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# Exploring the Determinants and Measurement of Financial Literacy: A Comprehensive Review Approach

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**ABSTRACT**

This Article examines into the various factors that influence financial literacy and how its measurement techniques have changed throughout time. To be financially well-off, to be economically included, and to make good decisions, one must have financial literacy, which includes knowledge, attitudes, and behaviors connected to personal financial management. Education is repeatedly emphasized as the principal effect among key determinants, which include demographic (gender, age), socioeconomic (education, income), psychological (self-efficacy, motivation), and cultural elements. Contextual factors are important since financial literacy differs among communities. This is true for students, entrepreneurs, and marginalized groups. When it comes to measurement, we've come a long way from those days of basic objective assessments to the OECD/INFE toolkit and other thorough, psychometrically validated instruments that assess digital literacy, knowledge, attitudes, and behaviors. But problems like cultural sensitivity, under-representation of digital abilities, and non-standard measurements still exist. In light of the ever-changing nature of financial markets, the review stresses the need of integrated actions and context-sensitive, strong evaluation mechanisms.

# 1. Introduction

## 1.1. Background and justification

Financial literacy is a crucial factor that profoundly influences economic and financial conditions, enabling individuals to articulate diverse economic and financial behaviors. Financial knowledge is crucial and has garnered the interest of both developed and developing nations due to its significance in financial circumstances. For this reason, the United States government in January (2008) established a President's Advisory Council on Financial Literacy aiming to improve financial literacy in all parts of the economy. Schwab et al. (2008) suggested that some developing countries, like Ghana and Indonesia, had set up programs that played a key role in improving financial literacy.

Financial literacy is essential; however, awareness of it remains low globally. The lack of financial skills and knowledge is prevalent in both developing and developed nations (Nalini, 2011; Xu & Zia, 2012). To address these challenges, financial education serves as the primary solution. Various studies, including those by Lusardi and Mitchell (2013) and Socol (2014), emphasize the critical importance of financial literacy. The research conducted by Xu and Zia (2012) on financial literacy worldwide further underscored the scarcity of supporting data from developing countries regarding the levels of financial literacy. They confirmed that involvement in financial education, irrespective of existing financial literacy levels, is equally important for all nations, both developed and developing. This empirical evidence suggests that financial knowledge and skills hold the same significance for individuals across the globe. Financial literacy offers numerous benefits, which some scholars have explored in depth. According to Behrman et al. (2012) and Lusardi and Mitchell (2014), individuals equipped with sufficient financial skills are better positioned to forecast job opportunities and save effectively for retirement.

Human resources form the foundation for sustainable economic growth and development. These resources must be supported by financial knowledge to achieve successful development. In a dynamic economy, managerial financial skills are essential to protect capital from potential losses. Enhancing financial literacy holds particular significance for both developing and developed countries. Numerous studies worldwide have concluded that financial literacy levels are alarmingly low. For example, Xu and Zia (2012) indicated that financial literacy is declining across all segments of society, irrespective of whether countries are classified as low, middle, or high income. Consequently, this paper aims to review the current state of financial literacy.

### 1.1. Objectives

The primary objective of this review study is to explore the state of financial literacy, its determinants, and measurement methods.

## 2. Methodology

This review is grounded in a comprehensive literature analysis of both published and unpublished sources, including books, journals, and other academic materials. The data are presented in narrative fashion.

## 3. Review of the literature

### 3.1. Definition and Concepts of Financial Literacy

Financial literacy has been defined in various ways by different researchers, each using distinct connotations based on the nature and objectives of their studies. Nearly all definitions share similar components, emphasizing the importance of possessing the skills and knowledge necessary to make informed decisions in an unpredictable environment. A fundamental definition describes financial literacy as the knowledge of how to manage money and an understanding of its significance. It addresses questions such as why one should spend on certain items Norman (2010). In a similar vein, Lusardi and Mitchell (2007) characterized financial literacy as individuals' genuine ability to comprehend how to manage their finances. The Organization for Economic Cooperation and Development, OECD (2013) and Atkinson and Messy (2012) defined financial literacy as a combination of financial awareness, knowledge, skills, attitudes, and behaviors essential for making sound financial decisions to achieve financial well-being. Thus, financial literacy can be understood as the ability to utilize financial knowledge and skills to effectively manage financial resources for sustained financial prosperity.

A person's financial literacy was originally thought of as synonymous with their financial knowledge, which meant they had to grasp the basics of numbers, interest rates, inflation, and diversification. On the other hand, newer definitions incorporate a more comprehensive collection of abilities that are based on behavior and cognition. Kamiya (2017), discusses various definitions and measurement scales, drawing attention to the expansion of "financial knowledge" to encompass consumer behavior, social and economic circumstances, and cognitive biases. He argues in favor of measures that can capture dispositions related to critical-thinking, such as reasoning and evidence-based judgement. The multi-dimensional nature of financial literacy, as highlighted in the research conducted by Lusardi and Mitchell

(2011, 2014) cast a significant shadow over strategies for retirement savings, engagement in the stock market, and the creation of family wealth.

Various studies on financial knowledge and literacy have been conducted by numerous scholars. (Hilgert et al., 2003; Lusardi & Mitchell, 2014; Hung et al., 2009; Clark et al.,2017) suggest that financial knowledge encompasses an individual's understanding of various financial issues, including interest rates, deposits, the time value of money, and inflation. Acquiring financial knowledge is essential, particularly as the range of financial products becomes increasingly complex and accessible to a diverse array of depositors and investors. Below are a few fundamental definitions of financial literacy:

- Financial literacy is a fundamental knowledge about finance in which the community require in order to stay active in a modern society' (Kim, 2001).
- Financial knowledge is described as understanding of key financial terms and concepts needed to perform daily tasks in the community' (Bowen, 2003).
- Financial literacy is the capability which aids a person to make a sound decision in their financing activity. people who have financial knowledge simply can understand the financial concepts like risk, interest rate, rate of inflation and rate of return (Huston, 2010).
- Financial literacy is the capability to use knowledge and skills effectively in managing the financial resources (PACFL, 2008).

### 3.2.Determinants of Financial Literacy

One of the most important factors impacting economic inclusion, financial decision-making, and personal well-being is financial literacy, which is the knowledge and ability to manage personal financial concerns successfully. The variables that influence financial literacy have been the subject of a great deal of research, spanning a wide range of demographic and economic situations. Knowledge, behavior, and attitude are the three components that make up financial literacy, according to scholars. The seven major aspects that impact financial literacy were discovered in a recent systematic analysis by Rehman and Mia (2024) that analyzed 53 Scopus-indexed studies. These dimensions include demographic, socio-economic, psychological, financial, sociological, Islamic, and technological elements. The importance of these characteristics differs among cultures and populations, but they all contribute to how people interpret and make use of financial data. "The Theory of Planned Behavior (Ajzen, 1991) is one such paradigm" that explains how people's attitudes, perceived behavioral control, and subjective norms

impact their financial decision-making by relating personal characteristics to larger social and environmental factors.

Several studies have been conducted to detect the factors that affect financial literacy. The determinants were varying with the nature of the studies. Ford and Kent (2010) found that women are more vulnerable to a lower level of financial market awareness than men. It also assessed information about female and male college students. The result showed that males are much more interested in financial market awareness. Research investigated demographic and socioeconomic variables that affect financial knowledge, such as (Kadoya & Khan., 2020; Garg & Singh., 2018; Cucinelli et al., 2019). The study by Yoshihiko and Mostafa (2020) also affirmed that the level of financial literacy is affected by demographic factors such as gender, age, and education, as well as socioeconomic factors such as income and occupation. One of the most important factors that determines financial literacy is education. People with greater education tend to have better financial knowledge and more prudent financial behaviors, according to a large body of research from both developed and developing nations. For example, Anshika et al. (2021) discovered that higher levels of schooling were positively correlated with financial literacy among micro and small firms in India. Undergraduates in Nigeria who had completed more coursework fared better on tests of financial literacy, according to research by Kolade et al. (2022). According to these results, people can better understand and assess complicated financial items and ideas after receiving an education.

Another research has been employed on demographic characteristics including gender and age in addition to education. Across different age groups, there is a tendency for financial literacy to follow an inverted U-shaped trend. Literacy rates are highest among middle-aged people because they have had more time to acquire both academic knowledge and real-world financial experience (OECD, 2020; Zaimovic et al., 2022). Nevertheless, there are studies that point out that older persons can make up for lost cognitive abilities with their wealth of financial experience, which highlights the significance of life-cycle impacts (Lusardi & Mitchell, 2014). Gender is another common factor brought up, and research shows that men generally do better than women on tests of financial literacy (Rehman & Mia, 2024; OECD, 2020). The gender gap narrows in contexts where women have more education or a higher occupational standing, but it is generally believed that insecurity, lack of access to financial data, and societal standards are the main causes of this inequality. But the study conducted by Sucuahi (2013) concludes that financial literacy is not influenced by gender. This result shows gender has no significant impact on financial literacy. Bağcı (2019) also affirmed from the survey distributed to 602 people in Turkey that gender has no significant influence on financial literacy since the women have gotten and equipped financial information. Gender

does not matter if women strive to seek information on finance and get ready to apply the financial matters equally with men. Besides, Ibrahim et al. (2016) mentioned that financial awareness does not differentiate by sex because of equal understanding of financial terms and concepts. They suggested that sex has no significant effect on financial literacy.

There is a strong correlation between socioeconomic position (as measured by factors like income, employment, and family history) and financial literacy. People who have more consistent income and job security tend to have more knowledge and confidence when it comes to money. This is partially because they have more opportunities to learn about and use financial products and services. Anshika et al. (2021) found that small business owners in India who had higher gross profits also had better financial literacy, indicating a positive feedback loop between financial performance and knowledge. There is some evidence that family background characteristics, like parental education and household income, have an influence, although the results are inconsistent. While Böhm et al. (2023) in Slovakia found that students from financially stable homes were more likely to possess sound financial knowledge, Kolade et al. (2022) in Nigeria found no significant association between parental education and students' financial literacy. These discrepancies show how different educational systems, economic structures, and local circumstances affect people's ability to learn about money. Individuals with extended work experience can pass through a larger number of financial conditions, and they gain more knowledge of finance, thus providing a basis for decision-making.

Income has a significant impact on developing financial literacy. People who have a steady income are more likely to manage and organize their finances, claim Calamato and Maria (2010). Additionally, Monticone (2010) discovered that financial literacy is slightly but favourably impacted by wealth.

“Study such as Hastings and Mitchell (2010) presented experimental evidence linking financial literacy to wealth”. According to Johnson & Sherraden (2007), they revealed from the assessment of financial literacy that students from affluent families had significantly higher knowledge levels than students from low-income families. Individuals with low income are particularly vulnerable to dropping out of school, which adversely affects their financial literacy Calamato and Maria (2010). Empirical evidence suggests that individuals with high levels of financial literacy tend to make more informed financial decisions and consequently achieve higher incomes compared to those with lower financial literacy levels.

Moreover, cultural differences play a significant role in enhancing financial knowledge; however, there are few studies that have confirmed this effect. According to research conducted by Brown et al. (2017), cultural dissimilarities have a substantial impact on the attainment of financial literacy. Agyei (2018)

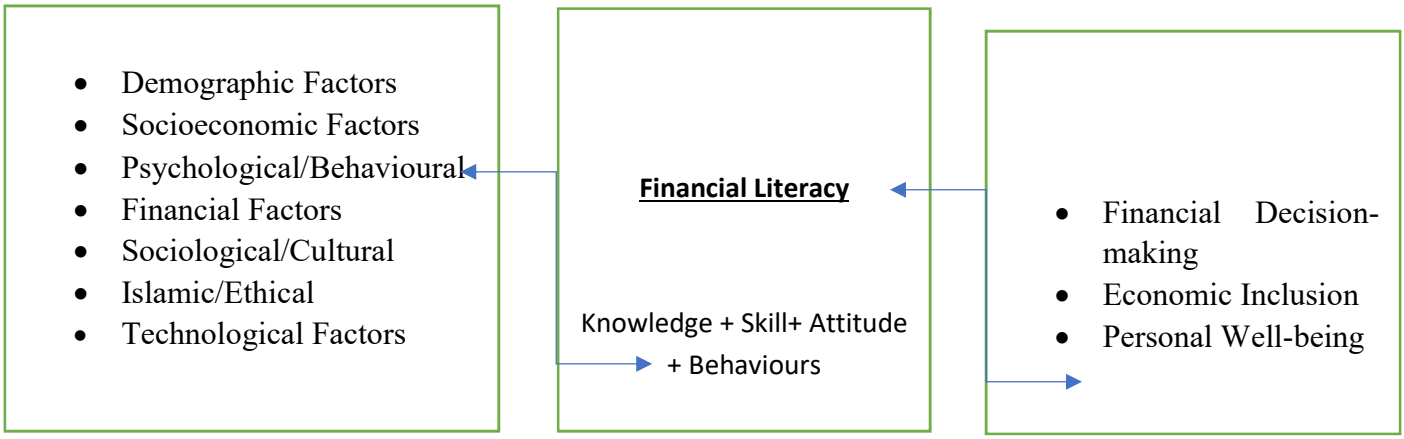
examined the influence of culture on financial knowledge through a sample of 300 Ghanaian SME owners and concluded that cultural values greatly affect financial literacy levels. He also recommended that the cultural beliefs of these owners should be taken into account when designing financial literacy programs. Further, societal elements impact financial literacy, frequently in ways that individual-level variables fail to capture. Hofstede's cultural dimensions have been used in cross-national studies to demonstrate that social values like collectivism and uncertainty avoidance affect how individuals perceive and handle financial risks (OECD, 2020; Zaimovic et al., 2022). People are more likely to establish solid financial habits in cultures that value future planning and avoidance of risk. Additionally, systemic barriers, such as gender, racial, or economic class-based exclusion, have a mediating role in financial literacy. Research in the US has revealed that minority groups and those with lower incomes tend to have poorer levels of financial literacy (Blanco et al., 2024). These results point to the need for institutional reform to guarantee equitable access to education and financial resources as well as for individual education in order to improve financial literacy.

It is now well acknowledged that psychological and behavioral factors play a significant role in determining financial literacy. There is much evidence linking financial decision-making to factors like risk tolerance, perceived control, motivation, and financial self-efficacy. As an example, Rehman and Mia (2024) used structural equation modelling to analyses 277 respondents from Malaysia and found that financial self-efficacy and social influence were the strongest predictors of financial literacy outcomes, accounting for more than 60% of the observed variation in behavior. Consistent with the Theory of Planned Behavior, these results show that social norms, perceived behavioral control, and knowledge all play a role in shaping people's financial behaviors. Financial attitudes are shaped in part by social influences, such as conversations about money within families and amongst peers, particularly among younger generations.

The factors that influence people's ability to manage their money differ among different demographics, including students, rural areas, and entrepreneurs. Factors that matter to entrepreneurs include profitability, industry, and level of business experience. Anshika et al. (2021) found that among small business owners in Punjab, India, financial literacy was strongly predicted by age, educational achievement, and gross profits. Academic discipline, year in school, and prior work experience are significant factors for pupils. According to research by Kolade et al. (2022), undergraduates majoring in economics, finance, or business had better levels of literacy compared to their counterparts in other majors. Students who worked part-time also showed higher financial self-assurance and awareness, which may indicate that practical experience improves academic performance. Information availability,

faith in financial institutions, and cultural norms all play important roles in underserved or rural areas. Customized interventions are necessary because these groups frequently encounter institutional and informational hurdles that hinder their capacity to learn about money.

Figure 1: Conceptual frame work for Determinants of Financial Literacy




Sources: Literature, 2025

### 3.3.Measurment of financial literacy

The varied survey methods employed in different contexts and the ever-changing conceptual definitions of financial literacy make it a difficult challenge to measure. The first methods of assessment placed a premium on objective facts, usually measured with brief cognitive exams that probed candidates' familiarity with concepts like inflation, risk diversification, and compound interest. Many commonly used instruments were based on this "Big Three" approach, which was first used in US surveys including 2004 Health and Retirement Study Lusardi & Mitchell (2011). The OECD eventually expanded it into a "Big Four" by including simple interest in its worldwide surveys (OECD, 2016). A popular short battery for evaluating fundamental financial cognition, these items are performance-oriented. With the development of the profession, scholars started to see that financial literacy is about more than just knowing the basics; it also involves having the right mindset and doing the right things. This was elaborated into a thorough framework by Atkinson and Messy (2012), who divided financial competence into three parts: attitude, behavior, and knowledge. Financial stability, future planning, and trust in decision-making were some of the standardized measures they suggested. According to Atkinson and Messy (2012), this tripartite framework was essential in developing more comprehensive survey tools and national evaluations.

The OECD/INFE (International Network on Financial Education) built upon previous work to create a standardized toolbox, which led to the revised survey instrument used worldwide in 2022. Knowledge, attitudes, and behaviors related to money management, as well as digital literacy, financial inclusion, resilience, and overall well-being, are all assessed by the OECD/INFE Toolkit. Its modular design allows for local customization while enabling cross-country comparability. Notably, OECD working groups collaborated to establish new items on digital financial literacy (OECD, 2020; OECD, 2022). In order to ensure validity and reliability, researchers have stressed that scoring and analytic methodologies are just as important as standardized instruments when it comes to evaluating financial literacy. Various significant methodological steps were brought to light by a comparative study of the OECD/INFE adult financial literacy assessment (Lietz et al., 2017). Among these, there was a strong instrument framework that systematically measured financial knowledge, attitudes, and behaviors; a transparent, policy-driven design that made sure that assessment goals and national priorities were in sync; and the use of Classical Test Theory (CTT) and Item Response Theory (IRT), especially Rasch modelling, to analyze item-level performance and improve measurement quality (Lietz 2017; Clercq, 2019). One important factor to consider for international large-scale assessments is whether items behave consistently across nations. Researchers were able to analyze item fit and differential item functioning (DIF) by using the Rasch model Clercq (2019). In addition, the instrument's ability to consistently differentiate across skill levels in different national contexts was confirmed through thorough cross-country comparability testing. Although the design was solid in general, these analyses showed that there was some variation in item difficulty between nations, which could mean that full measurement invariance is not possible. In order to get meaningful and reliable scores, it is crucial to include both simple and difficult items. This deliberate design choice allows for improved discrimination across a wide range of respondent ability levels (OECD, 2016; OECD, 2022).

Bongini et al. (2018) investigated different approaches of data analysis, such as Item Response Theory (IRT) and classification/regression tree models, after using the OECD/INFE instrument domestically; Italy serves as an illustrative case study. Researchers discovered that certain individuals, especially those most at risk, could be misclassified if indices based on Classical Test Theory (CTT) or total scores were used alone. According to Bongini et al. (2018), IRT enabled more precise assessment of hidden characteristics and better identification of learning gaps. There are now country- and context-specific scales in addition to large-scale standardized instruments. In his review for the Japanese Journal of Psychology, Kamiya (2017) argues that current measures should be expanded to encompass dispositions towards critical thinking, confidence in decision-making, and evidence-based judgement in financial

matters, in addition to traditional measures such as numerical ability and declarative knowledge tests. Similarly, Shariah-compliant banking, takaful, money basics, and ethical investment are the focus of conceptual models in Islamic finance. These models aim to evaluate Islamic financial literacy in a way that is respectful of culture and religion Kamiya (2017).

Concurrently, "Financial Quotient" (FQ) tools, like the ones created by Yu and Zhang (2016) assess six main areas: spending, credit and debt, income and career, investing, planning, and risk/protection. These instruments give respondents and teachers a composite score and a visual hexagonal profile that shows where they excel and where they need improvement. There is a rising demand for diagnostic tools that are both easy to use and rich in semantic information, and our approach reflects that. In their comprehensive evaluation of the managerial finance literature, Ouachani et al. (2021) details the item selection and scoring procedures. Their findings reveal a wide range of instruments, from brief three-item surveys to lengthy forty-plus item batteries, as well as a variety of calculation methodologies, from raw counts of correct responses to factor scores and IRT-based latent estimates. Research goals and demographics should inform instrument selection and item content, according to the review (Ouachani et al., 2019).

Students' ability to understand and work with money and transactions, as well as financial planning and management, risk and reward, and the overall financial landscape, were evaluated in educational settings like the 2012 Program for International Student Assessment (PISA). Students' capacity to recognize, interpret, and use financial data in a variety of real-world settings was also tested [Organization for Economic Co-operation and Development (OECD, 2014)]. If we want to compare financial literacy levels across countries, we need an assessment that takes into consideration students' real-life experiences in the classroom, at home, and in society. Results from the OECD PISA tests demonstrate that many teenagers, even in economically advanced countries, have difficulty with basic mathematical reasoning and financial tasks. This highlights the necessity for tests that evaluate not only theoretical understanding but also practical problem-solving abilities OECD (2014).

When taken as a whole, these works shed light on numerous important issues surrounding the evaluation of financial literacy. To begin, in order to direct the creation of measuring tools, a precise conceptual description that includes knowledge, attitudes, and behaviors is essential (Atkinson & Messy, 2012; Lusardi & Mitchell, 2014). Secondly, there are multiple dimensions to financial literacy, and performance-based assessments alone do not capture them all. Other key components include self-reported confidence, attitudes, and behavioral intentions (OECD, 2018; Fernandes et al., 2014). Finally,

in order to guarantee measurement reliability across different groups, standardized instruments like the OECD/INFE questionnaire need to undergo thorough psychometric validation. This validation is done using methods like Rasch analysis or Item Response Theory (IRT) (Kempson et al., 2016). The significance of culturally relevant and domain-specific techniques is emphasized, especially in non-Western contexts, by alternative tools like the Financial Quotient (FQ) scale or instruments that are customized to Islamic financial principles (Sabri et al., 2013).

In spite of advancements, there are still a number of obstacles that need to be addressed. It is difficult to compare results from different studies due, in large part, to the fact that item selection is not consistently applied. Research goals or context-specific adjustments dictate the variation in item count, item difficulty, and item theme (Hung et al., 2009). Inconsistencies in the measurement and interpretation of financial literacy might also arise from the fact that studies use a variety of analytical procedures, ranging from simple summative scoring systems to complex latent variable modelling (Lusardi & Mitchell, 2014). Some worry that short-form evaluations may omit important behavioral and attitude variables or oversimplify complicated conceptions, which could lead to people being misclassified (OECD, 2018). Despite the growing importance of digital financial literacy in the age of fintech and digital financial services, national-level surveys often fall short in capturing it (Klapper et al., 2015).

Several important areas should be prioritized in future measurement research due to the growing complexity of financial behaviors and the necessity for inclusive financial education. For large-scale surveys to be feasible, assessment methods must be brief. However, in order to capture the multidimensional nature of financial literacy, they must also be broad (OECD, 2018). Ensuring reliability, validity, and fairness across varied socio-demographic groups should become standard practice through robust psychometric validation, which includes the use of Rasch modelling and Item Response Theory (IRT) (Hung et al., 2009). Flexible evaluation frameworks, such as those created by the OECD/INFE, should also incorporate context-specific modules aimed at specific demographics, such as young people, Islamic banking users, and digitally marginalized communities (OECD, 2020). Atkinson and Messy (2012) argue that in order to influence focused educational and policy actions, scoring techniques should use both composite indices and domain-specific ratings. To further ensure that financial literacy programs are evaluated thoroughly for their long-term efficacy, longitudinal study designs and pre- and post-intervention assessments are necessary (Lusardi & Mitchell, 2014).

A high level of financial literacy is a crucial instrument for sustaining financial well-being. This degree of financial literacy should be assessed and enhanced. Assessing financial literacy improves an

individual's financial comprehension. Acquiring financial literacy skills can assist individuals in circumventing difficulties associated with financial situations (Yuesti et al., 2020). No universally applicable method exists for assessing financial literacy Remund (2010). Instruments differ according on the particular study undertaken. The degree of financial literacy is evaluated by the quantity of individuals striving to comprehend their capacity for making prudent financial choices. Various criteria exist to evaluate financial literacy, including performance assessments, self-report evaluations, objective examinations, and self-assessment exams. Performance assessments grounded in knowledge-based enquiries aligned with definitions. Self-reports assess self-confidence in knowledge, exemplified by enquiries regarding one's understanding of saving, among other topics. Self-assessment is a method employed to gauge individuals' financial literacy by enquiring about their attitudes towards financial decisions, as well as their knowledge and information regarding finance. Nevertheless, the objective measure tests the participants' familiarity with financial concepts (such as assets and obligations), interest and inflation rates, and their numerical reasoning abilities in specific financial contexts. Using the self-assessment method, Jappelli (2010) compared the financial literacy levels of 55 countries. This led him to the following conclusion: "The financial literacy of the population from those 55 nations is high." Many researchers have utilized objective measurements to look at literacy. In order to gauge financial literacy, researchers in Russia (Panos & Klapper, 2011) and Sweden (Almenberg & Söderbergh, 2011) administered objective measure examinations that enquired about topics such as inflation rate, compound interest, and risk diversification. Almenberg and Söderbergh (2011), found that the most literate people in Sweden were between the ages of 35 and 50. People older than 65 years old, however, possessed the least amount of skill.

Financial literacy is significantly lower in Russia's rural areas, according to research by Panos and Klapper (2011). In terms of percentages of correct answers for compound interest calculations, their study found that 36% of respondents got it right, 30% got it wrong, and 33% said they couldn't even give an approximate estimate.

The way people handle their money is known as financial behavior. According to Xiao (2008) and Woodyard (2013), it covers the pros and cons of managing one's own finances. Making deposits, controlling credit, monitoring cash flow, saving for emergencies, and setting long-term financial goals like retirement pensions are all examples of positive financial behaviour. On the other hand, bad financial habits can show up as avoiding conversations about money, being wasteful with gifts, or being too dependent on pension plans at work. Values and beliefs related to money management, such as being patient, thinking long-term, and exercising self-control, are what make up a person's financial attitude

Priyadharshini (2017). Being patient when faced with financial problems, looking for ways to diversify risks, understanding the relationship between risk and return, and saving money are all aspects of this self-belief attitude that highlight the importance of believing in oneself Diacon and Ennew (2001).

Table 1: summary of Financial literacy measurement

| Component | Key Elements | Methods & Tools | Key References |
|---|---|---|---|
| Core Domains | Knowledge (Big 3/4, digital, contextual)- Attitudes (confidence, patience, risk tolerance)- Behaviors (saving, budgeting, debt)- Digital Literacy (fintech use, security) | OECD/INFE tools- FQ Index- Custom modules | Atkinson & Messy (2012), OECD (2022) |
| Assessment Types | Objective tests- Self-report & self-assessment- Scenario- based performance | Cognitive quizzes- Likert scales- Behavior checklists | Lusardi & Mitchell (2011), Remund (2010) |
| Psychometric Methods | Ensures validity, reliability, fairness, comparability | CTT- IRT- Rasch- Factor Analysis- CART | Lietz et al. (2017), Clercq (2019) |
| Instrument Design | Modular structure- Balanced item difficulty- Contextual adaptation- Composite& domain-specific scoring | OECD/INFE, FQ tools- Subscale diagnostics | Yu & Zhang (2016), Ouachani et al. (2021) |
| Future Focus | Digital financial literacy- Longitudinal tracking- Cultural fit- Youth, elderly, Islamic finance inclusion | Pre-post studies- Digital modules- Adaptive design | OECD (2020), Lusardi & Mitchell (2014) |
| Limitations | Cross-country item variance- Risk of misclassification- Inconsistent analytical methods- short tools may miss depth | Use IRT/DIF- Combine objective + subjective methods | Bongini et al. (2018), Hung et al. (2009) |

**Sources**: literature, 2025

In recent decades, assessments of financial literacy have shifted from focusing solely on knowledge to including attitudes, behaviors, and digital competence (Lusardi & Mitchell, 2014; OECD, 2020). Atkinson and Messy (2012) note that culturally adapted scales address specific local needs, whereas standardized worldwide instruments, like the OECD's PISA financial literacy evaluation, allow for cross-country comparability (OECD, 2017). Accurately testing and improving financial literacy across varied

populations requires ongoing refinement in item design, psychometric validation, and context adaptation (Kempson et al.,2016). Summary of key compenents with their measurement presented in table 1.

## 4. Conclusion, Limitation and Future research direction

### 4.1. Conclusion

There is a wide range of elements, such as demographics, socioeconomic status, psychology, and technology, that impact financial literacy. Income, age, gender, self-efficacy, and social impact are among the most important determinants of financial capacity, while education is still the most important. There is currently no universal measure for financial literacy. Based on the results of the examination, one's ability to make outstanding financial decisions can be determined. A variety of approaches have been used by researchers to evaluate financial literacy. These days, there are more thorough frameworks for measuring financial literacy than ever before. These frameworks take into account not only knowledge but also attitudes, behaviors, and digital abilities. The OECD/INFE toolbox and similar instruments establish global benchmarks using verified scientific methodologies; nonetheless, it is essential to make adjustments based on culture and context in order for these instruments to be relevant. Item content variability, scoring methodologies, and effectively addressing the growing role of digital literacy are persistent issues. In order to accurately assess requirements and design inclusive, effective interventions, it is crucial to combine rigorous and adaptable measurement methods with a thorough understanding of the factors that influence financial literacy. Integrating these systems helps academics, educators, and politicians improve the financial well-being of diverse populations around the world.

### 4.2. Limitations

While this review does shed light on the factors that influence and how financial literacy is measured, it does so with some caveats. The first is that it only looks at academically published materials in English, even if it covers a lot of ground (from demography to technology, among other things). Policy papers and local initiatives may have provided useful insights; however, this may have omitted data from research conducted in languages other than English. It was also difficult to compare studies since they used different financial literacy measurement methodologies. Although many studies have attempted to define financial literacy, no consensus has been reached. Some have focused on knowledge, while others have expanded the definition to encompass attitudes, behaviors, and digital abilities. Because of this variety, it was difficult to combine results into a single model. The results may not apply to people all over the world because much of the evaluated material comes from very particular geographical or socioeconomic settings. It is difficult to assess the review's efficacy in real-world applications because it does not

incorporate empirical validation of the frameworks addressed. These constraints indicate the necessity for prudence in the generalization of the findings, particularly across diverse cultural and economic settings.

### 4.3. Future Research Directions

Future research should use this review as a foundation to fill in certain important gaps. Above all else, it is critical to continue working on a flexible and standardized framework to test financial literacy. In order to account for cultural and geographical variations, such a framework should incorporate digital skills with knowledge, behavior, attitude, and the ability to adapt to new situations. Validation of current tools, such as the OECD/INFE toolbox, across varied populations, especially in under-represented regions, requires additional empirical research. Given the increasing importance of digital finance, it would be wise for future research to investigate how digital literacy affects one's financial competence. Better understanding of the factors that influence monetary choices can be gained through multidisciplinary studies that bring together fields such as technology, education, behavioral economics, and psychology. To better understand the long-term effects of variables like income, education, and self-efficacy on financial literacy, longitudinal studies are highly recommended. Lastly, additional research with a policy focus is required to evaluate the effects of financial literacy programs and educational interventions on the financial well-being of people, particularly those who are marginalized or at risk. Researchers, legislators, and teachers must work together to improve financial literacy on a global scale in order to make progress in this area.

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