



Investor Behavior and Sustainable Finance: A Bibliometric and Thematic Analysis

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ABSTRACT

This study explores the intersection of investor psychology and sustainable finance through a bibliometric and thematic analysis of 325 documents published between 2010 and 2025, retrieved from the Scopus database. Using Biblioshiny and VOSviewer, the analysis examines publication trends, leading contributors, and the conceptual development of the field. Results show a sharp increase in research activity after 2015, reflecting the growing importance of Environmental, Social, and Governance (ESG) considerations in investment decisions. Keyword co-occurrence and thematic mapping reveal that ESG, sustainable finance, decision-making, and investor behavior form the core of the literature, while themes such as climate finance and financial markets are emerging. Thematic evolution further highlights a shift from broad governance and investment issues to more behaviourally driven and sustainability-focused research. The study contributes by systematizing fragmented knowledge, identifying research gaps, and offering insights for investors and policymakers, particularly relevant to India's \$5 trillion economy vision.



1. Introduction

In recent years, the global financial landscape has been undergoing a paradigm shift driven by the growing emphasis on sustainability, climate change, and responsible investment practices. Environmental challenges such as global warming, biodiversity loss, and natural resource depletion, combined with socio-economic disruptions like the COVID-19 pandemic, have accelerated the demand for a financial system that not only delivers economic returns but also supports social equity and environmental resilience. Against this backdrop, sustainable finance has emerged as a crucial mechanism to align investment flows with long-term developmental and environmental goals. Sustainable finance broadly refers to investment and financial activities that integrate Environmental, Social, and Governance (ESG) considerations into decision-making processes, thereby balancing profitability with broader societal well-being.

At the core of sustainable finance lies the investor, whose preferences, attitudes, and psychological orientations shape the trajectory of capital allocation. Unlike traditional finance, which assumes rationality, the field of behavioral finance acknowledges that cognitive biases, emotions, and social influences play a critical role in investment decisions. In the context of sustainability, this psychological dimension becomes even more important. For example, research shows that investors may be willing to accept slightly lower returns in exchange for supporting socially responsible or environmentally friendly projects. This highlights the role of investor psychology—the interplay of values, perceptions, and decision-making heuristics—in driving the growth of sustainable investments. Understanding these behavioral underpinnings is essential not only for academic inquiry but also for policymakers, asset managers, and regulators seeking to scale up sustainable finance.

Globally, sustainable finance has been studied through various lenses, including ESG integration, Socially Responsible Investing (SRI), green bonds, and ethical investment. While earlier studies primarily focused on financial performance and portfolio diversification, there has been a noticeable shift towards examining behavioral aspects—such as risk tolerance, ethical considerations, and social identity—that influence investors' choices. This emerging body of literature points to a deeper convergence between investor psychology and sustainability-oriented finance. However, the field remains fragmented, with multiple terminologies (e.g., sustainable finance, responsible investment, ethical investment, green finance) and varied methodological approaches. A structured review of how these concepts interrelate is therefore necessary to provide clarity and direction for future research.



Bibliometric analysis offers a rigorous methodology to address this need. By analyzing patterns of publications, citations, and keyword co-occurrences, bibliometric techniques enable scholars to map the intellectual and conceptual structure of a field, identify its core themes, and trace its evolution over time. Applying this approach to sustainable finance and investor psychology not only helps systematize existing knowledge but also uncovers underexplored areas that require scholarly attention. While prior reviews have examined sustainable finance in terms of ESG performance, green instruments, or corporate governance, relatively few have focused explicitly on the intersection of investor psychology and sustainability. To the best of our knowledge, no bibliometric study has systematically mapped this domain using tools such as VOSviewer and Biblioshiny.

This study seeks to fill that gap by conducting a bibliometric and thematic analysis of the literature on investor psychology and sustainable finance. Using 325 documents published between 2010 and 2025 retrieved from the Scopus database, the analysis investigates publication trends, influential authors, countries, and institutions, as well as the conceptual and thematic evolution of the field. By highlighting the behavioral dimension of sustainable investment, the study contributes to a deeper understanding of how psychology shapes financial decisions in the era of sustainability.

The relevance of this research is particularly significant for emerging economies like India, which has set an ambitious goal of becoming a \$5 trillion economy. Achieving this target requires massive capital mobilization into infrastructure, renewable energy, green technologies, and inclusive development initiatives. Sustainable finance offers a pathway to align investor resources with these priorities, while investor psychology determines the extent to which individuals and institutions are willing to commit to ESG-driven investments. By mapping global knowledge in this area, the present study provides insights that can inform India's policies, investor education initiatives, and market strategies, thereby contributing to the broader discourse on how sustainable finance can serve as an engine for long-term economic growth.

While sustainable finance and investor psychology have attracted growing attention, the literature remains scattered across different themes such as ESG integration, behavioral finance, and responsible investing. A structured bibliometric study is therefore needed to bring together these fragmented strands of research, highlight dominant patterns, and identify underexplored areas. By analyzing publications from 2010 to 2025, this study aims to provide a comprehensive overview of the intellectual and thematic landscape of the field. To achieve this, the following research questions and objectives have been formulated.



RQ1 : How has research on investor psychology and sustainable finance grown from 2010 to 2025?

RQ2: Which countries, authors, and journals contribute most to this field?

RQ3: What are the main themes and keywords studied in this area?

RQ4: How have these themes changed over time?

RQ5: What gaps remain, and what future directions can be suggested?

2. Research Objectives

1. To study the publication trends in investor psychology and sustainable finance.
2. To identify key contributors such as authors, countries, and journals.
3. To map the main themes and concepts using bibliometric tools.
4. To trace how research themes have evolved over time.
5. To suggest gaps and future research directions, with relevance to India's growth.

3. Research Methodology

The bibliometric data for this study were extracted from the Scopus database, recognized for its wide coverage of peer-reviewed academic literature across disciplines. To ensure relevance to the topic of investor psychology and sustainable finance, a keyword-based search strategy was employed using Boolean operators and field filters. The keywords included terms such as:

("Investor Psychology" OR "Behavioral Finance" OR "Investment Decision Making" OR "Investor Behaviour") AND ("Sustainable Finance" OR "ESG" OR "Socially Responsible Investing" OR "SRI" OR "Green Investment").

The initial keyword search with a time span of 2010-25 gave 500 documents. In the second stage, the search was limited to only journal articles and reviews that were published in the English language. The subject areas were limited to Economics, Econometrics and Finance, Business, Management and Accounting, Social Sciences, Arts and Humanities, Psychology, and Multidisciplinary. After applying filters and eliminating duplicates, a total of 325 valid documents were selected for analysis. The



bibliographic metadata, such as authors, titles, keywords, affiliations, citations, etc., were exported in CSV format for compatibility with bibliometric software.

The tools used for analysis included VOS viewer for keyword co-occurrence and network visualization, and Biblioshiny (Bibliometrix in R) for thematic evolution, descriptive analysis, and thematic mapping.

4. Analysis and Results

4.1. Descriptive Analysis

The bibliometric dataset includes 325 documents published from 2010 to 2025, collected from the Scopus database using specific keywords related to investor psychology and sustainable finance. The yearly publication rate shows a strong upward trend with a compound annual growth rate of 25.26%, indicating rising scholarly interest in this interdisciplinary area. These papers are distributed across 177 journals, highlighting the topic's broad and interdisciplinary nature. Analysis of authorship reveals 848 unique contributors, with an average of 2.85 co-authors per paper and 44 single-authored works, pointing to a collaborative research environment. Additionally, 28% of the publications involve international co-authorship, highlighting the global academic engagement and cross-border relevance of research on sustainable finance and investor behavior. Keyword analysis uncovered 1,020 unique author keywords, reflecting the field's thematic diversity and conceptual richness. These keywords offer a rich landscape for thematic mapping and future topic clustering. The average age of the documents is 2.9 years, suggesting that the literature is relatively recent, dynamic, and rapidly evolving, while the average citations per document are 17.84, demonstrating moderate scholarly impact and increasing influence of this emerging field.

Table 1: Descriptive Analysis

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2010:2025
Sources (Journals, Books, etc)	177
Documents	325
Annual Growth Rate %	25.26
Document Average Age	2.9
Average citations per doc	17.84



DOCUMENT CONTENTS	
Keywords Plus (ID)	363
Author's Keywords (DE)	1020
AUTHORS	
Authors	848
Authors of single-authored docs	44
AUTHORS COLLABORATION	
Single-authored docs	46
Co-Authors per Doc	2.85
International co-authorships %	28
DOCUMENT TYPES	
Article	309
Review	16

Source: Compiled from Scopus using Biblioshiny

4.2. Annual Scientific Production

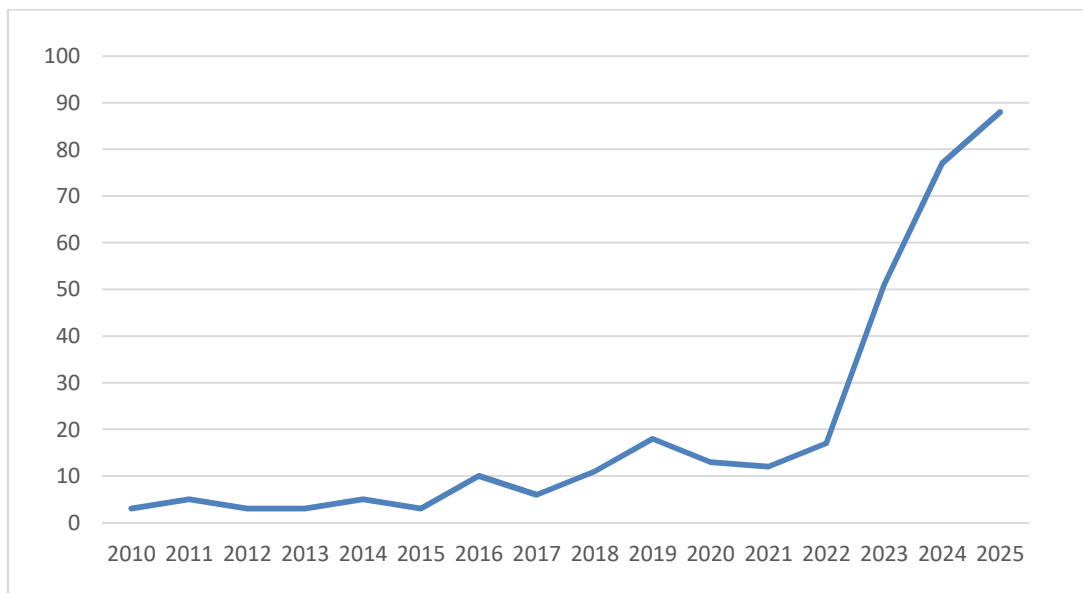


Figure 1: Publication Trend from 2010 to 2025 (Source: Scopus database)

Figure 1 shows the number of research papers published each year on investor psychology and sustainable finance from 2010 to 2025. From 2010 to 2016, very few papers were published, showing limited interest in the topic. A small rise can be seen between 2017 and 2019. However, after 2022, there

is a sharp increase in publications, with the highest number in 2025. This rise shows that researchers are now paying more attention to how psychological factors influence sustainable investment decisions.

4.3. Threefold Plot

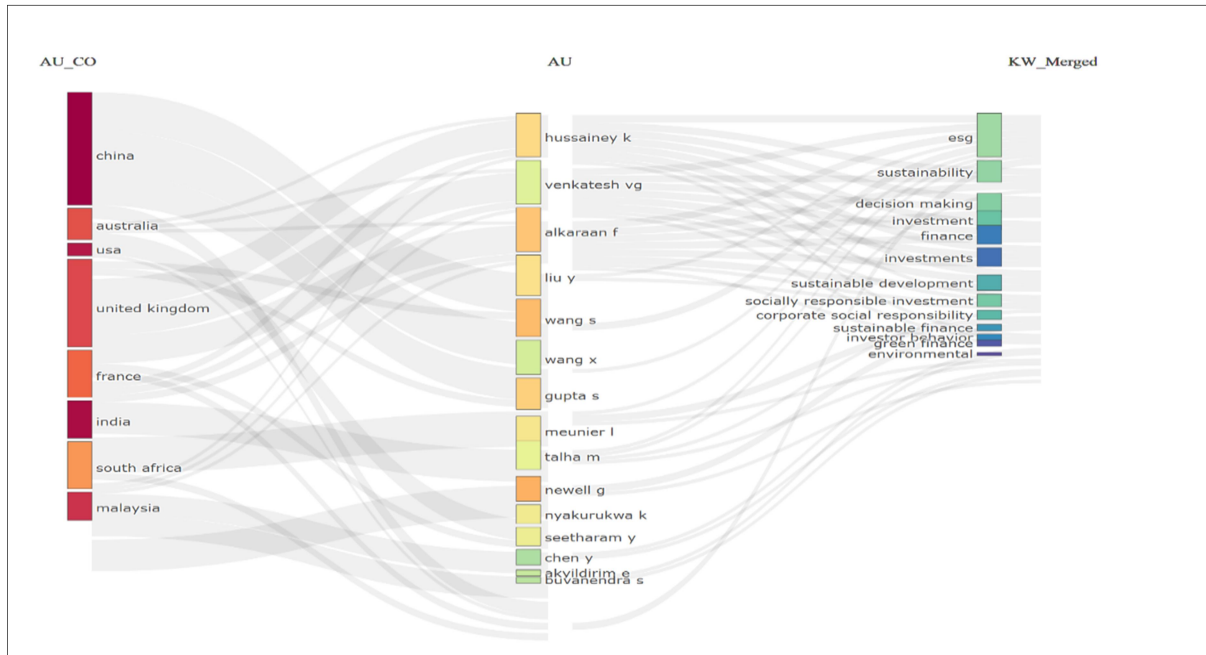


Figure 2: Three-Field Plot: Country–Author–Keyword Linkages

The three-field plot illustrates the connections among countries, authors, and research themes in investor psychology and sustainable finance. Leading countries include China, USA, UK, France, India, Australia, South Africa, and Malaysia. Influential authors such as Hussainey K, Venkatesh VG, Alkaraan F, Liu Y, and Wang S are central to advancing the field. The analysis of keywords reveals core themes like ESG, sustainability, decision making, investment, sustainable development, and socially responsible investment. The plot demonstrates that while research spans various countries, it consistently focuses on themes like ESG and sustainable finance, driven by a few prominent authors.

5. Conceptual Structure

5.1. Keyword Co-occurrence

The VOSviewer keyword map shows the main themes linking investor psychology and sustainable finance. The most common keywords are ESG, sustainability, socially responsible investment, investor behavior, and behavioral finance. These keywords are closely connected, showing that research mainly focuses on how psychological factors affect investment decisions in sustainable finance.

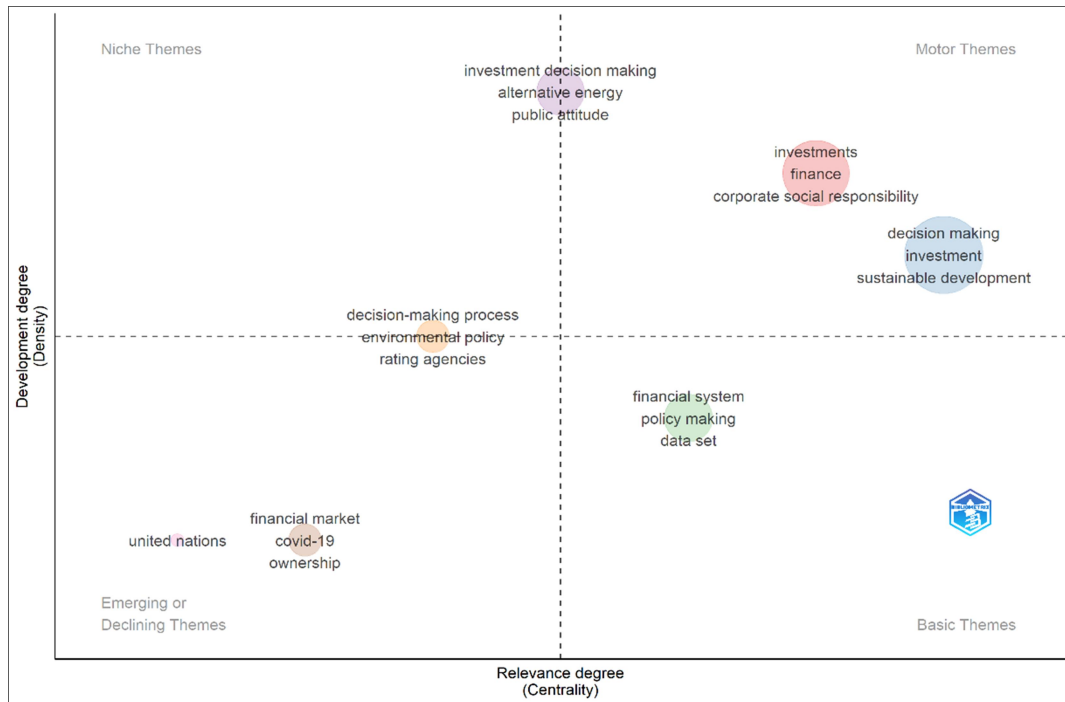


Figure 4: Conceptual Thematic Map (Source: Biblioshiny)

The thematic map shows that investments, finance, corporate social responsibility, decision making, and sustainable development are the main focus areas driving research in investor psychology and sustainable finance. Topics such as investment decision-making, alternative energy, and public attitudes are more specialized but less central. Financial system and policy making act as supporting themes, while areas such as Covid-19, financial markets, and United Nations appear as emerging or declining topics.

Thematic Evolution

Thematic evolution shows continuity in decision-making while highlighting the growing integration of ESG and financial markets, linking sustainability with investor psychology.

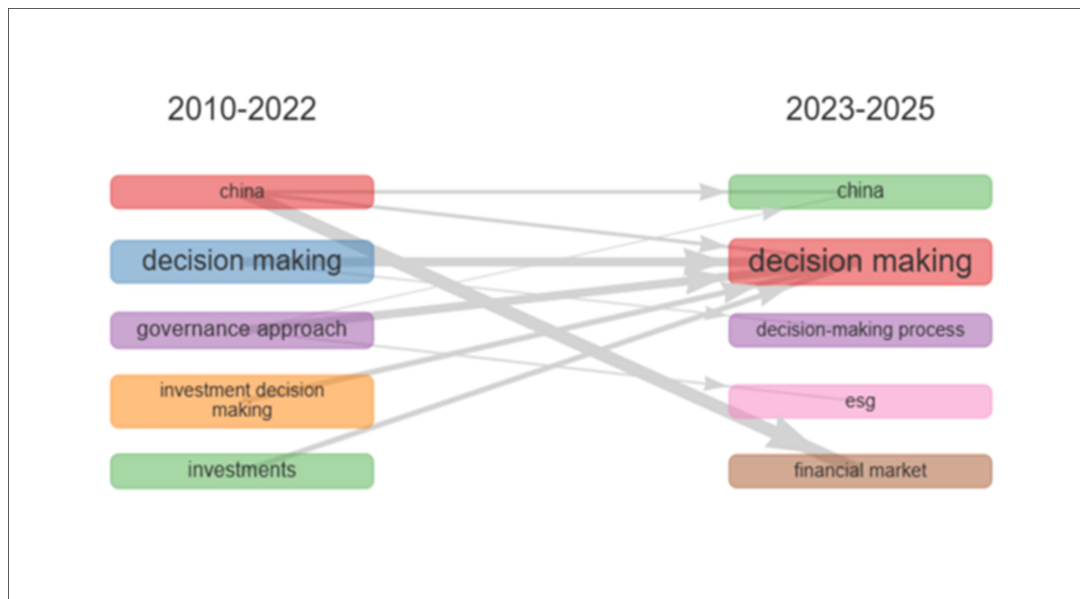


Figure 5: Thematic evolution over the period (visualised using Biblioshiny)

During 2010–2022, themes such as decision making, governance approach, investment decision making, and investments dominated the field, reflecting a general exploration of how investors and institutions approach financial and sustainable choices. In the 2023–2025 period, these themes have evolved into decision-making processes, ESG, and financial markets, indicating a shift toward applied and behaviourally driven aspects of sustainable finance. The persistence of decision-making across both time slices shows that investor psychology continues to be at the core of this research domain. At the same time, the growing emphasis on ESG and financial markets reflects how sustainability factors are becoming integral to investment behavior and strategies. The recurring presence of China further underlines its leading role in shaping global sustainability research. Overall, this evolution suggests that the field is moving from traditional financial decision frameworks toward integrating psychological, sustainability, and ESG considerations in investment behavior.

Discussion

The analysis of 325 documents published between 2010 and 2025 shows that research on investor psychology and sustainable finance has grown steadily, especially after 2015, reflecting the rising importance of ESG and behavioral aspects in investment decisions. The three-field plot highlights that developed countries lead the field, while emerging economies like India are gradually increasing their presence, opening space for more region-specific studies.



The keyword co-occurrence results indicate that ESG, investor behavior, sustainable finance, and socially responsible investment are the core themes of this research. The thematic map shows that ESG and decision-making are well-established areas, while new themes such as climate finance and financial markets are emerging. The thematic evolution further suggests that research has shifted from broad investment and governance issues toward more behaviourally driven and sustainability-focused topics in recent years.

These findings imply that investor psychology is central to understanding the future of sustainable finance. For India, which is working toward its \$5 trillion economy target, this means that mobilizing capital into green and responsible investments will require not only financial innovations but also policies that address investor attitudes, motivations, and behavioral patterns.

Conclusion

This study mapped the intellectual and thematic structure of research on investor psychology and sustainable finance using bibliometric methods. The results show a steady rise in publications since 2015, with ESG, investor behavior, and decision-making emerging as dominant themes. Thematic evolution highlights a clear shift from general investment and governance issues to sustainability-oriented and psychology-driven research. These findings contribute by systematizing fragmented knowledge and pointing to new directions, such as climate finance and behavioral aspects of ESG investing. For India, the insights are particularly relevant in the context of its \$5 trillion economy goal, as attracting capital into sustainable projects will depend not only on financial instruments but also on understanding investor psychology. While this study is limited to Scopus data and selected keywords, it provides a foundation for future research that can include multiple databases, longitudinal case studies, and a deeper focus on India-specific trends.

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