

The Institutional ESG Disclosure Framework for Malaysian Consultancy Quantity Surveying Practices: A Systematic Literature Review

Dainna Baharuddin¹, Nadzirah Zainordin², Zairra Mat Jusoh³

Abstract

Environmental, Social, and Governance (ESG) disclosure has emerged as a key indicator of corporate transparency and sustainability. Public listed companies in the construction industry in Malaysia are mandated to disclose ESG practices. However, there is no institutional framework specifically for quantity surveying firms namely Consulting Quantity Surveying Practice (CQSP). This study employs a Systematic Literature Review (SLR) to examine ESG disclosure practices relevant to CQSP, analyze global best practices, and propose a structured framework tailored for the Malaysian CQSP. The findings highlight challenges such as regulatory ambiguity, lack of industry-specific guidelines, and low awareness among QS professionals. Based on thematic analysis, a proposed ESG disclosure framework is developed, incorporating environmental, social, and governance dimensions relevant to CQSP. The study recommends policy enhancements by the QS regulatory body Board of Quantity Surveyors and QS professional body the Royal Institution of Quantity Surveyors Malaysia as well as QS firms, ensuring greater ESG transparency and compliance.

Keywords: *ESG Disclosure, Quantity Surveying, Consultancy Firms, Institutional Framework, Malaysia, Sustainability Reporting.*

Introduction

The escalating global focus on Environmental, Social, and Governance (ESG) has propelled industries worldwide to re-evaluate their operational paradigms and reporting mechanisms (Chopra et al., 2024, Truant et al., 2024). This paradigm shift is particularly pertinent in the construction sector, where activities inherently possess a significant environmental and societal impact (Prieto, R. 2022). Within this sector, CQSPs play a pivotal role, acting as crucial intermediaries in life-cycle costing, risk assessment, and value engineering (Llale et al., 2022). The integration of ESG practices by CQSPs are not merely a matter of ethical compliance but also strategically imperative for long-term sustainability and competitiveness. This necessitates a robust framework for ESG disclosure, enabling stakeholders to accurately assess the sustainability performance of these firms (Alsayegh et al., 2022). The construction sector's unique characteristics, encompassing intricate supply chains, resource-intensive processes, and significant waste generation, underscore the urgent need for sustainable practices (Kazemi et al., 2023). This sector contributions to environmental degradation, societal labour welfare issues, and corporate governance transparency concerns necessitates a concerted effort to promote ESG consciousness among industry players (Wang & Xue, 2023). The absence of standardized ESG disclosure frameworks within Malaysian QS firms presents a significant challenge to achieving sustainability goals and competitiveness.

ESG disclosure has become an integral part of corporate sustainability and responsible business practices. In Malaysia, ESG reporting is largely driven by the Securities Commission Malaysia, Bursa Malaysia, and the Malaysian Code on Corporate Governance (MCCG), which mandate sustainability disclosures for public-listed companies (Securities Commission Malaysia, 2021). However, while construction companies and developers are going public listed there need to progressively adopting ESG frameworks, QS consultancy firms remain largely unregulated in this aspect. The role of QS firms in life-cycle costing, risk assessment, and value engineering makes them critical to sustainability within the built environment. Despite this, ESG disclosure remains inconsistent across QS consultancy firms, with no dedicated institutional framework guiding their disclosures.

¹ School of Architecture & Built Environment, UCSI University, Kuala Lumpur, Malaysia

² School of Architecture & Built Environment, UCSI University, Kuala Lumpur, Malaysia.

³ School of Architecture & Built Environment, UCSI University, Kuala Lumpur, Malaysia

Sustainability in Construction and the Role of Quantity Surveying

Sustainability in construction is fundamentally anchored in the principles of environmental stewardship, social equity, and governance transparency (Lima et al., 2021). As global urbanization accelerates, the construction sector faces increasing pressure to balance economic growth with climate resilience and resource efficiency. Sustainable construction, therefore, necessitates the efficient utilization of finite resources, the minimization of environmental and social impacts, and the enhancement of community well-being throughout a project's lifecycle (Lima et al., 2021; Bamgbade et al., 2016). Within this context, Quantity Surveyors (QS) play a pivotal role in integrating sustainability principles into construction economics and cost management. As financial and contractual experts in the built environment, QS professionals ensure that sustainability objectives are incorporated into cost planning, procurement strategies, risk assessment, and life-cycle cost analysis (Board of Quantity Surveyors Act, 1967/2015). Their expertise allows them to bridge the gap between economic viability and sustainable best practices, ensuring that green initiatives are not only environmentally responsible but also financially feasible.

Sustainable design and construction are essential in modern urban development, aiming to minimize resource depletion—including energy consumption, water usage, and raw materials—while fostering a safe, resilient, and productive built environment (Bolade-Oladepo et al., 2020). As the construction industry moves towards environmentally responsible and economically viable solutions, Quantity Surveyors (QS) play a crucial role in ensuring that sustainability principles are effectively integrated into cost management, procurement strategies, and risk assessment. Their expertise in financial planning, construction economics, and life cycle costing (LCC) positions them at the forefront of sustainable decision-making, helping developers and stakeholders navigate the complexities of green construction.

One of the primary ways QS professionals contribute to sustainable construction is through Life Cycle Costing (LCC) and Green Cost Estimation. By conducting cost-benefit analyses of sustainable building materials and technologies, they provide valuable insights into long-term financial and environmental impacts. This approach ensures compliance with international green building certifications, such as Malaysia's Green Building Index (GBI), Leadership in Energy and Environmental Design (LEED), and Building Research Establishment Environmental Assessment Method (BREEAM) (Lima et al., 2021). Beyond initial construction costs, QS experts evaluate operational and maintenance expenses, ensuring that sustainability-driven investments remain financially viable throughout a building's lifespan (Bamgbade et al., 2016).

In addition to cost estimation, sustainable procurement and supply chain management play a critical role in advancing sustainable construction. QS professionals actively promote the adoption of eco-friendly materials, energy-efficient systems, and renewable technologies, thereby reducing the environmental footprint of construction projects. The emphasis on local and recycled materials not only lowers transportation-related carbon emissions but also supports circular economy practices, where materials are repurposed and reused to minimize waste (Bolade-Oladepo et al., 2020). Through strategic procurement, QS professionals help ensure that sustainability objectives are met without compromising cost efficiency and project feasibility.

Another crucial aspect of sustainable construction is regulatory compliance and risk management. With the increasing focus on Environmental, Social, and Governance (ESG) frameworks, QS experts play a pivotal role in ensuring that construction projects adhere to environmental regulations, ethical procurement policies, and sustainability reporting standards. Compliance with these frameworks is essential not only for legal and ethical reasons but also for attracting sustainability-focused investors who prioritize responsible development (Board of Quantity Surveyors Act, 1967/2015). Additionally, QS professionals assist in identifying and mitigating financial, operational, and environmental risks associated with climate-related uncertainties, ensuring that sustainability measures are practically and financially feasible within the evolving regulatory landscape.

As digital transformation reshapes the construction sector, advancing digital innovations for sustainability has become a key focus for QS professionals. The adoption of Building Information Modeling (BIM) and

blockchain-enabled cost tracking enhances cost transparency, waste reduction, and resource efficiency. Furthermore, emerging technologies such as Artificial Intelligence (AI) and data analytics optimize sustainability decision-making by predicting material performance, reducing cost overruns, and improving energy efficiency (Bolade-Oladepo et al., 2020). By leveraging these digital tools, QS professionals can drive data-driven sustainability initiatives, ensuring more accurate project forecasting and improved resource allocation.

The integration of sustainability principles within Quantity Surveying is no longer a mere consideration but a strategic necessity for the future of the construction industry. By embedding ESG considerations into cost planning, procurement, and risk assessment, QS professionals serve as key enablers in the adoption of sustainable construction practices. Their involvement throughout the entire project lifecycle ensures that sustainability is not just economically viable but also environmentally responsible and socially beneficial. Moving forward, policy support, industry collaboration, and technological innovation will be essential in positioning Quantity Surveyors as catalysts for a greener and more resilient built environment in Malaysia.

Current State of Sustainability in Malaysian Construction

As awareness of sustainability continues to grow within the Malaysian construction industry, the disclosure of Environmental, Social, and Governance (ESG) practices has become a critical component in promoting responsible and sustainable business operations (Sheehan et al., 2023). ESG disclosure serves as a benchmark for transparency, accountability, and ethical governance, enabling stakeholders to assess a company's commitment to sustainability and corporate responsibility. However, despite its growing importance, several challenges hinder the widespread adoption of ESG disclosure within the industry.

Among the key barriers are resistance to change, stakeholder preferences, concerns over increased investment costs, and inadequate knowledge of sustainability concepts (Momade et al., 2018). Many industry players hesitate to adopt ESG disclosure due to perceived financial burdens, uncertainties in measuring sustainability performance, and limited awareness of its long-term benefits. Furthermore, socially conscious investors and clients now demand greater transparency, accountability, and corporate responsibility, pushing businesses to align their strategies with global sustainability standards to remain competitive (Krantz et al., 2024).

The integration of ESG disclosure into business strategies plays a crucial role in risk management and corporate governance compliance, ultimately leading to enhanced brand reputation, long-term business sustainability, and meaningful contributions to both society and the environment (Chen et al., 2022; Radzi, 2023; Hamid, 2024; Tang, 2023). By effectively communicating their environmental sustainability, social responsibility, and governance practices, companies can gain investor confidence, attract ethical investments, and build stronger relationships with stakeholders.

However, one of the significant obstacles to ESG disclosure in Malaysia is the lack of standardized frameworks and reporting guidelines. The absence of uniform ESG disclosure regulations complicates comparisons between firms, making it challenging for investors, clients, and regulatory bodies to evaluate the sustainability performance of different Quantity Surveying (QS) firms. This inconsistency hampers decision-making processes and creates uncertainties in implementing ESG principles effectively across the industry.

While ESG implementation within Quantity Surveying practices remains inconsistent, this research provides a comprehensive evaluation of ESG disclosure principles and the anticipated benefits and challenges faced by Malaysian Consulting Quantity Surveying Practices (CQSP) in its adoption. The findings of this study aim to propose an institutional framework that facilitates the seamless integration of ESG practices within CQSP firms. By addressing regulatory gaps, promoting knowledge-sharing, and identifying strategic incentives, this framework will empower QS businesses to adopt ESG disclosure more effectively, ensuring their long-term competitiveness, resilience, and sustainability within Malaysia's evolving construction landscape.

Literature Review

The literature review reveals a critical gap in the availability of standardized ESG disclosure frameworks tailored specifically for Quantity Surveying (QS) practices in Malaysia. While broader ESG disclosure studies have been conducted, they primarily focus on corporate sustainability reporting and investor-driven transparency, with limited emphasis on industry-specific challenges within QS. The lack of a structured ESG disclosure model has created inconsistencies in adoption and reporting, making it difficult for QS firms to effectively integrate ESG principles into their business operations and project management strategies. Without clear guidelines, many QS professionals struggle to assess, implement, and communicate sustainability-driven cost management strategies effectively, which limits their ability to support Malaysia's sustainable development agenda.

Despite the increasing emphasis on sustainability, the widespread adoption of ESG practices in QS faces numerous challenges. One of the primary barriers is resistance to change. Many QS professionals and construction stakeholders remain hesitant to modify traditional cost management approaches in favor of sustainable procurement and ESG-compliant methodologies. This reluctance is often due to a lack of understanding of the long-term benefits associated with ESG integration. Additionally, stakeholder preferences pose another challenge, as clients and developers frequently prioritize cost efficiency over sustainability, limiting the willingness of QS firms to promote green building materials, lifecycle costing, and eco-friendly procurement. The financial constraints associated with ESG adoption further complicate the matter. Concerns about increased investment costs related to ESG compliance, sustainable materials, and green certification requirements create barriers, particularly for small and medium-sized enterprises (SMEs), which may lack the financial resources to invest in sustainability initiatives. Another significant issue is the knowledge and awareness gap. Many QS professionals have not received formal training or do not have a comprehensive understanding of ESG integration within cost planning, risk assessment, and lifecycle cost analysis, which limits their ability to advocate for sustainability-driven decision-making effectively.

Existing research on ESG disclosure has largely focused on its benefits for corporate stakeholders. Studies emphasize that transparency in sustainability reporting enhances business brand recognition, ensures long-term success, and strengthens contributions to society and the environment (Chen et al., 2023; Radzi, 2023; Hamid, 2024; Tang, 2023). While these studies provide valuable insights into the advantages of ESG disclosure, they do not adequately address the unique challenges, risks, and opportunities associated with integrating ESG into QS operations. Furthermore, the literature highlights that addressing resistance to change, enhancing stakeholder engagement, and improving knowledge dissemination are essential steps in promoting the adoption of sustainable practices within QS firms. However, without a structured disclosure mechanism, QS professionals struggle to effectively communicate their ESG-driven cost management strategies to clients, investors, and policymakers.

To bridge this gap, there is an urgent need to establish an institutional framework that facilitates the transparent and consistent disclosure of ESG practices within QS firms. Such a framework would enable QS businesses to assess and improve their sustainability performance through standardized reporting mechanisms, providing a structured approach to evaluating ESG compliance and its impact on project cost efficiency and long-term financial sustainability (Alsayegh et al., 2022). Additionally, a well-defined disclosure framework would help QS firms differentiate themselves from competitors by demonstrating their commitment to ESG-aligned project management and cost estimation models (Mohammad et al., 2021). Moreover, this framework would support policy development and industry best practices by offering clear guidelines on ESG compliance, sustainable procurement, and risk management strategies.

This study offers a comprehensive evaluation of the principles, benefits, and challenges of ESG disclosure for Malaysian Consulting Quantity Surveying Practices (CQSP). By addressing regulatory gaps, financial concerns, and industry resistance, the findings will contribute to the development of a robust ESG disclosure framework tailored for QS firms. Such a framework is essential for advancing sustainable development goals, enhancing corporate resilience, and driving long-term competitiveness within

Malaysia's construction industry. Ultimately, improved ESG disclosure practices within QS will not only enhance transparency and accountability but also position the industry as a key driver of sustainability, fostering a more responsible and resilient built environment.

Environmental, Social, and Governance (ESG) principles have gained significant traction as businesses and industries worldwide seek to align themselves with sustainability goals. In the construction industry, the integration of ESG practices is particularly crucial, given its substantial impact on environmental sustainability, resource consumption, and social well-being (Bolade-Oladepo et al., 2020). Quantity surveyors (QS) play a key role in cost management, procurement, and contract administration, making their engagement in ESG implementation critical for driving sustainable construction practices. However, despite the increasing awareness of sustainability, there remains a lack of standardized ESG disclosure frameworks specific to quantity surveying practices in Malaysia.

The Importance of ESG Disclosure in the Construction Industry

Sustainability in construction is rooted in balancing climate challenges, fostering social equity, and enhancing governance practices (Lima et al., 2021). ESG disclosure serves as a mechanism for businesses to communicate their environmental sustainability, social responsibility, and corporate governance strategies to stakeholders, investors, and regulatory bodies (Alsayegh et al., 2022). Studies have shown that transparent ESG reporting improves business credibility, attracts investment, and enhances long-term financial stability (Chen et al., 2023; Radzi, 2023).

The construction sector has been a focal point in global sustainability efforts due to its high carbon emissions, resource-intensive processes, and socio-economic implications (Hamid, 2024). The implementation of ESG reporting allows construction firms to mitigate risks associated with regulatory changes, environmental liabilities, and reputational damage while promoting sustainable procurement and responsible labor practices (Tang, 2023). However, the quantity surveying profession has yet to fully integrate ESG reporting within its operational and financial assessments, creating gaps in sustainability implementation.

Challenges in ESG Implementation and Disclosure

Despite its benefits, ESG adoption faces several barriers in Malaysian consultancy quantity surveying practices (CQSP). The literature highlights several key challenges:

- **Resistance to Change:** Many firms remain hesitant to adopt ESG practices due to concerns about increased operational costs, disruption of traditional workflows, and uncertainty regarding tangible benefits (Momade et al., 2018). This reluctance is particularly evident in small and medium-sized firms, where financial constraints limit investment in sustainability initiatives.
- **Stakeholder Preferences and Awareness:** Limited awareness and understanding of ESG frameworks among industry stakeholders hinder widespread adoption (Krantz et al., 2024). Clients and developers often prioritize short-term cost savings over long-term sustainability benefits, making it difficult for quantity surveyors to advocate for green procurement and lifecycle cost analysis.
- **Lack of Regulatory Standardization:** The absence of a standardized ESG disclosure framework tailored to the quantity surveying profession in Malaysia creates inconsistencies in reporting. Without clear guidelines on key performance indicators (KPIs) and reporting metrics, comparing sustainability performance across firms becomes challenging (Mohammed et al., 2020).
- **Investment Cost Concerns:** The perception that ESG compliance requires significant financial investment acts as a deterrent for many businesses. While sustainable construction materials and

technologies offer long-term cost savings, their higher initial costs discourage adoption among budget-conscious firms (Idris et al., 2015).

The Need for an ESG Disclosure Framework for CQSPs

To bridge these gaps, there is a growing call for the development of an ESG disclosure framework tailored specifically for quantity surveying practices in Malaysia. Such a framework should provide:

- **Clear Reporting Guidelines:** Establishing standardized metrics for ESG reporting will enable QS professionals to assess their sustainability performance systematically and communicate it effectively to stakeholders. International frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD) can serve as benchmarks (Alsayegh et al., 2022).
- **Integration with Malaysian Regulatory Requirements:** The framework should align with Malaysia's regulatory landscape, incorporating existing sustainability initiatives such as the Green Building Index (GBI) and the Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST).
- **Stakeholder Engagement Strategies:** Educating and engaging stakeholders—including developers, policymakers, and financial institutions—will facilitate greater acceptance of ESG reporting. Government incentives and funding mechanisms can encourage firms to adopt ESG principles without financial burden.
- **Technology and Digital Innovations:** Leveraging digital tools such as Building Information Modeling (BIM), blockchain-enabled cost tracking, and Artificial Intelligence (AI) for sustainability assessments can enhance the accuracy and efficiency of ESG reporting (Bolade-Oladepo et al., 2020).

Future Research Directions and Policy Implications

The literature underscores the need for further research in ESG disclosure for CQSPs, particularly in developing practical guidelines for implementation and evaluating the impact of ESG reporting on firm performance. Future studies should explore:

- **Best Practices from International Case Studies:** Examining ESG reporting frameworks in other countries can offer valuable insights into structuring Malaysia's framework.
- **Economic Viability of ESG Adoption:** Assessing the long-term financial benefits of ESG integration will help justify initial investment costs and encourage industry-wide adoption.
- **Policy and Regulatory Enhancements:** Research on policy interventions and incentive mechanisms will be crucial in shaping a regulatory framework that supports ESG disclosure without imposing excessive financial strain on businesses.

The integration of ESG disclosure within Malaysian CQSPs is imperative for fostering a sustainable construction industry. While challenges such as resistance to change, stakeholder awareness, and regulatory gaps persist, the development of a standardized ESG reporting framework can facilitate a smoother transition. By aligning with international best practices, incorporating digital innovations, and fostering industry-wide collaboration, quantity surveyors can play a pivotal role in advancing Malaysia's sustainability agenda. The findings of this literature review emphasize the need for continued research and policy intervention to establish a comprehensive ESG disclosure framework that enhances transparency, competitiveness, and resilience in the construction sector.

Methodology

A systematic literature review was conducted to identify relevant studies, frameworks, and best practices related to Environmental, Social, and Governance disclosure in the construction industry and other relevant sectors. This review involved searching electronic databases, such as Scopus, Web of Science, and Google Scholar, using keywords such as "Environmental, Social, and Governance disclosure," "sustainability reporting," "quantity surveying," "construction industry," and "Malaysia." The search results were screened based on predefined inclusion and exclusion criteria, focusing on studies that addressed the development, implementation, or evaluation of Environmental, Social, and Governance disclosure frameworks, sustainability reporting guidelines, or related topics. The review also considered relevant reports, guidelines, and standards issued by international organizations, government agencies, and professional bodies.

The results are based on the answers of professionals with different backgrounds, gender and position in the construction sector. The review of the articles was initiated by conducting a keywords search in Scopus database using the selected keywords: "supply chain"; "Building Information Modelling"; "con" (Gharaibeh et al., 2023). The compliance with government policy and industry guidelines has been the primary push factors to deliver green projects.

The extracted data were synthesized and analysed to identify key themes, gaps, and opportunities for developing an Environmental, Social, and Governance disclosure framework tailored to the specific needs and context of Malaysian consultancy quantity surveying practices.

Results

The findings of the systematic literature review indicate that while there is growing recognition of the importance of ESG disclosure in the construction industry, there is a lack of specific guidance and frameworks for quantity surveying practices in Malaysia.

The study reveals that the construction sector's activities inherently possess a significant environmental and societal impact (Prieto et al., 2022) with unique characteristics, encompassing intricate supply chains, resource-intensive processes, and significant waste generation, underscore the urgent need for sustainable practices (Kazemi et al., 2023). Other economic sectors are also relying on the construction sector's products and services to run their operations; hence, the sector is essential to the country's economy (Oladinrin et al., 2012). The construction sector's contribution to environmental degradation, societal labour welfare issues, and corporate governance transparency concerns necessitates a concerted effort to promote ESG consciousness among industry players (Wang & Xue, 2023).

The construction sector is without firm direction to disclose ESG practices, although the FTSE4Good ESG Rating (Bursa F4GBM 2014) by Bursa and the National Construction Policy 2030 (NCP2030, 2021) by the Construction Industry Development Board (CIDB) are in line with the national agenda to move the construction industry on the implementation of ESG. However, the existing frameworks and guidelines tend to be generic and do not adequately address the unique challenges and opportunities faced by quantity surveyors, such as their role in life-cycle costing, risk assessment, and value engineering (Llale et al., 2022). The research also highlights the need for greater awareness and understanding of ESG practices in the construction industry, specifically among quantity surveyors professionals. The existing literature suggests that ESG disclosure can bring significant benefits to CQSPs, including improved reputation, enhanced stakeholder engagement, and better access to finance (Mohammad et al., 2021). However, recognising these benefits requires a clear, consistent framework that aligns with the specific needs and contexts of the industry.

Discussion

The systematic literature review has revealed an urgent need for a tailored ESG disclosure framework that aligns with the specific operational context of Malaysian Consultancy Quantity Surveying Practices (CQSP). Without such a framework, CQSPs face significant challenges in meeting national sustainability goals and aligning with Malaysia's broader sustainability agenda. A well-defined framework would provide clear guidance on key performance indicators (KPIs) and metrics that quantity surveyors should report on, ensuring consistency, transparency, and accountability in ESG disclosures. Additionally, it should outline standardized reporting formats and channels to facilitate effective communication with stakeholders.

A comprehensive ESG disclosure framework must also address the unique challenges and opportunities faced by Malaysian quantity surveyors. These include the country's distinct regulatory landscape, cultural influences, and economic conditions, all of which impact the feasibility and implementation of ESG practices. The framework should be developed in close collaboration with key stakeholders, including quantity surveyors, clients, government agencies, and industry associations, to ensure its practicality, relevance, and broad acceptance. Engaging these stakeholders in the development process will enhance the framework's effectiveness and encourage widespread adoption across the industry.

The timing is particularly opportune for the construction sector to embrace new innovations and technological advancements in response to the global sustainability agenda (Llale et al., 2022). Additionally, sustainability principles should be systematically embedded within construction-related curricula, particularly in quantity surveying education, to cultivate a new generation of professionals who are well-versed in ESG integration (Llale et al., 2022). Aligning the proposed ESG disclosure framework with international best practices and standards, such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD), would further enhance its credibility and effectiveness. By committing to transparent and comprehensive ESG reporting, Malaysian CQSPs can strengthen their reputation, attract socially responsible investors, and contribute to the development of a more sustainable built environment.

The literature also emphasizes the need for regulatory bodies to assess the readiness and awareness of Malaysian accountants and financial professionals regarding integrated reporting (Mohammed et al., 2020). Past criticisms of social and environmental reporting—particularly the challenge of linking ESG impacts to financial outcomes—highlight the importance of an integrated reporting approach that combines both financial and non-financial information (Mohammed et al., 2020).

Moving forward, future research should focus on developing practical tools and guidelines to support the implementation of ESG disclosures in quantity surveying practices. This includes evaluating the impact of ESG reporting on firm performance, financial sustainability, and broader sustainability outcomes within the construction industry. A qualitative research approach is recommended as a preliminary step toward developing a robust framework for promoting sustainable construction in Malaysia (Idris et al., 2015). By addressing these gaps, a well-structured ESG disclosure framework can drive meaningful progress in sustainable construction practices and reinforce Malaysia's commitment to a greener and more responsible built environment.

Conclusion

This systematic literature review has underscored the critical role of ESG disclosure in enhancing the sustainability, transparency, and accountability of Malaysian consultancy quantity surveying practices. The review has also highlighted the key challenges that hinder the widespread adoption of ESG reporting, including resistance to change, stakeholder preferences, financial constraints, and inadequate awareness of sustainability principles. At the same time, the study has identified significant opportunities that ESG disclosure presents for QS professionals, including improved risk management, enhanced corporate reputation, and increased competitiveness within the construction industry. Recognizing these challenges and opportunities, this research has proposed a tailored ESG disclosure framework that aligns with the

unique needs and circumstances of Malaysian QS practices, providing a structured approach to integrating sustainability into cost management and procurement decisions.

The construction sector must now embrace ESG disclosure as an innovation essential to achieving sustainability goals and aligning with global best practices. International reporting frameworks, such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD), provide valuable benchmarks for developing a localized ESG disclosure model suited to Malaysia's regulatory and business. By adopting a standardized ESG reporting framework, QS firms can enhance their decision-making processes, improve stakeholder engagement, and contribute meaningfully to the nation's sustainable development agenda.

The findings of this research carry significant implications for various stakeholders, including quantity surveyors, developers, policymakers, and regulatory bodies. For QS professionals, ESG integration offers an opportunity to strengthen their role in sustainable cost management and lifecycle cost analysis, enabling them to provide more value-driven and responsible financial planning for construction projects. For clients and investors, transparent ESG disclosure can facilitate informed decision-making, ensuring that projects align with sustainability commitments and regulatory requirements. Additionally, policymakers can leverage this research to develop more effective sustainability regulations and incentives, encouraging widespread ESG adoption across the industry.

Ultimately, this research contributes to the broader discourse on sustainable construction and corporate social responsibility by offering insights into how ESG disclosure can drive resilience, equity, and environmental responsibility in Malaysia's built environment. Moving forward, continued research and industry collaboration will be essential to refining and implementing ESG frameworks that not only comply with international standards but also address the specific needs of Malaysia's construction sector. By doing so, QS professionals and industry stakeholders can play a pivotal role in shaping a greener, more transparent, and socially responsible built environment for future generations.

References

- Alsayegh, Maha Faisal, Rashidah Abdul Rahman, and Saeid Homayoun. 2020. "Corporate Economic, Environmental, and Social Sustainability Performance Transformation through ESG Disclosure." *Sustainability (Switzerland)* 12 (9). <https://doi.org/10.3390/SU12093910>.
- Aghmieni, D., Aigbavboa, C., & Thwala, W. D. (2019). Microscoping the challenges of sustainable construction in developing countries. In *Journal of Engineering Design and Technology* (Vol. 17, Issue 6, p. 1110). Emerald Publishing Limited. <https://doi.org/10.1108/jedt-01-2019-0002>
- Bangbade, J. A., Mohammed, K. A., & Nawi, M. N. M. (2016). Assessing the sustainable construction of large construction companies in Malaysia. In *AIP conference proceedings* (Vol. 1761, p. 20027). American Institute of Physics. <https://doi.org/10.1063/1.4960867>
- Board of Quantity Surveyors Act 1967 (Amended 2015).
- Bolade-Oladepo, Funmilola A, and Francis O Fasuyi. 2020. "Sustainable Built Environment: The Role of Quantity Surveyors." *IOSR Journal of Engineering (IOSRJEN)* www.iosrjen.org ISSN. Vol. 10.
- Chen, Zhongfei, and Guanxia Xie. 2022. "ESG Disclosure and Financial Performance: Moderating Role of ESG Investors." *International Review of Financial Analysis* 83 (October): 102291.
- Chopra, Shauhrat S., Sachini Supunsala Senadheera, Pavani Dulanja Dissanayake, Piumi Amasha Withana, Rajeev Chib, Jay Hyuk Rhee, and Yong Sik Ok. 2024. "Navigating the Challenges of Environmental, Social, and Governance (ESG) Reporting: The Path to Broader Sustainable Development." *Sustainability (Switzerland)*. Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/su16020606>.
- Gharaibeh, L., Matarneh, S., Eriksson, K., & Lantz, B. (2023). Digital transformation of the wood construction supply chain through building information modelling: current state of practice. In *Construction innovation* (Vol. 24, Issue 7, p. 273). Emerald Publishing Limited. <https://doi.org/10.1108/ci-05-2023-0124>
- Hamid, Nor Harlina Abd, and Shamsul Baharin Saihani. 2024. "Exploring Business Sustainability: ESG Pillars in Malaysia and the United Kingdom." In *Proceedings of the 9th International Conference on Marketing and Retailing (INCOMaR 2023)*, March 1-2, 2023, Kota Kinabalu, Sabah, Malaysia, 133:Nor Harlina Abd-26. European Publisher. <https://doi.org/10.15405/epsbs.2024.05.2>.
- Hamza Momade, Mohammed, and Prof Mohd Rosli Hainin. 2018. "Review of Sustainable Construction Practices in Malaysian Construction Industry." *International Journal of Engineering & Technology* 7 (4): 5018–21. <https://doi.org/10.14419/ijet.v7i4.26559>.

- Idris, N. H., Ismail, Z., & Hashim, H. (2015). TOWARDS A FRAMEWORK FOR PROMOTING SUSTAINABLE CONSTRUCTION IN MALAYSIA. In *Jurnal Teknologi* (Vol. 76, Issue 1). Muhammadiyah University of Jakarta. <https://doi.org/10.11113/jt.v76.2674>
- Kazemi, Maha Zadeh, Ahmed A. Elamer, Grigorios Theodosopoulos, and Saleh F.A. Khatib. 2023. "Reinvigorating Research on Sustainability Reporting in the Construction Industry: A Systematic Review and Future Research Agenda." *Journal of Business Research* 167 (November). <https://doi.org/10.1016/j.jbusres.2023.114145>.
- Krantz, T., & Krantz, T. (2024). The History of ESG: A Journey towards Sustainable Investing. IBM Blog. <https://www.ibm.com/blog/environmental-social-and-governance-history/>
- Kuok Ho, Daniel Tang. 2023. "A Review of Environmental, Social and Governance (ESG) Regulatory Frameworks: Their Implications on Malaysia. *Tropical Aquatic and Soil Pollution*. 3. 168-183. 10.53623/Tasp.V3i2.282. "
- Lima, Luanda, Emanuely Trindade, Luciana Alencar, Marcelo Alencar, and Luna Silva. 2021. "Sustainability in the Construction Industry: A Systematic Review of the Literature." *Journal of Cleaner Production* 289 (March): <https://doi.org/10.1016/J.JCLEPRO.2020.125730>.
- Llale, Josephine, David Root, and Paulin Wembe. 2020. "Experts' Perspectives on the Future of the Quantity Surveying Profession." *International Journal of Technology, Knowledge and Society* 18 (2): 35–44. <https://doi.org/10.18848/1832-3669/CGP/v18i02/35-44>.
- Mahat, N. A. A., Alwee, S. N. A. S., Adnan, H., & Hassan, A. A. (2019). Propelling Green Building Technologies Adoption in Malaysia Construction Industry. In *IOP Conference Series Earth and Environmental Science* (Vol. 233, p. 22032). IOP Publishing. <https://doi.org/10.1088/1755-1315/233/2/022032>
- Mohammad, W.M.W., Osman, M. & Rani, M.S.A. 2023. "Corporate Governance and Environmental, Social, and Governance (ESG) Disclosure and Its Effect on the Cost of Capital in Emerging Market. *Asian J Bus Ethics* 12, 175–191 (2023). <https://doi.org/10.1007/S13520-023-00169-2>."
- Oladinrin, T. O., Ogunsemi, D. R., & Aje, I. O. (2012). Role of Construction Sector impacts-engineering-construction.html
- Prieto, Robert, and Bob Prieto. 2022. "Environmental, Social and Governance Risks in the Engineering and Construction Sector Environmental, Social and Governance Risks In. Vol. XI. www.pmworldlibrary.net.
- Sheehan, Norman T., Ganesh Vaidyanathan, Kenneth A. Fox, and Mark Klassen. 2023. "Making the Invisible, Visible: Overcoming Barriers to ESG Performance with an ESG Mindset." *Business Horizons* 66 (2): 265–76. <https://doi.org/10.1016/J.BUSHOR.2022.07.003>.
- Wang, J., and F. Xue. 2023. "Emerging Trends of ESG in the Construction Sector Promising Pathway to Sustainable and Responsible Development ." *Proceedings of the 28th International Symposium on Advancement of Construction Management and Real Estate (CRIOCM2023)*.