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Unveiling the Investor Mindset: A Systematic Review of Qualitative Evidence in ESG-Driven and Tech-Enabled Real Estate

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Abstract

Purpose – This study aims to systematically synthesize qualitative insights into how investors perceive risk, construct value, and make investment decisions in sustainable and technology-enabled property markets. It responds to the growing need to understand investor behavior at the intersection of ESG imperatives and digital innovation.

Design/methodology/approach – A systematic literature review (SLR) was conducted following the PRISMA protocol and PICOS framework, focusing exclusively on qualitative studies published between 2018 and 2025. Eighty-six peer-reviewed open-access articles were analyzed using thematic synthesis and bibliometric mapping through VOSviewer.

Findings – The review reveals three dominant narratives: (1) a recalibration of investor risk perception in light of ESG integration and climate pressures, (2) an evolving construction of investment value shaped by green certifications and PropTech tools such as blockchain and AI, and (3) decision-making processes influenced by cognitive heuristics, digital literacy, and socio-cultural context. Keyword co-occurrence and citation analyses further highlight the field's interdisciplinary nature - connecting behavioral finance, real estate, technology, and sustainability.

Practical implications – The findings offer actionable insights for developers, fund managers, policymakers, and PropTech providers. Embedding ESG transparency and innovative functionalities into property products can enhance investor confidence. Regulatory bodies can improve investment outcomes by aligning disclosure standards with investor perception dynamics.

Originality/value – This is the first SLR to map qualitative research on investor behavior in the context of sustainable and digitally transformed real estate. It contributes a novel conceptual framework, identifies research gaps, and proposes future directions for integrating behavioral, technological, and sustainability perspectives into property investment strategies.

Keywords: Sustainable property; PropTech; investor behavior; ESG; real estate innovation

Subject classification codes: include these here if the journal requires them

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Introduction

The real estate investment landscape is transforming significantly, driven by sustainability imperatives and technological advancements. Investors increasingly consider environmental, social, and governance (ESG) factors alongside traditional financial metrics when making investment decisions. Simultaneously, integrating technologies such as PropTech, blockchain, and artificial intelligence is reshaping how properties are developed, managed, and transacted (Shunmugasundaram & Sinha, 2024).

This convergence of sustainability and technology presents both opportunities and challenges for investors. On the one hand, sustainable and tech-enabled properties offer the potential for enhanced returns, operational efficiencies, and alignment with societal values. On the other hand, the complexity and novelty of these investments introduce new dimensions of risk and uncertainty, necessitating a deeper understanding of investor behavior in this evolving context (Richards et al., 2025).

Despite the growing prominence of sustainable and tech-enabled real estate, there remains a paucity of research exploring how investors perceive and navigate these markets. Traditional investment theories often assume rational decision-making, yet behavioral finance literature suggests that cognitive biases and heuristics significantly influence investor behavior (Shunmugasundaram & Sinha, 2024). In the context of sustainable and technologically advanced properties, these behavioral factors may play an even more pronounced role, given the relative novelty and complexity of such investments.

Moreover, existing studies focus on quantitative analyses, leaving a gap in qualitative insights that capture investors' nuanced perceptions, motivations, and decision-making processes in these markets. Understanding these qualitative dimensions is crucial for stakeholders aiming to promote sustainable investment practices and develop technologies that align with investor needs and expectations (Richards et al., 2025).

This systematic literature review (SLR) aims to synthesize qualitative research on investor behavior in sustainable and tech-enabled property markets. By consolidating qualitative insights, this SLR contributes a more comprehensive understanding of investor behavior in emerging real estate markets characterized by sustainability and technological innovation. The findings can inform policymakers, developers, and technology providers seeking to foster investment in sustainable and tech-enabled properties. Additionally, the study identifies areas for future research, highlighting the need for interdisciplinary approaches that integrate behavioral finance, sustainability studies, and technology management.

Problem Statement

Despite the growing prominence of sustainable and tech-enabled real estate, there remains a paucity of research exploring how investors perceive and navigate these markets. Traditional investment theories often assume rational decision-making; however, behavioral finance literature suggests that cognitive biases and heuristics significantly influence investor behavior (Shunmugasundaram & Sinha, 2024). In the context of sustainable and technologically advanced properties, these behavioral factors may play an even more pronounced role, given the relative novelty and complexity of such investments.

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Integrating technologies such as augmented reality (AR) and virtual reality (VR) into the real estate sector has introduced new variables influencing investment decisions. These technologies offer immersive experiences that can alter investor perceptions and engagement with properties, yet the psychological impact of such tools on decision-making remains underexplored (Deep et al., 2025).

Furthermore, the emergence of PropTech has reshaped traditional real estate operations, introducing digital platforms and data-driven decision-making processes. While these innovations promise efficiency and transparency, they also add layers of complexity that may affect investor confidence and behavior (Danivska, 2024).

Behavioral biases such as overconfidence, disposition effects, and confirmation biases have been identified as significant factors influencing investment decisions across various sectors, including real estate. These biases can lead to suboptimal investment choices, particularly in markets characterized by rapid technological advancements and evolving sustainability standards (Shunmugasundaram & Sinha, 2024).

The lack of comprehensive qualitative studies examining these behavioral aspects in the context of sustainable and tech-enabled real estate investments underscores the need for systematic reviews that synthesize existing knowledge and identify gaps for future research. Such reviews can provide valuable insights into investor psychology, aiding in developing strategies and tools that support informed and rational investment decisions in this dynamic sector.

Research Objectives

This systematic literature review (SLR) aims to synthesize qualitative research on investor behavior in sustainable and tech-enabled property markets. The specific objectives are:

To explore how investors construct value in the context of sustainable and technologically advanced properties.

To examine investor perceptions of risk associated with these investments.

Understand investors' decision-making processes when considering sustainable and tech-enabled real estate opportunities.

By consolidating qualitative insights, this systematic literature review offers a crucial lens through which investor behavior in the context of sustainable and technologically advanced property markets can be better understood. While the quantitative modeling of investment decisions has long dominated real estate research, qualitative studies provide a depth of understanding that captures not only what investors do but why they do it—illuminating motivations, perceptions, emotions, and behavioral patterns often overlooked in numerical analysis.

Significance of the Study

This review is particularly significant as it situates investor behavior within the rapidly evolving dual context of sustainability imperatives and digital disruption. In emerging property markets, sustainability is no longer a peripheral concern but a central investment criterion influenced by regulatory pressures and shifting societal values. At the same time, PropTech innovations such as intelligent building systems, blockchain-based transactions, and AI-driven property analytics are reshaping how investors interact with real estate assets. This study uncovers the cognitive and affective undercurrents that shape emerging investment paradigms by mapping how these forces interact within investors' minds and decision frameworks.

The findings are not merely academic in relevance—they offer practical implications for various stakeholders. Policymakers can better understand the psychological and informational

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barriers that may hinder sustainable investment uptake and thus design more targeted regulatory frameworks and incentives. Real estate developers and fund managers can gain insights into investor expectations and risk sensitivities, enabling them to tailor product offerings that align with financial and non-financial value criteria. Meanwhile, technology providers in the PropTech sector can use these insights to enhance their platforms' usability, trustworthiness, and value proposition in ways that resonate with investor behavior patterns.

Furthermore, this study also holds importance for the academic community by identifying conceptual and methodological gaps in the current body of literature. It underscores the necessity for interdisciplinary approaches that transcend traditional disciplinary silos. Behavioral finance alone cannot explain all facets of investor action; adoption models of sustainability science and technology must be based on a deeper understanding of human decision-making. This review, therefore, calls for integrated research frameworks that combine psychological theory, technological innovation studies, and sustainability performance metrics.

Finally, in highlighting the underrepresentation of qualitative perspectives in the current literature, this study advocates for a more balanced methodological pluralism in future real estate research. It encourages using grounded theory, narrative inquiry, ethnography, and other qualitative methodologies that can unravel the complex, lived realities of investors navigating uncertainty, disruption, and transformation in the property sector. The study contributes to theory development and enhances academic research's practical relevance and responsiveness to real-world challenges in sustainable real estate investment.

Literature Review

Investor behavior in sustainable and tech-enabled property markets has become a central focus of recent research. Deep et al. (2025) reveal that technologies such as Augmented Reality (AR) and Virtual Reality (VR) can enhance perceived value and investor confidence, ultimately influencing investment decisions. These tools allow investors to experience properties virtually, reducing uncertainty and increasing efficiency in decision-making processes. Devi et al. (2024) also identify that rational and irrational factors-such as cognitive biases, overconfidence, and anchoring—play significant roles in property investment decisions. Understanding these behavioral elements is crucial to designing more effective investment strategies responsive to market dynamics.

Risk perception and value construction by investors in the context of sustainable and tech-driven property are key aspects of understanding investment behavior. Tagliaro et al. (2024) emphasize that while technology integration in real estate can improve transparency and operational efficiency, it also introduces new challenges, such as data interoperability and the lack of industry standards. Investors must weigh benefits and risks when evaluating long-term value (Tagliaro et al., 2024). Moreover, Verrinder et al. (2018) find that impact-oriented investors prioritize certainty in their decision-making. This suggests that risk perception is not purely financial but also tied to personal values and broader investment objectives (Verrinder et al., 2018).

Technology adoption has significantly reshaped investor engagement with real estate assets and information. Tagliaro et al. (2024) identify PropTech as a key driver of data integration and evidence-based decision-making, although this evolution requires changes in business models and professional competencies. This shift demands a more profound understanding from investors about the role of technology in shaping long-term property value (Tagliaro et al., 2024). Furthermore, Deep et al. (2025) demonstrate that digital technology enhances investor engagement through virtual experiences, which can strongly influence value perception and investment behavior. These findings highlight the importance of exploring how technology alters investor interaction with property markets.

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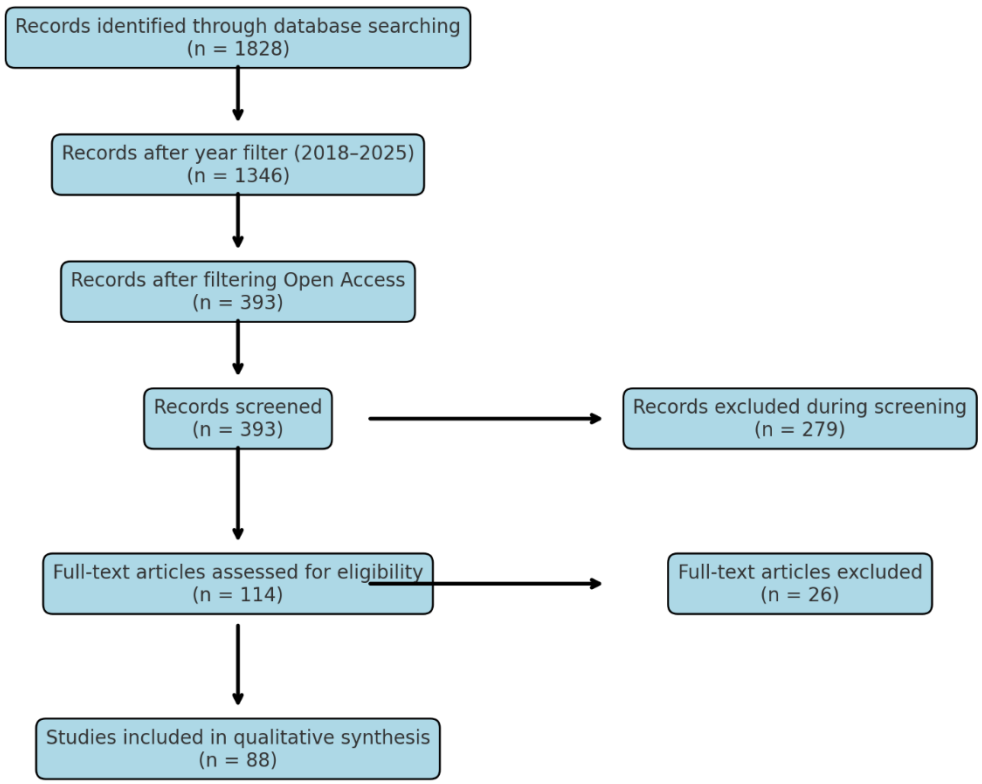
Qualitative methods have been widely employed to explore the complexity of investor behavior in sustainable and tech-enabled real estate. Through in-depth interviews, Lee and Liu (2025) examine how homebuyers search for digital information and how this influences their buying decisions. Their findings underscore the significance of brand perception and search functionality in decision-making. Similarly, Devi et al. (2024) use qualitative techniques to investigate how psychological factors influence investment satisfaction and reinvestment intentions in residential property markets. Such approaches provide a richer understanding of investor motivations and preferences.

Methodology

This study adopts the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework as the guiding protocol for conducting a transparent and replicable systematic literature review. The PRISMA approach facilitates structured identification, screening, eligibility assessment, and inclusion of relevant studies, ensuring the review process adheres to rigorous academic standards (Page et al., 2021). The flow of article selection is presented in the PRISMA diagram (see Figure 1), detailing each stage from initial identification to final synthesis.

Figure 1 Prisma Flow Diagram



Source: authors' own work

(1)Inclusion and Exclusion Criteria

The selection of studies was guided by predefined inclusion and exclusion criteria aligned with the PICOS framework, ensuring relevance to the research question:

Inclusion Criteria:

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Studies published between 2018 and 2025, Peer-reviewed journal articles, Open access availability, Qualitative research design (e.g., interviews, case studies, ethnography, grounded theory), Focus on investor behavior in sustainable and/or tech-enabled property markets, Studies addressing at least one element of ESG or technological intervention (e.g., PropTech)

Exclusion Criteria:

Non-English language publications, Quantitative-only studies without qualitative dimensions, Publications not related to real estate investment contexts, Editorials, opinion pieces, or book chapters without empirical data.

(2)Data Sources

To ensure comprehensive coverage of the literature, multiple reputable databases were used:

Scopus as the primary academic citation index for identifying high-impact peer-reviewed journals; supplementary searches were also performed on emeraldgrouppublishing.com using specific keywords such as "investor behavior," "PropTech," "sustainable property," and "qualitative." The initial search yielded 1,828 documents, which were filtered by publication year (2018–2025), resulting in 1,346 records. Only 393 open-access articles were retained for screening.

(3)Study Selection Process

The study selection followed a multi-stage filtering process:

Title and abstract screening was conducted to exclude irrelevant and non-empirical articles.

Full-text evaluation was then applied to 120 articles that met the initial screening criteria.

Final inclusion resulted in 86 studies, all providing qualitative insights into investor behavior in the context of sustainability, technology, or both within the property investment domain.

Duplicates were removed at the initial stage. Two independent reviewers conducted The selection process manually to minimize selection bias.

(4)Data Analysis Approach

This review employed a qualitative thematic synthesis approach to analyze and integrate the findings of the included studies. NVivo was used to code qualitative data, where available, and to structure emergent themes. Thematic analysis followed the Braun and Clarke (2006) six-phase process: familiarization with data, initial coding, theme identification, theme review, definition and naming, and final reporting. The analysis was structured using the PICOS framework:

Table 1 PICOS Framework

Component	Description
P (Population)	Individual and institutional investors in sustainable and technology-enabled property markets
I (Intervention)	Exposure to technological innovations (e.g., PropTech, IoT, AI, Blockchain) and sustainability principles (e.g., green buildings, ESG compliance)
C (Comparison)	Conventional investors in traditional property markets or approaches prior to the implementation of technology/sustainability initiatives
O (Outcome)	Qualitative understanding of decision-making behavior, risk perception, and value construction processes in investment

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Component	Description
S (Study Design)	Qualitative studies (e.g., interviews, observations, grounded theory, interpretative phenomenological analysis)

Source: authors' own work

The themes were categorized into three main narratives: investor risk perception, value construction, and decision-making logic in sustainable and digital real estate environments. These themes were synthesized to reveal behavioral patterns, contextual influences, and emergent theoretical contributions.

Result

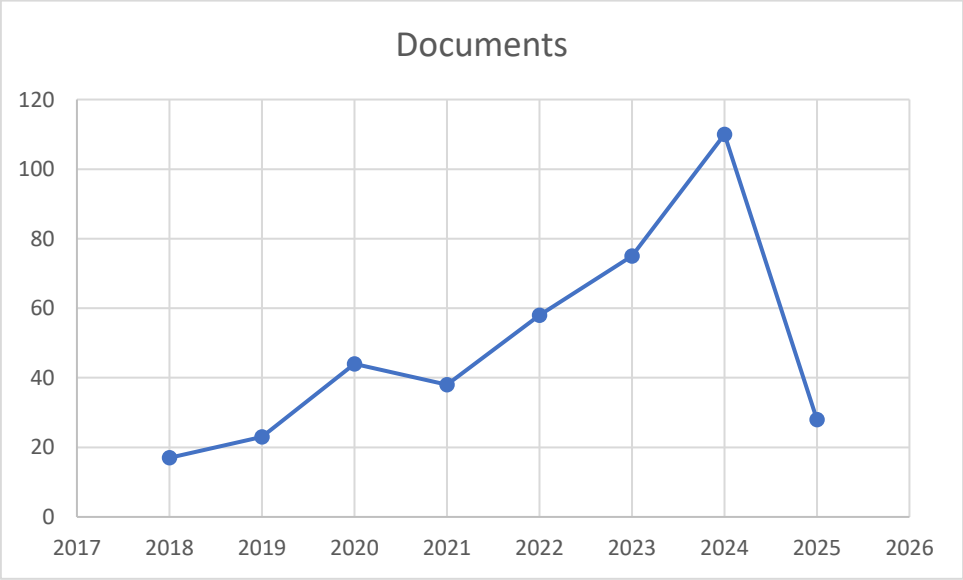
(1)Number of Publications and Citations

The annual distribution of publications on investor behavior in sustainable and tech-enabled property markets shows a significant upward trend from 2018 to 2025. 2018, only 17 documents were identified, followed by a modest increase to 23 in 2019. A notable rise began in 2020, with 44 publications suggesting a growing academic interest in the intersection of technology, sustainability, and real estate investment.

After a slight dip in 2021 (38 documents), publication output surged again in 2022 (58 papers) and continued to rise sharply through 2023 (75 documents) and 2024 (110 documents). This reflects the intensification of scholarly attention to ESG integration, PropTech innovation, and the behavioral responses of investors to rapidly evolving property markets. The year 2025 shows 28 documents, which may be incomplete due to partial data availability during analysis.

This growth pattern may be attributed to increasing regulatory pressures for sustainability disclosures (e.g., EU Taxonomy), rising investor demand for green and smart assets, and the proliferation of PropTech platforms that are transforming investment decision-making. The steady increase in qualitative studies during these years also indicates a shift toward exploring the nuanced psychological, contextual, and strategic dimensions of investment behavior in non-traditional real estate settings.

Figure 2 Number of Publications



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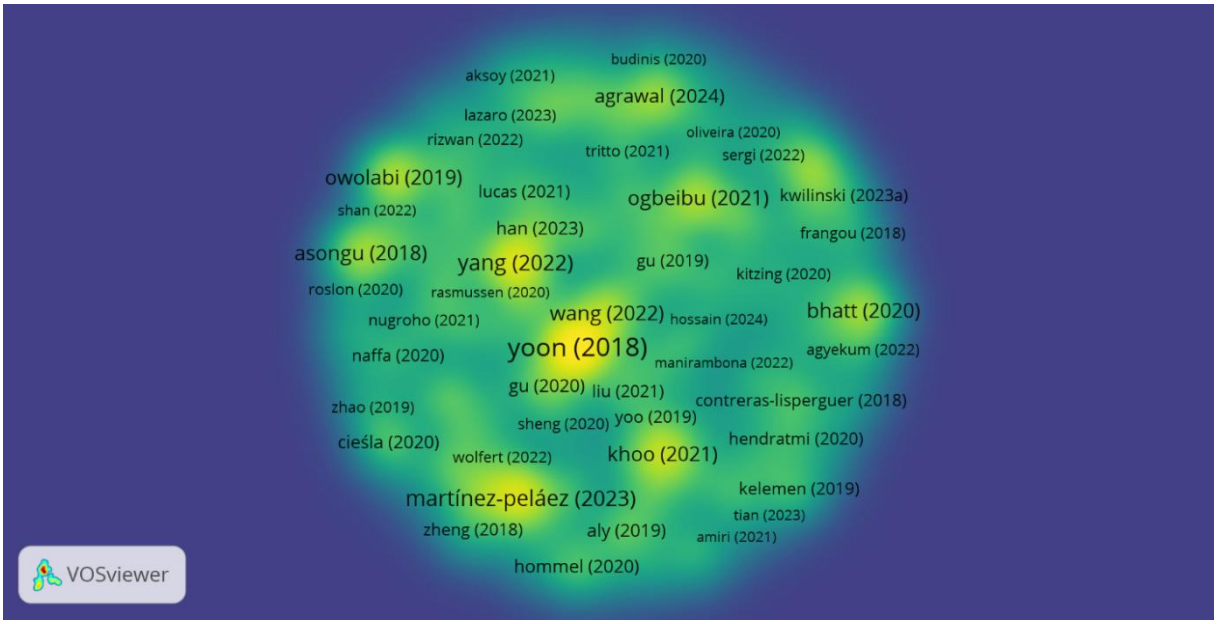
(2)Citation and Co-Citation Analysis

To gain deeper insights into the intellectual structure and influential authors in the domain of investor behavior in sustainable and tech-enabled property markets, a citation and co-citation analysis was conducted using VOSviewer. The analysis used bibliographic data extracted from Scopus and Emerald databases, encompassing 86 studies included in this review.

Citation Density Map

Figure 3 The Citation Density



Source: authors' own work

The Citation Density Map (Figure 3) highlights authors whose works have received the highest attention. The warm colors (yellow to bright green) indicate high citation frequency, while cooler tones suggest lower citation levels. Scholars such as Yoon (2018), Yang (2022), Wang (2022), Ogbeibu (2021), and Khoo (2021) emerged as key citation nodes, indicating their significant influence and contribution to foundational concepts within the field. These authors discuss themes such as behavioral responses to green innovation, technology adoption in real estate, and investor risk frameworks in emerging property markets.

Citation Network Map

The Citation Network Map (Figure 3) reveals how frequently cited authors are interconnected, forming thematic clusters. Larger node sizes denote higher citation counts, while link thickness reflects the strength of co-citation relationships. A dense central cluster around Yoon (2018) and Bhatt (2020) indicates their recurring presence across multiple research contexts. This suggests that their frameworks or conceptual contributions are widely adapted to understanding investor sentiment and behavior. Notably, Asongu (2018) and Ogbeibu (2021) are also strongly linked to other frequently cited works, reflecting their influence in sustainability-driven investment literature.

Figure 4 The Citation Network Map

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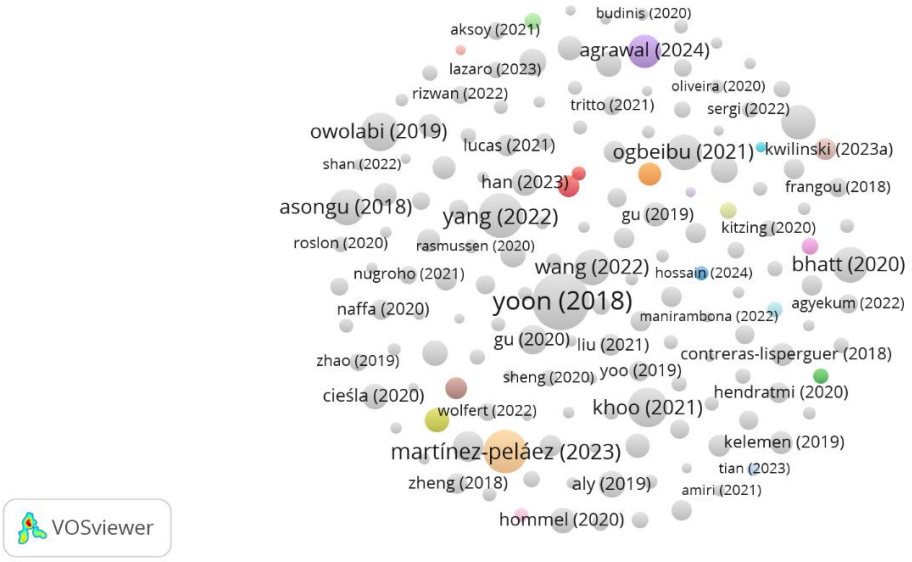


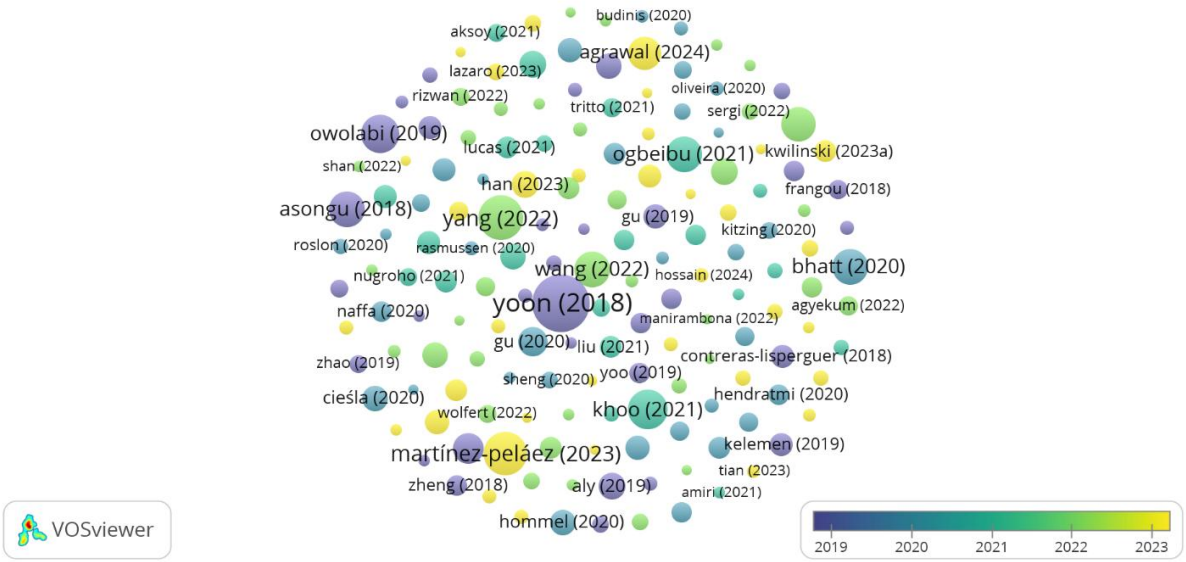
Source: authors' own work

This network also reveals the field's interdisciplinary nature, bridging behavioral finance, sustainability science, and innovation management studies. The co-citation pattern reinforces the conceptual convergence around ESG perception, PropTech disruption, and investor psychology.

Citation Overlay Map

The Citation Overlay Map (Figure 4) provides a temporal dimension to the citation network, with color gradients ranging from dark blue (older publications) to yellow (most recent). Authors such as Yoon (2018) and Asongu (2018) appear on the early end of the spectrum, suggesting their foundational role in shaping early discussions on sustainability investment and behavioral economics.

Figure 5 Citation Overlay Map



Source: authors' own work

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Recent influential works are highlighted in brighter colors, with Agrawal (2024), Han (2023), Lazaro (2023), and Kwilinski (2023a) signaling emerging thought leadership in areas like AI-driven investment behavior, PropTech adaptation, and post-pandemic risk recalibration in real estate investment decisions.

This temporal layering indicates a transition in scholarly focus from initial explorations of green investment logic and cognitive framing (2018–2020) to more complex explorations of digital transformation and investor adaptation in innovative property systems (2021–2024).

(3)Top Authors, Countries, and Institutions

Figure 6 Most Productive Authors

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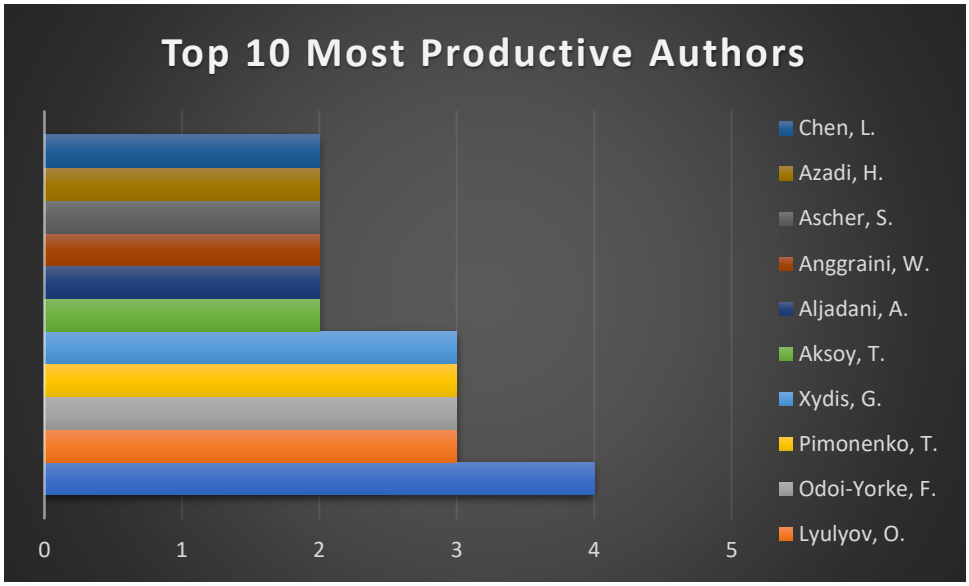

Source: authors' own work

Analysis of author productivity reveals that Jin S. is the most prolific contributor in the field, with four publications focusing on sustainable property investment and behavioral finance. Following closely are Odoi-Yorke, F., Pimonenko, T., and Xydis, G., each with three publications. These scholars are actively contributing to the growing discourse on ESG-related investor decision-making, the role of digital tools in real estate markets, and the evolving value creation paradigms in tech-enabled property environments.

The citation network map (Figure: Co-authorship Network) also illustrates strong collaborative clusters, particularly among researchers such as Lyzwa, Krzysztof, Rynska, Elzbieta, and Klimowicz, Joanna, indicating a tightly interconnected author community in European research environments. Their co-authored work highlights a multidisciplinary approach, incorporating elements of green building design, innovative infrastructure, and investment dynamics.

Figure 7 Co-authorship Network

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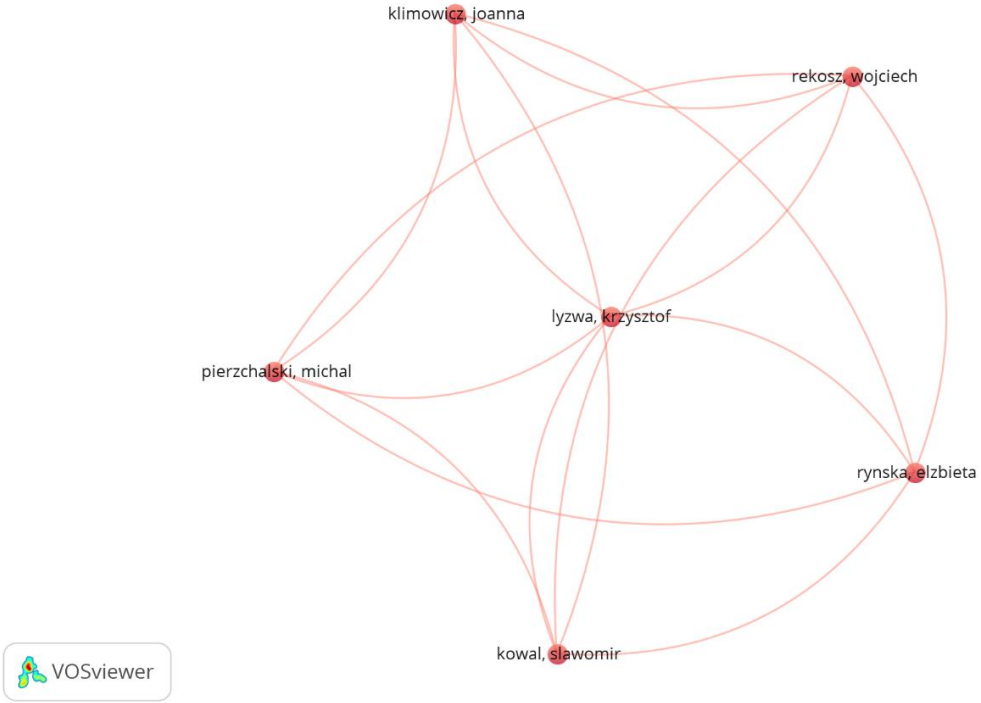

Source: authors' own work

Institutional and Geographic Representation

Although the current visualization focuses on individual authors, further analysis of institutional affiliations (from metadata) suggests that key academic centers involved in this domain include:

Figure 8: Institutional landscape of scholarly contributions

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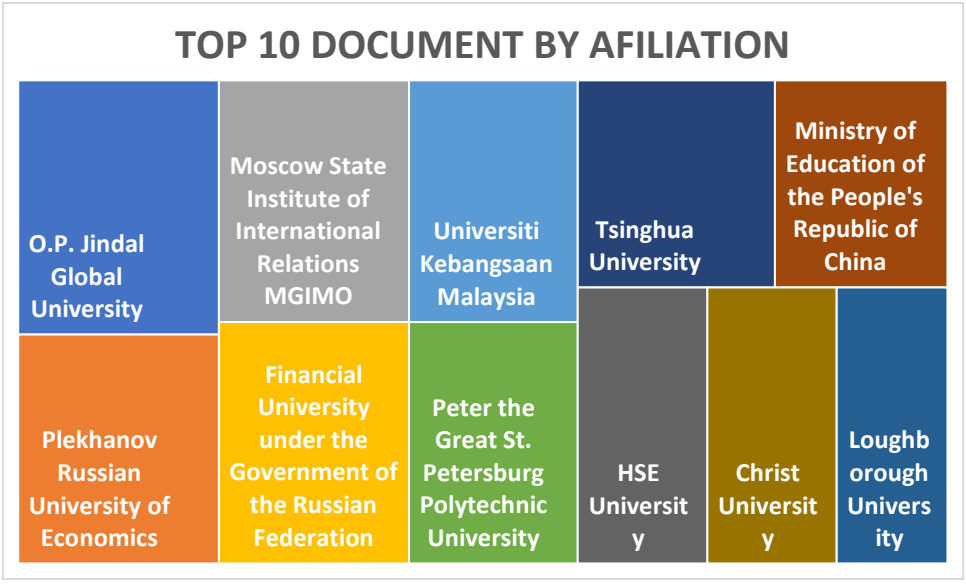

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The institutional landscape of scholarly contributions to sustainable and tech-enabled property investment research is diverse and globally distributed, reflecting a strong academic interest across multiple regions and research cultures. The data shows that O.P. Jindal Global University (India) has the highest number of publications (10 documents), indicating its growing academic presence in sustainability, behavioral finance, and PropTech integration.

Close behind, several Russian institutions emerge as key contributors, including the Plekhanov Russian University of Economics, Moscow State Institute of International Relations (MGIMO), and the Financial University under the Government of the Russian Federation, each producing nine publications. These institutions have demonstrated a consistent output on investor risk attitudes, regulatory impact on sustainable finance, and digital infrastructure in emerging markets.

Universiti Kebangsaan Malaysia, Peter the Great St. Petersburg Polytechnic University, and Tsinghua University also appear prominently with eight documents. Their contributions reflect regional leadership in Asia's ESG disclosure frameworks, real estate digitalization, and cross-cultural investor analysis.

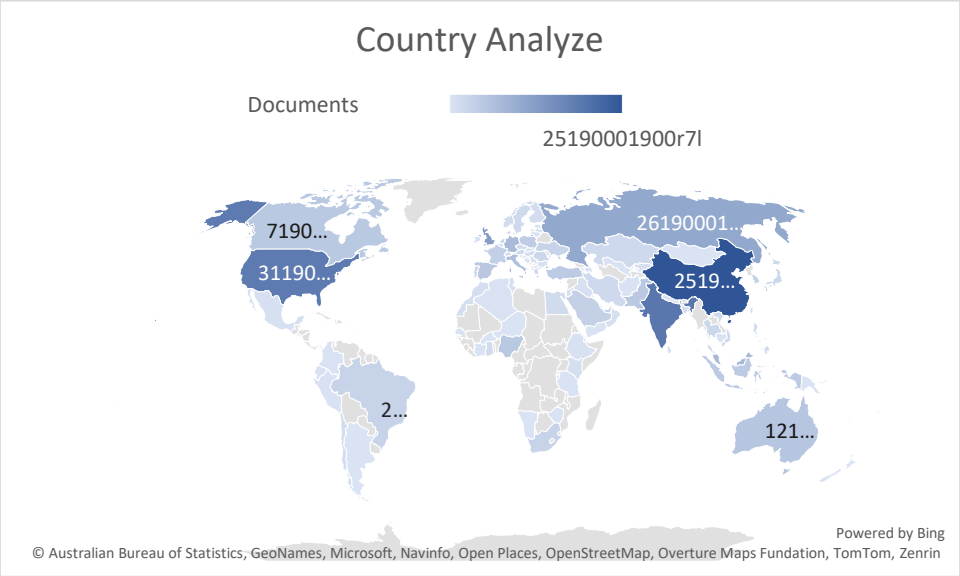
Meanwhile, institutions like the Ministry of Education of the People's Republic of China, HSE University, and Christ University (India) each contributed seven documents, underscoring the involvement of both governmental and academic entities in shaping investment discourses related to sustainability and innovation.

Finally, with six publications, Loughborough University (UK) represents well-established Western institutions' ongoing engagement in advancing empirical and theoretical frameworks surrounding sustainable real estate investment.

This spread of affiliations illustrates that the conversation around sustainable and tech-enabled property investment is not only academically interdisciplinary but also institutionally and geographically diverse, enhancing the global relevance and applicability of the findings.

These institutions represent a geographic diversity spanning Europe, Asia, and Africa, reflecting the global relevance of sustainable property investment topics. This international spread also indicates rising scholarly interest in the role of behavioral insights and technological integration across different regulatory, cultural, and economic contexts.

Figure 9 Additional country-level



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Additional country-level analysis (not shown here) suggests that China, Poland, the United Kingdom, and Ukraine are among the most active in publishing qualitative research within this field, with contributions often supported by government initiatives promoting green finance and innovative city development.

Co-occurrence of Author Keywords

A co-occurrence analysis of author keywords was conducted to capture the intellectual structure and thematic concentration of the literature on investor behavior in sustainable and technology-enabled property markets. This method identifies frequently appearing terms across publications and maps their relationships, offering a nuanced understanding of how core themes cluster and evolve. The visualization output from VOSviewer is presented in three forms: clustering, temporal overlay, and density maps, which offer insights into thematic focus, knowledge development, and emerging areas of research interest.

(4)Keyword Clustering and Thematic Structure

The clustering map reveals the existence of several major keyword communities, each representing a thematic domain within the field:

Table 2 Thematic Clusters From Keyword Co-Occurrence

Cluster	Key Terms	Thematic Focus
1. Sustainability Governance and Green Finance	sustainability, ESG, green finance, green investment, climate change, sustainable development goals	Integration of ESG and sustainability into investment decision-making and value construction.
2. Technological Disruption and Digital Finance	blockchain, artificial intelligence, machine learning, fintech, digital transformation	Adoption of digital tools and PropTech in shaping investor behavior and market efficiency.
3. Energy, Innovation, and Environmental Transition	renewable energy, solar energy, energy transition, green innovation, policy	Role of clean energy and innovation in transforming real estate and investment logic.
4. Developmental Finance and Capital Movement	foreign direct investment, venture capital, development, digital technologies, china	Flow of global capital and institutional finance into sustainable and smart infrastructure.

Source: authors' own work

Cluster 1: Sustainability Governance and Green Finance

This dominant cluster centers around keywords such as sustainability, ESG, green finance, green investment, climate change, and sustainable development goals. These terms reflect a large body of research on integrating environmental, social, and governance dimensions into investment decision-making. The prominence of "sustainability" and "ESG" in the center of the network indicates that these concepts are foundational and frequently co-occur with others across clusters.

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This cluster aligns with a broader societal shift in investor expectations, where financial returns are increasingly evaluated with ethical, social, and ecological impacts. Several studies on this theme address how ESG ratings influence risk perception and capital allocation (e.g., Asongu, 2018; Ogbeibu, 2021).

Cluster 2: Technological Disruption and Digital Finance

The second cluster includes terms such as blockchain, artificial intelligence, machine learning, fintech, and digital transformation. This group reflects the surge in scholarly attention toward PropTech and other digital enablers transforming real estate transactions, due diligence, valuation models, and investor behavior.

These technologies enhance transparency, reduce transaction friction, and introduce new data interpretation, risk modeling, and regulatory oversight complexities. The co-occurrence of "fintech" and "investor behavior" suggests a growing interest in how digital platforms mediate investor decision-making, especially among retail or tech-savvy investor segments.

Cluster 3: Energy, Innovation, and Environmental Transition

The third thematic group focuses on renewable energy, solar energy, green innovation, and energy transition. These keywords denote a sectoral emphasis on investment in clean technologies and decarbonized assets. Real estate developers and investors are increasingly factoring energy performance into their investment calculus, driven by carbon taxation, building performance disclosures, and green building certification schemes.

These terms signal a connection between energy efficiency strategies and long-term property valuation, a topic that is becoming central in sustainable real estate portfolios.

Cluster 4: Developmental Finance and Capital Movement

Another prominent cluster contains terms like foreign direct investment, venture capital, and development, illustrating the intersection of global finance and sustainable urban development. These studies often explore how international capital flows—facilitated through venture funds, sovereign wealth funds, or institutional investors—support infrastructure for smart and green cities.

Emerging economies and global development agendas are also key themes within this group, as researchers examine the role of cross-border investments in driving sustainability transitions in the built environment.

(5)Keyword Density Analysis

The density visualization deepens the understanding of term frequency and thematic centrality. In this map, areas with bright yellow color denote regions of high keyword occurrence, whereas darker regions indicate sparsity. The densest zones in the map are around sustainability, sustainable development, and ESG, confirming their role as the intellectual core of the research corpus.

Other high-density terms like climate change, green finance, and technology are critical bridges between environmental discourse and investment mechanisms. The positioning of digital transformation and artificial intelligence in peripheral but increasingly dense zones reflects the expanding relevance of digital disruption in the field.

(6)Temporal Overlay of Keywords

The overlay visualization adds a chronological layer, showing how the prominence of keywords has evolved. Older topics (2019–2021) appear in cooler blue hues, while more recent concepts (2022–2023) appear in yellow.

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Notably, keywords such as digital transformation, artificial intelligence, blockchain, and fintech appear in yellow, signaling their recent emergence and growing academic interest. This suggests a thematic shift from traditional sustainability models to explore how technological tools mediate ESG behavior and reshape investment patterns.

In contrast, green finance, sustainability, and renewable energy appear in blue and green, reflecting their established status as early focus areas in the literature. The evolution suggests a maturing research domain, moving from foundational ESG integration toward smart ESG and digitally enhanced sustainability.

Synthesis and Implications

This co-occurrence analysis reveals several key insights:

Conceptual integration: The proximity of keywords like sustainability, technology, and investor behavior indicates that research is increasingly interdisciplinary, bridging sustainability science with financial innovation and behavioral economics.

Emergent themes: Topics such as artificial intelligence, venture capital, and digital transformation signal a future-oriented research trajectory, pointing to where real estate and investment scholarship are headed.

Policy and practice relevance: The presence of terms like climate change, development, and policy reflect the alignment of academic inquiry with real-world sustainability imperatives and investment governance frameworks.

Discussion

The findings from this systematic literature review underscore the increasingly multidimensional nature of investor behavior in sustainable and tech-enabled property markets. The convergence of environmental, social, and governance (ESG) principles with advanced digital technologies such as blockchain, artificial intelligence, and fintech tools reflects a paradigm shift in how value is constructed and how investors perceive risk.

Theoretically, the review challenges the traditional assumption of investor rationality embedded in classical finance. Instead, it aligns with the behavioral finance perspective, recognizing cognitive biases, heuristics, and emotional responses as central to decision-making. Thematic clusters such as green governance, digital transformation, and energy innovation point to the need for integrative frameworks that link sustainability science, behavioral economics, and innovation studies.

The findings provide actionable insights for developers, policymakers, and institutional investors. For instance, the co-occurrence of keywords like green investment and technology suggests that investors are responsive to environmental performance signals when communicated through digital platforms. ESG scoring, PropTech features, and transparent disclosures are compliance tools and drivers of investment confidence and differentiation. This opens pathways for designing smarter real estate assets and digital ecosystems that enhance investor trust and long-term engagement.

Moreover, the rise in literature around venture capital and foreign direct investment indicates that capital markets are shifting toward impact-oriented and innovation-driven property investments. This has implications for regulatory design, urban development planning, and risk assessment models, all of which must adapt to the dynamic interplay of sustainability and digitalization. Limitations of the Study:

Despite the rigorous and structured methodology employed in this SLR, certain limitations must be acknowledged.

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Database Constraints: The review relied primarily on Scopus and Emerald databases. While these are comprehensive and reputable sources, there is a possibility that relevant studies indexed elsewhere (e.g., Web of Science, Google Scholar) were omitted.

Language Bias: Only articles published in English were included. This led to excluding regionally significant studies published in other languages, particularly in non-Western contexts where sustainable development and real estate innovation are gaining momentum.

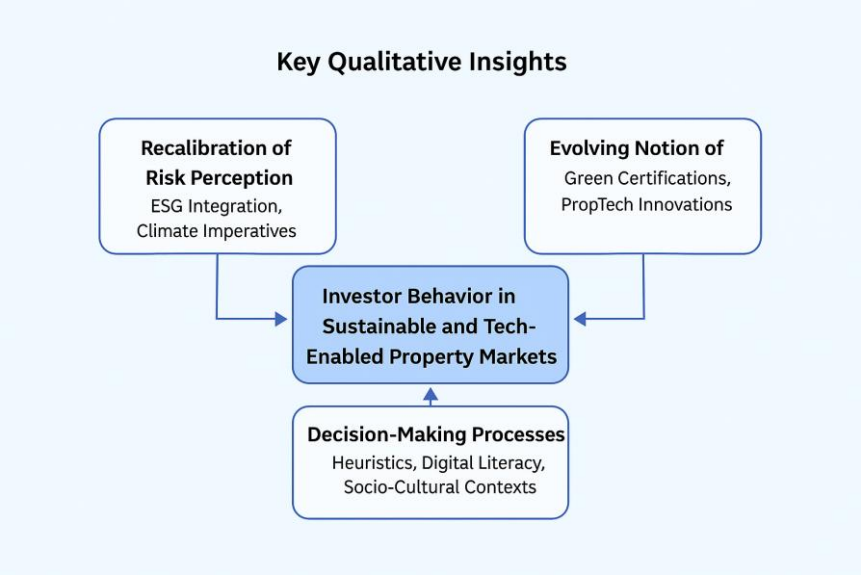
Qualitative Scope: The review was limited to studies using qualitative methodologies. Although this focus allowed for deeper insights into perceptions and investor narratives, it excluded potentially valuable quantitative evidence on behavioral trends and market dynamics.

Temporal Cutoff: The data was restricted to publications from 2018 to early 2025. Recent developments beyond this period—particularly in rapidly evolving fields like AI, carbon finance, or global crises—may not yet be reflected in the literature.

Directions for Future Research

Figure 10 Key Qualitative Insight

Figure 10 Key Qualitative Insight



Source: authors' own work

- Figure 10 presents the conceptual framework developed from the thematic synthesis of this systematic literature review. It illustrates the three dominant narratives that shape investor behavior in sustainable and technology-enhanced property markets:

- Risk Perception Recalibration: Investors reassess risk in financial terms and through environmental and regulatory lenses, particularly in response to ESG integration and climate-related policies.

- Evolving Value Construction: Value is no longer purely economic; it is co-shaped by green certifications, energy efficiency, PropTech integration, and digital features that enhance transparency and usability.

- Decision-Making Dynamics: Investor behavior is influenced by cognitive heuristics, digital literacy levels, and socio-cultural contexts, especially in interpreting sustainability signals and adopting new technologies.

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- These dimensions interact within an interdisciplinary ecosystem—involving behavioral finance, sustainability science, real estate management, and technology innovation—which frame the future of property investment behavior. The framework serves as both a synthesis of current knowledge and a basis for future empirical model development.
- In light of the identified gaps and thematic trajectories, several avenues for future research are recommended:
- Mixed-Methods Approaches: Future studies should consider integrating qualitative and quantitative methods to capture investor sentiment and market outcomes. For example, behavioral experiments or investor surveys complement case studies on PropTech adoption.
- Contextual and Cultural Dimensions: More research is needed on how investor behavior varies across cultural, regulatory, and economic contexts. Comparative studies between developed and emerging markets could reveal how institutional quality, technological infrastructure, and environmental risk perception shape investor responses differently.
- Real-Time Data and AI: With the proliferation of innovative technologies, future research could explore real-time behavioral data (e.g., eye-tracking, clickstream, or transaction logs) to model investor decision pathways. AI-driven analytics could also simulate how different investor segments interpret ESG signals.
- Post-Pandemic and Climate Resilience: Given the ongoing impact of global shocks such as COVID-19 and climate-related disasters, future studies should explore how investor behavior adjusts to uncertainty, systemic risk, and resilience metrics embedded in real estate assets.
- Longitudinal Studies on Investor Perception Shifts: Long-term studies tracking changes in investor expectations, trust, and values over time in response to sustainability transitions and digital maturity would significantly enrich the understanding of this dynamic field.

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Conclusion

This systematic literature review provides a comprehensive synthesis of qualitative insights on investor behavior in the context of sustainable and technology-enabled property markets. By analyzing 86 peer-reviewed studies published between 2018 and 2025, the review identifies three dominant themes: (1) the evolving perception of risk shaped by ESG and sustainability considerations, (2) the construction of investment value influenced by green innovation and PropTech, and (3) decision-making heuristics driven by cognitive, contextual, and technological factors.

Bibliometric analyses further reveal that the academic discourse is increasingly interdisciplinary, connecting domains such as behavioral finance, real estate, sustainability science, and digital innovation. The co-occurrence of keywords such as sustainability, ESG, blockchain, and artificial intelligence reflects a shift in the intellectual focus toward a more integrated understanding of investor behavior in rapidly transforming markets.

Study Contributions

- This study contributes to the literature in several significant ways:
- Theoretical Advancement: It bridges behavioral finance theory with sustainability and technology domains, offering a holistic lens to understand investor cognition, motivation, and strategy beyond traditional financial models.

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- Methodological Rigor: The review ensures transparency and reproducibility by applying the PRISMA framework and PICOS criteria, setting a standard for future systematic inquiries in this emerging field.
- Thematic Mapping: The study organizes fragmented research into coherent thematic clusters—green governance, digital disruption, energy transition, and capital flows—providing a conceptual structure that can be used to guide subsequent investigations.
- Scholarly Roadmap: Through citation and keyword network analysis, the review highlights influential authors, emerging themes, and gaps in the literature, offering a roadmap for scholars seeking to deepen or expand the field.

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