

GREEN INVESTMENT AND SUSTAINABLE FIRM PERFORMANCE IN INDONESIA: IDENTIFYING THE OPTIMAL INVESTMENT POINT THROUGH A SYSTEMATIC LITERATURE REVIEW AND BIBLIOMETRIC ANALYSIS

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Abstract

Study This aiming for identify optimal investment point green which is significant contribute to performance sustainable companies in the Indonesian context. With use approach *Systematic Literature Review* (SLR) combined with analysis bibliometrics, study This synthesize findings from 50 articles journal reputable published between 2015 to 2025. Selection process article follow PRISMA protocol for ensure accuracy methodological, while tool bibliometrics like VOSviewer used for analyze co - existence network keywords, trends research, and patterns authorship. Synthesis thematic disclose three cluster main: (1) investment strategy environment, (2) integration ESG and financial disclosures, and (3) performance sustainability based on innovation. findings show that optimal investment point green happen when company align shopping environment with capability innovation and transparent ESG reporting. This article give contribution for development literature academic and direction policy with offer framework comprehensive for increase performance of sustainable company through investment strategic green.

Keywords: Green Investment; Sustainable Firm; ESG

INTRODUCTION

Over the past decade, climate change, environmental degradation, and energy crises have pushed global businesses to embed sustainability into their corporate strategies, with green investment—such as in renewable energy, energy efficiency, and clean technologies—emerging as a key approach to not only meet environmental regulations but also potentially boost sustainable firm performance (Ganda, 2018; Zhang, 2020). Although Indonesia has implemented supportive frameworks like Presidential Decree No. 98 of 2021 and the OJK Green Taxonomy, empirical studies assessing the actual impact of green investment on firm performance remain scarce. This gap underscores the urgent need to identify the optimal level of green investment, especially in developing economies like Indonesia, where environmental and economic pressures intersect. While prior research suggests green investment can enhance operational efficiency and reputation, its long-term effects on firm performance are still inadequately explored and lack consistent measurement standards (Chen, 2021; Khan, 2022).

This study aims to identify and analyze scientific literature related to green investment and sustainable firm performance, with the goal of synthesizing findings to determine the optimal level of green investment that enhances firm sustainability. Additionally, the study seeks to map research trends, conceptual linkages, and scholarly collaborations through bibliometric analysis. The expected outcomes include theoretical contributions to the academic discourse on green investment, as well as practical insights for managers and policymakers in designing optimal green investment strategies within the Indonesian context.

The novelty of this study lies in its integrative approach, combining systematic literature review (SLR) and bibliometric analysis to offer a comprehensive mapping of the green investment domain—an area that has not been systematically explored in international literature. Moreover, the study provides a contextual focus on Indonesia, a developing country with distinct environmental and economic challenges. By compiling a thematic synthesis, this research identifies the optimal investment point for maximizing sustainable firm performance—an emerging and underexplored topic in the existing literature (Chen, 2021; Khan, 2022).

This study uses a Systematic Literature Review (SLR) approach based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol for selecting, filtering, and analyzing 50 articles relevant to scientific research from 2015 to 2025. Criteria for inclusion and exclusion are set in a way that ensures quality and relevance of the articles reviewed. In addition, an analysis was also carried out using bibliometrics using VOSviewer and Publish or Perish software to identify structure knowledge, keywords dominant, and map collaboration between authors and institutions. This approach aims to enrich understanding of thematic development of GI and SFP research globally and nationally.

This study is expected to contribute in three key aspects:

This study makes significant theoretical, practical, and methodological contributions by synthesizing empirical literature from 2015 to 2025 to deepen understanding of the relationship between green investment and firm performance. Practically, it provides strategic guidance for managers, policymakers, and investors in Indonesia to determine optimal green investment strategies, while methodologically, it introduces a replicable hybrid approach combining a Systematic Literature Review (SLR) with bibliometric analysis using VOSviewer. Guided by the PRISMA framework, the study rigorously selected and analyzed 50 high-quality articles through strict inclusion-exclusion criteria, and employed bibliometric tools like VOSviewer and Publish or Perish to map thematic trends, keyword dominance, and author collaborations. This comprehensive method enables a deeper thematic analysis and offers a structured overview of both global and national research progress in green investment and sustainable firm performance.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Conceptual Framework: Green Investment and Sustainable Firm Performance

The conceptual framework of this study is constructed by integrating several foundational theories that provide explanatory depth to the relationship between green investment and sustainable firm performance. These theories include: Legitimacy Theory (Suchman, 2016), Stakeholder Theory (Freeman, 1984), the Triple Bottom Line (Elkington, 1997), Resource-Based View (RBV) (Barney, 1991), and Institutional Theory (DiMaggio, 1983). Each of these theoretical perspectives offers a complementary lens to understand the motivations, mechanisms, and outcomes of green investment in the corporate context.

Stakeholder Theory Interest (Freeman, 1984)

Stakeholder theory posits that businesses must account for the interests of all parties affected by their operations—not just shareholders. Freeman (1984) emphasized that stakeholders include employees, customers, suppliers, local communities, governments, and other related entities. Sustainable firm performance, therefore, requires managing stakeholder relationships holistically. Green investment initiatives can enhance a firm's standing among diverse stakeholder groups by demonstrating corporate responsibility, which in turn can improve both reputational value and long-term performance.

Triple Bottom Line (Elkington, 1997)

The Triple Bottom Line (TBL) framework proposed by Elkington (1997) extends the definition of business success beyond financial profitability. It incorporates three critical dimensions: economic (profit), social (people), and environmental (planet). Firms are thus encouraged to evaluate their decisions not only by financial returns but also by their contributions to society and the environment. Green investment directly aligns with this framework, as it encompasses activities that reduce environmental impact, promote social equity, and generate long-term economic value—enhancing a company's reputation and stakeholder trust.

Institutional Theory (DiMaggio & Powell, 1983)

Institutional theory explains how organizational behavior is shaped by institutional pressures, including formal regulations, normative standards, and cultural expectations. DiMaggio (1983) described three types of institutional isomorphism—coercive, normative, and mimetic—that drive firms to adopt similar practices to gain legitimacy. In the context of green investment, companies may respond to regulatory mandates (coercive), professional standards (normative), or industry trends (mimetic) by integrating environmental sustainability into their strategies. Institutional pressures thus play a key role in shaping firm-level responses to environmental issues and promoting convergence in green investment practices.

A. Main Concept

1. Green Investment (GI)

Green investment refers to the allocation of financial resources by companies toward projects or assets that deliver positive environmental outcomes. These may include investments in renewable energy, waste management systems, energy efficiency technologies, and the adoption of environmentally friendly innovations (Zhang, 2020). GI reflects a proactive corporate commitment to sustainability that transcends regulatory compliance, aligning long-term financial interests with ecological responsibility.

1. Sustainable Firm Performance (SFP)

Sustainable firm performance encompasses a company's ability to maintain growth and profitability while simultaneously generating positive environmental and social impacts. It is not solely assessed through financial indicators but also includes environmental and social performance measures. Common frameworks used to evaluate SFP include ESG (Environmental, Social, Governance) metrics, the Triple Bottom Line (Elkington, 1997) and various sustainability indices (Khanchel et al., 2023)

Theoretical Linkages between Green Investment and Sustainable Firm Performance

Green investment plays a central role in reducing environmental externalities through environmentally conscious technological development, energy efficiency, waste management, and the enhancement of sustainable production processes (Wang et al., 2022). The literature indicates that GI can improve sustainable firm performance through several key mechanisms:

1. Enhancing Operational Efficiency:

Green investments can reduce long-term costs by decreasing energy and material consumption, leading to improved operational productivity (Khanchel et al., 2023).

2. Strengthening Reputation and Brand Value:

Companies that actively pursue green strategies are often viewed more favorably by environmentally and socially conscious stakeholders. This positive perception can boost brand loyalty and attract ESG-oriented investors (Wang et al., 2022)

3. Reducing Regulatory and Legal Risks:

Proactive environmental investment helps firms stay ahead of tightening environmental regulations, minimizing the risk of legal penalties, fines, or reputational damage (Andrianto, 2023)

4. Fostering Innovation and Product Differentiation:
investment stimulates eco-innovation, enabling firms to develop environmentally friendly products and capture niche markets within the green economy (Chen, 2021).

Intervening Variables in the GI–SFP Relationship

Several studies suggest that the relationship between green investment and sustainable firm performance is not always direct, but often mediated by organizational and external factors. The most prominent intervening variables include:

1. Environmental Innovation Capability
A firm's ability to design and implement green innovations significantly mediates the impact of GI on performance. Without strong innovation capabilities, green investments may fail to yield competitive or commercial returns (Chen, 2013).
2. Green Organizational Culture
An internal culture that supports sustainability—through management commitment, employee engagement, and environmentally aligned structures—is crucial to ensuring that green investments are implemented effectively (Jabbour, 2018).
3. Corporate Governance and ESG Orientation
Companies with strong governance frameworks and clear ESG orientations are better equipped to deploy green investments efficiently. In contrast, weak governance may lead to greenwashing or misallocated resources.
4. Stakeholder Engagement
Active involvement from stakeholders—such as investors, customers, and local communities—can enhance the effectiveness of green investments by reinforcing legitimacy and accelerating implementation (Wang et al., 2022).
5. Green Financial Literacy
The level of financial literacy related to green investment among corporate managers and internal decision-makers plays a crucial role. Without adequate understanding of green finance principles, firms risk making suboptimal investment decisions (Xie, 2019).

Based on this conceptual mapping, the framework developed in this study emphasizes that the effectiveness of green investment in improving sustainable firm performance is highly dependent on organizational context and internal capabilities. As such, identifying the optimal level of green investment is essential—particularly in the Indonesian context—where such analysis remains largely underexplored in existing literature.

Framework Model Conceptual (Visual)

Conceptual Framework and Theoretical Foundation

The conceptual model of this study synthesizes insights from existing literature to illustrate the relationship between green investment (GI) and sustainable firm performance (SFP). This relationship is influenced by internal organizational factors such as environmental innovation, operational efficiency, and stakeholder engagement. The model also acknowledges the possibility of a non-linear relationship, suggesting the existence of an optimal point, beyond which additional green investment may yield diminishing or even negative returns.



Figure 1. Conceptual model

Academic Narrative Framework Conceptual

Drawing on a review of 50 peer-reviewed studies, the relationship between GI and SFP is generally positive, but context-dependent and complex. While green investment can enhance energy efficiency, innovation, and ESG governance, excessive or poorly managed investment may become counterproductive. Therefore, identifying the optimal level of green investment is essential—particularly in developing countries such as Indonesia, where organizational capabilities, governance quality, and institutional support play a crucial role in translating GI into sustainable performance. This study integrates a systematic literature review with bibliometric analysis to explore key themes and patterns in GI–SFP research.

PRISMA Flow and Article Selection Process

This study follows the Systematic Literature Review (SLR) approach using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Data were sourced from major academic databases including Scopus, ScienceDirect, Emerald Insight, and Google Scholar, using keywords such as “green investment,” “sustainable firm performance,” “Indonesia,” “ESG disclosure,” and “optimal investment point”, covering the 2015–2025 publication window.

1. After undergoing the identification, screening, and eligibility phases, 50 articles met the inclusion criteria:
2. Published in journals indexed in SINTA 1, Scopus Q1–Q3, or Web of Science;
3. Focused on the relationship between green investment and sustainability performance;
4. Relevant to the Indonesian or developing country context;

Included empirical data or clearly structured literature synthesis.

Thematic Analysis: Linking Green Investment and Sustainable Firm Performance

From the analysis of 50 selected studies, five major thematic clusters emerged regarding the GI–SFP relationship:

Theme 1. Green Investment as a Catalyst for Innovation and Efficiency

Numerous studies highlight GI's role in enhancing energy efficiency, promoting eco-innovation, and reducing long-term operational costs. Investments in low-emission technologies and energy-saving measures significantly contribute to both financial and sustainability performance (Cheng et al., (2022); Lin et al., (2014).

Theme 2. GI Enhances ESG Disclosure and Market Trust

Green investment is frequently linked to improved environmental, social, and governance (ESG) disclosure. Robust ESG practices increase stakeholder trust and reinforce corporate legitimacy. Empirical evidence shows that companies engaging in green initiatives experience greater investor confidence and regulatory goodwill (Agatha (2024); Yuliana (2022).

Theme 3. Mediating and Moderating Variables in the GI–SFP Relationship

The impact of GI on performance is often mediated or moderated by internal and external factors. Corporate green culture, ESG disclosure quality, and technological capability all influence the strength of this relationship. For example, Zhang (2020) and Choiriyah (2024) found that ESG disclosure serves as a crucial mediator linking GI to improved sustainability outcomes.

Theme 4. The Search for the Optimal Investment Point

Recent studies question the assumption that more green investment always yields better performance. Several works identify a U-shaped (non-linear) relationship, suggesting that overinvestment may reduce efficiency and profitability (Kondor (2024); Putri (2023)). Strategic alignment and planning are necessary to avoid diminishing returns.

Theme 5. Implementation Challenges in Developing Countries

Research focusing on developing economies, particularly Indonesia, underscores structural and institutional barriers to green investment. Key challenges include insufficient funding, limited fiscal incentives, regulatory inconsistency, and low managerial awareness of sustainability imperatives (Rahayu & Hasanah (2021); Nasution (2022)). Government intervention and policy incentives are needed to overcome these hurdles and encourage widespread GI adoption.

Synthesis

The thematic findings confirm that the relationship between green investment and sustainable firm performance is not linear nor universal, but highly contextual and strategy-dependent. This study addresses a critical gap in the literature by identifying the optimal investment threshold for green initiatives within the Indonesian context, using an integrative approach combining SLR and bibliometric analysis

Research Gap

While there is extensive literature addressing the relationship between Green Investment (GI) and Sustainable Firm Performance (SFP), several critical gaps remain, highlighting the need for further research. These gaps arise from methodological limitations, geographical contexts, and analytical approaches in previous studies. Below are three primary gaps identified:

1. **Conceptual and Empirical Gap: Optimal Green Investment Threshold**
Most studies indicate that GI positively impacts company performance. However, few discuss the limits or optimal thresholds of green investment. Recent articles (Putri, 2023) have begun to explore the risks of overinvestment, yet there is a lack of quantitative studies mapping the optimal level of GI in relation to SFP, particularly in developing countries. Understanding this optimal point is crucial to prevent companies from either over-investing or under-investing in GI practices, which could ultimately jeopardize financial and environmental sustainability.
2. **Local Context Gap: Insufficient Studies in Indonesia**
The majority of existing literature is derived from developed nations (e.g., the US, Europe, China), with limited research focusing on Indonesia or other developing countries. The structural and institutional challenges faced by these regions differ significantly. Indonesia, in particular, encounters unique issues such as funding limitations, suboptimal environmental regulations, and low green technology adoption. Thus, local studies are essential for formulating more context-specific policy recommendations.
3. **Methodological Gap: Integrative Approaches**
Previous research often relies solely on traditional literature review methods or quantitative meta-analysis, neglecting bibliometric analysis to understand knowledge structures and global research development. This study proposes to integrate a PRISMA-based systematic literature review with bibliometric analysis (including keyword co-occurrence, authorship, and citation mapping) to provide a comprehensive understanding. This integrative approach will help identify dominant topics, emerging trends, and relevant research clusters, guiding future research and policy in GI in Indonesia.

Based on these identified gaps, this research aims to determine the optimal green investment point for sustainable firm performance, map GI-SFP themes and trends in the Indonesian context, and

provide a systematic synthesis of literature based on PRISMA and bibliometric analysis to enrich future research directions.

Development of Hypotheses

Grounded in the resource-based view theory—which posits that a firm's unique and valuable resources and capabilities can lead to competitive advantages and improved performance (McWilliams & Siegel, 2011)—and supported by previous research indicating a nonlinear relationship between green investment and sustainable performance (Putri, 2023), this study hypothesizes a nonlinear inverted U-shaped relationship between green investment and sustainable firm performance among companies in Indonesia. This suggests the existence of an optimal green investment point that maximizes sustainable performance. The hypotheses developed are as follows:

1. ***H1: Green investment positively contributes to sustainable firm performance.***
2. ***H2: There exists an optimal point of green investment that maximizes its impact on firm performance.***
3. ***H3: The effectiveness of green investment is influenced by ESG disclosure practices and the company's innovation capabilities.***

RESEARCH METHODS

Research Design

This study employs a dual approach, combining a Systematic Literature Review (SLR) with bibliometric analysis. This methodology is selected to provide a thorough understanding of the link between green investment and sustainable firm performance and to trace the development of research on this topic from 2015 to 2025. The SLR offers a systematic and transparent framework for identifying, selecting, evaluating, and synthesizing relevant literature, while bibliometrics measures the influence and interconnections of the scientific works reviewed.

Systematic Literature Review (SLR) Approach

SLR is utilized to identify, evaluate, and integrate findings from pertinent research, aiming to produce a more structured and in-depth synthesis (Snyder, 2019). The SLR process in this study follows several clear stages:

1. **Article Search Stage**
The search for articles is conducted across several leading scientific databases, including Google Scholar, ScienceDirect, SpringerLink, Wiley Online Library, and JSTOR. The keywords used in this search include: green investment, sustainable firm performance, corporate sustainability, environmental innovation, and optimal investment point. The search is limited to publications from 2015 to 2025 to ensure relevance to recent developments in the field.
2. **Inclusion and Exclusion Criteria**
Establishing inclusion and exclusion criteria is vital for determining the relevance of articles to be included in this study. Inclusion criteria ensure that only relevant articles aligned with the research topics and objectives are analyzed. Articles must be published in indexed, peer-reviewed journals and explicitly discuss the relationship between green investment and sustainable firm performance. Selected articles should also include empirical studies, theoretical discussions, or relevant literature. Exclusion criteria remove articles that do not present empirical data or do not discuss relevant relationships, as well as those that are inaccessible or do not meet other specified criteria (Münch, 2019)
3. **Article Selection Process**
The selection process follows the PRISMA model Moher (2009) and consists of four stages:
Identification: The initial search yields 462 articles from all databases.

Screening: Articles are filtered based on title and abstract to eliminate irrelevant ones.

Eligibility: Full-text content is evaluated to assess alignment with the study focus.

Inclusion: A total of 50 articles that meet the criteria are included in the thematic and bibliometric synthesis.

The selection process involves filtering articles based on titles and abstracts to ensure they conform to the specified topics and inclusion criteria. Irrelevant articles are eliminated immediately. Those that pass the initial selection are read in full to confirm they meet inclusion criteria and contribute significantly to the research topic. Articles that do not meet quality standards are excluded from analysis, ensuring only high-quality, relevant articles are utilized in this study (Mojtahedzadeh, 2018).

4. Thematic Synthesis

After filtering articles that meet the inclusion criteria, the next step is thematic synthesis. This synthesis aims to identify key patterns or themes within the existing literature and to formulate the optimal green investment point that can enhance sustainable firm performance. Each identified theme is analyzed based on key concepts and its relationship with other variables, such as ESG disclosures and corporate innovation.

Bibliometric Analysis

To enrich the literature analysis and provide a clearer outlook on the development of studies related to green investment, bibliometric analysis is employed. This analysis maps study patterns through visualization, identifies trends, and examines networks among authors, journals, and keywords.

1. Bibliometric Data Collection

Bibliometric data collection aims to identify research trends and map relevant topics related to green investment and sustainable firm performance. Data is gathered from major scientific databases like Web of Science, Scopus, and Google Scholar. This data includes crucial information such as citation counts, frequently cited authors, and the leading journals publishing articles on this topic. Using bibliometric data, trend analysis, author collaboration, and journal networks can provide a comprehensive view of the development in this field. Bibliometrics helps map the significant influence of specific authors or journals and identifies gaps in existing research (Moed, 2021).

2. Tools Used

VOSviewer is utilized for bibliometric analysis, allowing the mapping of connections between keywords, authors, and publications in visual formats. This tool also facilitates deeper insights into author collaborations and research trends within the field.

3. Visualization of Author and Journal Networks

A visual map is created to depict collaborations among authors and between leading journals that publish articles related to green investment. This visualization aids in understanding the significant influence of certain authors or journals in this area and helps identify gaps in existing research.

4. Trend and Development Analysis

Trend analysis seeks to identify the direction of research related to green investment over the years. This analysis is based on the number of publications, the most researched topics, and shifts in methodological approaches used by researchers in this field.

Conceptual Framework

Based on the results of the SLR and bibliometric analysis, the proposed conceptual framework illustrates the connection between green investment, sustainable firm performance, and the influencing variables. This framework is intended to serve as a reference for ongoing research and decision-making regarding

green investments. It considers moderating variables such as ESG disclosures and corporate innovation that impact this relationship.

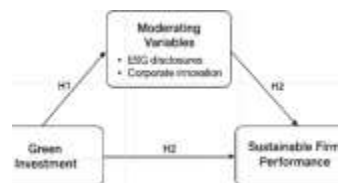


Figure 1. Conceptual Framework

Data Analysis Techniques

Data analysis in this study employs two approaches:

1. Thematic Synthesis: Selected articles are analyzed qualitatively to identify key themes emerging from the literature. This process involves open coding, axial coding, and selective coding to compile thematic categories.
2. Bibliometric Analysis: Utilizing VOSviewer, this analysis visualizes the relationships between keywords, authors, and institutions. The goal is to understand research trends, topic centrality, and collaboration networks within the literature on green investment and SFP in Indonesia.

Limitations Methodology

Despite the systematic and structured nature of SLR and bibliometric analysis, several limitations must be acknowledged. These include publication bias, as articles not published in indexed journals may be overlooked. The study is confined to publications from 2015 to 2025, which limits historical perspectives. Focusing on the Indonesian context restricts the generalizability of findings to other regions. Additionally, not all journals provide complete citation data, which may result in an incomplete bibliometric analysis. The study relies on secondary data from existing literature, meaning unpublished research may not be included. Language barriers also pose challenges, as the study is limited to English-language articles, excluding potentially relevant work in other languages (Zupic, 2015). Nevertheless, this methodology aims to provide a comprehensive understanding of the relationship between green investment and sustainable firm performance, contributing significantly to the theory and practice of sustainability in Indonesia.

RESULTS AND DISCUSSION

The article selection process adhered to PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Moher, 2009). An initial review of national and international databases (Garuda, DOAJ, Google Scholar, Sinta, Scopus) yielded 462 articles using keywords such as "green investment," "sustainable performance," "ESG," and "Indonesia" within the 2015–2025 timeframe. After rigorous filtering for relevance to the Indonesian context and peer-reviewed status, 50 articles were selected for further analysis. The stages of identification, screening, eligibility, and inclusion are documented in the PRISMA diagram.



Figure 2. Article

Selection Results

Synthesis Thematic : Findings Keys and Interpretations

The SLR of the 50 articles reveals three main themes addressing the influence of green investment (GI) on sustainable firm performance in Indonesia, the role of ESG disclosures and governance, and the effect of government policies and incentives:

1. Impact of Green Investment on Financial and Operational Performance: The synthesis indicates that GI significantly enhances both financial and operational performance, including improved energy efficiency, waste reduction, and long-term cost savings (Nasution, 2022). Investments in environmentally friendly technologies and sustainable management practices have been shown to boost profitability and competitiveness. For instance, a study on state-owned enterprises like PT Pertamina and PT PLN indicates improved Return on Assets (ROA) and cost efficiency following GI program implementation (Hariyanto, 2023).
2. The Role of ESG Disclosure and Governance in Enhancing Company Legitimacy: ESG disclosure is identified as a crucial tool for increasing corporate transparency and accountability. Research by Hussain (2024) found that firms with robust ESG reporting gain social legitimacy and greater investor confidence. Moreover, positive correlations exist between ESG disclosures and easier access to financing, particularly as banking and capital markets increasingly incorporate sustainability principles into risk assessments and investment decisions.
3. Influence of Government Policies and Incentives on GI Implementation: National policies, such as OJK Regulation No. 51/POJK.03/2017 on sustainable finance and Indonesia's green taxonomy, provide a framework and incentives for companies to adopt GI. demonstrated that the manufacturing and energy sectors respond positively to fiscal incentives and green financing facilitated by the government. Additionally, the roles of Bappenas and KLHK in formulating regulations and low-carbon development roadmaps further promote the adoption of green investments in Indonesia.

Bibliometric Analysis

The bibliometric mapping conducted using VOSviewer identified "green investment," "sustainability," "ESG," and "firm performance" as dominant keywords in the literature. The visualization of keyword co-occurrence illustrates research clusters focused on renewable energy, environmental efficiency, green policies, and sustainability management. A notable surge in publications occurred between 2021 and 2024, highlighting an increased focus on GI and sustainable performance. Gadjah Mada University, University of Indonesia, and Diponegoro University emerged as the most productive institutions, becoming central figures in the citation network (Adi (2021); Lestari (2015)).

Integration of Findings with Indonesian Theory and Context

The findings can be interpreted through the lens of Legitimacy Theory Suchman (2016) which posits that companies engage in GI to meet social expectations and gain legitimacy from stakeholders and regulators. Similarly, Stakeholder Theory (Freeman, 1984) emphasizes that business success depends on a company's ability to address the interests of various parties, including investors and the public. The Triple Bottom Line concept (Elkington, 1997) also underscores the importance of balancing economic, social, and environmental aspects. Effective implementation of GI has proven to enhance company performance across these three dimensions. In the Indonesian context, factors such as fiscal incentives, regulatory pressures, green financing support, and growing public environmental awareness play vital roles in strengthening the connection between GI and sustainable performance. For example, national banks are beginning to allocate a substantial portion of their loan portfolios to green projects as part of sustainable finance policies, while the energy and manufacturing sectors have seen improvements in GI projects, supported by international collaboration and development finance institutions.

Academic and Practical Implications

This research deepens academic understanding of green investment (GI) practices in developing countries like Indonesia by highlighting the role of ESG disclosures and government interventions, while also offering practical insights for policymakers to craft effective green incentives and guiding corporate managers to embed GI strategies into long-term planning for enhanced competitiveness and sustainability. A conceptual model illustrating the multivariate relationship among GI, ESG disclosures, government policies, and sustainable performance has been developed, which can serve as a foundation for future quantitative studies using SEM-PLS to test the structural validity of the proposed connections. Further research can explore the generalizability of this model to other sectors or developing countries, potentially modifying or expanding existing theories on green investment adoption and its impact on sustainable performance.

Relevance to the Conceptual Framework and Hypotheses

The findings explicitly support the hypothesis that green investment positively influences sustainable firm performance, with ESG disclosure acting as a mediator and government policy as a moderator. This outcome aligns with the previously proposed conceptual framework, which positioned GI as a key determinant of sustainability performance. The developed conceptual model effectively explains the complex relationships among key variables, including the moderating role of government policy and the mediating role of ESG practices. The SLR and bibliometric analysis served as primary methods for obtaining these findings, allowing for the identification of trends, key themes, and relationships in the relevant literature.

CONCLUSION

This study aimed to identify the optimal point of green investment related to sustainable firm performance in Indonesia through a systematic literature review (SLR) and bibliometric analysis from 2015 to 2025. Three main themes were successfully identified: (1) the direct influence of green investment on financial performance and operational efficiency, (2) the role of ESG disclosure in enhancing company trust and legitimacy, and (3) the importance of supportive policies and governance in implementing GI. Bibliometric data indicate a significant increase in GI publications post-2020, suggesting that this issue is receiving greater scientific attention.

Theoretically, this research enriches the discourse on the relationship between GI and SFP in developing countries, particularly Indonesia, and promotes the integration of ESG and green accounting approaches within academic frameworks.

However, the study has limitations, as it focused solely on academic literature available in reputable national journal databases and did not fully explore GI practices in the MSME sector or BUMDes that have begun engaging in environmental activities. Additionally, the methodological limitations of bibliometrics may overlook qualitative nuances in the articles.

Future research recommended For :

1. Determine the Optimal Level of Green Investment (GI)
Future research should empirically identify the point at which green investment maximizes sustainable firm performance, avoiding both underinvestment and overinvestment.
2. Explore Green Investment in MSMEs and Non-Java Regions
Studies should focus on how GI is implemented in micro, small, and medium enterprises (MSMEs) and in regions outside Java to promote a more inclusive and contextual understanding of sustainability practices in Indonesia.
3. Develop a Green Investment–Sustainable Performance Index
Researchers are encouraged to create a national index that measures the effectiveness of GI on firm performance by combining financial, environmental, and ESG indicators tailored to the Indonesian context.

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