significantly influences long-term financial trajectories. Insights from behavioral economics further reveal that biases, heuristics, and emotional responses often hinder rational decision-making, yet these limitations can be mitigated through targeted financial education. Empirical studies consistently affirm the link between financial literacy and responsible investment behavior, highlighting improvements in diversification, reductions in impulsivity, and greater resilience to financial shocks. In crisis-affected economies such as Lebanon, where institutional instability heightens individual responsibility for financial security, financial literacy becomes even more pivotal for enabling young adults to protect assets, assess risks accurately, and make informed investment decisions.

3. Methodology

The study applies a quantitative research design, consistent with contemporary financial literacy research, which emphasizes the value of structured measurement instruments, replicability, and statistical modelling (Kaiser & Menkhoff, 2021; OECD, 2020). The section outlines the research design, population and sampling strategy, measurement instruments, study variables, and data analysis procedures used to test the study's hypotheses. The methodological structure is designed to ensure internal coherence, validity, and rigor in explaining how financial education shapes financial knowledge, behaviors, and attitudes among students in a crisis-affected context.

3.1 Research Design

The study employs a descriptive explanatory research design, consistent with the dual aims of (1) characterizing the financial literacy and investment patterns of university students and (2) identifying causal relationships between financial education and investment-related outcomes. Descriptive research supports systematic profiling of the target population, while explanatory research enables hypothesis testing and modelling causal associations (Saunders et al., 2019). This hybrid approach is common in financial literacy studies examining behavioral determinants (Hasler et al., 2023; Kalmi & Rahko, 2022). A quantitative approach was adopted, relying on a structured questionnaire administered to university students. Quantitative methods are particularly effective for financial literacy research because they allow for large sample sizes, objective metrics, and robust statistical inference (Lusardi & Mitchell, 2014; OECD, 2020). The use of standardized measurement scales strengthens reliability and comparability with global empirical research.

3.2 Research Objectives

The primary objective is to assess whether and how financial education influences the financial knowledge, financial behaviors, and financial attitudes that drive investment decisions among Lebanese university students. This objective aligns with current international research emphasizing the need to evaluate how educational interventions translate into behavioral and attitudinal financial capability (Klapper et al., 2022; Nicolini & Cude, 2021). Additional goals include identifying gaps in students' financial competencies and generating evidence-based recommendations to strengthen financial capability in crisis-affected economies.

3.3 Population and Sampling

The target population consists of undergraduate and graduate students enrolled in public and private universities across Lebanon. This population, estimated at approximately 225,000 students according to recent national statistics from the Central Administration of Statistics and the Center for Educational Research and Development, represents a critical segment of emerging financial decision-makers operating in an environment characterized by prolonged economic instability. University students are at a developmental stage where foundational attitudes and behaviors related to financial management and investment decision-making are formed, making them an essential group for examining financial literacy and its behavioral implications (Amagir et al., 2020; OECD, 2020).

A non-probability convenience sampling technique was used to recruit participants. This approach facilitates efficient access to respondents across multiple universities and is widely applied in financial literacy and behavioral finance research involving youth populations, particularly when contextual constraints make random sampling unfeasible (Hasler et al., 2023; Kaiser & Menkhoff, 2021). Although convenience sampling introduces potential selection bias, for example, by

overrepresenting financially engaged students, the method is appropriate for exploratory and explanatory research designs, especially when statistical procedures can be used to mitigate bias and enhance generalizability.

A total of 390 students participated in the study. The minimum recommended sample size was established using standard criteria for finite populations of approximately N ≈ 220,000 university students. Assuming a 95% confidence level, 5% margin of error, and maximum response variability (p = .50), the calculated requirement was substantially lower than the final achieved sample. Therefore, the sample of 390 respondents provides adequate statistical power, robust parameter estimation, and sufficient variability for subgroup and multivariate analyses. Comparable sample sizes have been used in recent empirical studies on youth financial capability and investment behavior (Kalmi & Rahko, 2022).

3.4 Data Collection Instrument

A structured online questionnaire was administered using Google Forms and disseminated to university students across major Lebanese regions through WhatsApp groups and university communication networks. Online administration is widely adopted in contemporary financial literacy research because it offers efficiency, cost-effectiveness, and broad reach across diverse student populations (OECD, 2020). The questionnaire comprised four sections covering socio-demographic characteristics, exposure to financial education (independent variable), financial literacy components (knowledge, behaviors, and attitudes), and investment-related perceptions and patterns. All items were assessed using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), a format well suited for capturing behavioral and attitudinal constructs and recognized for its reliability and psychometric robustness in financial behavior studies (Nicolini & Cude, 2021). Participation in the study was voluntary and anonymous, and all ethical protocols were followed, including informed consent, confidentiality assurances, and adherence to data protection standards.

3.6 Study Variables

The study examines the relationship between financial education as the independent variable and three dependent variables, financial knowledge, financial behaviors, and financial attitudes, reflecting the internationally recognized OECD/INFE financial literacy framework (Atkinson & Messy, 2012; OECD, 2020). This typology captures the multidimensional nature of financial capability and enables a structured analysis of how educational exposure shapes students' cognitive, behavioral, and attitudinal dispositions toward financial decision-making.

Financial education is conceptualized as students' exposure to formal and informal learning experiences that cultivate financial awareness, knowledge, skills, attitudes, and applied behaviors. This operationalization is consistent with the OECD definition and contemporary scholarship emphasizing financial capability and behavior-oriented outcomes, particularly within contexts

characterized by economic volatility (Hasler et al., 2023; Klapper et al., 2022). By treating financial education as a broad developmental construct rather than a narrow instructional input, the study captures its potential influence on multiple facets of financial literacy.

The dependent variables comprise three components central to financial literacy. Financial knowledge reflects students' understanding of essential financial concepts, including inflation, interest rates, diversification, and risk–return trade-offs. Financial behaviors refer to practical actions such as budgeting, saving, spending discipline, debt management, and investment planning, which together demonstrate applied financial competence. Financial attitudes capture students' orientations toward risk tolerance, future planning, time preferences, and general attitudes surrounding money management. These components jointly represent the attitudinal and behavioral foundations necessary for rational financial and investment decisions. Drawing on the literature and the conceptual framework, the study tests three hypotheses: **H1**, that financial education positively influences students' financial knowledge; **H2**, that financial education positively influences students' financial behaviors; and **H3**, that financial education positively influences students' financial attitudes. These hypotheses reflect consistent empirical findings demonstrating that financial education strengthens financial capability and promotes rational investment behavior across diverse populations (Lusardi & Mitchell, 2014; Nicolini & Cude, 2021).

3.7 Data Analysis Procedures

Data were analyzed using SPSS Version 26 in accordance with contemporary quantitative standards in financial literacy and behavioral research. SPSS provides robust capabilities for data management, descriptive analytics, and inferential modeling, and its widespread adoption in social science research enhances comparability with international studies in the financial literacy field (Kaiser & Menkhoff, 2021). The analysis began with descriptive statistics to summarize socio-demographic characteristics, levels of financial education exposure, and the distributional properties of all study variables. Frequencies, means, standard deviations, and cross-tabulations were employed to provide an initial understanding of sample patterns and variable tendencies. Reliability testing was conducted using Cronbach's alpha to assess the internal consistency of the multi-item scales measuring financial knowledge, behaviors, and attitudes. Values of $\alpha \geq 0.70$ were considered indicative of satisfactory reliability, following established psychometric standards and consistent with recent empirical studies on financial capability (Tavakol & Dennick, 2011). Pearson correlation coefficients were then computed to examine the linear associations between financial education and each dimension of financial literacy. Correlation analysis served to determine both the direction and strength of relationships and to guide subsequent inferential modeling.

To assess group differences, an independent samples t-test compared the financial literacy scores of students with financial education exposure to those without such exposure, enabling the evaluation of mean differences relevant to investment-related outcomes. Finally, three simple linear regression models were estimated to quantify the effect of financial education on financial knowledge, financial behaviors, and financial attitudes, respectively. Regression analysis is widely applied in financial literacy research because it allows for the examination of directional influence and the prediction of behavioral outcomes (Lusardi & Mitchell, 2014; Kaiser & Menkhoff, 2021).

4. Results and Discussion

To provide a clear and structured presentation of the empirical findings, the key results of the descriptive statistics, reliability analysis, correlations, t-tests, and regression models are summarized in the following tables.

Table 1. Descriptive Statistics of Financial Literacy Dimensions (N = 390)

Financial Literacy Dimension	Mean (Range)	Standard Deviation (Approx.)	Interpretation
Financial Knowledge	3.00–3.20	0.65–0.80	Moderate conceptual understanding; difficulty with advanced topics such as diversification and risk–return trade-offs
Financial Behaviors	3.50–3.70	0.60–0.75	Moderate-to-strong behaviors; inconsistent budgeting and long-term planning
Financial Attitudes	Above 4.20	0.55–0.70	Strong positive attitudes; high future orientation and responsibility mindset

Source: Authors' calculations based on survey data (2025).

Table 2. Reliability Analysis (Cronbach's Alpha Values)

Construct / Scale	Cronbach's α	Interpretation
Financial Knowledge	0.89	Excellent internal consistency
Financial Behaviors	0.76	Acceptable reliability

Construct / Scale	Cronbach's α	Interpretation
Financial Attitudes	0.66	Adequate for attitudinal constructs
Financial Education–Investment Link	0.77	Strong reliability

Source: Internal consistency estimates computed using SPSS v26.

Table 3. Pearson Correlations Between Financial Education and Financial Literacy Dimensions

Relationship	Correlation (r)	p-value	Interpretation
Financial Education → Financial Knowledge	> .70	< .001	Strong and significant association
Financial Education → Financial Attitudes	~ .40	< .001	Moderate and significant association
Financial Education → Financial Behaviors	< .30	< .01	Weak-to-moderate but significant association

Source: Pearson correlation analysis conducted using SPSS v26.

Table 4. t-Test Results Based on Exposure to Financial Education

Financial Literacy Component	t-value	p-value	Group with Higher Mean	Interpretation
Financial Knowledge	4.216	< .001	Students with Financial Education	Very strong group difference
Financial Behaviors	2.960	.004	Students with Financial Education	Moderate group difference

Financial Literacy Component	t-value	p-value	Group with Higher Mean	Interpretation
Financial Attitudes	2.728	.008	Students with Financial Education	Meaningful attitudinal improvement

Source: Independent samples t-tests performed in SPSS v26.

Table 5. Simple Linear Regression Models Predicting Financial Literacy Dimensions from Financial Education

Dependent Variable	R	R^2	p-value	Interpretation
Financial Knowledge (H1)	~ .70	~ .49	< .001	Strong predictive effect; H1 supported
Financial Behaviors (H2)	~ .22	~ .05	≈ .02	Modest but significant effect; H2 supported
Financial Attitudes (H3)	~ .41	~ .17	< .001	Meaningful predictive effect; H3 supported

Source: Simple linear regression analyses computed using SPSS v26.

Table 6. Summary of Hypothesis Testing Results

Hypothesis	Statement	Result
H1	Financial education positively influences financial knowledge	Supported (Strong)
H2	Financial education positively influences financial behaviors	Supported (Modest)
H3	Financial education positively influences financial attitudes	Supported (Strong)

Source: Derived from regression and t-test results.

The findings summarized in Tables 1–6 are further interpreted and discussed in the subsections that follow.

4.1 Descriptive Insights: A Fragmented Financial Capability Profile

The descriptive statistics generated through SPSS revealed a misaligned configuration of financial literacy dimensions among Lebanese university students. Average financial knowledge scores hovered slightly above the midpoint of the scale (means generally around 3.0–3.2), indicating basic conceptual awareness but limited analytical depth. Students tended to understand elementary concepts such as simple interest or inflation but exhibited substantial difficulty interpreting risk–return relationships or diversification principles, areas essential for investment decision-making. Financial behavior scores were comparatively stronger, with several items showing averages in the upper third of the scale (around 3.5–3.7). Students demonstrated caution regarding debt, restraint in unnecessary spending, and occasional saving habits. However, structured budgeting, long-term planning, and systematic financial discipline remained inconsistent. The attitudinal component displayed the highest mean levels, some items surpassing the value of 4.2. Students strongly endorsed statements emphasizing financial responsibility, future planning, and the value of acquiring financial knowledge. This mirrors global patterns (OECD, 2020): youth populations often internalize the idea of financial prudence long before mastering the knowledge or behaviors that operationalize it**.** This tri-dimensional disparity, high attitudes, moderate behaviors, limited knowledge, sets the empirical foundation for understanding how students respond to financial education.

4.2 Scale Reliability: Strong Internal Consistency Supporting Robust Analysis

Cronbach's alpha values demonstrated that all measurement scales exhibited adequate to excellent internal consistency, supporting the robustness of the analysis. The financial knowledge scale showed excellent reliability ($\alpha \approx .89$), while financial behavior demonstrated acceptable reliability ($\alpha \approx .76$). Financial attitudes yielded an alpha of approximately .66, which is considered adequate for attitudinal constructs, and the scale assessing the education–investment link showed strong reliability ($\alpha \approx .77$). These coefficients justify the use of composite scores for each construct and reinforce the statistical validity of subsequent analyses, in line with best practices outlined by Kaiser and Menkhoff (2021).

4.3 Correlation Analysis: First Evidence of Theoretical Relationships

The Pearson correlation analysis revealed statistically significant relationships between financial education and all three dimensions of financial literacy. The association between education and financial knowledge was strong, with coefficients exceeding .70, indicating that exposure to financial education is closely tied to conceptual understanding. The correlation between education and financial attitudes was moderate, approximately in the .40 range, suggesting that financial education meaningfully shapes students' financial mindsets. In contrast, the relationship between education and financial behaviors was weak to moderate, with coefficients below .30, reflecting the inherent difficulty of converting knowledge into sustained behavioral change, particularly

within crisis conditions. These patterns are consistent with international evidence showing that financial knowledge is the most responsive to educational interventions, whereas behavioral adjustments emerge more gradually and are heavily influenced by contextual constraints (Hasler et al., 2023).

4.4 Group Differences: Financial Education as a Distinguishing Factor

Independent samples t-tests revealed clear performance gaps between students with and without financial education, with statistically significant differences across all three dimensions: financial knowledge showed a very strong difference ($t = 4.216$, $p < .001$), financial behavior demonstrated meaningful improvement ($t = 2.960$, $p = .004$), and financial attitudes indicated moderate enhancement ($t = 2.728$, $p = .008$). These results confirm that financial education provides both a statistically and practically significant advantage, particularly in the domain of knowledge acquisition. Effect sizes were largest for financial knowledge, approaching or exceeding $d \approx 1.0$, which signals a substantial real-world impact rather than merely statistical significance. This pattern aligns closely with Lusardi and Mitchell's (2014) assertion that financial education most strongly affects the cognitive dimension of financial capability.

4.5 Hypothesis Testing Through Simple Linear Regression

Regression analyses were conducted to test the study's three hypotheses, and the models produced statistically significant results across all financial literacy dimensions.

For H1, examining the effect of financial education on financial knowledge, the regression yielded a strong model fit ($R \approx .70$, $R^2 \approx .49$, $p < .001$), indicating that financial education explains nearly half of the variance in financial knowledge, an exceptionally large effect in youth financial literacy research and clear confirmation of H1.

For H2, assessing the influence of financial education on financial behavior, the model showed a significant but modest explanatory power ($R^2 \approx .05$, $p \approx .02$), suggesting that while education does influence behavior, only about 5% of behavioral variance is accounted for, reflecting the well-documented gap between knowledge acquisition and behavioral implementation (Barberis, 2018). Thus, H2 is supported, though within evident contextual constraints.

For H3, evaluating the impact of financial education on financial attitudes, the regression revealed a meaningful effect ($R^2 \approx .17$, $p < .001$), demonstrating that education substantially shapes financial attitudes, confidence, planning orientation, and risk awareness. This result validates H3 and aligns with behavioral finance perspectives emphasizing the psychological foundations that underlie financial decision-making.

4.6. Integrated Discussion: What the Numbers Mean

The exceptionally strong effect of financial education on knowledge acquisition must be understood within the Lebanese context, whereas prolonged financial instability and institutional

uncertainty limit access to reliable financial information. In such environments, education becomes one of the few trustworthy mechanisms through which students can develop cognitive clarity about financial systems. Those with formal or informal financial training are better equipped to decode financial signals and interpret market conditions, whereas untrained students tend to rely on heuristics, fragmented information, or misinformation circulating through social networks. Despite these cognitive gains, financial behaviors remain constrained, highlighting that behavioral limitations are largely structural rather than educational. This aligns with the OECD (2020) financial capability model, which emphasizes that behavior is shaped not only by ability but also by opportunity. In settings marked by hyperinflation, capital controls, liquidity shortages, and institutional mistrust, as observed in Lebanon, even financially knowledgeable individuals struggle to translate knowledge into consistent financial action. Thus, the observed behavioral gap is not a failure of education but a consequence of environmental barriers.

Financial education nevertheless produces meaningful improvements in financial attitudes, which function as the psychological bridge between knowledge and behavior. Students exposed to financial learning exhibit stronger planning orientations, greater risk awareness, and more future-focused financial mindsets. These attitudinal changes are critical because they often determine whether knowledge evolves into action over time, a relationship well documented in behavioral finance research (Nicolini & Cude, 2021). By altering underlying beliefs and dispositions, education lays the groundwork for behavioral adaptation when economic conditions become more conducive. Finally, the findings indicate that although students feel more capable of evaluating investment opportunities, actual investment participation remains depressed due to prevailing macroeconomic instability. This distinction underscores a central insight: financial education enhances the *quality* of financial decision-making, even if adverse economic conditions limit the *quantity* or frequency of investment activity. In crisis environments, therefore, the role of education is not merely to stimulate market participation but to equip individuals with the analytical and psychological tools necessary to make sound decisions when opportunities eventually arise.

4.7 Synthesis: A Multi-Layered Impact of Financial Education

The combined results reveal a multi-layered impact of financial education, showing that educational exposure most strongly enhances financial knowledge, produces substantial improvements in financial attitudes, and generates more modest gains in financial behavior due to the constraining effects of the ongoing economic crisis. While students demonstrate greater readiness to make informed investment decisions, actual investment activity remains limited by external conditions. Overall, the findings indicate that financial education builds cognitive and psychological capability even when structural barriers restrict behavioral expression.

5. Conclusion and Implications of the Study

This study set out to examine how financial education shapes the financial knowledge, financial behaviors, and financial attitudes of university students in Lebanon, and how these dimensions, taken together, contribute to more rational investment decision-making in the context of a deep and prolonged economic crisis. Using a quantitative design and responses from 390 students enrolled in different Lebanese universities, the research provides robust empirical evidence that financial education is a key determinant of students' financial capability, but that its impact is not uniform across all dimensions of literacy, nor is it independent from the structural constraints of the national context.

First, the results clearly show that financial education exerts its strongest and most direct influence on financial knowledge. Students who reported exposure to financial education scored substantially higher on items related to budgeting, interest, inflation, risk–return trade-offs, and basic investment concepts. Nearly half of the variance in financial knowledge can be explained by financial education alone. This finding confirms the central idea underpinning human-capital and financial capability theories: structured financial education changes how individuals think about money, reshape their cognitive frames, and provides them with analytical tools to decode increasingly complex financial environments. In a context such as Lebanon, where market signals are volatile and institutional trust is eroded, this cognitive reinforcement is not merely desirable – it is indispensable.

Second, the study shows that financial education also affects financial attitudes**,** although to a lesser extent than knowledge. Educated students display stronger agreement with statements associated with long-term planning, financial responsibility, and the importance of understanding financial products and risks. They appear more future-oriented, more aware of the consequences of poor decisions, and more willing to consider investment as a necessary component of their life trajectory. This attitudinal shift is particularly important from a behavioral finance perspective: it suggests that education does not only transmit information, it also contributes to building a psychological disposition that is more compatible with disciplined and rational financial behavior. In other words, education does not only teach students "what to know", but also "how to think" about financial decisions.

Third, the effect of financial education on financial behavior is statistically significant but clearly more modest. Students with financial education report somewhat better budgeting practices, greater caution toward debt, and more frequent saving, yet these behaviors remain inconsistent and fragmented. The relatively small share of behavioral variance explained by education suggests that knowing what to do is not sufficient to fully determine what individuals actually do**.** Behavior is constrained by liquidity shortages, income instability, currency depreciation, and restricted access to trustworthy financial products, all of which characterize the Lebanese crisis. This tension between improved capability and constrained action is one of the most critical insights of the study:

in crisis settings, financial education increases the quality of decision-making potential, but it cannot, on its own, neutralize the impact of a hostile economic environment.

A central contribution of this research lies in demonstrating that financial education operates through three distinct but interrelated channels**:** a cognitive channel (knowledge), a psychological channel (attitudes), and a behavioral channel (actions). The empirical results confirm that the cognitive channel is the most responsive to education, the psychological channel acts as a bridge between knowledge and behavior, and the behavioral channel is the most exposed to contextual pressures. This tri-dimensional perspective enriches the literature by moving away from the simplistic idea that "more education automatically means better financial behavior" and instead underscores that education is necessary but not sufficient**.** It is necessary because, without it, students remain conceptually unprepared and more vulnerable to misinformation and impulsive choices; it is not sufficient because the translation of capability into action depends on opportunity structures, institutional trust, and macroeconomic stability. The study also makes a context-specific contribution. Much of the international evidence on financial literacy and investment behavior is derived from relatively stable or high-income economies. By focusing on Lebanese university students during a severe financial and monetary crisis, this research shows how crisis conditions amplify the need for financial capability while simultaneously constraining its behavioral expression. Even when students are better educated, they may refrain from investing, not because they lack understanding, but because they correctly perceive the environment as excessively risky or structurally unfair. This suggests that rational investment behavior in a crisis may involve delayed or defensive decision-making**,** and that "not investing" can itself be a rational choice when systemic conditions are dysfunctional.

The overall conclusion is clear: financial education significantly strengthens the financial capability of university students and enhances the quality of their investment-related reasoning, even under conditions of systemic crisis. The study confirms that education can mitigate some of the cognitive and psychological vulnerabilities that typically characterize young or inexperienced investors, and it provides a strong empirical basis for promoting financial education as a strategic priority in higher education and national policy. At the same time, the results warn against overestimating what education can achieve in isolation. For financial literacy to fully translate into rational investment behavior at scale, it must be accompanied by broader structural and institutional reforms that restore trust, improve access to fair and transparent financial products, and stabilize the macroeconomic environment. In that sense, this research offers a dual message: it affirms the power of financial education as a lever for individual empowerment and more rational investment decisions, and it simultaneously reminds policymakers and institutions that individual capability cannot compensate indefinitely for systemic failure**.** The future of financial decision-making among Lebanon's youth depends both on what students learn and on the conditions under which they are asked to apply that learning.

References

Amagir, A., Groot, W., Maassen van den Brink, H., & Wilschut, A. (2018). A review of financial-literacy education programs for children and adolescents. *Citizenship, Social and Economics Education, 17*(1), 56–80. https://doi.org/10.1177/2047173417719555

Amagir, A., Groot, W., Maassen van den Brink, H., & Wilschut, A. (2020). Financial literacy of high school students in the Netherlands: Knowledge, attitudes, self-efficacy, and behavior. *International Review of Economics Education, 34*, Article 100185. https://doi.org/10.1016/j.iree.2020.100185

Atkinson, A., & Messy, F.-A. (2012). *Measuring financial literacy: Results of the OECD/INFE pilot study* (OECD Working Papers on Finance, Insurance and Private Pensions, No. 15). OECD Publishing. https://doi.org/10.1787/5k9csfs90fr4-en

Awada, A., Makhoul, S., & Mekdessi, S. (2025). The financial crisis' effect on the financial behavior: A study on the public schools' teachers in Beirut, Lebanon. *International Journal of Social Science and Economic Research, 10*(2), 660–685. https://doi.org/10.46609/IJSSER.2025.v10i02.016

Baker, H. K., Kumar, S., Goyal, N., & Gaur, V. (2019). How financial literacy and demographic variables relate to behavioral biases. *Managerial Finance, 45*(1), 124–146. https://doi.org/10.1108/MF-01-2018-0003

Barberis, N. (2018). Psychology-based models of asset prices and trading volume. In D. Bernheim, S. DellaVigna, & D. Laibson (Eds.), *Handbook of behavioral economics: Applications and foundations* (Vol. 1, pp. 79–175). Elsevier. https://doi.org/10.1016/bs.hesbe.2018.07.001

Batsaikhan, U., & Demertzis, M. (2018). *Financial literacy and inclusive growth in the European Union* (Bruegel Policy Contribution 2018/08). Bruegel.

Bernheim, B. D., Garrett, D. M., & Maki, D. M. (2001). Education and saving: The long-term effects of high school financial curriculum mandates. *Journal of Public Economics, 80*(3), 435–465.

Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review, 7*(2), 107–128. https://doi.org/10.1016/S1057-0810(99)00006-7

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance, 25*(2), 383–417.

Hasler, A., Lusardi, A., Yagnik, N., & Yakoboski, P. (2023). Resilience and wellbeing in the midst of the COVID-19 pandemic: The role of financial literacy. *Journal of Accounting and Public Policy, 42*(2), 107079. https://doi.org/10.1016/j.jaccpubpol.2022.107079

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263–291. https://doi.org/10.2307/1914185

Kaiser, T., & Menkhoff, L. (2020). Financial education in schools: A meta-analysis of experimental studies. *Economics of Education Review, 78*, Article 101930. https://doi.org/10.1016/j.econedurev.2019.101930

Kalmi, P., & Rahko, J. (2022). The effects of game-based financial education: New survey evidence from lower-secondary school students in Finland. *The Journal of Economic Education, 53*(2), 109–125. https://doi.org/10.1080/00220485.2022.2038320

Klapper, L., Lusardi, A., & van Oudheusden, P. (2015). *Financial literacy around the world: Insights from the S&P Global Financial Literacy Survey*. Global Financial Literacy Excellence Center (GFLEC).

Lusardi, A. (2019). Financial literacy and the need for financial education: Evidence and implications. *Swiss Journal of Economics and Statistics, 155*, Article 1. https://doi.org/10.1186/s41937-019-0027-5

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature, 52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

Makdissi, E., Makdissi, R., & Mekdessi, S. (2024). Unpacking the role of financial literacy in shaping investment behavior among university students in Lebanon. *International Journal of Progressive Research in Engineering Management and Science, 4*(10). https://doi.org/10.58257/IJPREMS36290

Makdissi, E., Saliba, G., Makdissi, R., & Mekdessi, S. (2025). Financial literacy as a strategic tool for enhancing risk resilience in SMEs: A study of Lebanese enterprises. *International Journal of Business Management and Economic Review, 8*(2), 115–134. https://doi.org/10.35409/IJBMER.2025.3664

Makdissi, R., & Mekdessi, S. (2024). The critical role of financial literacy in navigating challenges faced by Lebanese SMEs. *International Journal of Social Science and Economic Research, 9*(10), 4753–4767. https://doi.org/10.46609/IJSSER.2024.v09i10.045

Makdissi, R., Arja, N., & Mekdessi, S. (2023). Surviving and thriving: Financial behavior of entrepreneurs in crisis-ridden Lebanon. *Journal of Economics and Finance, 14*(6), 7–21. https://doi.org/10.9790/5933-1406010721

Markowitz, H. (1952). Portfolio selection. *The Journal of Finance, 7*(1), 77–91. https://doi.org/10.2307/2975974

Masri, N., Moucachar, M., Alameddine, H., Makdissi, R., & Mekdessi, S. (2022). Evaluating students' entrepreneurial capacity of university students in Lebanon. *Journal of Economics and Finance, 13*(6), 11–19. https://doi.org/10.9790/5933-1306021119

Nicolini, G., & Cude, B. J. (Eds.). (2021). *The Routledge handbook of financial literacy* (1st ed.). Routledge. https://doi.org/10.4324/9781003025221

Nicolosi, G., Peng, L., & Zhu, N. (2009). Do individual investors learn from their trading experience? *Journal of Financial Markets, 12*(2), 317–336. https://doi.org/10.1016/j.finmar.2008.07.001

OECD. (2020). *PISA 2018 results (Volume IV): Are students smart about money?* OECD Publishing. https://doi.org/10.1787/48ebd1ba-en

Park, N., Lee, S., & Kim, J. (2021). Social media, influencers, and investment decisions among young adults. *Journal of Behavioral and Experimental Finance, 30*, 100564.

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.

Stolper, O. A., & Walter, A. (2017). Financial literacy, financial advice, and financial behavior. *Journal of Business Economics, 87*(5), 581–643. https://doi.org/10.1007/s11573-017-0853-9

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies, 40*(6), 712–721. https://doi.org/10.1111/ijcs.12285