



Editorial

# Reframing Financial Literacy for the Twenty-First Century: Foundations, Digital Transformations, and Pathways to Sustainable Empowerment

Fernando Oliveira Tavares <sup>1,2,\*</sup>  and Luis Almeida <sup>3,4</sup> 

- <sup>1</sup> Research on Economics, Management and Information Technologies, Department of Economics and Management, Universidade Portucalense, 4200-027 Porto, Portugal
- <sup>2</sup> Instituto Superior Miguel Torga, Largo da Cruz de Celas No. 1, 3000-132 Coimbra, Portugal
- <sup>3</sup> GOVCOPP—Research Unit on Governance, Competitiveness and Public Policies, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal
- <sup>4</sup> Higher Institute of Accounting and Administration of Aveiro, Aveiro University, 3810-193 Aveiro, Portugal
- \* Correspondence: ftavares@upt.pt

## 1. Introduction

Over the last two decades, financial literacy has emerged as a central determinant of economic wellbeing, social inclusion, and individual empowerment (Tavares et al., 2020). Once conceptualized primarily as a cognitive skill involving basic numeracy and knowledge of financial products, financial literacy has evolved into a multidimensional construct encompassing behavioural, digital, and ethical dimensions (Santos et al., 2022). In the context of globalization, technological acceleration, and increasing economic complexity, the capacity to make informed financial decisions has become indispensable not only for personal financial management but also for sustainable development and collective resilience (Vieira et al., 2024). This transformation reflects not only changes in global financial systems but also the digitalisation of everyday life, which has blurred the boundaries between financial and technological capabilities.

The global financial landscape is currently defined by profound structural transformations. The rise in fintech innovations, mobile banking, and algorithmic finance has blurred the boundaries between technological literacy and financial capability (Tavares et al., 2021). These shifts have amplified both opportunities and risks: while digitalisation expands access to financial services, it simultaneously creates new forms of exclusion for populations lacking adequate digital or financial skills. *Simultaneously*, the pursuit of sustainability and equity—anchored in the United Nations’ Sustainable Development Goals (SDGs)—requires a rethinking of financial literacy as an instrument of empowerment and ethical responsibility, not merely as an individual asset.

Against this background, this Special Issue, “The New Horizons of Global Financial Literacy”, brings together empirical and theoretical contributions that collectively redefine what it means to be financially literate in the twenty-first century. The papers address a wide spectrum of topics, ranging from educational foundations to digital adaptation and sustainable empowerment. Together, they present a comprehensive framework that situates financial literacy at the intersection of education, technology, and development, offering a renewed understanding of its transformative potential for individuals, institutions, and societies alike.

This Editorial is structured into three thematic sections. The first, *Foundations and Frontiers: Advancing our Understanding of Financial Literacy in a Global Context*, explores the



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determinants, disparities, and theoretical foundations of financial literacy across diverse populations. The second, *Digital Transformations and Technological Inclusion: Re-imagining Financial Literacy for the 21st Century*, examines how technological innovation reshapes financial behaviour and introduces new forms of inclusion and vulnerability. Finally, *From Inclusion to Sustainability: Financial Literacy as a Driver of Empowerment and Global Development* extends the discussion to the macro level, linking financial education and inclusion to sustainable entrepreneurship, ethical finance, and global equity. Taken together, these contributions present a cohesive line of argument and demonstrate that financial literacy must evolve from a static, knowledge-based model to a dynamic, integrative, and future-oriented capability, which is essential for addressing the challenges of a rapidly changing world.

While previous research has historically examined financial literacy, digital literacy, and sustainability as separate, parallel domains, this Special Issue innovatively explores their systematic integration by articulating a cohesive framework where digital and behavioural capabilities are viewed as prerequisites to achieving sustainable and equitable global outcomes. The collected papers thus move the discourse beyond mere knowledge acquisition toward a dynamic, multi-axis concept of financial citizenship.

## 2. Foundations and Frontiers: Advancing Our Understanding of Financial Literacy in a Global Context

The conceptualisation and measurement of financial literacy remain central in understanding individuals' capacity to make informed financial decisions in increasingly complex economic environments. The studies in this section collectively explore the cognitive, educational, and socio-demographic determinants of financial literacy, revealing its multidimensional nature and highlighting the persistent inequalities that characterize its global distribution.

[Nogueira et al. \(2025\)](#) examine financial literacy, knowledge, and behaviour across OECD countries, demonstrating that higher education attainment and levels of human development positively influence literacy, whereas social inequality and household indebtedness exert negative effects. Their findings underscore the role of structural and educational policies in fostering financial competence across diverse economies. In a complementary context, [Tzora \(2025\)](#) investigates predictors of financial literacy among Greek high school students, identifying academic performance, parental education, and household income awareness as critical factors. These results suggest that early and targeted interventions within school curricula can strengthen long-term financial resilience.

The interconnection between mathematical ability and financial reasoning is further developed by [García \(2024\)](#), who provides evidence of the influence of understanding geometric progressions on compound interest calculations among university students. This work emphasizes the importance of integrating mathematical literacy into financial education frameworks to enhance decision-making capabilities. Similarly, [Pakos and Mpogiatzidis \(2025\)](#), through a systematic review, highlight the deficient levels of financial literacy among healthcare providers, calling attention to the need for financial training beyond clinical expertise. This domain-specific analysis expands the boundaries of financial literacy research by situating it within professional contexts where economic competence directly impacts organizational efficiency.

Finally, the gendered dimensions of financial literacy are brought to the forefront by [Maina and Györke \(2025\)](#), who document persistent disparities between men and women in financial knowledge and behaviour. Their study attributes these gaps to socio-cultural norms, unequal access to education, and systemic barriers to financial inclusion. It calls

for gender-sensitive financial education programmes and inclusive financial policies to promote equitable empowerment and participation.

Together, these studies delineate both the foundations and the frontiers of contemporary financial literacy research. They advance the idea that financial literacy is not merely a personal competency but a social and structural construct shaped by education, inequality, and culture. By bridging cognitive, pedagogical, and socio-economic perspectives, this collection contributes to redefining financial literacy as a cornerstone of human development and economic citizenship. Future research should continue to integrate interdisciplinary approaches, focusing on how educational innovation, equity policies, and behavioural insights can jointly enhance financial capability across populations and generations.

### 3. Digital Transformations and Technological Inclusion: Re-Imagining Financial Literacy for the 21st Century

The digitalisation of financial systems has reshaped how individuals interact with money, financial institutions, and markets. In this context, digital financial literacy emerges as a pivotal competence for navigating an economy characterized by mobile banking, financial technologies, and algorithmic decision-making. The contributions assembled under this theme highlight the dual nature of financial digitalization—its potential to democratize access and its capacity to reinforce exclusion for those lacking digital or financial skills.

[Cassola et al. \(2025\)](#), in “Digital Finance Adoption in Brazil: An Exploratory Analysis on Financial Apps and Digital Financial Literacy”, examine users’ perceptions of financial applications across age groups. Their findings reveal the widespread adoption of digital tools motivated by convenience and efficiency yet tempered by persistent concerns over data security and technological dependence. Despite high confidence in app use, participants exhibited limited proficiency in complex financial tasks, exposing a gap between access and capability. This study suggests that the development of digital inclusion without parallel digital financial education could increase financial vulnerability, especially among marginalized populations.

Complementing this behavioural perspective, [Vieira et al. \(2024\)](#) present the “Digital Financial Capability Scale (DFCS)”, a validated multidimensional instrument integrating digital financial knowledge, behaviour, and confidence. This innovative framework captures individuals’ self-assessed ability to manage finances in a digital environment and offers policymakers and researchers a standardized measure for evaluating interventions and public programmes. The DFCS responds to the growing need for evidence-based tools to assess the impact of digital transformation on financial wellbeing, allowing for cross-cultural comparison and longitudinal analysis.

Together, these studies articulate a crucial shift in the discourse on financial literacy, from a focus on a cognitive understanding of money to a broader conception that encompasses technological competence, digital confidence, and adaptive behaviour. They reflect the reality that financial literacy in the 21st century cannot be disentangled from digital literacy. The intersection of both domains defines individuals’ capability to safely and effectively engage with financial ecosystems that are increasingly automated, data-driven, and globally interconnected.

From a policy perspective, these insights call for integrated digital–financial education strategies that go beyond mere technological access. Governments, educational institutions, and financial entities must collaborate to ensure that the expansion of fintech ecosystems does not reproduce old forms of exclusion under new digital guises. Initiatives aimed at enhancing digital infrastructure must be accompanied by programmes that cultivate critical understanding, data protection awareness, and responsible digital behaviour.

Ultimately, this section reimagines financial literacy as a dynamic and hybrid competence—a fusion of financial understanding, digital adaptability, and ethical awareness. As financial technologies continue to evolve, a key challenge for researchers and policy-makers is to design inclusive frameworks that empower citizens to participate confidently and equitably in the digital economy. In this way, financial literacy becomes not only a mechanism of inclusion but also a fundamental condition for sustainable digital citizenship.

#### 4. From Inclusion to Sustainability: Financial Literacy as a Driver of Empowerment and Global Development

Against an evolving global economic landscape, financial literacy has transcended its traditional role as a tool for individual financial management to become a cornerstone of inclusive growth, sustainable entrepreneurship, and social empowerment. The studies in this section underscore the transformative potential of financial literacy to foster both economic resilience and sustainable development, particularly in emerging and developing contexts. By linking financial knowledge with inclusion, entrepreneurship, and ethical finance, these works are expanding the conceptual and practical frontiers of financial education as a global development strategy.

[Zouitini et al. \(2024\)](#), in “Determinants of Sustainable Entrepreneurship in Morocco”, investigate the interplay between financial literacy, financial inclusion, and entrepreneurial orientation as drivers of sustainable business practices. Their findings reveal that financial literacy exerts a significant positive influence on sustainable entrepreneurship, mediating the relationship between inclusion and business performance. This evidence challenges the notion that financial access alone is sufficient for sustainable growth, emphasizing instead that informed financial capability is indispensable in translating inclusion into long-term viability. This study further highlights the importance of targeted policies to enhance entrepreneurs’ financial knowledge and to design financial ecosystems that promote responsible and socially conscious entrepreneurship.

[Cáceres et al. \(2025\)](#), through their “Systematic Review of Financial Education and Personal Finance in Latin America”, reinforce this argument by demonstrating that financial education contributes not only to economic wellbeing but also to social equity and empowerment. Their synthesis of the Spanish-language academic literature identifies structural barriers—such as unequal access to education and technological resources—that hinder effective financial inclusion. This review advocates for multi-actor collaboration among governments, schools, and the financial sector to integrate financial literacy into broader social and economic development agendas. The authors suggest that financial education should evolve as a lifelong and adaptive process, responding to the complexities of globalization and digital transformation.

Expanding this discussion to the intersection of financial ethics and market behaviour, [Bhuiyan and Hoque \(2025\)](#) analyze “The Dynamic Link Between Crude Oil and Islamic Stock Returns” across BRIC economies during the Global Financial Crisis. Their results demonstrate significant comovement between Islamic equity markets and oil prices, particularly under conditions of economic stress, challenging the perception of Islamic finance as immune to global shocks. By exploring the predictive relationship between energy markets and Shariah-compliant financial instruments, the authors contribute to a nuanced understanding of ethical investment systems and their vulnerability to macroeconomic volatility. This analysis situates financial literacy within a broader sustainability framework, emphasizing the need for informed investment strategies that align with ethical and environmental principles.

Collectively, these studies illuminate the continuum between inclusion, education, and sustainability, suggesting that financial literacy is not merely a behavioural or cognitive

skill but a catalyst for equitable and resilient economies. They advance the notion that empowering individuals with financial knowledge enhances their agency to participate meaningfully in economic life, supports responsible entrepreneurship, and strengthens the social fabric of communities.

From a policy standpoint, these findings underscore the need for integrated national strategies that align financial literacy initiatives with the Sustainable Development Goals (SDGs). Governments and international organizations are urged to view financial education as a lever for achieving inclusive and green growth and empowering citizens to navigate systemic risks, mitigate inequality, and contribute to the collective prosperity of their society.

Ultimately, financial literacy represents both a means of empowerment and a mechanism of transformation. By bridging financial inclusion and sustainability, it represents a vital instrument for achieving economic justice and long-term global development. The works presented here reaffirm the idea that advancing financial literacy is not only a matter of knowledge dissemination but a structural imperative for building fairer, more resilient, and sustainable economies.

## 5. Conclusions

The contributions presented across the three thematic axes—*Foundations and Frontiers of Financial Literacy*, *Digital Transformations and Technological Inclusion*, and *From Inclusion to Sustainability*—reframe financial literacy as a multidimensional construct that transcends individual cognition to encompass technological, social, and developmental dimensions. Together, these strands delineate a comprehensive and forward-looking research agenda for the field, one that aligns financial capability with global transformations in education, technology, and sustainability.

The first thematic block, *Foundations and Frontiers*, establishes the epistemological and empirical groundwork for understanding financial literacy as an outcome of one's educational attainment, socio-economic structure, and cultural environment. It reaffirms that disparities in financial knowledge are not solely behavioural deficits but reflections of structural inequities in access to education, income, and opportunities. By documenting variations across age, gender, profession, and geography, these studies construct a comparative foundation upon which more inclusive and adaptive financial education frameworks can be built.

Building on this foundation, the second block, *Digital Transformations and Technological Inclusion*, highlights how the digitization of finance redefines the competencies required for economic participation. Digital financial literacy emerges as both a continuation and an evolution of traditional literacy—a hybrid skill set that integrates financial reasoning into digital navigation, risk awareness, and data ethics. The interplay between digital capability and financial behaviour underscores a new axis of inequality: access to and confidence in technology. Thus, digital inclusion is becoming an essential complement to financial inclusion, demanding coordinated policy approaches that combine infrastructure investment with educational innovation.

The third block, *From Inclusion to Sustainability*, extends the discussion beyond individual empowerment toward collective and systemic outcomes. Financial literacy is conceptualized here as a catalyst for sustainable entrepreneurship, ethical investment, and social resilience. By linking financial knowledge with the Sustainable Development Goals (SDGs), this body of work situates literacy within broader global challenges such as inequality, ecological transition, and responsible governance. Financially literate citizens are thus positioned not only as informed consumers but as active contributors to inclusive and sustainable economies.

Together, these three perspectives reveal financial literacy to be an integrative and transformative domain—one that bridges micro-level behavioural competencies and macro-level socio-economic imperatives. The synthesis of these dimensions suggests that advancing financial literacy requires a holistic, interdisciplinary approach that simultaneously addresses education systems, technological infrastructures, and development policies.

From a research standpoint, future work should explore cross-domain frameworks that connect behavioural finance, digital economics, and sustainability science. Longitudinal and cross-cultural studies should be carried out to further clarify the mechanisms through which financial literacy contributes to resilience, inclusion, and sustainable growth. For policymakers, the implications are equally clear: financial literacy must be embedded in broader strategies for digital inclusion and sustainable development, ensuring that the benefits of financial innovation and globalization are equitably distributed.

In sum, the emerging direction of global financial literacy is defined by its capacity to connect knowledge with technology, broaden access while strengthening empowerment, and align individual decision-making with collective sustainability. By integrating these dimensions, researchers and policymakers can position financial literacy as a central competency for twenty-first-century citizenship—one that supports informed choices, fosters adaptability, and contributes to both personal wellbeing and global development.

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