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Green Intellectual Capital, Digital Transformation, and Sustainable Financial Performance: An Islamic Management Perspective

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Abstract−This study aims to analyze the relationship between Green Intellectual Capital (GIC), Digital Transformation, and Sustainable Financial Performance in the perspective of Islamic Management. The study used the Narrative Literature Review (NLR) approach by examining ten Scopus indexed scientific articles published during the period 2020–2025. The analysis process is carried out through the stages of *critical reading*, *data extraction*, *thematic categorization*, and *conceptual synthesis* to identify patterns of relationships, theoretical debates, and research gaps that develop in the literature. The results of the study show that Green Intellectual Capital, which consists of *green human capital*, *green structural capital*, and *green relational capital*, is a strategic resource that contributes to sustainable value creation through increased innovation, operational efficiency, and competitive advantage. However, the influence of Green Intellectual Capital on Sustainable Financial Performance is not always direct and requires adequate organizational capability support. In this context, Digital Transformation plays a role as a strategic capability that strengthens the use of Green Intellectual Capital through improving the organization's ability to manage knowledge, innovate, and adapt to changes in the business environment. In addition, the perspective of Islamic Management provides an ethical foundation through the principles of *amanah*, *adl*, *ihsan*, and *maslahah* that strengthen the creation of economic, social, and environmental values in a sustainable manner. This research produces a conceptual framework that integrates Resource-Based View, Dynamic Capabilities Theory, and Islamic Management in explaining the mechanism of achieving Sustainable Financial Performance in the digital era.

Keywords: Green Intellectual Capital; Digital Transformation; Sustainable Financial Performance; Islamic Management; Corporate Sustainability

1. INTRODUCTION

Digital transformation has become one of the key forces changing the global business landscape in the 21st century. Technological developments such as artificial intelligence (AI), big data analytics, cloud computing, Internet of Things (IoT), and blockchain have encouraged organizations to change business models, operational processes, and decision-making strategies more effectively and efficiently. In the midst of increasing complexity of the business environment and the demands of sustainability, companies are no longer only required to achieve short-term profitability, but also to be able to create sustainable economic value through innovative and responsible resource management (Verhoef et al., 2021; Kraus et al., 2022).

In this context, the concept of Sustainable Financial Performance is becoming increasingly important in management and financial studies. Sustainable financial performance not only reflects a company's ability to generate profits consistently, but also the ability to maintain long-term financial performance through efficient resource management, risk reduction, reputation enhancement, and sustainable value creation for all stakeholders (Friede et al., 2021; Fatemi et al., 2023). Therefore, modern organizations need to develop strategic capabilities that are able to support the achievement of sustainable financial performance in the midst of increasingly complex economic and environmental dynamics.

One of the strategic resources that has received great attention in the sustainability management literature is Green Intellectual Capital (GIC). Green Intellectual Capital is the development of the concept of intellectual capital that integrates environmental aspects into organizational knowledge assets. This concept consists of three main dimensions, namely green human capital, green structural capital, and green relational capital. Green human capital refers to the knowledge, competence, skills, and environmental awareness that employees have. Green structural capital includes systems, procedures, organizational culture, and technology that support sustainable business practices. Meanwhile, green relational capital describes an organization's relationship with customers, suppliers, regulators, and other stakeholders in supporting the sustainability agenda (Yusliza et al., 2020; Asiaei et al., 2022).

Based on the perspective of the Resource-Based View (RBV), Green Intellectual Capital is an intangible resource that is valuable, scarce, difficult to replicate, and difficult to replace so that it is able to create a sustainable competitive advantage (Barney, 1991). Organizations that are able to effectively develop environment-based intellectual assets have a greater chance of improving innovation, operational efficiency, corporate reputation, and long-term financial performance. Recent research shows that Green Intellectual Capital contributes significantly to improving organizational performance through strengthening innovation capabilities and sustainability management (Asiaei et al., 2022; Abbas & Sağsan, 2023).

In addition to Green Intellectual Capital, Digital Transformation is also an important factor that affects the performance of modern companies. Digital transformation enables organizations to optimize business processes, accelerate data-driven decision-making, improve resource use efficiency, and create business models that are more adaptive to changing environments. The use of digital technology also allows companies to manage environmental knowledge more effectively, thereby strengthening the organization's ability to create sustainable innovation and improve financial performance (Verhoef et al., 2021; Vial, 2021).

From the perspective of Dynamic Capabilities Theory, digital transformation is seen as an organization's ability to integrate, build, and reconfigure internal resources to respond to rapid environmental changes (Teece, 2021). Companies that have strong digital capabilities tend to be better able to leverage Green Intellectual Capital to create economic and environmental value simultaneously. Thus, digital transformation can serve as a catalyst that strengthens Green Intellectual Capital's contribution to sustainable financial performance.

In recent years, the attention of academics and practitioners has also increased to the relationship between sustainability and corporate financial performance. Various studies show that investing in sustainability practices can improve operational efficiency, strengthen customer loyalty, reduce business risk, and increase access to better sources of funding (Friede et al., 2021; Fatemi et al., 2023). However, some studies still find mixed results regarding the effectiveness of sustainability investments on short-term financial performance, so the relationship between Green Intellectual Capital, digital transformation, and sustainable financial performance still needs further study.

From the perspective of Islamic Management, sustainability is not only seen as a business strategy, but also as part of human moral and spiritual responsibility as a caliph on earth. Islamic principles such as trustworthiness, adl (justice), ihsan (excellence), and maslahah (public benefit) emphasize the importance of responsible resource management to achieve economic, social, and environmental welfare in a balanced manner. Therefore, the development of Green Intellectual Capital and digital transformation that supports the sustainability of the company is in line with the goals of maqashid al-shariah, especially in maintaining the benefit of the community and environmental sustainability (Grassa, 2022; Muneeza & Mustapha, 2021).

Although the literature on Green Intellectual Capital, digital transformation, and sustainability continues to grow, research integrating these three concepts in the perspective of Islamic Management is still relatively limited. Most of the research focuses on the direct relationship between Green Intellectual Capital and organizational performance without explaining the role of digital transformation as a strengthening of organizational capabilities and its relevance to achieving sustainable financial performance. In addition, studies that associate Green Intellectual Capital with Islamic management values are still not widely found in the strategic management and financial literature.

Based on these gaps, this study aims to analyze the relationship between Green Intellectual Capital, Digital Transformation, and Sustainable Financial Performance through the perspective of Islamic Management. Using the Narrative Literature Review approach to ten Scopus indexed scientific articles published during the period 2020–2025, this study seeks to identify research trends, synthesize empirical findings, and formulate a conceptual framework that explains how Green Intellectual Capital and digital transformation can support the achievement of sustainable financial performance based on Islamic management values.

2. RESEARCH METHODS

2.1 Research Design

This study uses the Narrative Literature Review (NLR) approach to analyze the relationship between Green Intellectual Capital (GIC), Digital Transformation, Sustainable Financial Performance, and Islamic Management. This approach was chosen because it allows researchers to conduct conceptual synthesis of various previous studies in order to gain a comprehensive understanding of theoretical developments, empirical findings, and future research directions in the fields of sustainability management, digital transformation, and Islamic management.

In contrast to *systematic literature review* which focuses on very strict selection procedures and quantitative analysis, Narrative Literature Review places more emphasis on critical evaluation, conceptual interpretation, and integration of various relevant theoretical perspectives. Therefore, this method is considered suitable to examine the relationship between Green Intellectual Capital, digital transformation, and sustainable financial performance from the perspective of Islamic Management.

2.2 Literature Search Strategy

The research data was obtained from scientific articles indexed in the Scopus database. The selection of Scopus was made because this database provides reputable international publications that have gone through *a peer review* process and are widely used as a reference source in management, finance, sustainability, and digital transformation research.

Literature search was conducted on articles published during the period 2020–2025 using keywords: *Green Intellectual Capital*, *Green Human Capital*, *Green Structural Capital*, *Green Relational Capital*, *Digital Transformation*, *Digital Innovation*, *Sustainable Financial Performance*, *Corporate Sustainability*, and *Islamic Management*. These keywords are used individually or combinatively to obtain articles that are relevant to the research objectives.

2.3 Article Selection Criteria

The selection of articles is carried out based on inclusion and exclusion criteria to ensure the quality and relevance of the literature used.

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Inclusion Criteria
a. Articles indexed by Scopus.
b. Published in the period 2020–2025.
c. Membahas Green Intellectual Capital, Digital Transformation, Sustainable Financial Performance, Corporate Sustainability, atau Islamic Management.
d. Published in reputable international journals.
e. Available in *full text*.
f. Have theoretical and empirical relevance to the research objectives.

Exclusion Criteria
a. Articles that are not indexed by Scopus.
b. Articles published before 2020.
c. Editorial, book review, conference abstract, dan artikel non-*peer reviewed*.
d. Articles that are not directly related to the research topic.
e. Articles that do not address aspects of sustainability, organizational performance, or digital transformation.

Based on the selection process, the 10 most relevant Scopus articles were obtained and were directly related to the research focus. The selection of ten articles was carried out *purposively* by considering the quality of the journal, theoretical contributions, and the ability of the articles to represent the development of the literature on Green Intellectual Capital, Digital Transformation, Sustainable Financial Performance, and Islamic Management.

Table 1. Selected Scopus Articles Reviewed in This Study (2020–2025)

No	Authors	Year	Journal	Research Focus	Main Findings
1	Yusliza et al.	2020	Journal of Cleaner Production	Green Intellectual Capital and Sustainable Performance	Green intellectual capital positively influences sustainable organizational performance through environmental capabilities.
2	Verhoef et al.	2021	Journal of Business Research	Digital Transformation	Digital transformation creates business value through organizational innovation and strategic adaptation.
3	Vial	2021	The Journal of Strategic Information Systems	Digital Transformation	Digital transformation is a multidimensional process involving technology, strategy, and organizational change.
4	Asiaei et al.	2022	Business Strategy and the Environment	Green Intellectual Capital and Environmental Management Accounting	Environmental management accounting mediates the relationship between GIC and environmental performance.
5	Asiaei et al.	2022	Business Strategy and the Environment	Green Intellectual Capital and Organizational Performance	GIC enhances organizational performance through improved environmental management practices.
6	Grassa	2022	International Journal of Islamic and Middle Eastern Finance and Management	Islamic Governance and Sustainability	Islamic governance strengthens sustainable business practices through ethical principles and accountability.
7	Abbas and Sağsan	2023	Sustainability	Green Intellectual Capital and Green Innovation	Green innovation mediates the relationship between GIC and sustainable organizational performance.
8	Fatemi et al.	2023	Global Finance Journal	ESG and Sustainable Financial Performance	Sustainability initiatives contribute to long-term financial performance and corporate resilience.
9	Hina et al.	2024	Journal of Intellectual Capital	GIC and Sustainability Business Performance	Green intellectual capital improves sustainability performance among manufacturing SMEs.
10	Alnaim et al.	2024	Administrative Sciences	Green Intellectual Capital and Environmental Performance	Green intellectual capital positively affects environmental and organizational performance.

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2.4 Data Analysis Technique

Data analysis was carried out using the thematic synthesis method. This technique is used to identify key themes, patterns of relationships, and research gaps that emerge in the literature analyzed.

The analysis process is carried out through four stages, namely: (1) *critical reading* to understand the content of the article in depth, (2) *data extraction* to identify research objectives, theories, methods, and main findings, (3) *thematic categorization* to group articles based on similar themes, and (4) *conceptual synthesis* to develop a conceptual relationship between Green Intellectual Capital, Digital Transformation, Sustainable Financial Performance, and Islamic Management.

The results of the synthesis produced four main themes, namely: (1) Green Intellectual Capital as an organization's strategic resource, (2) Digital Transformation as a driver of innovation and efficiency, (3) Sustainable Financial Performance as an indicator of organizational sustainability, and (4) Islamic Management as an ethical foundation in sustainable value creation.

2.5 Conceptual Framework

Based on the synthesis of the literature, this study develops a conceptual framework that explains that Green Intellectual Capital plays a role as a strategic asset that supports the success of Digital Transformation. Digital transformation further enhances the organization's ability to create efficiency, innovation, and competitive advantages that contribute to Sustainable Financial Performance.

In this framework, Islamic Management functions as an ethical foundation that strengthens all relationships between variables through the principles of amanah, adl, ihsan, and maslahah, thereby supporting the achievement of sustainable and responsible financial performance.

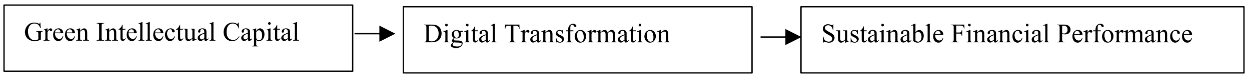

Figure 1. Conceptual Framework Developed from the Literature Synthesis

Islamic Management *(Amanah, Adl, Ihsan, and Maslahah)* serves as an ethical foundation that strengthens all relationships within the conceptual framework.

2.6 Research Limitations

This research is limited to ten Scopus-indexed scientific articles published during the period 2020–2025. In addition, the Narrative Literature Review approach does not conduct direct empirical testing so that the research results focus more on conceptual synthesis and the development of theoretical frameworks. Nevertheless, this study provides a comprehensive understanding of the relationship between Green Intellectual Capital, Digital Transformation, Sustainable Financial Performance, and Islamic Management and offers a research agenda that can be developed in future research.

3. RESULTS AND DISCUSSION

3.1 Green Intellectual Capital as a Driver of Sustainable Financial Performance

The results of a synthesis of ten Scopus articles show that Green Intellectual Capital (GIC) is one of the most consistently associated strategic resources with organizational sustainability and long-term financial performance. Most studies confirm that Green Human Capital, Green Structural Capital, and Green Relational Capital contribute positively to increased innovation, operational efficiency, corporate reputation, and sustainable value creation.

However, the literature shows that the influence of Green Intellectual Capital on Sustainable Financial Performance is not always direct. Yusliza et al. (2020), Asiaei et al. (2022), and Abbas and Sağsan (2023) found that GIC is able to improve organizational performance through strengthening green innovation and sustainability capabilities. Conversely, some studies show that investing in green resources does not necessarily yield financial benefits if it is not followed by an organization's ability to manage knowledge and integrate sustainability into its core business strategy.

These findings indicate that Green Intellectual Capital is not a stand-alone source of competitive advantage, but rather requires a supporting mechanism capable of converting environmental knowledge into real economic value. Thus, the results of the synthesis expand the perspective of the Resource-Based View (RBV) by showing that the strategic value of Green Intellectual Capital is highly dependent on the organization's ability to convert these resources into operational and innovative capabilities.

3.2 Digital Transformation as a Strategic Enabler

The second theme that appears consistently in the literature is the role of digital transformation as a strengthening factor in the relationship between Green Intellectual Capital and Sustainable Financial Performance. Verhoef et al. (2021) and Vial (2021) affirm that digital transformation is not just the adoption of technology, but is an organizational transformation process that includes changes in culture, structure, business processes, and decision-making.

Interestingly, the results of the synthesis show the existence of two different views in the literature. The first group argues that digital transformation increases efficiency, productivity, service quality, and innovation capabilities so that it has a positive impact on organizational performance. The second group shows that digitalization often results in high investment costs, implementation risks, and organizational resistance that can hinder the achievement of economic benefits in the short term.

The difference in findings shows that digital transformation is not a direct determinant of financial performance, but rather a strategic capability that determines the effectiveness of the use of Green Intellectual Capital. In the perspective of Dynamic Capabilities Theory, digital transformation allows organizations to integrate, build, and reconfigure the resources they have to respond to dynamic environmental changes.

Therefore, this study proposes that digital transformation acts as a *linkage mechanism* that allows Green Intellectual Capital to generate a greater impact on Sustainable Financial Performance.

3.3 The Debate on Sustainability and Financial Performance

One of the main debates in the literature relates to the relationship between sustainability and financial performance. Some studies have concluded that investing in sustainability produces economic benefits through improved reputation, customer loyalty, resource efficiency, and access to capital. In this perspective, sustainability is seen as a strategic investment that creates long-term value.

In contrast, other research shows that implementing sustainability strategies often increases operational costs, especially in the early stages of organizational transformation. Investments in green technology, employee training, and sustainable innovation require significant resources so the financial benefits are not always visible in the short term.

The results of the synthesis show that the contradiction occurs because most studies still measure financial performance in the short term. In fact, the concept of Sustainable Financial Performance emphasizes the company's ability to maintain profitability and value creation in the long term. Thus, this study argues that the relationship between sustainability and financial performance should be understood as a dynamic process influenced by the quality of intellectual resources and organizational transformation capabilities.

These findings provide new insights that sustainability is not just a cost or an automatic source of profit, but a strategic investment that yields financial benefits when supported by Green Intellectual Capital and effective digital transformation.

3.4 Islamic Management and Ethical Value Creation

Most of the literature on Green Intellectual Capital and digital transformation is still dominated by economic and strategic management perspectives. The ethical and spiritual dimensions have received relatively little attention. Therefore, this research integrates the perspective of Islamic Management to enrich the understanding of sustainable value creation.

The principles of trust, adl, ihsan, and maslahah provide a normative basis for organizations to manage resources responsibly. From an Islamic perspective, the organization's goal is not only to maximize economic benefits but also to create benefits for the community and maintain environmental sustainability.

The results of the synthesis show that there is a strong conceptual fit between Green Intellectual Capital and Islamic Management values. Green Human Capital reflects responsible competency development, Green Structural Capital reflects organizational transparency and accountability, while Green Relational Capital reflects fairness and benefit-oriented partnerships. In addition, digital transformation from an Islamic perspective not only aims to improve efficiency, but also supports transparency, accountability, and better governance. Therefore, Islamic Management can be positioned as an ethical foundation that strengthens the relationship between Green Intellectual Capital, digital transformation, and Sustainable Financial Performance.

3.5 Integrated Conceptual Insight

Based on the synthesis of all the articles reviewed, this study proposes a new conceptual perspective. In contrast to previous research that generally placed Green Intellectual Capital or digital transformation as an independent factor, this study shows that Sustainable Financial Performance is the result of the interaction between green resources, digital capabilities, and value-based governance.

These findings yield three key insights. First, Green Intellectual Capital serves as a strategic resource that provides a knowledge base and sustainability innovation. Second, digital transformation plays a role as a capability that allows these resources to be converted into economic and environmental value. Third, Islamic Management serves as an ethical foundation that ensures that the value creation process takes place responsibly and sustainably.

This research expands the Resource-Based View and Dynamic Capabilities Theory through the integration of Islamic Management perspectives in explaining the mechanism of achieving Sustainable Financial Performance in the digital era. The main contribution of this research lies in the development of a conceptual framework that places Green Intellectual Capital, Digital Transformation, and Islamic Management as complementary elements in creating competitive advantage and long-term sustainability.

4. CONCLUSION

This study aims to analyze the relationship between Green Intellectual Capital, Digital Transformation, and Sustainable Financial Performance in the perspective of Islamic Management through a Narrative Literature Review approach to ten

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Scopus indexed scientific articles for the 2020–2025 period. The results of the synthesis show that Green Intellectual Capital is a strategic resource that contributes to sustainable value creation through increased innovation, operational efficiency, and organizational competitive advantage. However, the influence of Green Intellectual Capital on Sustainable Financial Performance is not always direct, but requires the support of organizational capabilities that are able to transform environmental knowledge and resources into real economic value. In this context, Digital Transformation plays a role as a strategic capability that strengthens the use of Green Intellectual Capital through increasing efficiency, innovation, and organizational adaptability to changes in the business environment. This study also found that Islamic Management provides an ethical foundation that strengthens the relationship between Green Intellectual Capital, Digital Transformation, and Sustainable Financial Performance through the principles of amanah, adl, ihsan, and maslahah. The main contribution of this research is the development of a conceptual framework that integrates Resource-Based View, Dynamic Capabilities Theory, and Islamic Management in explaining the mechanism of creating Sustainable Financial Performance in the digital era. The limitations of this study lie in the use of ten Scopus articles and a conceptual approach without empirical testing. Therefore, further research is recommended to conduct empirical testing on various industrial sectors to validate the relationships between variables proposed in the conceptual framework of this study.

REFERENCES

Abbas, J., & Sağsan, M. (2023). Green intellectual capital and sustainable organizational performance: The mediating role of green innovation. *Sustainability, 15*(4), 3258.

Alnaim, M. F., Alshammari, A. A., & Alenezi, M. A. (2024). Green intellectual capital and environmental performance: Evidence from sustainable business practices. *Administrative Sciences, 14*(12), 311.

Asiaei, K., Bontis, N., Alizadeh, R., & Yaghoubi, M. (2022). Green intellectual capital and environmental management accounting: Natural resource orchestration in favor of environmental performance. *Business Strategy and the Environment, 31*(1), 76–93.

Asiaei, K., Jusoh, R., Bontis, N., & Nor, K. M. (2022). Green intellectual capital and organizational performance: The mediating role of environmental management accounting. *Business Strategy and the Environment, 31*(4), 1587–1606.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120.

Fatemi, A., Glaum, M., & Kaiser, S. (2023). ESG performance and sustainable financial outcomes: A review of recent evidence. *Global Finance Journal, 56*, 100814.

Friede, G., Busch, T., & Bassen, A. (2021). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance and Investment, 11*(4), 210–233.

Grassa, R. (2022). Islamic corporate governance and sustainability: Emerging issues and future directions. *International Journal of Islamic and Middle Eastern Finance and Management, 15*(3), 481–498.

Haddad, A. M., Al-Hamadeen, R., & Bani-Khalid, T. (2024). Green intellectual capital and sustainable organizational performance: Evidence from emerging economies. *Futurity Economics & Law, 4*(1), 24–39.

Hina, M., Abdul-Rashid, S. H., Asadi, S., & Muhammad, N. (2024). Nexus between green intellectual capital and sustainability business performance of manufacturing SMEs. *Journal of Intellectual Capital, 25*(2), 367–389.

Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022). Digital transformation in business and management research: An overview of the current status quo. *Technological Forecasting and Social Change, 182*, 121706.

Muneeza, A., & Mustapha, Z. (2021). Maqasid al-Shariah and sustainable development: Implications for Islamic management and governance. *Journal of Islamic Finance, 10*(2), 45–58.

Teece, D. J. (2021). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *Strategic Management Review, 2*(1), 1–42.

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research, 122*, 889–901.

Vial, G. (2021). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems, 30*(2), 101698.

Yusliza, M. Y., Yong, J. Y., Tanveer, M. I., Ramayah, T., Noor Faezah, J., & Muhammad, Z. (2020). A structural model of the impact of green intellectual capital on sustainable performance. *Journal of Cleaner Production, 249*, 119334.