Journal of Innovation & Knowledge 10 (2025) 100648

Contents lists available at ScienceDirect

Journal of Innovation & Knowledge

journal homepage: www.elsevier.com/locate/jik

# Revisiting knowledge on ESG/CSR and financial performance: A bibliometric and systematic review of moderating variables

Marcos Alexandre dos Reis Cardillo [a,*], Leonardo Fenando Cruz Basso [b]

[a] Doctorate in Business Administration Course, Mackenzie Presbyterian University, Rua Ibiraja, no 221, apto 81, Vila Guarani, São Paulo, São Paulo 04310-020, Brazil
[b] Mackenzie Presbyterian University, São Paulo, Brazil

ARTICLE INFO

*JEL classification:*
G300 corporate finance and governance
General

*Keywords:*
Environmental, social, and governance
Corporate social responsibility
Firm value
Corporate financial performance
Moderating variables
Systematic review
Bibliometric analysis
Research agenda

ABSTRACT

This study conducts a comprehensive bibliometric analysis and systematic review to investigate the moderating variables that influence the relationship between Environmental, Social, and Governance (ESG) measures, Corporate Social Responsibility (CSR) measures, and Corporate Financial Performance (CFP). Analyzing 108 articles from the Web of Science and Scopus databases published between 2019 and 2023, the study identifies key variables, influential studies, and methodological approaches within the ESG/CSR-CFP nexus. The findings reveal that moderating variables such as governance structures, cultural norms, technological readiness, market maturity, economic conditions, industry characteristics, firm strategy, and CSR engagement levels significantly impact the strength and direction of ESG and CSR effects on financial performance. However, the literature demonstrates considerable inconsistencies due to diverse research designs, varying definitions of ESG and CFP, and underrepresentation of moderating variables such as social and cultural factors, technological readiness, and firm-specific characteristics. The study highlights the need for more standardized variables, advanced research methodologies, and a broader exploration of these underexamined moderating variables to develop a more nuanced understanding of how ESG and CSR initiatives influence corporate financial outcomes. This work provides a framework for future research to address these gaps, enhancing the academic discourse on corporate sustainability and financial performance.

## Introduction

Sustainability has evolved from a peripheral concern to a pivotal element shaping corporate strategies in today's business landscape. Environmental, Social, and Governance (ESG) disclosures and Corporate Social Responsibility (CSR) engagement — now considered essential — play a critical role in ensuring transparency, enhancing financial performance, and securing long-term competitive advantages (Ellili, 2022; Sánchez García, 2018). Moreover, companies are increasingly adopting green finance to comply with regulatory requirements and boost their competitiveness and resilience in a rapidly changing global environment (Khan et al., 2024; Lyulyov et al., 2024). In tandem, sustainable business models enable firms to better adapt to market dynamics and global challenges, offering strategic advantages and fostering innovation (Bashir et al., 2022). As sustainability becomes embedded in core operations, improvements in operational efficiency, risk management, and stakeholder relationships drive long-term profitability and growth (Saini et al., 2023; Coelho et al., 2023).

The widespread adoption of ESG principles and CSR initiatives signifies a critical shift in how corporations address global challenges such as climate change, social inequality, and ethical governance. These frameworks, once considered optional, are now integral to corporate strategies, with firms recognizing their importance in building resilience, maintaining a competitive edge, and ensuring financial sustainability while addressing societal and environmental concerns (Sun et al., 2022). Research exploring the relationship between ESG/CSR initiatives and corporate financial performance (CFP), however, faces numerous challenges due to the inconsistencies and contradictory findings across studies. Some findings highlight the positive effects of ESG/CSR on financial outcomes, while others report neutral or even negative impacts (Barnett & Salomon, 2012; Friede et al., 2015).

One significant challenge in this research field is the lack of standardization in ESG/CSR metrics. Different data providers (e.g., MSCI and Sustainalytics) employ varying methodologies, making cross-comparisons difficult (Gillan et al., 2021). Compounding these challenges is the multi-dimensional nature of financial performance, which

* Corresponding author.
*E-mail address:* marcos.cardillo@mackenzista.com.br (M.A.R. Cardillo).

https://doi.org/10.1016/j.jik.2024.100648
Received 26 February 2024; Accepted 14 December 2024
Available online 20 December 2024

includes profitability, market performance, and risk management, each of which may be differently affected by sustainability efforts (Orlitzky et al., 2003; Alshehhi et al., 2018). Furthermore, the indirect benefits of ESG and CSR, such as improved stakeholder trust or corporate reputation, may take years to materialize and are difficult to quantify, complicating the assessment of the true value of these initiatives (Barnett & Salomon, 2012; Lins et al., 2017).

The underexplored role of moderating variables further complicates the analysis. Governance structures, industry characteristics, and regional factors can significantly influence the relationship between ESG/CSR and financial performance (Ye et al., 2021; Gillan et al., 2021). For example, companies with strong governance frameworks are more likely to successfully integrate sustainability into their core strategies, thereby, enhancing financial outcomes (Chen et al., 2024). Additionally, economic conditions play a critical role in shaping the financial impacts of ESG efforts, with varying results depending on whether firms operate in stable or volatile markets (Flammer, 2018; Lins et al., 2017). The interaction between these moderating factors and ESG/CSR initiatives highlights the need for more refined studies that consider context-specific conditions (Raman et al., 2024).

In addition, the lack of long-term studies and the over-reliance on cross-sectional data limit our understanding of the evolving impacts of ESG on financial performance (Orlitzky et al., 2003; Margolis et al., 2009). Consequently, longitudinal research is essential to capture the lasting effects of sustainability efforts and better understand how these initiatives influence firm resilience and financial outcomes over time (Eccles et al., 2014; Brammer et al., 2006; Gillan et al., 2021). Standardized metrics, advanced methodologies, and deeper exploration of moderating variables are crucial to overcoming these challenges and fully grasping the complexities of ESG/CSR's impact on financial performance.

The debate around ESG and CSR's financial effects is primarily anchored in theoretical frameworks such as Stakeholder Theory and Agency Theory, which provide insights into how companies balance competing interests (Freeman, 1984; Jensen & Meckling, 1976). While Stakeholder Theory underscores the importance of considering the interests of employees, customers, and communities, it falls short of fully explaining how cultural, social, and institutional factors moderate the relationship between ESG and financial performance (Laique et al., 2023). These complexities are further compounded by varying levels of regulation and public scrutiny across industries and regions (Lyulyov et al., 2024), which affect how firms prioritize sustainability.

The importance of financial sustainability must also be contextualized within broader discussions around innovation and technology. As global challenges such as climate change, social inequality, and resource depletion intensify, businesses are increasingly pressured to balance financial goals with their social and environmental responsibilities (Orlitzky et al., 2003). Firms that successfully integrate sustainability into their core business strategies, especially through technological innovations, are better positioned to create long-term value for both shareholders and stakeholders (Yang et al., 2024). This alignment between financial sustainability and social/environmental objectives is crucial for ensuring resilience and competitiveness in the face of global challenges (Raman et al., 2024).

While ESG and CSR frameworks offer substantial potential to enhance financial performance, their impact is shaped by a complex web of direct and indirect effects moderated by governance, industry, and market-specific factors (Ye et al., 2021). The full scope of these effects is further complicated by the lack of standardized ESG metrics, the underexplored role of moderating variables, and the multi-dimensional nature of financial performance. To address these challenges, this paper conducts a systematic review and bibliometric analysis, highlighting how ESG and CSR initiatives influence financial outcomes and identifying key research gaps.

## Theoretical framework

The relationship between ESG and CSR factors converting into CFP is complex and multifaceted. Numerous empirical studies demonstrate varying positive, neutral, or negative outcomes depending on a range of moderating variables, including CEO characteristics, governance structures, industry type, and market conditions. Understanding the role of these moderating variables is essential to explain the conflicting results found in the literature This theoretical framework will explore several fundamental theories, such as Shareholder Theory, Stakeholder Theory, Agency Theory, Resource-Based View (RBV), and Institutional Theory, while emphasizing the critical role of moderating variables in shaping the impact of ESG and CSR initiatives on financial performance.

### *Shareholder theory*

Milton Friedman's (1970) Shareholder Theory asserts that the foremost duty of a corporation is to maximize shareholder value, casting initiatives such as ESG and CSR as secondary unless they directly contribute to profitability. This perspective — rooted in prioritizing short-term financial gains — traditionally regards sustainability efforts with skepticism, suggesting they impose unnecessary costs. However, as the corporate landscape evolves, recent empirical studies offer a more nuanced view, revealing that under certain circumstances, ESG initiatives can align with the long-term interests of shareholders. The theory's interpretation is, therefore, shifting as moderating factors such as governance structures and market conditions redefine the potential value of ESG activities within this framework.

According to Shareholder Theory, ESG and CSR initiatives are often viewed as diversions from the core purpose of maximizing profit. Critics argue that such activities can impose unnecessary costs on firms, reducing their competitive edge. For instance, investing in costly sustainability projects can reduce short-term profits and create inefficiencies. Barnea and Rubin (2010)) argue that CSR initiatives are often driven by managerial motives such as reputation building rather than genuine financial incentives, leading to agency costs and misalignment between managers and shareholders. Additionally, Hart and Zingales (2017) suggest that in firms with concentrated ownership, major shareholders exert pressure to prioritize short-term profits over long-term sustainability goals, disincentivizing ESG initiatives unless they provide immediate financial returns.

Furthermore, evidence shows that ESG initiatives do not always align with financial performance. Albuquerque et al. (2020) have found that during periods of economic downturn, firms often deprioritize ESG activities to preserve financial performance, suggesting that in volatile markets, ESG may not be seen as a value-enhancing strategy. Similarly, Peloza and Shang (2010) argue that the effectiveness of CSR in creating value varies widely across different industries and stakeholder groups, with some firms seeing little to no financial return from these initiatives.

In certain cases, ESG and CSR activities may even reduce financial performance by increasing operational costs and diverting resources from core profit-generating activities. In highly competitive industries with low profit margins, the additional costs of ESG compliance can strain financial resources, leading to lower profitability. Companies with substantial environmental or social obligations may find themselves at a disadvantage compared to competitors that do not engage in such practices. This view is supported by empirical findings that suggest ESG's impact on financial performance is not universally positive (Khan et al., 2024), and in industries with low public visibility, the financial benefits of ESG are often minimal.

However, recent studies also provide evidence that ESG initiatives can align with shareholder interests under specific conditions. For example, Ghosh and Gupta (2023) demonstrated that decarbonization strategies, as part of broader ESG efforts, contribute positively to financial performance, particularly in industries under significant regulatory scrutiny. This suggests that ESG activities, when aligned with

external pressures such as regulation or consumer expectations, can serve shareholder interests by mitigating risks and enhancing reputation. Similarly, Saini et al. (2023) argue that ESG practices can lead to lower capital costs, improved risk management, and enhanced operational efficiency, but these benefits vary significantly across industries and firm sizes, reinforcing the notion that the financial impact of ESG is context-dependent.

Ownership structure plays a crucial role in moderating the financial outcomes of ESG and CSR initiatives. In firms with dispersed ownership and stronger governance mechanisms, ESG initiatives are more likely to be embraced as part of a long-term strategy for value creation (Coelho et al., 2023). Such firms, driven by long-term institutional investors, may be more willing to invest in sustainability projects, recognizing that these initiatives can enhance reputation and build customer loyalty over time, thus, benefiting shareholder value in the long run.

Similarly, CEO characteristics play a significant role in shaping how ESG initiatives align with shareholder value. CEOs with a background in sustainability or those who personally champion long-term goals are more likely to integrate ESG practices into their firm's strategic vision, leading to better alignment with shareholder value over time (Shen et al., 2019). Rousseau et al. (2023) have found that firms with sustainability-oriented CEOs are better able to balance short-term profitability with long-term ESG benefits, suggesting that leadership commitment is essential for driving the success of ESG initiatives. In contrast, CEOs who prioritize immediate financial returns may resist ESG investments, viewing them as costly distractions from profit-maximizing activities.

While Shareholder Theory traditionally prioritizes profit maximization, conflicting evidence suggests that the relationship between ESG and financial performance is contingent on several moderating factors. Market conditions, for example, play a significant role in shaping this relationship. During periods of market growth, firms that invest in ESG may see positive returns as consumers and investors increasingly value sustainability. Conversely, in periods of economic downturn, ESG initiatives may be viewed as non-essential, leading to reduced financial commitment (Enciso-Alfaro & García-Sánchez, 2024).

Board diversity is another critical moderating factor. Enciso-Alfaro and García-Sánchez (2024) have found that firms with a higher proportion of female executive directors are more proactive in driving climate innovation, which can enhance financial performance. However, they also identified a threshold effect, where the positive impact of female representation diminishes after a certain point, suggesting that governance structures must be carefully balanced to optimize the financial returns from ESG activities.

Industry-specific dynamics further complicate the relationship between ESG and financial performance. Firms in industries with high public visibility and regulatory oversight, such as consumer goods or finance, are more likely to benefit from ESG activities (Ellili, 2022). In these sectors, ESG practices serve not only to mitigate risks but also to enhance legitimacy, aligning with shareholder interests by managing reputational risks and maintaining public trust. In contrast, firms in industries with less exposure to environmental or social risks may not experience the same financial benefits, as ESG activities may not be as integral to their strategic objectives (Khan et al., 2024).

While Shareholder Theory has traditionally been critical of ESG and CSR initiatives, empirical evidence presents a more nuanced view. Under certain conditions, such as strong governance, leadership commitment, and industry-specific pressures, ESG activities can align with shareholder interests and enhance financial performance. However, the financial benefits of ESG are highly contingent on contextual factors such as market conditions, ownership structure, and regulatory environment. These conflicting findings highlight the importance of understanding the moderating variables that shape the relationship between ESG initiatives and financial performance, suggesting that the success of such initiatives is far from universal and often depends on the broader market and governance context.

*Stakeholder theory*

Stakeholder Theory, introduced by Freeman (1984), expands corporate responsibility beyond shareholders to include various stakeholders such as employees, customers, suppliers, communities, and the environment. This theory posits that creating value for all stakeholders, rather than focusing solely on shareholders, leads to long-term financial success. ESG and CSR initiatives naturally align with this framework as they seek to address the needs and concerns of a wide array of stakeholder groups. However, the financial impact of these initiatives is influenced by several moderating variables, leading to diverse outcomes across different contexts.

Recent empirical evidence supports the positive link between ESG practices and financial performance, particularly when addressing stakeholder needs. Saini et al. (2023) have found that ESG practices are associated with lower capital costs and improved risk management, especially in firms that actively engage with diverse stakeholder groups. This aligns with the idea that addressing stakeholder concerns can reduce risks and enhance operational efficiencies, leading to better financial outcomes. However, the study also highlights that these benefits are not uniform across all industries, suggesting that the influence of ESG on financial performance depends heavily on industry-specific dynamics.

Board composition is a critical moderating variable affecting the relationship between ESG activities and financial performance through Stakeholder Theory. Firms with more diverse boards — particularly those with higher levels of gender diversity — tend to manage stakeholder relationships more effectively, resulting in improved financial outcomes (Franco et al., 2020).

Enciso-Alfaro and García-Sánchez (2024) reinforce this view, finding that companies with higher female representation on boards are more proactive in addressing climate change and sustainability issues, strengthening stakeholder relationships and enhancing long-term financial performance. This mirrors earlier findings on the role of diversity such as those by EncisoAlfaro and García-Sánchez (2023), who argue that female leadership, particularly among executive directors, significantly enhances the transition toward circular business models. This transition not only drives environmental sustainability but also improves operational efficiency and financial outcomes. However, both studies note a diminishing return when board diversity exceeds certain thresholds, suggesting that diversity has limits in terms of its financial impact.

CEO leadership is another significant moderating variable. CEOs who are personally committed to sustainability and social responsibility are more likely to integrate ESG initiatives into the company's core strategies, ensuring that stakeholder needs are prioritized (Shen, 2019). For example, Rousseau et al. (2023) show that companies led by CEOs who actively champion sustainability tend to exhibit stronger alignment between ESG practices and financial performance. In contrast, CEOs who focus on short-term financial results may deprioritize ESG activities, potentially damaging stakeholder relationships and long-term profitability. Similarly, Yang et al. (2024) emphasize the importance of leadership in aligning CSR with technological innovation, noting that responsible leadership can enhance innovation while balancing stakeholder needs. However, excessive CSR can draw focus away from innovation by consuming limited resources, further complicating financial outcomes.

Stakeholder pressure also plays a crucial role in shaping the financial outcomes of CSR activities. Firms operating in consumer-facing industries, where customers and activist groups are vocal about sustainability issues, are likelier to adopt ESG practices to maintain their reputation and market share (Rangan et al., 2021). In such sectors, failing to meet stakeholder expectations regarding social and environmental responsibility can lead to reputational damage and revenue loss. Hossain et al. (2024) have highlighted that companies under high stakeholder pressure, whether from customers, investors, or regulators,

tend to exhibit better financial outcomes when prioritizing ESG initiatives. This reinforces the argument that addressing stakeholder needs through ESG efforts can improve financial performance, especially in industries with high public visibility.

Ownership structure also influences the effectiveness of ESG practices in improving financial performance. Coelho et al. (2023) found that firms with dispersed ownership are more likely to prioritize ESG initiatives, as these firms tend to cater to a broader range of stakeholders, including institutional investors who often demand higher standards of sustainability and governance. In contrast, companies with concentrated ownership may face pressure to prioritize short-term financial gains, which can hinder the implementation of ESG initiatives that focus on long-term stakeholder value. Chen et al. (2024) also underscore the role of governance, showing that financial technology-driven sustainability efforts are more effective in firms with strong governance structures. These firms experience enhanced carbon emission reductions and improved financial performance, further proving the moderating role of governance in ESG success.

Additionally, industry-specific factors moderate the relationship between ESG practices and financial outcomes. For example, in industries with significant environmental impact, such as energy or manufacturing, firms that engage in proactive ESG initiatives are more likely to maintain legitimacy and manage risks effectively, thereby, ensuring long-term financial success (Khan et al., 2024). Conversely, companies in less-regulated industries may not experience the same benefits from ESG activities, as the pressure to address stakeholder concerns is less pronounced. Lyulyov et al. (2024) demonstrate how green branding within the context of Sustainable Development Goals (SDGs) enhances national competitiveness in the EU, suggesting that firms within more regulated environments are likely to see greater financial returns from their sustainability initiatives.

Despite the positive correlation between stakeholder engagement through ESG practices and financial performance, some studies report conflicting results. For instance, Peloza and Shang (2010) have found that while CSR activities can create value by influencing stakeholder perceptions and behaviors, their effectiveness varies depending on the type of activity and the stakeholder group targeted. Philanthropic efforts may yield less tangible financial benefits than product-related initiatives that directly impact consumer behavior. This suggests that the type of CSR activity and the stakeholder group being engaged serve as critical moderating variables in determining the financial impact of ESG practices.

In general, Stakeholder Theory provides a compelling rationale for adopting ESG and CSR activities, with the expectation that firms can achieve long-term financial success by creating value for all stakeholders. However, the financial outcomes of these initiatives are influenced by several moderating variables, including board composition, CEO leadership, stakeholder pressure, ownership structure, and industry-specific dynamics. Firms that successfully balance these factors are more likely to realize the financial benefits of ESG practices, while others may experience neutral or even negative financial impacts depending on their specific context. Integrating new insights from studies on gender diversity, digital integration, and national sustainability initiatives further highlights stakeholder engagement's complex but promising role in shaping long-term financial outcomes.

### *Agency theory*

Agency Theory, developed by Jensen and Meckling (1976), focuses on the potential conflicts of interest between principals (shareholders) and agents (managers). Managers may pursue CSR and ESG activities for personal or reputational gains, even when these initiatives do not directly benefit shareholders, leading to agency costs. The presence of robust governance structures (e.g., performance-based executive compensation and independent boards) can mitigate these agency conflicts by aligning managerial actions with shareholder interests, ensuring that ESG initiatives contribute to long-term financial performance. The latest empirical evidence indicates that the correlation between ESG activities and financial outcomes, as per Agency Theory, is frequently influenced by various moderating factors.

One critical moderating variable is governance structure, particularly the presence of independent directors and the design of executive compensation schemes. Rousseau et al. (2023) demonstrate that firms with well-structured executive compensation schemes tied to ESG performance tend to outperform those without. These firms can align managerial incentives with shareholder interests by ensuring that executives are rewarded not just for short-term financial results but also for achieving long-term sustainability goals. In contrast, firms with weaker governance structures are more susceptible to agency problems, where managers may pursue ESG initiatives that enhance their personal reputation or social standing but fail to deliver financial returns for shareholders (Cohen et al., 2023).

Recent research from Sun et al. (2022) supports these findings, showing that board independence, CEO duality, and the adoption of integrated reporting standards significantly influence the integration of CSR disclosures. However, the study found that board independence and gender diversity did not directly impact CSR integration levels, highlighting that governance mechanisms must be specifically aligned with sustainability goals to mitigate agency conflicts effectively. EncisoAlfaro and García-Sánchez (2023) further argue that female executive directors, more so than independent directors, are more likely to drive meaningful ESG changes, emphasizing that governance structures must be carefully tailored to ensure that managerial ESG actions align with shareholder interests.

Ownership concentration also significantly determines how ESG activities align with shareholder interests. In firms with dispersed ownership, shareholders have less direct control over managerial decisions, which can exacerbate agency problems and lead to ESG initiatives that may not align with financial performance goals (Coelho et al., 2023). Conversely, in firms with concentrated ownership, large shareholders can exert greater influence over managerial decisions, ensuring that ESG initiatives are more closely aligned with the company's financial objectives. This dynamic is particularly evident in the study by Saini et al. (2023), which has found that concentrated ownership structures tend to lead to more focused ESG initiatives, improving operational efficiency and risk management.

Chen et al. (2024) also demonstrate that governance characteristics such as board independence and firm size moderate the impact of digital integration on corporate sustainability. Their findings align with Agency Theory, suggesting that firms with stronger governance structures are better positioned to ensure that digital sustainability efforts translate into financial benefits rather than becoming a source of agency costs.

CEO characteristics are another moderating factor that influences the effectiveness of ESG activities under Agency Theory. Shen (2019) argues that CEOs who are personally committed to sustainability and long-term value creation are more likely to integrate ESG practices into the firm's strategic vision. This can help reduce agency conflicts by aligning managerial actions with shareholder interests. For example, firms led by sustainability-oriented CEOs tend to balance short-term profitability with long-term ESG goals, as demonstrated in the findings of Rousseau et al. (2023). However, CEOs who prioritize short-term financial performance may resist ESG initiatives, viewing them as a distraction from immediate financial gains. Yang et al. (2024) further note that while responsible leadership enhances innovation in ESG practices, excessive focus on CSR can crowd out innovation by consuming limited resources, thereby, complicating the financial outcomes.

Recent empirical evidence also highlights the role of board diversity in mitigating agency problems. Enciso-Alfaro and García-Sánchez (2024) have found that firms with higher levels of gender diversity on their boards tend to adopt more comprehensive ESG initiatives, which not only enhance corporate governance but also align more closely with shareholder interests. This is particularly true for firms with female

executive directors, who were found to play a stronger role in driving climate innovation and long-term sustainability strategies. However, the study also notes that the positive effects of gender diversity diminish after reaching a certain threshold, suggesting that there are limits to the governance benefits provided by diverse boards. EncisoAlfaro and García-Sánchez (2023) further highlight how female leadership drives the transition to circular economy models, suggesting that when aligned with governance, leadership characteristics play a critical role in the success of ESG initiatives.

The role of executive compensation in driving ESG performance is well-documented in the literature. Firms that tie managerial compensation to ESG outcomes are more likely to see improved financial performance, as managers are incentivized to focus on both short-term profitability and long-term sustainability goals (Rousseau et al., 2023). However, the effectiveness of this approach depends on the specific design of the compensation package. For instance, firms that offer long-term stock options linked to ESG performance tend to perform better financially, as managers are encouraged to adopt a longer-term perspective (Coelho et al., 2023). In contrast, firms with short-term bonuses tied only to financial results may experience weaker alignment between managerial decisions and shareholder value.

Market conditions also moderate the impact of ESG initiatives under Agency Theory. During market uncertainty or economic downturns, managers may deprioritize ESG activities to focus on short-term financial performance, exacerbating agency conflicts. Lins et al. (2017) and Flammer (2015) have found that firms facing financial instability are more likely to reduce ESG initiatives, which can lead to reputational risks and long-term value destruction. However, firms that maintain their ESG commitments during difficult market conditions tend to build stronger relationships with stakeholders, ultimately improving their financial performance in the long run. Chen et al. (2024) add that fintech-driven sustainability initiatives (e.g., carbon emission reductions) can help firms weather economic downturns by enhancing efficiency and resilience, further proving the role of market conditions in shaping the financial outcomes of ESG initiatives.

Despite the general alignment of ESG initiatives with shareholder interests when robust governance structures are in place, conflicting findings in the literature suggest that not all ESG activities lead to financial benefits. For example, Ye et al. (2021) have found that the effectiveness of ESG initiatives depends heavily on the presence of mediating and moderating variables, such as governance quality, CEO characteristics, and industry-specific dynamics. In some cases, ESG activities may create agency costs, particularly when managers pursue these initiatives for personal gain rather than shareholder value. Enciso-Alfaro and García-Sánchez (2024) also highlight the risks of over-investing in ESG activities without clear financial returns, noting that firms can experience diminishing financial benefits if ESG initiatives are not carefully aligned with core business strategies.

Agency Theory offers a more cautious perspective on ESG and CSR activities, highlighting the potential for agency costs when managerial actions do not align with shareholder interests. Managers may pursue ESG initiatives for personal or reputational reasons, leading to inefficiencies and potential conflicts of interest. Nonetheless, strong governance structures, such as independent boards and executive compensation schemes tied to ESG performance, can mitigate these agency problems. The effectiveness of ESG activities under Agency Theory is influenced by several moderating factors, including ownership concentration, board diversity, and market conditions. While firms with robust governance mechanisms tend to experience financial benefits from ESG efforts, those with weaker governance may face significant agency costs. Thus, the relationship between ESG activities and financial performance is contingent on the firm's ability to align managerial decisions with shareholder value through effective governance practices.

*Resource-based view*

The Resource-Based View (RBV), as articulated by Barney (1991), posits that a firm's competitive advantage stems from its unique resources and capabilities. ESG and CSR initiatives, under this framework, can be viewed as strategic resources that help firms achieve long-term financial success. Through improved reputation, enhanced innovation, and operational efficiencies, ESG practices can differentiate firms in the marketplace. However, the ability to convert ESG activities into competitive advantage is heavily moderated by factors such as industry dynamics, R&D intensity, innovation capacity, and governance structures, leading to diverse financial outcomes across firms and sectors.

Empirical research strongly supports the notion that ESG activities, when integrated into a firm's resource base, can enhance financial performance by strengthening key capabilities. For instance, Ghosh and Gupta (2023) found that companies investing in decarbonization and sustainable innovation exhibit superior financial performance compared to those that do not. These firms leverage ESG initiatives as strategic resources, differentiating themselves and responding to consumer demand for environmentally responsible products. Similarly, Saini et al. (2023) demonstrated that ESG practices improve risk management and reduce capital costs, reinforcing the idea that ESG can act as a valuable resource for strengthening a firm's financial position.

However, the financial benefits of ESG practices are not uniform. Industry dynamics play a pivotal role in moderating the financial impact of ESG activities. Firms in industries with substantial environmental footprints, such as energy and manufacturing, are more likely to benefit from proactive ESG strategies, due to regulatory pressures and growing demand for sustainable practices (Khan et al., 2024). In contrast, firms in less-regulated sectors, where external pressures to adopt sustainability initiatives are lower, may not experience similar financial returns from ESG activities. This divergence underscores the importance of understanding the specific industry context when evaluating the financial impact of ESG initiatives.

R&D intensity and innovation capacity further influence how effectively firms can capitalize on ESG efforts. Bartolacci et al. (2019) have found that firms with strong R&D capabilities are better positioned to integrate ESG principles into their product development processes, which in turn improves their competitive advantage and financial outcomes. Companies with higher R&D intensity can innovate around sustainability challenges, developing new products that align with the growing demand for environmentally friendly solutions. Similarly, Chen et al. (2024) emphasized the role of fintech in reducing carbon emissions, particularly in high-carbon regions, highlighting how innovation capacity can translate ESG activities into financial gains. The ability of firms to harness technological innovation for environmental improvement underscores the importance of integrating ESG into the firm's innovation strategy.

In addition to innovation, governance structures play a critical role in the financial success of ESG initiatives. Saini et al. (2023) found that larger firms and those with strong governance frameworks are better able to turn ESG initiatives into financial gains. These firms typically have more resources to invest in comprehensive sustainability strategies and the governance mechanisms to ensure that ESG activities align with long-term financial goals. In contrast, smaller firms or those with weaker governance structures may struggle to achieve the same financial benefits, as they often lack the resources and oversight to manage sustainability initiatives effectively.

Despite the generally positive relationship between ESG activities and financial performance suggested by the RBV, some studies report mixed results. For instance, Verma and Mukhtaruddin (2023)) have highlighted that the financial impact of environmental responsibilities can vary significantly based on geographical and regulatory differences. Firms in developed markets tend to experience more positive financial outcomes from proactive environmental practices, while firms in emerging economies may face challenges in translating ESG activities

into financial gains due to weaker regulatory frameworks and less demand for sustainability from consumers. This geographical variation underscores the role of institutional support in shaping the financial benefits of ESG activities.

Additionally, the long-term nature of ESG investments poses challenges for firms focused on short-term financial performance. While the RBV emphasizes that ESG activities contribute to long-term competitive advantage, the financial benefits may not always be immediate. Bos et al. (2017) have found that some firms, particularly in sectors such as healthcare, improved short-term financial performance through cost-cutting measures that negatively impacted ESG-related factors (e.g., employee well-being), suggesting a trade-off between short-term financial gains and long-term sustainability goals.

New evidence from Quttainah and Ayadi (2024) reinforces the role of digital integration as an enabler of ESG-driven competitive advantage. They have found that digital technologies significantly enhance emissions reduction, environmental innovation, and resource efficiency, particularly in firms with lower initial sustainability performance. This highlights how technology, as a unique resource, allows firms to achieve both environmental and financial goals, further supporting RBV's premise that valuable and rare resources (e.g., ESG-driven technological innovation) can lead to competitive advantage.

The RBV emphasizes the strategic value of unique resources and capabilities in generating competitive advantage. From this perspective, ESG initiatives can be seen as valuable intangible assets that enhance a firm's reputation, foster innovation, and improve operational efficiencies. Firms that invest in sustainable practices are better positioned to meet evolving market demands and regulatory standards, thereby, improving their financial performance in the long term. However, the financial benefits of ESG initiatives depend on a firm's ability to leverage these activities as strategic resources. Companies in industries with high environmental impact, such as energy or manufacturing, are more likely to benefit from sustainability efforts, while firms in less environmentally focused sectors may see fewer direct financial gains. The RBV underscores the importance of firm-specific capabilities in translating ESG initiatives into financial success, with industry-specific factors serving as critical moderators.

### *Legitimacy theory*

Legitimacy Theory, as articulated by Suchman (1995), suggests that organizations seek to align their actions with societal norms and expectations to gain, maintain, or restore legitimacy in the eyes of stakeholders. In the context of ESG and CSR, firms engage in sustainability initiatives not only to secure financial returns but also to enhance their legitimacy, especially under public scrutiny or regulatory pressure. However, the financial outcomes of these actions are moderated by several factors, including regulatory environments, stakeholder scrutiny, and public visibility, leading to mixed empirical results in the literature.

Firms increasingly view ESG and CSR practices as mechanisms for aligning corporate behavior with societal expectations. Companies operating in highly scrutinized industries, such as consumer goods or pharmaceuticals, are particularly inclined to adopt ESG practices to avoid reputational damage and preserve stakeholder trust. For instance, Deegan (2002) emphasizes that firms in highly visible sectors are more likely to engage in CSR to maintain legitimacy in the eyes of the public. Additionally, firms facing adverse publicity or operating in regulated industries are under continuous pressure to demonstrate ethical behavior, further reinforcing the relevance of Legitimacy Theory in understanding the relationship between ESG and financial performance.

Moderating variables such as regulatory pressures, public visibility, and stakeholder scrutiny are critical in shaping how effectively firms maintain legitimacy through ESG and CSR initiatives. Companies in heavily regulated industries such as energy or finance often adopt ESG practices to comply with regulatory requirements and reduce legal risks (Khan et al., 2024). In these sectors, regulatory frameworks compel firms to align their operations with environmental and social standards, enhancing their legitimacy among stakeholders. Failing to meet regulatory expectations can result in penalties, reputational damage, and loss of market share, demonstrating the importance of legitimacy in these industries.

Public visibility is another significant moderating factor in the financial impact of ESG activities. Firms that operate in industries under constant public scrutiny, particularly consumer-facing businesses, are more likely to implement comprehensive ESG strategies to avoid negative publicity and maintain stakeholder confidence. Peloza and Shang (2010) have found that companies in highly visible industries are more inclined to engage in robust ESG efforts to prevent reputational damage, which can, in turn, lead to financial gains as consumers and investors increasingly favor businesses with strong sustainability profiles.

Stakeholder scrutiny is also crucial in moderating the financial outcomes of legitimacy-driven ESG activities. Companies closely monitored by investors, NGOs, or consumer groups are more likely to adopt transparent ESG strategies, which can lead to enhanced financial performance. Ellili et al. (2022) have found that firms with strong stakeholder engagement adopt ESG practices that not only meet societal expectations but also contribute to financial objectives. In industries with high stakeholder pressure, companies that fail to engage in ESG and CSR activities risk reputational damage and financial underperformance due to declining consumer trust and investor confidence.

While Legitimacy Theory offers a robust theoretical explanation for why firms adopt ESG and CSR practices, the empirical evidence is mixed. In highly visible industries, ESG practices often lead to positive financial outcomes. Saini et al. (2023) have demonstrated that ESG practices reduce capital costs and improve risk management, particularly in industries subject to stringent regulatory oversight. These firms benefit financially from their ESG efforts, as they are better positioned to meet regulatory and societal expectations.

However, the financial benefits of ESG initiatives are not equally distributed across industries. Firms in less visible sectors or those facing fewer regulatory pressures may not experience the same financial gains from adopting ESG practices. Verma and Mukhtaruddin (2023) have found that the financial impact of environmental responsibilities is mixed, particularly in industries with lower public scrutiny or weaker regulatory frameworks. Companies in these sectors may engage in ESG activities to maintain legitimacy but struggle to convert these actions into financial returns.

Additionally, the pursuit of legitimacy can sometimes lead to short-term, symbolic actions that fail to generate long-term financial benefits. Delmas and Montes-Sancho (2011) note that firms may adopt ESG initiatives in response to external pressures rather than integrating sustainability into their core business strategies. Such companies may engage in superficial activities, such as "greenwashing" to maintain legitimacy, which can harm long-term financial performance if stakeholders perceive these initiatives as insincere. This can lead to a loss of trust and undermine the firm's ability to achieve sustained financial success.

Legitimacy Theory suggests that firms engage in ESG and CSR activities to maintain or enhance their legitimacy in the eyes of stakeholders. These efforts are often driven by external pressures, such as regulatory requirements, societal expectations, and public scrutiny, rather than direct financial incentives. While ESG activities can help firms secure their legitimacy and manage reputational risks, their financial impact is less straightforward. Firms operating in industries with high public visibility are more likely to benefit financially from ESG efforts, as these activities help them maintain stakeholder trust and comply with regulatory standards. However, for firms in less scrutinized sectors, the financial returns on ESG initiatives may be minimal. Therefore, while Legitimacy Theory provides a strong rationale for adopting ESG practices, the financial outcomes depend heavily on the level of external pressure and stakeholder expectations.

*Institutional theory*

Institutional Theory, as introduced by DiMaggio and Powell (1983), emphasizes both the formal and informal roles of external pressures in shaping corporate behavior. In the context of ESG and CSR, firms often adopt sustainable practices in response to institutional pressures such as regulatory requirements, industry standards, or normative societal expectations. With increasing demands to integrate sustainability, particularly through global initiatives such as the SDGs, Institutional Theory provides a framework to understand how these external factors influence corporate actions. However, the financial outcomes of ESG and CSR efforts vary based on the regulatory and normative environments in which companies operate.

Empirical evidence supports the significant influence of institutional pressures on ESG and CSR activities, particularly in regions with stringent regulatory frameworks or high normative expectations. For instance, Khan et al. (2024) have found that companies in areas with strong environmental regulations are more likely to implement robust ESG strategies, which, in turn, improve financial performance. These companies adopt ESG practices not only to comply with legal requirements but also to gain competitive advantages by aligning with societal expectations. Regulatory pressures, thus, act as a key moderating variable, ensuring that ESG practices contribute to both legitimacy and financial success.

Normative pressures, such as industry-specific sustainability standards, also shape corporate behavior. In industries such as energy, chemicals, and automotive, where sustainability norms are well-established, firms that adopt ESG initiatives often perform better financially. For example, Yu (2022) demonstrates that companies in such industries align their operations with both regulatory and market expectations, leading to improved financial outcomes. These normative pressures compel companies to exceed baseline regulatory requirements and adopt best practices, which enhance their competitiveness.

However, the effects of institutional pressures are not uniform across all industries or regions. Firms in less-regulated industries or emerging markets face weaker institutional pressures, resulting in less comprehensive ESG initiatives. Javed et al. (2016) highlight that companies in non-Western markets often experience fewer regulatory and normative pressures to adopt ESG practices, leading to inconsistent financial outcomes. While these firms may implement ESG initiatives to gain legitimacy in global markets, they often struggle to attain immediate financial benefits due to weaker institutional support in their domestic contexts.

Regional variations further complicate the relationship between institutional pressures and ESG performance. Firms in developed markets, such as the European Union, benefit from stronger institutional support for sustainability initiatives. For instance, Lyulyov et al. (2024) have found that European companies, especially in countries such as France, Germany, and Sweden, have been at the forefront of green branding and environmental performance, largely due to the alignment of national policies with SDGs. Conversely, firms in emerging markets such as Ukraine face challenges in achieving similar results, given weaker regulatory frameworks and less robust institutional support for sustainability.

Another important factor is mimetic pressure within industries. According to DiMaggio and Powell (1983), firms often imitate the practices of their peers to maintain legitimacy and competitive parity. This is particularly true in sectors where ESG practices have become the norm. For example, Enciso-Alfaro and García-Sánchez (2024) have found that firms with greater female representation on their boards are more proactive in climate change innovation, partly because of normative pressures to align with best practices in corporate governance. Such mimetic pressures push firms to adopt ESG strategies to maintain legitimacy and meet investor and stakeholder expectations.

Despite the strong theoretical foundation of Institutional Theory, empirical findings on the financial benefits of ESG practices remain mixed. Some studies, such as those by Quttainah and Ayadi (2024), show that digital integration and environmental innovation drive financial success, particularly for firms with low initial sustainability performance. However, other studies, such as Verma and Mukhtaruddin (2023), suggest that the financial benefits of environmental responsibilities are contingent on industry and regional factors, with firms in emerging markets facing more challenges in translating ESG activities into financial gains due to weaker institutional frameworks.

Institutional Theory emphasizes the role of external pressures such as regulations, norms, and societal expectations in shaping corporate behavior. Firms adopt ESG and CSR practices not necessarily for direct financial returns but to conform to these institutional demands and secure legitimacy. The financial outcomes of ESG activities under this theory are influenced by the strength of regulatory frameworks and normative pressures within specific industries or regions. Firms operating in markets with strong regulatory oversight or high societal expectations for sustainability tend to experience better financial outcomes from ESG initiatives. However, in regions with weaker regulatory environments, firms may find it more challenging to translate ESG activities into financial success. Institutional Theory highlights the importance of aligning ESG practices with external institutional demands to achieve both legitimacy and financial performance.

In summary, the theoretical perspectives of Shareholder Theory, Stakeholder Theory, Agency Theory, RBV, Legitimacy Theory, and Institutional Theory each provide unique lenses through which the relationship between ESG/CSR initiatives and CFP can be understood. These theories highlight the critical role of moderating variables such as governance structures, industry type, ownership concentration, market conditions, and institutional pressures in shaping the financial outcomes of ESG and CSR activities.

However, despite the extensive theoretical exploration of ESG/CSR and CFP relationships, significant research gaps remain, particularly regarding the nuanced role of moderating variables. The lack of consensus in empirical findings, driven by variations in these moderating variables, underscores the need for a more targeted analysis that synthesizes recent trends in the literature.

This study aims to address these gaps by exploring the role of moderating variables in the ESG/CSR-CFP relationship through a systematic review and bibliometric analysis of research published from 2019 to 2023. Specifically, it seeks to answer the following research questions:

- What are the most frequently studied moderating variables in the relationship between ESG/CSR and CFP in the literature from 2019 to 2023?
- How has the focus on specific moderating variables in the ESG/CSR and CFP literature evolved from 2019 to 2023?
- What primary theoretical frameworks are employed in recent ESG/CSR-CFP relationship studies?
- Are there any notable gaps or under-researched areas in the ESG/CSR and CFP literature regarding moderating variables?
- What are the most influential studies, journals, or authors in ESG/CSR and CFP research concerning moderating variables?

By addressing these questions, this study aims to provide a comprehensive overview of the evolving role of moderating variables in shaping the ESG/CSR-CFP relationship, identify trends and gaps in the current literature, and offer guidance for future research in this critical area.

To ensure a robust examination of the relationship between ESG/CSR initiatives and CFP, with a particular emphasis on moderating variables, it is essential to adopt a methodological approach synthesizing the wide range of existing research. In the following section, we will outline the methodology employed in this study, including the systematic review and bibliometric analysis. This approach allows for a comprehensive literature assessment, providing insights into the most frequently studied moderating variables, theoretical frameworks, and research trends

from 2019 to 2023. The methodology will detail the steps taken to ensure the rigor and reliability of the analysis, guiding the investigation of the key research questions introduced above.

## Methodology

Based on the vast number of articles that presented conflicting results, the justification for new research in ESG-CSR-CFP relationships, with a particular focus on moderating variables, is compelling. Addressing the inconsistencies and gaps identified in existing studies, exploring underrepresented moderating factors, and adopting more rigorous and standardized methodologies are essential for advancing our understanding of how ESG and CSR initiatives impact CFP. As the global business environment evolves, this new research will contribute to academic knowledge and provide valuable insights for practitioners seeking to navigate the complexities of sustainability and financial performance in diverse and dynamic contexts.

This study employs a combined methodology of bibliometric analysis and systematic review to address these research questions and provide a comprehensive overview of the current state of the literature. The bibliometric analysis starts by testing the bibliometric laws of Bradford and Lotka and follows techniques outlined by Ellili et al. (2022), including Trend Analysis, Bibliographic Coupling of Sources Analysis, Bibliographic Coupling of Articles Analysis, and Keyword Occurrence Analysis.

The systematic review follows the techniques of Junior and Godinho Filho (2010), Van Kampen et al. (2012), and Jabbour (2013), utilizing a codification system to identify gaps in the research field. The review systematically analyzes financial performance variables, ESG and CSR measures, assessment methods, theoretical foundations, and the role of database providers. It also explores the statistical modeling techniques employed and identifies key areas for future research, providing a roadmap for advancing knowledge in this domain.

The bibliometric analysis complements the systematic review by mapping the intellectual structure of the field and identifying key authors, influential studies, and journals. This dual approach offers a comprehensive and up-to-date overview of the existing literature while uncovering the underlying patterns and connections that have shaped academic discourse on ESG, CSR, and financial performance under the influence of moderating variables.

The article is organized as follows: Section 1 is the Introduction; Section 2 analyzes the Theoretical Framework and formulates the research questions; Section 3 presents the Methodology used in this article; Section 4 is structured to present the results and discussion relevant to the present literature review and bibliometric analysis. Finally, Section 5 presents the conclusions of this work, the practical applications, theoretical collaboration, limitations of this research, and guidelines for future research.

### *Sample selection*

The first step in this research involved carefully selecting articles, for which we utilized the Web of Science and Scopus databases. These databases are widely recognized in financial corporate research for their reliability and broad coverage. Scholars such as Aguinis et al. (2018) emphasize the importance of Web of Science and Scopus in conducting comprehensive literature reviews, particularly in the context of CSR.

The robustness of research findings is further reinforced by the use of Web of Science, as demonstrated by Orlitzky et al. (2003) in their meta-analysis of CSR and financial performance. Similarly, Peloza (2009) recognizes Scopus' extensive coverage, making it a key resource for collecting data on CSR and financial outcomes. Friede et al. (2015) also advocate for the combined use of Web of Science and Scopus in examining ESG and CFP, acknowledging their value in sourcing reliable, peer-reviewed articles. These collective insights underline the essential role of Web of Science and Scopus in enhancing the rigor and depth of financial corporate research.

Beyond their extensive use in academic research, Web of Science and Scopus are valued for their comprehensive journal coverage, which includes a wide array of regional and non-English publications, especially within Scopus (Mongeon & Paul-Hus, 2016). Both databases maintain rigorous selection criteria to ensure that only high-quality, peer--reviewed journals are included, which is vital for producing credible research outcomes (Harzing & Alakangas, 2016). Their advanced search capabilities allow for precise and thorough literature reviews, facilitating systematic analyses that are integral to corporate financial research (Bramer et al., 2017). Moreover, the citation analysis tools provided by Web of Science and Scopus enable researchers to track the influence of their work and assess academic impact, offering valuable insights into research trends and collaboration networks (Bornmann & Daniel, 2008).

The global reach and interdisciplinary scope of Web of Science and Scopus make them indispensable for cross-disciplinary research, further establishing their reliability and broad adoption in various academic fields (Archambault et al., 2009). The consistent use of these databases in research processes not only enhances the credibility of the studies but also broadens their scope and relevance, solidifying Web of Science and Scopus as essential resources for conducting comprehensive and impactful financial corporate research.

We searched the Web of Science and Scopus databases using a search string encompassing many articles. The search string utilized: ("ESG" or "CSR") and ("financial performance" or "firm value") AND ("moderating" or "moderator" or "moderate"). The last systematic search was completed on December 18, 2023.

The sample initially comprised 610 articles from the Web of Science and Scopus databases from the 2019 to 2023 period, excluding the more recent studies such as Ye et al. (2021) and Lee and Suh (2022). We applied native filtering criteria Scopus (Subject Area: Business, Management, and Accounting; Social Sciences; Economics) and Web of Science (Categories: Business; Management). Subsequently, we imported a sample of 610 articles and filtered it to Ryann Systematic Review for a content selection analysis.

Rayyan is an increasingly popular tool for conducting systematic reviews, offering significant advantages in terms of efficiency, collaboration, and accuracy. Developed by Ouzzani et al. (2016), Rayyan is a web-based application specifically designed to streamline the screening and selection process in systematic reviews.

A key feature of Rayyan is its native PRISMA interface, which integrates seamlessly with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. PRISMA is widely recognized for enhancing the transparency, reproducibility, and rigor of systematic reviews (Moher et al., 2009). By incorporating PRISMA's framework, Rayyan ensures that researchers can easily document and visualize the flow of studies through the different phases of the review process, adhering to best practices in transparency and reporting (Haddaway et al., 2022).

We apply the native PRISMA protocol selection in the Rayyan software to guarantee the reliability of the selection process.

After selecting the articles, we start the analysis using the RStudio software with the Bibliometrics R package. This package allows us to use Biblioshiny, a web-based interface for bibliometric analysis. The sample includes 108 documents published between 2019 and 2023 by 320 authors from 76 academic sources. Fig. 1 presents the PRISMA flow diagram, generated using Rayyan, which visually summarizes the selection process from initial identification through final inclusion.

### *Bibliometric analysis*

Bibliometric Analysis is a quantitative research method that allows scholars to systematically explore the landscape of academic literature by analyzing patterns in publication data and citations. It is particularly effective for identifying key authors, influential studies, and significant

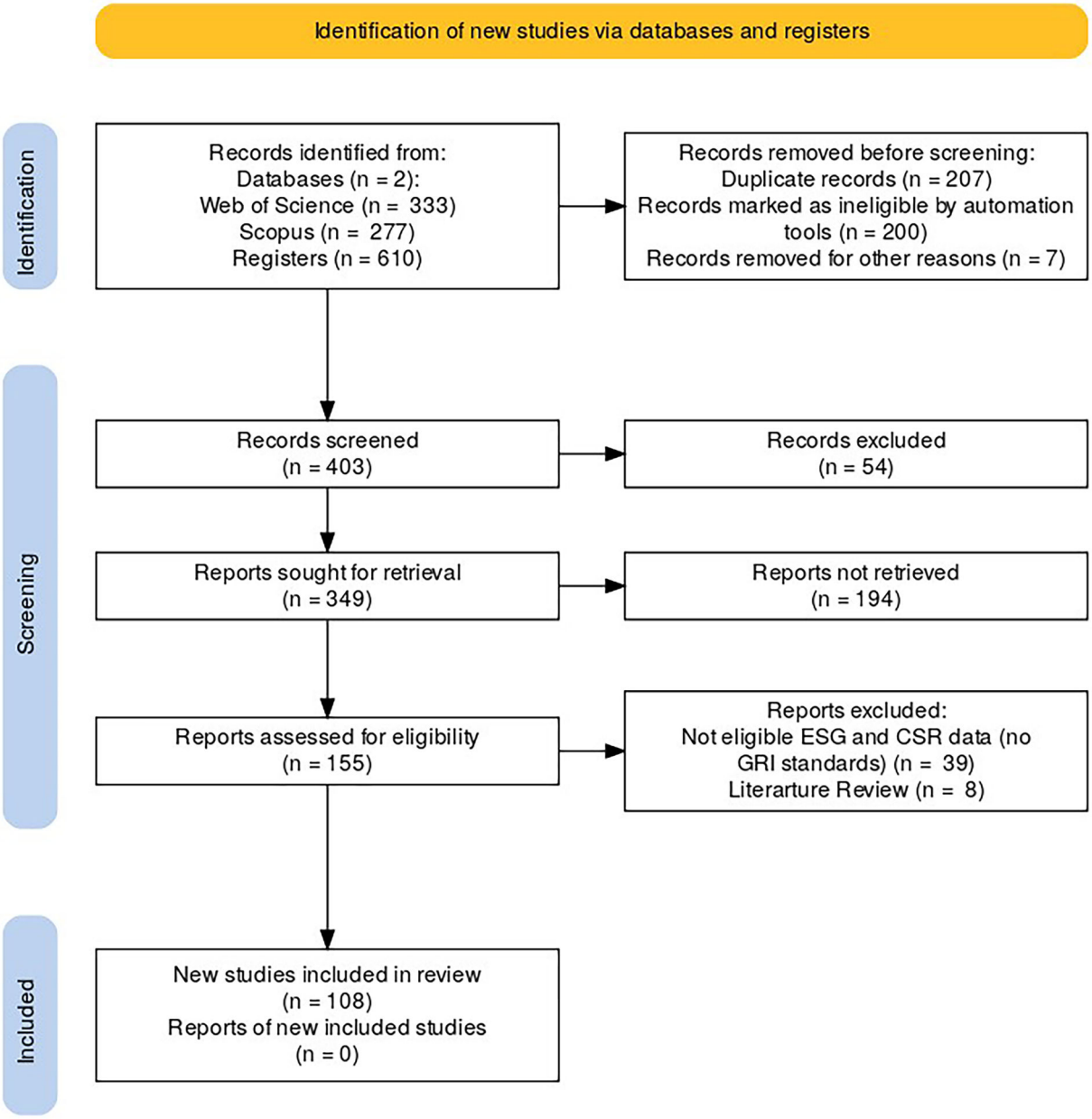


**Fig. 1.** PRISMA flow diagram for selection of studies; generated by Rayyan.

trends within a given field. The method has grown in popularity due to its ability to provide a structured and data-driven approach to understanding scholarly communication (Garfield, 1955; Price, 1963; Glänzel, 2003; Small, 2004; Van Raan, 2005; Aria & Cuccurullo, 2017; Bornmann & Daniel, 2008; Thelwall, 2008).

The origins of bibliometric analysis trace back to key figures such as Eugene Garfield, who pioneered the concept of citation indexing in the 1950s. His work, especially through the creation of the Science Citation Index, marked a breakthrough in the evaluation of academic impact and citation networks (Garfield, 1955).

Within this historical context, the application of foundational bibliometric laws — Bradford's Law and Lotka's Law — further refines our understanding of the structure and dynamics of academic literature.

Bradford's Law, introduced by Bradford (1934), identifies the core journals that publish the majority of significant articles, building on Garfield's concept of citation networks to reveal where research output is most concentrated (Aria & Cuccurullo, 2017).

Lotka's Law, formulated by Lotka (1926), examines author productivity, showing that a small number of authors produce most of the literature — a concept that aligns with Price's observations on the distribution of scientific productivity (Thelwall, 2008).

Researchers have applied these laws to identify key journals, authors, and themes within ESG and CSR research, particularly in business, demonstrating their utility in mapping the academic landscape (Chytis et al., 2024). Additionally, the comprehensive bibliometric methodologies developed by Maria Aria and Corrado Cuccurullo, including the use of the Bibliometrix package, integrate these laws to provide a structured and data-driven approach to understanding the impact of ESG and CSR on financial performance (Aria & Cuccurullo, 2017).

In modern research, tools such as VOSviewer and Biblioshiny have greatly enhanced bibliometric studies by offering sophisticated visualization capabilities for citation networks and large-scale data analysis. This has enabled a more in-depth examination of trends, research impact, and the evolution of academic fields (Donthu et al., 2021; Zupic & Čater, 2015). By leveraging techniques such as co-citation analysis, bibliographic coupling, and keyword mapping, researchers can explore

the structure of academic disciplines and identify influential contributions over time.

*Trend analysis*

In conducting a trend analysis using Biblioshiny, linking the production of academic works over the years with the number of citations provides deeper insights into the impact and evolution of a research field. The software allows researchers to visualize the annual growth of publications, revealing how interest in topics such as ESG and CSR has expanded over time. This can be contrasted with citation data, highlighting which publications have had a lasting influence on the field. For example, a surge in publications might signal growing interest, but only highly cited works indicate significant contributions that shaped subsequent research.

By analyzing both production volume and citation trends, Biblioshiny enables a more nuanced understanding of how certain themes, such as sustainability integration or stakeholder engagement, have gained prominence and influenced CFP discussions. This dual approach helps researchers identify pivotal studies and periods of heightened scholarly attention, revealing key trends and gaps for further exploration.

Linking the article's production over the years with citation evolution is essential to understanding the relevance of the research field interest. While article production data reveal trends and periods of increased scholarly activity, citation analysis measures the lasting impact of these works, highlighting those that have significantly influenced subsequent research (Bornmann et al., 2008).

*Bradford's law and bibliographic coupling analysis*

In bibliometric research, Bradford's Law is a foundational principle that aids in understanding the distribution of scientific literature across journals. The law suggests that if journals are ranked according to the number of articles they publish on a specific topic, they can be categorized into a small core group followed by several broader groups, each containing a similar number of articles but spread over an increasing number of journals (Bradford, 1934). This distribution pattern highlights the concentration of crucial research outputs within a limited number of journals, while the remaining contributions are scattered across a broader range of publications.

The primary advantage of applying Bradford's Law in bibliometric analysis is its ability to identify the most influential journals within a specific field. By isolating the core journals, researchers can more efficiently target their literature reviews, focus on the most impactful publications, and strategically decide where to submit their work for publication (Egghe & Rousseau, 1990). Moreover, the law provides a clear visual representation of how research output is distributed across journals, which can reveal trends in publication activity over time (Ding et al., 2000).

The application of Bradford Law is relatively simple. The articles are, then, sorted by the journals in which they were published and ranked in descending order according to the number of articles each journal has contributed to the topic. Once the journals are ranked, the next step is dividing them into zones as Bradford's Law prescribes them.

The total number of articles $N$ is divided into three groups, each containing one-third of the articles. The first group, known as the core zone, will typically include the fewest journals but publish the largest share of significant research articles. The remaining two zones will contain the same number of articles as the core zone but distributed across more journals (Egghe & Rousseau, 1990).

The general formula for Bradford's Law, while not as mathematically strict as other bibliometric laws, is often expressed in terms of the geometric progression of the number of journals in each zone:

$$R : R^2 : R^3$$

Where:

$R$ represents the multiplier that reflects the increasing number of journals needed in each subsequent zone to account for the same number of articles as in the core zone.

The process can be outlined as follows:

Total Articles ($N$): Determine the total number of articles in the dataset.

Articles per Zone: Divide $N$ by 3 to find the number of articles in each zone:

Articles per Zone $= N3$

Zone Division: Assign journals to the first zone until the cumulative number of articles reaches one-third of $N$. Continue this process for the subsequent zones.

The application of Bradford's Law using Biblioshiny, a web interface for the R package Bibliometrix, facilitates the identification of core journals within research fields by automating the ranking and categorization of journals based on their publication frequency. The software's capabilities ensure that even in fields with widely dispersed research outputs, Bradford's Law can be applied with accuracy, providing a clear visualization of the most influential journals (Aria & Cuccurullo, 2017). Furthermore, Bibliophagy's intuitive interface enhances the accessibility of bibliometric analysis, allowing researchers to maintain a focused and strategic approach to literature reviews and resource allocation, as recommended by Egghe and Rousseau (1990).

While Bradford's Law is a valuable tool for identifying core journals in specific fields, its application in broad and interdisciplinary areas such as ESG and CSR presents challenges due to the dispersed nature of research outputs across numerous journals (Egghe & Rousseau, 1990).

This dispersion can blur the boundaries of core journals, making precise application difficult. Additionally, the dynamic nature of research fields means that core journals may shift over time, necessitating regular updates to maintain relevance. Furthermore, the overlap of journals across multiple disciplines complicates categorization, as journals might appear in more than one zone, further challenging the law's application (Li & Yin, 2017). To address these limitations, it is recommended that Bradford's Law be complemented with other bibliometric methods, such as Bibliographic Coupling, to achieve a more comprehensive understanding of the research landscape (Chiu & Ho, 2005).

Bibliographic coupling reveals connections between articles through shared references, highlighting clusters of related research that contribute to the same agenda. Together, these methods address the limitations of Bradford's Law by mapping the interconnected research streams and influential works that shape and advance the field.

By integrating Bradford's Law with bibliographic coupling, researchers can achieve a deeper, more structured view of the research landscape, enabling precise navigation of complex interdisciplinary fields such as ESG and CSR (Kessler, 1963; Small, 1973; Zupic & Čater, 2015).

This bibliographic coupling reveals the strength of connections between journals, with stronger links indicating a higher number of shared references. The software creates a visual map where journals are represented as nodes, and their connections are depicted as lines, highlighting clusters of journals that share similar research areas (Van Eck & Waltman, 2010). These clusters indicate closely related journals, while the size and centrality of nodes reflect the influence of particular journals within the academic landscape.

*Lotka's law*

Lotka's Law, introduced by Alfred J. Lotka in 1926, is a critical bibliometric principle that describes the frequency of publication by authors within a given field. According to Lotka's Law, the number of authors producing $n$ publications is inversely proportional to $n^2$; that is, meaning that a small number of authors contribute a large portion of the total publications, and in contrast, the majority of authors publish only a few papers (Lotka, 1926).

The application of Lotka's Law in bibliometric analysis involves

several steps. First, a comprehensive dataset of publications in the ESG and CSR fields is collected. Authors are then identified, and their contributions (i.e., the number of publications) are counted. The distribution of these contributions is, then, analyzed to determine if it follows the inverse square law described by Lotka. Mathematically, Lotka's Law can be expressed as:

$$y = \frac{C}{x^n} \quad (1)$$

where,

$y$ is the number of authors contributing $x$ publications.

$C$ is a constant representing the total number of authors.

$n$ typically equals 2, representing the inverse square law.

To apply this in practice, the distribution of authorship is plotted on a logarithmic scale. If the data follow a straight line with a slope of approximately $-2$, it confirms the applicability of Lotka's Law to the dataset (Pao, 1985; Egghe & Rousseau, 1990).

Lotka's Law is a valuable tool in bibliometric analysis for identifying the most influential authors within a research field, offering insights into the key figures and groups driving scholarly advancements (Aksnes & Sivertsen, 2004).

It also helps understand the structure of scientific output by highlighting the disparity between highly productive and less active authors (Pao, 1985). Additionally, the rise of multi-author publications complicates the attribution of individual productivity, further challenging the application of Lotka's Law (Aksnes & Sivertsen, 2004). To address these limitations, using Lotka's Law alongside other bibliometric measures (e.g., Bibliographic Coupling Analysis) is recommended to comprehensively understand author influence (Pao, 1985).

Integrating Lotka's Law analysis with bibliographic coupling by article analysis provides a nuanced understanding of the research landscape in ESG/CSR and CFP under the effect of moderating variables. We perform bibliographic coupling by articles on VOSviewer.

Bibliographic coupling, which analyzes shared references between documents, is utilized in academic research to identify research trends, map intellectual structures, and trace the evolution of ideas within a field. This method helps to discover influential works, potential collaborations, and the impact of research by clustering studies with overlapping citations (Kessler, 1963; Boyack & Klavans, 2010). It is particularly useful in systematic reviews and meta-analyses for efficiently identifying related studies (Zupic & Čater, 2015).

*Keyword analysis*

Similar to the coupling analysis, the co-occurrence analysis is very often used. A co-occurrence map based on keyword analysis is utilized in academic research to visualize relationships between key concepts and identify major themes within a research area. Co-occurrence maps provide a visual representation of how different concepts are interconnected, which is valuable for understanding the intellectual structure of a field and guiding future research (Van Eck & Waltman, 2010; Donthu et al., 2021).

*Systematic review*

The systematic review in the article follows a five-step technique proposed by Jabbour (2013) and Lage Junior and Godinho Filho (2010), which has been successfully disseminated in various academic works. Several studies have utilized systematic literature reviews with categorization systems to advance research in different fields. Lee et al. (2021) employed a categorization system to review and classify sustainability-oriented applications of value stream mapping in manufacturing. Henrique et al. (2019) categorized machine learning techniques applied to financial market prediction, while Nazário et al. (2017) focused on categorizing studies related to technical analysis in stock markets. Pinto and Sobreiro (2022) provide a comprehensive literature review of anomaly detection approaches in digital business financial systems. It explores various methods used to identify irregularities within financial data, focusing on digital business environments, and evaluates their effectiveness in improving system security and performance.

In the field of environment and eco-innovation, Salim et al. (2019) systematically categorized internal capabilities for enhancing eco-innovation in manufacturing, and Masudin and Fernanda (2019) reviewed logistics performance using a structured approach to assess its impact on environmental outcomes. These studies illustrate the broad applicability of systematic reviews across diverse research fields, utilizing categorization to streamline complex data.

Systematic Search: The first step involved conducting a systematic search of available articles in a reliable database, specifically the Web of Science and Scopus databases. We improve the efficiency of the selection of the articles by using Rayyan and following the PRISMA's protocol.

Classification and Coding Framework Development: The second step involved developing a classification and coding framework to systematically categorize the identified articles. This framework was designed to capture various aspects of the studies, including the financial performance measures, ESG and CSR measures, moderating variable types, theoretical frameworks, statistical methods and common suggestions for research given by authors. The classification aimed to provide a comprehensive overview of the existing literature and identify research trends.

Application of Classification Framework: The third step entailed applying the classification framework to synthesize and present study trends on moderating variables and the ESG/CSR-CFP research field. Each article was classified according to the developed framework, allowing for a systematic analysis of the methodologies and findings.

Framework Outline: The fourth step involved outlining a framework that portrays the composition of the literature review, its main results, and what it represents according to the pre-established coding. This visual representation helped in understanding the results and trends in the current literature on detecting financial anomalies.

Analysis and Discussion of Results: The final step consisted of analyzing and discussing the results based on the synthesized data. This step also included proposing suggestions for future research, identifying gaps in the existing literature, and outlining potential areas for further investigation.

After selecting and reviewing the articles in this study, a classification framework was developed to categorize the papers in a manner relevant to the research theme. This framework consists of 7 primary categories, numbered from 1 to 7, each paired with a set of subcategories represented by letters (A, B, C, D, etc.). These codes facilitate a detailed analysis of research trends regarding methods, data sources, and variables. Each article was analyzed and assigned one or more codes from the framework, reflecting its alignment with the relevant categories and subcategories. Notably, a single article can receive multiple codes within a category for more than one subtopic. Table 1 presents this classification and coding framework, detailing the categories and subcategories used to organize the data systematically. The framework includes categories such as Financial Performance, ESG and CSR Measures, Moderating Variables, Theoretical Framework, Suggestions for Future Research, Statistical Modeling, and Data Sources, each with specific subcategories and corresponding codes.

Category 1 is Financial Metrics. In evaluating the intersection between ESG/CSR measures and financial performance, categorizing financial variables into distinct groups — such as Valuation Metrics (1A), Profitability Metrics (1B), Risk Metrics (1C), Innovation Metrics (1D), and Market Performance Metrics (1D) — offers a comprehensive framework for analysis. Valuation Metrics, grounded in Fama and French's (1992) seminal work on stock returns and further validated by Alareeni and Hamdan (2020) and Nguyen et al. (2021), help in understanding how market perceptions, influenced by ESG scores, affect firm valuation. Profitability Metrics, central to Friedman's (1970) emphasis

**Table 1**
Classification and coding framework.

| Category | Subcategories | Code |
|---|---|---|
| Financial Performance | Valuation Metrics | 1A |
| | Profitability Metrics | 1B |
| | Risk Metrics | 1C |
| | Innovation Metrics | 1D |
| | Other | 1E |
| | Market Performance Metrics | 1F |
| ESG and CSR Measures | | |
| | General ESG | 2A |
| | Governance | 2B |
| | Environmental | 2C |
| | Expenditures | 2D |
| | Other | 2E |
| | Social | 2F |
| | General CSR | 2G |
| Moderating Variables | | |
| | Firm Characteristics | 3A |
| | Industry-Level Indicators | 3B |
| | Institutional/Legal Environment | 3C |
| | Corporate Governance | 3D |
| | Social/Culture Indicators | 3E |
| | CSR Engagement | 3F |
| | Firm Strategy | 3G |
| | Economic Indicators | 3H |
| Theoretical Framework | | |
| | Economic and Financial Theories | 4A |
| | Strategic Management Theories | 4B |
| | Social and Ethical Theories | 4C |
| | Organizational Theories | 4D |
| | Cultural and Behavioral Theories | 4E |
| | Innovation and Technology Theories | 4F |
| Suggestions for Future Research | | |
| | Variables of Interest | 5A |
| | Theoretical Framework | 5B |
| | Data Sources | 5C |
| | Type of Research Methodology | 5D |
| | Sample Size/Population | 5E |
| | Time Frame | 5F |
| | Uncategorized | 5G |
| | Geographical Focus | 5H |
| | Research Focus Area | 5I |
| | Industry/ Sector Focus | 5J |
| | Suggested Contributions | 5K |
| Statistical Modeling | | |
| | Basic and Intermediate Models | 6A |
| | Advanced Models | 6B |
| Data Sources | | |
| | Content Analysis | 7A |
| | Reputation Indices | 7B |
| | One-Dimensional Measures | 7C |

Source: Produced by Authors.

on profit maximization, are reinforced by recent studies (e.g., Velte, 2023) that demonstrate how CSR initiatives can enhance a firm's profitability. Risk Metrics, originally conceptualized by Sharpe (1964) through Beta, are crucial for understanding financial risk and are shown in recent research by Broadstock et al. (2021) and Bae et al. (2021) to be mitigated by strong ESG practices.

Innovation, as highlighted by Croitoru (2012) in Schumpeter's analysis of economic development, provides a comprehensive view of the dynamics of capital and innovation, which are further explored by Zhou et al. (2020), connecting ESG initiatives to increased innovation outputs. Lastly, Market Performance Metrics, pioneered by Jensen (1968) with the introduction of Alpha, are supported by Albuquerque et al. (2020) and Cheema-Fox et al. (2021), who reveal that firms with strong ESG performance often achieve superior market outcomes, particularly in times of market stress.

Category 2 is ESG and CSR assessment. General ESG (2A) captures broad, aggregated metrics, supported by Eccles et al. (2014), who link comprehensive ESG scores to long-term financial success, with recent refinements by Berg et al. (2022). The Governance (2B) category, focusing on corporate leadership and structure, is grounded in Shleifer and Vishny's (1997) work on reducing agency costs, with modern extensions by Adams (2016) on the importance of board diversity. Environmental (2C) metrics, such as those proposed by Hart (1995) and expanded by Busch and Lewandowski (2018), assess natural resource impacts (e.g., carbon emissions) and their influence on financial performance. Expenditures (2D) reflect financial investments in sustainability, framed by McWilliams and Siegel's (2001) strategic CSR concept and empirically supported by Flammer (2018), who shows that targeted investments lead to superior performance. Social (2E) considerations, rooted in Freeman's Stakeholder Theory (1984) and updated by Edmans (2020), evaluate societal impacts, including labor practices and diversity, linking strong social practices to better financial outcomes. The Other (2E) category accommodates emerging ESG factors, reflecting the dynamic nature of the field, as emphasized by Giese et al. (2019). General CSR (2F) covers a wide range of ethical and community-focused activities, building on Carroll's (1979) CSR pyramid and Aguinis and Glavas' (2012) meta-analytic insights into CSR's role in enhancing reputation and stakeholder trust. This categorization allows for a comprehensive analysis of how ESG and CSR practices intersect with financial performance, providing insights into the strategic value of corporate sustainability.

CSR and ESG criteria, while often used interchangeably, represent distinct approaches to corporate sustainability, each with unique implications for financial performance and stakeholder engagement. CSR is a broader, qualitative concept rooted in ethical obligations and Stakeholder Theory (Freeman, 1984), emphasizing a company's voluntary commitment to social and environmental stewardship, as articulated by Carroll (1979) and further explored through the lens of Corporate Citizenship (Matten & Crane, 2005). In contrast, ESG is a more targeted, quantitative framework focused on specific metrics that assess a company's environmental impact, social practices, and governance structures, reflecting the financial materiality emphasized in studies such as Khan et al. (2016) and Clark et al. (2015).

While CSR activities, as discussed by McWilliams and Siegel (2001), often enhance reputation and brand value, ESG criteria are supported by Institutional Theory (DiMaggio & Powell, 1983) and the RBV (Barney, 1991), providing a strategic advantage by directly influencing financial outcomes and risk management, as evidenced by Eccles et al. (2014). Despite their convergence over time, the distinction between CSR's ethical focus and ESG's financial materiality remains critical for both academic research and practical applications in corporate sustainability.

Category 3 represents the moderating variables. We categorize the moderating variables into several key areas, drawing on the framework by Ye et al. (2021). Firm Characteristics (3A), including size and ownership structure, shape a company's capacity to implement effective sustainability initiatives, while Industry-Level Indicators (3B) (e.g., competition and regulatory pressures) contextualize the impact of these practices across sectors. The Institutional/Legal Environment (3C) reflect the regulatory landscape, and Corporate Governance (3D) is critical in aligning management actions with stakeholder expectations through effective governance structures. Social/Culture Indicators (3E) capture the influence of societal norms on the success of CSR and ESG efforts, while the level of CSR Engagement (3F) highlights the importance of deeply integrating sustainability into business operations for enhanced financial returns. Firm Strategy (3G) includes strategic orientations such as innovation or cost leadership determining how these practices contribute to competitive advantage. Finally, Economic Indicators (3H), such as economic growth and market volatility, provide the broader macroeconomic context that influences how sustainability practices translate into financial performance. This categorization offers a comprehensive framework for understanding the complex dynamics between corporate sustainability and financial success.

Category 4 comprises the theoretical framework. We start with Economic and Financial Theories (4A), such as Fama's Efficient Market Hypothesis (1970) and its extensions by Fatemi et al. (2015), which

emphasize the role of market efficiency in reflecting sustainability practices in stock prices. Strategic Management Theories (4B), including Barney's RBV (1991) and Porter's Competitive Advantage (1985), illustrate how CSR and ESG initiatives can serve as strategic assets, a view reinforced by Eccles et al. (2014). Social and Ethical Theories (4C), particularly Freeman's Stakeholder Theory (1984) and Carroll's CSR Pyramid (1979), provide a framework for understanding corporate responsibility, with Aguinis and Glavas (2012) confirming its positive impact on financial performance. Organizational Theories (4D), such as DiMaggio and Powell's Institutional Theory (1983) and Jensen and Meckling's Agency Theory (1976), along with recent works by Jamali and Karam (2018) and Ferrell et al. (2016), explore how internal structures and external pressures shape CSR effectiveness. Cultural and Behavioral Theories (4E), highlighted by Hofstede's Cultural Dimensions (1980) and furthered by Liang and Renneboog (2017), underscore the influence of cultural context on CSR practices. Finally, Innovation and Technology Theories (4F), from Rogers's Diffusion of Innovations (1962) to Christensen's Disruptive Innovation (1997) and Bocken et al. (2019), demonstrate how technological advancements drive sustainability and corporate transformation.

Category 5 resumes the future research suggestions collected in the sample articles. We have categorized future research suggestions into several key ones. These categories include Variables of Interest (5A) that focus on the specific constructs to be examined, such as ESG metrics or financial performance indicators, as highlighted by Kaplan and Norton (1996). The Theoretical Framework (5B) category emphasizes the importance of grounding research in robust theories such as Stakeholder Theory, as discussed by Whetten (1989), and further explored by Khan et al. (2016). Data Sources (5C) are critical for ensuring research validity and reliability, with Bryman and Bell (2015) underscoring the need for alignment between data sources and research objectives. The Type of Research Methodology (5D) employed whether a quantitative, qualitative, or mixed methods approach is essential for methodological rigor, as advocated by Creswell and Plano Clark (2017) and exemplified in studies such as Flammer (2018). Considerations of Sample Size and Population (5E) ensure the generalizability of findings, with recent research by Fatemi et al. (2015) highlighting the importance of adequate sample sizes. The Time Frame (5F) of research, whether cross-sectional or longitudinal, is crucial for capturing trends and causality, as Menard (2002) noted.

The Geographical Focus (5H) of a study, informed by the work of Hofstede (1980) and Liang and Renneboog (2017), reveals how cultural and institutional differences shape research outcomes. The Uncategorized (5G) includes miscellaneous suggestions that are difficult to categorize into other categories. The Research Focus Area (5I) defines the primary topics to be explored, with Whetten (1989) stressing the importance of clarity in this domain, supported by Eccles et al. (2014). Industry/Sector Focus (5J) is vital for understanding how different industries exhibit unique challenges and opportunities, as discussed by Porter (1985) and extended by Bocken et al. (2019). Finally, Suggested Contributions (5K) must be articulated, ensuring that research advances both academic knowledge and practical application, a principle highlighted by Whetten and Van de Ven (1989). By categorizing these areas, we provide a structured approach that not only identifies key areas for further investigation but also ensures that future research continues to build on foundational knowledge, contributing meaningfully to both theory and practice in corporate sustainability.

Category 6 shows the statistical methods categorized by complexity into Basic and Intermediate Models (6A) and Advanced Models (6B), providing a structured framework for selecting the appropriate tools for research. Ordinary Least Squares (OLS) regression is a foundational method classified under Basic Models (6A) due to its simplicity and widespread use in estimating linear relationships (Wooldridge, 2010). As we move to Intermediate Models (6B), techniques such as Propensity Score Matching and the Instrumental Variables (IV) approach address more complex issues (e.g., selection bias and endogeneity), offering more robust analysis options (Rosenbaum & Rubin, 1983; Greene, 2012).

Additionally, Fixed Effects Regression and Two-way Fixed Effects Models are essential in controlling for unobserved heterogeneity in panel data, providing more accurate estimates (Baltagi, 2008). At the Advanced Models (6C), methods such as the Dynamic Panel Generalized Method of Moments (GMM) and System GMM tackle endogeneity in dynamic panel data with sophisticated instrument selection (Hansen, 1982). Moreover, techniques such as the Staggered Difference-in-Differences (DID) approach and robustness tests such as the Parallel Trend Test and Goodman-Bacon Decomposition are critical for ensuring the validity of causal inference in complex datasets (Goodman-Bacon, 2021). Lastly, Two-stage Data Envelopment Analysis (DEA) and Directional Distance Function (DDF)-based models, often paired with bootstrapping, provide advanced tools for efficiency analysis, emphasizing the nuanced nature of these methods (Cooper et al., 2004). This categorization framework ensures that researchers select the most suitable methodologies, aligning with their research goals and the complexity of their data.

Finally, Category 7 is the data source regarding ESG and CSR information into three main categories: Content Analysis (7A), Reputation Indices (7B), and One-Dimensional Measures (7C). Questionnaire surveys gather direct insights from critical stakeholders but are vulnerable to biases and variations in response rates, a challenge common to CSR and ESG data acquisition (Rau & Yu, 2024). Acquiring and assessing CSR data is vital for understanding its impact on a company's financial performance, and various methods have been developed to capture these activities. Barauskaite and Streimikiene (2020) categorize these methods into reputation indices, content analysis, questionnaire surveys, and one-dimensional measures. Reputation indices (e.g., the Dow Jones Sustainability Index) offer a comprehensive view of a company's CSR efforts but are often limited to large, publicly traded firms and may introduce bias. Similarly, in ESG assessments, indices such as those provided by MSCI and Sustainalytics aggregate data from multiple sources, although they face similar limitations (Rau & Yu, 2024).

Content analysis allows for a detailed examination of company reports, providing flexibility in assessing specific CSR aspects, though it risks subjectivity and inconsistencies in reporting. This method is also applied in ESG assessments, which systematically review company disclosures to evaluate performance across various dimensions (Barbosa, 2023). One-dimensional measures focus on particular CSR aspects, offering in-depth insights but potentially providing an incomplete picture of overall CSR performance. Each method presents unique strengths and limitations, requiring careful consideration to ensure an accurate and meaningful analysis of CSR's relationship with financial performance.

As illustrated in Fig. 2, the graphical abstract provides an overview of the systematic literature review process, detailing the steps to categorize and analyze the articles. In the following paragraphs, we detail the categories' definitions and characteristics.

## Results and discussion

### *Trend analysis*

We analyzed the trends in the research field. With the annual growth rate of articles in the last five years, there has been an increase in the number of scholarly articles published on moderating variables in ESG/CSR/CFP research. Fig. 3 graphically depicts the annual scientific production alongside the average citations per year, highlighting trends over time. Fig. 3 emphasizes the increased scholarly interest and subsequent citation impact, particularly notable in 2021 and 2022. The highest number of publications, with 38 articles, was in 2022, followed by 24 articles in 2023, 22 in 2021, 14 in 2020, and 10 in 2019. As shown in Table 2, the annual scientific production and average citations per year illustrate the fluctuation in scholarly output and impact within the field from 2019 to 2023. The data reveal that while the number of

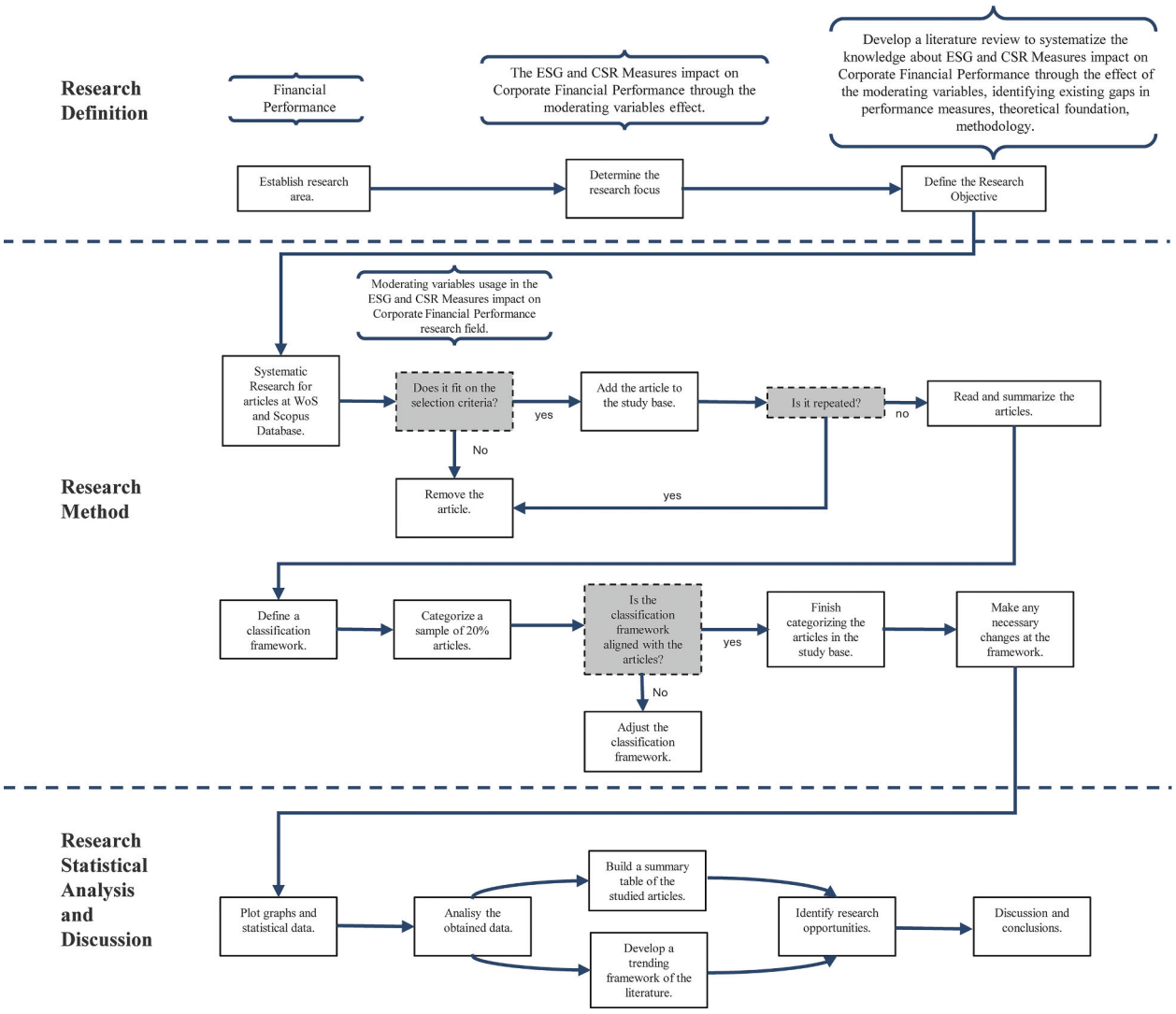


**Fig. 2.** Systematic literature review graphical abstract; elaborated by authors.

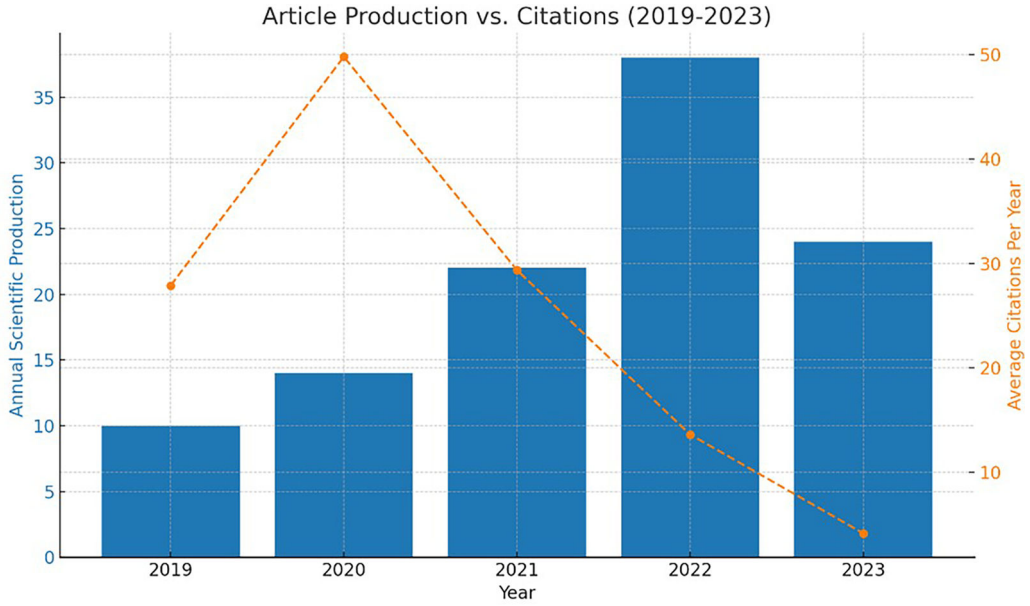


**Fig. 3.** Annual scientific production and average citation; generated by Matplotlib.

**Table 2**
Annual scientific production over the years and average citations per year.

| Year | Annual Scientific Production | Average Citations Per Year |
|---|---|---|
| 2019 | 10 | 27,9 |
| 2020 | 14 | 49,79 |
| 2021 | 22 | 29,36 |
| 2022 | 38 | 13,63 |
| 2023 | 24 | 4,17 |

Source: Biblioshiny.

publications peaked in 2022, the most cited year was 2020, indicating a lag between publication and citation accumulation.

It is possible to identify a high article production paired with low citations, which may indicate areas of research that are heavily explored but less impactful (Garfield, 2006). This trend may occur due to research fragmentation (Boyack & Klavans, 2010), increased competition (Merton, 1968), shifts toward newer topics (Kolk, 2016), citation fatigue (Tahamtan et al., 2016), reduced novelty (Kuhn, 1962), changing methodologies (Fiss, 2011), greater article availability but lower individual impact (Laakso et al., 2011), and shorter citation lifecycles (Redner, 1998).

Three stages can be identified as follows:

1. Early Growth (2019–2020): In 2020, both article production and citations peaked, indicating that research on moderating variables in ESG/CSR-CFP was gaining significant attention. This may reflect an increased recognition of the importance of moderating factors (e.g., ownership structure, governance, or environmental regulations) in the ESG-CFP relationship. The heightened citations suggest that early publications on this topic were highly influential, potentially establishing key frameworks or models for analyzing moderating variables in ESG/CSR studies.
2. Declined Citations Despite Growth in Publications (2021–2023): Article production continued to grow, peaking in 2022, but citations have sharply declined. This suggests a possible saturation of the research field, where numerous studies are being published, but their impact (as measured by citations) has diminished. It could also indicate that subsequent studies may focus on more niche or specific aspects of moderating variables, which are not as widely cited as the foundational work from earlier years.
3. Dip in Article Production and Citations (2023): The drop in both production and citations in 2023 might suggest a leveling off of interest or innovation in the field. Researchers may be shifting focus or waiting for more substantial developments in moderating variables before further contributions. It could also mean that the research field is consolidating, with fewer new insights being introduced in comparison to the surge in prior years.

The sharp rise in early article production and citations likely points to the importance of exploring moderating variables in understanding the ESG-CFP relationship. These variables help explain why ESG performance may have varied impacts on financial outcomes depending on factors such as industry, ownership, and governance structures.

The decline in citations in recent years suggests that future studies need to explore new or underexplored moderating variables or perhaps take a more interdisciplinary approach to continue adding value to the ESG/CSR-CFP literature. This might involve integrating data from different regions, industries, or firm characteristics to uncover new patterns.

The short-term surge in article production (especially in 2022) may reflect a response to external pressures (e.g., the pandemic), leading to more studies investigating how these factors moderate the ESG-CFP link. However, the quick decline in citation suggests that a clear, dominant consensus or theoretical framework may still be lacking.

In conclusion, while the moderating variables in ESG/CSR-CFP research experienced a spike in scholarly interest, the declining citation trend indicates the need for more innovative approaches to sustain academic influence in this domain.

In the next sub-section, we will apply Bradford's bibliographic laws to the sample articles and complement the analysis using VOSviewer and Biblioshiny resources.

### *Bradford's law and bibliographic coupling analysis*

Fig. 4 visually summarizes the application of Bradford's Law, illustrating the concentration of core journals central to moderating variables and ESG/CSR-CFP research. Table 3 shows Bradford's Law zone distribution, where Zone 1 includes 7 core journals that account for 37 publications, representing the most concentrated sources of impactful research. Zones 2 and 3 consist of 26 and 35 journals, respectively, with decreasing frequency of publications, reflecting a broader, less concentrated distribution of research. This distribution, generated using Biblioshiny, illustrates the varying levels of journal influence within the academic landscape.

The core zone is composed of seven journals: Sustainability with 13 articles, Corporate Social Responsibility and Environmental Management with 9 articles, Cogent Business & Management with 3 articles, Finance Research Letters with 3 articles, Journal of Asian Finance Economics and Business with 3 articles, Journal of Sustainable Finance & Investment with 3 articles and Management Decision with 3 articles.

Table 4 further breaks down the annual scientific production and citations by source, allowing for a more detailed analysis of the most influential journals in the field.

Fig. 5 displays the bibliographic coupling map generated by VOSviewer. It reveals the clustering of journals that share similar research agendas and citation patterns. The color of the nodes corresponds to the groups formed by a set of journals, with three clusters identified.

The Red Cluster focuses on the broad, cross-industry effects of CSR and ESG practices, highlighting how comprehensive ESG scores and detailed CSR disclosures influence financial metrics such as Tobin's Q, Return on Assets (ROA), and misvaluation measures. Bofinger et al. (2022) demonstrate that higher CSR scores are associated with reduced misvaluation and enhanced firm value, indicating that the market better values firms with robust CSR practices. Additionally, Rashid et al. (2020) explore the moderating effect of CEO power on the relationship between CSR disclosures and firm performance, finding that stronger CEO power can negatively impact the transparency of CSR disclosures, which, in turn, affects firm valuation. Sreepriya et al. (2023) further investigate the role of Global Reporting Initiative (GRI) compliance as a moderating variable, revealing that adherence to GRI standards significantly enhances the impact of sustainability disclosures on firm value. These studies collectively underscore the importance of integrating ESG factors into business strategies and maintaining transparency in sustainability efforts to drive financial success and market confidence.

The Blue Cluster examines sector-specific impacts of CSR practices, particularly within industries such as tourism and energy. This cluster explores how CSR activities, especially those related to environmental sustainability and social governance, affect financial performance metrics such as Net Interest Margin (NIM), ROA, and Tobin's Q. Javeed and Lefen (2019) highlight the positive impact of CSR on financial performance in the energy sector, particularly through environmental sustainability initiatives that enhance firm value and profitability. Similarly, Nagalingam et al. (2022) analyzed the tourism sector and found that companies with strong CSR practices in environmental and community engagement experienced higher financial returns. Alani and Makhlouf (2023) add to this perspective by examining how ownership structures, such as state-owned versus private firms, moderate the relationship between CSR and financial performance, with state-owned firms benefiting more from CSR activities in emerging markets. These findings suggest that tailored CSR strategies that align with sector-specific dynamics and regulatory environments can maximize

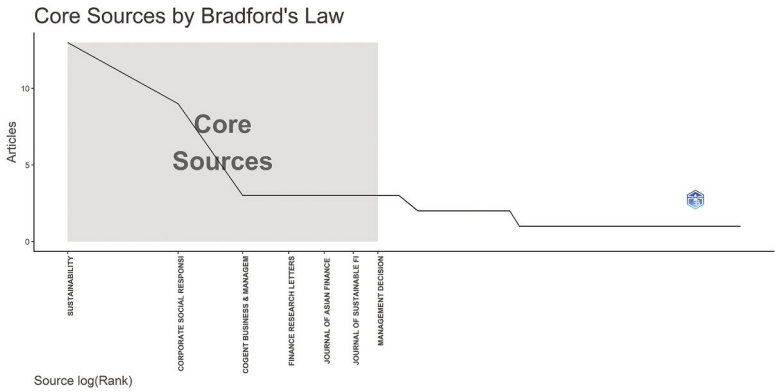


**Fig. 4.** Graphic resume of the Bradford's Law; generated by Biblioshiny.

**Table 3**
Bradford's law zone distribution.

| Zone | Total of Journals | Total_Frequency | Cumulative_Frequency |
|---|---|---|---|
| Zone 1 | 7 | 37 | 37 |
| Zone 2 | 26 | 36 | 73 |
| Zone 3 | 35 | 35 | 108 |

Source: Biblioshiny.

financial returns, particularly in industries that face high public and regulatory scrutiny.

At last, in the Green Cluster, the focus shifts to a more nuanced exploration of CSR and ESG initiatives within specific contexts, such as food safety and finance, emphasizing the strategic alignment of these initiatives with corporate goals. Jihadi et al. (2021) examine the food industry and find that financial ratios (e.g., liquidity and leverage) moderate the impact of CSR activities on firm value, with firms possessing higher liquidity and lower leverage better positioned to leverage CSR for financial gains. Brooks et al. (2020) investigate the finance sector and reveal that firms adopting differentiation strategies benefit more from CSR initiatives in terms of profitability and firm value, highlighting the importance of aligning CSR efforts with a firm's strategic objectives. Naseem et al. (2019) further explore the moderating role of financial ratios in the CSR-financial performance relationship across various industries in emerging markets, finding that high leverage can dampen the positive effects of CSR on firm value. This cluster emphasizes the need for firms to carefully consider their strategic positioning, financial health, and market environment when designing and implementing CSR and ESG strategies to ensure maximum financial and competitive gains.

In the next sub-section, we will apply Lotka's Law and Bibliographic Coupling Analysis to the sample articles and complement the analysis using VOSviewer and Biblioshiny resources.

**Table 4**
Annual scientific production and average citations per year.

| Source | Documents | Citations |
|---|---|---|
| *Sustainability* | 13 | 155 |
| *Corporate Social Responsibility and Environmental Management* | 9 | 259 |
| *Cogent Business & Management* | 3 | 56 |
| *Finance Research Letters* | 3 | 87 |
| *Journal of Asian Finance Economics and Business* | 3 | 40 |
| *Journal of Sustainable Finance & Investment* | 3 | 11 |
| *Management Decision* | 3 | 57 |
| *Review of Managerial Science* | 3 | 68 |

Source: Biblioshiny.

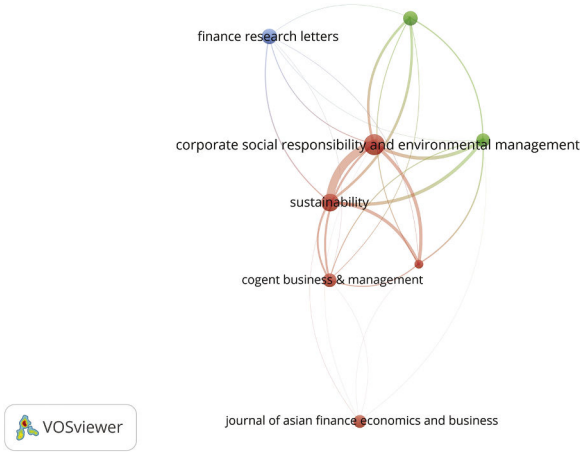


**Fig. 5.** Bibliographic coupling map by sources (Journals); generated by VOSviewer.

### *Lotka's law and bibliographic coupling analysis*

Table 5 applies Lotka's Law to analyze author productivity, showing the relationship between the number of authors and publications in moderating variables and the ESG/CSR-CFP research field. It illustrates a typical distribution pattern of authorship in academic literature, where a few authors are highly prolific, while the majority contribute only occasionally.

In this dataset, 296 authors wrote only 1 document each — accounting for 95.2 % of the total — reflecting a large pool of infrequent contributors. A smaller group of 14 authors — representing 4.5 % — wrote 2 documents each, showing moderate productivity. Finally, a single author wrote three documents, showcasing the high productivity that Bradford's Law predicts for a "core" group of authors who contribute most significantly to literature. This pattern confirms the law's principle that a few authors generate most publications in any field, highlighting the uneven distribution of scientific output. Fig. 6 illustrates author productivity by Lotka's Law, highlighting the disproportionate contribution of a few highly prolific authors.

The VOSviewer software permits the creation of maps based on bibliographic data. We applied the bibliographic coupling analysis

**Table 5**
Author's productivity through Lotka's law.

| Documents Written | N° of Authors | Proportion of Authors |
|---|---|---|
| 1 | 296 | 0.952 |
| 2 | 14 | 0.045 |
| 3 | 1 | 0.003 |

Source: Biblioshiny.

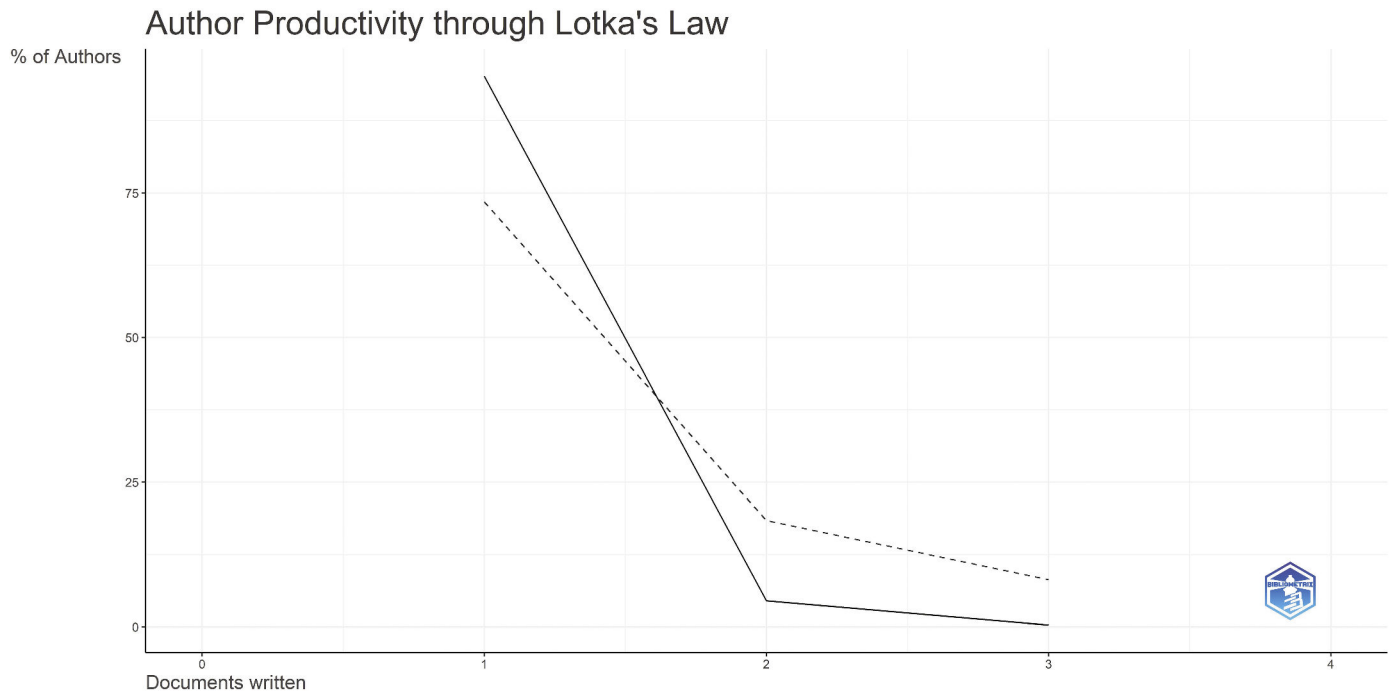


**Fig. 6.** Author productivity through Lotka's Law; generated by Biblioshiny.

based on the shared references. Fig. 7 shows the bibliographic coupling map of articles, identifying key clusters and the intellectual structure of the field as determined by shared references. We identified five research clusters: yellow, green, blue, red, and purple. Each one is based on the shared bibliographic references.

In examining the dynamics of CSR and its impact on financial performance, the Yellow Cluster primarily focuses on how CSR disclosures influence market perceptions and firm value. Research in this cluster (e.g., Bofinger et al., 2022) highlights that transparency in CSR practices significantly enhances investor confidence and reduces information asymmetry, leading to improved financial performance. Bofinger et al. (2022) found that firms with robust CSR reporting often enjoy higher market valuations, especially in regions with stringent regulatory frameworks and high stakeholder expectations. Moderating variables such as firm size, industry type, and CEO characteristics is also critical. For example, Rashid et al. (2020) show that larger firms benefit more from CSR disclosures due to their greater visibility and scrutiny from investors and regulators. In contrast, Butt et al. (2020) demonstrate that firms in highly regulated or consumer-facing industries, where public scrutiny is intense, see enhanced financial outcomes from engaging in visible CSR activities. Moreover, the power dynamics within firms (e.g., the influence of a strong CEO) can direct the strategic focus of CSR efforts, aligning them more closely with market expectations and thereby amplifying their positive impact on firm value. These findings underscore the importance of considering both internal and external factors when evaluating the financial benefits of CSR activities.

The Green Cluster delves into the integration of ESG criteria into business strategies and their subsequent impact on firm value and

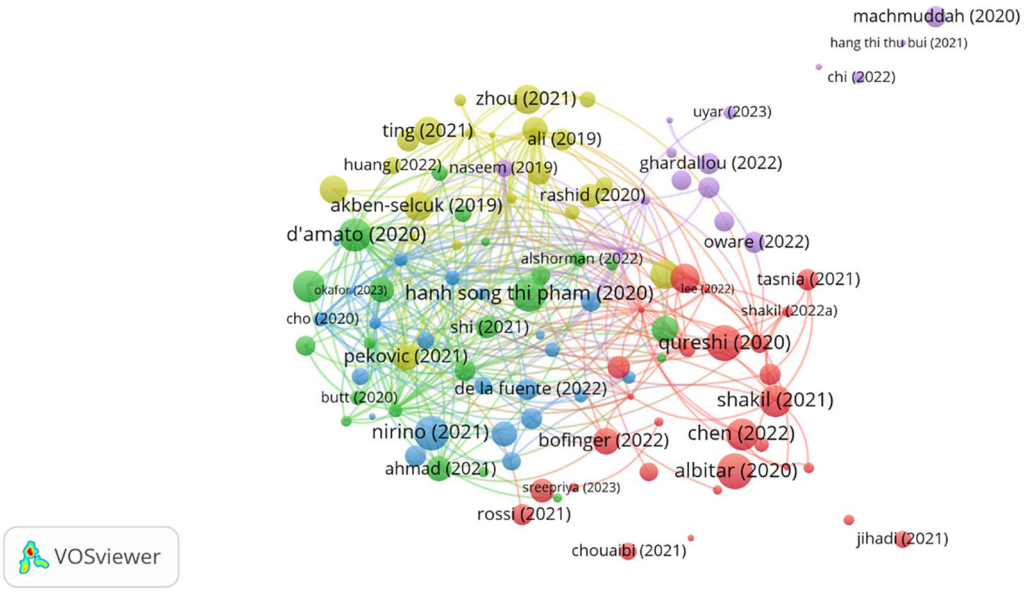


**Fig. 7.** Bibliographic coupling articles map; generated by VOSviewer.

financial stability. Studies within this cluster, such as those by Sreepriya et al. (2023), demonstrate that firms effectively integrating ESG practices into their operations tend to perform better in terms of market valuation and financial resilience. Sreepriya et al. (2023) found that adherence to recognized sustainability standards (e.g., GRI) increases a firm's credibility and trust among investors, which can enhance financial outcomes. Similarly, Nisar Ahmad et al. (2021) emphasize that the financial benefits of ESG practices are moderated by economic conditions and market maturity. In developed markets, where governance structures are robust and investor sentiment favors sustainability, firms with high ESG scores are more likely to attract institutional investors and achieve higher valuations. Conversely, Jihadi et al. (2021) point out that in emerging markets, where ESG practices are still evolving, the impact on firm value may be less pronounced but is gaining traction as awareness and regulatory support increase. These studies collectively highlight that while ESG integration generally boosts firm value, the extent of its impact is influenced by market-specific factors and the broader economic context.

The Blue Cluster focuses on identifying and analyzing the moderating variables that influence the outcomes of ESG and CSR initiatives on financial performance. This cluster emphasizes that the effectiveness of these initiatives is not uniform and depends heavily on a range of firm-specific characteristics and external factors. For example, Brooks et al. (2022) show that larger firms often see greater benefits from their ESG and CSR activities due to their higher visibility and the greater scrutiny they receive from investors and the public. Similarly, Vuong (2022) highlights the crucial role of audit firm tenure; firms with longer audit relationships may present more credible ESG disclosures, which enhances their market valuation. Chang et al. (2019) add another layer by examining the impact of media freedom, finding that in markets with higher media freedom, CSR disclosures lead to improved firm value due to increased public scrutiny. These studies underscore the importance of understanding the specific contexts in which ESG and CSR activities are deployed, as the interplay of these moderating variables can significantly alter their impact on financial performance.

The Red Cluster explores the integration of ESG criteria into financial performance metrics and its effect on overall firm performance, particularly during periods of economic volatility. Wang (2023) suggests that firms that incorporate ESG considerations into their strategic management and financial planning are better positioned to navigate market fluctuations and maintain stable performance. For instance, integrating ESG criteria into financial planning can enhance a firm's resilience and adaptability in volatile markets, leading to more sustainable long-term growth (Wang, 2023). This integration is particularly beneficial in industries facing frequent disruptions, where ESG-driven strategies help firms manage risks and seize opportunities more effectively. E-Vahdati (2023) further explores this theme by examining how ESG integration fosters financial innovation, focusing on the development of new metrics for measuring sustainability impacts. The role of economic cycles as a moderating variable is also crucial; during economic downturns, Albuquerque (2020) found that firms with strong ESG practices tend to perform better because their focus on sustainability and ethical practices fosters greater trust and confidence among stakeholders, thereby, stabilizing their financial performance.

Finally, the Purple Cluster comprises niche studies focusing on the unique impacts of ESG considerations within specific sectors or under unique market conditions. This cluster emphasizes that the financial impact of ESG activities can vary significantly depending on sector-specific dynamics and market maturity. For instance, Zhou et al. (2021) investigated the banking sector and find that firms engaging in responsible lending and promoting financial inclusion see enhanced reputational benefits and reduced risk, leading to improved financial performance. Similarly, in the real estate sector, Sebastiano Cupertino et al. (2021) show that firms prioritizing sustainable building practices and energy efficiency attract environmentally conscious investors, thereby, boosting their market valuation. Ali Uyar et al. (2022) explored the tourism sector, demonstrating that strategic orientations (cost leadership vs. differentiation) significantly affect CSR performance. These studies highlight the importance of tailoring ESG strategies to fit the specific needs and conditions of different sectors, as well as the varying levels of market maturity, to optimize their impact on financial performance.

In the next sub-section, we will apply Keyword Analysis to the sample articles using VOSviewer resources.

*Keyword analysis (Co-Occurrence analysis)*

Keyword analysis using VOSviewer is a valuable bibliometric approach that identifies key research themes and trends by examining the co-occurrence of keywords within academic publications. By constructing co-occurrence networks, VOSviewer visually maps how frequently specific keywords appear together in the same documents, revealing clusters of related concepts. This helps researchers identify core topics, emerging trends, and potential research gaps within a field. Additionally, the strength of the connections between keywords offers insights into the relationships between different research areas, guiding future research directions and supporting interdisciplinary exploration. VOSviewer is widely used in systematic reviews and research planning due to its ability to quantify and visualize the intellectual structure of a domain effectively.

Fig. 8 presents a VOSviewer-generated keyword co-occurrence map depicting the major themes and conceptual linkages within the literature. We analyzed the five clusters that were automatically identified based on the keywords shared by articles.

The Red Cluster focuses on CSR's impact on management strategies and financial outcomes, grounded in Stakeholder Theory and Shareholder Value Maximization. Bofinger et al. (2022) explore how CSR initiatives can enhance market efficiency and firm value, using financial metrics such as Tobin's Q. Their findings align with Stakeholder Theory, suggesting that CSR activities cater to a broader range of stakeholders, thereby, improving market perceptions and, subsequently, financial performance. Similarly, Cho and Tsang (2020) investigate how aligning CSR with product strategies, such as cost leadership or differentiation, enhances a firm's financial performance. The research supports the idea that CSR, when integrated into strategic business operations, can significantly boost firm value, especially when external market sentiment toward sustainability is favorable.

The Blue Cluster delves into the interplay between financial performance, corporate governance, and CSR, with a foundation in Agency Theory and Stakeholder Theory. Rashid et al. (2020) examined how CEO power moderates the relationship between CSR and financial performance, revealing that stronger governance mechanisms can enhance the positive effects of CSR on the firm value measured by Tobin's Q. This finding aligns with Agency Theory, which posits that effective governance can mitigate agency problems and ensure that CSR activities are aligned with shareholder interests. Guo et al. (2020) further explore this dynamic, finding that governance structures, such as board size and independence, significantly influence how CSR initiatives translate into firm value, underscoring the importance of robust governance frameworks in maximizing the financial benefits of CSR.

The Green Cluster emphasizes sustainability strategies and their impact on performance metrics, drawing on Signaling Theory and Legitimacy Theory. Vuong (2022) examines how investor sentiment toward CSR affects financial performance, highlighting that positive investor sentiment can significantly boost financial outcomes. This supports Signaling Theory, which suggests that companies engaging in CSR signal their commitment to ethical practices, thereby, attracting positive investor attention. Chang et al. (2020) investigated the moderating role of media freedom on the CSR-financial performance relationship, demonstrating that greater media freedom amplifies the positive impact of CSR on financial outcomes. This aligns with Legitimacy Theory, which posits that organizations strive to operate within

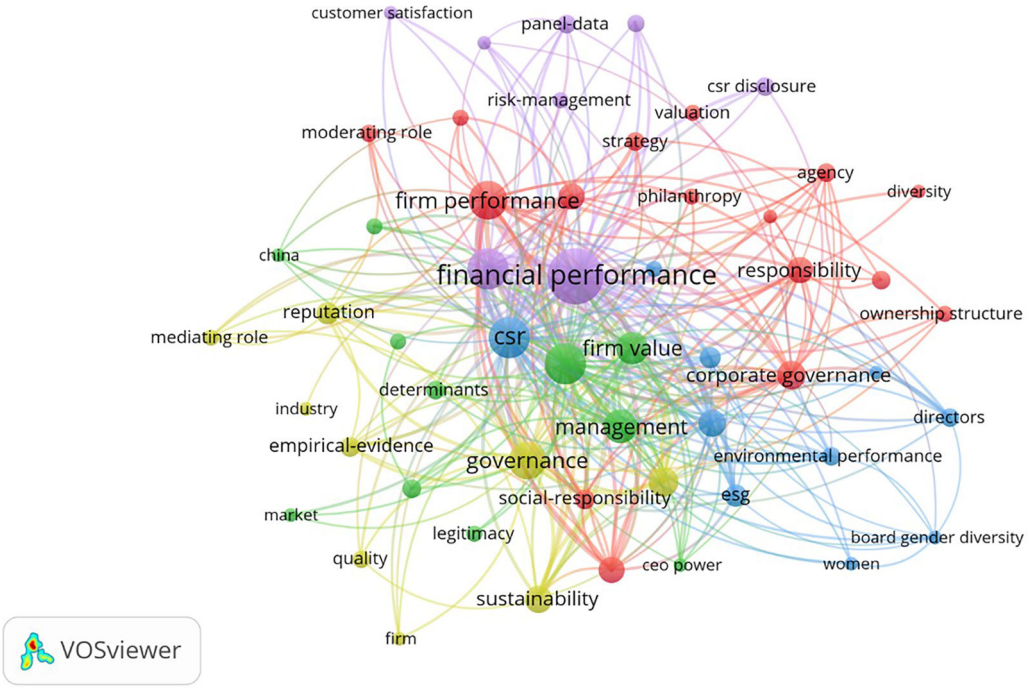


**Fig. 8.** Keyword Map; generated by VOSviewer.

the norms and values of their social environment to maintain legitimacy.

The Yellow Cluster focuses on risk management, shareholder value, and their determinants, underpinned by Risk Management Theory and Agency Theory. Leopizzi (2023) examines how CSR initiatives affect firm value in the context of various risk management strategies, finding that effective risk management enhances the positive effects of CSR on firm value. Sreepriya et al. (2023) discuss the role of GRI compliance as a moderating factor in the CSR-financial performance link, emphasizing the importance of transparency and risk mitigation. These findings suggest that companies that integrate robust risk management practices and adhere to sustainability reporting standards are better positioned to maximize the financial benefits of CSR.

The Purple Cluster explores governance issues, ownership structures, and legitimacy concerning CSR and financial performance, drawing from Agency Theory and Stakeholder Theory. Brooks et al. (2020) analyzed the relationship between audit firm tenure and CSR, demonstrating that longer audit firm tenure, combined with robust CSR practices, enhances firm value. Javeed and Lefen (2019) examine how different ownership structures impact the CSR-financial performance relationship, revealing that firms with diverse ownership structures are better able to capitalize on CSR initiatives. These studies underscore the importance of governance mechanisms in moderating the impact of CSR activities on firm value, suggesting that internal governance factors play a crucial role in shaping CSR effectiveness.

Finally, the Cyan Cluster examines ESG criteria, particularly environmental performance, and their financial implications, guided by the RBV and Institutional Theory. Ahmad et al. (2021) revisit the impact of ESG on financial performance, highlighting that environmental performance has a particularly strong impact on financial metrics such as ROA and stock returns. Naseem et al. (2019) discuss how traditional financial metrics such as liquidity and leverage moderate the impact of ESG efforts on overall financial performance, indicating that companies with healthier financial positions are better positioned to benefit from ESG investments. These findings suggest that firms with solid financial foundations can more effectively leverage their ESG initiatives to improve financial outcomes.

*Moderating variables analysis*

Based on the frequent count analysis of the 108 articles, we identified the most common moderating variables at play in the ESG/CSR-CFP research. Table 6 provides a detailed classification of the articles based on the primary moderating variables identified. This categorization highlights critical factors such as audit firm tenure, audit quality, board characteristics, and CEO characteristics, frequently examined to assess their moderating effects on the ESG/CSR-CFP relationship.

Fig. 9 presents a frequency count of these moderating variables, highlighting which factors have been most examined in recent studies. This visualization helps to underscore the importance of specific moderating variables, such as board and firm characteristics, in shaping the ESG/CSR-CFP dynamic. The five most frequent moderating variables influencing the relationship between ESG/CSR measures and CFP are *Board Characteristics, Firm Characteristics, Ownership Structure, Social Influence, Industry Characteristics*, and *CEO Characteristics*. These categories collectively represent the most studied moderators shaping the impact of sustainability practices on financial outcomes.

*Board Characteristics* are the most frequent moderating variables, accounting for 19.3 % of the total occurrences. This category includes elements such as board size, diversity, independence, and the presence of sustainability committees. The board's composition and structure significantly influence a company's strategic direction, especially concerning ESG and CSR initiatives. A well-composed board, characterized by diversity and independence, is better equipped to oversee and support sustainability practices that align with long-term shareholder value. Strong governance frameworks provided by the board can enhance the credibility and effectiveness of ESG/CSR strategies, thus, positively impacting financial performance.

Similarly, *Firm Characteristics* make up 17.4 % of the moderating variables, reflecting their substantial influence. This category includes factors such as firm size, age, profitability, leverage, and operational efficiency, which affect a firm's ability to implement and benefit from ESG and CSR initiatives. For example, larger firms often have more resources and capabilities to invest in comprehensive sustainability programs, while firms with high leverage may face financial constraints that limit their ability to engage in CSR activities. The prominence of firm

**Table 6**
Moderating variable classification.

| Moderator | Refs. |
|---|---|
| Audit Firm Tenure | Brooks et al. (2020), Brooks et al. (2022). |
| Audit Quality | Dakhli (2022), Fuadah et al. (2022) |
| Board Characteristics | Rossi et al. (2021), Albitar et al. (2020), Chijoke-Mgbame et al. (2020), Karim et al. (2020), Lee (2021), Li et al. (2022), Sampong et al. (2021), Ahmad et al. (2023), Pekovic and Vogt (2021), Shakil et al. (2022), Kahloula et al. (2022), Al-Shammari et al. (2023), Nirino et al. (2022), Nekhili et al. (2021), Brinette et al. (2023), Shakil (2021), E-Vahdati et al. (2023), Ooi et al. (2022), Yeon et al. (2021), Butt et al. (2020). |
| CEO Characteristics | Ghardallou (2022), Pham and Tran (2020), Almulhim and Aljughaiman (2023), Velte (2020), Okafor et al. (2023). |
| Competitive Environment | Rasheed and Ahmad (2022), Bashir (2022). |
| Cultural Factors | Shi and Veenstra (2021), Le et al. (2023), DasGupta and Roy (2023), Liu et al. (2023). |
| Sustainability Indicators | Chen and Xie (2022), Grassmann (2021), Zhou et al. (2021). |
| Economic Indicators | Alfalih (2022). |
| Financial Aspects | Saadaoui and Ben Salah (2023), Coleman and Wu (2021), Ryu (2019). |
| Financial Flexibility | Guo et al. (2020) |
| Firm Characteristics | Javed et al. (2020), Dkhili (2023), Akben-Selcuk (2019), Machmuddah et al. (2020), Ting (2021), Handayati et al. (2022), Shakil (2022), Jiang et al. (2020), Wirawan et al. (2020), (Wang et al., 2023), Alshorman et al. (2022), Aqabna et al. (2023), Espinosa-Méndez, Maquieira and Arias (2023), D'Amato and Falivena (2020), Abdi et al. (2022), Sánchez-Infante Hernández et al. (2020), Al-Dah (2019), Naseem et al. (2019), Ahmad et al. (2021). |
| Firm Strategy | Uyar et al. (2023) |
| Growth and Market-Based Assets | de la Fuente et al. (2022), Lin et al. (2020). |
| Industry Characteristics | Jeong (2021), Wang (2022), Jia (2020), Qureshi et al. (2020), Kaupke and zu Knyphausen-Aufseß (2023), Bui & Bui (2021) |
| Internationalization | .Sang et al. (2022) |
| Market Sentiment | Bofinger et al. (2022), Heyden and Rock (2022), Vuong (2022). |
| Marketing and Media | Sun et al. (2019), Fu et al. (2022), Chang et al. (2019). |
| Other | Wen et al. (2022), Asante-Appiah and Lambert (2023), Boulhaga et al. (2023), Cupertino et al. (2021). |
| Ownership Structure | Ang et al. (2022), Chi et al. (2022), Muda et al. (2019), Ali et al. (2019), Bui and Bui (2021), Bai (2022), Rastogi et al. (2023), Tarighi et al. (2022). |
| Political and Governance Factors | Huang (2022), Lee and Li (2022). |
| Product and Strategic Management | Cho and Tsang (2020). |
| R&D Investment | Al-Shammari et al. (2022), Duan et al. (2023). |
| Regulatory Environment | Forgione et al. (2020). |
| Social Influence | Khan et al. (2023), Garel et al. (2022), Oware and Mallikarjunappa (2022), Zhao et al. (2022), Gallego-Álvarez and Pucheta-Martínez (2022), Bifulco et al. (2023). |
| Social Ties | Jang et al. (2019). |
| Stakeholder Influence | Rashid et al. (2020), Tsang et al. (2022). |
| Tax and Regulation | Tasnia et al. (2021). |
| Technology and Innovation | Chouaibi and Chouaibi (2021). |

Source: Produced by Authors.

characteristics as a moderator underscores the importance of understanding company-specific traits when assessing the financial impacts of sustainability efforts.

*Ownership Structure* also plays a critical role, accounting for 7.3 % of the total moderating variables. This category includes aspects such as ownership concentration, institutional ownership, family ownership, and shareholder activism. Different ownership structures can influence a firm's strategic priorities and openness to adopting ESG and CSR measures. For instance, firms with concentrated ownership, such as those dominated by a few large shareholders, might prioritize long-term sustainability if it aligns with the owners' preferences and objectives. Conversely, firms with dispersed ownership might experience challenges in achieving consensus on sustainability strategies, potentially impacting their financial benefits from ESG and CSR initiatives. The high frequency of ownership structure as a moderator highlights its role in shaping corporate governance and strategic decision-making.

In addition to governance-related factors, *Social Influence* represents 5.5 % of the moderating variables. This category captures the impact of societal expectations, cultural norms, and stakeholder pressures on a company's ESG and CSR practices. Factors such as community engagement, social responsibility pressures from customers and investors, and media attention significantly influence corporate behavior. Companies that effectively respond to social pressures often experience enhanced reputation, customer loyalty, and, consequently, improved financial performance. The presence of social influence as a frequent moderator emphasizes its importance in driving corporate sustainability strategies and outcomes.

*Industry Characteristics* are also prominent, identified as moderating variables in 4.6 % of the cases. This category includes sector-specific dynamics, regulatory requirements, competitive intensity, and market maturity. Certain industries, such as energy, mining, and manufacturing, face higher regulatory scrutiny and societal expectations due to their environmental impact. Firms in these sectors may need to adopt more robust ESG strategies to comply with regulations and maintain their social license to operate. Conversely, firms in less-regulated industries might not experience the same level of pressure, leading to varied financial impacts of their sustainability initiatives. The frequency of this moderator underscores the significant role of industry context in determining the financial implications of ESG and CSR activities.

Finally, *CEO Characteristics* also account for 4.6 % of the moderating variables. This category includes factors such as CEO power, tenure, ethical orientation, and leadership style. The CEO's vision and commitment to sustainability can significantly influence a firm's strategic direction and the effectiveness of its ESG/CSR initiatives. A CEO who prioritizes ethical governance and sustainability is likely to foster a corporate culture that values long-term success over short-term gains, which can enhance a firm's reputation and financial stability. The frequent mention of CEO characteristics as a moderating variable underscores the critical influence of executive leadership on the success of sustainability initiatives.

In conclusion, the aforementioned moderating variables collectively account for a significant portion of the dataset. These variables highlight the complex interplay between governance, leadership, social pressures, industry-specific contexts, and ownership dynamics in shaping the financial outcomes of ESG and CSR initiatives. Understanding these moderators is crucial for businesses looking to optimize their sustainability strategies and enhance financial performance.

### *Systematic review*

Following the proposed classification framework by Junior and Godinho Filho (2010), Van Kampen et al. (2012), and Jabbour (2013), we applied a codification system and a frequency count analysis to identify research gaps. We conducted a comprehensive review and analysis of 108 selected articles, subsequently categorizing them based on their specifications. Table 7 provides a complete categorization matrix of articles based on the classification and coding framework. This classification endeavor facilitates a coherent comprehension and analysis of the knowledge and methodologies in the selected papers.

In the following subsections, we discuss the results of the seven categories provided by the categorization matrices, identifying the existing knowledge base and the gaps in it that require further studies. We graphically show the variable's distribution of each category, providing an easy view of how the knowledge has been explored in the

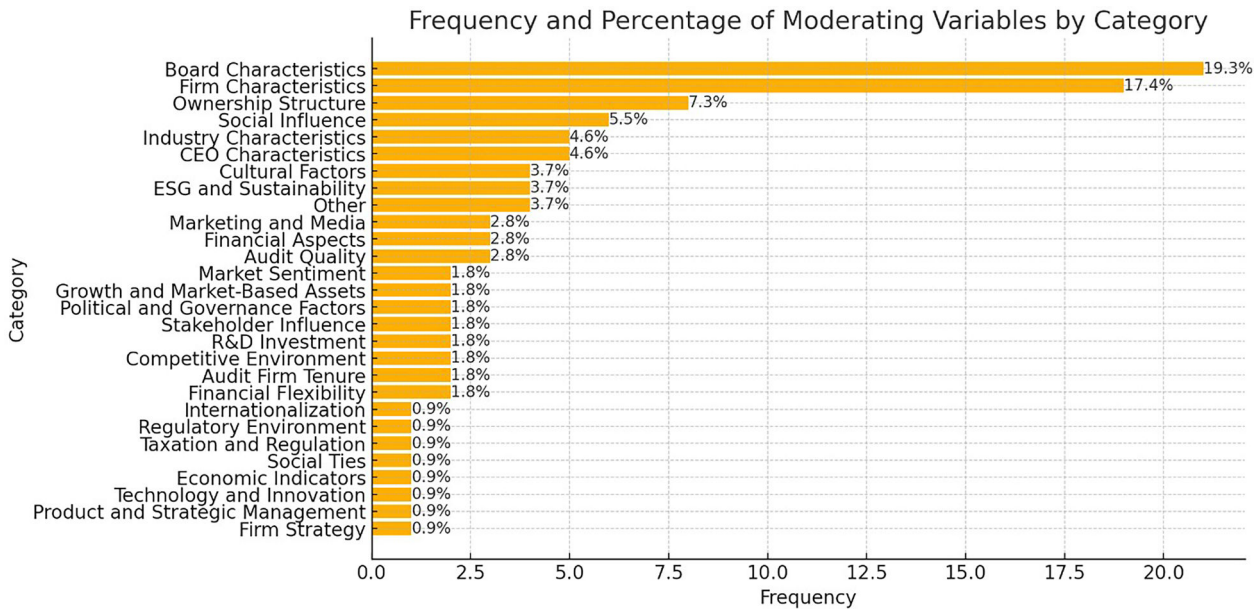


**Fig. 9.** Moderating variables frequency count; generated by Matplotlib.

sample articles. We identified the 20 most representative gaps. Each gap is identified by the letter "G" and the numbers 1 to 20 in highlighted text format for easy identification.

*Financial performance research gaps*

This classification category was structured to list the selected articles according to their Financial Performance Measure. Fig. 10 depicts the percentage distribution of these financial performance categories, indicating that Category 1A, which includes valuation metrics such as Tobin's Q and market-to-book ratio, accounts for the highest proportion at 51.06 %. This suggests a predominant focus on market-based performance measures in the literature that is particularly relevant for assessing the impact of ESG and CSR initiatives, which are generally designed to enhance long-term value rather than immediate financial returns (Verma & Mukhtaruddin, 2023; Wagner, 2011).

Profitability metrics (1B), including ROA, return on equity (ROE), and net profit margin, represent another significant area of focus, making up 34 % of the studies. For example, Wagner (2011) shows that socially responsible practices can enhance profitability by driving operational efficiencies, reducing costs, and fostering customer loyalty. However, the impact of moderating variables such as corporate governance structures and regulatory environments in this relationship is less explored, indicating an area for further research. Understanding these moderating effects could provide deeper insights into optimizing financial outcomes through ESG practices.

Risk management metrics (1C) are another critical yet underrepresented area in ESG research, constituting less than 5 % of the studies. These metrics, which include credit risk, volatility, and beta, are essential for assessing how ESG and CSR initiatives contribute to financial risk mitigation. The systematic review by Verma and Mukhtaruddin (2023) underscores the limited exploration of these metrics, particularly in how different moderating variables (e.g., geographic location and industry-specific risks), influence the effectiveness of ESG practices in reducing financial risks. This gap suggests a need for more focused research on the role of ESG in enhancing financial resilience.

***G1:* Explore risk metrics such as credit risk, volatility, and beta systematic risk in upcoming articles**

Innovation metrics (1D), including R&D expenditure and patent counts, are also notably underrepresented in the literature, representing only 0.71 % of the studies. These metrics are crucial for assessing the role of ESG and CSR initiatives in driving innovation within firms. The limited focus on innovation suggests a gap in exploring how sustainability practices contribute to long-term financial performance through innovation, particularly when moderated by factors such as industry innovation rates and access to sustainable technologies. The work by Bartolacci et al. (2020) highlights the need for more research to understand the broader implications of ESG on innovation.

***G2:* Explore innovation metrics in future articles, such as R&D expenditures and patent counts**

Emerging financial performance indicators (1E), such as those related to stakeholder value creation and intangible assets, are gaining importance as integrated reporting frameworks such as the GRI become more widely adopted. Common variables in this category include brand value, employee satisfaction, and customer loyalty. The absence of extensive research on Total Shareholder Return (TSR) in the context of ESG and CSR initiatives represents a significant gap in the current literature. TSR is a key indicator of overall shareholder value, combining both capital gains and dividends, and remains underexamined. This gap is noteworthy because TSR directly reflects the financial benefits delivered to shareholders over time, making it a crucial measure of how ESG and CSR efforts translate into tangible returns for investors.

Market performance metrics (1F), such as stock price, market share, and sales growth, account for 4.26 % of the studies. These metrics are vital for understanding the competitive advantages conferred by sustainability practices. The study by Hang et al. (2019) indicates that stock price directly reflects market perceptions and investor sentiment, and moderating factors such as market volatility and investor behavior can significantly influence its relationship with ESG activities.

The research on valuation and profitability metrics in the context of ESG and CSR initiatives is well-developed and supported by robust evidence from recent literature. However, significant gaps remain in the study of risk management, market performance, innovation, and emerging financial performance indicators, particularly the TSR when considering the effects of moderating variables.

***G3: Explore* more financial indicators, such as brand value, employee satisfaction, customer loyalty, and TSR**

**Table 7**
Categorized articles based on the classification and coding framework.

| Refs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Abdi et al. (2022). | 1A | 2C/ 2F/ 2B/ 2A | 3A | 4C/ 4A | 5I/ 5A | 6B | 7A/ 7C |
| Ahmad et al. (2021). | 1A/ 1B | 2C/ 2F/ 2B/ 2A | 3A | 4C/ 4D | 5I/ 5E | 6B | 7B/ 7C |
| Akben-Selcuk (2019). | 1B | 2G | 3D | 4C/ 4D | 5I | 6B | 7B/ 7C |
| Albitar et al. (2020). | 1A | 2A | 3D | 4C/ 4D | 5I/ 5A/ 5C | 6B | 7C |
| Al-Dah (2019). | 1A | 2G | 3D | 4D/ 4F | 5I | 6B | 7B/ 7C |
| Alfalih (2022). | 1A/ 1B | 2C/ 2F/ 2B/ 2A | 3H | 4C/ 4D | 5I/ 5A | 6C | 7C |
| Ali et al. (2019). | 1A | 2F/ 2G | 3C | 4C/ 4D | 5I/ 5A | 6B | 7C |
| Almulhim and Aljughaiman (2023). | 1B | 2C/ 2F/ 2B/ 2A | 3D | 4D/ 4C | 5I | 6C | 7B/ 7A/ 7C |
| Al-Shammari et al. (2022). | 1A | 2G | 3A | 4C/ 4D | 5I | 6C | 7B/ 7C |
| Al-Shammari et al. (2023). | 1B | 2G | 3D/ 3A | 4D | 5I | 6B | 7B/ 7C |
| Alshorman et al. (2022). | 1C | 2C/ 2F/ 2B/ 2A/ 2G | 3H | 4C | 5I | 6B | 7B/ 7C |
| Ang et al. (2022). | 2E | 2C/ 2F/ 2B/ 2A | 3E | 4C | 5G | 6C | 7B/ 7C |
| Aqabna et al. (2023). | 1A/ 1B | 2C/ 2F/ 2B/ 2A/ 2G | 3D | 4C/ 4D/ 4A | 5I/ 5H/ 5C | 6C | 7B/ 7A/ 7C |
| Asante-Appiah and Lambert (2023). | 1A/ 1B | 2A | 3C | 4A/ 4C | 5I | 6B | 7B/ 7C |
| Bai (2022). | 1D | 2G | 3A | 4C/ 4D | 5I | 6B | 7C |
| Bashir (2022). | 1A/ 1B | 2G/ 2D | 3B | 4C/ 4D | 5D/ 5F | 6C | 7B/ 7A/ 7C |
| Bifulco et al. (2023). | 1F | 2A | 3F | 4C/ 4D | 5I/ 5A/ 5J | 6B | 7B/ 7C |
| Bofinger et al. (2022). | 1A | 2A | 3G/ 3F | 4C | 5I/ 5J | 6C | 7B/ 7C |
| Boulhaga et al. (2023). | 1A | 2A | 3D | 4C/ 4D | 5I/ 5A | 6C | 7B/ 7C |
| Brinette et al. (2023). | 1A | 2A | 3D | 4C/ 4D | 5A/ 5E | 6B | 7B/ 7C |
| Brooks et al. (2020). | 1A | 2F/ 2A/ 2G | 3C | 4C | 5I/ 5J | 6A | 7B/ 7C |
| Brooks et al. (2022). | 1A | 2A/ 2G | 3C | 4C/ 4D | 5J/ 5F | 6A | 7B/ 7C |
| Bui and Bui (2021). | 1B | 2F/ 2G/ 2D | 3D | 4C | 5A/ 5J | 6C | 7A/ 7C |
| Butt et al. (2020). | 1A/ 1B | 2F/ 2G | 3D/ 3A | 4C/ 4D | 5A | 6B | 7A/ 7C |
| Broadstock et al. (2021). | 1A/ 1B | 2G | 3C | 4C/ 4D | 5I | 6B | 7A/ 7C |
| Chang et al. (2019). | 1A | 2C/ 2F/ 2G | 3E | 4C | 5I/ 5A | 6B | 7B/ 7C |
| Chen and Xie (2022). | 1A/ 1B/ 2E | 2A | 3F | 4C/ 4D | 5I | 6C | 7B/ 7C |
| Chi et al. (2022). | 1B | 2G | 3D | 4C/ 4E/ 4B | 5G | 6A | 7B/ 7C |
| Chijoke-Mgbame et al. (2020). | 1B | 2F/ 2G | 3D/ 3A | 4D/ 4C | 5I | 6B | 7A/ 7C |
| Cho and Tsang (2020). | 1A | 2G | 3G | 4B | 5I/ 5A | 6B | 7C |
| Chouaibi and Chouaibi (2021). | 1A | 2F | 3G/ 3F | 4C/ 4F | 5I/ 5A/ 5H | 6C | 7B/ 7C |
| Coleman and Wu (2021). | 1A/ 1B | 2B | 3H | 4D/ 4C | 5G | 6B | 7A/ 7C |
| Cupertino et al. (2021). | 1B | 2C/ 2F/ 2B/ 2A | 3A | 4B/ 4C | 5A/ 5J | 6A | 7B/ 7C |
| Dakhli (2022). | 1A/ 1B | 2G | 3C | 4D/ 4C | 5A/ 5J | 6B | 7B/ 7C |
| D'Amato and Falivena (2020). | 1A/ 1F | 2G | 3A | 4C/ 4D | 5I/ 5A/ 5H | 6B | 7B/ 7A/ 7C |
| DasGupta and Roy (2023). | 1A/ 1B | 2A | 3E | 4E | 5I | 6B | 7B/ 7C |
| de la Fuente et al. (2022). | 2E/ 1A | 2F/ 2A | 3G | 4A/ 4F/ 4C/ 4D | 5H/ 5J/ 5F | 6B | 7B/ 7C |
| Dkhili (2023). | 1A | 2A | 3B | 4C/ 4D | 5I/ 5A/ 5H/ 5J | 6C | 7B/ 7C |
| Duan et al. (2023). | 1A | 2A | 3G | 4C | 5I/ 5A | 6A | 7B/ 7C |
| Espinosa-Méndez and Maquieira (2023). | 1A | 2C/ 2F/ 2B/ 2A | 3H | 4D | 5C | 6C | 7B/ 7C |
| E-Vahdati et al. (2023). | 1F | 2C/ 2F/ 2B/ 2A | 3D | 4C | 5I/ 5A | 6C | 7B/ 7C |
| Forgione et al. (2020). | 2E | 2C/ 2F/ 2B/ 2G | 3C | 4D/ 4C | 5J/ 5F | 6B | 7B/ 7C |
| Fu et al. (2022). | 1C | 2F/ 2A | 3F | 4C | 5I | 6B | 7B/ 7C |
| Fuadah et al. (2022). | 1A/ 1B | 2A | 3C | 4C/ 4D | 5A/ 5C | 6C | 7C |
| Gallego-Álvarez and Pucheta-Martínez (2022). | 1A/ 1B | 2E | 3D/ 3A | 4C/ 4D | 5I/ 5H/ 5J | 6B | 7B/ 7C |
| Garel et al. (2022). | 1A | 2C/ 2F/ 2G | 3F | 4C | 5I/ 5J | 6B | 7B/ 7C |
| Ghardallou (2022). | 1A/ 1B | 2A/ 2G | 3D | 4C/ 4D/ 4B | 5I/ 5E | 6C | 7B/ 7A/ 7C |
| Grassmann (2021). | 1A | 2C/ 2F/ 2G/ 2D | 3F/ 3C | 4D/ 4C | 5I | 6A | 7B/ 7C |
| Guo et al. (2020). | 1A | 2F/ 2G | 3H/ 3G | 4D | 5I/ 5A | 6B | 7A/ 7C |
| Guo et al. (2020). | 1A/ 1C | 2G | 3H/ 3G | 4C/ 4D/ 4B | 5A | 6B | 7B/ 7C |
| Handayati et al. (2022). | 1A | 2F/ 2G | 3A/ 3A | 4C | 5A/ 5J | 6A | 7A/ 7C |
| Huang (2022). | 1B | 2G | 3C | 4C/ 4D | 5I/ 5A/ 5J | 6B | 7B/ 7C |
| Sreepriya et al. (2023). | 1A/ 1B | 2A | 3F | 4C | 5G | 6C | 7B/ 7C |
| Jang et al. (2019). | 1B | 2G | 3E | 4C/ 4D | 5I/ 5A | 6B | 7B/ 7C |
| Javed et al. (2020). | 1A/ 1B | 2G | 3D | 4D/ 4C | 5A | 6A | 7A/ 7C |
| Jeong (2021). | 1B | 2F | 3B | 4F | 5I/ 5J/ 5C | 6A | 7B/ 7C |
| Jia (2020). | 1A | 2G | 3B | 4C | 5I/ 5J/ 5C | 6C | 7B/ 7A/ 7C |
| Jiang et al. (2020). | 2E | 2C/ 2F/ 2G | 3B | 4C | 5A/ 5J/ 5E | 6C | 7B/ 7C |
| Kahloula et al. (2022). | 1A/ 1B | 2A/ 2G | 3D | 4C/ 4D/ 4E | 5I/ 5A | 6C | 7B/ 7A/ 7C |
| Karim et al. (2020). | 1A/ 1B | 2B/ 2G | 3D | 4D/ 4C | 5I/ 5J | 6C | 7B/ 7A/ 7C |
| Kaupke and zu Knyphausen-Aufseß (2023). | 1A | 2A | 3B | 4C | 5I/ 5F | 6B | 7B/ 7C |
| Khan et al. (2023). | 1B | 2C/ 2F/ 2G | 3F | 4C/ 4D | 5I | 6A | 7B/ 7C |
| Le et al. (2023). | 1A | 2G | 3D | 4D/ 4C | 5I/ 5J | 6B | 7B/ 7A/ 7C |
| Lee and Li (2022). | 1B | 2A | 3E | 4C/ 4A | 5I/ 5E/ 5K | 6C | 7B/ 7C |
| Lee (2021). | 1B | 2C/ 2G | 3D | 4C/ 4D | 5A/ 5J/ 5E | 6B | 7B/ 7C |
| Li et al. (2022). | 1A/ 1B | 2G | 3D | 4C | 5I/ 5J | 6C | 7C |
| Lin et al. (2020). | 1A | 2G | 3C | 4C | 5J/ 5F | 6C | 7B/ 7C |
| Liu et al. (2023). | 2E | 2B | 3E | 4D | 5I | 6B | 7B |
| Machmuddah et al. (2020). | 1A | 2G | 3A | 4C | 5B/ 5A | 6B | 7C |
| Muda et al. (2019). | 1A | 2F/ 2G | 3C | 4C/ 4D | 5A | 6A | 7A/ 7C |
| Naseem et al. (2019). | 1A | 2G | 3A | 4C/ 4D/ 4E | 5I/ 5D | 6A | 7C |
| Nekhili et al. (2021). | 1A | 2C/ 2F/ 2B/ 2A | 3D | 4C/ 4D | 5I/ 5A/ 5J | 6C | 7B/ 7A/ 7C |
| Nirino et al. (2022). | 1C | 2C/ 2F | 3D | 4C/ 4D | 5I/ 5A/ 5C | 6B | 7C |
| Okafor et al. (2023). | 1A | 2F/ 2G | 3D | 4D | 5G | 6B | 7B/ 7C |

(continued on next page)

**Table 7** (*continued*)

| Refs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Ooi et al. (2022). | 1A | 2F | 3D | 4C | 5I | 6A | 7B/ 7C |
| Oware and Mallikarjunappa (2022). | 1A/ 1B/ 1F | 2G/ 2D | 3F | 4C/ 4D | 5I | 6B | 7C |
| Pekovic and Vogt (2021) | 1A/ 1B | 2F/ 2G | 3H | 4D/ 4C | 5I | 6C | 7B/ 7C |
| Pham and Tran (2020). | 1A/ 1B | 2A/ 2G | 3D | 4C/ 4E | 5I/ 5A/ 5J | 6C | 7B/ 7C |
| Qureshi et al. (2020). | 1F | 2C/2F/2B | 3B | 4C | 5I/ 5J | 6B | 7B/ 7C |
| Rasheed and Ahmad (2022). | 1B/ 1F | 2G/ 2D | 3B | 4C/ 4D | 5I/ 5J | 6C | 7A/ 7C |
| Rashid et al. (2020). | 1A | 2B | 3E | 4C/ 4D | 5I/ 5J | 6B | 7B/ 7A/ 7C |
| Rastogi et al. (2023). | 1A | 2A | 3D | 4D/ 4C | 5E | 6B | 7A/ 7C |
| Rossi et al. (2021). | 1B | 2G | 3D/ 3A | 4C/ 4D | 5I/ 5A/ 5C | 6B | 7B/ 7A/ 7C |
| Ryu (2019). | 1A | 2G | 3H | 4C | 5I/ 5A/ 5J | 6B | 7B/ 7C |
| Saadaoui and Ben Salah (2023). | 1B | 2C/ 2F/ 2B/ 2G | 3H | 4C/ 4D | 5A | 6B | 7B/ 7C |
| Sampong et al. (2021). | 1A | 2F/ 2G | 3D | 4D/ 4F | 5I/ 5A/ 5H/ 5C | 6B | 7B/ 7C |
| Sánchez-Infante Hernández et al. (2020) | 2E | 2C/ 2F/ 2G | 3A | 4C | 5A/ 5J | 6B | 7C |
| Sang et al. (2022) | 1B | 2F | 3G | 4C/ 4D | 5H/ 5J | 6A | 7B/ 7C |
| Waheed et al. (2021). | 1A/ 1B | 2A/ 2G | 3D | 4C/ 4D | 5I | 6B | 7B/ 7C |
| Shakil (2021). | 1C | 2A | 3D | 4C | 5I/ 5A | 6B | 7B/ 7C |
| Shakil (2022). | 1C | 2A | 3A | 4C | 5I/ 5A/ 5J | 6B | 7B/ 7C |
| Shakil et al. (2022). | 1A | 2C/ 2F/ 2G | 3G | 4C | 5I/ 5J/ 5E | 6A | 7B/ 7C |
| Shi and Veenstra (2021). | 1A/ 1B | 2C/ 2F/ 2A | 3E | 4C/ 4E | 5J/ 5F | 6B | 7B/ 7C |
| Sun et al. (2019). | 1A | 2F/ 2G | 3H | 4D/ 4B/ 4F/ 4C | 5I/ 5H/ 5J | 6B | 7A/ 7C |
| Tarighi et al. (2022). | 1C | 2F/ 2G | 3C | 4D/ 4C | 5I/ 5J | 6C | 7C |
| Tasnia et al. (2021). | 1A/ 1B | 2C/ 2F | 3D | 4C | 5D/ 5J | 6B | 7B/ 7C |
| Ting (2021). | 1A/ 1B | 2G | 3A | 4C | 5I/ 5J | 6B | 7B/ 7A/ 7C |
| Tsang et al. (2022). | 1A | 2G | 3H/ 3E/ 3C | 4C/ 4D | 5I | 6A | 7B/ 7C |
| Uyar et al. (2023) | 1A | 2C/ 2F/ 2B/ 2G | 3G | 4D | 5I/ 5A | 6B | 7B/ 7C |
| Velte (2020). | 1B | 2C/ 2F/ 2B/ 2A | 3D | 4C | 5I/ 5A | 6B | 7B/ 7C |
| Vuong (2022). | 1A/ 1B | 2C/ 2F/ 2B/ 2A | 3H | 4C/ 4E | 5I/ 5A | 6B | 7B/ 7C |
| Wang and Qiao (2022). | 1A | 2G | 3A | 4D/ 4C | 5G | 6B | 7B/ 7C |
| Wang et al. (2023). | 1B | 2C | 3D | 4C | 5J | 6C | 7A/ 7C |
| Wen et al. (2022). | 1A | 2F/ 2G | 3A/ 3A | 4C/ 4D | 5I/ 5J | 6B | 7A/ 7C |
| Wirawan et al. (2020). | 1A | 2F/ 2G | 3D | 4D | 5G | 6B | 7B/ 7C |
| Yeon et al. (2021). | 1A | 2G | 3D | 4C/ 4D | 5G | 6B | 7B/ 7A/ 7C |
| Zhao et al. (2022). | 1B | 2G | 3E | 4C/ 4D | 5I/ 5E | 6A | 7B/ 7A/ 7C |

Source: Produced by Authors.

***G4:* Explore *stock* prices in future articles, for example, in different time frames**

*ESG and csr measures research gaps*

Notable disparities exist in how different ESG and CSR categories are covered. These disparities reveal areas that have been extensively explored and others that remain underdeveloped, presenting valuable opportunities for future research. Fig. 11 illustrates the percentage distribution of these categories, revealing that "General CSR" (2G) and "General ESG" (2A) are the most frequently studied, accounting for the highest percentages at approximately 35 % and 20 %, respectively. This suggests a broad interest in overarching ESG and CSR themes. In contrast, categories such as "Expenditures" (2D) have significantly lower representation, indicating less emphasis on these specific aspects in the existing research.

General CSR is the most extensively studied category, with numerous investigations exploring how CSR activities can enhance corporate reputation, stakeholder engagement, and financial outcomes. Early research established a positive correlation between CSR and financial performance, suggesting that CSR engagement often leads to improved risk management and corporate image enhancement (Khan et al., 2016; Jo & Harjoto, 2011; Brammer & Millington, 2008). Some studies have reinforced these findings, with Lim and Tsutsui (2012) demonstrating that CSR engagement yields long-term financial benefits, particularly when it aligns with stakeholder expectations and corporate strategy.

Similarly, the social aspect of ESG, which includes labor practices, community involvement, and human rights, has also garnered substantial attention. Waddock and Graves (1997) were among the early proponents of the view that socially responsible firms performed better financially due to enhanced employee morale and customer loyalty. This perspective has been further validated by more recent research from Ye et al. (2021), who highlight that social performance is a critical driver of financial success, especially in industries where consumer and employee relations are crucial.

In addition to these well-explored areas, the integrated approach to ESG, which considers environmental, social, and governance factors collectively, has gained considerable focus. Friede et al. (2015) conducted a comprehensive meta-analysis, confirming that a holistic ESG strategy is associated with superior financial performance. Recent contributions (e.g., Pellegrini, 2022) support this view, suggesting that companies with high ESG scores are better positioned to navigate market uncertainties and achieve long-term financial stability.

Despite these advances, significant gaps remain, particularly in the governance and environmental categories. Governance, a crucial component of ESG, is less explored than social and CSR factors. While Gompers et al. (2003) linked strong governance to reduced agency costs, more recent studies (e.g., Freeman & Evan, 1990) indicate that the impact of specific governance practices on financial performance is context-dependent, requiring further exploration across different sectors and regions.

***G5: Explore disaggregated governance scores in future articles combined with moderating variables***

Environmental factors, although increasingly recognized as critical to financial performance, are still underrepresented in the literature relative to social and CSR issues. Research by Clarkson et al. (2011) suggests that proactive environmental strategies can result in cost savings and revenue growth. Moreover, studies such as McCright and Dunlap (2011) emphasize the growing importance of environmental sustainability in corporate strategy, particularly in response to climate change and regulatory pressures. Nevertheless, more empirical research is necessary to assess the financial impact of specific environmental initiatives across diverse industries.

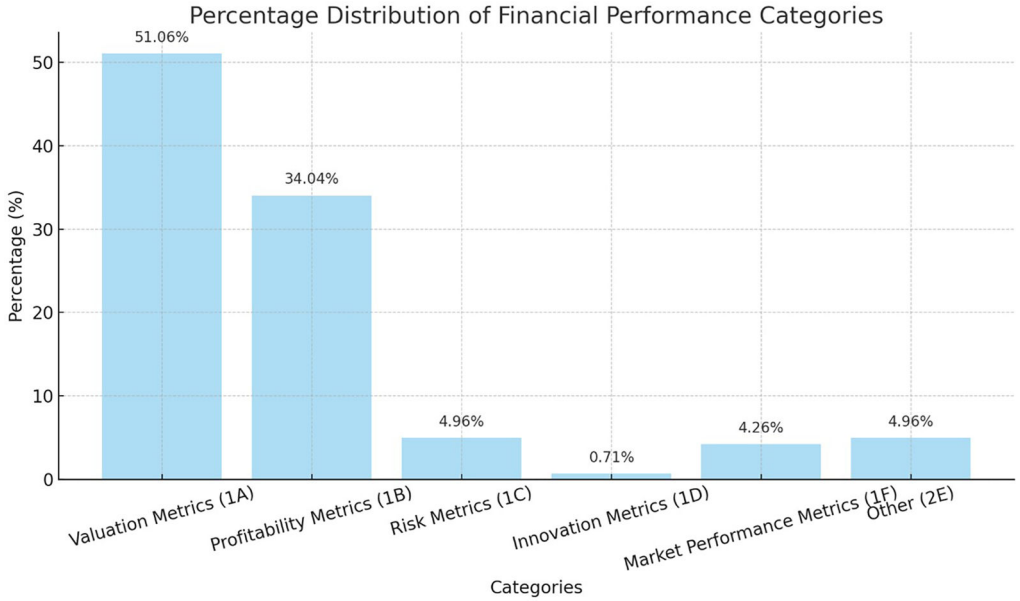


**Fig. 10.** Percentage distribution of financial performance categories; generated by Matplotlib.

***G6: Explore* disaggregated environmental scores in future articles combined with moderating variables**

Furthermore, the literature on expenditures associated with ESG and CSR initiatives is notably sparse. Understanding the financial trade-offs and Return of Interest of these expenditures is essential for informed decision-making. Recent studies (e.g., Jorion, 2007) underscore the need for a more rigorous analysis of the costs and benefits of ESG and CSR investments, particularly concerning risk management and long-term value creation.

***G7:* Explore expenditures associated with ESG and CSR initiatives in future articles combined with moderating variables**

Finally, the "Other" category, representing emerging or niche areas within ESG and CSR, remains virtually unexplored. This category includes new technological advancements in sustainability reporting, the role of artificial intelligence (AI) in monitoring ESG performance, and the impact of emerging social issues such as mental health on financial outcomes. The lack of research in this area highlights a substantial opportunity for pioneering studies that could significantly influence the future direction of ESG and CSR practices.

***G8: Explore* new technological advancements in sustainability reporting and the role of AI in future articles combined with moderating variables**

*Moderating variables category analysis*

The analysis of moderating variables in the relationship between ESG/CSR practices and CFP highlights key factors influencing these outcomes. Fig. 12 illustrates the percentage of occurrences by moderating variable categories, with "Corporate Governance" (3D) being the most frequently studied at approximately 30 %. This underscores the importance of governance structures in shaping the outcomes of ESG

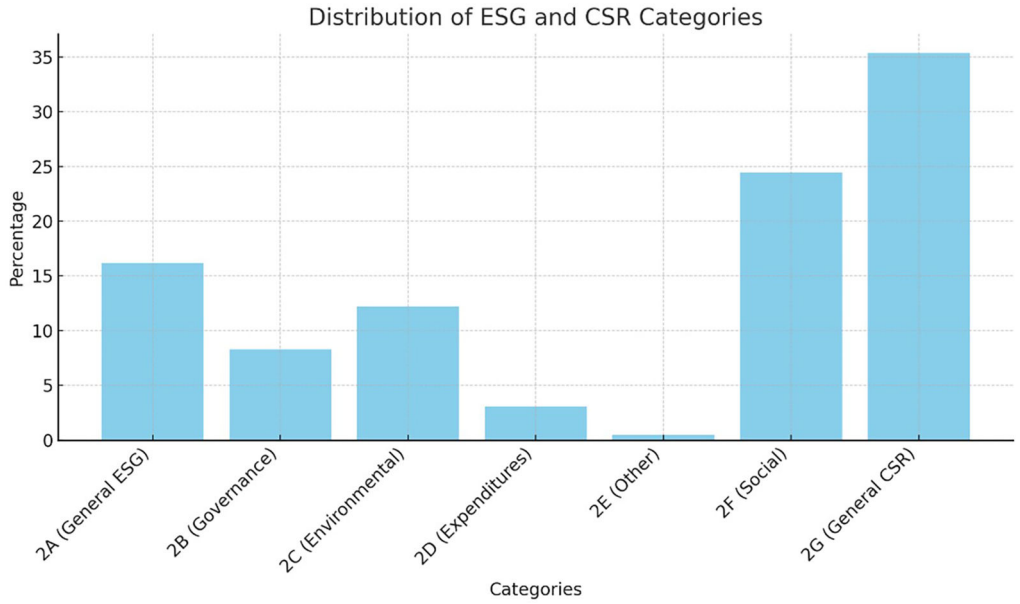


**Fig. 11.** Percentage distribution of ESG and CSR categories. generated by Matplotlib.

and CSR initiatives. Meanwhile, categories such as "Firm Characteristics" (3A) and "Economic Indicators" (3H) are also significantly represented, suggesting these factors are critical considerations in the research. In contrast, less attention has been given to "Industry-Level Indicators" (3B) and "Institutional/Legal Environment" (3C), indicating areas where future research could provide additional insights.

Corporate governance (3D) is the most frequently explored moderating variable category in the sample articles analyzed regarding ESG and CSR impacts on financial performance. This focus is substantiated by numerous studies, including Shen et al. (2019), who emphasize that robust governance structures (e.g., board independence and shareholder engagement) are pivotal in aligning corporate strategies with ESG goals, thereby, enhancing financial outcomes. Moreover, Bartolacci et al. (2020) illustrate that good corporate governance mitigates risks and strengthens the legitimacy of ESG initiatives in the eyes of investors, which can lead to improved financial performance. The importance of corporate governance (3D) is further underscored by Yu (2022), who systematically reviews the relationship between CEO duality and firm performance, highlighting how this aspect of governance can influence ESG and CSR outcomes depending on various contextual factors, such as ownership structures and national governance quality.

In addition to corporate governance (3D), firm characteristics (3A), such as size, market position, and industry sector, also receive substantial attention in the literature. Barauskaite and Streimikiene (2020) argue that larger firms typically have more resources to invest in ESG and CSR initiatives, which can result in better financial performance. This is consistent with findings by Shen et al. (2019), who show that firm size and market share significantly influence the effectiveness of CSR strategies, particularly in industries where consumer expectations for corporate responsibility are high. However, while these firm characteristics (3A) are widely recognized, there remains a need to examine in-depth how specific attributes, such as innovation capacity or leadership style, further moderate the ESG-financial performance relationship.

The extent of a firm's CSR engagement (3F) plays a crucial role in determining its financial outcomes. Barauskaite and Streimikiene (2020) suggest that firms with proactive CSR strategies, which go beyond regulatory compliance and actively seek to address social and environmental issues, are more likely to see positive financial returns. This is echoed by Shen et al. (2019), who observed that the depth of CSR engagement (3F), measured by integrating CSR into core business strategies, significantly enhances financial performance, particularly in consumer-facing industries where brand reputation is vital.

Economic conditions (3H), including macroeconomic factors such as GDP growth and inflation, are also recognized as significant moderators in the relationship between ESG/CSR and financial performance. Bartolacci et al. (2020) show that firms in more stable economic environments can better capitalize on their ESG investments, while during economic downturns, the financial benefits of ESG and CSR initiatives may be less pronounced. This highlights the importance of economic context (3H) in evaluating the effectiveness of these strategies.

Despite the industry-specific nature of many ESG and CSR initiatives, industry-level indicators (3B) remain underexplored. Shen et al. (2019) point out that industry characteristics, such as regulatory intensity and competitive dynamics, can significantly influence the success of ESG strategies. For instance, industries with stringent environmental regulations may derive more financial benefits from ESG initiatives than less-regulated sectors. However, the relatively low focus on this area suggests a gap in understanding how industry-specific factors (3B) interact with ESG and CSR strategies.

***G9:* Explore industry-level indicators in future articles, such as regulatory intensity and competitive dynamics as moderating variables**

The role of institutional and legal environments (3C) in moderating the ESG-financial performance relationship is another area with room for further exploration. Bartolacci et al. (2020) indicate that differences in regulatory frameworks across countries can lead to varying financial outcomes from ESG initiatives. For example, firms operating in regions with solid environmental regulations may see higher financial returns from ESG investments than those in less-regulated environments. This highlights a need for more cross-country comparative studies to understand better the impact of institutional and legal environments (3C) on ESG and CSR outcomes.

***G10: Explore* institutional and legal environments, such as regulatory frameworks across countries, as moderating variables**

Social and cultural factors (3E), despite their potential to significantly influence corporate behavior and consumer expectations, are underrepresented in current research. Barauskaite and Streimikiene (2020) emphasize that cultural differences, such as varying levels of consumer activism or social norms around sustainability, can affect how ESG and CSR initiatives are perceived and rewarded in different

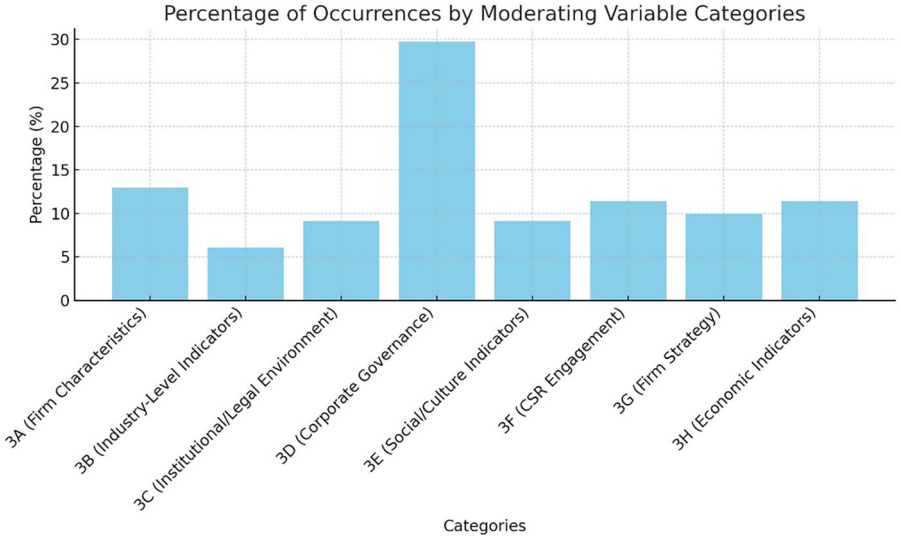


**Fig. 12.** Percentage distribution of moderating variables categories. generated by Matplotlib.

markets. This suggests that more research is needed to explore how social and cultural contexts (3E) influence the financial impact of ESG and CSR activities, particularly in multinational or culturally diverse settings.

***G11:* Explore social and cultural factors, such as cultural differences across countries, as moderating variables**

Finally, firm strategy (3G) is another underexplored moderating variable. A firm's strategic orientation, whether it focuses on cost leadership, differentiation, or innovation, can significantly impact the implementation and financial success of ESG and CSR initiatives. Bartolacci et al. (2020) highlight that firms with strategies closely aligned with ESG principles, such as those prioritizing sustainability or ethical business practices, tend to achieve better financial outcomes. However, more research is needed to understand how different strategic approaches (3G) affect the relationship between ESG/CSR and financial performance, particularly in dynamic or competitive markets.

***G12: E*xplore firm strategies, such as strategic orientation, as moderating variables**

*Theoretical framework research gaps*

The analysis of the theoretical framework within ESG and CSR research reveals both areas of extensive exploration and those with significant gaps. Fig. 13 presents the percentage distribution of theoretical framework categories, with "Social and Ethical Theories" (4C) being the most commonly applied, representing 51.00 % of the total. This is followed by "Organizational Theories" (4D) at 35.00 %, indicating a strong reliance on these perspectives to explain the relationship between ESG/CSR practices and financial outcomes. Theories such as "Innovation and Technology" (4F), "Strategic Management" (4B), "Cultural and Behavioral" (4E), and "Economic and Financial" (4A) are less represented, suggesting opportunities for expanding the theoretical bases in future research.

The dominance of Social and Ethical Theories (4C), which comprise over half of the theoretical frameworks used in the literature, highlights the critical role these theories play in understanding corporate responses to social expectations and ethical challenges. This is particularly evident in how businesses are increasingly held accountable for their social impact, a trend extensively documented in the literature. For example, the work of McCright and Dunlap (2011) underscores the societal pressures that compel firms to adopt socially responsible practices. Additionally, Carroll's (1979) classic model of CSR remains a cornerstone in analyzing ethical business behavior.

Organizational Theories (4D) also feature prominently, reflecting their importance in examining how companies integrate ESG and CSR into their internal structures and cultures. This theoretical perspective is crucial for understanding the practical implementation of sustainability initiatives within firms. Lim and Tsutsui (2012) illustrate how organizational culture and leadership can either facilitate or hinder the adoption of sustainable practices. These insights are vital for businesses seeking to align their internal processes with broader sustainability goals, as outlined in the strategic management frameworks discussed by Freeman and Evan (1990).

In contrast, Economic and Financial Theories (4A) are significantly underrepresented despite their potential to offer valuable insights into the financial implications of ESG and CSR activities. This category's scant 2.67 % occurrence suggests a gap in understanding the economic rationale behind sustainability efforts. This gap is critical because integrating financial models into ESG and CSR research could illuminate how these practices impact firm value and risk, as suggested by the financial performance categories proposed by Orlitzky et al. (2003). Moreover, Jorion's (2007) work on risk management could provide a robust framework for analyzing the financial risks associated with sustainability initiatives, an underexplored area.

***G13*: Explore economic and financial theories, such as Fama's efficient market hypothesis or behavioral finance**

Similarly, Innovation and Technology Theories (4F), which account for only 3.21 % of the theoretical frameworks, represent another area ripe for further investigation. In an era marked by rapid technological advancements, understanding how innovation drives or is driven by ESG and CSR practices is crucial. The limited exploration of this category may overlook how technological innovations can support sustainability goals – an issue that is increasingly relevant as firms leverage new technologies to enhance their ESG performance. Studies that focus on the intersection of technology and sustainability, such as those examining the role of digital transformation in CSR, could significantly enrich this area of research.

***G14:* Explore innovation and technology theories, such as open innovation theory or absorptive capacity theory**

Cultural and Behavioral Theories (4E) also appear to be underutilized, with a representation of just 3.74 %. These theories are essential for understanding how cultural contexts and behavioral factors influence the effectiveness of ESG and CSR initiatives. Given the global reach of many corporations, cultural considerations play a crucial role in shaping stakeholder expectations and responses to corporate actions. Expanding research in this area could provide deeper insights into how cultural values impact the implementation and success of sustainability strategies, as highlighted by Pellegrini's (2022) exploration of cultural influences on corporate behavior.

Strategic Management Theories (4B) similarly occupy a small portion of the theoretical landscape, despite their importance in understanding how firms strategically manage their ESG and CSR initiatives. The integration of these theories could shed light on how companies align their sustainability efforts with broader business objectives, ultimately enhancing their competitive advantage. The strategic perspective is crucial for identifying the drivers behind successful ESG and CSR integration, a topic that could benefit from further exploration, particularly in relation to the frameworks proposed by Davis (1960) and Freeman and Evan (1990).

***G15: Explore* strategic management and behavioral theories, such as dynamic capabilities and prospect theory**

In summary, while Social and Ethical Theories and Organizational Theories are well-represented in the literature, significant gaps exist in the application of Economic and Financial Theories, Innovation and Technology Theories, Cultural and Behavioral Theories, and Strategic Management Theories. Addressing these gaps could provide a more comprehensive understanding of the complex relationship between ESG/CSR practices and CFP. Integrating these underexplored theoretical perspectives will not only enrich academic discourse but also offer practical insights for businesses striving to achieve sustainable success in an increasingly complex and demanding global environment.

*Significant gaps to be explored in the ESG/CSR-CFP research*

Analyzing the Suggestions for Future Research categories reveals exciting trends and significant gaps in the current ESG and CSR research landscape. Fig. 14 presents the percentage distribution of suggestions for future research categories. Notably, "Industry/Sector Focus" (5J) emerges as the most frequently suggested area, accounting for 36.27 % of the total, indicating a strong need to explore ESG/CSR impacts across different sectors. This is followed by "Variables of Interest" (5A) and "Research Focus Area" (5I), which highlight the need for more specific studies on particular variables and broader research domains. Other categories, such as "Theoretical Framework" (5B) and "Suggested Contributions" (5K), appear less frequently, suggesting they are less of a priority but still relevant for building a comprehensive research agenda.

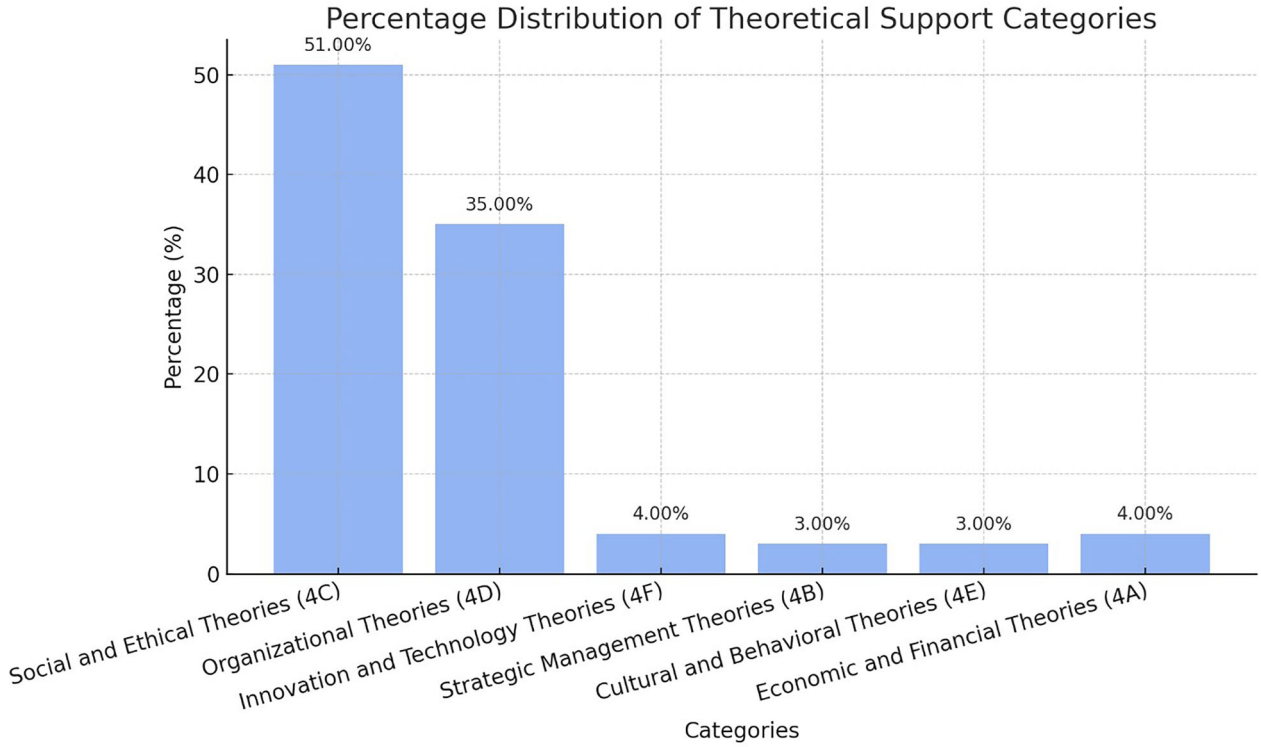


**Fig. 13.** Percentage distribution of theoretical framework categories. Generated by Matplotlib.

A prominent focus has been placed on the Research Focus Area (5I), which suggests that many scholars prioritize exploring specific sectors and themes within ESG and CSR. This emphasis aligns with these fields' increasing complexity and specificity, where sector-specific studies can yield more actionable insights. Chang et al. (2020) and Nagalingam et al. (2022) highlight the need for tailored approaches, as the impact of ESG practices can vary greatly between industries due to differing regulatory pressures and stakeholder expectations.

Similarly, the frequent mention of Variables of Interest (5A) in the suggestions indicates a robust interest in uncovering new dimensions or factors that might influence the relationship between ESG and financial performance. This reflects the dynamic nature of the field, where scholars are continuously seeking to refine and expand the set of variables under consideration. For instance, Li and Zheng (2023) introduce novel variables such as corporate digitalization, which could potentially mediate the ESG-financial performance relationship in ways that have not been fully explored.

However, the Industry/Sector Focus (5J) category also receives considerable attention, underscoring the importance of understanding ESG impacts within specific contexts. This trend is supported by research from Clark et al. (2015), who have found that sector-specific factors significantly moderate the effectiveness of ESG initiatives, particularly in industries with high environmental risks. The insights gained from such sectoral studies are crucial, as they provide more precise guidelines for companies operating in different environments.

However, the analysis also uncovers notable gaps in the literature. Theoretical Frameworks (5B) are surprisingly underexplored, suggesting that many studies may lack a solid theoretical foundation. This could potentially limit the generalizability of the findings. The importance of grounding empirical research in robust theories is well-documented, with scholars like Whetten (1989) arguing that theory-building is essential for advancing any field of study. The relative scarcity of suggestions related to theoretical frameworks may indicate a need for more rigorous theoretical contributions in future ESG and CSR research.

***G16:* Explore a more comprehensive theoretical foundation**

Another significant gap is the minimal focus on Suggested Contributions (5K). This could imply that many studies fail to adequately articulate their broader impact or relevance to ongoing academic and practical debates. For example, Aguinis and Glavas (2012) have noted that many studies lack a clear articulation of their contributions, particularly in terms of how they advance theoretical debates or inform practical applications. This often leaves a gap in understanding the broader implications of research findings.

Methodological rigor also appears somewhat overlooked, as evidenced by the relatively few mentions of Research Methodology (5D). This is concerning because the robustness of research findings depends heavily on the methodologies employed. Podsakoff et al. (2012) emphasize that innovative and rigorous methodologies are crucial for producing reliable and valid results. The current trend suggests that there may be room for improvement in this area, with a need for more diverse and sophisticated research methods in ESG and CSR studies.

***G17:* Utilize *robust* research methodology**

The moderate emphasis on Data Sources (5C) and Geographical Focus (5H) suggests that they are not as prioritized as others. Expanding the diversity of data sources and exploring ESG impacts across different geographical contexts could enrich the field significantly. For example, Enciso-Alfaro and García-Sánchez (2024) demonstrate how diverse data sources can uncover regional variations in ESG effectiveness, which might otherwise be overlooked.

***G18: U*tilize different sources of ESG and CSR databases, acquisition techniques, and broad geographic samples**

In summary, while the research focus on specific areas, variables, and industries within ESG and CSR is well-established, there are critical gaps in theoretical grounding, methodological rigor, and the articulation of contributions. Addressing these gaps through more theoretically informed, methodologically robust, and globally diverse research will be essential for advancing the field and providing more actionable insights

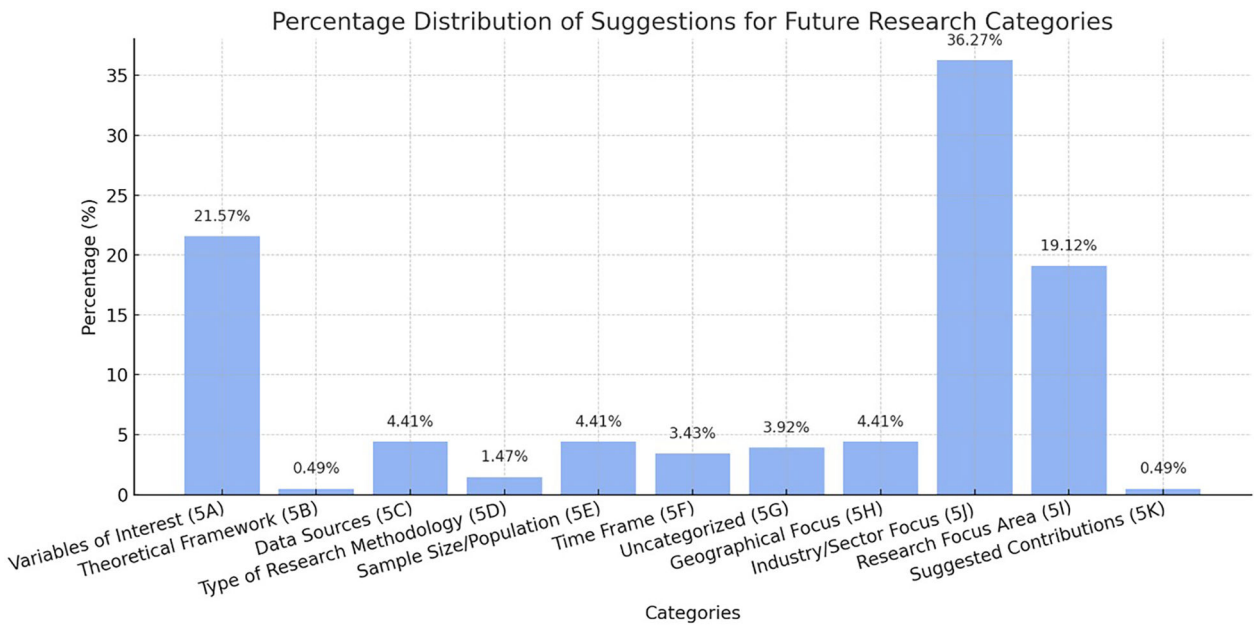


**Fig. 14.** Presents the percentage distribution of suggestions for future research categories.

for practitioners.

*Statistical modeling research gaps*

The choice of statistical models plays a crucial role in shaping the conclusions that researchers can draw in the study of ESG/CSR and CFP. Fig. 15 shows the percentage distribution of statistical modeling categories, revealing that "Basic and Intermediate Models" are the most frequently utilized, accounting for 72.22 % of the total usage. This predominance suggests a reliance on simpler models, possibly due to their ease of interpretation and application. In contrast, "Advanced Models" comprise only 27.78 % of the total, indicating that more sophisticated techniques are less commonly employed, potentially reflecting the need for specialized knowledge and computational resources. This distribution underscores the importance of encouraging advanced modeling techniques to capture the complexities of ESG/CSR impacts more accurately.

Basic models, including simple linear regressions, are often used in exploratory phases of research or studies with limited data complexity. They are particularly useful when the goal is to establish foundational relationships or when the research context does not require the handling of multiple interacting variables. However, these models have limitations, especially in their assumptions of linearity and the potential for oversimplification of complex relationships. Intermediate models (e.g., multivariate regressions and panel data techniques) build on this foundation by incorporating more variables and allowing for the control of certain types of data structure, such as time series or cross-sectional data. These models are well-suited for studies that require a more nuanced analysis of how ESG/CSR factors influence financial performance across different contexts or over time.

Despite their widespread use, basic and intermediate models are often critiqued for their inability to fully capture the complexities inherent in the CSR-CFP relationship. They may not adequately account for non-linear interactions or the simultaneous effects of multiple moderating variables. Consequently, while these models are valuable for their simplicity and clarity, they may lead to oversimplified conclusions that overlook important nuances.

In contrast, advanced models, such as GMM, Structural Equation Modeling (SEM), and machine learning techniques, offer a more sophisticated approach to analyzing ESG/CSR impacts on financial performance. These models are designed to handle the complexities that basic and intermediate models often struggle with. For instance, GMM is particularly effective in addressing issues of endogeneity, which is a common challenge in ESG/CSR research where the direction of causality between CSR activities and financial outcomes can be ambiguous. SEM allows researchers to model complex relationships between variables, including latent variables, and to test for direct and indirect effects within a single framework. This is particularly useful when examining how multiple ESG/CSR dimensions interact to influence financial performance.

Advanced models are also better equipped to handle non-linear relationships and model the interactions between multiple moderating variables. This capability is crucial for capturing the full complexity of the CSR-CFP relationship, where the effects of CSR initiatives may not be uniform across different contexts or periods. Additionally, machine learning techniques provide a powerful tool for uncovering patterns in large datasets that might not be apparent through traditional statistical methods, offering new insights into the impact of ESG/CSR activities on financial performance.

However, the use of advanced models comes with its own set of challenges. These models require a higher level of technical expertise and a deeper understanding of the underlying assumptions and limitations. They also demand more sophisticated data collection and preparation processes, as the quality of the inputs significantly impacts the validity of the results. Moreover, the complexity of these models can sometimes make their results more difficult to interpret, particularly for practitioners who may not have a strong background in econometrics or statistics.

***G19: Utilize Advanced Statistical and Econometric Modeling.***

*ESG and CSR data acquiring research gaps*

The research landscape on ESG and CSR reveals a significant focus on methodologies that are quantifiable and easily comparable across contexts, such as one-dimensional measures and reputational indices. Fig. 16 shows the percentage distribution of data source categories, highlighting that "One-Dimensional Measures" (7C) are the most frequently used, accounting for 49.32 % of the occurrences. This suggests a reliance on single-factor data points, such as individual ESG scores or specific financial indicators. "Reputational Indices" (7B) are also commonly utilized, representing 36.53 % of the data sources,

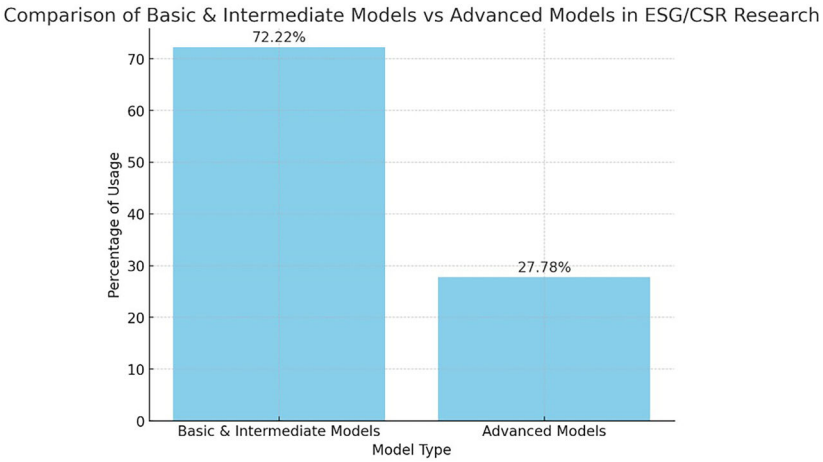


**Fig. 15.** Percentage distribution of statistical modeling categories. Generated by Matplotlib.

reflecting the importance of firm reputation in CSR/ESG studies. In contrast, "Content Analysis" (7A) is the least frequently used data source at 14.16 %, indicating a lesser focus on qualitative assessments of ESG and CSR practices. This distribution highlights the need for more diverse data collection methods to capture a comprehensive picture of ESG and CSR impacts.

One-dimensional measures (7A), often concentrated on specific aspects such as environmental scores or social responsibility indices, are particularly prominent. These measures are favored for their ability to distill complex CSR activities into easily comparable figures, making them a staple in the analysis of ESG impacts. Similarly, reputational indices, such as the Dow Jones Sustainability Index, serve as proxies for broader CSR engagement and are widely accepted as reliable indicators of corporate success. The connection between corporate reputation and financial stability, as highlighted by Barauskaite and Streimikiene (2020), reinforces the importance of these indices in assessing long-term value creation and risk management.

However, the preference for quantifiable metrics may lead to underutilizing more nuanced approaches, such as content analysis. This method, which involves a detailed examination of CSR activities through corporate reports, press releases, and other qualitative data, is notably less represented in the literature. Despite its potential to provide deeper insights into the authenticity of CSR practices and their strategic motivations, content analysis is often overlooked. This gap in research indicates a broader trend where qualitative methods are underemphasized, potentially overlooking the rich context that they can provide.

The limited use of content analysis may stem from a broader inclination within the research community to prioritize methods that yield clear, comparable results. However, as highlighted by Wang and Lu (2021), qualitative methods such as content analysis are crucial for understanding the subtleties of CSR practices. These methods can reveal discrepancies between what companies report and what they actually do, offering valuable insights into issues such as greenwashing or the genuine integration of sustainability into business strategies. Barauskaite and Streimikiene (2020) further support this view by emphasizing that content analysis can uncover deeper layers of corporate behavior that quantitative measures might miss.

The emphasis on one-dimensional measures and reputational indices is not without academic support. For instance, Gillan et al. (2021) argue that these tools are effective in linking CSR to financial performance, particularly in capturing the market's perception of a company's social responsibility. Similarly, Orlitzky et al. (2003) demonstrate through a meta-analysis that the use of these measures is widespread and often correlates with positive financial outcomes. This is supported by findings from Jorion (2007), who discusses the role of reputational indices in risk management, highlighting their importance in maintaining long-term financial stability.

However, the gap in the use of content analysis reflects a missed opportunity to explore CSR practices more comprehensively. Future research could address this gap by integrating content analysis with quantitative measures to provide a fuller picture of how ESG activities are reported versus their actual impact. For instance, longitudinal studies that track the evolution of CSR reporting and its effects on financial performance could provide insights into the long-term efficacy of CSR strategies. Furthermore, applying content analysis in cross-cultural studies could reveal important differences in how CSR is practiced and communicated across different regions, especially in emerging markets where CSR is still developing.

The current emphasis on one-dimensional measures and reputational indices, while well-supported by the existing literature, represents only part of the potential analytical landscape. To advance the field, researchers must also embrace the richness of qualitative methods like content analysis, as highlighted by Melo and Galan (2011) and Han et al. (2019). Consequently, they can uncover new insights and contribute to a more nuanced understanding of the complex relationship between CSR and financial success. This balanced approach could lead to more authentic and effective CSR practices, ultimately benefiting both

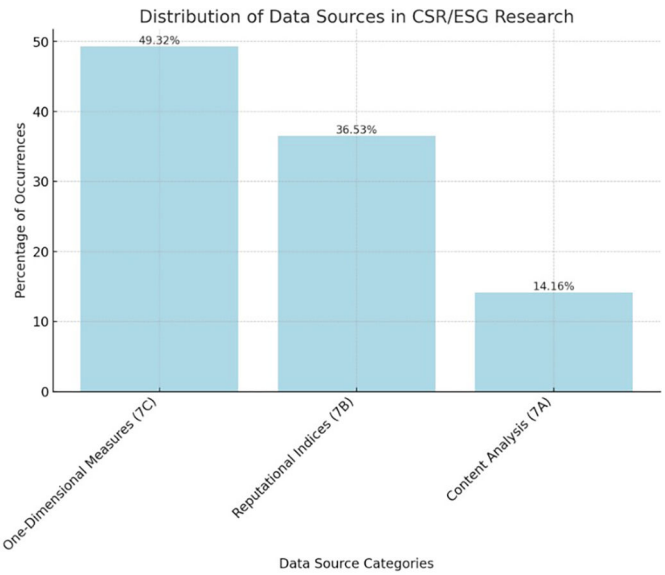


**Fig. 16.** Percentage distribution of data sources of ESG and CSR categories. Generated by Matplotlib.

companies and society at large.

***G20:* Utilize *content* analysis to measure ESG and CSR**

This approach aligns with the findings of Barauskaite and Streimikiene (2020), who emphasize the importance of diverse methodologies in capturing the full scope of CSR's impact on financial performance. By broadening the scope of research to include both quantitative and qualitative methods, scholars can provide a more comprehensive understanding of how CSR practices influence corporate success, paving the way for more informed and effective business strategies.

In the dynamic and evolving field of ESG/CSR-CFP, under the effect of moderating variables research, it is imperative to systematically map out the existing body of knowledge to identify the strengths and weaknesses within the literature. This comprehensive mapping provides a clear understanding of what has already been explored and established and reveals research gaps or inconsistencies. By pinpointing these gaps, researchers can better comprehend the complexities and multifaceted nature of ESG and CSR impacts on CFP and other outcomes. Table 8 resumes all research gaps identified, providing a future research agenda. Fig. 17 provides a graphical summary of these findings, categorizing them into seven key areas: Financial Performance, ESG and CSR Measures, Moderating Variables, Theoretical Framework, Suggestions for Future Research, Statistical Modeling, and Data Sources. The figure illustrates the current state of knowledge and the areas where future research is needed, offering a structured pathway for advancing the field. This visual representation helps researchers identify critical gaps and prioritize topics for further investigation.

This strategic approach to identifying knowledge gaps is essential for developing well-informed and targeted future research agendas. It encourages scholars to delve deeper into underexplored areas, address methodological weaknesses, and build upon the foundations laid by previous studies. Furthermore, understanding these gaps allows for formulating new research questions and hypotheses to drive innovation and theoretical advancement in the field. This methodical process enriches the academic discourse and has practical implications, guiding practitioners and policymakers in understanding the nuanced impacts of ESG and CSR initiatives.

## Limitations, implications, and conclusion

### *Research limitations*

This study has several limitations. It specifically focuses on the direct and unidirectional relationship between ESG/CSR measures and financial performance while acknowledging that this relationship can also be bidirectional and influenced by various contexts and processes. The deliberate choice to emphasize this direct relationship was made to understand better how moderating variables impact it. Nonetheless, the study is constrained to articles published within a five-year period, and findings may vary over a longer timeframe. Furthermore, the analysis is limited to firms with publicly available ESG/CSR data, thereby, excluding studies that use internal measures from questionnaire-based surveys. To keep the research manageable, studies employing conceptual frameworks with mediating or mediating-moderating models were not included. Additionally, many articles view ESG/CSR measures as moderators or mediators of other variables; although these perspectives have not been addressed in this review, they present opportunities for future research.

Moreover, the study is restricted to articles published between 2019 and 2023, which may omit earlier foundational works that could offer additional insights into the ESG/CSR and CFP relationship. The analysis relied on two highly regarded databases — Web of Science and Scopus —, which may not capture all relevant literature, particularly in regional or niche journals not indexed by these databases.

Another limitation is the diversity of ESG/CSR metrics and financial performance indicators used in the reviewed studies. The lack of standardization across different research designs and variable definitions introduces challenges in synthesizing results and forming generalized conclusions. While the study focuses on moderating variables such as governance, market maturity, and firm strategy, it does not exhaustively cover all possible influencing factors, such as cultural, geographic, or regulatory variations, which may also impact the relationship between ESG/CSR and financial outcomes.

Finally, while this study identifies trends and gaps in literature, the analysis is predominantly quantitative, relying on bibliometric and systematic review techniques. The absence of qualitative insights from case studies or interviews limits the depth of understanding regarding the nuances and contextual factors influencing the ESG/CSR-CFP nexus. Expanding future research to include qualitative methodologies could provide a more comprehensive perspective on the complexities of this relationship.

### *Theoretical implications*

This research provides significant contributions to the theoretical landscape surrounding the ESG/CSR-CFP relationship by emphasizing the role of moderating variables. It highlights the importance of governance structures, industry characteristics, and firm strategy in shaping the impact of ESG and CSR initiatives on financial performance. The study reinforces and extends the relevance of existing theoretical frameworks, such as Stakeholder Theory, Agency Theory, and the RBV, by demonstrating how these theories interact with moderating factors to influence financial outcomes.

Moreover, this research uncovers evolving trends in academic focus, offering new directions for future theoretical exploration. For instance, the study suggests that the underexplored role of social and cultural variables as moderators presents a valuable avenue for expanding

**Table 8**
Table resume of the gaps identified.

| Gaps | Description |
|---|---|
| G1 | Explore risk metrics such as credit risk, volatility, and beta systematic risk in upcoming articles |
| G2 | Explore innovation metrics in future articles, such as R&D expenditures and patent counts |
| G3 | Explore more emerging financial indicators, such as brand value, employee satisfaction, customer loyalty and TSR |
| G4 | Explore stock prices in future articles, for example, in different time frames |
| G5 | Explore disaggregated governance scores in future articles combined with moderating variables |
| G6 | Explore disaggregated environmental scores in future articles combined with moderating variables |
| G7 | Explore expenditures associated with ESG and CSR initiatives in future articles combined with moderating variables |
| G8 | Explore new technological advancements in sustainability reporting and the role of AI in future articles combined with moderating variables |
| G9 | Explore industry-level indicators in future articles, such as regulatory intensity and competitive dynamics as moderating variables |
| G10 | Explore institutional and legal environments, such as regulatory frameworks across countries, as moderating variables |
| G11 | Explore social and cultural factors, such as cultural differences across countries, as moderating variables |
| G12 | Explore firm strategies, such as strategic orientation, as moderating variables |
| G13 | Explore economic and financial theories, such as Fama's efficient market hypothesis or behavioral finance |
| G14 | Explore innovation and technology theories, such as open innovation theory or absorptive capacity theory |
| G15 | Explore strategic management and behavioral theories, such as dynamic capabilities theory and prospect theory |
| G16 | Explore a more comprehensive theoretical foundation |
| G17 | Utilize robust research methodology |
| G18 | Utilize different sources of ESG and CSR databases, acquisition techniques, and broad geographic samples |
| G19 | Utilize advanced statistical and econometric modeling |
| G20 | Utilize content analysis to measure ESG and CSR |

Source: Produced by Authors.

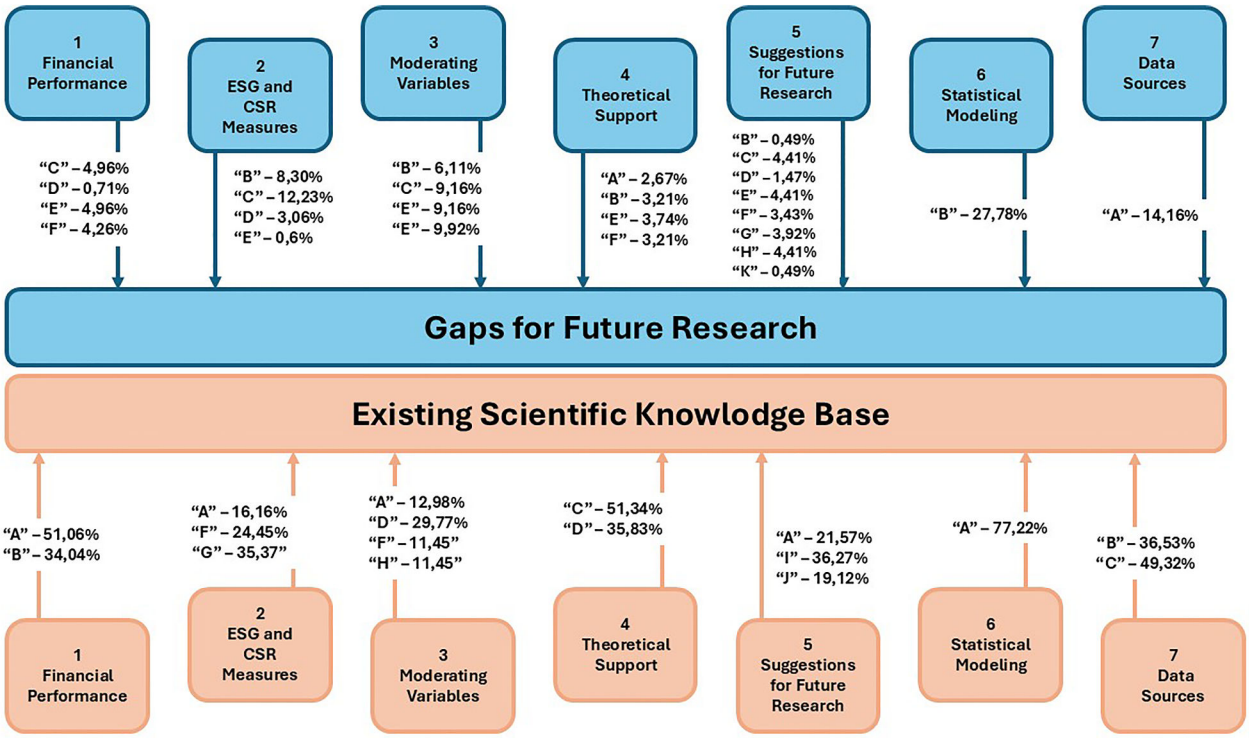


**Fig. 17.** Graphic resume of the suggestions for a research agenda. Elaborated by authors.

current theoretical models. Additionally, this work highlights the need for more standardized frameworks for measuring ESG and CSR outcomes, which could strengthen the integration of these concepts into established financial and strategic management theories.

This study also contributes to the academic debate by clarifying the complex relationship between ESG, CSR, and financial performance through a deeper focus on the moderating variables. The research calls for multi-theoretical approaches to capture the nuances of the ESG-CSR-CFP relationship, thus, advancing the theoretical understanding of corporate sustainability, for example, in digital transformation and technological readiness as emerging factors.

### *Practical implications*

From a practical standpoint, this research offers actionable insights for corporate leaders and policymakers. Identifying key moderating variables, such as firm governance and industry characteristics, can help organizations tailor their ESG and CSR initiatives to align with their specific operational contexts. Companies can use this information to improve decision-making processes, enhance stakeholder engagement, and optimize financial performance by integrating sustainability into core business strategies more effectively.

Additionally, the study highlights the potential for standardizing ESG/CSR metrics, which could aid businesses in benchmarking their sustainability efforts against industry standards and improving transparency in reporting. Policymakers may also find the results useful in shaping regulations that encourage the adoption of ESG principles, particularly by acknowledging the diverse ways in which these initiatives influence financial outcomes across different sectors and regions.

### *Social implications*

On a broader societal level, this study contributes to the ongoing discourse on sustainability and corporate responsibility. By revealing the conditions under which ESG and CSR initiatives are most likely to lead to positive financial outcomes, the research supports the integration of social and environmental considerations into corporate strategies. This alignment between profitability and sustainability goals not only benefits shareholders but also has a positive impact on broader society by promoting ethical business practices and addressing pressing global challenges like climate change and social inequality.

Furthermore, the study's call for standardized ESG metrics aligns with societal demands for greater corporate accountability and transparency. As more firms adopt robust ESG and CSR practices, the cumulative impact can drive meaningful progress toward achieving global sustainability goals, benefiting both the business community and society at large.

## Conclusion

This study provides a comprehensive examination of the complex relationship between ESG measures, CSR activities, and CFP, highlighting the critical role that moderating variables play in shaping this relationship. The bibliometric analysis and systematic review revealed that key moderating variables, such as governance structures, cultural norms, economic conditions, and industry characteristics, profoundly influence the ESG-CSR-CFP dynamic.

Governance structures, such as board diversity and executive compensation aligned with sustainability goals, enhance the positive financial impact of ESG and CSR initiatives. These findings show that corporate governance can amplify or weaken the link between sustainability practices and financial outcomes, underscoring that the composition and incentivization of leadership are crucial to successful ESG implementation. Similarly, cultural norms emerge as significant moderators, affecting how stakeholders perceive and value CSR activities. In regions where environmental and social responsibility is highly prioritized, ESG initiatives are more likely to lead to positive financial outcomes. Conversely, in markets where such initiatives are undervalued, their financial impact may be muted. This highlights the importance of tailoring ESG strategies to the cultural context in which firms operate to maximize their financial benefits.

Economic conditions, such as market stability and growth, also

moderate the effectiveness of ESG initiatives. In stable economic environments, ESG practices can enhance financial returns by improving a firm's reputation and reducing operational risks. However, during economic downturns, the financial benefits of ESG efforts may be diminished, as firms struggle to balance short-term survival with long-term sustainability goals. This underscores the need for context-specific strategies when implementing ESG and CSR initiatives, especially in volatile economic climates.

Industry characteristics play a significant moderating role, as factors such as competition and regulatory pressures shape the financial returns of ESG investments. In highly regulated industries, such as energy or finance, companies may achieve greater financial stability from ESG practices due to heightened scrutiny and potential penalties for non-compliance. In contrast, firms in less-regulated sectors may experience different financial outcomes from similar initiatives, given the varying regulatory and competitive dynamics across industries.

Innovation plays a crucial role in determining the effectiveness of ESG strategies. R&D expenditures and patent generation, for example, influence how much value firms can generate from their sustainability initiatives. Future research should explore how these innovation metrics moderate the relationship between ESG efforts and financial performance, particularly in industries that heavily rely on technological advancements. By understanding the link between innovation and ESG, firms can better leverage their sustainability efforts to foster competitive advantage and long-term growth.

Emerging financial performance indicators (e.g., those related to stakeholder value creation and intangible assets) are gaining importance as frameworks such as the Global Reporting Initiative (GRI) become widely adopted. Indicators like brand value, employee satisfaction, and customer loyalty reflect how sustainability practices impact intangible assets and stakeholder relationships. However, there is a notable gap in research on Total Shareholder Return (TSR), a critical measure that combines capital gains and dividends to reflect the financial benefits delivered to shareholders over time. Given TSR's direct link to shareholder value, future research should examine how ESG and CSR efforts translate into tangible returns for investors through this key metric.

Another important area for future exploration is stock price movements in response to ESG initiatives. While short-term stock price reactions have been studied, less is known about how stock prices evolve over different time horizons due to sustained ESG efforts. A more detailed examination of stock price movements can provide insights into how market perceptions of sustainability influence both short-term and long-term financial outcomes.

This study also identifies gaps in the understanding of disaggregated governance and environmental scores as moderating variables. Governance and environmental practices are often evaluated in aggregate, but disaggregating these scores could provide more precise insights into which specific aspects drive financial outcomes. For example, components such as board diversity or shareholder rights may have different effects on financial performance depending on other moderating factors, such as industry and market conditions. Similarly, focusing on disaggregated environmental factors, such as carbon emissions or energy efficiency, could reveal new insights into how specific environmental practices contribute to financial success.

Additionally, expenditures as an ESG and CSR measure remain underexplored. Firms that allocate substantial resources to sustainability initiatives may experience varying financial outcomes based on how effectively they manage these expenditures, and how these efforts are influenced by various moderating variables. Factors such as organizational context, market conditions, or governance structures can all impact the relationship between expenditure levels and financial performance. Understanding the financial impact of different levels of spending on ESG and CSR, while considering the role of these moderating variables, is essential for firms aiming to optimize resource allocation. By analyzing these dynamics, companies can better align their sustainability investments with improved financial outcomes.

Technological advancements in sustainability reporting, particularly AI integration, represent another important yet underexplored moderating factor. AI has the potential to improve the accuracy and efficiency of ESG reporting. Future research should investigate how technological innovations such as AI moderate the effectiveness of ESG practices in driving financial performance, as AI-driven ESG reporting could enhance transparency and provide stakeholders with more reliable data, leading to better-informed decision-making and stronger financial outcomes.

At the industry level, indicators such as regulatory intensity and competitive dynamics further influence how ESG initiatives translate into financial performance. Highly regulated industries tend to derive greater financial returns from ESG investments due to increased focus on compliance and risk management. In contrast, firms in less-regulated industries may need to rely more on competitive dynamics, such as differentiation through sustainability, to achieve financial success.

Finally, institutional and legal environments, including varying regulatory frameworks across countries, play a significant moderating role in the ESG-CFP relationship. Firms operating in jurisdictions with supportive legal environments for sustainability are more likely to achieve financial success through ESG initiatives. In regions with less stringent regulations, however, the financial impact of ESG practices may be weaker, highlighting the need for region-specific ESG strategies.

In summary, this study highlights the crucial role of moderating variables in shaping the ESG-CSR-CFP relationship. However, to fully grasp the mechanisms driving the financial impact of ESG and CSR initiatives, it is essential to address the gaps identified in this research. Future studies should delve deeper into these moderating factors, utilizing advanced methods such as longitudinal analysis and sophisticated econometric techniques to capture their dynamic influence. By bridging these gaps, both scholars and practitioners will be able to unlock richer insights into the strategic value of ESG and CSR, paving the way for more effective corporate sustainability practices that are closely aligned with long-term financial performance.

## Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) utilized Grammarly to enhance the writing quality. Following the use of this tool, the author(s) thoroughly reviewed and edited the content as necessary, assuming full responsibility for the final version of the publication.

## CRediT authorship contribution statement

**Marcos Alexandre dos Reis Cardillo:** Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Leonardo Fenando Cruz Basso:** Supervision, Project administration, Conceptualization.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could appear to influence the work reported in this paper.

## Acknowledgments

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES) – Finance Code 001.

## References

Abdi, Y., Li, X., & Càmara-Turull, X. (2022). Exploring the impact of sustainability (ESG) disclosure on firm value and financial performance (FP) in the airline industry: The

moderating role of size and age. *Environment, Development and Sustainability, 24*(4), 5052–5079. https://doi.org/10.1007/s10668-021-01649-w
Adams, R. B. (2016). Women on boards: The superheroes of tomorrow? *The Leadership Quarterly, 27*(3), 371–386. https://doi.org/10.1016/j.leaqua.2015.11.001
Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management, 38*(4), 932–968. https://doi.org/10.1177/0149206311436079
Aguinis, H., Ramani, R. S., & Alabduljader, N. (2018). What you see is what you get? Enhancing methodological transparency in management research. *Academy of Management Annals, 12*(1), 83–110. https://doi.org/10.5465/annals.2016.0011
Ahmad, N., Mobarek, A., & Raid, M. (2023). Impact of the global financial crisis on firm performance in the UK: Moderating role of ESG, corporate governance, and firm size. *Cogent Business and Management, 10*(1), Article 2167548. https://doi.org/10.1080/23311975.2023.2167548
Ahmad, N., Mobarek, A., & Roni, N. N. (2021). Revisiting the impact of ESG on the financial performance of FTSE350 UK firms: Static and dynamic panel data analysis. *Cogent Business and Management, 8*(1), Article 1900500. https://doi.org/10.1080/23311975.2021.1900500
Akben-Selcuk, E. (2019). Corporate social responsibility and financial performance: The moderating role of ownership concentration in Turkey. *Sustainability, 11*(13), 3643. https://doi.org/10.3390/su11133643 (Switzerland).
Aksnes, D. W., & Sivertsen, G. (2004). The effect of highly cited papers on national citation indicators. *Scientometrics, 59*(2), 213–224. https://doi.org/10.1023/B:SCIE.0000018529.58334.eb
Alani, R., & Makhlouf, M. (2023). Does ownership structure moderate the relationship between corporate governance and corporate social responsibility disclosures? Evidence from emerging countries. In *Proceedings of the international conference on business and technology* (pp. 1347–1360). Springer. https://doi.org/10.1007/978-3-031-08954-1_116.
Alareeni, B., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society, 20*(7), 1405–1421. https://doi.org/10.1108/CG-06-2020-0258
Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. *International Journal of Accounting and Information Management, 28*(3), 429–444. https://doi.org/10.1108/IJAIM-09-2019-0108
Albuquerque, R., Koskinen, Y., Yang, S., & Zhang, C. (2020). Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. *Review of Corporate Finance Studies, 9*(3), 593–621. https://doi.org/10.1093/rcfs/cfaa011
Al-Dah, B. (2019). Director interlocks and the strategic pacing of CSR activities. *Management Decision, 57*(10), 2782–2798. https://doi.org/10.1108/MD-11-2017-1103
Alfalih, A. A. (2022). ESG disclosure practices and financial performance: A general and sector analysis of SP-500 non-financial companies and the moderating effect of economic conditions. *Journal of Sustainable Finance & Investment, 13*(4), 1506–1533. https://doi.org/10.1080/20430795.2022.2150511
Ali, S., Zhang, J., Usman, M., Khan, F. U., Ikram, A., & Anwar, B. (2019). Sub-National Institutional Contingencies and Corporate Social Responsibility Performance: Evidence from China. *Sustainability, 11*(19), 5478. https://doi.org/10.3390/su11195478
Almulhim, A. A., & Aljughaiman, A. A. (2023). Corporate sustainability and financial performance: The moderating effect of CEO characteristics. *Sustainability, 15*(16), 12664. https://doi.org/10.3390/su151612664 (Switzerland).
Al-Shammari, M. A., Banerjee, S. N., & Rasheed, A. A. (2022). Corporate social responsibility and firm performance: A theory of dual responsibility. *Management Decision, 60*(6), 1513–1540. https://doi.org/10.1108/MD-12-2020-1584
Al-Shammari, M. A., Banerjee, S. N., Al-Shammari, H., & Doty, H. (2023). The interplay of CEO ability and governance robustness on the performance effects of corporate social responsibility. *Management Decision, 61*(7), 1932–1965. https://doi.org/10.1108/MD-07-2022-0957
Alshorman, S., Qaderi, S., Alhmoud, T., & Meqbel, R. (2022). The role of slack resources in explaining the relationship between corporate social responsibility disclosure and firm market value: A case from an emerging market. *Journal of Sustainable Finance and Investment*. https://doi.org/10.1080/20430795.2022.2119833
Ang, R., Shao, Z., Liu, C., Yang, C., & Zheng, Q. (2022). The relationship between CSR and financial performance and the moderating effect of ownership structure: Evidence from Chinese heavily polluting listed enterprises. *Sustainable Production and Consumption, 30*, 117–129. https://doi.org/10.1016/j.spc.2021.11.030
Aqabna, S. M., Aga, M., & Jabari, H. N. (2023). Firm performance, corporate social responsibility and the impact of earnings management during COVID-19: Evidence from MENA region. *Sustainability, 15*(2), 1485. https://doi.org/10.3390/su15021485
Archambault, E., Campbell, D., Gingras, Y., & Larivière, V. (2009). Comparing bibliometric statistics obtained from the Web of Science and Scopus. *Journal of the American Society for Information Science and Technology, 60*(7), 1320–1326. https://doi.org/10.1002/asi.21062
Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics, 11*(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007
Asante-Appiah, B., & Lambert, T. A. (2023). The role of the external auditor in managing Environmental, Social, and Governance (ESG) reputation risk. *Review of Accounting Studies, 28*, 2589–2641. https://doi.org/10.1007/s11142-022-09706-z
Bae, K. H., El Ghoul, S., Gong, Z.(J.), & Guedhami, O. (2021). Does CSR matter in times of crisis? Evidence from the COVID-19 pandemic. *Journal of Corporate Finance, 67*, Article 101876. https://doi.org/10.1016/j.jcorpfin.2020.101876
Bai, Y. (2022). Corporate social responsibility and corporate innovation output: Empirical evidence based on Chinese listed companies. *Managerial and Decision Economics, 43*(8), 3534–3547. https://doi.org/10.1002/mde.3612
Barauskaite, G., & Streimikiene, D. (2020). Corporate social responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods. *Corporate Social Responsibility and Environmental Management, 28*(1), 278–287. https://doi.org/10.1002/csr.2048
Barbosa, A., da Silva, M. C. B. C., da Silva, L. B., Morioka, S. N., & de Souza, V. F. (2023). Integration of Environmental, Social, and Governance (ESG) criteria: Their impacts on corporate sustainability performance. *Humanities and Social Sciences Communications, 10*(1), 1–18. https://doi.org/10.1057/s41599-023-01919-0
Barnea, A., & Rubin, A. (2010). Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics, 97*(1), 71–86. https://doi.org/10.1007/s10551-010-0496-z
Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120. https://doi.org/10.1177/014920639101700108
Bartolacci, F., Caputo, A., & Soverchia, M. (2020). Sustainability and financial performance of small and medium sized enterprises: A bibliometric and systematic literature review. *Business Strategy and the Environment, 29*(3), 1297–1309. https://doi.org/10.1002/BSE.2434
Bashir, M. (2022). Corporate social responsibility and financial performance: The role of corporate reputation, advertising and competition. *PSU Research Review*. https://doi.org/10.1108/PRR-10-2021-0059
Bashir, M., Alfalih, A., & Pradhan, S. (2022). Sustainable business model innovation: Scale development, validation, and proof of performance. *Journal of Innovation & Knowledge, 7*(1), Article 100243. https://doi.org/10.1016/j.jik.2022.100243
Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. *Review of Finance, 26*(6), 1315–1344. https://doi.org/10.1093/rof/rfac033
Bifulco, G. M., Savio, R., Paolone, F., & Tiscini, R. (2023). The CSR committee as moderator for the ESG score and market value. *Corporate Social Responsibility and Environmental Management, 30*(6), 3231–3241. https://doi.org/10.1002/csr.2549
Bocken, N. M. P., Schuit, C. S. C., & Kraaijenhagen, C. (2019). Experimenting with a circular business model: Lessons from eight cases. *Environmental Innovation and Societal Transitions, 28*, 79–95. https://doi.org/10.1016/j.eist.2018.02.001
Bofinger, Y., Heyden, K. J., & Rock, B. (2022). Corporate social responsibility and market efficiency: Evidence from ESG and misvaluation measures. *Journal of Banking & Finance, 134*, C.. https://doi.org/10.1016/j.jbankfin.2021.106322
Bornmann, L., & Daniel, H. D. (2008). What do citation counts measure? A review of studies on citing behavior. *Journal of Documentation, 64*(1), 45–80. https://doi.org/10.1108/00220410810844150
Bornmann, L., Mutz, R., & Daniel, H. D. (2008). Are there better indices for evaluation purposes than the h-index? A comparison of nine different variants of the h-index using data from biomedicine. *Journal of the American Society for Information Science and Technology, 59*(5), 830–837. https://doi.org/10.1002/asi.20806
Bos, A., Boselie, P., & Trappenburg, M. (2017). Financial performance, employee well-being, and client well-being in for-profit and not-for-profit nursing homes: A systematic review. *Health Care Management Review, 42*(4), 352–368. https://doi.org/10.1097/HMR.0000000000000121
Boulhaga, M., Bouri, A., Elamer, A. A., & Ibrahim, B. A. (2023). Environmental, social and governance ratings and firm performance: The moderating role of internal control quality. *Corporate Social Responsibility and Environmental Management, 30*(1), 134–145. https://doi.org/10.1002/csr.2343
Boyack, K. W., & Klavans, R. (2010). Co-citation analysis, bibliographic coupling, and direct citation: Which citation approach represents the research front most accurately? *Journal of the American Society for Information Science and Technology, 61*(12), 2389–2404. https://doi.org/10.1002/asi.21419
Bradford, SC. (1934). Sources of information on specific subjects. *Engineering: An Illustrated Weekly Journal, 137*, 85–86 (London).
Brammer, S., & Millington, A. (2006). Firm size, organizational visibility and corporate philanthropy: An empirical analysis. *Business Ethics: A European Review, 15*(1), 6–18. https://doi.org/10.1111/j.1467-8608.2006.00424.x
Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal, 29*(12), 1325–1343. https://doi.org/10.1002/smj.714
Brinette, S., Sonmez, F. D., & Tournus, P. S. (2023). ESG controversies and firm value: Moderating role of board gender diversity and board independence. *IEEE Transactions on Engineering Management*. https://doi.org/10.1109/TEM.2023.3236667
Broadstock, D. C., Chan, K., Cheng, L. T. W., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance Research Letters, 38*, Article 101716. https://doi.org/10.1016/j.frl.2020.101716
Brooks, L. Z., Gill, S., & Wong, B. (2020). Corporate social responsibility, product strategy, and financial performance in the finance sector. *Journal of Asian Finance, Economics and Business, 7*(3), 139–149. https://doi.org/10.13106/jafeb.2020.vol7.no3.139
Brooks, L. Z., Gill, S., Wong-On-Wing, B., & Yu, M. D. (2022). Does audit firm tenure enhance firm value? Closing the expectation gap through corporate social responsibility. *Managerial Auditing Journal, 37*(8), 1113–1145. https://doi.org/10.1108/MAJ-11-2020-2902
Bui, T. T. H., & Bui, T. (2021). The relationship between corporate social responsibility and corporate financial performance: An empirical study of commercial banks in Vietnam. *Journal of Asian Finance, Economics and Business, 8*(10), 373–383. https://doi.org/10.13106/jafeb.2021.vol8.no10.0373

Busch, T., & Lewandowski, S. (2018). Corporate carbon and financial performance: A meta-analysis. *Journal of Industrial Ecology, 22*(4), 745–759. https://doi.org/10.1111/jiec.12591

Butt, A. A., Shahzad, A., & Ahmad, J. (2020). Impact of CSR on firm value: The moderating role of corporate governance. *Indonesian Journal of Sustainability Accounting and Management, 4*(2), 145. https://doi.org/10.28992/ijsam.v4i2.257

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review, 4*(4), 497–505. https://doi.org/10.5465/amr.1979.4498296

Chang, K., Shim, H., & Yi, T. D. (2019). Corporate social responsibility, media freedom, and firm value. *Finance Research Letters, 30*, 1–7. https://doi.org/10.1016/j.frl.2019.03.019

Cheema-Fox, A., LaPerla, B. R., Serafeim, G., Wang, H., & Yu, G. (2021). Corporate resilience and response during COVID-19. *Journal of Applied Corporate Finance, 33*(1), 24–40. https://doi.org/10.1111/jacf.12457

Chen, W., Wang, J., & Ye, Y. (2024). Financial technology as a heterogeneous driver of carbon emission reduction in China: Evidence from a novel sparse quantile regression. *Journal of Innovation & Knowledge, 9*(1), Article 100476. https://doi.org/10.1016/j.jik.2024.100476

Chen, Z., & Xie, G. (2022). ESG disclosure and financial performance: Moderating role of ESG investors. *International Review of Financial Analysis, 83*, Article 102291. https://doi.org/10.1016/j.irfa.2022.102291

Chi, L. H. D., Hac, L. D., Nhat, N. Q., & Hang, B. T. T. (2022). Corporate environmental responsibility and financial performance: The moderating role of ownership structure and listing status of Vietnam banks. *Cogent Economics and Finance, 10*(1). https://doi.org/10.1080/23322039.2022.2087286

Chijoke-Mgbame, A. M., Mgbame, C. O., Akintoye, S., & Ohalehi, P. (2020). The role of corporate governance on CSR disclosure and firm performance in a voluntary environment. *Corporate Governance, 20*(2), 294–306. https://doi.org/10.1108/CG-06-2019-0184 (Bingley).

Chiu, W. T., & Ho, Y. S. (2005). Bibliometric analysis of tsunami research. *Scientometrics, 73*(1), 3–17. https://doi.org/10.1007/s11192-005-1523-1

Cho, E., & Tsang, A. (2020). Corporate social responsibility, product strategy, and firm value. *Asia-Pacific Journal of Financial Studies, 49*(2), 272–298. https://doi.org/10.1111/ajfs.12291

Chouaibi, S., & Chouaibi, J. (2021). Social and ethical practices and firm value: The moderating effect of green innovation: Evidence from international ESG data. *International Journal of Ethics and Systems, 37*(3), 442–465. https://doi.org/10.1108/IJOES-12-2020-0203

Christensen, C.M. (1997). The innovator's Dilemma: When new technologies cause great firms to fail. Harvard Business School. https://www.hbs.edu/faculty/Pages/item.aspx?num=46.

Chytis, E., Eriotis, N., & Mitroulia, M. (2024). ESG in business research: A bibliometric analysis. *Journal of Risk and Financial Management, 17*(10), 460. https://doi.org/10.3390/jrfm17100460

Clark, G. L., Feiner, A., & Viehs, M. (2015). From the stockholder to the stakeholder: How sustainability can drive financial outperformance. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2508281

Coelho, R., Jayantilal, S., & Ferreira, J. J. (2023). The impact of social responsibility on corporate financial performance: A systematic literature review. *Corporate Social Responsibility and Environmental Management*. https://doi.org/10.1002/csr.2446

Cohen, S., Kadach, I., Ormazabal, G., & Reichelstein, S. (2023). Executive compensation tied to ESG performance: International evidence. *Journal of Accounting Research, 61*(3). https://doi.org/10.1111/1475-679x.12481

Coleman, M., & Wu, M. (2021). Corporate governance mechanisms and corporate performance of firms in Nigeria and Ghana. *International Journal of Productivity and Performance Management, 70*(8), 2319–2351. https://doi.org/10.1108/IJPPM-01-2020-0020

Cooper, W. W., Seiford, L. M., & Zhu, J. (2004). *Handbook on data envelopment analysis, 164*. Springer Science & Business Media. https://doi.org/10.1007/978-1-4419-6151-8

Croitoru, A., & Schumpeter, J. A. (2012). The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle, New Brunswick (U.S.A) and London (U.K.): Transaction Publishers. *Journal of Comparative Research in Anthropology and Sociology, 3*(1), 137–148. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4499769.

Cupertino, S., Vitale, G., & Riccaboni, A. (2021). Sustainability and short-term profitability in the agri-food sector, a cross-sectional time-series investigation on global corporations. *British Food Journal, 123*(13), 317–336. https://doi.org/10.1108/BFJ-02-2021-0154

D'Amato, A., & Falivena, C. (2020). Corporate social responsibility and firm value: Do firm size and age matter? Empirical evidence from European listed companies. *Corporate Social Responsibility and Environmental Management, 27*(2), 909–924. https://doi.org/10.1002/csr.1855

Dakhli, A. (2022). The impact of corporate social responsibility on firm financial performance: Does audit quality matter? *Journal of Applied Accounting Research, 23*(5), 950–976. https://doi.org/10.1108/JAAR-06-2021-0150

DasGupta, R., & Roy, A. (2023). Moderation impact of national culture on international firm's environmental, social, governance and financial performance. *International Journal of Intercultural Relations, 92*, Article 101749. https://doi.org/10.1016/j.ijintrel.2022.101749

de la Fuente, G., Ortiz, M., & Velasco, P. (2022). The value of a firm's engagement in ESG practices: Are we looking at the right side? *Long Range Planning, 55*(4), 102143. https://doi.org/10.1016/j.lrp.2021.102143

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing & Accountability Journal, 15*(3), 282–311. https://doi.org/10.1108/09513570210435852

Delmas, M. A., & Montes-Sancho, M. J. (2011). US state policies for renewable energy: Context and effectiveness. *Energy Policy, 39*(5), 2273–2288. https://doi.org/10.1016/j.enpol.2011.01.034

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*(2), 147–160. https://doi.org/10.2307/2095101

Ding, Y., Chowdhury, G. G., & Foo, S. (2000). Bibliometric cartography of information retrieval research by using co-word analysis. *Information Processing & Management, 37*(6), 817–842. https://doi.org/10.1016/S0306-4573(00)00051-0

Dkhili, H. (2023). Does environmental, social and governance (ESG) affect market performance? The moderating role of competitive advantage. *Competitiveness Review*. https://doi.org/10.1108/CR-10-2022-0149

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research, 133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Duan, Y., Yang, F., & Xiong, L. (2023). Environmental, Social, and Governance (ESG) performance and firm value: Evidence from Chinese manufacturing firms. *Sustainability, 15*(17), 12858. https://doi.org/10.3390/su151712858 (Switzerland).

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science, 60*(11), 2835–2857. https://doi.org/10.1287/mnsc.2014.1984

Egghe, L., & Rousseau, R. (1990). *Introduction to informetrics: Quantitative methods in library, documentation and information science*. Elsevier Science Publishers.

Ellili, N. O. D. (2022). Bibliometric analysis and systematic review of environmental, social, and governance disclosure papers: Current topics and recommendations for future research. *Environmental Research Communications, 4*(9), Article 092001. https://doi.org/10.1088/2515-7620/ac8b67

Enciso-Alfaro, S.-Y., & García-Sánchez, I.-M. (2024). Are innovative firms more circular when women hold upper positions? *Journal of Innovation & Knowledge, 9*(1), 100556. https://doi.org/10.1016/j.jik.2024.100556

Espinosa-Méndez, C., Maquieira, C. P., & Arias, J. T. (2023). The impact of ESG performance on the value of family firms: The moderating role of financial constraints and agency problems. *Sustainability, 15*(7), 6176. https://doi.org/10.3390/su15076176 (Switzerland).

E-Vahdati, S., Wan-Hussin, W. N., & Mohd Ariffin, M. S. (2023). The value relevance of ESG practices in Japan and Malaysia: Moderating roles of CSR award, and former CEO as a board chair. *Sustainability, 15*(3), 2728. https://doi.org/10.3390/su15032728 (Switzerland).

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance, 25*(2), 383–417. https://doi.org/10.2307/2325486

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *Journal of Finance, 47*(2), 427–465. https://doi.org/10.1111/j.1540-6261.1992.tb04398.x

Fatemi, A., Fooladi, I., & Tehranian, H. (2015). Valuation effects of corporate social responsibility. *Journal of Banking & Finance, 59*, 182–192. https://doi.org/10.1016/j.jbankfin.2015

Ferrell, A., Liang, H., & Renneboog, L. (2016). Socially responsible firms. *Journal of Financial Economics, 122*(3), 585–606. https://doi.org/10.1016/j.jfineco.2015.12.003

Fiss, P. C. (2011). Building better causal theories: A fuzzy set approach to typologies in organization research. *Academy of Management Journal, 54*(2), 393–420. https://doi.org/10.5465/amj.2011.60263120

Flammer, C. (2018). Competing for government procurement contracts: The role of corporate social responsibility. *Strategic Management Journal, 39*(5), 1299–1324. https://doi.org/10.1002/smj.2767

Forgione, A. F., Laguir, I., & Staglianò, R. (2020). Effect of corporate social responsibility scores on bank efficiency: The moderating role of institutional context. *Corporate Social Responsibility and Environmental Management, 27*(5), 2094–2106. https://doi.org/10.1002/csr.1950

Franco, L. S., Nadal, J. M., Pilatti, L. A., Picinin, C. T., & Franco, A. C. (2020). *Corporate governance and women's participation in the financial performance of enterprises: A systematic review*. Navus – Revista de Gestão e Tecnologia. https://doi.org/10.22279/navus.2020.v10.p01-14.1091

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge University Press. https://doi.org/10.1017/CBO9781139192675

Freeman, R. E., & Evan, W. M. (1990). Corporate governance: A stakeholder interpretation. *Journal of Behavioral Economics, 19*(4), 337–359. https://doi.org/10.1016/0090-5720(90)90022-Y

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment, 5*(4), 210–233. https://doi.org/10.1080/20430795.2015.1118917

Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine, 13*(1970), 32–33. https://doi.org/10.1007/978-3-540-70818-6_14

Fu, L., Boehe, D. M., & Orlitzky, M. O. (2022). Broad or narrow stakeholder management? A signaling theory perspective. *Business and Society, 61*(7), 1838–1880. https://doi.org/10.1177/00076503211053018

Fuadah, L. L., Mukhtaruddin, M., Andriana, I., & Arisman, A. (2022). The ownership structure, and the Environmental, Social, and Governance (ESG) disclosure, firm value and firm performance: The audit committee as moderating variable. *Economies, 10*(12), 314. https://doi.org/10.3390/economies10120314

Fuente, G., Ortiz, M., & Velasco, P. (2022). The value of a firm's engagement in ESG practices: Are we looking at the right side? *Long Range Planning, 55*(4), Article 102143. https://doi.org/10.1016/j.lrp.2021.102143

Gallego-Álvarez, I., & Pucheta-Martínez, M. C. (2022). The moderating effects of corporate social responsibility assurance in the relationship between corporate social responsibility disclosure and corporate performance. *Corporate Social Responsibility and Environmental Management, 29*(3), 535–548. https://doi.org/10.1002/csr.2218
Garel, A., Tourani-Rad, A., & Xu, S. (2022). Corporate social responsibility and capital allocation efficiency in Australia and New Zealand. *Journal of Risk and Financial Management, 15*(3), 100. https://doi.org/10.3390/jrfm15030100
Garfield, E. (1955). Citation indexes for science. *Science, 122*(3159), 108–111. https://doi.org/10.1126/science.122.3159.108 (New York, N.Y.).
Garfield, E. (2006). The history and meaning of the journal impact factor. *JAMA, 295*(1), 90–93. https://doi.org/10.1001/jama.295.1.90
Ghardallou, W. (2022). Corporate sustainability and firm performance: The moderating role of CEO education and tenure. *Sustainability, 14*(6), 3513. https://doi.org/10.3390/su14063513 (Switzerland).
Ghosh, N., & Gupta, D. (2023). Decarbonization strategy of businesses, stock return performance and investment styles: A systematic review. *Benchmarking: An International Journal*. https://doi.org/10.1108/BIJ-09-2021-0554
Giese, G., Lee, L. E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of ESG investing: How ESG affects equity valuation, risk, and performance. *The Journal of Portfolio Management, 45*(5), 69–83. https://doi.org/10.3905/jpm.2019.45.5.069
Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance, 66*, Article 101889. https://doi.org/10.1016/j.jcorpfin.2021.101889
Global Reporting Initiative (GRI). (2021). Global reporting initiative: Standards. Retrieved from https://www.globalreporting.org/standards/.
Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics, 225*(2), 254–277. https://doi.org/10.1016/j.jeconom.2021.03.014
Grassmann, M. (2021). The relationship between corporate social responsibility expenditures and firm value: The moderating role of integrated reporting. *Journal of Cleaner Production, 285*, Article 124840. https://doi.org/10.1016/j.jclepro.2020.124840
Greene, W. H. (2012). *Econometric analysis* (7th ed.). Pearson Education.
Guo, Z., Hou, S., & Li, Q. (2020). Corporate social responsibility and firm value: The moderating effects of financial flexibility and R&D investment. *Sustainability, 12*(20), 1–17. https://doi.org/10.3390/su12208452 (Switzerland).
Haddaway, N. R., Page, M. J., Pritchard, C. C., & McGuinness, L. A. (2022). PRISMA2020: An R package and Shiny app for producing PRISMA 2020-compliant flow diagrams, with interactivity for optimised digital transparency and Open Synthesis. *Campbell Systematic Reviews, 18*, e1230. https://doi.org/10.1002/cl2.1230
Handayati, P., Sumarsono, H., & Narmaditya, B. S. (2022). Corporate social responsibility disclosure and Indonesian firm value: The moderating effect of profitability and firm's size. *Journal of Eastern European and Central Asian Research, 9*(4), 703–714. https://doi.org/10.15549/jeecar.v9i4.940
Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica : Journal of the Econometric Society, 50*(4), 1029–1054. https://doi.org/10.2307/1912775
Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics, 100*(1), 45–67. https://doi.org/10.1007/s10551-011-0772-6
Hart, O., & Zingales, L. (2017). Companies should maximize shareholder welfare not market value. *Journal of Law, Finance, and Accounting, 2*(2), 247–275. https://doi.org/10.1561/108.00000022
Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review, 20*(4), 986–1014. https://doi.org/10.5465/amr.1995.9512280033
Harzing, A. W., & Alakangas, S. (2016). Google scholar, Scopus, and the web of science: A longitudinal and cross-disciplinary comparison. *Scientometrics, 106*(3), 787–804. https://doi.org/10.1007/s11192-015-1798-9
Henrique, B. M., Sobreiro, V. A., & Kimura, H. (2019). Literature review: Machine learning techniques applied to financial market prediction. *Expert Systems with Applications, 124*, 226–251. https://doi.org/10.1016/j.eswa.2019.01.012
Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Sage Publications. https://doi.org/10.1177/017084068300400409
Hossain, M. I., Mia, M. A., & Dalla Pellegrina, L. (2024). A systematic review of gender diversity and its impact on the performance of microfinance institutions. *Journal of Economic Structures*. https://doi.org/10.1186/s43093-023-00294-1
Huang, J. (2022). Corporate social responsibility and financial performance: The moderating role of the turnover of local officials. *Finance Research Letters, 46*(B), Article 102497. https://doi.org/10.1016/j.frl.2021.102497
Jabbour, C. J. C. (2013). Environmental training in organizations: From a literature review to a framework for future research. *Resources, Conservation and Recycling,, 74*, 144–155. https://doi.org/10.1016/j.resconrec.2012.12.017
Jamali, D., & Karam, C. (2018). Corporate social responsibility in developing countries as an emerging field of study. *International Journal of Management Reviews, 20*(1), 32–61. https://doi.org/10.1111/ijmr.12112
Jang, S. S., Ko, H., Chung, Y., & Woo, C. (2019). CSR, social ties and firm performance. *Corporate Governance, 19*(6), 1310–1323. https://doi.org/10.1108/CG-02-2019-0068 (Bingley).
Javed, A., Ahmad, H., & Maeenuddin, D. (2020). Moderating effect of earnings management on relationship between corporate social responsibility and financial performance. *International Journal of Advanced Science and Technology, 29*(8s), 474–486. Retrieved from https://www.researchgate.net/publication/340779161.
Javed, M., Rashid, M. A., & Hussain, G. (2016). When does it pay to be good? A contingency perspective on corporate social and financial performance. *Journal of Cleaner Production, 133*, 1062–1073. https://doi.org/10.1016/j.jclepro.2016.05.163
Javeed, S. A., & Lefen, L. (2019). An analysis of corporate social responsibility and firm performance with moderating effects of CEO power and ownership structure: A case study of the manufacturing sector of Pakistan. *Sustainability, 11*(1), 248. https://doi.org/10.3390/su11010248 (Switzerland).
Jensen, M. C. (1968). The performance of mutual funds in the period 1945–1964. *Journal of Finance, 23*(2), 389–416. https://doi.org/10.1111/j.1540-6261.1968.tb00815.x
Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X
Jeong, N. (2021). A comparative approach to corporate social performance and corporate financial performance: Moderating effects of conformity tendency in the industry. *Journal of General Management, 46*(3), 220–228. https://doi.org/10.1177/0306307020961606
Jia, X. P. (2020). Corporate social responsibility activities and firm performance: The moderating role of strategic emphasis and industry competition. *Corporate Social Responsibility and Environmental Management, 27*(1), 65–73. https://doi.org/10.1002/csr.1774
Jiang, G. F., Jung, J. C., & Makino, S. (2020). Parent firm corporate social responsibility and overseas subsidiary performance: A signaling perspective. *Journal of World Business, 55*(6), Article 101141. https://doi.org/10.1016/j.jwb.2020.101141
Jihadi, M., Vilantika, E., Hashemi, S. M., Arifin, Z., Bachtiar, Y., & Sholichah, F. (2021). The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia. *Journal of Asian Finance, Economics and Business, 8*(3), 423–431. https://doi.org/10.13106/jafeb.2021.vol8.no3.0423
Jorion, P. (2007). *Value at risk: The new benchmark for managing financial risk* (3rd ed.). McGraw-Hill.
Junior, M. L., & Godinho Filho, M. (2010). Variations of the Kanban system: Literature review and classification. *International Journal of Production Economics, 125*(1), 13–21. https://doi.org/10.1016/j.ijpe.2010.01.009
Kahloul, I., Sbai, H., & Grira, J. (2022). Does corporate social responsibility reporting improve financial performance? The moderating role of board diversity and gender composition. *Quarterly Review of Economics and Finance, 84*, 305–314. https://doi.org/10.1016/j.qref.2022.03.001
Karim, S., Manab, N. A., & Ismail, R. B. (2020). Assessing the governance mechanisms, corporate social responsibility, and performance: The moderating effect of board independence. *Global Business Review, 24*(3). https://doi.org/10.1177/0972150920917773
Kaupke, K., & zu Knyphausen-Aufseß, D. (2023). Sustainability and firm value in the oil and gas industry—A vicious circle? *Corporate Social Responsibility and Environmental Management, 30*(3), 1129–1144. https://doi.org/10.1002/csr.2409
Kessler, M. M. (1963). Bibliographic coupling between scientific papers. *American Documentation, 14*(1), 10–25. https://doi.org/10.1002/asi.5090140103
Khan, A., Afeef, M., Ilyas, M., & Jan, S. (2023). Does CSR committee drive the association between corporate social responsibility and firm performance? International evidence. *Managerial Finance*. https://doi.org/10.1108/MF-10-2022-0508
Khan, H. H. A., Ahmad, N., Yusof, N. M., & Chowdhury, M. A. M. (2024). Green finance and environmental sustainability: A systematic review and future research avenues. *Environmental Science and Pollution Research, 31*(6), 9784–9794. https://doi.org/10.1007/s11356-023-31809-6
Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate sustainability: First evidence on materiality. *The Accounting Review, 91*(6), 1697–1724. https://doi.org/10.2308/accr-51383
Kolk, A. (2016). The social responsibility of international business: From ethics and the environment to CSR and sustainable development. *Journal of World Business, 51*(1), 23–34. https://doi.org/10.1016/j.jwb.2015.08.010
Kuhn, T. S. (1962). *The structure of scientific revolutions* (1st ed.). University of Chicago Press.
Laakso, M., Welling, P., Bukvova, H., Nyman, L., Björk, B. C., & Hedlund, T. (2011). The development of open access journal publishing from 1993 to 2009. *PLOS ONE, 6*(6), e20961. https://doi.org/10.1371/journal.pone.0020961
Laique, U., Abdullah, F., Rehman, I. U., & Sergi, B. S. (2023). Two decades of research on board gender diversity and financial outcomes: Mapping heterogeneity and future research agenda. *Corporate Social Responsibility and Environmental Management*. https://doi.org/10.1002/csr.2510
Le, M. H., Lu, W. M., & Kweh, Q. L. (2023). The moderating effects of power distance on corporate social responsibility and multinational enterprises performance. *Review of Managerial Science, 17*, 2503–2533. https://doi.org/10.1007/s11846-022-00591-z
Lee, E. T., & Li, X. (2022). Too much of a good thing? Exploring the curvilinear relationship between environmental, social, and governance and corporate financial performance. *Asian Journal of Business Ethics, 11*(2), 399–421. https://doi.org/10.1007/s13520-022-00157-y
Lee, J. K. Y., et al. (2021). Sustainability-oriented application of value stream mapping: A review and classification. *IEEE Access : Practical Innovations, Open Solutions, 9*, 68414–68434. https://doi.org/10.1109/ACCESS.2021.3077570
Lee, M. T., & Suh, I. (2022). Understanding the effects of environment, social, and governance conduct on financial performance: Arguments for a process and integrated modelling approach. *Sustainable Technology and Entrepreneurship, 1*, Article 100004. https://doi.org/10.1016/j.stae.2022.100004
Lee, S. P. (2021). Environmental responsibility, CEO power and financial performance in the energy sector. *Review of Managerial Science, 15*(8), 2407–2426. https://doi.org/10.1007/s11846-020-00430-z
Leopizzi, R. (2023). Risk management and CSR (eds). In S. O. Idowu, R. Schmidpeter, N. Capaldi, L. Zu, M. Del Baldo, & R. Abreu (Eds.), *Encyclopedia of sustainable management*. Cham: Springer. https://doi.org/10.1007/978-3-031-25984-5_668.
Li, Y., de Villiers, C., Li, L. Z., & Li, L. (2022). The moderating effect of board gender diversity on the relation between corporate social responsibility and firm value. *Journal of Management Control, 33*(1), 109–143. https://doi.org/10.1007/s00187-022-00334-x

Liang, H., & Renneboog, L. (2017). On the foundations of corporate social responsibility. *The Journal of Finance, 72*(2), 853–910. https://doi.org/10.1111/jofi.12487

Lim, A., & Tsutsui, K. (2012). Globalization and commitment in corporate social responsibility: Cross-national analyses of institutional and political-economy effects. *American Sociological Review, 77*(1), 69–98. https://doi.org/10.1177/0003122411432701

Lin, W. L., Ho, J. A., Lee, C., & Ng, S. I. (2020). Impact of positive and negative corporate social responsibility on automotive firms' financial performance: A market-based asset perspective. *Corporate Social Responsibility and Environmental Management, 27*(4), 1761–1773. https://doi.org/10.1002/csr.1923

Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *Journal of Finance, 72*(4), 1785–1824. https://doi.org/10.1111/jofi.12505

Liu, S., Wang, K. T., & Walpola, S. (2023). Female board representation and the adoption of corporate social responsibility criteria in executive compensation contracts: International evidence. *Journal of International Financial Markets, Institutions and Money, 82*, Article 101685. https://doi.org/10.1016/j.intfin.2022.101685

Lotka, A. J. (1926). The frequency distribution of scientific productivity. *Journal of the Washington Academy of Sciences, 16*(12), 317–323.

Lyulyov, O., Pimonenko, T., Infante-Moro, A., & Kwilinski, A. (2024). Perception of artificial intelligence: GSR analysis and facial expression detection in retail and employee engagement. *Virtual Economics, 7*(2). https://doi.org/10.34021/ve.2024.07.02(1)

Machmuddah, Z., Sari, D. W., & Utomo, S. D. (2020). Corporate social responsibility, profitability and firm value: Evidence from Indonesia. *Journal of Asian Finance, Economics and Business, 7*(9), 631–638. https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.631

Masudin, I., & Fernanda, F. W. (2019). A review of literature on types, stages of recovery and humanitarian logistics operations in the tsunami and earthquake disaster in Indonesia. In *, 674. Proceedings of the IOP conference series: Materials science and engineering*, Article 012043. https://doi.org/10.1088/1757-899X/674/1/012043

Matten, D., & Crane, A. (2005). Corporate citizenship: Toward an extended theoretical conceptualization. *Academy of Management Review, 30*(1), 166–179. https://doi.org/10.5465/amr.2005.15281448

McCright, A. M., & Dunlap, R. E. (2011). Cool dudes: The denial of climate change among conservative white males in the United States. *Global Environmental Change, 21*(4), 1163–1172. https://doi.org/10.1016/j.gloenvcha.2011.06.003

McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review, 26*(1), 117–127. https://doi.org/10.5465/amr.2001.4011987

Merton, R. K. (1968). The Matthew effect in science: The reward and communication systems of science are considered. *Science, 159*(3810), 56–63. https://doi.org/10.1126/science.159.3810.56 (New York, N.Y.).

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, T. P. (2009). PRISMA: A preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med, 6*(7), Article e1000097. https://doi.org/10.1371/journal.pmed.1000097

Mongeon, P., & Paul-Hus, A. (2016). The journal coverage of Web of Science and Scopus: A comparative analysis. *Scientometrics, 106*(1), 213–228. https://doi.org/10.1007/s11192-015-1765-5

Muda, I., Erlina, Diharja, M. P., Omar, N. H., & Said, J. (2019). The role of institutional ownership in strengthening to the enterprise value on the banking issuers. *Banks and Bank Systems, 14*(1), 42–54. https://doi.org/10.21511/bbs.14(1).2019.05

Nagalingam, N., De Silva, L. M. H., Weerasinghe, R. M., Pathirana, T. D., Rajapaksha, C. M., Perera, K. R., et al. (2022). Corporate social responsibility and financial performance: A study of the tourism industry in Sri Lanka. *Corporate Ownership & Control, 19*(4), 103–110. https://doi.org/10.22495/cocv19i4art9

Naseem, M. A., Lin, J., Rehman, R., Ahmad, M. I., & Ali, R. (2019). Moderating role of financial ratios in corporate social responsibility disclosure and firm value. *PLOS ONE, 14*(4). https://doi.org/10.1371/journal.pone.0215430

Nazário, R. T. F., Silva, J. L., Sobreiro, V. A., & Kimura, H. (2017). A literature review of technical analysis on stock markets. *The Quarterly Review of Economics and Finance, 66*, 115–126. https://doi.org/10.1016/j.qref.2017.01.014

Nekhili, M., Boukadhaba, A., Nagati, H., & Chtioui, T. (2021). ESG performance and market value: The moderating role of employee board representation. *International Journal of Human Resource Management, 32*(14), 3061–3087. https://doi.org/10.1080/09585192.2019.1629989

Nirino, N., Battisti, E., Ferraris, A., Dell'Atti, S., & Briamonte, M. F. (2022). How and when corporate social performance reduces firm risk? The moderating role of corporate governance. *Corporate Social Responsibility and Environmental Management, 29*(6), 1995–2005. https://doi.org/10.1002/csr.2296

Okafor, C. E., Ujah, N. U., Cho, E., Okafor, W. U., & James, K. L. (2023). The moderating effect of a golden parachute on the association between CSR and firm value: Does gender-driven innovation matter? *Sustainability, 15*(6), 5483. https://doi.org/10.3390/su15065483

Ooi, C. A., Hooy, C. W., & Choi, J. S. (2022). Corporate governance code revisions, corporate social performance and firm value: International evidence. *Malaysian Journal of Economic Studies, 59*(1), 1–25. https://doi.org/10.22452/MJES.vol59no1.1

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies, 24*(3), 403–441. https://doi.org/10.1177/0170840603024003910

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan—A web and mobile app for systematic reviews. *Systematic Reviews, 5*(1), 210. https://doi.org/10.1186/s13643-016-0384-4

Oware, K. M., & Mallikarjunappa, T. (2022). CSR expenditure, mandatory CSR reporting and financial performance of listed firms in India: An institutional theory perspective. *Meditari Accountancy Research, 30*(1), 1–21. https://doi.org/10.1108/MEDAR-05-2020-0896

Pao, M. L. (1985). Lotka's law: A testing procedure. *Information Processing & Management, 21*(4), 305–320. https://doi.org/10.1016/03064573(85)90055X

Pekovic, S., & Vogt, S. (2021). The fit between corporate social responsibility and corporate governance: The impact on a firm's financial performance. *Review of Managerial Science, 15*(4), 1095–1125. https://doi.org/10.1007/s11846-020-00389-x

Pellegrini, L. (2022). SRI, ESG and value of sustainability (Eds.). In B. Pellegrini, L. Pellegrini, & M. Catizone (Eds.), *Climate change adaptation, governance and new issues of value: Measuring the impact of ESG scores on COE and firm performance* (pp. 61–93). Springer International Publishing. https://doi.org/10.1007/978-3-030-90115-8_4.

Peloza, J. (2009). The challenge of measuring financial impacts from investments in corporate social performance. *Journal of Management, 35*(6), 1518–1541. https://doi.org/10.1177/0149206309335188

Peloza, J., & Shang, J. (2010). How can corporate social responsibility activities create value for stakeholders? A systematic review. *Journal of the Academy of Marketing Science, 39*(1), 117–135. https://doi.org/10.1007/s11747-010-0213-6

Pham, H. S. T., & Tran, H. T. (2020). CSR disclosure and firm performance: The mediating role of corporate reputation and moderating role of CEO integrity. *Journal of Business Research, 120*, 127–136. https://doi.org/10.1016/j.jbusres.2020.08.002

Pinto, S. O., & Sobreiro, V. A. (2022). Literature review: Anomaly detection approaches on digital business financial systems. *Digital Business, 2*(2). https://doi.org/10.1016/j.digbus.2022.100038

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*(1), 539–569. https://doi.org/10.1146/annurev-psych-120710-100452

Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. Free Press.

Porter, M. E., & Kramer, M. R. (2006). Strategy & society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review, 84*(12), 78–92.

Qureshi, M. A., Kirkerud, S., Theresa, K., & Ahsan, T. (2020). The impact of sustainability (environmental, social, and governance) disclosure and board diversity on firm value: The moderating role of industry sensitivity. *Business Strategy and the Environment, 29*(3), 1199–1214. https://doi.org/10.1002/bse.2427

Quttainah, M. A., & Ayadi, I. (2024). The impact of digital integration on corporate sustainability: Emissions reduction, environmental innovation, and resource efficiency in the European context. *Journal of Innovation & Knowledge, 9*(1), Article 100525. https://doi.org/10.1016/j.jik.2024.100525

Raman, R., Pattnaik, D., Achuthan, K., Hughes, L., Al-Busaidi, A. S., Dwivedi, Y. K., et al. (2024). Mapping research in the Journal of Innovation & Knowledge to sustainable development goals. *Journal of Innovation & Knowledge,, 9*(1), Article 100538. https://doi.org/10.1016/j.jik.2024.100538

Rangan, V. K., Corsten, D., Higgins, M., & Schlesinger, L. A. (2021). How direct-to-consumer brands can continue to grow. *Harvard Business Review, 99*(6), 101–109. Retrieved from https://hbr.org/2021/11/how-direct-to-consumer-brands-can-continue-to-grow.

Rasheed, B., & Ahmad, M. (2022). Competitive intensity: Bridging the gap between corporate social responsibility and competitive advantage. *Journal of Strategy and Management, 15*(4), 745–765. https://doi.org/10.1108/JSMA-08-2021-0177

Rashid, A., Shams, S., Bose, S., & Khan, H. (2020). CEO power and corporate social responsibility (CSR) disclosure: Does stakeholder influence matter? *Managerial Auditing Journal, 35*(9), 1279–1312. https://doi.org/10.1108/MAJ-11-2019-2463

Rastogi, S., Singh, K., & Kanoujiya, J. (2023). Firm's value and ESG: The moderating role of ownership concentration and corporate disclosures. *Asian Review of Accounting*. https://doi.org/10.1108/ARA-10-2022-0266

Rau, P. R., & Yu, T. (2024). A survey on ESG: Investors, institutions and firms. *China Finance Review International, 14*(1), 3–33. https://doi.org/10.1108/CFRI-12-2022-0260

Redner, S. (1998). How popular is your paper? An empirical study of the citation distribution. *The European Physical Journal B, 4*(2), 131–134. https://doi.org/10.1007/s100510050359

Rogers, E. M. (1962). *Diffusion of innovations*. Free Press.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*(1), 41–55. https://doi.org/10.1093/biomet/70.1.41

Rossi, M., Chouaibi, J., Chouaibi, S., Jilani, W., & Chouaibi, Y. (2021). Does a board characteristic moderate the relationship between CSR practices and financial performance? Evidence from European ESG firms. *Journal of Risk and Financial Management, 14*(8), 354. https://doi.org/10.3390/jrfm14080354

Rousseau, D., Kim, B. J., Splenda, R., Young, S., Lee, J., & Beck, D. (2023). *Does chief executive compensation predict financial performance or inaccurate financial reporting in listed companies: A systematic review*. Campbell Systematic Reviews. https://doi.org/10.1002/cl2.1370

Ryu, D. (2019). Effects of the 2008 global financial crisis on corporate social responsibility and firm value in Korea. *Investment Analysts Journal, 48*(2), 114–124. https://doi.org/10.1080/10293523.2019.1626601

Saadaoui, A., & Ben Salah, O. (2023). The moderating effect of financial stability on the CSR and bank performance. *EuroMed Journal of Business, 18*(4), 621–642. https://doi.org/10.1108/EMJB-10-2021-0163

Saini, M., Aggarwal, V., Dhingra, B., Kumar, P., & Yadav, M. (2023). ESG and financial variables: A systematic review. *International Journal of Law and Management*. https://doi.org/10.1108/IJLMA-02-2023-0033

Salim, N., Ab Rahman, M. N., & Abd Wahab, D. (2019). A systematic literature review of internal capabilities for enhancing eco-innovation performance of manufacturing firms. *Journal of Cleaner Production, 209*, 1445–1460. https://doi.org/10.1016/j.jclepro.2018.11.105

Sampong, F., Song, N., Amoako, G. K., & Boahene, K. O. (2021). Voluntary social performance disclosure and firm profitability of South African listed firms: Examining the complementary role of board independence and managerial ownership. *South African Journal of Economic and Management Sciences, 24*(1), a3346. https://doi.org/10.4102/sajems.v24i1.3346

Sánchez García, J. L. (2018). Sustainability as an innovative key element, another perspective to rethink the problem of hunger and poverty in the world. *Journal of Innovation & Knowledge, 3*(3), 166–173. https://doi.org/10.1016/j.jik.2017.12.004

Sánchez-Infante Hernández, Yañez-Araque, B., & Moreno-García, J. (2020). Moderating effect of firm size on the influence of corporate social responsibility in the economic performance of micro-, small- and medium-sized enterprises. *Technological Forecasting and Social Change, 151*, 119774. https://doi.org/10.1016/j.techfore.2019.119774

Sang, M., Zhang, Y., Ye, K., & Jiang, W. (2022). Moderating effects of internationalization between corporate social responsibility and financial performance: The case of construction firms. *Buildings, 12*(2), 185. https://doi.org/10.3390/buildings12020185

Shakil, M. H. (2021). Environmental, social and governance performance and financial risk: Moderating role of ESG controversies and board gender diversity. *Resources Policy, 72*, Article 102144. https://doi.org/10.1016/j.resourpol.2021.102144

Shakil, M. H. (2022). Environmental, social and governance performance and stock price volatility: A moderating role of firm size. *Journal of Public Affairs, 22*(3). https://doi.org/10.1002/pa.2574

Shakil, M. H., Munim, Z. H., Zamore, S., & Tasnia, M. (2022). Sustainability and financial performance of transport and logistics firms: Does board gender diversity matter? *Journal of Sustainable Finance and Investment, 14*(1), 100–115. https://doi.org/10.1080/20430795.2022.2039998

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *Journal of Finance, 19*(3), 425–442. https://doi.org/10.1111/j.1540-6261.1964.tb02865.x

Shen, H., Wu, Y., & Chen, Z. (2019). Corporate governance and financial performance: Evidence from Chinese listed companies. *Accounting & Finance, 59*(3), 2037–2058. https://doi.org/10.22495/cocv5i4c5p7

Shen, Y. (2019). CEO characteristics: A review of influential publications and a research agenda. *Accounting and Finance*. https://doi.org/10.1111/acfi.12571

Shi, W., & Veenstra, K. (2021). The moderating effect of cultural values on the relationship between corporate social performance and firm performance. *Journal of Business Ethics, 174*(1), 89–107. https://doi.org/10.1007/s10551-020-04555-9

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance, 52*(2), 737–783. https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Small, H. (1973). Co-citation in the scientific literature: A new measure of the relationship between two documents. *Journal of the American Society for Information Science, 24*(4), 265–269. https://doi.org/10.1002/asi.4630240406

Small, H. (2004). Why authors think their papers are highly cited. *Scientometrics, 60*(3), 305–316. https://doi.org/10.1023/B:SCIE.0000034376.55800.18

Sreepriya, J., Suprabha, K. R., & Prasad, K. (2023). Does GRI compliance moderate the impact of sustainability disclosure on firm value? *Society and Business Review, 18*(1), 152–174. https://doi.org/10.1108/SBR-06-2022-0172

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571–610. https://doi.org/10.5465/amr.1995.9508080331

Sun, W., Yao, S., & Govind, R. (2019). Reexamining corporate social responsibility and shareholder value: The inverted-U-shaped relationship and the moderation of marketing capability. *Journal of Business Ethics, 160*(4), 1001–1017. https://doi.org/10.1007/s10551-018-3854-x

Sun, Y., Xu, C., Li, H., & Cao, Y. (2022). What drives the innovation in corporate social responsibility (CSR) disclosures? An integrated reporting perspective from China. *Journal of Innovation & Knowledge, 7*(1), Article 100267. https://doi.org/10.1016/j.jik.2022.100267

Tahamtan, I., Safipour Afshar, A., & Ahamdzadeh, K. (2016). Factors affecting the number of citations: A comprehensive review of the literature. *Scientometrics, 107*(3), 1195–1225. https://doi.org/10.1007/s11192-016-1889-2

Tarighi, H., Appolloni, A., Shirzad, A., & Azad, A. (2022). Corporate social responsibility disclosure (CSRD) and financial distressed risk (FDR): Does institutional ownership matter? *Sustainability, 14*(2), 742. https://doi.org/10.3390/su14020742 (Switzerland).

Tasnia, M., Syed Jaafar AlHabshi, S. M., & Rosman, R. (2021). The impact of corporate social responsibility on stock price volatility of the US banks: A moderating role of tax. *Journal of Financial Reporting and Accounting, 19*(1), 77–91. https://doi.org/10.1108/JFRA-01-2020-0020

Thelwall, M. (2008). Bibliometrics to webometrics. *Journal of Information Science, 34*(4), 605–621. https://doi.org/10.1177/0165551507087238

Ting, P. H. (2021). Do large firms just talk corporate social responsibility? The evidence from CSR report disclosure. *Finance Research Letters, 38*, Article 101476. https://doi.org/10.1016/j.frl.2020.101476

Tsang, A., Wang, K. T., Wu, Y., & Lee, J. (2022). Nonfinancial corporate social responsibility reporting and firm value: International evidence on the role of financial analysts. *European Accounting Review*. https://doi.org/10.1080/09638180.2022.2094435

Uyar, A., Koseoglu, M. A., Kuzey, C., & Karaman, A. S. (2023). Does firm strategy influence corporate social responsibility and firm performance? Evidence from the tourism industry. *Tourism Economics, 29*(5), 1272–1301. https://doi.org/10.1177/13548166221102806

Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics, 84*(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

Van Kampen, T. J., Akkerman, R., & van Donk, D. P. (2012). SKU classification: A literature review and conceptual framework. *International Journal of Operations & Production Management, 32*(7), 850–876. https://doi.org/10.1108/01443571211250112

Van Raan, A. F. J. (2005). For your citations only? Hot topics in bibliometric analysis. *Measurement: Interdisciplinary Research and Perspectives, 3*(1), 50–62. https://doi.org/10.1207/s15366359mea0301_7

Velte, P. (2020). Does CEO power moderate the link between ESG performance and financial performance? A focus on the German two-tier system. *Management Research Review, 43*(5), 497–520. https://doi.org/10.1108/MRR-04-2019-0182

Verma, M., & Mukhtaruddin, M. (2023). Environmental responsibilities and firms financial performance: A systematic review and bibliometric analysis. *Indonesian Journal of Sustainability Accounting and Management, 7*(1), 27–40. https://doi.org/10.28992/ijsam.v7i1.770

Vuong, N. B. (2022). Investor sentiment, corporate social responsibility, and financial performance: Evidence from Japanese companies. *Borsa Istanbul Review, 22*(5), 911–924. https://doi.org/10.1016/j.bir.2022.06.010

Waddock, S. A., & Graves, S. B. (1997). The corporate social performance-financial performance link. *Strategic Management Journal, 18*(4), 303–319. http://www.jstor.org/stable/3088143.

Waheed, A., Hussain, S., Hanif, H., Mahmood, H., & Malik, Q. A. (2021). Corporate social responsibility and firm performance: The moderation of investment horizon and corporate governance. *Cogent Business & Management, 8*(1). https://doi.org/10.1080/23311975.2021.1938349

Wang, K., & Qiao, Y. (2022). The horizontal S-shaped relationship between corporate social responsibility and financial performance: The moderating effects of firm size and industry dynamism. *Business Ethics, Environment and Responsibility, 31*(4), 937–968. https://doi.org/10.1111/beer.12465

Wang, X., Feng, X., He, Y., Cui, X., Song, X., Xi, M., et al. (2023). How does corporate internationalization affect the link between social responsibility and financial performance? Evidence from China. *Journal of Environmental Planning and Management*. https://doi.org/10.1080/09640568.2023.2189057

Wen, H., Ho, K. C., Gao, J., & Yu, L. (2022). The fundamental effects of ESG disclosure quality in boosting the growth of ESG investing. *Journal of International Financial Markets, Institutions and Money, 81*, Article 101655. https://doi.org/10.1016/j.intfin.2022.101655

Whetten, D. A. (1989). What constitutes a theoretical contribution? *Academy of Management Review, 14*(4), 490–495. https://doi.org/10.5465/amr.1989.4308371

Wirawan, A. W., Falah, L. J., Kusumadewi, L., Adhariani, D., & Djakman, C. D. (2020). The effect of corporate social responsibility on the firm value with risk management as a moderating variable. *Journal of Asia-Pacific Business, 21*(2), 143–160. https://doi.org/10.1080/10599231.2020.1745051

Wooldridge, J. M. (2010). *Introductory econometrics: A modern approach* (5th ed.). South-Western College Pub.

Yang, H., Shi, X., Bhutto, M. Y., & Ertz, M. (2024). Do corporate social responsibility and technological innovation get along? A systematic review and future research agenda. *Journal of Innovation & Knowledge, 9*(1), Article 100462. https://doi.org/10.1016/j.jik.2024.100462

Ye, M., Wang, H., & Lu, W. (2021). Opening the "black box" between corporate social responsibility and financial performance: From a critical review on moderators and mediators to an integrated framework. *Journal of Cleaner Production, 313*, Article 127919. https://doi.org/10.1016/J.JCLEPRO.2021.127919

Yeon, J., Lin, M. S., Lee, S., & Sharma, A. (2021). Does family matter? The moderating role of family involvement on the relationship between CSR and firm performance. *International Journal of Contemporary Hospitality Management, 33*(10), 3729–3751. https://doi.org/10.1108/IJCHM-03-2021-0315

Yu, M. (2022). CEO duality and firm performance: A systematic review and research agenda. *European Management Review*. https://doi.org/10.1111/emre.12522

Zhao, W., Ye, G., Xu, G., Liu, C., Deng, D., & Huang, M. (2022). CSR and long-term corporate performance: The moderating effects of government subsidies and peer firm's CSR. *Sustainability, 14*(9), 5543. https://doi.org/10.3390/su14095543 (Switzerland).

Zhou, G., Sun, Y., Luo, S., & Liao, J. (2021). Corporate social responsibility and bank financial performance in China: The moderating role of green credit. *Energy Economics, 97*, Article 105190. https://doi.org/10.1016/j.eneco.2021.105190

Zhou, H., Wang, Q., & Zhao, X. (2020). Corporate social responsibility and innovation: A comparative study. *Industrial Management & Data Systems, 120*(5), 863–882. https://doi.org/10.1108/IMDS-09-2019-0493

Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods, 18*(3), 429–472. https://doi.org/10.1177/1094428114562629