

STRATEGIC SYNERGIES ON PERFORMANCE MANAGEMENT AND SUSTAINABILITY REPORTING

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Abstract:

This study explores the strategic synergies between performance management and sustainability reporting (ESG), analyzing how they influence the overall financial, operational, and ESG performance of organizations. The paper highlights an evolution in performance management, which is no longer limited to financial control but increasingly integrates sustainability, strategic foresight, and stakeholder engagement. Sustainability reporting enables decision-making based on real data on consumption, costs, operational efficiency, and organizational climate. At the same time, it improves the company's reputation with investors, customers, and banks, facilitating access to financing and new partnerships. By identifying risks and opportunities, reporting helps reduce costs, increase efficiency, and better structure internal processes. Thus, sustainability reporting strengthens the company's management, makes the organization more competitive, and aligns it with modern market and legislative requirements. Entities that adopt a balanced and integrated approach—measuring what matters economically, ethically, and environmentally—are better equipped to thrive in the long term, transforming performance from a business necessity into a strategic advantage and a social responsibility. Research shows that the field of performance management is integrating technological advances, with a red cluster of key terms such as informatics, machine learning, and artificial intelligence (AI) standing out.

Key words: performance management, sustainability, strategic management, technological processes

JEL classification: G39, M14

1. THEORETICAL BACKGROUND

Corporate Social Responsibility (CSR) and sustainability reporting were initially perceived as two distinct concepts – the former focusing on social aspects and the latter on environmental aspects. The first sustainability report was prepared in 1997 by Shell, with the Netherlands actively promoting this type of reporting. In the same year, John Elkington introduced, in his book *Cannibals with Forks – The Triple Bottom Line of 21st Century Business*, the concept of the "triple bottom line" of organizational performance, which includes environmental, social, and economic dimensions. However, companies in highly regulated economies, such as the United States and European countries, were already publishing information on social and environmental impact before 1980, mainly influenced by legislative obligations and the associated legal risk (Tschopp, D. & Huefner, R.J., 2015). In general, non-financial reporting was voluntary, with the exception of some European countries, such as Denmark, Norway, France, Belgium, and the United Kingdom, which introduced legal obligations for CSR reporting (Lauesen, L. M., 2014). Currently, the European Commission has imposed non-financial and sustainability reporting for companies in the European Union, while companies in China and the US have a lower level of reporting in this area (Cheng, B., & Saltzman, D., 2010).

In Europe, in order to improve transparency among large, publicly traded companies, the European Commission introduced the requirement to publish non-financial information (NFRD) through Directive 2013/34/EU, amended by Directives 2014/95/EU, 2017/C 215/01, and 2019/C 209/01 (BVB, 2022). These directives aimed to strengthen the relevance, uniformity, clarity, and comparability of the information reported. In response to the challenges posed by climate change and the launch of the European Green Deal, the Corporate Sustainability Reporting Directive (CSRD) was adopted by Directive 2022/2464. The CSRD emphasizes the importance of providing information on environmental, social, and governance (ESG) issues, with the aim of improving

transparency and ensuring a higher level of comparability between companies. Under the CSRD, companies must include the principle of double materiality in their reporting, align with the European Sustainability Reporting Standards (ESRS), which cover environmental, social, and governance issues, obtain validation from an independent third party, and publish the information in a digital format to enable machine readability. There is no clear consensus on the elements that should be included in an ESG score, given that this concept is constantly evolving. The most frequently analysed topics are (LSEG, 2024):

- *environmental dimension*: climate change and carbon emissions; use of natural resources, energy and water management; biodiversity and ecosystems; pollution and waste management; eco-design and innovation;
- *social dimension*: employee health and safety, diversity and training; customer and product responsibility; community relations and charitable activities;
- *governance dimension*: shareholder rights; board structure (independence and diversity); management remuneration policy; fraud and corruption prevention; business ethics.

In order to steer investment flows towards sustainable activities, the European Parliament and the Council of the European Union adopted Regulation (EU) 2020/852, known as the "taxonomy." For an activity to be classified as sustainable, it must contribute to one of six environmental objectives: climate change mitigation; adaptation to climate change; sustainable use and protection of water and marine resources; transition to a circular economy; prevention and control of pollution; protection and restoration of biodiversity and ecosystems – without negatively compromising one in favor of another. In addition, companies must comply with the "do no significant harm" (DNSH) principle, as well as the minimum requirements of the OECD guidelines, the UN Principles (UNP), and the regulations of the International Labor Organization (ILO). According to the CSRD, sustainability is defined by the integration of environmental, social, human rights, and governance aspects (European Commission (EC), 2019). It is estimated that responsible investments, which took ESG criteria into account, exceeded \$30 billion. The capital market's focus on companies' ESG performance is influenced by climate change (environmental dimension), intergenerational imbalances in resource distribution (social dimension), and changes in governance structures following major scandals (Enron, Volkswagen, Facebook) and financial crises (governance dimension).

2. RESEARCH METHODOLOGY

The research methodology and the composition of a paper's text are described in the specialized literature as a "way" to be used in the research activity to accomplish the goals, which are information and training. To attain the goals of this research, I relied on a qualitative approach employing a general-to-private strategy (Gray et al., 2007). In terms of the human and social sciences, this study is predicated on non-participant observation (Lesage and Wechtler, 2012), specifically the application of the inductive research method, document analysis, and comparison procedures.

The objective of the research is to identify, analyze, and evaluate how strategic synergies between performance management and sustainability reporting influence the overall performance of the organization (financial, operational, and ESG). Thus, we aim to identify and explore specific literature that analyzes performance management. For the relevance of the results, we will use keywords specific to each type of cluster under analysis. For the relevance of the results, we propose that the analysis period be extended over the interval and focus on how and to what extent technologies and artificial intelligence influence strategic management and organizational performance.

The impact of technology, especially Artificial Intelligence (AI), on strategic management and organizational performance is transformative and disruptive. AI shifts strategic management from static planning to a dynamic, adaptable, and data-driven framework, significantly improving the speed, accuracy, and agility of the company.

Technology and AI are not just automation tools, but strategic partners that empower organizations to make better, faster, and more informed decisions, thereby increasing agility and long-term competitive advantage.

We aim to capture not only how AI improves performance, but also how it is measured. We will achieve this by observing, through the present research, the synergy between AI and performance indicators. The research methods pursued will identify how AI models help set realistic and optimized targets based on historical and market data, thereby making KPIs more accurate and better aligned with market potential. The technology facilitates performance monitoring through real-time dashboards and anomaly analysis, whereby AI sends automatic alerts when performance deviates from the target. Last but not least, AI optimizes marketing budgets, inventory, and staff allocation based on demand predictability, with a direct impact on asset returns and cost efficiency, which improve significantly by eliminating waste. This research proposes as its research method the VOSviewer analysis of OpenAlex data over a period of 10 years (2015-2024).

3. ANALYSIS OF THE CONCEPTUALIZATION OF PERFORMANCE MANAGEMENT IN THE SPECIALIZED LITERATURE

The evolution of definitions over time suggests a shift from purely administrative approaches to more dynamic and integrated models. By synthesizing these academic perspectives, it becomes clear that effective performance management requires a comprehensive approach that balances quantitative assessment with strategic foresight. Organizations must move beyond rigid measurement tools and adopt a more holistic perspective that encourages long-term development, efficiency, and innovation. Understanding this evolution is essential for building a robust performance management system that responds to both internal organizational dynamics and external market challenges.

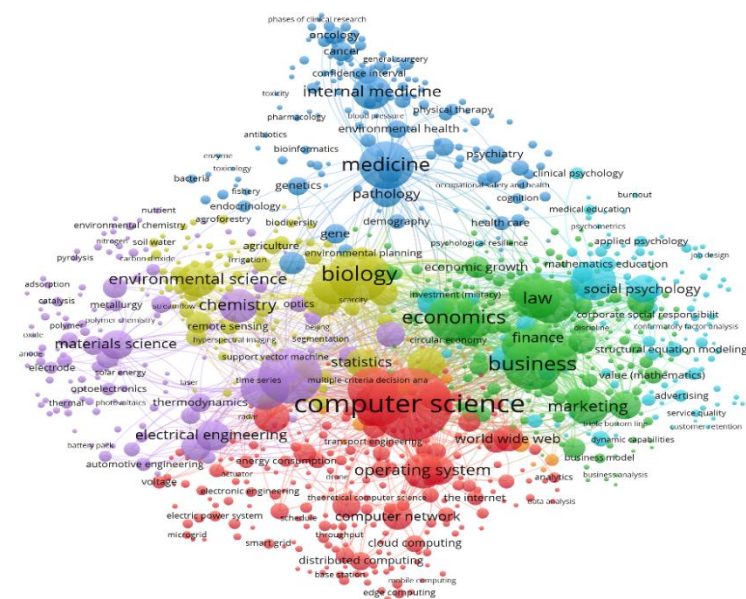


Figure no.1. The network of the most frequent topics in research on performance management

Source: VOSviewer analysis with OpenAlex data (2015–2024)

A network representation generated using VOSviewer provides a comprehensive picture of the most frequent themes in performance management research from 2015 to 2024. The dataset, retrieved through OpenAlex query filtering for articles with over 150 citations published in English-language journals, captures influential contributions and key trends in the field. The visualization reveals several prominent clusters, reflecting interdisciplinary connections in performance management

research. The centrality of computer science, business, economics, and psychology highlights the integration of technological advances, organizational strategies, and behavioral perspectives in the field.

The red cluster highlights digital transformation and data-driven performance management, with key terms such as IT, machine learning, cloud computing, big data, algorithms, and artificial intelligence. This cluster reflects the technological transformation of performance management practices, emphasizing the role of advanced technologies such as AI, big data, and cloud computing in performance measurement and decision-making. The prominence of machine learning suggests a shift toward data-driven approaches to performance forecasting and optimization. In this regard, Cosa and Torelli's approach examines how digital transformation influences performance measurement systems in various industries, highlighting the role of technologies such as artificial intelligence in improving organizational performance (Cosa, M., & Torelli, R., 2024). Studies in this cluster emphasize how digital tools, including performance dashboards and artificial intelligence-based analytics, support decision-making and continuous improvement.

Strategic management and organizational performance are illustrated by the green cluster through the words: business, management, economics, supply chain management, marketing, resource efficiency. It highlights the strategic aspects of performance management, particularly in the context of commercial operations and supply chain optimization. Key words such as resource efficiency and economic growth indicate a focus on aligning performance management systems with business objectives to enhance productivity and sustainability. The papers cited in this area examine performance indicators, such as key performance indicators and their role in determining outcomes.

Human performance and behavioral perspectives are marked by the blue cluster using the following keywords: psychology, social sciences, applied psychology, organizational behavior, employee engagement, burnout, resilience. It reflects the human-centered dimensions of performance management by highlighting psychological factors such as employee engagement, resilience, and well-being in organizational performance. According to Liang, it highlights how the psychological level of managers influences business performance, emphasizing the importance of psychological well-being in performance management, as well as leadership styles on employee performance (Ruoxi, L. et al. 2024). This cluster is closely linked to the green cluster, which refers to business through common themes such as organizational behavior and workplace productivity. Performance and sustainability are represented by the purple cluster, whose key terms are environmental science, resource efficiency, sustainable development, renewable energy, and waste management. It highlights the intersection between performance management and environmental sustainability by emphasizing how companies integrate sustainable practices, such as carbon footprint reduction and resource efficiency, into their performance management frameworks. One author concerned with the environment and performance is Majid, along with his collaborators, who are researching how resource efficiency actions, such as energy conservation, renewable energy use, and waste minimization, affect business performance (Majid, S., & al., 2023).

VOSviewer analysis of OpenAlex data (2015-2024) highlights key patterns and trends in performance management research, underscoring its dynamic evolution. The central nodes—computer science, business, psychology, and sustainability—reflect the integration of technology, strategic management, and human behavior into performance management. Performance management research has become increasingly comprehensive, integrating technological advances, strategic alignment, perspectives on human behavior, and sustainability practices. This reflects an evolution from traditional performance measurement to more holistic, data-driven, and socially responsible approaches, providing valuable directions for future research.

4. CHALLENGES AND OPPORTUNITIES IN INTEGRATING SUSTAINABILITY INTO PERFORMANCE MANAGEMENT

As sustainability becomes essential to strategic management, organizations face increasing pressure to incorporate ESG principles into performance systems. However, the path to integration is

often uneven, shaped by internal constraints and external uncertainty. While many companies recognize the importance of sustainability, translating it into measurable and actionable performance metrics remains a persistent challenge. A key tension lies in balancing long-term ESG goals with short-term financial expectations. This is further complicated by evolving stakeholder demands, fragmented reporting frameworks, and a lack of consistent standards for assessing sustainability. Despite these obstacles, integration also presents significant opportunities, from innovation and improved resilience to stronger investor relations. Sustainability can no longer be managed in isolation. As noted in previous research, true incorporation requires structural, strategic, and cultural alignment (Lloret, A., 2016).

Despite the growing momentum for sustainable business practices, integrating ESG principles into performance management remains complex. A major barrier is the lack of consistency and standardization in ESG data. Companies often use very different values and units to report on the same issues, such as employee health and safety, making comparisons between companies difficult and potentially misleading (Kotsantonis, S., & Serafeim, G., 2019). Another significant problem is the discrepancy between ESG data providers, where differences in peer group definitions and data imputation methods can generate conflicting assessments for the same company (In, S. Y., Rook, D., & Monk, A. 2019). These discrepancies reduce the reliability of ESG scores and undermine the confidence of investors and stakeholders.

Environmental uncertainty further complicates strategic alignment, as firms struggle to predict the long-term impact of environmental variables on performance outcomes. This unpredictability often leads to reactive rather than proactive ESG strategies. There is a persistent short-term problem, where corporate incentives are linked more to immediate financial returns than to long-term sustainability goals. This misalignment leads to insufficient investment in sustainable innovation and hinders cultural change.

Table 1 – Problems encountered in ESG integration

Challenges	Description
ESG indicators inconsistent	Definitions of units vary, hindering comparability
ESG data discrepancies	Different providers using different methodologies
Environmental uncertainty	Inability to predict long-term environmental effects on performance
Financial orientation in the short term	The incentives prioritize quarterly results over sustainable innovation.

Source: adapted from Alwan, A. R., & Maelah, R. (2024)

Integration of sustainability into performance management presents challenges, but it also opens up a range of strategic opportunities for forward-thinking organizations. A well-aligned ESG strategy enhances competitive advantage, can promote innovation, strengthen stakeholder relationships, and drive long-term value creation.

Innovation based on sustainability is one of the most important outcomes of ESG integration. Organizations that prioritize environmental and social goals tend to innovate more easily, particularly in terms of resource efficiency, product development, and process optimization (Metz, I. 2016). By aligning innovation with sustainability goals, companies not only meet regulatory and stakeholder expectations, but also capitalize on new markets and cost-saving opportunities. Another key benefit is improved brand value and corporate reputation. ESG performance is increasingly visible to consumers, employees, and investors. Companies that demonstrate strong ESG commitments tend to enjoy greater customer loyalty and stronger public trust, contributing to sustained brand equity and market differentiation (Sukmana, R. 2024).



Figure no.2. Strategic levels of ESG integration leading to sustainable advantages

Source: adapted from Metz, I. (2016)

In the figure above, we want to highlight how ESG integration works as a layered strategic process. At its core is a clear commitment to sustainability within corporate strategy, which enables deeper alignment between organizational structures and culture. This alignment, in turn, facilitates the adoption of innovative practices, ethical leadership, and stakeholder-based decision-making. As each layer builds on the next, the result is a more agile and resilient organization capable of achieving sustained competitive advantage. Rather than being a separate function, ESG becomes a strategic driver that supports long-term performance across financial, operational, and reputational dimensions. Integrating sustainability into performance management is both a complex challenge and a transformative opportunity. Organizations face real barriers, including inconsistent ESG data, short-term financial pressures, and limited internal alignment. However, when these challenges are addressed through strategic leadership, innovation, and clear reporting structures, ESG becomes a powerful lever for value creation.

5. CREATING SUSTAINABLE VALUE AND LONG-TERM PERFORMANCE

Creating sustainable value reflects a growing shift in corporate thinking, from prioritizing short-term financial gains to promoting long-term, stakeholder-oriented outcomes. Today, the complex business environment, resilience, innovation, and ethical governance are increasingly recognized as essential to sustainable success. ESG factors have become key drivers of this transformation, influencing how organizations define performance and pursue competitive advantage.

Instead of viewing sustainability as a compliance requirement, forward-thinking companies incorporate ESG considerations into their strategy, operations, and culture. This approach not only responds to emerging regulatory and societal expectations, but also improves risk management and brand equity. As a result, long-term performance is no longer measured solely by profit margins, but by an organization's ability to generate sustainable value for shareholders, communities, and the planet.

Sustainable value expands the concept of corporate success to include long-term social and environmental benefits, not just financial performance. The Triple Bottom Line framework introduced the idea that businesses must balance "people, planet, and profit" to achieve true sustainability (Pereira, T. H. M., & Martins, H. C., 2021). Stakeholder theory builds on this by emphasizing value creation for a wider range of actors—including employees, communities, and the environment (Jin, D., 2023).

Porter and Kramer's shared value creation further redefines corporate purpose by linking direct social impact with competitive strategy (Moon, H. C., Parc, & al., 2011). Together, these frameworks form the basis for a broader view of organizational value. The table below compares these three key approaches, showing how each conceptualizes value and identifies its main beneficiaries.

Table no. 2. Compare the concepts in the definition of value

The framework	Focus area	Value beneficiaries
Triple Bottom Line	Environment, social, economic	Society, planet, business
Stakeholder theory	The significant interests of stakeholders	Shareholders
Creating shared value	Business synergy and social goals	Business and communities

Source: adapted from Pereira & Martins (2021), Jin (2023), and Moon et al. (2011).

Environmental, social, and governance performance plays a key role in increasing long-term corporate value and strategic resilience. Companies with strong ESG scores are often rewarded with lower capital constraints, greater analyst coverage, and increased credibility among stakeholders. These advantages improve both financial flexibility and the organization's ability to pursue sustainable growth.

Studies conducted by Chinese companies show that high ESG performance reduces dependence on risky practices, such as using short-term debt to finance long-term investments. In addition, transparent ESG information increases stakeholder confidence and reduces uncertainty, which further supports long-term stability and strategic execution (Liu, Y. 2024).



Figure no.3. Mechanisms linking ESG performance to long-term corporate value

Source: adapted from Cornell, B. (2020)

These pathways demonstrate that ESG is more than a symbolic effort; it is a strategic advantage. Although some argue that ESG firms may achieve slightly lower returns in the short term due to reduced risk premiums, the long-term benefits in terms of resilience, brand equity, and investor loyalty often outweigh these limitations.

Strategically integrating sustainability involves aligning social and environmental priorities with core business objectives to promote long-term value creation. Rather than being viewed as a compliance obligation, sustainability is increasingly recognized as a source of competitive advantage and organizational resilience.

Contemporary approaches emphasize the transition from reactive compliance to proactive value creation. Key strategies include eco-efficiency, product stewardship, and circular economy practices, each contributing to reduced resource use, waste minimization, and innovation-driven growth (Long, T. B. 2019). These practices support not only environmental goals but also financial stability and market differentiation.

A multidimensional model of sustainability strategy highlights the integration of market-based, resource-based, and institutional perspectives. The market-based view focuses on satisfying customer demand and achieving competitive positioning. The resource-based view emphasizes leveraging internal assets such as innovation, human capital, and learning capabilities. The institutional perspective addresses regulatory expectations, stakeholder alignment, and legitimacy in the broader societal context (Lloret, A., 2016).

These three strategic perspectives are not isolated; rather, they work in tandem to reinforce sustainable value creation. When effectively integrated, they enable companies to adapt to external pressures, leverage internal strengths, and remain competitive. The following figure illustrates their interconnection and collective contribution to long-term sustainability strategy.

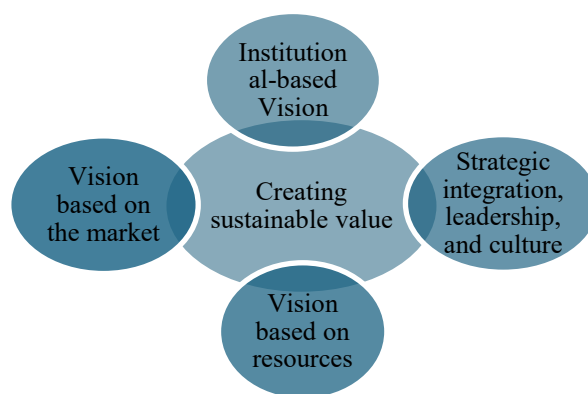


Figure no.4. Strategic visions in corporate sustainability integration

Source: adapted from Lloret, A. (2016)

The market-based vision ensures competitiveness by aligning sustainability with customer expectations and market trends. The resource-based vision focuses on developing internal capabilities such as innovation, knowledge, and human capital. Meanwhile, the institutional view focuses on aligning organizational practices with regulatory standards and stakeholder expectations. When these approaches are strategically coordinated, sustainability becomes a driver of long-term value rather than a reactive obligation. This integration enables firms to increase their resilience, strengthen their legitimacy, and achieve consistent performance in a rapidly evolving business environment.

Creating sustainable value has become a defining feature of modern performance management. Moving beyond short-term profit, organizations are increasingly aligning environmental, social, and governance considerations with long-term strategic objectives. Empirical evidence confirms that ESG performance improves financial resilience, innovation, and competitiveness over time. As businesses face increasing social and environmental pressures, creating sustainable value offers a path to both relevance and resilience in the future economy.

6. CONCLUSIONS

In this study, we have highlighted that performance management systems are evolving into tools not only for control, but also for learning, innovation, and stakeholder alignment. The shift to integrated reporting and dashboards reflects an understanding that performance is multidimensional. Companies that treat sustainability and financial performance as two sides of the same coin tend to be better positioned to anticipate change, manage risk, and capitalize on emerging opportunities.

Looking ahead, we believe that future research should further explore how integrated performance frameworks influence long-term financial health. Longitudinal studies, possibly using econometrics, could help identify causal relationships between ESG maturity and financial indicators. In addition, comparative studies across sectors or countries could reveal the institutional, regulatory, or cultural factors that shape the adoption of holistic performance models.

As artificial intelligence and data analytics tools continue to evolve, we see significant potential in examining how predictive performance modeling can integrate financial and sustainability variables to support strategic forecasting. Finally, we encourage the inclusion of qualitative methods such as executive interviews and focus groups that could capture how performance management is experienced and interpreted within organizations, bridging the gap between policy, metrics, and practice.

In this paper, we have demonstrated that performance management is undergoing a significant transformation. No longer limited to financial control or quarterly reports, it is increasingly defined by its ability to integrate sustainability, strategic foresight, and stakeholder engagement. We have highlighted that entities with a balanced and integrated approach, those that measure what matters

economically, ethically, and environmentally, are not only more likely to perform in the short term, but are also better equipped to thrive over time. In this context, performance becomes more than a business necessity; it becomes a strategic asset and a social responsibility. The entities most likely to endure and lead are those that embrace performance management as a holistic, forward-looking discipline based on accountability, resilience, and a clear sense of purpose.

REFERENCES

1. Cheng, B., & Saltzman, D., (2010), *The landscape of integrated reporting reflections and next steps*, URL: <https://www.thecaq.org/wp-content/uploads/2019/03/thelandscape-of-integrated-reporting-reflectionsand-next-steps.pdf>
2. Cosa, M., & Torelli, R. (2024), *Digital Transformation and Flexible Performance Management: A Systematic Literature Review of the Evolution of Performance Measurement*, Systems, Global Journal of Flexible Systems Management, 25(3), p.p. 445-466
3. European Commission (EC), (2019), *Guidelines on non-financial reporting: Supplement on reporting climate-related information - 2019/C 209/01*
4. Heather M. Gray et al. (2017), *Dimensions of mind perception*, Science 315, 619, AAAS
5. In, S. Y., Rook, D., & Monk, A. (2019), *Integrating Alternative Data (Also Known as ESG Data) in Investment Decision Making*, Global Economic Review, 48(3), 237–260
6. Jin, D., (2023), *Is stakeholder value a barrier for shareholder value?* Proceedings of the 2nd International Conference on Interdisciplinary Humanities and Communication
7. Kotsantonis, S., & Serafeim, G. (2019), *Four Things No One Will Tell You About ESG Data*, Journal of Applied Corporate Finance, 31(2), 50–59
8. Lauesen, L. M., (2014), *How well are water companies engaged in CSR? A critical cross-geographical discourse analysis*, Social Responsibility Journal, 10(1), p. 115-136
9. Lesage and Heidi Wechtler, (2010) *An Inductive Typology of Auditing Research*, [Contemporary Accounting Research](#) 29(2), October 2010
10. Liu, Y., (2024), *Can corporate ESG performance mitigate short lending and long investment?* Advances in Economics and Management Research, 10, 236–24
11. Lloret, A., (2016), *Modeling corporate sustainability strategy*. Journal of Business Research, 69(5), 1839–1846
12. Long, T. B., (2019), *Sustainable Business Strategies*, In W. Leal Filho (Ed.), Decent Work and Economic Growth (pp. 125-140), Charm: Springer
13. LSEG, (2024), *LSEG - Environmental, Social, and Governance (ESG) Data*, <https://www.lseg.com/en/data-analytics/sustainable-finance/esg-scores>
14. Majid, S., Zhang, X., Khaskheli, M. B., Hong, F., King, P. J. H., & Shamsi, I. H., (2023), *Eco-efficiency, environmental and sustainable innovation in recycling energy and their effect on business performance: evidence from European SMEs*. Sustainability, 15(12), 9465
15. Metz, I., (2016), *Advancing sustainability through leadership development*. Journal of Economics, Business and Management, 4(3), 234–239.
16. Moon, H. C., Parc, J., Yim, S. H., & Park, N., (2011), *An extension of Porter and Kramer's creating shared value (CSV): Reorienting strategies and seeking international cooperation*. Journal of International and Area Studies, 18(2), 49–64
17. Pereira, T. H. M., & Martins, H. C., (2021), *People, planet, and profit: A bibliometric analysis of Triple Bottom Line Theory*. Journal of Management and Sustainability, 11(1), 64–74
18. Ruoxi, L., Chutipattana, N., & Dongsheng, L., (2024), *Research on the Application of Manager's Psychological Capital in Enterprise Performance*. International Journal of Religion, 5(5), p.p. 35-48

19. Sukmana, R., (2024), *ESG performance, firm value and profitability*, SHS Web of Conferences, 182, 3022
20. Tschopp, D. & Huefner, R.J., (2015), *Comparing the Evolution of CSR Reporting to that of Financial Reporting*, Journal of Business Ethics, 127(3), p. 565-577