

Evaluating Environmental, Social and Governance (ESG) Practice Among Malaysian Public Listed Construction Companies Using FTSE Russell Rating Model

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Abstract

Implementation of Environmental, Social and Governance (ESG) in company strategy has become critical as it increases investors confident in the company. A company without ESG strategies will have problem on loss of intellectual capital, loss of customers, sales and decline in reputation. Failed to disclose ESG information perceived as having poor investments in high-risk sectors. Therefore, the purpose of this paper is to evaluate current ESG practices disclosed in annual reports and sustainability statements among 55 construction sector companies listed in Bursa Malaysia from 2021 until 2022. The investigation was conducted using content analysis based on ESG pillars and themes of FTSE Russell rating model. The rating model consists of 3 individual pillars and 14 themes. A binary scoring method was used, and the result was analyses in descriptive analysis. Based on the content analysis, the results indicate that social pillar has the highest percentage of ESG practice among the construction company with 64% score with the focus on health & safety. Environmental pillar practice remains the second highest score with 57.45% followed by governance with 55% score. The findings of this study are useful to investors, government agencies such as Bursa Malaysia and Securities Commission, industry, policy makers, and other related agencies. This study is among the first content analysis study on auditing ESG practices of construction sector in Malaysian public listed companies guided by FTSE Russell rating model.

1. Introduction

The Malaysian government has undertaken numerous proactive initiatives to adopt and execute the 17 Sustainable Development Goals (SDGs) introduced by the United Nations General Assembly (UN-GA) in the field of logistics, a significant sector of the economy, along with other economic industries. A governance structure that includes the involvement of multiple stakeholders and participatory decision-making processes has been implemented. This structure is overseen by the National Sustainable Development Goals (SDG) Council, with the Prime Minister serving as its chairman (Chien, 2023).

Considering these circumstances, there is a growing need to transform the conventional paradigms of the industry by incorporating SDGs and environmental, social, and governance (ESG) practices. The incorporation of ESG factors has emerged as a prevailing investment requirement within the context of public listed companies. This development can be attributed to increased levels of society and environmental consciousness and awareness (Brounen et al., 2020).

The construction sector performs an essential part in driving economic growth and has a significant impact on transforming the urban and rural environments of Malaysia. It confronts a critical juncture as it dealing with the complex dynamics of rapid urbanisation, increased awareness of environmental issues, and a changing socio-economic context. The alignment of environmental sustainability, social responsibility, and effective governance in the construction sector not only signifies a worldwide transition towards ethical business practices but also presents an opportunity to foster enduring growth, innovation, and resilience specifically in the Malaysian context. Contractors are obligated to engage actively within the environment, constantly improving the efficiency of the construction process, conserving energy, optimising water usage, and effectively managing various resources during the construction phase. Additionally, contractors must strive to minimise construction waste and proficiently oversee all associated operations (Abidin et al., 2020).

The ESG elements encompasses a trinity of factors that transcend the current project life cycle. Environmental considerations involve a range of concerns, including the release of carbon emissions, the effective management of resources, and the reduction of waste. Social issues comprise a range of factors that pertain to labour rights, worker safety, community engagement, and local economic development. The governance dimensions encompass several aspects such as ethical behaviour, transparent leadership, risk management, and the alignment of company operations with wider society objectives. Through the integration of these aspects into construction practices, stakeholders strive to maximise both financial returns and long-term societal and environmental effects. Nowadays, the measurement of organisational success is undergoing a transformation, embracing not only financial performance but also the evaluation of organisations' achievements in relation to ESG objectives. The process of effectively incorporating these concerns into the overall corporate business strategy is difficult and requires a substantial investment of time and money, along with collaborative efforts involving various stakeholders (CBRE Research, 2021). Providing productive working environments to the employee helps to increase visual impact and shifting the paradigm to add value to the company (Omar & Heywood, 2010). All the collaborative efforts, time and money investment are worth it when a company able to achieve many objectives such as establishing partnerships, promoting good health, ensuring justice, fostering peace, facilitating decent employment, and encouraging innovation by takes into account its own social and environmental responsibilities and formulates policies with the aim of fostering positive relationships (Chien, 2023).

In the context of Malaysia's developing construction sector, which covers a diverse range of projects including infrastructure development, residential construction, and commercial endeavours, the implementation of ESG practices brings up distinct potential and challenges. This study aims to explore and audit the current practice of ESG in Malaysian construction sector. This will be achieved through content analysis of sustainability statement of the annual reports.

2. ESG Practices in Construction Sector

ESG considerations in the global construction industry should be in accordance with the broader sustainability objectives specified in international agreements such as the United Nations Sustainable Development Goals (SDGs). Considering the growing global issues surrounding climate change, resource scarcity, and social injustice, it is imperative for the construction industry to prioritise the adoption of ESG principles. This commitment is essential to attain sustainable, resilient, and responsible development on a global scale.

Environmental pillar in construction involves the implementation of sustainable development principles across the whole life cycle of a building, covering activities such as planning, construction, raw material extraction and manufacturing, utilisation, demolition, and waste management. The method in concern is a comprehensive approach that seeks to maintain a state of balance between the natural environment and the built environment by establishing human settlements that are both suitable for inhabitants and promote economic equality (Yılmaz & Bakış, 2015).

Table 1 shows a difference practice of ESG in construction sector in a global scale. Based on the references, Europe had the most outstanding practice of ESG in its construction sector. Developers in Europe even had a detailed ESG reporting with separate sustainable report. Within the European construction sector, it was discovered that 72% of the companies have chosen to produce separate sustainability reports. Followed by Asia which amounts to 50%, while America has a little lower percentage of 43%. Meanwhile, 10% of developers in the Australasian region document their sustainability commitments through the use of dedicated sustainability reports (Afzal et al., 2017). These European developers seem to be motivated by ethical and moral factors which encouraged them towards adopting sustainability practices than the counterparts from other regions. The main distinctive attribute of this group is their successful integration of all three elements of sustainability into their business operations. These include performance measurement against set targets for waste minimization, high standards towards employee safety and training and publication of detailed sustainability reports. Meanwhile, American developers have demonstrated an important focus on sustainability by incorporating sustainability commitments and performance metrics into their annual reports. Their focus is mostly on greenhouse gas emissions, community fund raising and workplace safety and diversity. Result from Table 1 indicate that there has been an increase in the distribution of sustainability reports. However, it is noteworthy that the quality of these reports exhibits regional variations. This suggests that there is a growing acknowledgment among companies regarding the significance of disclosing their sustainability commitments and accomplishments (Afzal et al., 2017).

Table 1 Global ESG Practice in Construction Sector

	Asia	Europe	United States
Environmental	<ul style="list-style-type: none"> • Conservation & preservation of the environment. • Green Building Practices • New technology in construction. • Waste management • Reuse and recycle of resources. • Resource consumption. • General site management • Green Supply Chain. 	<ul style="list-style-type: none"> • Target for waste minimization. • Green Building Practices • Reduce energy consumptions in Building. • Renewal energy usage • Reduce Green House Gas emission. • Establish Environmental Certificate • Supports by Government Policies. 	<ul style="list-style-type: none"> • Monitor green-house gas emission. • Green Building Practices • Reduce energy consumptions in Building. • Establish Environmental Certificate. • Supports by Government Policies.
Social	<ul style="list-style-type: none"> • Occupational Safety and Health Policy. 	<ul style="list-style-type: none"> • Health & safety training to employee. 	<ul style="list-style-type: none"> • Work safety & diversity. • Community fund raising.
Governance	<ul style="list-style-type: none"> • CSR based sustainability management models for disclosure. • Risk Assessment. 	<ul style="list-style-type: none"> • Detailed sustainability reporting. 	<ul style="list-style-type: none"> • Sustainability report accordance to GRI.

Global ESG practices in social pillar is focus more on health and safety. In construction sector, prioritisation of health and safety measures not only safeguards the physical and mental well-being of workers, but also mitigates potential hazards, improves efficiency, and fosters the long-term viability and prosperity of construction projects and organisations. Mavroulidis et al., (2022) study show that most of the multinational companies included in the sample have focused their efforts on a limited range of occupational health and safety (OHS) concerns in order to ensure the transparency of the disclosed information. These concerns primarily pertain to OHS governance, rates of accidents and illnesses, training hours, third-party assurance, and participation in externally produced OHS charters. Increased of transparency of the disclosed information and communication from construction companies to stakeholders positively impacts responsibility levels, hence enhancing operational efficiency and contributing to the overall improvement of the economic and social system. Meanwhile, in Park et al., (2023) study show that cultivation of construction professionals, enhancement of the job training system, and the limitation of serious accidents and safety incidents were all socially significant factors within South Korean construction companies. On the contrary, global construction companies have demonstrated a notable emphasis on matters pertaining to ethical and environmental management, particularly when viewed from an organisational perspective. However, on a global scale, social practices observed in construction sector are in accordance with the overarching objectives of sustainable development and corporate

social responsibility. These practices play a significant role in enhancing social well-being, fostering community development, and promoting a construction industry that is characterised by fairness and inclusivity.

Good corporate governance practices help construction companies adhere to the utmost ethical standards in their operations. Transparency, honesty, and a steadfast dedication to honest and equitable practices are essential in an industry that frequently faces the risk of corruption and unethical conduct. In Asia, among of the 427 cases of bribery in the field of international business that were examined, it was seen that 15% of these cases were specifically associated with the construction sector (Cicchello et al., 2023). The figure shows that to commit bribery in construction project in Asia is quite common. This unpleasant practice can be avoided and further prevented by sustainability reporting practices. It has been shown that there exists an inverse relationship and risk-taking reduction between the perceived extent of corruption and the sustainability reporting practices of firms (Cicchello et al., 2023; Tran, 2022). In the past, construction companies are less interested to disclose their corporate governance information (Chang et al., 2006). However, nowadays, disclosure of corporate governance information among construction companies has greatly improved. This is due to recent study has proved that there is significant influence of corporate governance strategies on the performance of firms within the CIDB building business in Malaysia is significant (Azhar Hussain & Razak Abdul Hadi, 2018). The study further revealed that variables such as board size, board composition, compensation committee, risk management committee, and gender diversity do not exhibit a statistically significant influence on a firm's performance. The relationship between duality and audit committee is found to have a notable favourable impact on a firm's performance.

2.1 ESG Practices in Malaysian Construction Sector

Bursa Malaysia has classified the construction sector as companies that actively engaged in the construction of commercial and residential buildings, infrastructure such as railways, highways, roads and providers of building construction-related services such as architects, interior design. Construction projects help foster economic growth and facilitate employment opportunities (Alhashmi & Omar, 2023). Its critical roles have given the construction sector a spotlight due to its environmental and social impact, regulatory requirements, and the growing importance of sustainability in the global business environment. This situation has caused construction companies are under increasing pressure to commit and report on the overall sustainability performance of operational initiatives (Afzal et al., 2017). By disclosing their ESG performance, construction companies may demonstrate their commitment to responsible practices, acquire a competitive advantage, and contribute to Malaysia's sustainability objectives.

Construction companies in Malaysia really need ESG in their daily operations because of its nature of business. The nature of construction sector in Malaysia has extremely intensive labour and has a very large spectrum of stakeholders and each stakeholder is of critical importance for the completion of the construction chain (Zainordin et al., 2015). Construction project required a lot of local and foreign labour force and acquisition of new area for development which involved multiple parties that will be affected by the development such as the environment biodiversity itself and changes in social pattern at the surrounding area. Moreover, due to its extreme labor-intensive sector, studies show that the construction sector has result in excessive carbon emissions and generated 40% of waste materials, 12% of water and used the world energy by 40% (Chua & Oh, 2010). As a result, the world is dealing with the challenges of global warming and the depletion of the ozone layer, mainly caused by the emission of air pollutants, due to excessive carbon emissions. For this reason, it is important for contractors to contribute their commitment to maintain the ecosystems in the area, healthy working environment and preserve the health and well-being of the employees.

The sustainable construction industry covers various key features, including the utilisation of natural resources, effective waste management and recycling practices, the repurposing or reuse of existing buildings and materials, enhanced efficiency within the construction sector, and considerations of the building's cost of ownership (Abidin et al., 2020). Application of sustainable construction principles would result in the development of the built environment with a heightened level of environmental awareness and sensitivity. Moreover, sustainable construction in building development has been identified as the current trend in environmental protection due to its demonstrable positive influence on the environment (Saharuddin et al., 2022). As a result, sustainable construction has been address as 'green construction', which describes the responsibility of the construction industry in attaining sustainability (Abidin et al., 2020). Implementation of sustainable construction practices may encourage a sense of environmental conservation, a heightened awareness among stakeholders, and financial success (Zainordin et al., 2015).

In Abidin et al., (2020) study has successfully identified and validated the generic environmental methods that may be independently adopted by contractors in Malaysia. The solutions discussed are seen as an expression of the significance attributed to the conservation and preservation of the environment. This recognition started from the concerning repercussions that the construction sector has had on the environment. This research managed to outline five (5) main environmental strategies namely waste management, reuse and

recycle of resources, general site management, resource consumption and protection of the natural environment.

The competitive nature of the construction sector has made having skilled workers lead to successful projects. However, to train workers towards sustainable construction required a lot of cost. Result from Zainordin et al., (2015) show majority of respondents, specifically 71.43%, agreed that the substantial expenses associated with training the workforce on novel methods and technologies for the purpose of achieving sustainable development could potentially hinder the successful execution of project. In addition, it further shows that 67.14% of respondents reported a perceived lack in training provided to various stakeholders in the construction industry about sustainable building materials and development. Even sustainable practice required a lot of cost, sustainable construction practices involve the deliberate incorporation of strategies aimed at ensuring enduring resilience in the face of environmental and social difficulties over an extended period of time. Being prepared can serve as a safeguard for investments against unforeseen circumstances, such as severe weather occurrences or regulatory modifications, thereby guaranteeing a consistent return on investment (ROI) in the long run.

As one of the developing Asian nations, Malaysia has demonstrated substantial and consistent economic growth concentrated on addressing environmental, social, and economic matters. Malaysia's sustainable development journey has begun in the 1970s and has continued ever since with the adoption of multiple efforts to achieve the 2030 vision (Khan et al., 2021). However, even Malaysia has begun to concentrated on ESG and sustainability efforts since before, in construction sector the availability of a practical guideline for the application of sustainable construction methodologies is still lacking (Abidin et al., 2020). This is because there is lack of rational approaches to sustainable strategies that can be implemented by contractors to address environmental issues at construction. Besides, sustainable construction in Malaysia requires more times and cost investment which becomes the main challenges among Malaysian developers (Saharuddin et al., 2022). In conclusion, the implementation of sustainable practices within the construction sector in Malaysia has the potential to yield significant financial benefits. These benefits include cost reduction, enhanced property values, access to financial incentives, improved reputation, and increased operational efficiency. Although there may be upfront expenses involved with implementing sustainability measures, the long-term advantages generally surpass these costs, rendering sustainability a financially prudent choice for construction projects in Malaysia.

3. FTSE Russell Rating Model

This study used FTSE rating model from Bursa Malaysia as the main guideline. The FTSE rating model provide objective ESG exposure and performance data that is based on clear and easy to apply methodologies (FTSE Group, 2015). The FTSE Russell rating model was divided into three individual pillars which are environmental, social and governance. From 3 individual pillars, it's been narrowed down to 14 themes scores, as stated in Table 2. Themes score for environmental pillar in FTSE Russell rating model are biodiversity, climate change, pollution & resources, water use and supply chain. Meanwhile, social pillar has 5 themes. They are customer responsibility, health & safety, human right & community, labour right and supply chain. The last pillar is governance pillar with anti-corruption, corporate governance, risk management and tax transparency as themes.

Table 2 FTSE Russell rating model

ESG		
Environmental	Social	Governance
<ul style="list-style-type: none"> • Biodiversity • Climate change • Pollution and Resources • Water Use • Supply Chain 	<ul style="list-style-type: none"> • Customer Responsibility • Health and Safety • Human Right and Community • Labor Standard • Supply Chain 	<ul style="list-style-type: none"> • Anti-corruption • Corporate Governance • Risk Management • Tax Transparency

3.1 Environmental Pillar Sustainability

Environmental sustainability can be achieved by implementing strategies and practices such as the conservation of energy, water, and natural resources through practices such as reusing, recycling, innovative design, and waste and pollution reduction, as it is possible to fulfil our present needs while safeguarding the requirements of future generations (Jin et al., 2019; Bohari et al., 2015). When companies are aware of their environmental responsibilities and adhere to regulations to mitigate the negative environmental impacts of the resources they

use and practices they employ, they can achieve many SDGs such as clean sanitation, a clean climate and water, healthy food, good health, social well-being, and natural resource security, among others (Singh & Shaik, 2021; Yang et al., 2022). All the initiatives executed by the company would be disclosed in their company's report as one of requirement from Bursa Malaysia since 2015.

The other main reason why companies disclosed their sustainability initiatives is to demonstrate to their stakeholders that they are environmentally responsible and committed to sustainable development. Environmental disclosure can also affect the future performance, uncertainties, and risks of the company. Furthermore, environmental reporting can be a tool to provide environmental information to fulfil companies' accountability relationships with multiple stakeholders and to demonstrate corporate awareness to the environment (Jaaffar et al., 2018). However, even the demand of environmental disclosure among stakeholders has increase, the level of environmental information in Malaysian businesses is still very low, and its correlation with actual environmental performance is ambiguous (Jaaffar et al., 2018).

The most recent themes that have the main attention recently is climate change. Jaaffar et al., (2018) study proved that Malaysian corporate environmental reporting practices are moving towards conformity due to institutional pressures stemming from concerns about climate change. From content analysis of the study, it is further show that the most prevalent non-compliance environmental strategies adopted by the sample firms are in environmental management of energy used in operations and environmental management practices related to environmental expenditure. This result is expected, as renewable energy technology in Malaysia is still in its early stages. However, in other study by Albertini, (2013) assert that there are several strategy of environmental responses to institutional pressures related to climate change concerns. They are beyond-compliance environmental strategy (voluntarily going beyond institutional pressures related to climate change concern), compliance environmental strategy (compliance to institutional pressures related to climate change concerns) and non-compliance environmental strategy (noncompliance strategic behaviour to institutional pressures related to climate change concern).

Other common issues for environmental are pollution & resources. Lee et al., (2022) study to evaluate the environmental performance of existing and alternative waste management technologies available in Malaysia in the form of net greenhouse gas (GHG) emission in term of carbon dioxide. The study noticed that the main difficulties encountered by the government in establishing a sustainable solid waste management framework, especially for plastic waste, are the lack of viable waste management options and the ineffective implementation of waste policies. In this case, Malaysian should have an alternative technology to have the potential to reduce reliance on landfills and served as the foundation for the development of an environmental sustainability framework for plastic waste management.

Water use is another issue encountered by us globally. Our global economy depends on clean water, and since 2012, water disasters have always been ranked among the top five most dangerous global risks (World Economic Forum, 2018). For this reason, it is vital for companies to improve their corporate water use to ensure water access, reliability, and availability. Effective water management has the capacity to assist corporations in mitigating operational disruptions, unforeseen legal responsibilities such as contamination issues, confrontations with stakeholders, competitiveness with industry peers, and fostering enhanced investment opportunities (CDP Global Water Report, 2018). In Peru and its similar region, companies experienced water risks are worsened by the prevailing social context, which is characterised by high levels of poverty and vulnerability in terms of livelihood. Consequently, any potential alterations in the availability or accessibility of water resources are expected to disproportionately affect communities in these areas, in comparison to more developed regions (CDP Global Water Report, 2018). The water scarcity issue in Peru amplifies existing societal inequalities. Insufficient access to clean water and sanitation disproportionately impacts indigenous tribes and marginalised urban groups. The presence of this societal inequity promotes a recurring pattern of economic disadvantage and sensitivity.

Finally is supply chain. The green supply chain is a concept within supply chain management that aims to promote environmental sustainability through the implementation of various sustainable practices. These practices include green purchasing, green transportation and distribution, green manufacturing, green construction activities, and the management of products' end-of-life (Mojumder & Singh, 2021). The successful implementation of a green supply chain can yield numerous advantages, such as financial savings, diminished ecological footprint, enhanced brand image, heightened consumer allegiance, and adaptability to regulatory shifts. This coincides with the increasing consumer demand for environmentally friendly products and contributes to worldwide initiatives aimed at addressing climate change and advancing sustainability.

3.2 Social Pillar Sustainability

Social sustainability practices involve a variety of initiatives and methods that are designed to foster the overall welfare, inclusiveness, and fair advancement of society. These practices have been specifically formulated to effectively tackle societal difficulties, mitigate inequities, and augment the overall standard of living. Delivering

and operating a socially responsible built environment demands more than innovative design and technology. To enhance the overall welfare of individuals and social, it is crucial to establish sufficient support systems, implement programmes that raise awareness, and provide accessible psychological services (Hussein et al., 2023). Environmental management, human resource management, health and safety, corporate governance, supply chain management, human rights protection, customer satisfaction, and community engagement should receive a higher priority (Evangelinos et al., 2016). Therefore, there is a need for performance measurement for social practices and disclosure. Social performance indicators primarily focus on labour practices within organisations, specifically measuring rates of injury, occupational accidents, and work-related absences. Additionally, these indicators assess internally produced programmes aimed at managing workforce skills and promoting lifelong learning. Reports do not adequately address concerns related to the protection of human rights. Evangelinos et al., (2016). conducted research to explore the status for corporate social responsibility disclosure in UK. Result of the research show that only a single company provides disclosure regarding investment agreements that incorporate human rights clauses or have undergone human rights screening. Additionally, two companies offer information on suppliers and contractors that undergo screening for human rights considerations.

Some countries are obligated to certain legislation acts that regulate the Occupational Health and Safety (OSH) in a company. In Malaysia, the construction industry is governed by three primary legislative Acts that pertain to occupational safety and health. These Acts include the Occupational Safety and Health Act 1994 (Act 514) (OSHA), the Factories and Machineries Act 1967 (Act 139) (FAMA), and the Construction Industry Development Act of 1994 (Act 520). Hence, OSH disclosure as social sustainability practices are common among companies. In another study on responsibility for disclosed OHS information by Mavroulidis et al., (2022), result of the research show that the achievement of accountability among the selected companies is accomplished by the implementation of OHS policies, plans, and programs, as well as through endeavours aimed at fostering a work environment that priorities safety and well-being. The G4-DMA indicator's high score of 67.1% suggests that a significant number of the construction companies included in the sample have effectively incorporated OHS concerns into their strategic management practices. In other words, social disclosure serves as a mechanism for both transparency and a potent instrument for cultivating trust, bolstering reputation, recruiting conscientious investors, and effecting constructive change within society.

The alignment with the values of social responsibility and ethical business practices ultimately yields benefits for both organisations and their stakeholders. Furthermore, implementation of customer responsibility themes could improve collaboration between service provider and internal customer ultimately impacts the company's ability to satisfy or exceed the needs and expectations of external customers (Omar & Heywood, 2014). With this approach, an organisation can be conceptualised as a series of connected distinct parts that collaborate to meet the needs of external customers. Hence, the satisfaction of all stakeholders within the organisation can be achieved.

3.3 Governance Pillar Sustainability

Majority of the Sustainable Development Goals (SDGs) primarily focus on social and environmental governance, however, with absence of corporate governance, which ensures financial development, puts the achievement of social and environmental performance is unachievable (Chien, 2023). The governance pillar is a fundamental component within the corporate world, including a range of factors that contribute to the integrity and performance of an organisation. In governance, emphasising the importance of anti-corruption initiatives, corporate governance frameworks, risk management procedures, and tax transparency measures as essential elements.

Bribery and corruption are significant issues included under the authority of sustainable governance. Corruption poses a significant obstacle for organisations seeking to adopt sustainable business models, restricting their ability to effectively incorporate social and environmental practices and regulations (Cicchello et al., 2023). Therefore, it is important for companies to implement comprehensive anti-corruption procedures and practices in order to protect the reputation and interests of its stakeholders based on the ESG paradigm (Cardoni et al., 2019; Saenz & Brown, 2018). One of the options to implement a comprehensive anti-corruption practice is by involving in anti-corruption disclosure. The disclosure of anti-corruption measures generates a "remedial impact" on the legitimacy of an organisation subsequent to the appearance of corrupt practices (Cardoni et al., 2019). In addition, other study show that there is relationship between corporate risk-taking and corruption, and reveals that the practice of information disclosure serves as a mitigating factor in the impact of corruption on risk-taking behaviour (Tran, 2022). Anti-corruption disclosure enables a corporation to actively recognise and mitigate any corruption risks. By implementing this approach, it has the ability to mitigate an increase of possible concerns, hence leading to a decrease in the financial and reputational risks that are frequently associated with corrupt practices. In contrast, the presence of unethical behavior within an organisation can foster a cultural environment that is conducive to such practices. This, in turn, may hinder the

organization's ability to effectively manage risks, thus exposing it to a range of financial and non-financial hazards.

Next is risk management. Risk refers to the possibility of negative outcomes resulting from the failure of company decisions. These outcomes may include economic or financial losses or gains, threats to health and safety, environmental harm (such as in the context of climate change), or delays arising from the pursuit or avoidance of specific courses of action. Examples of such courses of action include keeping pace with technological advancements, adapting to changes in the workplace and workforce, and meeting community expectations. As a result, risk policies and risk management serve a crucial role in ensuring effective governance (Armstrong & Li, 2022). The two key elements of risk management comprise the effective allocation and utilisation of resources, as well as the proficient management of stakeholders. The former refers to various aspects of corporate management, such as investment management, diversification, innovation, and the organization's relationships with the external political, legal, and social environment. It also covers administrative systems, including debt management, technology, such as information systems, and human resources, specifically the loss of skilled personnel (Armstrong & Li, 2022).

In general, good governance requires equity, transparency and responsibility. Accountability in governance is the acceptance and assumption of responsibility for actions, products, decisions, and policies, including the administration of those responsibilities. Nevertheless, good governance practices have been proposed to support risk management policies and practices, such as the formal and annual assessment of entity (and organisation) executives, monitoring of performance with appropriate measures, and reporting of actions taken in response (Armstrong & Li, 2022). These practices serve as essential for maintaining trust, promoting accountability, and driving sustainable business expansion. It contributes to the long-term success and sustainability of businesses by benefiting not only shareholders but also other stakeholders.

4. Methodology

This study employed a qualitative content analysis methodology to examine the sustainability statements of listed companies' annual reports, which were accessible via their corporate websites or the Bursa Malaysia website. Our sample comprised the 55 Malaysian construction companies listed in Bursa Malaysia, resulting in 110 firm-year observations from 2021 to 2022. These companies were selected because an amendment to Bursa Malaysia Securities Berhad's main market listing requirements regarding non-financial information disclosure was made in 2016 which is accessible for the sample year. The amended listing requirements requested all Malaysian companies listed in Bursa Malaysia Securities Berhad to disclose sustainability-related information in their annual report for the year ending on 31 December 2016 (Bursa Malaysia, 2015). Furthermore, FTSE Russell rating model has provide objective ESG exposure and performance data that is based on clear and easy to apply methodologies into investment decision making (FTSE Group, 2015). Analyzing and evaluating the level of disclosure of environmental, social and governance information under the FTSE Russell rating model of the 55 Malaysian construction companies provides insights into leading companies' sustainability reporting practices and offers implications for others in the business landscape. Conducting a construction sector analysis allowed us to identify common disclosure trends in the industries.

Following the FTSE Russell rating model, the model meticulously examined each accessible sustainability statement of annual report, specifically seeking data relevant to ESG. This research employed a binary scoring system, assigning a "1" if a company demonstrated a particular sustainability attribute or a "0" if otherwise. The scores for each pillar and themes within the FTSE Russell rating model were then summed up, with the average score in construction industry. To calculate average scores, the total scores in construction sector were divided by the number of observations within that sector. This content analysis process consisted of two phases. The first phase involved researcher identifying sustainability-related information, providing screenshots for verification, and assigning preliminary scores. Then, the researcher reviewed these scores in the second phase to ensure they met the defined criteria. Fig 1 shows the overall flow of data collection and methodology process. The metric scores are rolled up into environmental, social and governance pillar and subsequently into the smaller themes scores.

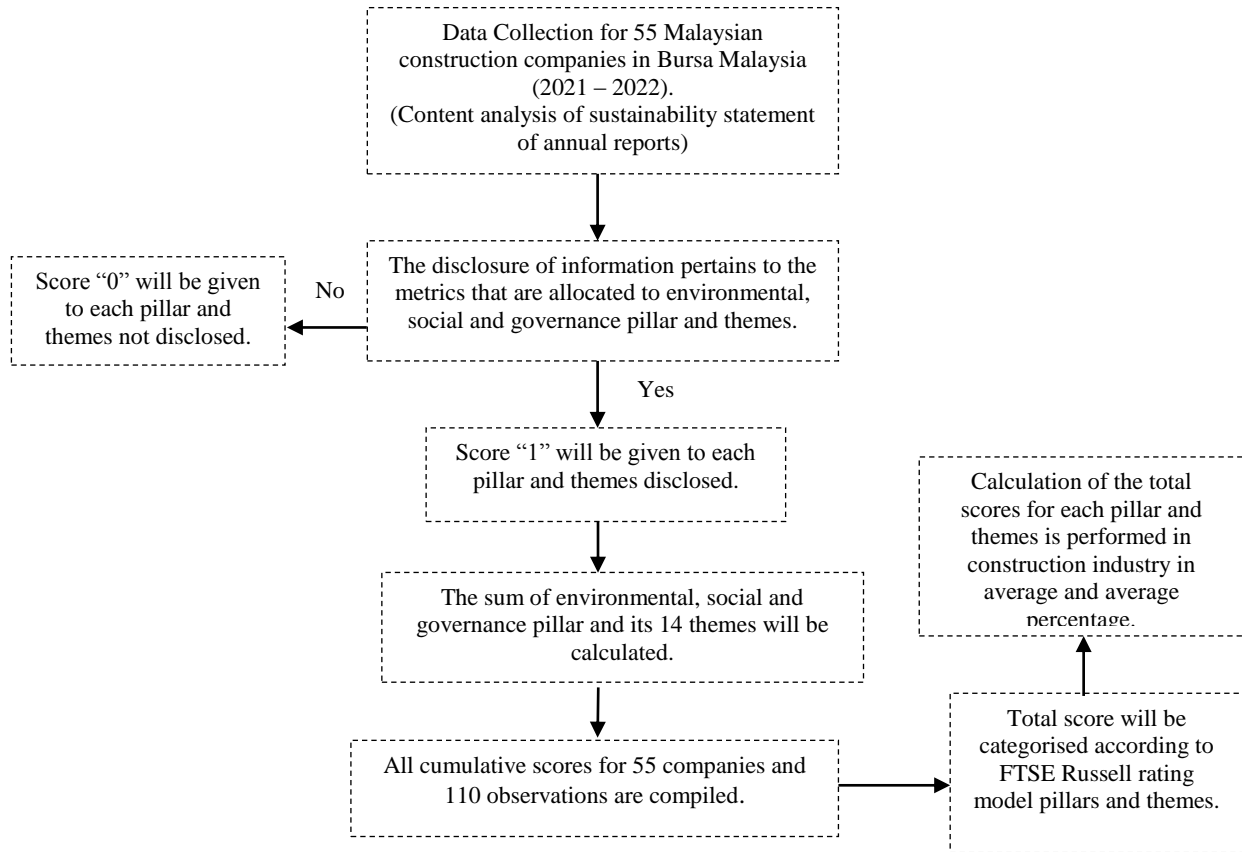


Fig. 1 Data Collection and methodology process

In Lac (2016) study informed that process of coding can be deductive by using formal or informal theories, frameworks, models or prior literature are used and advise the themes of coding variables. Therefore, in this research the extracted ESG information from the sustainability statement were analysed and grouped using thematic analysis according to ESG pillar and themes from FTSE Russell rating model. The formed themes are then analysed using descriptive analysis to get its frequency and percentage. From the results of this analysis, the researcher was able to code the answers to questions concerning the current ESG practice in Malaysian construction sector to assess the success of the sustainability statement as a vehicle for knowledge transfer.

5. Result and Discussion

5.1 Environmental Pillar Practices

Table 3 shows the result for environmental themes practices. From the table, it shows that the highest score is pollution & resources with score of 43% from all the criteria listed in environmental pillar. Almost half of the companies in construction sector adopted pollution & resources practices demonstrates that this sector has fair performance in reducing pollution and optimising resource utilisation. The construction sector in Malaysia has a lot of waste materials at its construction sites. Therefore, most developers have their own practices for disposing of all the construction waste material and their practice must comply with existing environmental policies, such as the Environmental Quality Act 1974. Developers are also active in exploring new alternatives in construction technology to reduce construction waste material, such as adopting the Industrialised Building System (IBS) to decrease their waste material production. Nevertheless, 57% of companies in this sector failed to adopt this theme. This shows that the implementation of this theme in their daily business operation is still weak and not comprehensive.

Secondly, climate change theme managed to score 33% from the overall criteria. This reveals a relatively greater dedication towards addressing climate-related challenges within the industry since more than half, 67% of the companies did not perform climate change practices. Due to the nature of construction companies that consume massive amounts of energy with their heavy machinery in their daily operations, some developers have likely taken steps to adopt energy-efficient practices and possibly invest in renewable energy sources. For this reason, Malaysian developers will regularly service and maintain their machinery to avoid any excess fuel usage when operating the machinery daily. Alternatively, developers with an established background tend to

install solar energy panels as an alternative energy resource that is more environmentally friendly, as solar energy helps reduce greenhouse gas emissions.

Next is biodiversity. The score of 23% for biodiversity indicates that less companies in the Malaysian construction industry have acknowledged the significance of preserving biodiversity. Business in the construction sector frequently involves the acquisition of new land area. The acquisition process needs to involve an independent consultant or government body to access and measure the environmental impact derived from the acquisition and construction projects. The result of this assessment is important because it helps developers create long-term value by mitigating risks, identifying gaps, and regulating their impact on the environment. Meanwhile, 77% of companies did not perform biodiversity practices in their operations, mostly due to the high expenses needed for biodiversity practices.

Table 3 Environmental practices in Malaysian construction sector

Sub-Element	Thematic Practices	Frequency out of 55	Frequency %	Average % of Sub-Element
Pollution and Resources	Pollution and Waste Prevention	42	76%	43%
	Good Waste Management	36	65%	
	Adherence to Policy and Regulations	23	42%	
	Technology Advancement	14	25%	
	Environmental Impact Assessment	13	24%	
	Promote Awareness	13	24%	
Climate Change	Energy consumptions or efficiency	27	49%	33%
	Technology improvement or maintenance	25	45%	
	Renewable Energy	22	40%	
	Reduce Carbon Emission	19	35%	
	Management Action to Promotes Awareness	10	18%	
	Climate Assessment or Policy Adherence	5	9%	
Biodiversity	Conservation & Preservation of Flaura & Fauna	17	31%	23%
	Adopt Green Policy	12	22%	
	Biodiversity Assessment	11	20%	
	Green Building Practice	10	18%	
Water Use	Water Management & Maintenance	20	36%	21%
	Water Efficiency & Conservation	18	33%	
	Alternative Sources from Water	17	31%	
	Technology Advancement	7	13%	
	Adherence to Policy & Regulations	5	9%	
	Water Use Awareness	3	5%	
Supply Chain	Supplier Assessment	4	7%	6%
	Green Supply Chain	3	5%	
	Established a Guideline or Policy	3	5%	

Meanwhile, the water use theme managed to score 21%. The result shows that the companies recognise the significance of water management in their daily operations. However, the initiatives to execute this practice are not well diverse around the sector because 79% of companies do not disclose their water use practices. In construction, water is important to support their daily operations, such as controlling dust and landscaping. They are reusing treated effluent water or practicing water harvesting on the construction site and minimising water wastage in the main office.

5.2 Social Pillar Practices

Table 4 shows the frequency of social practices in the social pillar. Of all the themes, the one with the highest score is safety & health with 32% of all criteria. The score reveals industry’s attention to the well-being of its employees. Due to the inherent risks of the construction industry, high safety and health protocols are indispensable. Developers provide rigorous safety training and personal protective equipment and cultivate a safety-first culture. In Malaysia, there are rules and laws in place to make sure that people who work in the

building and development industries are safe and healthy. Legally, developers have to follow these rules or risk getting fines, being sued, or having their projects shut down. Nevertheless, even though health and safety are considered the most important criteria in the social pillar, the percentage gained from this theme is still low since the remaining 68% of companies do not disclose their health and safety practices.

Table 4 Social practices in Malaysian construction sector

Sub-Element	Thematic Practices	Frequency out of 55	Frequency %	Average % of Sub-Element
Safety & Health	Awareness & Prevention Measurement	34	62%	32%
	Policy or Regulation Compliance & Adoption	24	44%	
	Safety & Health Training & Incentives	18	33%	
	Health & Safety Assessment	17	31%	
	Health & Safety Equipment Advancement & Maintenance	13	24%	
	Health & Safety Committee	13	24%	
	Provide Incentives & Good Remuneration Packages	5	9%	
Labour Standard	Learning or Training	32	58%	31%
	Inclusivity & Fair Treatment	25	45%	
	Good Remuneration & Incentives Package	19	35%	
	Flexibility & Work Life Balance	15	27%	
	Policy or Regulations Adherence	15	27%	
	Provide Conducive Work Environment	14	25%	
	Vertical Two-way Communications	14	25%	
	Financial Supports	3	5%	
Human Right	Inclusivity, Equality & Diversity	24	44%	21%
	Charitable Activities	24	44%	
	Policy or Regulations Adherence	7	13%	
	Prohibit Child or Illegal Labour	6	11%	
	Public or Gov Sector Engagement	6	11%	
	Established in-house Policy or Regulations	3	5%	
Customer Responsibility	Provide Quality Services or Products	13	24%	13%
	Provide Customer Survey or Assessment	11	20%	
	Vertical Two-way Communications	7	13%	
	Third Party Assessment or Audit	4	7%	
	Policy or Regulation Compliance	1	2%	
Supply Chain	Sustainable Supply Chain Policy	11	20%	13%
	Supplier Assessment	11	20%	
	Established a Guideline or Policy	5	9%	
	Technology involvement in Supply Chain	1	2%	

The second highest theme for social pillar is labour standard with 31% of score. The construction sector in Malaysia involves a lot of foreign workers. There are regulations and quotas governing the recruitment and employment of foreign employees in the construction industry in Malaysia. Developers are required to get the appropriate permissions and adhere to the rules established by the Ministry of Human Resources and the Immigration Department. Moreover, developers also need to make sure that foreign employees have valid work permits and comply with immigration regulations before hiring them. Despite the laws and regulations enforced by the government on labour standard, there is remaining 69% of companies that still failed to comply with labour force requirement and practices.

Human rights have a score of 21% from all the criteria listed in social pillar. Malaysia prohibits discrimination based on race, gender, religion, and other factors. It also refers to forced labour which is applicable to the recruitment, employment, and management of construction industry employees. Employers

are prohibited from using coercion, intimidation, or any other form of forced labour. Instead, another 79% of companies did not report their practice of human right in sustainability statement.

The next theme is customer responsibility and supply chain with a score of 13% respectively. Both themes achieved the lowest score as 87% of companies did not practice customer responsibility and supply chain. This is because Malaysia has typically practice cost and time efficiency. The competitive nature of the construction industry can put pressure on companies to practice costs, which may lead to practice that place a higher priority on cost-cutting than social responsibility.

5.3 Governance Pillar Practices

Table 5 show the result of governance pillar practices among construction companies in Malaysia. The most prominent theme is risk management with 23% Malaysian construction companies have implemented protocols for risk assessment and crisis management. Malaysian construction companies often involved in risk to secure contracts and project deadline hence they focus on risk management more and willing to spend higher expenses associated with implementing comprehensive risk management practices.

Table 5 Governance practices in Malaysian construction sector

Sub-Element	Thematic Practices	Frequency out of 55	Frequency %	Average % of Sub-Element
Risk Management	Risk Assessment	18	33%	23%
	Established In-House Policy/ Regulations	17	31%	
	Risk Management Committee	14	25%	
	Policy or Regulations Compliance	10	18%	
	Provide Training or Awareness Campaign to Minimised the Risk	4	7%	
Corporate Governance	Compliance to Rules/ Regulations	30	55%	22%
	Promotes Good Sustainability Practices & Reporting Disclosure	15	27%	
	Established an in-house Policy	14	25%	
	Transparency in Nomination or Appointment of BOD	6	11%	
	Assessment or Audit of Governance Practices	5	9%	
Anti-Corruption	Policy or Regulations Adherence	37	67%	21%
	Established in-house Policy or Regulations	22	40%	
	Provide Training & Awareness Campaign	7	13%	
	Direct Medium for Reporting Anti- Corruption	5	9%	
	No Gift Policy	4	7%	
	Formed Internal Integrity Department	2	4%	
	Anti-Corruptions Audit or Assessment	2	4%	
Tax Transparency	Compliance to Policy or Regulations	6	11%	6%
	In-House Tax Department	2	4%	
	In-House Tax Department	2	4%	

The second most prominent theme is corporate governance with a score of 22%. The Malaysian Code on Corporate Governance influences the construction industry in Malaysia. This code gives rules and suggestions for good corporate governance. Companies that are traded on the Malaysian stock exchange must follow these rules.

Next is anti-corruption with a score of 21%. Companies have enacted stringent anti-corruption policies, conducted due diligence on business associates, and provided anti-corruption training. Malaysia sets a lot of emphasis on anti-corruption practice in the construction sector because of its history, its economic importance, the need for transparency in significant infrastructure projects, international expectations, and the desire to restore public trust.

The least prominent score of this pillar is tax transparency with a score of 6%. In Malaysia, the legislation that require comprehensive tax disclosure within sustainability reports is still lacking. Companies often possess a greater degree of discretion when it comes to determining the scope of their tax-related disclosures.

5.4 Results based on FTSE Russel Bursa Malaysia Indicator

Fig 2 shows the result from content analysis of company's sustainability statement in construction sector. The social pillar score of 64% shows that companies operating in the Malaysian construction sector have shown a comparatively prominent dedication to social responsibility. This encompasses various dimensions, such as ensuring the safety of the workforce, promoting the well-being of employees, fostering community engagement, and implementing initiatives to enhance diversity and inclusion.

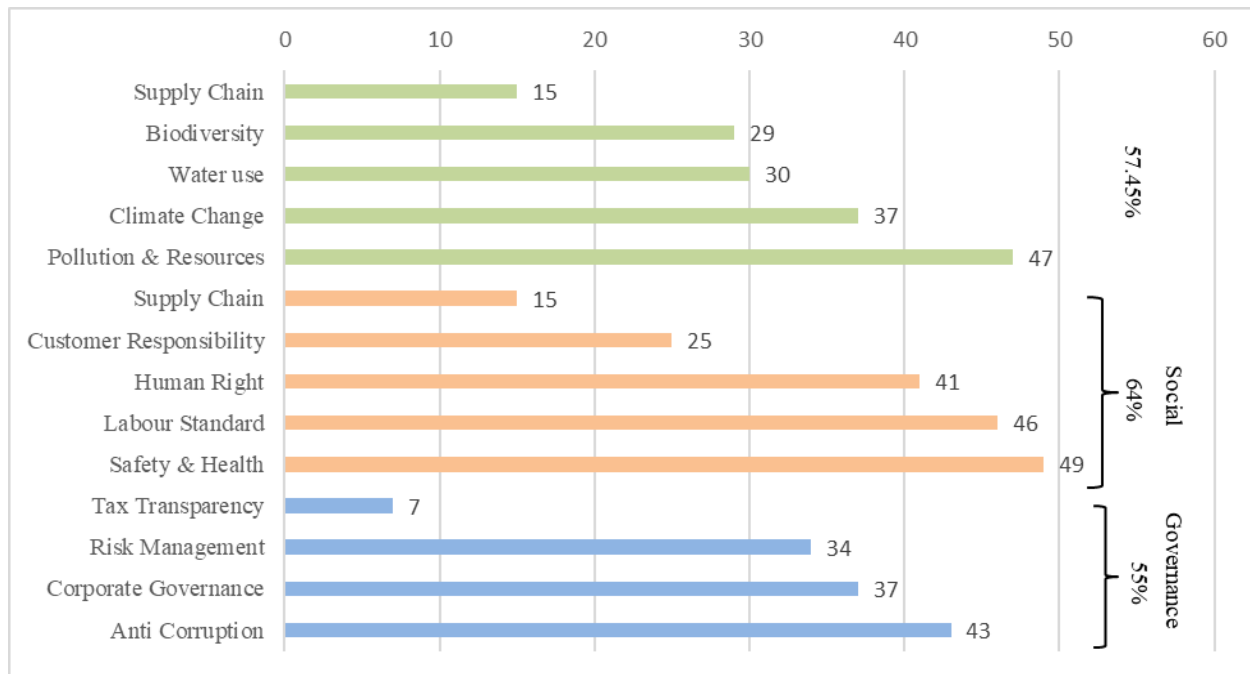


Fig. 2 ESG practice in Malaysian construction sector

Meanwhile, the score of 57.45% in the environmental pillar indicates that companies in the construction sector of Malaysia have achieved a moderate level of advancement in incorporating environmental sustainability practices into their operations. Malaysian construction company provide more attention on environmental issues and strategies. However, due to high investment cost, time consuming and technology advancement have limit their efforts in environmental strategies.

The least prominent pillar in ESG is governance pillar with a score of 55%. Even Malaysia has established a strong governance mechanism, percentage of construction companies that disclosed the governance practice in sustainability statement is still low. Another 45% of companies choose to not disclose their governance practice due to most of companies have their separate corporate governance report. Therefore, they do not report their governance practice in their sustainability statement.

6. Conclusions

This research of the ESG practices within Malaysian construction companies has yielded several significant discoveries. The research aim is to examine ESG practices within three pillars namely social, environmental, and governance with reference to FTSE Russell rating model. Content analysis of annual report for year 2021 and 2022 from fifty-five constructions companies listed in Bursa Malaysia provided insights into the focal areas and notable competencies of these constructions' companies in Malaysia. Based on the findings of the research, it is evident that the social pillar emerges as the top performing ESG pillar. The social pillar exhibits a notable emphasis on health & safety theme, result as the highest score among the themes in social pillars. This highlights the industry's significant acknowledgement of the potential risks associated with the construction industry and the significance of protecting the health & safety of its employees and the wider society. In addition, health & safety themes have been practices among this sector due to its compliance-based and operation rather than strategic (Loosemore & Lim, 2017).

The environmental pillar, though relatively less highlighted compared to the social pillar, shows a noticeable dedication towards the principles of sustainability. Malaysian construction companies demonstrate a remarkable level of environmental consciousness, as evidenced environmental pillar hold the second highest score among the three pillars. Within this pillar, the main themes that emerge are pollution & resources. This highlights a recognition of the requirement to address and prevent environmental damage, regulation of pollution and resources management within Malaysian construction industry.

Finally, the governance pillar achieves the lowest score among the three pillars. The highest theme score under this pillar is risk management. This statement shows the significance of strong corporate governance and efficient risk mitigation techniques within the construction sector in Malaysia as found by Kim & Li, (2021). Based on the result of three pillars, it can be concluded that the highest themes score for each pillar are health & safety, risk management and pollution & resources was achieved because the themes are related to law and regulations compliance. Construction sector in Malaysia need to adhere to certain law and regulations to avoid any penalty and accidents during business operations. In conclusion, result of this study could be useful to the investors, industry as well as to the policy makers in their effort to promote sustainable practice in Malaysian public companies in line with the UN-PRI policy and Bursa Malaysia requirement. To this end, businesses should be obligated to engage in and disclose more of their ESG activities.

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