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Nexus between Financial Literacy and Financial Behavior: Theoretical and Empirical Insights

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Abstract

Financial literacy empowers individuals to make informed financial behaviors, leading to better planning and management of life milestones like education, housing, savings, and retirement. This study analyzed the nexus between financial literacy and financial behavior among individuals by synthesizing existing theoretical frameworks and empirical research. The analysis reveals that financial literacy is significantly impacted by a combination of demographic (gender, income), educational (level), and personality characteristics (financial behavior, attitude, and influence). These findings highlight the multifaceted nature of financial literacy and financial behavior and underscore the need for targeted interventions that address the diverse factors shaping students' financial knowledge and decision-making abilities.

Key Words: financial behavior, financial literacy, financial planning, financial management

Background of the Study

The growing complexity of financial markets, coupled with easier access to credit and the rapid marketing of financial products, underscores the need for financial literacy. Recognizing this, policymakers worldwide are implementing national financial education strategies to improve financial literacy, particularly among younger generations (Grifoni & Messy, 2012). Researchers have extensively explored financial literacy and its impact on the financial behavior of individuals. Studies by (Dans, 1987; Worthington, 2005; Remund, 2010; Lusardi & Mitchell, 2011; Thapa & Nepal, 2014) highlight its significance in enabling informed decision-making and responsible financial behavior.

Financial literacy, encompassing knowledge, skills, and attitudes, empowers individuals to make informed financial decisions, leading to better financial well-being. It plays a crucial role in navigating daily life, including managing income and expenses,

investing wisely, mitigating financial risks, and planning for major life events like education, housing, and retirement (Dans and Hira, 1987). Financial literacy plays a vital role not only in individual well-being but also in the broader economic landscape. Promoting informed financial decisions and responsible financial behavior contributes to financial inclusion and ultimately strengthens the stability of an economy (Thapa and Nepal, 2014).

Financial literacy is particularly crucial for young adults like college students, investors, and entrepreneurs. Peng et al. (2007) emphasize their growing financial responsibilities and exposure to complex financial products. Equipping them with financial knowledge and skills becomes essential for sound financial management as they enter the workforce. Financial literacy directly impacts individuals' financial behavior. Various studies made by (Lusardi & Turfano, 2009; Rooij et al., 2007; and Lusardi & Mitchell, 2006) demonstrate how individuals with low financial literacy are more likely to experience debt problems, participate less in the stock market, and struggle with wealth accumulation and retirement planning.

Financial behavior refers to the skill to capture and comprehend the overall effect of decisions in finance on one's circumstances (i.e. person, family, community, country) and make decisions about proper cash management, precautions, and planning opportunities (Prasad, 2020). Financial behavior encompasses any actions or decisions related to the management of money, including handling cash, utilizing credit, and saving habits (Baley and Global, 2019). It can be categorized into two segments: short-term and long-term financial behaviors. Short-term financial behavior encompasses such as emergency funds, spending habits, overdraft usage, and budgeting. On the other hand, long-term financial behavior includes planning for retirement, having a retirement account, investment activities, and setting financial goals.

The main aim of this paper is to examine the nexus between financial literacy and financial behavior. The study follows a systematic literature review approach. This study emphasizes the importance of financial literacy for individuals and the growing recognition of its significance by researchers and policymakers. It specifically highlights the need for financial literacy among individuals and its potential impact on their financial behaviors to achieve future financial well-being.

The paper is organized as follows. The methodology section presents the research approach, literature sources, and methods of analysis. The review section makes a systematic review of theoretical literature and empirical studies. Section 4 provides a critical evaluation of the findings from theoretical literature and empirical studies. The last section concludes the findings and offers policy implications.

Methodology

This review-based study employs a systematic literature review approach to synthesize existing theoretical and empirical research on the nexus between financial literacy and financial behavior among individuals.

The methodology involved the following steps:

Literature Search: A comprehensive search has been followed using relevant academic databases (e.g., Google Scholar, JSTOR, Science Direct) to identify scholarly articles, books, and reports on financial literacy and its determinants among individuals.

Inclusion and Exclusion Criteria: Studies were included based on their relevance to the research topic, focus on sampled respondents, and publication in reputable academic journals or recognized sources. Studies with limited empirical data or those not specifically focused on student financial literacy were excluded.

Data Extraction and Analysis: Extracted data included key theoretical frameworks, empirical findings, and research methodologies employed in the identified studies. The analysis involved critically evaluating the evidence and identifying recurring themes regarding the determinants of the financial literacy of individuals

Theoretical Review

This section explores several theoretical foundations that shed light on the nexus between financial literacy and investment behavior. These theories provide a foundation for understanding the factors that influence how individuals acquire and utilize financial knowledge, skills, and attitudes.

Human Capital Theory: This theory emphasizes the role of education in increasing human capital, which ultimately leads to higher wages and wealth accumulation (Mincer & Becker, 1962). Recent developments in this theory acknowledge the importance of non-cognitive skills like personality traits in influencing financial outcomes (Heckman et al., 2006). This suggests that psychological capital, including self-esteem and locus of control, may play a significant role in financial self-awareness.

Investment in Financial Knowledge: Lusardi and Mitchel (2011) view financial knowledge as a form of human capital investment. This perspective highlights the potential benefits of financial literacy for individual well-being and underscores the importance of policies aimed at improving financial knowledge within the population. Their work also explores the current state of financial literacy, identifying gaps in knowledge and the population subgroups most affected by financial illiteracy.

Behavioral Finance Theory: This theory draws parallels between financial literacy and the concept of literacy in other domains, recognizing the influence of cognitive, emotional, and environmental factors on learning (Illeris, 2004; Ormrod, 1995). It suggests that financial knowledge levels can be influenced by various factors such as age, gender, educational background, parental influence, media access, and financial education resources. Additionally, it acknowledges that some investors may not always behave rationally, and their decisions can be swayed by psychological biases (Barberis & Thaler, 2003).

Prospect Theory: This theory focuses on individual decision-making under uncertainty (Kahneman & Tversky, 1979). It explains how individuals are more sensitive to losses than gains and tend to frame decisions based on potential gains or losses relative to a reference point. This theory highlights the influence of psychological factors like regret aversion and loss aversion on financial decision-making (Kahneman, 2003). By incorporating the time value of money and considering the moderating effect of financial

factors, prospect theory can contribute to understanding the relationship between financial literacy and financial planning.

Family Resource Management Model: This model, developed by Deacon and Firebaugh (1981), outlines the steps individuals take in making financial decisions and developing financial behaviors. It emphasizes the role of financial literacy in influencing these behaviors.

Life Cycle Theory: This theory, proposed by Ando and Modigliani (1963), examines individual saving decisions in the context of maximizing utility throughout their lifetime. It assumes that rational individuals will save during periods of high income (employment) to support consumption during periods of lower income (retirement). This model highlights the forward-looking nature of individuals and their consideration of resource constraints throughout their lives. By focusing on financial preparedness for retirement, this theory can inform our understanding of how individuals make future decisions regarding saving and investment.

Theory of Planned Behavior (TPB): This framework provides a valuable lens for examining the determinants of financial literacy among university students (Shen et al., 2018). According to the TPB, attitudes, subjective norms, and perceived behavioral control influence individual intention to engage in a behavior. In the context of financial literacy, attitudes reflect individuals' perceived importance of financial knowledge, while perceived behavioral control refers to their confidence in applying financial knowledge effectively. The TPB helps us understand how these factors collectively shape individuals' intentions to enhance their financial literacy, informing the development of targeted financial education programs.

By integrating these theoretical perspectives, this study aims to gain a comprehensive understanding of the factors influencing financial literacy and financial behaviors among individuals. This knowledge can be valuable in designing effective interventions and educational programs to improve financial literacy and empower individual investors to make informed financial decisions throughout their lives.

Review of Previous studies

Several studies have investigated the financial literacy of university students. Dans & Hira (1987) surveyed students at Iowa State University, finding that their knowledge of basic financial concepts like credit cards, insurance, and personal loans was generally low. Married students and males displayed slightly higher knowledge levels. This highlights the need for universities to incorporate personal finance education into their curriculum. Similarly, Chen and Volpe (1996) assessed students' understanding of investment alternatives. Their findings revealed that the average student scored poorly, suggesting insufficient knowledge in this area. Additionally, they observed that male students and business majors performed better than their counterparts. While this study focused on investment knowledge, it implies that students likely lack understanding in other financial domains as well.

Similarly, Britt et al. (2004) examined the financial behavior determinants among university students. They found a high level of interest (90%) in learning about various financial topics, with the greatest demand being for counseling services, followed by

knowledge of savings and investment, budgeting, income growth strategies, and overall financial management. Interestingly, the study also revealed gender differences in spending habits, with female students displaying a greater tendency to enjoy shopping and buying discounted items, while males were more likely to conceal their spending from their families. These findings emphasize the need for universities to provide comprehensive financial literacy education that equips students with the knowledge and skills necessary for sound financial decision-making, including budgeting and saving strategies.

Jorgensen (2007) delved into the financial literacy of undergraduate and graduate students, analyzing their knowledge, attitudes, and behavior across gender, academic year, and socioeconomic background. While initial scores were low in all three categories, the study found a significant positive trend with increasing academic years, suggesting that financial literacy improves as students progress through their studies. Interestingly, students who reported being financially influenced by their parents exhibited higher scores in all three aspects, highlighting the significant role of family discussions in shaping financial awareness. Furthermore, the study emphasized the interconnectedness of financial knowledge, attitudes, and behavior, recommending the incorporation of financial topics into family discussions and the development of dedicated financial literacy programs within universities.

Similarly, Dahlia et al. (2009) assessed the financial knowledge of degree students at UiTM Kedah Campus. Their findings revealed a concerning lack of financial literacy among students, translating to weak money management skills. The study urged the campus to revise its curriculum to enhance students' financial understanding, acknowledging the critical need for equipping them with the necessary knowledge and skills for responsible financial management.

Lusardi, A. & Mitchel, O., (2011) examined the financial literacy of young adults in Germany, focusing on their understanding of fundamental concepts like interest rates, inflation, and risk diversification. Their findings revealed a worrying trend: less than a third of young adults possessed basic knowledge in these areas. However, the study identified a significant correlation between financial literacy and both socio-demographic characteristics and family financial sophistication, highlighting the need for collaborative efforts from governments, central banks, and financial institutions to improve financial education among young people.

Similarly, Nidar & Bestari (2012) investigated the factors influencing personal financial literacy among students in Indonesia. Their study, based on a survey of 400 students at Padjadjaran University, revealed low levels of financial literacy, particularly in areas like investment, credit, and insurance. Interestingly, the study identified several key factors influencing financial literacy, including the level of education, faculty, personal income, parental financial knowledge and income, and even insurance ownership. These findings call for a multi-pronged approach, urging financial institutions, policymakers, and universities to prioritize financial literacy education for students, potentially using this study as a valuable reference point.

Thapa & Nepal (2014) explored the influence of demographic factors, educational background, and individual traits on financial literacy among 436 college students enrolled

in Nepalese universities. Utilizing logistic regression analysis, the study revealed that although most students possessed a fundamental understanding of financial concepts, they exhibited gaps in comprehension regarding areas such as credit, taxes, stock markets, financial statements, and insurance. Parental influence emerged as a significant factor shaping students' financial attitudes, with a positive inclination towards savings observed. Moreover, variables including income, age, gender, academic specialization, institution type, and individual attitudes emerged as determinants of financial knowledge. However, the study noted that overall financial literacy remained unaffected by gender, university affiliation, financial behavior, or external influences. In conclusion, while college students generally demonstrate a basic grasp of financial principles, their overall financial acumen is influenced by a combination of demographic, educational, and personality factors.

Hadar (2015) investigated the interplay between background characteristics, financial behavior, awareness, and literacy among 283 educators enrolled in Israeli universities. Through surveys, the research revealed a modest average of 42% correct responses among participants, indicating a generally low level of financial literacy. Certain demographic factors emerged as predictors of financial literacy, with individuals such as Sports, Art, and Music teachers, those enrolled in principals' preparation or BA programs, ethnic minorities, less experienced educators, non-secular educators, and those from lower socioeconomic backgrounds exhibiting comparatively lower levels of financial literacy. Moreover, educators with limited exposure to financial information via media channels demonstrated reduced financial literacy levels. The study underscored the imperative for educators to enhance their understanding of financial matters to better serve their roles.

Thomas (2015) delved into the financial literacy of polytechnic students, focusing on their comprehension of money management, savings, borrowing, insurance, and investment, and identifying barriers to accessing financial literacy information beyond the classroom. Utilizing statistical analyses including ANOVA and logistic regression, the study surveyed 120 students to gauge their financial literacy levels. Results indicated a need for improvement in students' personal finance knowledge, as the average correct response rate stood at 40.71%, with none of the mean scores for financial literacy categories exceeding 60%. While students displayed familiarity with simple interest calculations and loan guarantees, they exhibited less proficiency in areas such as personal financial planning, budgeting, mutual funds, and understanding the risk-return dynamics of investment decisions. The study concluded that students lack comprehensive knowledge of personal financial literacy issues and recommended the integration of financial literacy courses within the curriculum of Polytechnic University to bolster students' financial acumen.

Barboza et al. (2016) delved into the influence of gender and academic performance on financial literacy among 380 college students. Their study, utilizing statistical models, revealed that both factors significantly impact financial knowledge levels. Females were found to exhibit lower overall financial literacy compared to males. Additionally, students with higher GPAs demonstrated significantly stronger financial literacy skills. Interestingly, the study also found a discrepancy between self-reported and actual financial literacy, suggesting that individuals tend to overestimate their financial knowledge.

Swamy & Priya (2017) investigated the sources and variations in financial literacy among postgraduate management students in India. The findings, based on a sample of 203 students, indicated that formal education is the primary source of financial knowledge, followed by parental guidance, media, and peer influence. Notably, accounting students displayed the highest level of financial literacy, followed by students in banking and finance, marketing, and human resource management.

Mudzingiri et al. (2018) explored the determinants of financial behavior among 191 South African university students. Their analysis using a regression model revealed that risk tolerance, perceived financial literacy, and confidence significantly influence financial behavior. This suggests that personal characteristics and financial self-perception play a more prominent role in financial decision-making compared to solely financial knowledge.

Arofah et al. (2018) found a positive and significant impact of financial literacy on financial behavior among Indonesian economics students. This suggests that individuals with higher financial knowledge are more likely to make sound financial decisions.

Rai et al. (2019) examined the association of financial attitude, financial behavior, and financial knowledge toward financial literacy by using a structural equation modeling with the samples of 394 working women in New Delhi. The results of the study revealed that financial literacy is strongly associated with financial behavior. The findings suggested that the financial literacy authorities of India should focus more on increasing the financial knowledge of women because they have financial attitudes and behavior, but lack financial knowledge as they are showing less interest in investment awareness.

Zulaihati et al. (2020) analyzed the impact of financial literacy on financial behavior among teachers of secondary school by employing the reflective measurement model in PLS-SEM with 142 samples, taken as conveniently. The study found a significant impact of financial literacy on the financial behavior of teachers in terms of saving behavior, shopping behavior, short-term planning, and long-term planning. The study recommended that the government should facilitate financial literacy programs to enhance the level of financial literacy concerning capital markets.

Kumari (2020) investigated the impact of financial literacy on investment decisions among Sri Lankan undergraduates. The study found a positive and significant relationship, with financial skills being the most influential dimension of financial literacy on investment choices. This suggests that practical financial abilities are crucial for sound investment decisions.

Humid & Loke (2021) explored the factors influencing credit card repayment behavior in Malaysian students. While socio-economic factors like income and education play a role, the study highlighted the significant positive impact of financial literacy and money management skills. Additionally, personality traits like overspending and impulsiveness did not significantly affect credit card repayment, emphasizing the importance of financial knowledge and responsible money management habits.

Khalisharan et al. (2022) compared Malaysian and Indonesian students, revealing that while Indonesians scored higher in financial literacy, Malaysians displayed better

financial behavior. This highlights the potential influence of other factors beyond pure knowledge in shaping financial habits.

Kalade et al. (2022) focused on Nigerian students, demonstrating a positive influence of financial literacy on financial decision-making, further emphasizing the link between knowledge and responsible financial behavior. Prasad & John (2022) studied management graduate students in India, finding their average financial literacy exceeded the national average. This suggests that higher academic levels might be associated with stronger financial knowledge. Mireku et al. (2023) explored the connection between financial literacy and behavior in Ghanaian students. Their findings based on family resource management theory indicate that financially literate individuals are more likely to exhibit sound financial practices. Interestingly, the study also identified family characteristics, such as parental education and discussions about finances, as significant predictors of responsible financial behavior, suggesting the influence of family dynamics on financial decision-making.

Rapina (2023) examined the level of financial literacy and the level of financial behavior in 252 accounting students in West Java, Indonesia by employing PLS-SEM. The study found a significant positive association between financial literacy and financial behavior of accounting students and their willingness to start their businesses. Pham & Le (2023) examined the relationship between financial education, financial literacy, and financial behavior among young Vietnamese adults. Based on survey data from over 1000 participants, the study assessed short-term and long-term financial behaviors by employing Logistic and Ordered Logistic regression models. The study revealed that financial literacy hurts short-term financial behaviors but, has a positive impact on long-term financial behaviors. These novel findings highlighted the importance of considering different horizons when examining the interplay between financial literacy and behaviors.

Owusu et al. (2024) examined the interplay between financial literacy, propensity towards debt, and savings behavior among Ghanaian business students. Their study employed a partial least squares approach and found that while students with a higher tendency for debt accumulation tend to save less, financial literacy acts as a moderating factor, potentially mitigating the negative impact of debt proneness on savings behavior. This suggests that financial literacy can empower individuals to manage debt and prioritize saving even with a higher inclination towards borrowing.

Discussion

This review synthesizes existing research findings on the nexus between financial literacy and the financial behavior of individuals, encompassing both international and national contexts, including South Asia. These findings revealed that financial literacy among individuals underscores its crucial role in shaping financial behavior. The key findings are:

Low Financial Literacy Levels: Multiple studies consistently report low levels of financial knowledge and skills among students and other individuals across various countries (Dans & Hira, 1987; Chen and Volpe, 1996; Dahlia et al., 2009; Lusardi et al., 2010; Nidar & Bestari, 2012; Thomas, 2015).

Gender Differences: Several studies find that males tend to have higher levels of financial literacy than females (Dans & Hira, 1987; Chen and Volpe, 1996; Barboza et al., 2016).

Impact of Educational Background: Studies suggest that individuals with higher academic performance or majoring in business or finance demonstrate better financial literacy (Chen and Volpe, 1996; Swamy & Priya, 2017).

Influence of Family and Socioeconomic Factors: Parental financial discussions, income, and socioeconomic status are shown to positively impact financial literacy (Jorgensen, 2007; Nidar & Bestari, 2012; Hamid and Loke, 2021; Mireku et al., 2023).

Importance of Financial Literacy Education: Integrating financial literacy education into school curriculums and university programs is consistently recommended to improve students' financial knowledge and decision-making abilities (Britt et al., 2004; Jorgensen, 2007; Ramaswamy et al., 2013; Nidar & Bestari, 2012).

Association between financial literacy and financial Behavior: Studies have explored the relationship between financial literacy and specific financial behaviors like saving, shopping, investing, short-term and long-term, and debt management (Britt et al., 2004; Shaari et al., 2013; Arofah et al., 2018; Zulaihati et al., 2020; Rapina, 2023; Mireku et al., 2023; Prasad & John, 2022).

Role of Personality Traits on Financial Literacy: Research suggests that personality traits like financial attitude, financial knowledge, financial behavior, etc, and access to financial information also influence financial literacy (Ben-Hadar, 2015; Barboza et al., 2016; Humid & Loke, 2021, Mireku et al., 2023).

Conclusion and Implications

Financial literacy, encompassing knowledge, skills, and attitudes, empowers individuals to make informed financial decisions, leading to better financial well-being. Financial behavior is the human actions relevant to the management of cash, credit, and savings. The study concluded that several factors influence financial literacy, including demographic characteristics (gender, income), educational background (level of education), personality traits (financial behavior, attitude, education, and influence), and family dynamics. Similarly, financial education for individuals is found to be a strong predictor of financial knowledge. Financial literacy empowers individuals to make informed financial decisions, manage their finances effectively, and maximize their financial well-being.

Integrating financial literacy education into school curriculums, university programs, and training programs is essential to equip students and other respective individuals with the knowledge and skills necessary for responsible financial behavior for decision-making throughout their lives. Therefore, promoting financial literacy through individual efforts, policy initiatives, and educational programs across various levels remains crucial. This study serves as a valuable resource for individuals, policymakers, financial institutions, and researchers seeking to enhance financial literacy and empower individuals to make informed financial choices.

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