

THE ROLE OF FINANCIAL LITERACY IN RETIREMENT PLANNING: A MINI REVIEW

Rusliza Yahaya^{1*}
Azrizal Husin²
Nur Amirah Borhan³

¹ Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia
(E-mail: rusliza@fpe.upsi.edu.my)

² Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia
(E-mail: azrizal@fpe.upsi.edu.my)

³ Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia
(E-mail: amirah.borhan@fpe.upsi.edu.my)

*Corresponding author: rusliza@fpe.upsi.edu.my

Article history

Received date : 27-10-2025

Revised date : 28-10-2025

Accepted date : 29-11-2025

Published date : 10-12-2025

To cite this document:

Yahaya, R., Husin, A., & Borhan, N. A. (2025). The role of financial literacy in retirement planning: A mini review. *International Journal of Accounting, Finance and Business (IJAFB)*, 10 (63), 46 - 55.

Abstract: *This mini-review synthesizes recent evidence on the role of financial literacy in retirement planning, focusing on how it shapes planning strategies, financial behaviour, and core competencies such as budgeting, saving, investing, and debt management. Using Scopus and Google Scholar, a literature search conducted on 12 September 2025 identified peer-reviewed studies addressing financial literacy and retirement preparedness. The findings reveal that financial literacy interventions enhance savings behaviour, reduce financial stress, and improve retirement readiness, particularly when implemented through early education, workplace initiatives, and digital tools like robo-advisors, gamified applications, and retirement calculators. However, persistent issues remain, including unequal access to financial education, socioeconomic disparities, cultural influences, and doubts about the sufficiency of literacy alone to change behaviour without supportive policy frameworks. Debates also continue regarding the causal relationship between financial literacy and behavioural outcomes, as well as the long-term impact and ethical concerns associated with digital finance solutions. Major gaps identified include limited longitudinal studies, inconsistent measurement of financial literacy, and insufficient assessment of intervention cost-effectiveness. Overall, financial literacy is essential but not independently sufficient for sustainable retirement preparedness. Strengthening its impact requires integration with behavioural and policy mechanisms. Future research should emphasize longitudinal and cross-cultural studies on blended financial education and technology-based interventions, prioritize equity-focused programs for vulnerable populations, and establish ethical standards for AI-driven financial tools to ensure inclusive and resilient retirement security.*

Keywords: *financial literacy, financial knowledge, retirement planning, financial behaviour, budgeting*

Introduction

In an era marked by rising life expectancy, changing labour markets, and shifting pension landscapes, financial literacy and retirement planning have become central to both individual well-being and societal stability. Globally, many households struggle to save adequately for old age, and low financial literacy has been consistently linked to suboptimal investment choices, debt accumulation, and insufficient retirement preparedness (Fong et al., 2021). As governments increasingly shift responsibility for retirement security from public systems to individuals, the ability to understand and apply financial knowledge has become not only timely but also urgent.

Despite a growing body of research highlighting the importance of financial literacy for retirement outcomes, significant gaps remain. For example, there is no consensus on how to best measure financial literacy, nor on which specific aspects of financial knowledge most strongly drive retirement readiness (Adil et al., 2022). Furthermore, the relationship between financial literacy and behaviour is complex and contested: while some studies find direct causal links (Bay et al, 2014), others suggest mediating factors such as trust in financial institutions, psychological biases, or access to advice (Ahmad & Shah, 2022; Bhatia et al., 2024; Mitra & De, 2025). These divergent findings have fuelled ongoing debates about whether interventions should primarily target education, structural policy changes, or behavioural “nudges.”

The aim of this mini-review is to synthesize recent evidence on the intersection of financial literacy and retirement planning, with a particular focus on unresolved questions and areas of controversy. Specifically, it will examine (i) the conceptualization and measurement of financial literacy, (ii) the empirical evidence linking financial literacy to retirement saving and investment decisions, and (iii) the role of contextual factors such as culture, policy design, and behavioural tendencies. By outlining these thematic areas, the review highlights both what is known and what remains contested, ultimately underscoring the need for more integrative approaches that bridge financial education with behavioural and policy insights.

In doing so, this paper contributes to a clearer understanding of the challenges and opportunities in strengthening retirement preparedness through financial literacy. The conclusion emphasizes that while progress has been made, advancing the field will require addressing methodological inconsistencies, reconciling conflicting interpretations, and designing interventions that are sensitive to both individual differences and systemic constraints.

Methodology

A comprehensive literature search was conducted using [Scopus and Google Scholar]. Keywords such as ("financial literacy" OR "financial education" OR "money management" OR "financial knowledge") AND ("retirement planning" OR "pension planning" OR "retirement savings" OR "retirement strategy") AND ("investment" OR "savings" OR "budgeting" OR "wealth management") AND ("decision making" OR "behaviour" OR "attitudes" OR "preferences"). Date search 12 September 2025. Keywords such as financial literacy, financial knowledge, and retirement planning were utilized to collect relevant articles. Various types of articles, including original research, systematic reviews, meta-analyses, case studies, letters to the editor, commentaries, were considered for this mini review.

Below, we provide the inclusion and exclusion criteria for studies in this review article.

Inclusion Criteria

- Studies discussing planning strategies, financial behaviour, and key components consistently highlight that financial literacy is most effective when it integrates budgeting, saving, investing, debt management, and retirement-focused behaviours. These studies emphasize early education, workplace training, and community engagement as critical entry points for influencing retirement preparedness.
- Studies focusing on the application of specific technologies such as robo-advisors, AI-driven financial platforms, gamified apps, and retirement calculators demonstrate that technology can enhance accessibility, engagement, and personalization in financial literacy education. These digital tools are increasingly embedded in educational and workplace contexts to support behavioural change and long-term financial planning.
- Studies analyzing strengths, limitations, and potential applications of financial literacy interventions show that strengths include improved savings behaviour, reduced financial stress, and enhanced retirement security. However, limitations include uneven access, digital divides, cultural barriers, and the risk of interventions disproportionately benefitting higher-income groups. Potential applications lie in blended approaches that combine education, behavioural nudges, and digital solutions while ensuring inclusivity and equity.
- Studies published in English collectively identify key gaps and controversies in the literature, including limited longitudinal evidence linking early education to retirement outcomes, inconsistent evaluation of cost-effectiveness, and ongoing debates about whether education alone can overcome structural inequalities such as wage stagnation and employment precarity. Concerns over data privacy, algorithmic bias, and trust in digital tools further highlight the need for ethical standards.

Exclusion Criteria

- Studies published in languages other than English were excluded to ensure consistency and accessibility of reviewed literature.
- Studies that discuss financial literacy and retirement planning without explicit reference to the specified concepts or technologies (e.g., planning strategies, financial behaviour, or key components) were excluded to maintain focus on the defined scope of the review.
- Grey literature (e.g., conference abstracts, unpublished reports) was excluded to ensure that only peer-reviewed, high-quality, and reliable sources informed the review findings.

Discussion and Result

Figure 1 illustrates the emerging trends derived from the review.

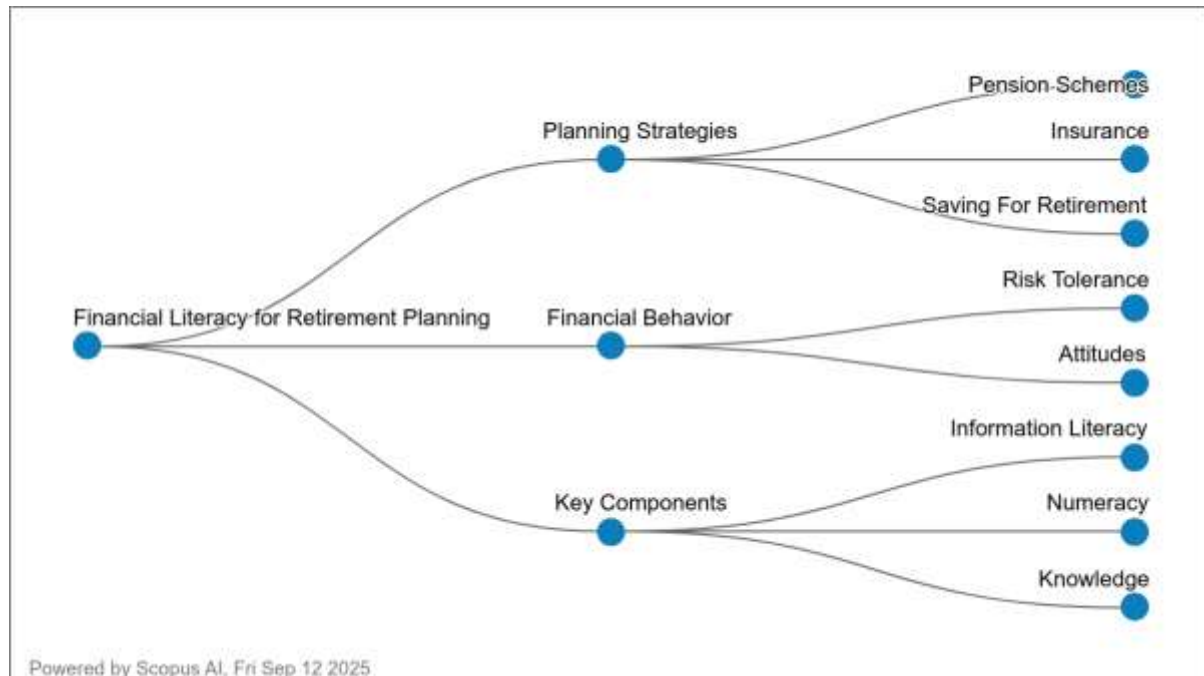


Figure 1: Emerging Themes

Current Status of Financial Literacy and Retirement Planning Based on Theme Planning Strategies

Financial literacy and retirement planning are increasingly recognized as critical competencies in education, as individuals face complex economic landscapes and shifting pension structures. Current strategies emphasize early integration of financial literacy into school curricula, workplace training, and digital platforms, with the goal of equipping individuals to make informed savings and investment decisions (Gilbert et al., 2024; Koskelainen et al., 2023; Mancone et al., 2024). Future directions highlight the potential of gamification, AI-driven financial advice, and policy-driven initiatives that mandate retirement planning education. Yet, debates persist over whether such interventions adequately address socioeconomic disparities. The benefits of financial literacy education include improved savings behaviour, reduced financial stress, and greater long-term security, while challenges include uneven access, cultural barriers, and skepticism about the efficacy of education alone without structural reforms. Emerging technologies such as robo-advisors, fintech applications, and interactive simulations are increasingly adopted to personalize financial planning and make retirement strategies more engaging and accessible, though concerns remain about data privacy, algorithmic bias, and over-reliance on automation (Machucho & Ortiz, 2025). Practical applications extend to university financial literacy programs, employer-sponsored retirement workshops, and mobile applications that track savings goals in real time, yet research continues to reveal gaps in long-term effectiveness, particularly among vulnerable populations. Scholars debate whether education can sufficiently overcome structural inequalities such as wage stagnation or precarious employment (Knight & Belcher, 2023), suggesting that future research should integrate financial literacy with broader economic and social policy. Ultimately, advancing retirement planning education requires interdisciplinary collaboration, critical evaluation of digital tools, and greater sensitivity to diverse socioeconomic contexts. By systematically linking benefits, challenges, technologies, and applications, the field can move toward more

inclusive strategies that not only improve individual decision-making but also inform public policy, creating opportunities for both scholarly innovation and practical development in preparing individuals for financially secure retirements.

Current Status of Financial Literacy and Retirement Planning Based on Theme Financial Behaviour

Financial behaviour, how individuals save, spend, borrow, and invest, has become a critical focus in financial literacy and retirement planning. Particularly as the shift from defined benefit to defined contribution systems transfers responsibility for retirement security to individuals, making education on behavioural practices highly relevant in schools, workplaces, and community programs. Current evidence highlights that interventions combining financial education with behavioural tools such as automatic enrolment, commitment devices, and digital reminders can improve saving behaviour (Moustati et al., 2024). However, debates persist over whether education alone can meaningfully reshape long-term actions without structural reforms. Gaps remain in longitudinal research linking early interventions to retirement adequacy, pointing to opportunities for blended models that integrate behavioural economics, technology, and policy. Benefits of improved financial behaviour include enhanced savings discipline, reduced financial stress, and stronger retirement resilience (Suh, 2022; Sundarassen et al., 2024). Challenges include socioeconomic inequality, cultural differences in saving norms, and the risk of disproportionately benefitting higher-income groups, raising concerns about equity. Key technologies such as robo-advisors, gamified financial apps, and retirement calculators show promise in increasing engagement and simplifying financial decisions (Arora et al., 2025; Shaji, 2024). However, questions around data privacy, trust, and the long-term efficacy of gamified approaches highlight the need for research into ethical, transparent, and accessible digital solutions. Practical applications show that programs combining contextualized education with behavioural reinforcement, such as workplace seminars paired with automatic savings features or university courses integrated with budgeting tools, are most effective (Carpena et al., 2019; Mancone et al., 2024). Nevertheless debates continue about whether governments, employers, or educators should bear primary responsibility. Moreover, gaps in cost-effectiveness analysis and teacher training remain pressing. Ultimately, advancing financial behaviour for retirement readiness requires interdisciplinary strategies that merge education, behavioural design, and technology, while addressing inequality and inclusivity. Future research should prioritize longitudinal evaluation, equity impacts, and the ethical use of digital innovations to ensure financial behaviour change translates into sustainable retirement security across diverse populations.

Current Status of Financial Literacy and Retirement Planning Based on Theme Key Components

Financial literacy, built on key components such as budgeting, saving, investing, debt management, risk assessment, and retirement planning, is increasingly emphasized in education as individuals face longer lifespans, complex financial markets, and the decline of traditional pension systems, making retirement preparedness a central goal. Current developments in schools, universities, and workplaces seek to integrate these components into curricula and training programs, with evidence suggesting that early education reinforced by lifelong learning improves decision-making and financial resilience (Klapper & Lusardi, 2020). Future directions highlight the promise of blended approaches that combine knowledge-based instruction with behavioural nudges, policy supports, and technology-enabled tools, though debates continue over whether education alone is sufficient to shape long-term retirement readiness without broader structural reforms. Benefits of strengthening financial literacy

include improved savings discipline, reduced financial stress, and enhanced retirement security (Sundaresan et al., 2024). However, challenges persist in addressing socioeconomic disparities, cultural differences, and the risk that interventions disproportionately benefit higher-income groups, raising concerns about equity. Technologies such as robo-advisors, retirement calculators, gamified apps, and AI-driven personalized platforms are increasingly used to make financial planning accessible and engaging; but, controversies around transparency, algorithmic bias, data privacy, and the long-term impact of gamified learning highlight the need for ethical standards and digital literacy benchmarks (Hesami, 2025). Practical applications show that programs combining education with structural reinforcements such as automatic enrolment, workplace financial counselling, and university-based financial tools yield the strongest results, though gaps remain in cost-effectiveness evaluation and teacher preparation. Overall, advancing financial literacy and retirement planning requires interdisciplinary strategies that blend education, behavioural economics, and technology while addressing equity and inclusivity. Future research should prioritize longitudinal studies, explore heterogeneous impacts across populations, and develop ethical, transparent digital solutions to ensure that financial literacy fosters sustained behavioural change and contributes meaningfully to retirement security for diverse communities.

Table 1: A structured table of authors, year, and contribution area

Authors	Year	Contribution Area
Zhuang & Yang	2025	Financial literacy, risk attitude, and consumer behaviour
Alfando et al.	2025	Empowering Indonesian Millennials: The Role of Financial Literacy in Retirement Planning
Lee & Kelvin	2025	Islamic Financial Literacy Education on Innovation in Retirement Planning
Lhaopadchan et al.	2025	Role of Intention and Financial Literacy on Retirement Saving Behaviour
Alfando et al.	2025	Role of Financial Literacy, Goal Clarity, Risk Tolerance on Retirement Savings
Green & Herbst-Debby	2025	Motherhood as a Prism Shaping Financial Literacy and Retirement Preparedness
Liu & Ju	2025	Digital Finance and Retirement Planning: Emerging Patterns
Mustafa et al.	2025	The Dynamics of Financial Retirement Planning in Emerging Markets
Rupeika-Apoga & Priede	2025	Retirement Readiness in the Baltics: The Roles of Financial Literacy and Behaviour
Putu Kepramareni et al.	2025	The Influence of Financial Literacy and Risk Tolerance on Retirement Planning

Table 1 presents a summary of 10 recent studies highlighting diverse research contributions to the field of financial literacy and retirement planning. The listed works collectively demonstrate an expanding global focus on how financial literacy interacts with behavioural, demographic, and contextual factors influencing retirement preparedness. For instance, Zhuang and Yang (2025) explore the interrelationship between financial literacy, risk attitude, and consumer behaviour, while Alfando et al. (2025) contribute two studies examining Indonesian millennials. First emphasizing empowerment through financial literacy and later investigating the combined effects of financial literacy, goal clarity, and risk tolerance on retirement savings. Lee and Kelvin (2025) extend this discussion to Islamic financial literacy, linking it to

innovation in retirement planning. Lhaopadchan et al. (2025) and Putu Kepramareni et al. (2025) similarly highlight behavioural and attitudinal determinants such as intention and risk tolerance. In addition, Green and Herbst-Debby (2025) provide a socio-demographic perspective by framing motherhood as a lens shaping financial literacy and retirement preparedness. Emerging market contexts are represented by Mustafa et al. (2025), while Liu and Ju (2025) address the role of digital finance in shaping modern retirement planning trends. Finally, Rupeika-Apoga and Priede (2025) contribute regional insights from the Baltics, emphasizing the combined roles of financial literacy and behaviour in determining retirement readiness. Collectively, these studies underscore the multidimensional and cross-cultural nature of financial literacy's role in retirement planning.

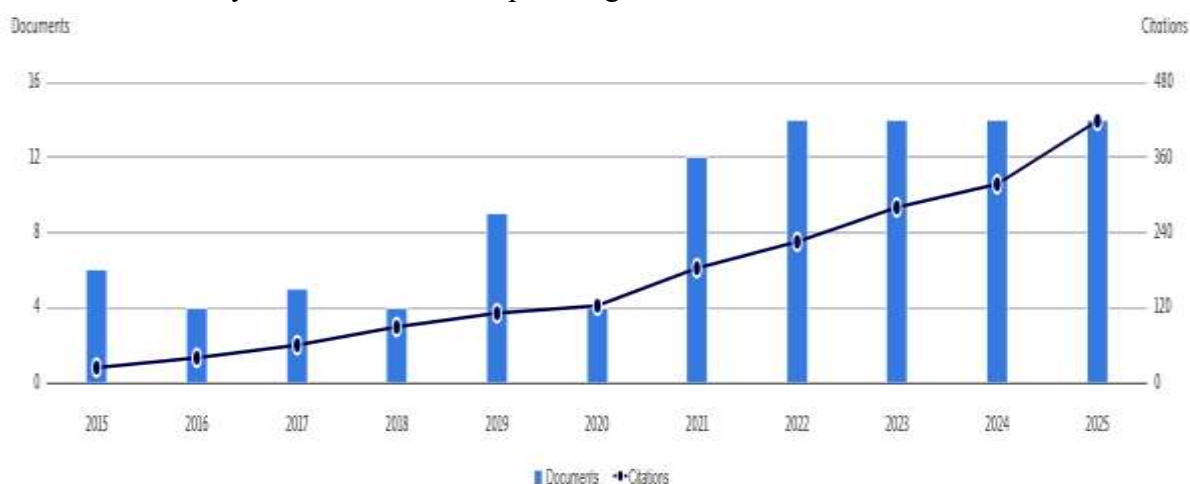


Figure 2: Published Documents and Citations

Figure 2 illustrates the trend in the number of published documents and corresponding citations from 2015 to 2025. The data show a steady increase in research activity, with publications rising from about four to thirteen documents annually over the period. Citations followed a more pronounced upward trajectory, climbing significantly from below 50 in 2015 to nearly 400 by 2025. This pattern indicates not only a consistent growth in research output but also an increasing academic influence and recognition of the published works. The sharp rise in citations, particularly after 2020, suggests that the research produced in recent years has gained substantial visibility and impact within the academic community. Overall, the trend reflects a positive progression in both scholarly productivity and citation performance over the decade.

Conclusion

This mini review highlights that financial literacy anchored in planning strategies, financial behaviour, and key components such as budgeting, saving, investing, and debt management is essential for effective retirement preparedness. Evidence shows that early education, workplace initiatives, and digital tools can enhance financial decision-making and retirement security; however, persistent challenges include unequal access, cultural barriers, and over-reliance on education without structural reforms. Ongoing controversies remain regarding the causal link between literacy and behaviour, the long-term effectiveness of interventions, and the ethical implications of emerging technologies. Notably, unresolved gaps include limited longitudinal evidence, inconsistent measures of financial literacy, and insufficient attention to equity impacts. Future research should prioritize cross-cultural and longitudinal evaluations of blended interventions, equity-focused program design for vulnerable populations, and the development of transparent frameworks for AI-driven financial tools. In practice, integrative approaches that

combine education, behavioural nudges, and supportive policies hold the greatest promise for fostering sustainable retirement readiness. Addressing these challenges will not only strengthen individual financial well-being but also contribute to broader economic resilience in aging societies.

Acknowledgements

We would like to thank the Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, for their helpful feedback and support.

References

- Adil, M., Singh, Y., & Ansari, Mohd. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision? *Asian Journal of Accounting Research*, 7(1), 17–30. <https://doi.org/10.1108/AJAR-09-2020-0086>
- Ahmad, M., & Shah, S. Z. A. (2022). Overconfidence heuristic-driven bias in investment decision-making and performance: Mediating effects of risk perception and moderating effects of financial literacy. *Journal of Economic and Administrative Sciences*, 38(1), 60–90. <https://doi.org/10.1108/JEAS-07-2020-0116>
- Alfando, K., Njo, A., & Yuliana, O. Y. (2025). Empowering indonesian millennials: The role of financial literacy, goal clarity, and risk tolerance in retirement savings. *Financial Planning Review*, 8(3), e70013. <https://doi.org/10.1002/cfp2.70013>
- Arora, S., Rajesh, A., Misra, R., & Singh, G. (2025). Bridging technology and trust: The role of AI-driven robo-advisors in middle-class financial management. *Management Decision*, 1–24. <https://doi.org/10.1108/MD-01-2025-0093>
- Bay, C., Catasús, B., & Johed, G. (2014). Situating financial literacy. *Critical Perspectives on Accounting*, 25(1), 36–45. <https://doi.org/10.1016/j.cpa.2012.11.011>
- Bhatia, M., Arora, R., & Mehrotra, V. (2024). Interplay between financial literacy, firm's characteristics, behavioural biases and investment choices—A conditional mediation model. *Global Business Review*, 09721509241288622. <https://doi.org/10.1177/09721509241288622>
- Carpena, F., Cole, S., Shapiro, J., & Zia, B. (2019). The abcs of financial education: Experimental evidence on attitudes, behaviour, and cognitive biases. *Management Science*, 65(1), 346–369. <https://doi.org/10.1287/mnsc.2017.2819>
- Fong, J. H., Koh, B. S. K., Mitchell, O. S., & Rohwedder, S. (2021). Financial literacy and financial decision-making at older ages. *Pacific-Basin Finance Journal*, 65, 101481. <https://doi.org/10.1016/j.pacfin.2020.101481>
- Gibert, R., Adams, I., & Kang, S. (2024). From saving to budgeting: Unpacking the impact of a culturally relevant financial literacy summer program- \$mart money. *Cogent Education*, 11(1), 2387900. <https://doi.org/10.1080/2331186X.2024.2387900>
- Green, L.-N., & Herbst-Debby, A. (2025). Motherhood as a prism shaping financial literacy for retirement among generation y women. *Social Sciences*, 14(5), 283. <https://doi.org/10.3390/socsci14050283>
- Hesami, S. (2025). Navigating the AI-driven transformation of personal finance: Opportunities, challenges, and ethical imperatives. *Strategy & Leadership*. <https://doi.org/10.1108/SL-02-2025-0019>
- Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, 49(3), 589–614. <https://doi.org/10.1111/fima.12283>

- Knight, C., & Belcher, J. (2023). Financialization and systemic income inequality: A call to action for social work educators and practitioners. *Journal of Teaching in Social Work*, 43(1), 20–42. <https://doi.org/10.1080/08841233.2022.2120168>
- Koskelainen, T., Kalmi, P., Scornavacca, E., & Vartiainen, T. (2023). Financial literacy in the digital age—A research agenda. *Journal of Consumer Affairs*, 57(1), 507–528. <https://doi.org/10.1111/joca.12510>
- Lee, C.Y., & Kelvin, L.Y.M., (2025). Islamic financial literacy education on innovative retirement financial product. *International Journal of Islamic Thought*, 27. <https://doi.org/10.24035/ijit.27.2025.322>
- Lhaopadchan, S., Gerrans, P., & Treepongkaruna, S. (2025). The important role of intention and financial literacy in pension plan members' retirement savings behaviours during COVID-19. *International Journal of Bank Marketing*, 43(6), 1295–1324. <https://doi.org/10.1108/IJBM-04-2024-0194>
- Liu, L., & Ju, Z. (2025). Digital finance and retirement planning: The role of information cost reduction and trust enhancement channels. *Economic Modelling*, 144, 106989. <https://doi.org/10.1016/j.econmod.2024.106989>
- Machucho, R., & Ortiz, D. (2025). The impacts of artificial intelligence on business innovation: A comprehensive review of applications, organizational challenges, and ethical considerations. *Systems*, 13(4), 264. <https://doi.org/10.3390/systems13040264>
- Mancone, S., Tosti, B., Corrado, S., Spica, G., Zanon, A., & Diotaiuti, P. (2024a). Youth, money, and behaviour: The impact of financial literacy programs. *Frontiers in Education*, 9, 1397060. <https://doi.org/10.3389/feduc.2024.1397060>
- Mancone, S., Tosti, B., Corrado, S., Spica, G., Zanon, A., & Diotaiuti, P. (2024b). Youth, money, and behaviour: The impact of financial literacy programs. *Frontiers in Education*, 9, 1397060. <https://doi.org/10.3389/feduc.2024.1397060>
- Mitra, A., & De, A. (2025). Empowering financial choices: How financial literacy and behavioural bias shape access to financial products and services. *International Journal of Accounting & Information Management*. <https://doi.org/10.1108/IJAIM-10-2024-0412>
- Moustati, I., Gherabi, N., & Saadi, M. (2024). Leveraging the internet of behaviours and digital nudges for enhancing customers' financial decision-making. *International Journal of Computer Applications in Technology*, 74(3), 208–221. <https://doi.org/10.1504/IJCAT.2024.141957>
- Mustafa, W. M. W., Islam, M. A., Hassan, Md. S., & Kassim, M. A. M. (2025). The dynamics of financial retirement planning: Financial attitude, health literacy, and the role of financial advisors with financial literacy as a moderator. *Journal of Financial Services Marketing*, 30(1), 3. <https://doi.org/10.1057/s41264-024-00296-2>
- Putu Kepramareni, P. K., I Gede Cahyadi Putra, I. G. C. P., Luh Putri Mas Mirayani, L. P. M. M., Kadek Dewi Indah Sri Laksemin, K. D. I. S. L., & Ni Wayan Jessy Janawati, N. W. J. (2025a). The influence of financial literacy and risk tolerance on retirement financial planning. *Global Business Finance Review*, 30(2), 86–98. <https://doi.org/10.17549/gbfr.2025.30.2.86>
- Rupeika-Apoga, R., & Priede, J. (2025). Retirement readiness in the baltics: The roles of financial literacy, product ownership, and advisory confidence. *Risks*, 13(2), 30. <https://doi.org/10.3390/risks13020030>
- Shaji, A.G. (2024). *Robo-revolution: Exploring the rise of automated financial advising systems and their impacts on management practices*. <https://doi.org/10.5281/ZENODO.14059485>

- Suh, E. (2022). Can't save or won't save: Financial resilience and discretionary retirement saving among British adults in their thirties and forties. *Ageing and Society*, 42(12), 2940–2967. <https://doi.org/10.1017/S0144686X21000337>
- Sundarasan, S., Rajagopalan, U., & Ibrahim, I. (2024). Financial sustainability through literacy and retirement preparedness. *Sustainability*, 16(23), 10692. <https://doi.org/10.3390/su162310692>
- Yadav, M., Banerji, P., & Garg, A. (2025). Digital financial literacy and retirement planning with mediating effect of saving behaviour. *American Journal of Business*, 40(3), 127–143. <https://doi.org/10.1108/AJB-12-2023-0221>
- Zhuang, J., & Yang, S. (2025). Financial literacy, risk attitude, and consumer retirement planning. *Finance Research Letters*, 84, 1078