

Beyond Financial Numbers: The Role of Green Accounting, ESG Disclosure, and Digital Transparency in Enhancing Firm Value within the Sustainability Economy

Muhammad Hafis Akbar Nasution¹, Andreasta Ginting², Emi Uliyanty Br Sidabutar³

^{1,2,3} Department of Accounting, Sekolah Tinggi Ilmu Ekonomi Profesional Indonesia, Dairi, Indonesia.
Email: mhafisakbar@gmail.com¹, ricardokaka199211@gmail.com², emisidabutar186@gmail.com³

ARTICLE HISTORY

Received: November 12, 2025
Revised: January 15, 2026
Accepted: February 20, 2026

DOI

<https://doi.org/10.52970/grdis.v6i2.725>

ABSTRACT

This study examines the role of green accounting, Environmental, Social, and Governance (ESG) disclosure, and digital transparency in enhancing firm value within the sustainability economy. The research aims to move beyond traditional financial perspectives by exploring how sustainability-oriented accounting and reporting practices contribute to corporate value creation. Adopting a qualitative research approach grounded in a comprehensive literature review, this research systematically analyzes and synthesizes prior empirical and theoretical studies published in reputable international journals. The method emphasizes qualitative content analysis to identify dominant themes, patterns, and conceptual linkages among green accounting practices, ESG disclosure mechanisms, digital transparency, and firm value. The findings reveal that green accounting enables firms to internalize environmental impacts and strengthen long-term performance legitimacy. At the same time, ESG disclosure functions as a strategic signaling mechanism that reduces information asymmetry and enhances stakeholder trust. Furthermore, digital transparency is found to amplify the value relevance of sustainability disclosures by improving the accessibility, timeliness, and credibility of non-financial information. The study also identifies that the effectiveness of these practices is highly context-dependent, influenced by institutional environments, reporting quality, and digital maturity. Overall, the study concludes that integrating green accounting, ESG disclosure, and digital transparency is essential for firms seeking to enhance sustainable firm value beyond financial numbers. These findings provide important theoretical insights and managerial implications for advancing sustainability-oriented corporate reporting.

Keywords: Green Accounting, ESG Disclosure, Digital Transparency, Firm Value, Sustainability Economy.

I. Introduction

In recent decades, the concept of firm value has undergone a substantial transformation, shifting from a narrow focus on short-term financial performance toward a broader evaluation that incorporates sustainability, ethical responsibility, and long-term resilience. Traditional financial indicators such as profitability, liquidity, and market capitalization have long dominated corporate valuation frameworks;



however, these measures are increasingly criticized for their inability to capture environmental and social externalities generated by corporate activities. As firms operate within a sustainability-driven economy, stakeholders—including investors, regulators, and the public—demand greater accountability and transparency beyond conventional financial numbers (Eccles et al., 2014; De Villiers et al., 2014). Consequently, firm value is no longer perceived solely as an outcome of financial efficiency, but as a reflection of how responsibly and transparently firms manage economic, environmental, and social resources. Within this evolving valuation paradigm, green accounting has emerged as a critical extension of traditional accounting systems by incorporating environmental costs and benefits. It impacts organizational decision-making and reporting processes. Green accounting enables firms to internalize environmental externalities, improve resource efficiency, and enhance long-term risk management, thereby strengthening their legitimacy and strategic positioning (López-Gamero et al., 2009; Laskar et al., 2017). Empirical evidence suggests that firms adopting environmental accounting practices tend to experience improved operational performance and enhanced stakeholder trust, which may ultimately translate into higher firm value. This shift underscores the growing recognition that environmental responsibility is not merely a compliance obligation, but a strategic asset within the sustainability economy.

Parallel to the development of green accounting, Environmental, Social, and Governance (ESG) disclosure has gained prominence as a standardized mechanism for communicating non-financial performance to stakeholders. ESG disclosure provides structured information on corporate environmental initiatives, social engagement, and governance quality, enabling investors to assess sustainability risks and the potential for long-term value creation (Buallay, 2019; Fatemi et al., 2018). Prior studies consistently demonstrate that higher-quality ESG disclosure is associated with reduced information asymmetry, lower cost of capital, and improved market valuation, particularly when disclosures are comprehensive and credible (Reverte, 2012; Albitar et al., 2020). These findings highlight ESG disclosure as a vital signaling tool that shapes investor perception and market confidence in an increasingly sustainability-oriented investment landscape.

In addition to sustainability-oriented accounting and disclosure practices, digital transparency has become a defining feature of modern corporate communication. Advances in digital technologies have transformed how firms disseminate information, enabling real-time reporting, interactive disclosure platforms, and broader stakeholder engagement. Digital transparency enhances the accessibility, timeliness, and reliability of sustainability-related information, thereby strengthening corporate accountability and market visibility (De Villiers et al., 2014). Research indicates that firms leveraging digital channels for ESG and sustainability disclosure benefit from reduced reporting delays and improved investor responsiveness, which can positively influence firm value (Schiemann & Sakhel, 2018). In this regard, digital transparency serves as a catalyst, amplifying the economic relevance of green accounting and ESG disclosure. The growing integration of green accounting, ESG disclosure, and digital transparency reflects a broader phenomenon: the institutionalization of sustainability within global economic systems. Heightened awareness of climate change, environmental degradation, social inequality, and governance failures has intensified scrutiny of corporate conduct, prompting capital markets to increasingly reward firms that demonstrate credible sustainability commitments (Eccles et al., 2014). The rapid expansion of ESG-focused investment funds, sustainability indices, and green financial instruments further illustrates how non-financial performance indicators progressively shape firm value. As a result, sustainability practices have evolved from peripheral reporting activities into core determinants of competitive advantage and long-term firm valuation.

Despite the growing body of literature on sustainability and firm value, existing empirical studies often examine green accounting, ESG disclosure, or transparency as isolated constructs. Relatively limited attention has been devoted to describing how these dimensions collectively manifest across firms and align with variations in firm value, particularly within descriptive quantitative frameworks. Moreover, prior research has predominantly employed causal or explanatory models, leaving a gap in understanding the distributional patterns and empirical characteristics of sustainability-oriented practices across corporate contexts (Hummel & Schlick, 2016; Buallay, 2019). This gap is especially evident in emerging and transitional economies, where sustainability reporting practices remain heterogeneous and digital transparency levels vary significantly.

From a research relevance perspective, a descriptive examination of green accounting, ESG disclosure, and digital transparency offers meaningful contributions to both theory and practice. For managers, understanding how sustainability-oriented reporting practices are reflected in firm value provides insights for strategic decision-making and resource allocation. For investors, descriptive evidence supports more informed risk assessment and valuation judgments. For regulators and policymakers, empirical insights into sustainability disclosure patterns can inform the development of reporting standards and digital governance frameworks that enhance market transparency and accountability (Fatemi et al., 2018; Reverte, 2012).

Anchored in this context, the sustainability economy serves as a conceptual foundation that links environmental accountability, social responsibility, governance quality, and technological innovation to corporate value creation. Firms operating within this paradigm are increasingly expected to align accounting systems, disclosure practices, and digital communication strategies with long-term sustainability objectives. Green accounting provides the methodological basis for recognizing environmental impacts, ESG disclosure offers standardized sustainability information, and digital transparency ensures that such information is accessible and credible to stakeholders (De Villiers et al., 2014; Eccles et al., 2014). Collectively, these elements redefine firm value as a multidimensional construct extending beyond traditional financial metrics. Accordingly, the objectivity of this study lies in its quantitative, descriptive approach, which systematically portrays the roles of green accounting, ESG disclosure, and digital transparency in relation to firm value within the sustainability economy. Rather than testing causal relationships, this research aims to describe empirical patterns, tendencies, and variations in sustainability-oriented reporting practices and to examine how these characteristics correspond with firm value indicators. By doing so, the study contributes to a more comprehensive understanding of how transparency and sustainability practices are embedded in corporate valuation processes in contemporary economic systems.

II. Literature Review and Hypothesis Development

In the evolving sustainability economy, corporate reporting has expanded beyond traditional financial disclosures to include environmental and social dimensions that reflect stakeholder demands for broader accountability. A foundational concept in this development is green accounting—an extension of conventional accounting systems that incorporates ecological costs and environmental performance into measurement and reporting processes. Although environmental management accounting traces its origins to early frameworks proposed by Schaltegger and Burritt (2000), green accounting has gained prominence in both academic inquiry and corporate practice as firms seek to internalize environmental externalities and communicate their sustainability commitments. Empirical evidence suggests that environmental accounting disclosures influence market perceptions and investor behavior, though results vary significantly across measurement frameworks and institutional contexts (Sitakara, 2024; Al Gamar & Widoretno, 2024).

Green accounting is conceptually rooted in the broader challenge of measuring the environmental impacts of business operations in monetary terms and integrating them into corporate reporting. It stands at the intersection of ecological economics and financial accounting, emphasizing the importance of environmental costs in decision-making and performance evaluation. By assigning economic values to environmental resources and liabilities, green accounting helps firms reflect both the economic and ecological consequences of their activities, offering a more comprehensive basis for value assessment. Nevertheless, studies have reported divergent outcomes regarding the relationship between green accounting and firm value; some research highlights positive effects on investor trust and valuation, while others find negligible or variable impacts, particularly in ASEAN and emerging markets.

The empirical landscape of ESG disclosure is similarly complex, shaped by a growing body of research that investigates how environmental, social, and governance information affects investor perceptions and corporate valuation. ESG disclosure encompasses a broad range of non-financial information, including carbon-emission targets, corporate governance practices, and social responsibility initiatives. It is disseminated through sustainability reports, integrated annual reports, and voluntary disclosure platforms.

Such disclosures are theorized to reduce information asymmetry, enhance transparency, and signal long-term strategic alignment with sustainability goals, thus potentially impacting firm value. Recent systematic reviews indicate that ESG reporting has evolved significantly, driven by regulatory pressures, investor expectations, and stakeholder activism, although inconsistencies in reporting standards and assurance practices pose challenges to comparability and credibility (The Evolution of ESG and Sustainability Reporting, 2025; Khamisu, 2024).

A wide range of studies support the notion that ESG disclosure is positively associated with firm value and performance. For example, research focusing on companies listed in European markets shows that more comprehensive ESG engagement correlates with higher profitability and stronger stakeholder trust, reflecting both strategic resource deployment and enhanced corporate resilience (Impact of ESG Disclosures on Financial Performance, 2025). Similarly, investigations in Indonesian market contexts reveal that ESG disclosure positively contributes to firm value, particularly when moderated by factors such as investment returns and profitability (Environmental, Social, and Governance Disclosure and Firm Size, 2025; ESG Disclosure and Firm Value with Profitability, 2025). These findings align with stakeholder and signaling theories that view transparent sustainability reporting as an effective mechanism for communicating corporate quality and reducing investors' perceived risk (Huang, 2021; Connelly et al., 2011). However, not all studies confirm a positive effect of ESG disclosure on firm valuation. Some research finds a negative or insignificant relationship, especially in contexts where sustainability reporting is inconsistent, perceived as superficial, or disconnected from core business performance. For instance, empirical investigations in emerging markets document cases in which ESG disclosure and green accounting negatively impact firm value, possibly due to concerns about greenwashing or the costs of implementing sustainability practices (ESG, Green Accounting and Institutional Ownership, 2025).

The third dimension of this narrative—digital transparency—refers to the use of digital tools and platforms to enhance the timeliness, accessibility, and quality of corporate reporting. Digital transformation in disclosure practices includes online sustainability dashboards, real-time emission tracking systems, and interactive reporting formats that enable stakeholders to evaluate ESG performance more effectively. Recent research suggests that digitalization not only facilitates broader access to ESG metrics but also enhances the accuracy and comparability of reported information, bridging gaps between sustainability reporting and traditional financial disclosure systems (Can Digitalization Drive Corporate Transparency?, 2025; Digital Transparency and Firm (Value, 2025). Emerging empirical studies indicate that digital transparency reinforces the positive effects of ESG disclosure by reducing information asymmetry and improving the efficiency of internal information systems, thereby indirectly affecting firm value through enhanced investor confidence and managerial accountability. For example, data from comprehensive samples of global firms show that higher levels of ESG transparency, supported by digital reporting infrastructures, are associated with more timely financial reporting and shorter audit delays, suggesting integrated data ecosystems improve overall corporate transparency (ESG Transparency and Financial Reporting Efficiency, 2025). Moreover, research examining the moderating role of firm size finds that digital transformation strengthens the relationship between ESG disclosure and firm value. However, this effect may diminish in huge organizations, where complexity and reporting burdens offset digital efficiencies (Chandra, 2025).

Despite considerable progress, significant gaps remain in understanding how green accounting, ESG disclosure, and digital transparency jointly contribute to firm value. Most studies tend to explore these constructs separately, leaving an unmet need for integrated frameworks that capture their combined and interactive effects on valuation metrics. Furthermore, research in emerging market contexts—characterized by varying levels of regulatory enforcement, investor sophistication, and sustainability awareness—remains limited, posing both theoretical and practical challenges for drawing generalizable conclusions from existing evidence. Given these insights, theoretical development points toward the convergence of stakeholder theory, signaling theory, and legitimacy theory as foundational lenses for interpreting the relationships among sustainability reporting practices and firm value. Stakeholder theory posits that firms engaged in comprehensive environmental and social reporting are better equipped to satisfy diverse stakeholder

expectations, thereby enhancing corporate reputation and valuation (Huang, 2021). Signaling theory suggests that credible sustainability disclosures signal a company's unobserved qualities to investors, reducing information asymmetry and fostering capital market confidence (Connelly et al., 2011).

Building on the reviewed literature, several hypotheses emerge logically from the empirical and theoretical grounds discussed. First, given the positive associations documented across multiple studies between green accounting practices and market valuation, we hypothesize that green accounting is positively associated with firm value. Second, consistent evidence supporting the role of ESG disclosure in enhancing transparency and investor confidence leads to the hypothesis that higher ESG disclosure levels are associated with higher firm value. Finally, the growing body of research underscoring the importance of digital transparency suggests that firms with advanced digital reporting capabilities will demonstrate stronger associations between sustainability disclosure practices and firm valuation outcomes.

III. Research Method

This study adopts a qualitative research approach, grounded in a systematic literature review, to examine the roles of green accounting, ESG disclosure, and digital transparency in enhancing firm value within the sustainability economy. A qualitative literature-based design is particularly appropriate for this research because the objective is not to test statistical relationships or causal effects, but to develop an in-depth conceptual understanding and critical synthesis of existing scholarly knowledge. By analyzing and interpreting prior empirical and theoretical studies, this approach enables the identification of dominant themes, conceptual patterns, research gaps, and theoretical perspectives that shape contemporary discourse on sustainability-oriented corporate value.

The data sources for this study consist of peer-reviewed journal articles, scholarly books, and authoritative reports published in reputable international outlets. Academic databases such as Scopus, Web of Science, Google Scholar, and ScienceDirect were used to retrieve relevant literature. Predefined inclusion criteria guided the selection of literature to ensure relevance and academic rigor. Only studies written in English, published in reputable journals, and explicitly addressing green accounting, ESG disclosure, digital transparency, sustainability reporting, or firm value were included. Priority was given to recent publications in order to capture the latest developments in sustainability reporting and corporate valuation, while seminal works were also incorporated to provide theoretical grounding.

The literature search employed a combination of keywords and Boolean operators, including "green accounting," "environmental accounting," "ESG disclosure," "sustainability reporting," "digital transparency," and "firm value." Retrieved studies were initially screened based on titles and abstracts to assess relevance. Subsequently, full-text reviews were conducted to evaluate conceptual alignment with the research objectives and to ensure methodological credibility. This iterative process allowed the refinement of the literature corpus and minimized the inclusion of peripheral or redundant studies.

Data analysis was conducted using a qualitative content analysis technique. The selected literature was systematically reviewed and coded to identify recurring concepts, theoretical frameworks, methodological approaches, and empirical findings related to the relationship between sustainability-oriented reporting practices and firm value. Through an interpretive process, the study categorized the literature into thematic dimensions: environmental accounting practices, ESG disclosure mechanisms, the digitalization of corporate transparency, and valuation implications. This thematic synthesis facilitated the integration of diverse findings into a coherent analytical narrative, enabling a comprehensive understanding of how these constructs interact within the sustainability economy.

To enhance the trustworthiness of the analysis, the study employed methodological rigor through transparency and consistency in the literature selection and interpretation process. Cross-referencing among studies was used to validate interpretations and reduce subjective bias. In addition, contrasting findings were deliberately examined to provide a balanced and critical perspective, rather than selectively emphasizing only positive relationships between sustainability practices and firm value.

The outcome of this qualitative literature study is a synthesized conceptual framework that elucidates the interconnected roles of green accounting, ESG disclosure, and digital transparency in influencing firm value. By grounding the analysis in established theories such as stakeholder theory, signaling theory, and legitimacy theory, the research method supports a theoretically informed interpretation of the literature. Overall, this qualitative approach enables a deeper exploration of sustainability-driven value creation and provides a robust foundation for future empirical or mixed-methods research in the field.

IV. Results and Discussion

This section presents a comprehensive synthesis of findings related to the research topic: *Beyond Financial Numbers: The Role of Green Accounting, ESG Disclosure, and Digital Transparency in Enhancing Firm Value within the Sustainability Economy*. Based on the qualitative literature analysis, this discussion integrates empirical insights, conceptual connections, and theoretical interpretations to unpack how green accounting, ESG disclosure, and digital transparency function as mechanisms of value creation in contemporary corporate contexts. The discussion is presented through four interrelated thematic sub-sections that explore (1) the integrated role of sustainability practices in firm valuation; (2) the moderating influence of digital transparency; (3) contextual variations across institutional environments; and (4) implications for future research and practice. Throughout, the analysis highlights key patterns in the literature, addresses contradictions, and points toward ongoing developments in sustainability reporting research.

4.1. Green Accounting and Firm Value in the Sustainability Economy

Green accounting is increasingly treated as a strategic reporting practice that moves beyond compliance toward value creation. Traditional accounting approaches focus on financial performance but often overlook environmental costs and benefits that materially affect long-term sustainability outcomes. Research shows that incorporating environmental accounting practices leads to more comprehensive performance measurement and can positively influence firm value by signaling managerial commitment to sustainability (López-Gamero et al., 2009; Laskar et al., 2017). For example, firms that systematically account for environmental liabilities tend to achieve better resource utilization and lower risk exposure, thereby enhancing investor confidence and improving market valuations. This aligns with theoretical claims that sustainability information reduces information asymmetry and enhances stakeholder trust (Huang, 2021; Connelly et al., 2011).

Empirical studies from emerging markets provide nuanced insights. Evidence from Indonesian and ASEAN contexts indicates that firms adopting green accounting achieve higher performance metrics over time, particularly in industries with significant environmental impacts (Environmental Accounting and Firm Value, 2025; Sitakara, 2024). Similarly, studies in South Asian contexts suggest that environmental accounting disclosures correlate with enhanced stock performance and market reputation when firms transparently manage environmental costs (Green Accounting and Firm Value, 2025). However, in some contexts, green accounting has weak or inconsistent effects on firm value, particularly when disclosure practices lack standardization or are not backed by robust verification mechanisms (Does Green Accounting Affect Firm Value?, 2023). These mixed findings point to the importance of institutional quality and reporting credibility in amplifying the value-relevant signals of green accounting.

The literature also suggests that green accounting's effectiveness depends on integration with broader sustainability frameworks rather than isolated implementation. Firms that align environmental accounting with organizational strategy and stakeholder engagement tend to exhibit stronger performance outcomes (Laskar et al., 2017; López-Gamero et al., 2009). This integrated perspective aligns with stakeholder theory, which emphasizes that firms that incorporate diverse stakeholder interests into their reporting processes can simultaneously generate social and economic value (Huang, 2021). Overall, the literature

supports the view that green accounting contributes to firm value within the sustainability economy, especially when embedded in comprehensive reporting systems and supported by credible frameworks.

4.2. ESG Disclosure: Mechanisms, Market Perception, and Value Outcomes

Environmental, Social, and Governance (ESG) disclosure has become a central focus of research on corporate sustainability reporting, reflecting its role in shaping investor perceptions and broader stakeholder assessments. ESG disclosure encompasses a wide array of non-financial information that goes beyond environmental accounting to include social responsibility practices and governance quality. Studies from developed markets consistently show that higher levels of ESG disclosure are associated with stronger financial performance, reduced cost of capital, and enhanced firm valuation (Buallay, 2019; Fatemi et al., 2018). These outcomes are theorized to result from improved transparency, better risk management, and enhanced corporate reputation. Research in European and North American markets confirms that ESG disclosure enhances firm value by signaling management quality and long-term strategic orientation (Impact of ESG Disclosures on Financial Performance, 2025). Moreover, voluntary ESG disclosure has been linked to lower stock volatility and greater investor trust, reinforcing its value-relevance in capital markets (Reverte, 2012; Albitar et al., 2020). Scholars argue that ESG reporting reduces information asymmetry between firms and external stakeholders, enabling more efficient capital allocation and improved firm performance (Hummel & Schlick, 2016).

In emerging markets, studies reveal similar but contextually contingent patterns. For instance, research from Indonesia indicates that ESG disclosure positively impacts firm value when paired with strong profitability or investment returns (ESG Disclosure and Firm Value with Profitability, 2025; Environmental, Social, and Governance Disclosure and Firm Size, 2025). This suggests that ESG disclosure alone may not be sufficient to generate value unless the underlying financial fundamentals support sustainability claims. Additionally, research shows that firms with high institutional ownership tend to leverage ESG disclosures more effectively, as institutional investors place greater emphasis on non-financial performance (ESG, Green Accounting and Institutional Ownership, 2025). Despite these generally positive associations, some studies report insignificant or even negative relationships between ESG disclosure and firm value, particularly in contexts where reporting practices are perfunctory or perceived as marketing rhetoric rather than substantive information (ESG and Firm Value in Emerging Markets, 2025). This highlights the potential for "greenwashing" to undermine the credibility of ESG disclosures and erode investor trust. To mitigate these risks, scholars emphasize the importance of robust standards and assurance mechanisms that enhance the reliability and comparability of ESG information (The Evolution of ESG and Sustainability Reporting, 2025). Overall, the literature underscores the role of ESG disclosure as a multifaceted mechanism that influences firm value through investor perception, risk mitigation, and reputational enhancement. The strength of these effects depends on the quality, credibility, and contextual relevance of disclosure practices.

4.3. Digital Transparency as a Moderator of Sustainability Reporting

Digital transparency refers to the deployment of digital technologies and platforms to disseminate corporate sustainability information in real time, enhancing accessibility, clarity, and stakeholder engagement. In an era of rapid digital transformation, traditional static reports such as PDFs and annual disclosures are increasingly complemented by interactive dashboards, real-time ESG data feeds, and digital assurance platforms. Research highlights that digital transparency enhances the value-relevance of ESG disclosure by improving data accessibility and reducing information latency (Can Digitalization Drive Corporate Transparency?, 2025; Digital Transparency and Firm (Value, 2025). Empirical evidence suggests that firms that leverage digital reporting platforms enjoy enhanced investor responsiveness, faster information assimilation, and reduced information asymmetry (ESG Transparency and Financial Reporting Efficiency,

2025). For example, studies indicate that digital transparency reduces audit delays and improves the timeliness of both financial and non-financial disclosures, thereby facilitating better market pricing and valuation (ESG Transparency and Financial Reporting Efficiency, 2025). Moreover, research shows that digital transparency can magnify the positive effects of ESG disclosure on firm value by providing stakeholders with real-time updates on sustainability performance metrics, thereby enhancing trust and reducing uncertainty (Chandra, 2025).

However, the effectiveness of digital transparency varies across organizations. Some studies note that while digital reporting tools improve accessibility, their impact on firm value depends on the firm's digital maturity and stakeholders' ability to interpret complex sustainability data (Digital Transparency Challenges and Impacts, 2025). Additionally, concerns about data overload and cybersecurity risks can attenuate the benefits of digital transparency if not managed effectively. These findings suggest that digital transparency serves as a moderator, amplifying or dampening the impact of sustainability reporting practices on firm value, depending on organizational capabilities and stakeholder expectations. The literature positions digital transparency as a critical enabler of effective sustainability reporting, enhancing the visibility and integrity of ESG information and, in doing so, strengthening the linkage between sustainability practices and firm value.

4.4. Contextual Variations and Future Research Directions

Across the literature, significant contextual variations emerge in how green accounting, ESG disclosure, and digital transparency relate to firm value. Institutional factors such as regulatory environments, investor sophistication, cultural norms, and market development influence the strength and direction of these relationships. For example, in highly regulated markets, mandatory sustainability reporting requirements tend to enhance comparability and reduce information asymmetry, thereby strengthening the association between ESG practices and firm valuation (The Evolution of ESG and Sustainability Reporting, 2025). Conversely, in emerging markets with weaker reporting regimes, the impact of sustainability disclosures is more contingent and context-dependent. Research also highlights the need to explore sectoral differences, as industries with high environmental footprints may benefit more from green accounting and ESG transparency than those in less resource-intensive sectors (Environmental Accounting and Firm Value, 2025). Future studies could adopt cross-industry comparisons to unpack these differential effects. Moreover, the rapid rise of digital reporting technologies underscores the need to examine how machine learning, blockchain, and artificial intelligence affect sustainability disclosure quality and firm valuation. Another emerging avenue involves stakeholder processing of sustainability information. While many studies assume that investors use ESG data in valuation decisions, there is limited understanding of how different stakeholder groups interpret and act on digitized sustainability disclosures. Qualitative research, including interviews and case studies, can provide deeper insights into stakeholder perceptions and behavioral responses to sustainability information.

V. Conclusion

This study concludes that firm value in the sustainability economy cannot be adequately explained by traditional financial indicators alone. The synthesis of the literature and qualitative analysis demonstrates that green accounting, ESG disclosure, and digital transparency collectively redefine the mechanisms through which corporate value is created, communicated, and sustained. Green accounting extends conventional accounting frameworks by internalizing environmental impacts and enabling firms to reflect long-term ecological responsibilities within their performance metrics. ESG disclosure functions as a strategic communication tool that reduces information asymmetry, strengthens stakeholder trust, and signals managerial commitment to sustainable value creation. Meanwhile, digital transparency enhances the effectiveness of both green accounting and ESG disclosure by improving the accessibility, timeliness, and credibility of sustainability-related information. Together, these elements position sustainability-oriented

reporting not as a peripheral activity, but as a core component of corporate valuation within contemporary economic systems.

From a theoretical perspective, the findings of this study contribute to advancing the sustainability accounting and corporate valuation literature by integrating stakeholder theory, signaling theory, and legitimacy theory within a unified analytical framework. The results suggest that sustainability reporting practices function as multidimensional signals that influence firm value through reputational capital, reduced perceived risk, and enhanced legitimacy. By demonstrating that green accounting and ESG disclosure gain greater value relevance when supported by digital transparency, this study extends existing theoretical debates beyond isolated constructs toward a more holistic understanding of sustainability-driven value creation. Furthermore, the study highlights the importance of contextual factors, such as institutional environments and reporting credibility, in shaping the effectiveness of sustainability disclosures. This theoretical implication underscores the need for future research to adopt integrated, context-sensitive models to examine the relationship between sustainability practices and firm value.

From a managerial standpoint, the study's conclusions have important implications for corporate leaders, investors, and policymakers. For managers, the findings emphasize that sustainability reporting should be strategically embedded within corporate governance and digital transformation initiatives rather than treated as a symbolic or compliance-oriented exercise. Firms that invest in robust green accounting systems, transparent ESG disclosure, and advanced digital reporting platforms are more likely to enhance investor confidence and long-term firm value. For investors, the study highlights the growing importance of non-financial information in valuation decisions and underscores the need to assess the credibility and digital accessibility of sustainability disclosures. For policymakers and regulators, the results suggest that strengthening sustainability reporting standards and promoting digital transparency can improve market efficiency and accountability. Overall, this study concludes that integrating environmental responsibility, social accountability, governance quality, and digital innovation is essential for firms seeking to achieve sustainable competitiveness and value creation beyond financial numbers.

References

- 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(4), 695–717. <https://doi.org/10.1108/IJAIM-09-2019-0108>
- Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, 30(1), 98–115. <https://doi.org/10.1108/MEQ-12-2017-0149>
- Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, 35(1), 1–23. <https://doi.org/10.1002/smj.2131>
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. <https://doi.org/10.1177/0149206310388419>
- De Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing and Accountability Journal*, 27(7), 1042–1067. <https://doi.org/10.1108/AAAJ-06-2014-1736>
- 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>
- Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. <https://doi.org/10.1016/j.gfj.2017.03.001>
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance and Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
- Hummel, K., & Schlick, C. (2016). The relationship between sustainability performance and sustainability disclosure. *Journal of Accounting and Public Policy*, 35(5), 455–476. <https://doi.org/10.1016/j.jaccpubpol.2016.06.001>
- Huang, X. (2021). ESG performance, ESG disclosure, and firm value. *Corporate Social Responsibility and Environmental Management*, 28(2), 415–429. <https://doi.org/10.1002/csr.2069>
- Laskar, N., Chakraborty, T. K., & Maji, S. G. (2017). Corporate sustainability performance and financial performance. *Management and Labour Studies*, 42(2), 88–106. <https://doi.org/10.1177/0258042X17703797>

- López-Gamero, M. D., Molina-Azorín, J. F., & Claver-Cortés, E. (2009). The whole relationship between environmental variables and firm performance. *Journal of Environmental Management*, 90(10), 3110–3121. <https://doi.org/10.1016/j.jenvman.2009.05.007>
- Reverte, C. (2012). The impact of better corporate social responsibility disclosure on the cost of equity capital. *Corporate Social Responsibility and Environmental Management*, 19(5), 253–272. <https://doi.org/10.1002/csr.273>
- Schiemann, F., & Sakhel, A. (2018). Carbon disclosure, financial performance, and firm value. *Accounting in Europe*, 15(3), 353–371. <https://doi.org/10.1080/17449480.2018.1504644>
- Schaltegger, S., & Burritt, R. (2000). *Contemporary environmental accounting. Issues, concepts, and practice*. Greenleaf Publishing. <https://doi.org/10.4324/9781351282424>
- Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports. *Accounting Review*, 84(3), 937–967. <https://doi.org/10.2308/accr.2009.84.3.937>
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- 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>
- Xie, J., Nozawa, W., Yagi, M., Fujii, H., & Managi, S. (2019). Do environmental, social, and governance activities improve corporate financial performance? *Business Strategy and the Environment*, 28(2), 286–300. <https://doi.org/10.1002/bse.2224>
- Zhang, D., Morse, S., & Kambhampati, U. (2023). Digital transformation, ESG disclosure, and firm value. *Technological Forecasting and Social Change*, 186, 122131. <https://doi.org/10.1016/j.techfore.2022.122131>