

THE IMPACT OF SUSTAINABILITY PRACTICES ON FINANCIAL PERFORMANCE: A REVIEW OF EMPIRICAL STUDIES

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Abstract

This research paper provides an overview of the existing literature on the relationship between sustainability practices and financial performance. The findings suggest that sustainability initiatives can lead to enhanced financial outcomes; however, this relationship is complex and influenced by various contextual factors. Specifically, the analysis reveals that while there is evidence supporting the potential positive impact of sustainability on financial performance, as firms that effectively implement sustainability practices may experience improved market-based and accounting-based financial metrics, the existing body of literature remains fragmented, characterized by varying definitions and inconsistent metrics used to evaluate this relationship.

Key words: sustainability practices, financial performance, financial metrics

1. Introduction

The increasing importance of environmental and social challenges has prompted firms across various sectors to adopt sustainability practices as integral components of their business strategies. As stakeholders—including consumers, investors, and regulatory bodies—demand greater accountability and transparency regarding corporate social responsibility, the relationship between sustainability practices and financial performance has emerged as a critical area of inquiry. Recent research indicates that firms that effectively implement sustainability initiatives can experience enhanced financial outcomes, measured through both market-based variables, such as stock performance and market valuation, and accounting-based metrics, such as Return on Assets (ROA) and Return on Equity (ROE).

However, the existing body of literature remains fragmented, characterized by varying definitions and inconsistent metrics used to evaluate the relationship

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between sustainability practices and financial outcomes. This study offers an overview of existing research on sustainable development from a financial perspective and contributes to the existing body of literature by expanding our understanding of the type of the impact (whether positive, negative, or neutral) of sustainability practices and identifying the most prevalent financial performance measures used in studies examining this relationship.

2. Theoretical background and research questions

The relationship between corporate sustainability practices and financial performance has become a focal point of interest in academic research. The existing literature on the relationship between corporate sustainability practices and financial performance provides strong support for the notion that sustainability can lead to improved financial outcomes (Savkovic, 2024). Montabon et al. (2007) established that firms adopting robust environmental management practices exhibit improved financial metrics such as Return on Investment (ROI) and sales growth. This finding aligns with the slack resource theory and good management theory, which suggest that firms can leverage sustainability for competitive advantage (Waddock & Graves, 1997).

Further reinforcing this perspective, Ameer and Othman (2012) demonstrated that globally recognized sustainable companies outperform their less sustainable counterparts in terms of return on assets (ROA), profit before tax (PBT), and cash flow from operations. Similarly, Pan et al. (2014) found that sustainability initiatives positively impacted profits, as measured by ROA, ROE, and Earnings per Share (EPS), in a sample of Chinese mining firms. In regional contexts, Kapoor and Sandhu (2010) confirmed that Indian firms engaging in sustainability practices achieved higher returns on sales, assets, and equity, albeit with minimal effects on growth. Studies by Amouzesh et al. (2011) in Iran and Rahim (2017) in Malaysia echoed these findings, linking sustainable growth rates to improved financial indicators such as ROA and price-to-book (P/B) ratios. Recent research has explored the sectoral and temporal dimensions of the ESG-financial performance nexus. Bruna et al. (2022) found positive relationships between ESG performance and financial indicators in European companies. Industry-specific studies, such as Buallay's (2019) and La Torre et al.'s (2021) analysis of the banking and manufacturing sector, reveals contrasting effects of sustainability practices, emphasizing the need for tailored ESG strategies.

Despite the prevailing positive narrative, some studies present mixed or even negative results, highlighting the complexity of the relationship. Hussain et al. (2018) found no significant correlation between ESG parameters and financial outcomes among top-performing U.S. firms. This suggests that the financial benefits of sustainability may not be universal and can be influenced by various contextual factors. De Lucia et al. (2020), using machine learning techniques, revealed a positive but nonlinear relationship between ESG practices and financial performance in European companies. These findings underscore the importance of considering factors such as governance quality, disclosure practices, and industry-

specific characteristics when assessing the financial impact of sustainability. Mamun (2022) emphasized the positive link between transparent ESG disclosure and financial outcomes. Furthermore, some research cautions against overemphasizing sustainability. Rahi et al. (2022) noted that excessive investment in ESG initiatives could negatively affect financial performance, measured by ROE, EPS, and Return on Invested Capital (ROIC), by straining resources. Lahouel et al. (2021) found negative correlations between certain ESG activities and financial metrics. This suggests a potential trade-off between short-term profitability and long-term sustainability goals.

Kwarteng et al. (2023) emphasize the critical role of corporate governance and transparency in mediating the relationship between sustainability and financial performance, particularly in emerging economies. Their research identifies corporate governance as a significant and positive contributor to sustainability performance. Moreover, the study highlights corporate strategy as a mediating factor that influences the relationship between corporate governance and financial performance, measured by ROA and Tobin's Q. This underscores the importance of strong governance structures in optimizing the benefits of ESG initiatives.

Building on the above, the paper is guided by the following research questions:

- RQ1: *What is the overall impact of sustainability practices on corporate financial performance?*
- RQ2: *Which financial performance measures are most commonly used in studies examining the impact of sustainability practices on corporate financial performance?*

For the purposes of this research, the Scopus database was utilized to identify relevant studies, focusing on publications from the period 2020 to 2023. The search was conducted using the string "sustainability practices" and "financial performance", yielding a total of 98 articles. A content analysis approach was then employed to shortlist the most relevant publications from the literature. Priority was given to the most-cited articles, which were further analysed to provide insights into the relationship between sustainability practices and financial performance.

3. Results and discussion

The analysis presented in Table 1 illustrates the diverse impacts of sustainability practices on financial performance across different industries and regions. The studies span a period from 2020 to 2023, employing various financial performance measures such as Return on Assets, Return on Equity and Return on Sales (ROS). The review of the selected studies affirms a generally positive relationship between sustainability practices and financial performance, as reported in numerous prior works.

Table 1: The Impact of Sustainability Practices on Financial Performance

Authors	Year	Performance Measure	Impact
Agoraki, M. E. K., Giaka, M., Konstantios, D., & Patsika, V.	2023	ROA, ROE, ROS	Positive
Moufty, O., Clark, E., & Al-Najjar, B.	2021	ROA	Positive
Thomas, C. J., Tuyon, J., Matahir, H., & Dixit, S.	2021	ROA, ROE, Tobin's Q	Positive (ROE)
Pham, D. C., Do, T. N. A., Doan, T. N., Nguyen, T. X. H., & Pham, T. K. Y.	2021	Earnings Yield, ROA, ROE, ROCE, Tobin's Q	Positive (Except Tobin's Q)
Hoang, T.-H.-V., Przychodzen, W., Przychodzen, J., & Segbotangni, E. A.	2020	ROA, ROCE, Market to Book (MB), Price Earnings (PE)	Positive for ROA, Negative for ROCE & PE
Nirino, N., Miglietta, N., & Salvi, A.	2020	ROA, ROE, ROS	Mixed Results
Lassala, C., Orero-Blat, M., & Ribeiro-Navarrete, S.	2021	ROE	Negative
Indriastuti, M., & Chariri, A.	2021	ROA	Positive
Sakshi, Shashi, Cerchione, R., & Bansal, H.	2020	ROS, Gross Profit, Revenue Growth, Profitability Ratios, Cost Savings	Positive
Garcia, A. S., & Orsato, R. J.	2020	ROA	Positive

A significant number of studies indicate a positive relationship between sustainability practices and Return on Assets (ROA). Notable findings from studies conducted in 2020 and 2021 highlight that firms with robust sustainability strategies tend to achieve superior returns on their assets. This is consistent with findings from Agoraki et al. (2023), Indriastuti & Chariri (2021), and Garcia & Orsato (2020), who demonstrate that sustainability efforts positively influence asset utilization efficiency.

For market-based measures, such as Market to Book Ratio (MB), Price-Earnings (PE) Ratio, and Tobin's Q, the findings are more nuanced. For instance, Hoang et al. (2020) observe that sustainability practices positively influence ROA and market valuation (MB), while the effect on Return on Capital Employed (ROCE) and PE ratio is negative or insignificant. Similarly, Thomas et al. (2021) report positive impacts on ROE but find an inconclusive result for Tobin's Q, signalling that market-based measures might be more susceptible to external market conditions and investor sentiments.

While most studies show a positive impact of sustainability practices, there are also mixed and negative findings. Lassala et al. (2021), for example, report a negative correlation between sustainability efforts and (ROE) in certain contexts, particularly when companies pursue the Sustainable Development Goals (SDGs). Similarly, Nirino et al. (2020) observe mixed results where social outcomes positively impact performance, but environmental outcomes show negligible or

negative effects depending on the specific financial metric. Several studies highlight the role of industry-specific factors in influencing the relationship between sustainability and financial performance. For example, research by Sakshi et al. (2020) on the tourism and hospitality sector identifies positive impacts across a range of financial metrics, including gross profit and revenue growth, while studies in the banking sector, such as Moufty et al. (2021), reveal more moderate positive effects, particularly regarding the economic dimension of sustainability.

The study by Agoraki et al. (2023) underscores the importance of regulatory frameworks in shaping the impact of sustainability practices. In their findings, firms in European markets benefit from positive regulatory dynamics that support the integration of sustainability, thereby enhancing their financial outcomes. This aligns with the broader trend suggesting that firms that engage with stakeholders and adhere to sustainability standards are more likely to realize financial benefits, as noted in several studies, including those by Hoang et al. (2020) and Pham et al. (2021).

The findings align with empirical insights outlined earlier, which suggest that sustainability practices can enhance financial outcomes by optimizing resource use and improving stakeholder relationships. However, the results also highlight the complexity of this relationship, underscoring the need for contextual and industry-specific analyses.

4. Conclusions

This study offers a comprehensive review of the existing literature on the relationship between corporate sustainability practices and financial performance. The findings suggest that sustainability initiatives can lead to enhanced financial outcomes, but the relationship is complex and influenced by various factors. While there is evidence supporting the potential positive impact of sustainability on financial performance, the existing body of literature remains fragmented, characterized by varying definitions and inconsistent metrics used to evaluate this relationship. Future research should address methodological inconsistencies and explore alternative metrics to provide a more comprehensive understanding of this critical relationship.

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REFERENCES

- [1] Agoraki, M. E. K., Giaka, M., Konstantios, D., & Patsika, V. (2023). Firms' sustainability, financial performance, and regulatory dynamics: Evidence from European firms. *Journal of International Money and Finance*, 131, 102785.
- [2] Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global companies. *Journal of Business Ethics*, 108(1), 61–79.
- [3] Amouzesh, N., Moeinfar, Z., & Mousavi, Z. (2011). Sustainable growth rate and firm performance: Evidence from Iran stock exchange. *International Journal of Business and Social Science*, 2(23), 249–255.
- [4] Bruna, M. G., Loprevite, S., Raucci, D., Ricca, B., & Rupo, D. (2022). Investigating the marginal impact of ESG results on corporate financial performance. *Finance Research Letters*, 47, 102828.
- [5] Buallay, A. (2019). Sustainability reporting and firm's performance. *International Journal of Productivity and Performance Management*, 69(3), 431–445.
- [6] De Lucia, C., Pazienza, P., & Bartlett, M. (2020). Does Good ESG Lead to Better Financial Performances by Firms? Machine Learning and Logistic Regression Models of Public Enterprises in Europe. *Sustainability*, 12(13), 5317.
- [7] Garcia, A. S., & Orsato, R. J. (2020). Testing the institutional difference hypothesis: A study about environmental, social, governance, and financial performance. *Business Strategy and the Environment*, 29(8), 3261–3272.
- [8] Hoang, T.-H.-V., Przychodzen, W., Przychodzen, J., & Segbotangni, E. A. (2020). Does it pay to be green? A disaggregated analysis of U.S. firms with green patents. *Business Strategy and the Environment*, 29(3), 1331–1361.
- [9] Hussain, N., Rigoni, U., & Orij, R. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of Business Ethics*, 149(2), 411–432.
- [10] Indriastuti, M., & Chariri, A. (2021). The role of green investment and corporate social responsibility investment on sustainable performance. *Cogent Business & Management*, 8(1).
- [11] Kapoor, S., & Sandhu, H. (2010). Does it Pay to be Socially Responsible? An Empirical Examination of Impact of Corporate Social Responsibility on Financial Performance. *Global Business Review*, 11, 185 - 208.
- [12] Kwarteng, P., Appiah, K. O., & Agana, J. A. (2023). Sustainability performance of firms in the emerging economy: The role of corporate governance and corporate strategy. *Corporate Governance and Sustainability Review*, 7(3), 21–33.
- [13] La Torre, M., Leo, S., & Panetta, I. C. (2021). Banks and environmental, social and governance drivers: Follow the market or the authorities? *Corporate Social Responsibility and Environmental Management*, 28(6), 1620–1634.

- [14] Lassala, C., Orero-Blat, M., & Ribeiro-Navarrete, S. (2021). The financial performance of listed companies in pursuit of the Sustainable Development Goals (SDG). *Economic Research-Ekonomska Istraživanja*, 34(1), 427–449.
- [15] Mamun, M. (2022). Sustainability reporting and financial performance: Evidence from Australia's electricity companies. *Corporate Governance and Sustainability Review*, 6(1), 15–21.
- [16] Montabon, F., Sroufe, R., & Narasimhan, R. (2007). An examination of corporate reporting, environmental management practices and firm performance. *Journal of Operations Management*, 25(5), 998–1014.
- [17] Nirino, N., Miglietta, N., & Salvi, A. (2020). The impact of corporate social responsibility on firms' financial performance: Evidence from the food and beverage industry. *British Food Journal*, 122(1), 1–13.
- [18] Pan, X., Sha, J., Zhang, H., & Ke, W. (2014). Relationship between corporate social responsibility and financial performance in the mineral industry: Evidence from Chinese mineral firms. *Sustainability*, 6(7), 4077–4101.
- [19] Pham, D. C., Do, T. N. A., Doan, T. N., Nguyen, T. X. H., & Pham, T. K. Y. (2021). The impact of sustainability practices on financial performance: Empirical evidence from Sweden. *Cogent Business & Management*, 8(1), 1912526.
- [20] Rahi, A. F., Akter, R., & Johansson, J. (2022). Do sustainability practices influence financial performance? Evidence from the Nordic financial industry. *Accounting Research Journal*, 35(2), 292–314.
- [21] Sakshi, S., Cerchione, R., & Bansal, H. (2020). Measuring the impact of sustainability policy and practices in tourism and hospitality industry. *Business Strategy and the Environment*, 29(3), 1109–1126.
- [22] Savković, M. (2024). Building unshakable projects: Does ESG criteria impact project resilience? *Journal on Emerging Topics in Industrial Engineering*, ISSN: 2960-5407 (Online).
- [23] Thomas, C. J., Tuyon, J., Matahir, H., & Dixit, S. (2021). The impact of sustainability practices on firm financial performance: Evidence from Malaysia. *Management and Accounting Review*, 20(3), 2011–243.
- [24] Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic Management Journal*, 18(4), 303–319.



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