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QUANTITY SURVEYORS AS ENABLERS OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE INTEGRATION IN THE MALAYSIAN CONSTRUCTION INDUSTRY

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Abstract

The increasing emphasis on sustainability in the Malaysian construction industry highlights the importance of Environmental, Social and Governance (ESG) practices as a structured approach to sustainable development. As a major contributor to Malaysia's economic growth, the construction sector faces growing pressure to balance economic performance with ESG considerations. This study explores the evolving role of Quantity Surveyors (QSs) as enablers of ESG practices in the Malaysian construction industry. ESG indicators from the FTSE Russell ESG Scores published by Bursa Malaysia were used to examine the alignment between ESG principles and QS professional practices across construction stages. A qualitative approach was adopted through semi-structured interviews with six middle-management professionals from contractor firms. The findings reveal that QSs contribute significantly to ESG implementation through green procurement, occupational safety and health (OSH), and ethical governance. However, implementation is constrained by resistance to change, supply chain limitations, reporting challenges, project characteristics, and limited client support. The study highlights the need for stronger governance, digital solutions, incentives, standardized ESG reporting, and greater involvement of professional bodies.

Keywords: Construction industry, ESG practices, Long-term value, Quantity Surveyors (QSs), Sustainability

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INTRODUCTION

In the construction sector, the integration of Environmental, Social and Governance (ESG) principles has increasingly been recognised as a comprehensive framework for advancing sustainable practices. In Malaysia's construction sector, ESG disclosure has become increasingly formalized through Bursa Malaysia's reporting requirements and frameworks aligned with FTSE Russell and the GRI. Within these disclosures, the social pillar, particularly regarding health and safety, consistently receives the highest reporting scores (Ahmad et al., 2021; Ngu & Amran, 2020; Sulaiman et al., 2024). Empirical studies suggest that strong governance mechanisms significantly enhance overall ESG performance by ensuring effective oversight, ethical conduct and responsible decision-making within organizations (Baran et al., 2022; Chodnicka-Jaworska, 2021). Governance mechanisms that promote transparency, accountability and effective monitoring are critical in guiding organizational behaviour and strengthening stakeholder confidence. Such governance practices not only support environmental and social performance but also contribute to the development of a more resilient and trustworthy built environment. Consequently, the environmental, social and governance pillars are widely regarded as interdependent components that collectively drive sustainable construction and long-term industry transformation.

In the Malaysian construction industry, ESG integration is gaining increasing attention as stakeholders align project delivery with sustainability agendas and regulatory expectations. As projects become more complex and sustainability-driven, construction professionals are required to expand their traditional roles to support ESG implementation. Among these professionals, Quantity Surveyors (Qs) are strategically positioned to support ESG practices through their roles in cost management, procurement, contract administration, and financial governance across the project lifecycle. Their involvement in decision-making enables them to influence sustainable procurement, resource efficiency, risk management, and ethical project practices. Existing literature indicates that project-level ESG performance in Malaysia's construction sector remains underexplored. To address this gap, this paper leverages the strategic positioning of Quantity Surveying (QS) practices to explore the role of QS professionals as enablers of ESG integration in construction projects.

LITERATURE REVIEW

Overview of ESG Practices in Construction Industry

ESG enables stakeholders to assess how firms manage risks and opportunities associated with environmental and social challenges while maintaining strong governance practices (Duuren et al., 2016). Its growing importance is evident in

the rise of ESG investing, reporting, and indicators, which collectively support transparent evaluation, comparability, and accountability across industries (Gong et al., 2023; Akomea-Frimpong et al., 2024). ESG investing applies sustainability criteria to guide investment decisions, while ESG reporting provides structured disclosure of organisational performance, and ESG indicators offer measurable benchmarks for assessing responsible practices. The increasing reliance on ESG ratings in global financial markets further underscores its role as a dominant tool for sustainability assessment, surpassing traditional approaches such as Corporate Social Responsibility (CSR) (Kamińska-Witkowska, A. & Matuszak-Flejszman, A., 2023; Lin, 2023).

The construction industry encompasses a broad range of activities, including the development of transportation systems, water infrastructure, and public facilities, alongside the production of construction materials (Scott et al., 2013). ESG practices are particularly critical due to the sector's significant role in economic development, infrastructure provision, and environmental impact. Effective implementation of ESG in this sector relies heavily on strong corporate governance, which underpins the ability to achieve sustainability goals, reduce greenhouse gas emissions, enhance resource efficiency, and improve worker welfare.

ESG Rating

A range of ESG evaluation methods and standards has been developed to facilitate systematic performance assessment, as summarised in Table 1 and Table 2. It provides structured guidance for measuring and reporting ESG performance across economic, environmental, and social dimensions (Gong et al., 2023; Kocmanova et al., 2012; Sulaiman et al., 2026). Collectively, these standards enhance comparability, reliability, and consistency in ESG disclosures, enabling stakeholders to evaluate corporate sustainability performance more effectively across industries and regions.

Table 1: Evaluation Methods

No.	Evaluation Method	Scope/ Indicator	Description
1.	Organization Global Reporting Initiative (GRI)	Economic, Environmental, Social	In 2006, the third version of Sustainability Reporting Guidelines (G3) was released and G3.1 which is an update and completion of the Guidelines' most recent generation was released in March 2011.
2.	United Nations Conference on Trade and Development (UNCTAD)	Corporate Responsibility	Issuing guidelines on corporate responsibility indicator including the measurement methodology.

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3.	Chartered Financial Analyst (CFA) Institute	Environmental, Social, Governance	Creating a manual for investors, proposing indicators of ESG practices which can be used in investment.
4.	The European Federation of Financial Analyst Societies (EFFAS)	Environmental, Social, Governance	As a company association financial analysts, it was appointed by the European Commission in integration of ESG factors into investment decision-making.
5.	International Federation of Accountants (IFAC)	Economic, Environmental, Social	Preparing a comprehensive performance features and key performance indicators within each of three pillars of sustainable development.

Source: Kocmanova et al. (2012)

Table 2: ESG Standards and Objects

Standard	Abbreviation	Scope	Industry	Target	Detailed Name
Global Reporting Initiative	GRI	ESG	Universal	All parties involved	GRI200, GRI300, GRI400
Sustainability Accounting Standards Board	SASB	ESG, Business Model	Industry assessment	Investors	SASB Standards
Organization for Standardization	ISO	ESG	Universal	All parties involved	ISO 9001, ISO 26000, ISO 14001, ISO 50001
Carbon Disclosure Project	CDP	Environment	Universal	All parties involved	CDP Standards

Source: Gong et al. (2023)

Bursa Malaysia introduced the FTSE4Good Bursa Malaysia Index (F4GBM) to recognise public-listed companies demonstrating strong ESG practices, serving as a benchmark for ESG-focused investment decisions while promoting transparency and wider ESG adoption (Atan et al., 2018; Maryssa et al., 2022). Inclusion in the index is determined using the FTSE Russell ESG Score Model (refer to Figure 1), which adopts a structured bottom-up approach to assess companies' exposure to and management of ESG risks across environmental, social, and governance pillars (Wong et al., 2022; Maryssa et al., 2022).

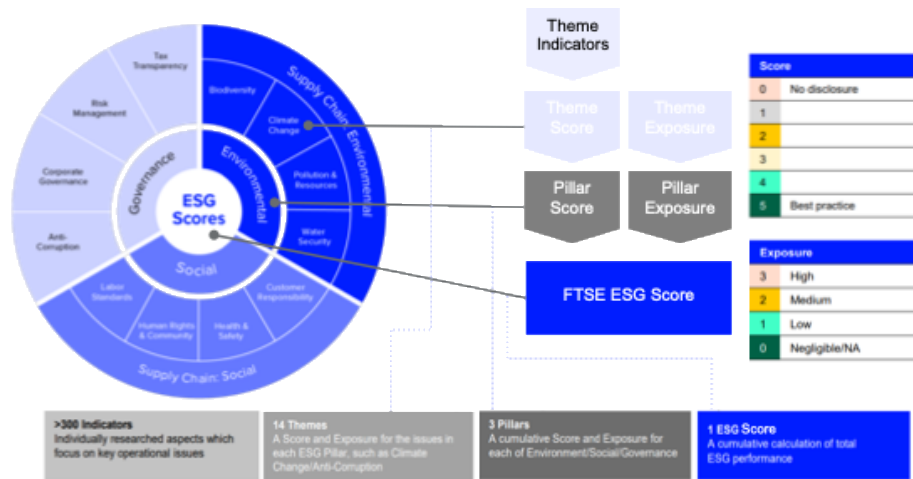


Figure 1: FTSE Russell ESG Scores
Source: LSEG (2025)

QS Practices as Enablers of ESG

This study employs the FTSE Russell ESG Rating as the primary framework to evaluate how quantity surveyors' (QS) professional practices or services align with ESG principles, highlighting their role as key enablers of ESG implementation. It systematically examines the evolution of traditional QS functions which historically centred on cost, time, and quality towards supporting broader ESG objectives such as environmental protection, social well-being, and governance transparency. According to the RISM (2021), QS services are broadly categorised into basic and supplementary services. This classification was used as the basis for analysing the alignment between QS professional practices and ESG principles.

QS often traditionally referred to as construction economists, are key professional advisors who collaborate with architects, engineers, contractors, suppliers, project owners, and financiers to manage cost, value, and contractual matters throughout the project lifecycle (Khan et al., 2024; Osunsanwo & Dada, 2019). Contemporary literature highlights a broad consensus that core QS professional responsibilities now encompass a comprehensive suite of strategic and operational tasks, most notably: cost planning, procurement advisory, tender evaluation, and contract administration. Furthermore, modern QS practice increasingly integrates advanced competencies such as value engineering, life cycle costing, post-contract valuation, and rigorous documentation and reporting. By executing these essential roles, increasingly supported by digital tools and ICT-enabled approaches, QS professionals safeguard financial probity, integrate

contractual and strategic considerations, and ensure sustainable, value-driven project delivery (Omotayo et al., 2022; Yap et al., 2021; Zhang et al., 2024).

In response to growing sustainability and ESG imperatives, QS practices are evolving beyond traditional cost management toward an integrated role that incorporates environmental and social considerations (Latif et al., 2020; Rahim et al., 2023). Highlighting this necessary adaptation, Omotayo et al. (2022) demonstrate how the QS profession is transitioning to meet the demands of sustainable construction within the Singaporean context. Ultimately, this shift positions QS professionals as critical contributors to ESG implementation, enhancing their advisory function by aligning project cost efficiency with broader sustainability objectives.

RESEARCH METHODOLOGY

Given the limited empirical evidence on the roles of Quantity Surveyors (Qs) in ESG implementation, this study adopts an exploratory qualitative research design to map and clarify their contributions. Qualitative methods are particularly appropriate in under-researched areas, as they enable an in-depth understanding of participants' experiences, perceptions, and professional practices (Njie & Asimiran, 2014). Accordingly, semi-structured interviews were selected as the primary data collection method, as they allow for rich and detailed insights while maintaining flexibility in probing relevant issues (Adams, 2007).

A minimum sample size of 12 participants was targeted, consistent with qualitative research recommendations for achieving data saturation while ensuring manageable and in-depth analysis (Laari et al., 2022). Each interview lasted approximately 45 minutes and was conducted face-to-face to minimise potential miscommunication. Where necessary, virtual interviews were conducted using platforms such as Microsoft Teams and Google Meet, depending on participants' availability. Prior to data collection, a pilot study was undertaken to assess the clarity, relevance, and comprehensibility of the interview questions.

Purposive sampling was adopted, targeting QS and management-level professionals in contractor firms within Kuala Lumpur and Selangor due to the high concentration of construction activities. Given that ESG implementation often entails higher upfront costs (Widia & Wibisono, 2024), the sample focused on large firms classified as G6 and G7 by the Construction Industry Development Board Malaysia (CIDB) and further restricted to publicly listed companies on Bursa Malaysia, reflecting stronger governance and mandatory sustainability reporting (Yang, 2023; Sulaiman et al., 2024). Company selection was guided by stock performance data from iSaham (2025), with firms ranked accordingly, and interviewees approached sequentially until the target sample size or data saturation was achieved.

This study explores the role of Quantity Surveying (QS) professionals as enablers of ESG integration in construction projects. To analyse and interpret the collected data, thematic analysis was employed due to its flexibility and broad applicability across qualitative research designs (Cedervall & Åberg, 2010; Mooney-Somers et al., 2008). This approach is highly appropriate for this study, as it facilitates the identification of recurring patterns within participants' perceptions and professional practices.

DATA COLLECTION, ANALYSIS AND DISCUSSION

Interviewees' Particulars

Based on iSaham (2025), 71 public-listed construction companies exist in Malaysia, with 64 G6 and G7 firms located in Selangor (45) and Kuala Lumpur (19). To recruit participants, 100 email and 60 LinkedIn invitations were sent to professionals from these companies, however within one month, as depicted in Table 3 only six agreed to participate. Similar to a study by Sulaiman et al. (2025), the limited participation was attributed to heavy workloads, confidentiality concerns, and restrictive HR policies in public listed companies. Ultimately, this limited participation mirrors existing literature: it highlights both the underexplored nature of project-level ESG performance in the Malaysian construction sector and the ongoing, complex adaptation required by QS professionals to meet sustainable construction demands. Tóth et al. (2021) argues that smaller participants can suffice when the information power is high due to focused aims and strong theoretical framing. Villarreal-Samaniego (2021) reinforces that even small, well-justified participants can yield rich qualitative insights when sampling is purposive and instrument design is rigorous. Furthermore, this sample size proved sufficient for qualitative inquiry; data saturation was achieved by the fifth interview, after which no new themes or insights emerged during subsequent analysis.

Table 3: Interviewees' Profile

Interviewee	Gender	Position	Years of Experience	Contractor's Grade
001	Male	Senior QS	6	G7
002	Female	Asst. Manager, Sustainability Department	5	G7
003	Male	Senior QS	12	G7
004	Female	Senior QS, Asst. Contract & Commercial Manager	10	G7
005	Female	Senior QS	5	G7
006	Female	Asst. Manager, Sustainability Department	3	G7

ANALYSIS AND DISCUSSION

The following thematic analysis findings, as illustrated in Figure 2, are structured around the roles of Quantity Surveyors (QS) across the three ESG pillars.

Main Theme 1: QSs' Roles in the Environmental Pillar

The findings show that all six interviewees recognised QS as key contributors to environmental sustainability in construction projects. Interviewee 001 emphasised their role in developing and managing green supply chains, including ensuring compliance with recognised certification standards, with the following excerpt:

“I am currently handling a terrace housing development that is subject to ESG requirements. Part of my role is updating the Green Building Index (GBI) score sheet every monthly. That means I need to track material orders like concrete and reinforcement bars, and making sure the relevant green certifications are in place to show compliance” (Interviewee 001)

Interviewee 005 highlighted their ability to bridge the cost-sustainability gap through value engineering and life cycle costing in evaluating green materials and approaches which supports earlier studies indicating that QS's roles have expanded beyond traditional cost management to include sustainability considerations (Ma and Luu, 2013).

“Quite often, green materials appear more expensive than conventional options, can be almost double the original budget. When that happens, clients usually ask us to justify the cost difference. That is where our role as QSs really come in. Instead of focusing only on upfront costs, we rely heavily on value engineering and life-cycle costing. We look at how the material performs over the entire building lifecycle, things like operational savings, durability, and lower maintenance.” (Interviewee 005)

Consistent with prior studies by Bonifazi et al. (2025) and Anifowose et al. (2013), the findings also emphasise QS's involvement in construction waste management and carbon-related practices. The views expressed by Interviewee 001, who noted that QS, particularly those who are site-based, are responsible for monitoring material usage, coordinating delivery schedules, and overseeing on-site waste segregation practices. They are also increasingly involved in embodied carbon assessment and documentation, reflecting a growing alignment with global sustainability practices.

Main Theme 2: QSs' Roles in the Social Pillar

Compared to the environmental dimension, QS's roles in the social pillar are perceived as less prominent, with only four interviewees recognising their contributions. Nevertheless, all respondents highlighted QS's involvement in occupational safety and health (OSH), indicating that this is the most visible social responsibility undertaken by QS. Their responsibilities include ensuring adequate provision of personal protective equipment (PPE), labour accommodation, safety signage, and compliance with safety requirements. Consistent with Anugwo and Okorie (2021), this observation emphasizes the crucial role of QS in driving health and safety (H&S) improvements within the industry.

In addition, interviewee 001, 003 and 005 emphasised that QS contribute to quality control by ensuring that construction materials comply with specifications and statutory requirements, including fire safety standards. Despite ongoing challenges in aligning costs with social sustainability goals, both this study and prior research emphasise the important role of QSs in budgeting for safety measures, monitoring their implementation, and ensuring compliance (Yang et al., 2021; Anugwo & Okorie, 2021; Aag & Latief, 2023).

“I remember at the early stage of my project, we organised a workshop specifically to brief site workers on ESG and QSHE requirements, which really helped set the right expectations from the start.” (Interviewee 001)

“It is also very important for us to make sure that all construction materials strictly comply with approved specifications and statutory requirements, such as fire safety standards. If materials do not meet fire or safety requirements, it directly puts occupants, workers, and also the public at risk.” (Interviewee 005)

Main Theme 3: QSs' Roles in the Governance Pillar

Similar to the social dimension, QS's roles in the governance pillar are perceived as less prominent, although four interviewees acknowledged their contributions. The findings suggest that increasing emphasis on transparency and traceability in the construction industry is reshaping QS practices. Interviewees 001 and 004 noted the growing use of digital procurement platforms to enhance transparency in tendering and payment processes, reduce information asymmetry, and strengthen accountability. These practices are supported by literature highlighting the role of e-procurement and e-tendering systems in reducing fraud, improving auditability, and enhancing governance standards (Aduwo et al., 2020; Gupta et al., 2020).

“Tender evaluations are guided by a structured scoring framework that looks at both technical requirements and ESG-related criteria, rather than simply awarding the contract to the lowest bidder... this digital and transparent procurement approach helps strengthen governance by improving fairness, accountability, and auditability, while also supporting ESG objectives through ethical sourcing and responsible contractor selection.” (Interviewee 004)

Furthermore, according to interviewees 005 and 006, Qs play an important role in documentation and record management to support ESG reporting and auditing. Their responsibilities include collecting and verifying ESG-related data, such as greenhouse gas emissions, and ensuring accurate documentation for submission to sustainability teams. This function is critical in strengthening the reliability and credibility of ESG disclosures, as robust documentation underpins effective audit processes and compliance with both financial and non-financial reporting requirements (Hossain et al., 2024; Fernández et al., 2025; Bamahros et al., 2022).

“From my experience, the challenge with ESG data collection is not just about gathering the information, it is also about managing the documents. A lot of ESG-related data is scattered across different sources, like site records, procurement documents, delivery orders, and consultant reports.” (Interviewee 006)

The FTSE Russell ESG scoring framework (Figure 1) comprises 14 themes and over 300 indicators, with each theme containing between 10 and 35 specific metrics. Consequently, based on the literature review, this study adopts these 14 overarching thematic areas as an analytical framework to examine and compare QS roles against established ESG standards. As illustrated in Figure 2, the overall findings map core QS roles (left) to these 14 ESG themes (centre). Furthermore, the right side of the figure details the specific practices identified by interviewees, e.g., green procurement and carbon accounting, demonstrating how QS professionals actively enable ESG integration in construction projects.

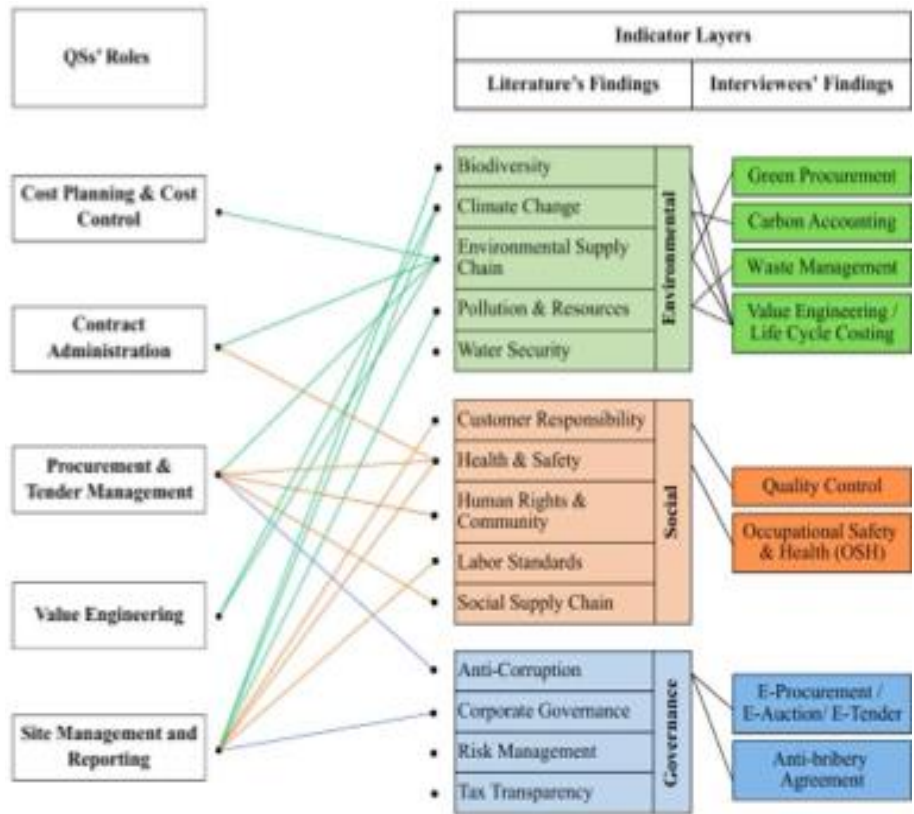


Figure 2: Interview Findings

CONCLUSION

By examining the alignment between QS roles and ESG principles, this study highlights the profession's pivotal role in advancing ESG integration within Malaysia's large-scale construction sector, particularly among G7 public-listed contractors. The findings reveal that Qs undertake multifaceted roles that significantly contribute to ESG implementation across all project stages. Environmentally, Qs advise on green material procurement and evaluate sustainable alternatives through value engineering. Socially, they safeguard worker and community welfare through stringent site safety and PPE provisions. In governance, Qs enforce transparency and accountability by maintaining confidential estimates, conducting fair tender evaluations, and validating ESG data for sustainability reporting.

To capitalise on this potential, construction firms are urged to integrate QS into their sustainability frameworks. Practically, this involves expanding the QS mandate to audit non-financial metrics for ESG reporting and embedding mandatory sustainability weightings into multi-criteria procurement evaluations. Furthermore, mandating LCC as an early-stage deliverable will ensure whole-life environmental value is prioritised over initial capital costs. Ultimately, by utilising contracts to enforce corporate ESG targets at the site level, QS professionals will act as vital anchors in the broader sustainability governance of construction projects.

To effectively implement ESG, QS must be well-versed in a wide range of ESG frameworks, standards, and regulatory requirements to support project-level application. Consequently, the respective professional bodies and contractor organisations must actively drive capacity building by embedding ESG-focused seminars, workshops, and industry forums into targeted continuing professional development (CPD) programmes. These structured, industry-led initiatives are essential for equipping QS professionals with the continuous learning needed to successfully operationalize ESG at the project level. Furthermore, integrating ESG principles into formal education is crucial, requiring close collaboration between construction professional bodies and universities or colleges to review and enhance existing curricula.

Overall, the study highlights that QS serve as enablers of ESG integration, bridging technical, financial, and regulatory aspects to promote sustainable construction practices. Their contributions position them as strategic drivers in advancing ESG agendas within the Malaysian construction industry. Future research may extend this line of inquiry by examining the roles of other construction professionals, such as architects and engineers, to provide a more comprehensive understanding of ESG integration across the industry.

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DISCLOSURE STATEMENT

The authors declare no conflicts of interest.

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