

Board Gender Diversity and Financial Performance: A Bibliometric Perspective in the Context of Emerging Markets

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ABSTRACT

This study aims to provide a bibliometric overview of research on board gender diversity and financial performance published between 2020 and 2026. Using the Scopus database, 158 peer-reviewed articles were identified through a structured search strategy and analyzed using bibliometric techniques, including performance analysis and keyword co-occurrence mapping. The findings reveal a significant increase in publication output, particularly after 2022, indicating growing academic attention toward gender diversity within corporate governance research. The intellectual structure of the field is primarily anchored in the governance–performance nexus, with board gender diversity, corporate governance, and financial performance emerging as dominant themes. Recent studies increasingly integrate sustainability, ESG performance, and corporate social responsibility, reflecting the evolving complexity of the diversity–performance relationship. The results also show geographic concentration of research output in selected countries, suggesting opportunities for broader contextual exploration. This study contributes by systematically mapping the development, thematic clusters, and influential works in this domain, and by providing recommendations for future research.

Keywords: Board Gender Diversity; Financial Performance; ESG Performance; Bibliometric Analysis; Sustainability

INTRODUCTION

1. Background

In recent years, board gender diversity has become a central issue in corporate governance research. Increasing female representation on corporate boards is frequently associated with enhanced monitoring effectiveness, improved strategic decision-making, and stronger stakeholder orientation. Empirical evidence suggests that gender-diverse boards may influence firm performance, risk behavior, and sustainability engagement (Brahma et al., 2021; Duppati et al., 2020).

A growing body of research documents a positive association between board gender diversity and financial performance. For instance, Brahma et al. (2021) report that UK firms with a critical mass of female directors exhibit significantly higher financial performance, particularly when three or more women serve on the board. Similarly, Duppati et al. (2020) find that gender diversity positively affects firm performance in both mandatory and voluntary governance regimes (India and Singapore). These findings support the resource dependence and critical mass theories, suggesting that diverse boards contribute broader perspectives and improved governance quality.

Beyond direct financial outcomes, recent studies have expanded the analysis toward sustainability and ESG performance. Romano et al. (2020) demonstrate that gender-diverse boards positively affect ESG performance, while CEO duality weakens this relationship. Shakil et al. (2020) find that board gender diversity enhances ESG performance in US banks, although the moderating role of ESG controversies is insignificant. Similarly, Shahbaz et al., (2020) show that board attributes, including gender diversity, influence CSR engagement, though higher CSR does not always guarantee improved financial performance.

More recent evidence also links board gender diversity with environmental dimensions of corporate strategy. Atif et al. (2021) document that firms with higher female representation consume more renewable energy, and that this environmental commitment is associated with better financial performance. Likewise, Gull et al. (2023) provide cross-country evidence that gender-diverse boards improve waste management practices and enhance firm performance.

Despite this expanding literature, the relationship between board gender diversity and financial performance remains inconclusive. Kahloul et al. (2022) find that CSR reporting alone does not necessarily improve financial performance; however, gender diversity positively moderates the CSR–performance link. Furthermore, Shahbaz et al., (2020)

suggest that sustainability engagement does not always translate into higher accounting or market performance. These mixed findings indicate that the governance–performance nexus is complex and context-dependent.

2. State of the Art

The current state of research reveals several dominant characteristics.

First, the literature increasingly integrates board gender diversity within broader ESG and CSR frameworks (Romano et al., 2020; Shakil et al., 2020; Velte, 2022). Rather than examining financial performance in isolation, recent studies emphasize sustainability, environmental responsibility, and long-term value creation.

Second, moderating mechanisms are becoming more prominent. Research has explored CEO duality (Romano et al., 2020), governance characteristics (Pekovic & Vogt, 2021), CSR engagement (Shahbaz et al., 2020), and renewable energy investment (Atif et al., 2021) as mediating or moderating factors.

Third, meta-analytic and review studies indicate that while board gender diversity tends to positively influence CSR performance, its direct financial implications are not universally consistent (Marquez-Cardenas, Gonzalez-Ruiz, et al., 2022; Velte, 2025).

Thus, the literature has evolved from simple direct-effect testing toward more complex governance–sustainability interactions.

3. Research Gap

Although empirical studies on board gender diversity and financial performance are abundant, several gaps remain.

First, there is limited bibliometric mapping of this research domain. Most existing studies test hypotheses using panel data models, but few systematically analyze the intellectual structure, publication trends, and thematic evolution of the field.

Second, prior research focuses heavily on developed markets such as the UK, the US, and Western Europe (Brahma et al., 2021; Romano et al., 2020), while emerging market dynamics remain underexplored.

Third, findings remain mixed regarding whether gender diversity directly improves financial performance or operates through sustainability-related channels (Kahloul et al., 2022; Shahbaz et al., 2020).

Fourth, although meta-analytical reviews exist within CSR literature (Velte, 2022), a comprehensive bibliometric analysis specifically mapping the intersection between board gender diversity and financial performance remains limited (Bogdan et al., 2023; Marquez-Cardenas, González-Ruiz, et al., 2022; Singh et al., 2021).

Therefore, a systematic bibliometric investigation is needed to identify research clusters, influential authors, thematic shifts, and future research directions.

4. Research Novelty

This study contributes to the literature in several ways.

First, it provides a systematic bibliometric analysis of 158 Scopus-indexed articles published between 2020 and 2026 on board gender diversity and financial performance.

Second, it maps the intellectual structure of the field by identifying influential publications such as Brahma et al. (2021), Atif et al. (2021), Velte (2022), and Shahbaz et al., (2020), which have shaped the governance–sustainability debate.

Third, it identifies emerging thematic clusters, particularly the integration of gender diversity with ESG performance, renewable energy consumption, CSR engagement, and sustainability governance.

Fourth, it offers structured future research directions, especially for emerging markets and sustainability-driven governance frameworks.

By moving beyond narrative review approaches, this study provides quantitative and structural mapping of the scientific landscape related to board gender diversity and financial performance.

5. Research Questions

Based on the background and identified research gaps, this study addresses the following questions:

1. How has research on board gender diversity and financial performance evolved between 2020 and 2026?
2. Which authors, journals, and countries are most influential in shaping this research domain?
3. What thematic clusters emerge from keyword co-occurrence and citation analysis?
4. What future research directions can be derived from the bibliometric evidence?

2. LITERATURE REVIEW

2.1 Theoretical Foundations

Agency Theory

Agency theory suggests that corporate boards function as monitoring mechanisms to reduce agency conflicts between managers and shareholders. Gender-diverse boards may enhance monitoring quality, reduce opportunistic behavior, and improve transparency. Empirical evidence indicates that female directors tend to exhibit stronger monitoring

behavior and higher ethical sensitivity, which may positively influence governance quality and performance outcomes (Brahma et al., 2021; Duppati et al., 2020).

Resource Dependence Theory

Resource dependence theory posits that board members provide firms with access to critical external resources, legitimacy, and strategic perspectives. Gender diversity expands the pool of experiences, networks, and problem-solving approaches, potentially enhancing decision-making effectiveness and long-term performance (Romano et al., 2020; Shahbaz et al., 2020).

Critical Mass Theory

Critical mass theory argues that the presence of a single female director may not be sufficient to influence board decisions. Instead, a threshold (e.g., two or three female directors) is required for meaningful impact. Empirical support for this perspective is found in Brahma et al. (2021), who report stronger performance effects when three or more women serve on boards.

Legitimacy Theory

Legitimacy theory explains why firms adopt gender diversity as part of broader governance and sustainability commitments. By aligning board composition with societal expectations regarding equality and inclusion, firms enhance legitimacy and stakeholder trust (Romano et al., 2020; Velte, 2022)

2.2 Empirical Evidence on Board Gender Diversity and Financial Performance

The empirical literature presents mixed findings regarding the impact of board gender diversity on financial performance.

Several studies report a positive relationship. (Brahma et al., 2021) find that gender diversity significantly improves firm performance in the UK. Duppati et al. (2020) show similar positive effects in India and Singapore, suggesting that governance environments do not eliminate the beneficial role of diversity.

However, other research highlights conditional or moderated relationships. (Kahloul et al., 2022) demonstrate that board gender diversity strengthens the CSR–financial performance link, rather than directly improving performance. Shahbaz et al., (2020) also report that CSR engagement does not automatically translate into higher financial returns. Recent research extends the discussion to sustainability dimensions. (Atif et al., 2021) link gender diversity to renewable energy consumption, while Gull et al. (2023) associate gender-diverse boards with improved waste management practices. These findings suggest that gender diversity may influence financial performance indirectly through sustainability channels.

Overall, the literature indicates growing complexity in the governance–performance nexus.

2.3 Conceptual Framework

Based on the reviewed literature, research in this domain can be categorized into three main streams:

1. Direct relationship between board gender diversity and financial performance.
2. Moderated relationships involving governance mechanisms (e.g., CEO duality, ownership concentration).
3. Indirect pathways through ESG, CSR engagement, and environmental strategies.

This study does not test causal relationships but aims to map the intellectual structure and thematic evolution of these research streams using bibliometric techniques.

3. METHODOLOGY

3.1 Research Design

This study employs a bibliometric analysis to systematically map the development of research on board gender diversity and financial performance. Bibliometric analysis enables quantitative evaluation of publication trends, citation structures, and thematic patterns within a defined body of literature.

3.2 Data Source and Search Strategy

The dataset for this study was retrieved from the Scopus database, which was selected due to its extensive coverage of peer-reviewed journals in the fields of business, management, accounting, and finance. To ensure relevance and consistency, the search query was formulated using the following keywords: TITLE-ABS-KEY (“board gender diversity”) AND TITLE-ABS-KEY (“financial performance”). The search was conducted for publications between 2020 and 2026 in order to capture contemporary research trends and recent developments in governance and sustainability discussions.

To improve the precision of the dataset and maintain academic rigor, several limitations were applied. The search was restricted to document type “article” to ensure that only peer-reviewed scholarly contributions were included. Furthermore, subject areas were limited to Business, Management and Accounting, as well as Economics, Econometrics and Finance, in order to focus on governance and financial performance research. Only publications written in English were considered to maintain consistency in bibliometric analysis and citation mapping.

After applying these inclusion criteria and filters, a total of 158 articles were identified as relevant for further analysis. These articles form the final dataset of this study.

3.3 Data Processing and Analysis

The bibliographic data of the 158 selected articles were exported in CSV format from the Scopus database. The dataset included information on authors, titles, publication year, journal sources, abstracts, keywords, and citation counts. The data were then processed and analyzed using bibliometric mapping tools, particularly Biblioshiny, to conduct performance analysis and science mapping.

The analysis was carried out in two main stages. First, performance analysis was conducted to evaluate publication trends over time, identify the most productive journals, determine the most influential authors, and examine country-level contributions. This stage provides an overview of the quantitative development of research in this domain.

Second, science mapping techniques were employed to explore the intellectual and conceptual structure of the field. Keyword co-occurrence analysis was used to identify dominant themes and research clusters, while citation analysis helped reveal influential works shaping the development of the literature. To enhance the clarity and interpretability of network visualizations, minimum occurrence thresholds were applied during the mapping process.

3.4 Research Procedure

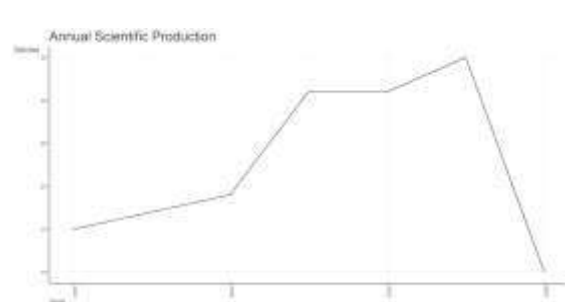
The research procedure followed a systematic and structured approach. The first stage involved defining the research scope and identifying appropriate keywords that accurately represent the intersection between board gender diversity and financial performance. The second stage consisted of retrieving data from the Scopus database and applying inclusion and exclusion criteria to ensure dataset relevance and quality.

In the third stage, the selected articles were screened and verified to eliminate duplicates and irrelevant records. The fourth stage involved exporting the bibliographic data and conducting bibliometric analysis using specialized software. Finally, the fifth stage focused on interpreting the results of performance analysis and thematic clustering in order to identify research patterns, intellectual structures, and potential directions for future research.

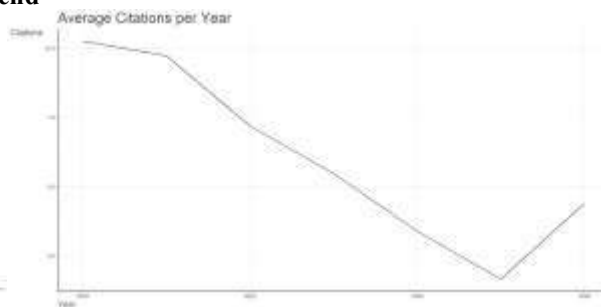
This structured procedure ensures transparency, replicability, and methodological rigor in mapping the development of research on board gender diversity and financial performance.

4. RESULTS AND DISCUSSION

4.1 Annual Scientific Production and Citation Trend



Source: (Biblioshiny, 2026)
Figure 1. Annual Scientific Production



Source: (Biblioshiny, 2026)
Figure 2. Annual Scientific Production

The annual scientific production shows a consistent upward trend over the observed period. In 2020, the number of publications was 15 articles, increasing gradually to 19 in 2022 and reaching 31 articles in 2023 and 2024. The highest publication output was recorded in 2025 with 35 articles. Although the number appears lower in 2026, this likely reflects incomplete data for the current year rather than a decline in research interest.

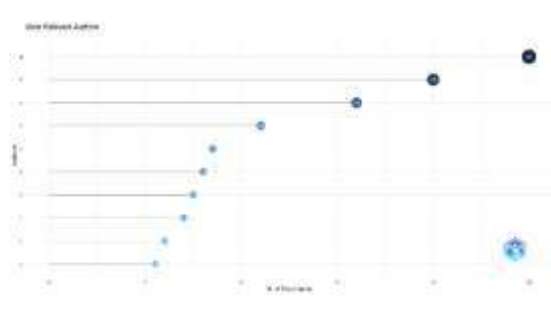
This growth indicates that board gender diversity and financial performance have become increasingly central topics within corporate governance research. The surge after 2022 suggests heightened academic attention, possibly driven by global ESG initiatives and increasing regulatory focus on diversity and sustainability.

In contrast, the average citations per year display a declining trend from 2020 to 2025, before slightly increasing again in 2026. This pattern can be interpreted as a maturity effect: as publication volume increases, citations become more distributed across studies, reducing average citation concentration. The slight recovery in 2026 may indicate the emergence of influential recent contributions.

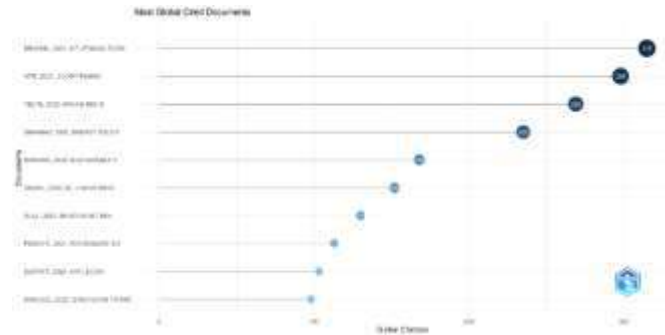
Overall, the findings suggest that the field is expanding in volume while gradually transitioning from foundational to more diversified research streams.

4.2 Most Influential Authors and Documents

The analysis of most relevant authors shows that a small group of scholars dominates publication output. The most productive author contributed 50 documents, followed by others with 40 and 32 publications, respectively. This concentration suggests the presence of core contributors who significantly shape the intellectual development of the field.



Source: (Biblioshiny, 2026)
 Figure 3. Annual Scientific Production



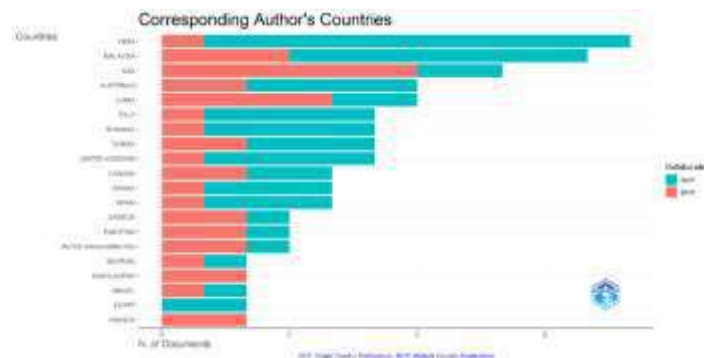
Source: (Biblioshiny, 2026)
 Figure 4. Annual Scientific Production

Citation analysis further highlights the most influential documents. The most globally cited article is Brahma et al. (2021) with 315 citations, followed by Atif et al. (2021) with 298 citations and Velte (2022) with 269 citations. Other highly cited works include Shahbaz et al. (2020) and Romano et al. (2020).

These highly cited studies primarily investigate the relationship between board gender diversity, corporate governance, ESG performance, and financial outcomes. The dominance of these works confirms that the governance–performance nexus remains the intellectual core of the literature.

The presence of sustainability-oriented journals such as *Sustainability and Corporate Governance: An International Review* among the most productive sources further demonstrates the integration of diversity research into broader ESG and sustainability discourse.

4.3 Country Scientific Production



Source: (Biblioshiny, 2026)
 Figure 5. Annual Scientific Production

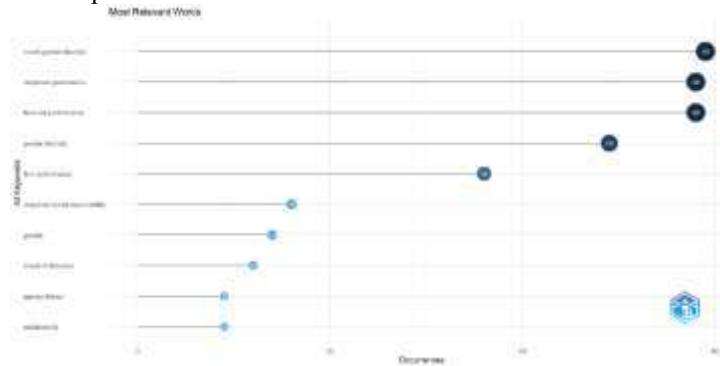
Country analysis reveals that research output is geographically concentrated. India and Malaysia appear as the most active corresponding author countries, followed by the United States, Australia, and China. Several European and developing countries also contribute, but at lower levels.

The dominance of emerging Asian economies, particularly India and Malaysia, is noteworthy. This suggests that governance diversity issues are not limited to developed markets but are increasingly examined within emerging market contexts. However, the relatively lower representation of other developing economies indicates potential gaps in geographic diversity.

The collaboration pattern (SCP and MCP) also shows that international collaboration plays a role in knowledge production, although single-country publications remain prominent in several cases.

4.4 Keyword Analysis and Thematic Structure

The analysis of most relevant words confirms that “board gender diversity” (59 occurrences), “corporate governance” (58), and “financial performance” (58) are the dominant keywords in the dataset. This confirms that the literature is firmly anchored in governance–performance discussions.



Source: (Biblioshiny, 2026)
Figure 6. Annual Scientific Production

Secondary keywords such as “gender diversity” (49) and “firm performance” (36) reinforce the central focus on organizational outcomes. Additionally, the presence of “corporate social responsibility,” “sustainability,” “agency theory,” and “board of directors” suggests theoretical and contextual expansion.



Source: (Biblioshiny, 2026)
Figure 7. Annual Scientific Production

The co-occurrence network reveals several thematic clusters:

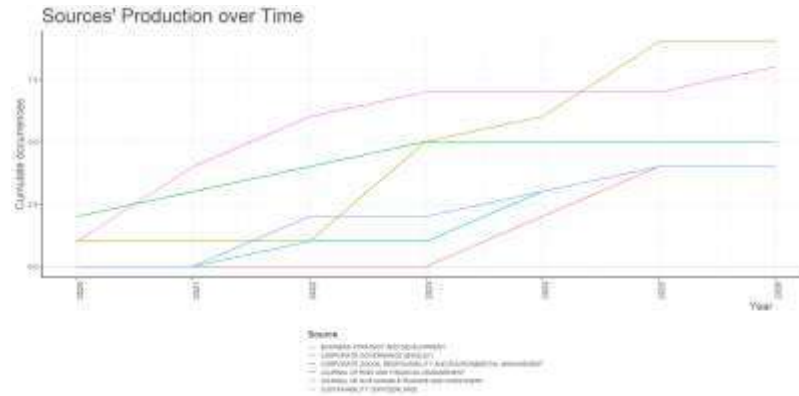
1. Core Governance–Performance Cluster
Centered on financial performance, firm performance, and board gender diversity. This represents the foundational research stream examining direct relationships.
2. Sustainability and ESG Cluster
Including keywords such as ESG performance, corporate social responsibility, and sustainability. This cluster reflects the integration of diversity research into environmental and social governance frameworks.
3. Theoretical and Moderation Cluster
Featuring agency theory, resource dependence theory, stakeholder theory, and moderating effect. This indicates growing theoretical sophistication and the use of moderating models.

The coexistence of these clusters demonstrates that the field has evolved beyond simple linear models toward multidimensional governance frameworks.

4.5 Source Dynamics Over Time

The analysis of source production over time shows increasing contributions from journals such as Sustainability, Corporate Governance (Bingley), and Journal of Risk and Financial Management. The cumulative growth patterns indicate that sustainability-oriented journals have become central publication outlets in recent years.

This trend suggests that board gender diversity is increasingly positioned within ESG and sustainable finance debates rather than being treated solely as a governance mechanism.



Source: (Biblioshiny, 2026)
Figure 8. Annual Scientific Production

4.6 Overall Discussion

The bibliometric findings indicate that research on board gender diversity and financial performance has transitioned from foundational governance debates toward broader sustainability integration.

Three major patterns emerge:

First, the research field is expanding rapidly, particularly after 2022, reflecting growing academic and policy interest in gender diversity.

Second, the intellectual core remains strongly anchored in corporate governance and financial performance frameworks, supported by agency theory and resource dependence theory.

Third, sustainability and ESG dimensions are increasingly incorporated, suggesting a shift from direct performance testing toward indirect and moderated relationships.

Despite increasing publication volume, the continued presence of mixed empirical findings in highly cited studies suggests that the diversity–performance relationship remains context-dependent. Geographic concentration also indicates opportunities for broader emerging market exploration.

Overall, the field demonstrates maturity in volume but continued theoretical and contextual diversification.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study provides a bibliometric overview of 158 Scopus-indexed articles examining the relationship between board gender diversity and financial performance from 2020 to 2026. The findings indicate that research in this area has grown significantly, particularly after 2022, reflecting increasing academic and policy interest in diversity within corporate governance.

1. The analysis confirms that the intellectual foundation of the field remains centered on the governance–performance relationship. Board gender diversity, corporate governance, and financial performance are the dominant themes, supported primarily by agency theory and resource dependence theory. In recent years, the literature has expanded to incorporate ESG performance, sustainability, and corporate social responsibility, indicating a shift toward broader governance and sustainability integration.
2. The study also reveals that research output is geographically concentrated, with major contributions from India, Malaysia, the United States, and several developed economies. While emerging markets are increasingly represented, geographic diversity remains uneven.

Overall, the field demonstrates steady growth, theoretical diversification, and increasing alignment with sustainability discourse.

5.2 Recommendations

Based on the findings of this bibliometric analysis, several recommendations can be proposed.

1. Future studies are encouraged to expand research coverage to underrepresented regions, particularly developing and transitional economies. Broader geographic representation may enhance the generalizability of findings and provide deeper insight into institutional influences on board diversity.
2. Researchers are advised to explore indirect and conditional mechanisms linking board gender diversity and financial performance. The increasing presence of ESG, CSR, and sustainability-related keywords suggests that diversity may influence performance through mediating or moderating pathways rather than solely through direct effects.

3. Longitudinal and regulatory-based studies are recommended to examine the long-term impact of diversity policies and governance reforms. Such approaches may provide stronger evidence regarding the sustainability of diversity-related performance effects.
4. Methodological diversification is recommended. While quantitative panel data approaches dominate the field, qualitative and mixed-method studies may contribute richer understanding of board decision-making dynamics. By addressing these recommendations, future research may contribute to a more comprehensive and context-sensitive understanding of the relationship between board gender diversity and financial performance.

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