

Evolution and Emerging Trends in Financial Literacy and Investment Behaviour: A Bibliometric Analysis

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ABSTRACT

Purpose – The study aims to identify trends in financial literacy and investment behaviour of individuals by synthesising knowledge structures, and also to propose future research directions by reviewing the corpus of literature.

Design/Methodology/Approach – The articles pertinent to the topic were curated from the Scopus and Web of Science databases from 2004 to 2024. A bibliometric analysis was conducted on 582 articles extracted. The study utilised Biblioshiny to analyse the performance and structural mapping of the literature.

Findings – The findings reveal that the themes of financial literacy and behaviour have grown throughout time as an interdisciplinary field. Researchers first concentrated on demographic and socioeconomic variables, but the area eventually expanded to include themes such as behavioural and psychological structures that influence financial activity. This research illustrates the domain's intellectual and social organisation and its conceptual structure. This study provides valuable insights into areas that require further investigation.

Research Limitations/Implications – Only two databases were selected for the study; more could have been included to strengthen the research. The query was also filtered by language, area, and time frame.

Practical Implications – The current study sheds light on the relationships between financial literacy and financial behaviour. It emphasises the most pressing difficulties in the field and points to potential areas for investigation. It informs future scholars about emerging themes, settings, and opportunities for collaboration in this area by showing the domain's social and intellectual structure.

Originality/Value – Previously, a large number of conceptual and empirical investigations were undertaken internationally across economics, finance, business, management, and consumer behaviour. This study contributes significantly by bringing together different literature on the topic, highlighting credible sources, authors, and documents, and investigating the relationship between digital finance, saving behaviour, and retirement planning.

Keywords – Financial literacy, Investment behaviour, Household finance, Bibliometric analysis

Paper Type – Literature Review

1. INTRODUCTION

To make good financial decisions and manage finances effectively, one must be knowledgeable about finance. This entails the knowledge, expertise, and confidence to comprehend and navigate the complex financial world. Enhancing financial knowledge is not limited to individuals but can also benefit communities and nations' economies (V. S., 2023). When individuals are informed about finance, they are more likely to save for retirement,

invest wisely, and avoid costly debt. Financial knowledge equips individuals to make sound financial decisions, enabling them to control their financial destiny (Olasiuk, 2023). This is because they can be critical thinkers of financial information, comprehend the impacts of different financial products and services, and make choices that align with their personal values and goals.

(FI) Financial Literacy and (IB) Investment Behaviour

In India's fast-evolving financial ecosystem, financial literacy has emerged as a critical skill for navigating an increasingly complex economic environment. With the growing emphasis on digital payments, mutual funds, retirement planning, and insurance, understanding financial concepts is no longer optional. Recognising this, institutions like the Reserve Bank of India (RBI), SEBI, and others have prioritised financial awareness campaigns and policy reforms to promote financial inclusion (RBI, 2020). The global literature on financial literacy has expanded significantly, yet focused research in the Indian context has gained momentum only recently. Foundational studies by Agarwal et al. (2010) and Lusardi and Mitchell (2011) provided global frameworks for measuring financial literacy, which Indian researchers have since adapted to local contexts. Organisations such as the RBI and SEBI have implemented initiatives, such as the (NSFE 2020–2025) National Strategy for Financial Education, sparking scholarly inquiry across various segments of Indian society (Kaur & Arora, 2021). Studies have revealed regional and demographic disparities; Bhushan and Medury (2013) identified gender-based differences in financial knowledge, while Mandell and Klein (2009) demonstrated the influence of early financial education on long-term behaviour—findings also reflected in studies among Indian students (Agarwalla et al., 2015; Sharma & Khare, 2021).

Recent literature increasingly incorporates behavioural economics into the study of financial literacy. For instance, Sinha and Bhatia (2022) investigated the role of financial anxiety, attitudes, and self-control. Despite these advancements, gaps remain in research concerning rural youth, gig workers, and the elderly. Additionally, there is a lack of large-scale, longitudinal studies, and financial literacy levels in India remain suboptimal, particularly among women and youth (NCFE, 2019). As the literature continues to diversify, a structured, analytical overview is necessary to assess the field's development and identify research gaps.

Bibliometric Analysis

With the exponential growth in scholarly publications, bibliometric analysis has become an essential tool for evaluating the structure,

performance, and trajectory of academic research. It employs statistical methods to assess publication trends, citation networks, and thematic patterns (Donthu et al., 2021). Bibliometric techniques have been increasingly used in domains such as finance (Goyal & Kumar, 2021), education (Sharma & Yadav, 2023), and artificial intelligence (Chen et al., 2021), offering insights into the intellectual and collaborative dynamics of research. Rooted in library and information sciences (Broadus, 1987), bibliometrics has evolved into a powerful method for science mapping and knowledge synthesis. Tools such as Bibliometrix (Aria & Cuccurullo, 2017), VOSviewer (Waltman et al., 2010) and CiteSpace have made it easier to see and analyse complex bibliographic data. Citation, co-citation, and co-word analyses help researchers find prominent authors, journals, institutions, and developing research clusters.

In the context of financial literacy and investment behaviour, bibliometric studies remain limited. Existing reviews (Singh & Sharma, 2022; Patel et al., 2023) tend to be thematic or narrative, rather than comprehensive science-mapping approaches. Thus, there is a pressing need for a systematic, data-driven analysis to consolidate fragmented literature and trace intellectual progress. This work intends to fill that gap by doing a bibliometric analysis of 582 scholarly papers from the “Scopus and Web of Science databases” from 2004 to 2024. Using methods such as Bibliometrix and Biblioshiny, the study aims to investigate the intellectual, social, and conceptual structure of research in the subject, identify major contributors and themes, and offer future possibilities for academic and policy research.

The objectives of the study are:

- (1) To find out how individuals' understanding of money and expenditure is changing. and
- (2) To analyse knowledge structure and integrate knowledge.

Research Questions

- (1) What is the cognitive structure of the research community?
- (2) Who are the most important writers and journals in the financial literacy and investment behaviour literature?

(3) What are the investment behaviour and financial literacy collaborative networks?

(4) How has the definition of investment behaviour and financial literacy evolved, and what are the key concerns in recent studies?

The paper will provide us: (a) a map of the growth trajectory of publications; (b) identify key contributing authors, institutions, and countries; (c) analyse keyword co-occurrence and thematic clusters; and (d) assess citation impact and collaborative patterns. By synthesising trends in scientific production, the study contributes to a better knowledge of the research landscape and lays the groundwork for future investigations.

2. RESEARCH METHODOLOGY

The initial phase of this study's analysis is to identify the database, followed by data collection using the

search technique (Fig. 1). The data needed for this investigation were gathered after selecting an appropriate database. The next step was to conduct a search using a suitable set of keywords. After producing the data set and applying the necessary inclusion and exclusion criteria, it is assessed using software tools. Descriptive analysis is carried out on the data sources, documents, and the authors primarily. The data were then reduced using techniques like principal component analysis and multiple correspondence analysis (MCA). Following that, network maps were created to display the data better and highlight its conceptual, intellectual, and social dimensions (Aria & Cuccurullo, 2017).

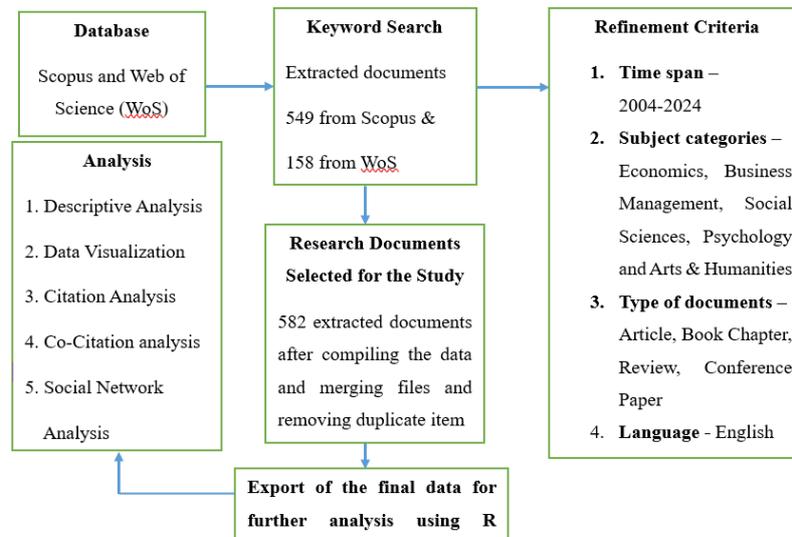


Figure 1. Document selection criteria

Source(s): Author’s own work

Database finalisation

To conduct a bibliometric analysis, the indexed articles in databases must be described systematically. Data is extracted from the “(WoS) Clarivate Analytics-Web of Science and Scopus” databases based on publication coverage, journal categorisation, and database compatibility with R-studio's Bibliometrix program.

Preparing data analysis

As per the software requirements, Scopus and WoS delivered the data in the Microsoft Excel Worksheet (.xlsx) format. On April 8, 2024, the papers were finalised according to the following parameters.

Query search strategy

Keywords: (“Financial literacy” AND (“Financial Behavi*” OR “Invest* Behavi*”)).

Refined by: CATEGORIES WOS: (“Management OR Business OR Economics OR Business Finance”)

AND Document types: (“Article OR Conference Paper OR Book Chapter OR Review”); Languages: “English”; Timespan: “2004 to 2024”; Indexes: “Social Science Citation Index (SSCI)”.

Refined by: CATEGORY SCOPUS: (“Business, Economics, Social Science, Management, Psychology, Art and Humanities”); Document type: (“Review, Article, Conference Paper, Book Chapter”); Time period: “2004 to 2024”; Languages: “English.”

Subject categories selection. The search was refined using categories such as business, management, some social sciences, and finance. 707 items were extracted till this stage.

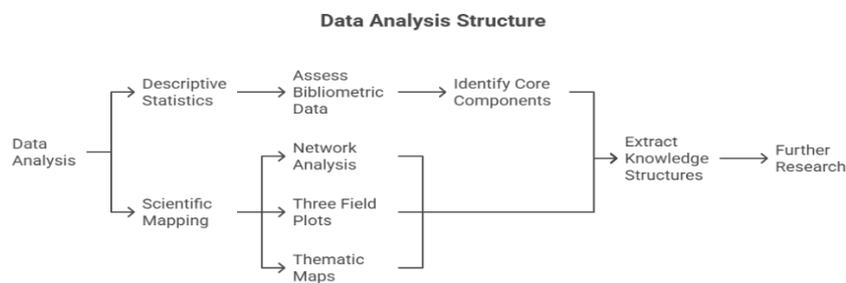
Document types selection. Data is further adjusted to meet the objectives by combining duplicate elements. The 582 items in the nominated data set, comprising chapters, reviews, papers, and articles, were selected in substantial part.

Language selection. The initial shortlisted documents were screened using the “English language” filter to obtain the final dataset of 582 articles. Biblioshiny received information about these documents, such as “title”, “authors”, “abstracts”, and “keywords”, in a standard “Microsoft Excel Worksheet (.xlsx) data format” for further processing. After the data were adjusted for work duplication and format compatibility, 582 documents were finally included in the Bibliometric system (see Figure 1).

Bibliometric tool finalisation

The science mapping approach was chosen for the bibliometric analysis. It is a long-standing study methodology used in information science and libraries to improve the efficacy and efficiency of libraries through statistical and quantitative analysis of scientific publications (Tella & Olabooye, 2014). The Bibliometrix R-package, created in the R programming language by Aria and Cuccurullo, is utilised in this work. The program makes it easy to perform data analysis and visualisation. As previously stated, the majority of bibliometric analyses are difficult to undertake due to access issues caused by commercial software licensing. This requires extensive training for researchers. Bibliometrix, an open-source software, is intended for detailed mapping analysis in the sciences. It can collaborate with other R statistical tools and is constantly evolving. User acceptability is also increasingly significant in the fast-growing fields of this bibliometric analysis: descriptive statistics and network analysis. This study uses Biblioshiny, a web-based tool provided with the Bibliometrix package. Even those who are not familiar with coding can utilise it. Similarly, Aggrawal (2009), Managerial Finance, developed and applied an automation technique for producing machine-readable financial datasets. Science mapping analysis is carried out using the core features of the Bibliometrix software, which are linked to an automated workflow.

3. ANALYSIS OF DATA AND FINDINGS



A flowchart Author’s own work

Descriptive analysis

Data set. Table 1 presents a summary of the data frame for 582 publications, selected following a

query search across both databases, “WoS and Scopus”. The discovered documents have an average citation score of 16.98 and are published in 319 sources, with an annual growth rate of 20.69%.

Table 1. Data set summary

Details	Results
Timespan	2004:2024
Sources (Books, Journals, etc.)	319
Documents	582
Average citations per doc	16.98
Annual Growth Rate %	20.69
(ID) Keywords Plus	624
(DE) Authors Keywords	1261
Authors	1390
Single-authored docs	69

Source(s): Author’s own work

Three-field plots. The relationship between the fields is shown in Figure 2 using Sankey plots, where the component's dimension is proportional to the node's value (Riehmman et al., 2005). The authors are in the middle of the Sankey Plot, the sources are on the left, and the keywords chosen for analysis are on the right. Every one of the ten items

contained familiar terms: “Financial Literacy” (FL), “Financial Behaviour” (FB), “Financial Education” (FE), “Financial Capability” (FC), “Financial Knowledge” (FK), “Financial Inclusion” (FI), “Financial Well-being” (FW), and “Financial Attitude” (FA), as well as their sources and prominent authors.

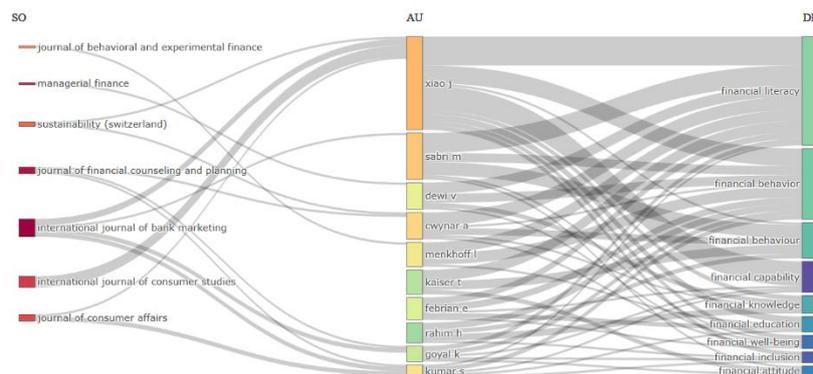


Figure 2. Plot three field

Source(s): Author’s own work

Sources. Scientific output in finance research increased from 2004 to 2024 (see Figure 3). Research on retirement planning and digital finance during the 2008 global financial crisis found a significant increase in volume after 2019, which is likely what drove the increase. In the same time frame, the average annual number of papers cited rose. Figure 4 shows that the majority of the goods were older than 4 years. Publications on this topic were growing steadily, but they were still in their

infancy. The following phases include the creation of a research domain (Low & Siegel, 2019). These include “antecedent, exponential expansion, knowledge consolidation, and fewer publications”. With constant incremental publishing until 2024, when the body of available research was compared to the preceding stage, the concepts of FL, “investment behaviour, saving behaviour, and retirement planning,” were positioned in the growth phase.

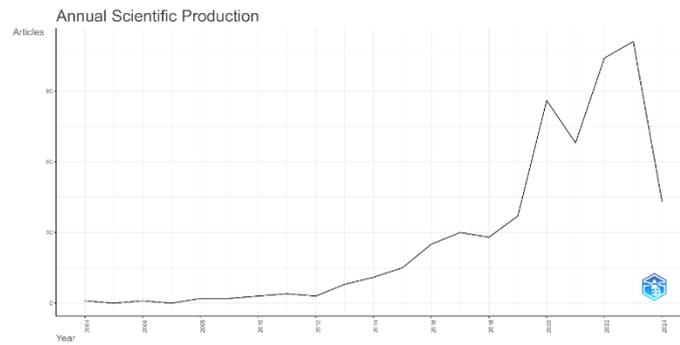


Figure 3. Annual scientific production

Source(s): Author’s own work

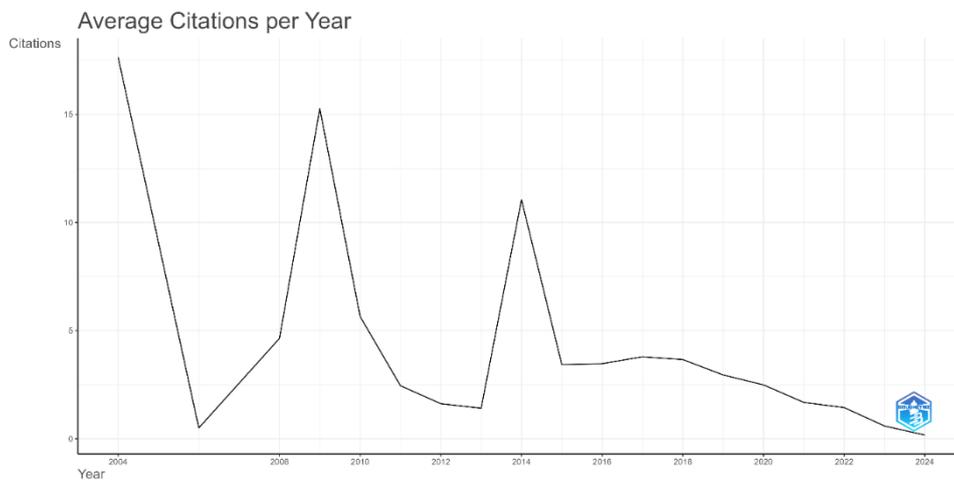


Figure 4. Average article citation per year

Source(s): Figure Author’s own work

Figure-5 shows the top 10 most referred journals indicating the quality of the papers in the field. “International Journal of Bank Marketing” receives the most citations, followed by “Journal of Financial Counselling and Planning and Managerial Finance”,

the most significant source (see figure-5). A closer examination of these publications shows that economics, finance, financial services, consumer and household studies, and the social sciences account for the majority of research on financial literacy and behaviour.

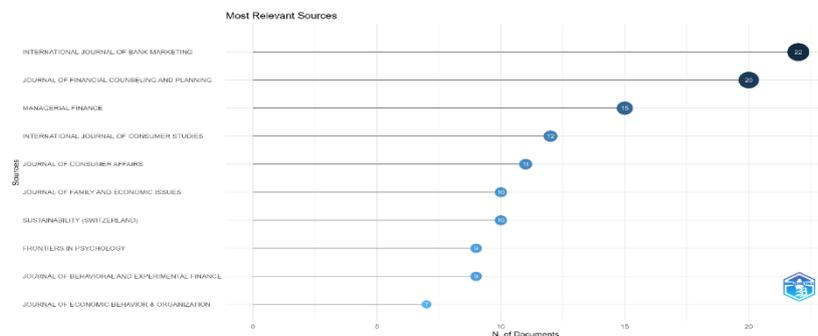


Figure 5. Highly cited sources

Source(s): Author’s own work

According to Tony and Desai (), the “h-index” is the highest value of “n,” where “n” is the number of journals that have published “n” articles with at least “n” citations. The top 10 academic papers in the field, ranked by h-index, are shown in Figure 6. This

statistic uses the productivity and impact of the citations to determine the relative quality of the publication. A journal's contribution to the area is not fully reflected in the quantity of articles or citations it receives. The H-index rating of a journal may better reflect its influence or quality.

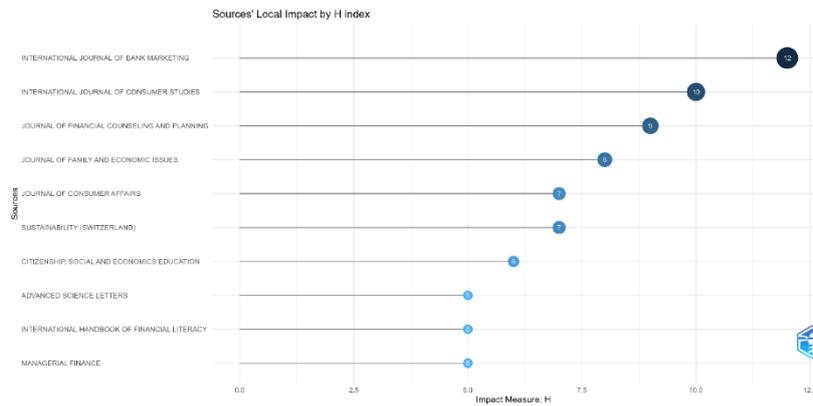


Figure 6. Source H Impact

Source(s): Author’s own work

Utilising “LOESS” (“locally estimated scatterplot smoothing”) to plot the number of publications over time, Figure 7 illustrates the source dynamics of the top 05 journals. According to these figures, starting in 2018, the number of publications across all journals—especially the “International Journal of Bank Marketing”—rose significantly. Other journals have also been published more frequently in recent years, especially since 2016. This can

indicate the beginning of a multidisciplinary field of study. Journals that focus on a particular subject, like economics or finance, or that conduct multidisciplinary research in areas such as marketing and consumer studies, are most frequently cited. As demonstrated by Low & Siegel (2019), a larger number of publications in the research area suggests that it is multidisciplinary and encompasses a diverse range of study topics.

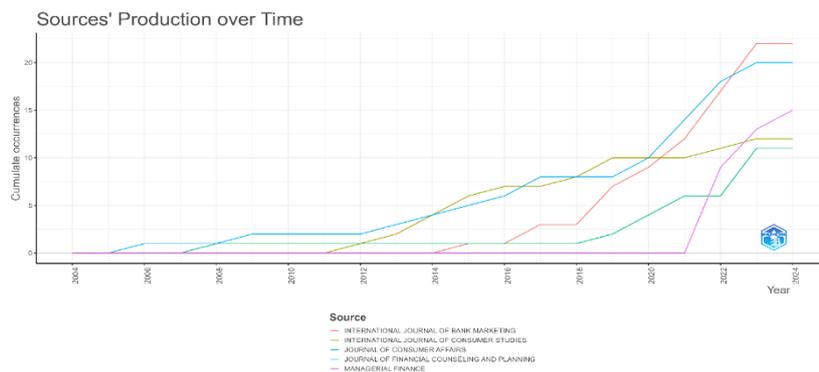


Figure 7. Source Dynamics

Source(s): Author’s own work

Authors. Xiao J, Sarbi M, Kumar S, Cwynar A, and Menkhoff L are the authors with the most FL-related publications and studies (Figure 8). Author “Xiao J” has published over 12 studies in the field. The

authors with the highest “H-index” were “Xiao J” and “Sabri M” (Figure 9). They produced crucial work. These articles are significant for future study on this topic.

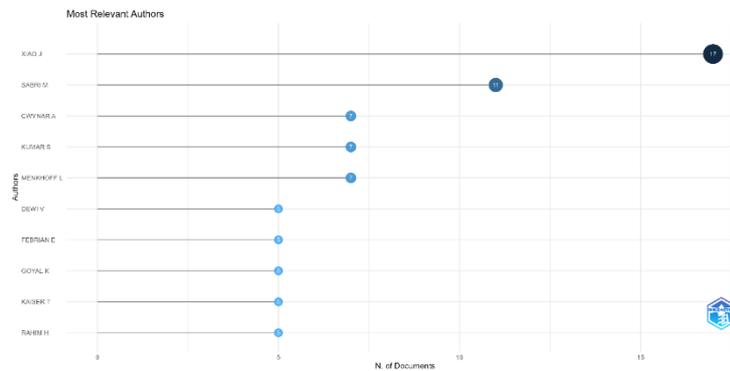


Figure 8. Most relevant authors

Source(s): Author’s own work

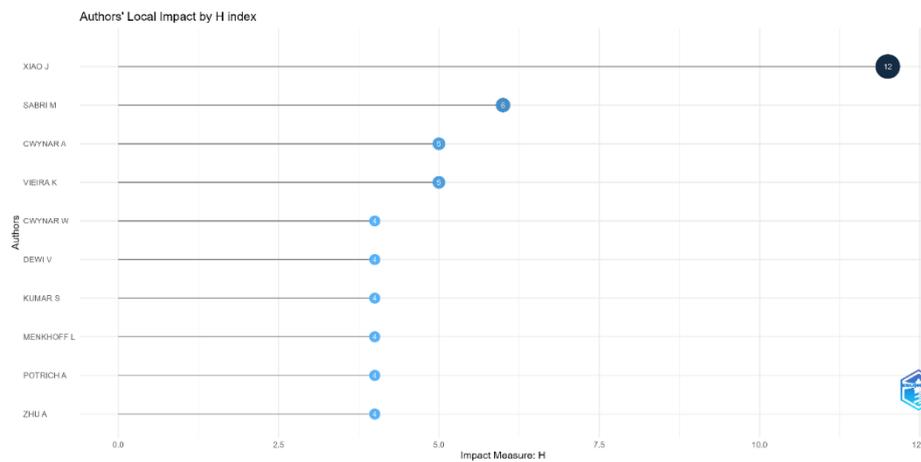


Figure 9. Author Impact

Source(s): Author’s own work

Contribution country-wise, developed nations contributed the most to the literature on the topic, as Table 2 demonstrates. In terms of publications, the United States led the field, with India trailing far behind. The number of citations received by the articles equals the number of publications in the area. Research is concentrated in the United States, as evidenced by the fact that the country accounted for almost 70% of all citations in the field. The

Netherlands, Germany, and India are at the bottom of the rankings, with all three scoring low on relevant outputs. This could symbolise the gradual progress of emerging countries towards high-quality research in this domain. The United States also receives the most citations globally, followed by the Netherlands, Germany, and India, according to bibliometric statistics. There were fewer citations for these nations.

Table 2. Productivity and citations- Top 10 countries

Scientific Production of Countries		Highly Cited Countries	
Nation	F	Nation	TC
USA	168	USA	3218
INDIA	77	NETHERLANDS	1034
INDONESIA	64	GERMANY	786
GERMANY	57	INDIA	641
MALAYSIA	47	MALAYSIA	409
CHINA	37	BRAZIL	262

NETHERLANDS	24	FRANCE	221
SOUTH AFRICA	22	CHINA	218
UK	20	SWEDEN	204
ITALY	17	AUSTRALIA	193

Source(s): Author’s own work

Cited Documents. Figure 10 shows the top 10 contributors in the area. All of these articles have acquired more than 150 citations. Fernandes D, Joo

Sh, Mandell L, and Xiao JJ made essential contributions to the field by writing the top four articles

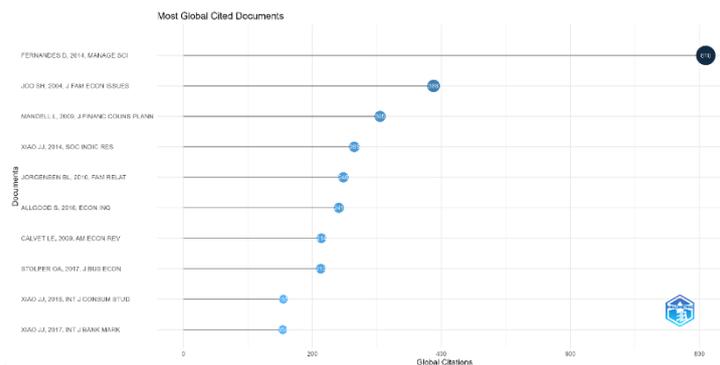


Figure 10. Highest cited documents

Source(s): Author’s own work

Keywords. “Financial literacy” was used 412 times, preceding “behaviour,” “knowledge,” “education,” “attitude,” “well-being,” “inclusion,” “capability,” and “household finance,” according to an analysis of the frequency of keywords used in the articles. The size of the word cloud in Figure 11 gives a visual representation of the frequency of words in the manuscript. It can act as a stand-in for the word's literary significance. In addition to these, psychological or behavioural factors like “overconfidence, risk-taking, security, self-control,

attitude, and perceptions” were found to be significant, as were economic or financial factors like income, consumption, savings, credit, and retirement.

The frequency has increased dramatically after 2016. This word cloud indicates that a range of financial literacy antecedents, including attitudes and education, were examined in this study. Most of them stressed the need for financial literacy in making decisions about credit, money, retirement, and investments.



Figure 11. Word Cloud

Source(s): Author’s own work

Trending topics. Plotting frequency of occurrence versus publication years on the horizontal axis, Figure 12 shows the growth of the most popular

titles on a two-dimensional scale. An intriguing pattern emerged from an analysis of the issues from the past six years. In 2018 and 2019, “youth,

financial contentment, and savings” were hot issues. Indicating a shift in focus from financial decisions to behaviours and household issues, the focus shifted from 2019 to 2022 to “retirement, investing, job

satisfaction, economic development, and decision-making”. Recent trends in literacy, sustainability, and financial hardship are displayed.

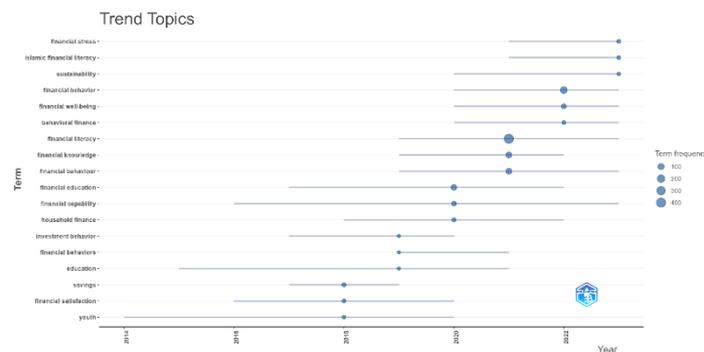


Figure 12. Trend Topics

Source(s): Author’s own work

Conceptual structure

The conceptual framework illustrates the relationships between themes, subjects, and trends through co-occurrence networks or co-word analysis. It is the sole method that utilises the content of the study paper. According to Li et al. (2018), the research topic is therefore a concept, a term that is frequently used, or a theme that emerges throughout the network. The Bibliometrix application was used in conjunction with MCA to develop this conceptual framework for the research field. (Greenacre and Blasius, 2006) Multivariate nominal data can be examined both graphically and quantitatively using MCA. The 50-node keyword co-occurrence network seen in Figure 13 was created for the “keyword plus” unit of study using Louvain's clustering technique.

Default association normalisation parameters and automatic layout were used to generate this network. Using phrases that appeared often in document titles and reference lists, a computer program produced the words that were designated as “Keyword Plus.” (Garfield & Sher, 1993) favoured due to their superior ability to convey the content of documents. Red, blue, green, and purple represent the three clusters into which the data is separated in Figure 14. The purple cluster shows domination by the financial system and the young population. At the same time, people, economics, and articles dominate the red cluster, and the blue cluster includes financial literacy, education, and finance. Green represents financial literacy through education, knowledge, and many other factors.



Figure 13. Co- word or co-occurrence network

Source(s): Author’s own work

Thematic map. Finding keyword clusters that create themes within the study topic is accomplished through co-word analysis. According to centre and density, these themes can be grouped into four quadrants on a two-dimensional graph, with centre and density as the two dimensions. A bubble on the map represents each theme. The terms “human economics articles,” “financial literacy,” “education,” and “knowledge” are represented by the bubbles in Figure 14. The field is driven by the

themes in the upper-right quadrant, “human economics articles” and “financial literacy,” which also garner the most attention. The niche themes of identity, propensity, and scale are shown in the upper left quadrant. These themes have strong internal connections but weak external relations and are of little significance. The “financial system” and “young population” concepts in the lower-left quadrant are underdeveloped and have little significance. It demonstrates both strengthening and decreasing relationships.

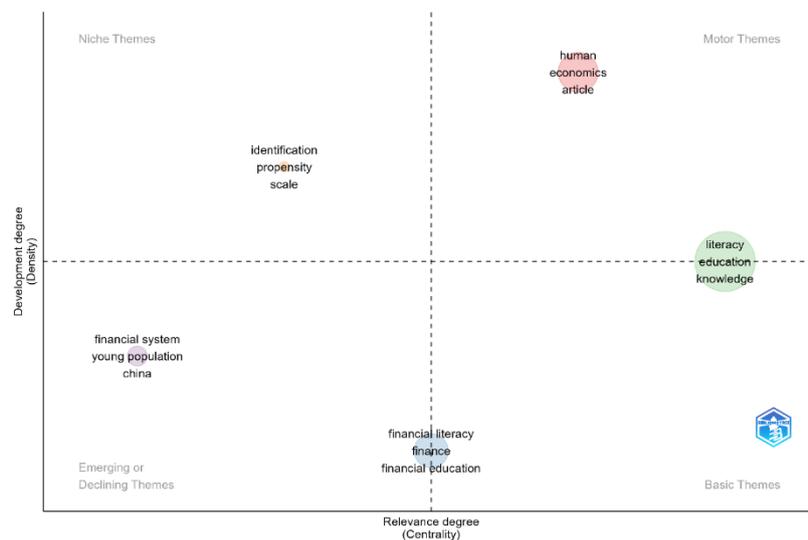


Figure 14. Thematic map

Source(s): Author’s own work

Thematic evolution. By splitting the entire period into several time slices, the field of thematic evolution examines the region's overall development. (Della Corte et al., 2019) The centrality and density of field and keyword components guide the evolution of the study field. With cut-off dates in 2020 and 2022 and a minimum cluster occurrence of five terms in the keyword plus field, theme evolution was used in this study across three time slices (fig. 15). The appearance of broad and fundamental concepts is shown in the three-field plot fig. 15. The themes’ development may be seen by carefully examining the connections among them, which are separated into three time periods

(2004–2020, 2021–2022, and 2023–2024). During the first phase, “financial decision-making, debt literacy, financial literacy, and savings” all become prominent themes and form the focus of development. In the second era, a development theme was formed by combining “personal finance, investor behaviour, household finance, and self-efficacy” into a single subject. This acknowledges the growing significance and applicability of “financial literacy and behaviour”. Development is a major issue in the second time period, underscoring its intimate connection to education and suggesting its use in behaviour-modifying therapies.

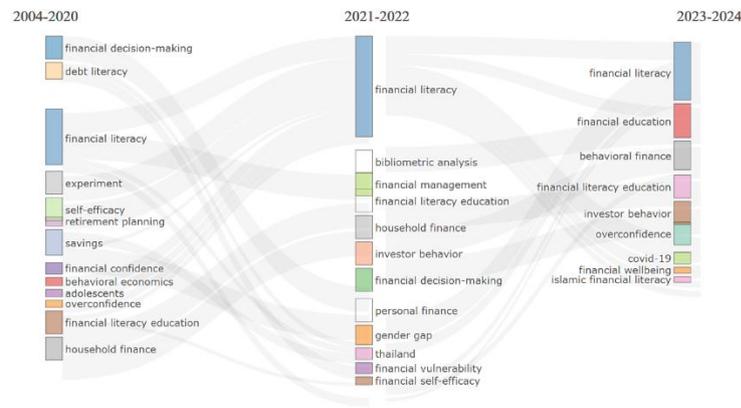


Figure 15. Thematic evaluation

Source(s): Author’s own work

Future Research Directions

The present study examines how research on financial literacy and investment behaviour has progressed and evolved, yet numerous avenues remain open for further study.

1. Further research can broaden the scope by including other databases like Google Scholar, Dimensions, or PubMed and by using more search words to cover a wider body of literature.
2. For more in-depth thematic and conceptual examination, bibliometric approaches need to be supplemented by qualitative approaches, such as systematic review of the literature, meta-analysis, and manual content analysis of full texts. Together, these would enable the identification of shared theoretical frameworks and the synthesis of disciplines.
3. Furthermore, exploring connections between financial literacy and emerging areas—retirement planning, online business, cybercrime, and behavioural finance—could potentially introduce fresh perspectives and applications.
4. Lastly, closing the gap between business practice and academic research is still a necessity. Future research must investigate how academic research is impacting actual financial literacy programs and how business knowledge must be incorporated into

academic research to advance both theory and application.

4. PRACTICAL IMPLICATIONS

By scientifically mapping 582 scholarly publications from 2004 to 2024, this research offers a robust foundation for understanding the evolution, intellectual structure, and emerging themes in the field.

For academic researchers, the findings highlight influential journals, authors, and countries, guiding future research collaboration, publication strategies, and topic selection. The thematic and trend analysis reveals key areas such as behavioural economics, digital finance, financial well-being, and retirement planning, offering a roadmap for addressing underexplored issues, such as financial literacy among rural youth, women, and gig economy workers.

For educators and curriculum developers, the keyword clusters and conceptual structures derived from the analysis can help design evidence-based financial education content. The insights from co-word analysis and thematic evolution underscore the need to integrate behavioural and psychological aspects of finance into financial literacy programs.

For policymakers and regulators, especially in developing economies like India, this study provides an evidence-based understanding of the global and

national research trajectories. It can inform the design of more targeted interventions and national strategies, such as the National Strategy for Financial Education (NSFE), by highlighting which demographic groups or behavioural themes require more policy attention.

The study provides financial institutions and practitioners with insight into how emerging themes, such as digital finance, savings behaviour, and financial inclusion, are shaping the landscape of financial decision-making. Mapping high-impact sources and collaboration networks also helps identify credible knowledge hubs for designing customer-centric, literacy-driven financial products and services.

Overall, this bibliometric analysis acts as a comprehensive reference point for all stakeholders, ensuring that future efforts in financial literacy and investment behaviour are more data-driven, inclusive, and strategically aligned with global research and practice trends.

5. CONCLUSION

This report provides a concise account of how the study of financial literacy and investment behaviour has evolved from 2004 to 2024. The research examines 582 academic articles from the Scopus and Web of Science databases. It makes us aware of the key concepts and social factors that define this mixed topic. Using Bibliometrix and its web interface, Biblioshiny, the research identifies key journals, leading authors, productive countries, patterns of co-authorship, and emerging topics—providing a clearer perspective on how the study has evolved.

The findings show that the field has developed over time. It started with primary research on demographic and economic dimensions and moved on to more focused research on behaviour and psychology. Major topics such as digital finance, retirement, savings behaviour, and financial well-being have come to the forefront more recently. Development in terms of themes and language indicates the growing complexity and convergence of multiple disciplines, connecting economics, psychology, education, and public policy.

The study shows that developed countries, especially the U.S., have a powerful impact on research. It also shows that developing countries, such as India, are increasingly interested in research. While there are still areas left to research, such as rural youth, gig economy workers, and women, who are often overlooked, the trends appear positive for future research.

Briefly, this bibliometric mapping provides a preliminary reference for researchers, educators, policymakers, and practitioners. It indicates the knowledge area and provides valuable insights to enhance financial literacy programs, curriculum development, and academic collaboration. As the international financial system continues to evolve, this research paves the way for more targeted, inclusive, and impactful research in the future.

The discipline has developed incrementally in its knowledge of the behavioural and psychological determinants that drive financial knowledge and investment behaviour. To gain a complete picture of this discipline, one must consider many of the field's determinants, including cognitive ability, social and demographic data, and economic choice environments. These choices include saving, investing, retirement planning, credit, and insurance. Additional careful consideration of the specific reasons for each of these financial choices will strengthen the discipline. New research should also attempt to identify common themes and extraneous determinants—such as education, risk attitudes, and money attitudes—that underlie individual behaviours. Examination of how these determinants influence one another, as well as their potential impact, will provide a clearer, more complete picture of the financial choice process and enable financial literacy research as an important discipline that brings together several disciplines and informs policy.

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