EFFECTS OF ESG CONTROVERSIES ON FINANCIAL PERFORMANCE IN MALAYSIA

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BACHELOR OF FINANCE (FINANCIAL TECHNOLOGY) WITH HONOURS

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EFFECTS OF ESG CONTROVERSIES ON FINANCIAL PERFORMANCE IN MALAYSIA

BY

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(1) This undergraduate research project is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

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LIST OF ABBREVIATION

ESG:	Environmental, Social, and Governance
E:	Environmental
S:	Social
G:	Governance
CSR:	Corporate Social Responsibility
RE:	Random effects
FE:	Fixed effects
F:	Firm Size
LV:	Leverage
REV:	Revenue
TA:	Total Assets
PLC:	Public Listed Companies
SCM:	Securities Commission Malaysia
ROA:	Return on Assets
ROE:	Return on Equity
MCCG:	Malaysian Code of Corporate Governance
BNM:	Bank Negara Malaysia
IND:	Board Independence
LSEG:	London Stock Exchange Group

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ABSTRACT

Purpose – This study examines the impact of environmental, social and governance (ESG) controversies on company financial performance, and it proposes the moderating roles of board independence over the relationship.

Design/Methodology/Approach – The research data included 75 PLCs in Malaysia over the period 2019-2023 (325 observations). The data were obtained from the LSEG database. The panel regression model was used to examine the relationships of the variables studied.

Findings – The study finds that ESG controversies are negative and significantly influence financial performance. Moreover, this study finds that board independence plays significant moderating roles in mitigates the negative effects of ESG controversies on financial performance.

Implications – The findings may be used as a basis for the Malaysian government to mandate the disclosure of ESG controversies in company report. Furthermore, companies need to be mindful of the importance of the ESG controversies-corporate governance linkage and imbed this relationship in their strategic development blueprints.

Research Limitations/Recommendations – The findings focus solely on Malaysian PLCs and include only board independence as moderator. Future study may include cross-country and more moderator.

CHAPTER 1: INTRODUCTION

The growing importance of environmental, social, and governance (ESG) in corporate management and investment decision-making indicates a worldwide trend toward sustainability and ethical responsibility. However, although excellent ESG practices frequently attract praise and investor confidence, the inverse, ESG controversies can seriously harm a company's reputation, stakeholder trust, and ultimately financial performance. ESG controversies develop as a result of environmental violations, human right abuses, corruption, and they act as obvious signs of corporate social responsibility and compliance failures. ESG has become an important concern in emerging economies like Malaysia due to stronger governance norms and sustainability reporting criteria outlined in the MCCG 2021 and Bursa Malaysia Sustainability Framework. However, numerous ESG controversies among public listed companies have cast doubt on the efficacy of governance frameworks, notably the role of independent directors in enforcing responsibility. As a result, understanding how ESG controversies impact company financial performance and whether board independence might offset the negative effects is critical. This study seeks to close this empirical gap by exploring the mediating role of board independence in the relationship between ESG controversies and financial performance among public listed companies (PLCs) in Malaysia.

1.0 Research Background

The current global frontrunner in Development Sustainable Policies, Zhou et al. (2025) argues, including Social and Economic Development Disintegration, Sustained Economic Instability, Severe Degradation of The Natural Environment, and the Continued Socio-Economic Disparity of the World is in the Economic World of the World. ESG Factors have made their way to the top of the Corporate Order Scales as they are deemed the most essential for Economic and Sustainable Development. ESG Corporate Policies extend and broaden Corporate Policies to include Social and Environmental Responsibilities in the Corporate Governance Policies for the Complex Stakeholders' Demands of Investors, Social Activists, Customers, and Decision Makers (Asif et al., 2023; Zhou et al., 2025).

Most research from Malaysian scholars in ESG studies is concerned with ESG disclosure and corporate governance pertaining to its benefits (Kamaludin et al., 2022). They study elements such as board structure, company size, and profitability regarding the reporting of ESG and fail to study the costs related to the financial degradation of the ESG (Brinette et al., 2024; Nirino et al., 2021; Okoye et al., 2025). At the same time, having a focus on the positive components of sustainability is often overshadowed by ESG Controversies (ESGC), which is the 'dark side' of corporate social responsibility (Elamer & Boulhaga, 2024). ESGC exists when a company undertakes acts/occurrences which are likely to have a negative impact on its stakeholders and the ecosystem. These controversies cover a wide range of issues, including environmental infractions, human rights violations, inadequate working conditions, non-transparent accounting, and fraud (Macchiarella, n.d.). Such negative incidents jeopardize a company's reputation. Consequently, ESG controversies are a significant indication of a company's risk management effectiveness and alignment with sustainability values (Fernandes et al., 2024).

There is research suggesting that a company is likely to have a poor financial standing due to ESG issues resulting in damage to the company's reputation, the company facing losses due to the company's failures resulting in legal issues, and

investors losing interest in the company (Abu Khalaf et al., 2025; Fernandes et al., 2024; Nirino et al., 2021). Disgraceful behaviours can damage the trust the company has gained and can even impact the company's credibility, resulting in the company losing even more money in the future (Dwekat & Abdelhaq, n.d.; Treepongkaruna et al., 2024a). It is a fact that research has shown ESG issues to have a huge impact on the negative side of the performance of the company in the market. For instance, a company that has poor ESG standing is likely to have poor performance in the market as a result of poor company valuation (Treepongkaruna et al., 2024b). The additional damage caused by poor ESG standing increases the level of risk a company is likely to be exposed to, especially the risk of the company alone. The company is likely to face operational failures as a result of the negative impact on the company's reputation (Aouadi & Marsat, 2018; Mahyoub et al., 2024). This impact of negative ESG standing on a company's profitability is likely to be even worse. Elamer & Boulhaga (2024) discovered that companies that have shown excellent Governance ESG standing in the market are likely to have a positive impact on the relationship between CSR and the company. The positive impact of CSR is likely to be as a result of poor standing as a company. This is to say the regulation that is in place is likely to be poor and as a result, the damage to the company as a result of the negative ESG standing is likely to be even worse.

Although there is little debate on the negative association between ESGC and performance, there remain substantial context-dependent gaps in the measurement and degree of such impact. For instance, in the context of the sensitivity of the construct, the accounts-based measures like the Return on Assets (ROA) and Return on Equity (ROE) are at times contradictory. To illustrate, Dutt et al. (2025), a study have looked into Indian firms and found no relevance of ESGC scored at short-term ROA, ROE, P/E ratio, Tobin's Q measurement. Inversely, Nirino et al. (2021) in a European study showed that, although a negative impact of the sponsorship on performance was also present, there was a paradoxical situation where the positive practice of ESG overall did not help to alleviate the adverse effect stemming from the sponsorship. On the other hand, there are geographic biases. Prior research on ESG controversies has mainly been on Western developed nations, Europe, and the United States where greater regulatory frameworks and media interests are likely to escalate the controversies (Jucá et al., 2024). Other studies focus on emerging

nations such as China, Indonesia, and the like (Lee & Isa, 2024). Developing nations like Malaysia have their own unique regulatory and institutional framework. Given the substantial geographic bias of current research, there is a gap in the literature demanding exclusive focus on developing nations in order to advance understanding of ESGC and associated risks.

The increasing attention across the globe on ESG issues has not been matched by the evidence on ESG controversy and financial performance, especially in the context of developing countries such as Malaysia (which still has nascent stages of sustainability reporting). In addition, the moderating effect of board independence has not been given the attention it deserves. This triad is of the utmost importance to companies, investors, and governments that wish to advance the conjunction of ethical business practices with longitudinal financial viability. This study looks at the more traditional measures of organisational performance such as ROA and ROE, with the former indicating efficiency of capital employment and the latter, profitability to shareholders. A high ESGC score (low ESG controversy) is positively associated with higher financial performance. This gap in the literature is addressed by investigating the ESGC and financial performance relationship for public companies in Malaysia and by analysing the moderating effect of board independence on this relationship. It is this gap that this study is addressing that adds to the literature on ESG in lesser developed countries. It also helps narrow the gap in literature on corporate governance and sustainable development in Malaysia.

1.1 Problem Statement

The growing importance of Environmental, Social, and Governance (ESG) standards highlights a crucial dichotomy in corporate accountability, where the financial benefits of effective ESG practices versus the severe consequences of ESG controversies (ESGC). ESGC, which refer to instances involving corporate wrongdoing or violations of sustainability norms, such as environmental pollution, labour exploitation, and governance scandals (Aouadi & Marsat, 2018). Given that avoiding controversies should be a managerial objective, it is critical to understand how these failures result in concrete losses in operational performance.

The existing research's overwhelming geographic concentration is a particularly striking area of empirical neglect with respect to the case of emerging countries like Malaysia. Most of the existing studies on the relationship between ESG controversies and financial performance focus specifically on emerging countries (Lee & Isa, 2024). A number of others focus on specific countries in the West, particularly in Europe and the United States. For instance, studies on listed enterprises in Europe have remarked that their results cannot be generalised to other business forms or other regions (Brinette et al., 2024; Dwekat & Abdelhaq, n.d.; Nirino et al., 2021). Soschinski et al. (2024) point out that in a rather large-scale global study involving 20 of the major economies, countries like the United States, Japan, Australia and the United Kingdom were responsible for almost 70% of the observations, meaning that the sample was predominantly reflective of the characteristics of developed markets. Also, in particular, Suomela (n.d.) stated that enterprises headquartered in the English-speaking countries like the United States, the United Kingdom and Australia are, probably because of greater media scrutiny and international exposure, more likely to be involved in controversies that are public.

Existing research on developing countries and their adoption of ESG frameworks is almost nonexistent. This research gap is justified by the complicated context of developing countries and the numerous environmental challenges they face, weak institutional frameworks, and developing legal systems. Jucá et al. (2024) and Mahyoub et al. (2024) state that it is reasonable to conclude that the relationship

between ESG controversies and financial performance, particularly ROE, is insignificant and that negative consequences associated with it are much more prevalent for more advanced markets. This more advanced research suggests that the (higher) parameters of regulatory frameworks and the (better) market maturity are more likely to conclude the opposite for developing countries. Such advanced economies directly contradict the positive relationship between the maturity of other regulatory frameworks and the market.

On top of that, there are issues when trying to understand how ESG controversies impact overall financial performance, particularly when one looks at the ROA and ROE numbers, as the data is often inconclusive or contradictory. Controversies obviously impact corporate performance negatively, or so the Stakeholder and Legitimacy theories suggest, but the evidence for controversies negatively impacting corporate performance is contradictory. The ESGC and market value negative relationship is often the subject of analysis, but the impact on operational profitability, often reflected in ROA and ROE, is the subject of less consensus, or even argument. For example, studies by Dutt et al. (2025) and Nirino et al. (2021) show that for European and Indian companies, there are virtually no controversies impacting ROA and ROE. The gap here is significant, as is the need for understanding the relationship between ESGC and profitability measures (ROA and ROE) to conduct high-quality empirical investigations. This is particularly the case when one recognises that internal operational results are measured in accounting, while market measures are based on investor sentiment.

It is argued that corporate governance mechanisms, especially Board Independence (IND), are believed to reduce the financial consequences from ESGC through improvement of supervision, risk management, and transparency (Abu Khalaf et al., 2025; Elamer & Boulhaga, 2024). Independent directors should help in decreasing the negative effects. While some evidence shows that IND positively moderates the relationship between ESGC and firm value (Tobin's Q) (Brinette et al., 2024), thereby decreasing the negative effects, there is little targeted evidence that IND mitigates the negative effects on ROA and ROE, which are proxies for operational profitability. There is a need for context-specific empirical evidence to validate this fact. For example, one study found that IND significantly reduces the negative effects of ESGC on ROA in MENA countries, whereas in other developing market

contexts, the moderating effects on corporate value (MTB) were found to be insignificant (Abu Khalaf et al., 2025). There is a need for considerable empirical scrutiny to ascertain the impact brought by IND on ESGC-ROA&ROE. This particular analysis needs to shine a light on how governance mechanisms defend a firm's core profit when sustainability failures occur. This will also help to address some unresolved issues in the literature around the impact of controversy and the impact of board governance.

1.2 Research Questions

Based on the identified research problem, this study seeks to answer the following research questions:

1. What is the relationship between ESG controversies and financial performance among public listed companies in Malaysia?
2. How do Board Independence (IND) moderate the relationship between ESG controversies and financial performance among public listed companies in Malaysia?

1.3 Research Objectives

The main objectives of this study are:

1. To examine the relationship between ESG controversies and financial performance among public listed companies in Malaysia.
2. To investigate the moderating role of Board Independence (IND) on the relationship between ESG controversies and financial performance among public listed companies in Malaysia.

1.4 Hypotheses of the Study

This study provides the following hypothesis based on the theoretical underpinnings and empirical data from sources that have been tailored for the Malaysian context:

H1: ESG Controversies negatively influence financial performance among public listed companies in Malaysia.

H2: IND positively moderates the relationship between ESG Controversies and financial performance among public listed companies in Malaysia.

1.5 Significance of the Study

This study holds significant academically and practical implications for academic research, corporate management and policymaking in Malaysia.

Firstly, this study adds to the small volume of literature that deals with the relationship that exists between ESG controversies and the financial performance of companies in developing economies because this relationship is still more of a conjecture than a research fact. The greater part of the body of research on controversies has to do with market financial metrics such as Tobin's Q and market value, which are very volatile and are driven by short-term speculators. This study has focused on internal performance and profitability on the basis of operational ROA and ROE. This adds to the ESG controversies more than off assessments of operational performance to the more internal of ESG controversies. The trends in research on the relationship of ESG financial performance have been more esoteric, predominantly showing a negative or insignificant relationship. This study has shown that this relationship is very real and multifaceted.

Moreover, this study offers valuable lessons to corporate managers regarding the need for emphasis on avoiding or minimising controversies. The report argues that sustainability initiatives should be an integral part of company strategy, and not

simply a way to mitigate the impacts of irrational acts. Managers should be more dispute resolution oriented and need to approach responsibility, not cure, but prevention. On the contrary, the research highlights the importance of Board Independence as a current necessity for a proactive governance approach. Managers appreciate the need for sound corporate governance, which should enhance the positive effect of ESG practices on corporate wealth. An innovative board is requisite to eliminate the residual downside and facilitate more sustainable progress towards the restoration of the overarching sustainability goals.

In addition, the study supports sustained analytical studies on educated and contextual advanced regulation as it pertains to ESG dilemmas. It prompts regulators to globally streamline parameters and encourage positive actions. Such findings may help sensitise politicians and regulators to the importance of the independent board in enhancing the quality and sustainability of the decisions made in the organisations. It seems to be the basis for some to rethink ESG practices and tier the organisations on particular ESG ratings and disproportionately punitive measures on the lower tier. Closing the gap helps in predictive measures for Value at Risk on the available objectives for regulated ESG.

1.6 Outline of the Study

There are five chapters in this thesis. The research topic is introduced in Chapter 1, along with background on ESG controversies, financial performance and board independence, outlining the problem statement, defining the research objectives, and detailing the study's significance. Chapter 2 presents a comprehensive literature review on ESG controversies, financial performance and board independence, culminating in the development of research hypotheses. The research methodology, including the research design, data collection procedures, variable measurement, and econometric models employed are all covered in Chapter 3. Chapter 4 presents the empirical results, including descriptive statistics, correlation analysis, and regression findings, alongside robustness checks and mechanism analyses. The main findings are summarized, their theoretical and practical implications are discussed, limitations are acknowledged, and future research directions are suggested in Chapter 5, which wraps up the thesis.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The comprehensive literature review that forms the basis of the investigation is covered in this chapter. There are four sections to it. Theories pertaining to the study issue are explained in the first section, Underlying Theories. In order to provide a thorough summary of their relationship, the second section examines the literature on the research variables. The developed hypotheses based on the literature review are presented in the next section, and the proposed conceptual framework is shown in the last section.

2.1 Theoretical Frameworks and Models

The purpose of this study is to develop a complete theoretical framework to understand the relationship between ESG controversies and financial performance of publicly listed companies in Malaysia using Stakeholder Theory, Legitimacy Theory and Agency Theory. These theories help us understand how companies manage internal factors and control internal resources, use/disregard new information and manipulate (or deal) with external factors in the pursuit of their objectives over a long period.

2.1.1 Stakeholder Theory

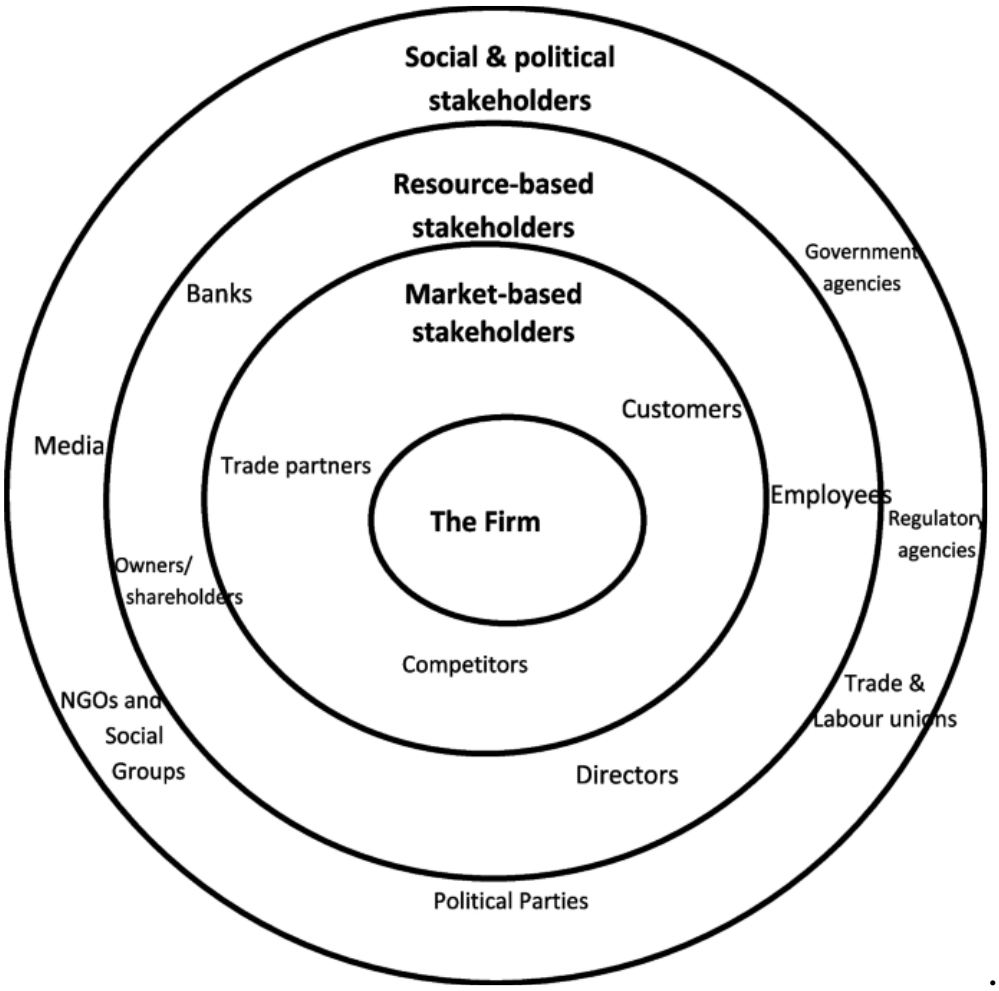
Assessing the impact of board disengagement in moderation on the relationship between ESG controversies and financial performance is framed on Stakeholder Theory (Freeman, 2010). According to this theory, which also formed the basis of Freeman's work, a firm's goal is correlated with all of its stakeholders and is not just limited to the shareholders and profit maximisation (Parmar et al., 2010). Stakeholders include a diversity of entities such as funders, employees, clients, vendors, government authorities, and the general society (Awa et al., 2024).

According to stakeholder theory, companies must consider the claims and expectations of all relevant stakeholder when making decisions since these groups can either influence or be affected by the company's operations (Ayuso et al., 2014). Fulfilling these needs results in a company's wealth maximization. This viewpoint gave rise to the topic of CSR, which entails companies undertaking activities to achieve broader societal objectives and address stakeholder requirements. High sustainable performance demonstrates the company's ability to meet the expectations of its stakeholders, attracting further investment and thereby enhancing financial performance (Xu et al., 2021). The instrumental stakeholder theory suggests that CSR has a favourable impact on corporate well-being and allows them to gain a competitive advantage through trusted stakeholder relationships. Corporate boards that support this theory are often larger, promoting stakeholder participation in decision-making processes and incentivizing corporations to achieve sustainability.

In contrast, ESG controversies (ESGC) are defined as acts or incidents that may have a negative impact on stakeholders' expectations. Controversial activities decrease stakeholder trust and increase perceptions of corporate duplicity, resulting in lost confidence (Nirino et al., 2021). ESGC has a negative impact on stakeholders' relationships, resulting in unfavourable publicity, financial losses, and increased financial risk (Lee & Isa, 2024). An unfavourable view of the company among stakeholders can result in a variety of undesirable outcomes, including lawsuits, revenue losses, greater financial risk, and higher debt payments (Nirino et al., 2021). Customers boycotting products, suppliers withholding supplies, governments

imposing fines, and shareholders selling stocks due to loss of trust are all examples of how stakeholders may actively penalize companies that engage in misbehaviour (Mahyoub et al., 2024). As a result, when a company has several continuing controversies, the withdrawal of stakeholder support is likely to result in a drop in its financial performance. Click or tap here to enter text.

Figure 2.1 Stakeholder Theory Diagram



Source: Awa, H. O., Etim, W., & Ogbonda, E. (2024). *Stakeholders, stakeholder theory and Corporate Social Responsibility (CSR).*

2.1.2 Legitimacy Theory

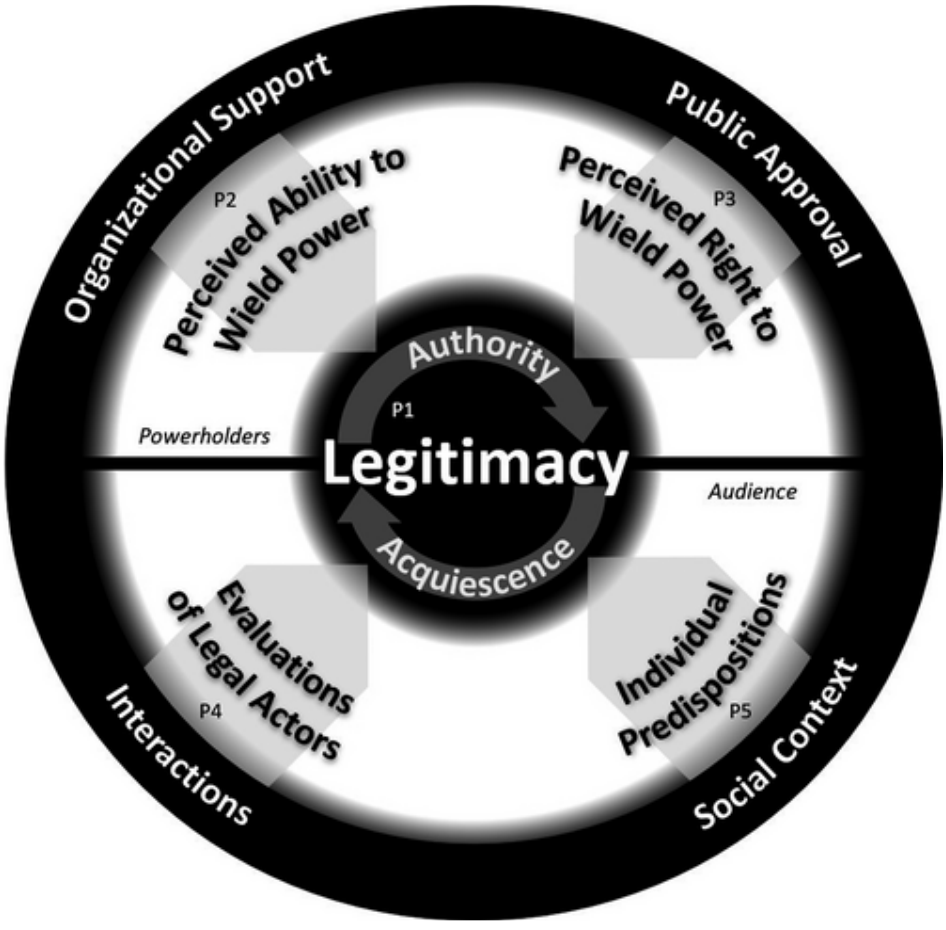
Legitimacy theory assesses organisations and the environment they interact with (Lee & Raschke, 2023). Based on the theory, there are social activities and organisational goals that are within the acceptable social parameters, and, as such, the company should not breach the social 'contract'. Legitimacy is defined as the social perception of an entity's activities that are wanted, accepted, and/or deserved within a socially constructed paradigm of systems of order, values, norms, beliefs, and definitions. The assumption is that the organisation needs to be sustainable, and to be so, it has to be legitimate whereby the systems within the organisation should be in harmony with that of society (Gray et al., 2009).

The arms of CSR and ESG social strategies are aimed at preserving/restoring social legitimacy loss. Socially responsible practices 'lengthen sustainability corporate social licence'. ESG disclosure ensures social compliance with societal values 'legitimacy inflation social status', which positively directs to corporate image and social financial performance. CSR disclosure provokes a social legitimisation reaction akin to the restoration image reaction to scandalous negative news (Xu et al., 2023). Furthermore, companies rated for their social ESG disclosure are able to mitigate social legitimisation loss, fiscal social validation, and investor confidence (Guo et al., 2024). However, 'symbolic' ESG actions that primarily ease social acceptance rather than significantly reduce environmental and social damage are actions that predominantly smooth social acceptance.

Elamer & Boulhaga (2024) explain the importance of ESGC for the ESG norms-abiding activities theory. In the spirit of Legitimation theory, ESGC are vital. In the event that a firm engages in contested activities, that firm is suspected of having a legitimacy deficit, and their legitimacy is socially and/or ethically disqualified (Treepongkaruna et al., 2024). The core of the theory is that corporate operations exist within a social contract framework, and such breaches of social contract framework can result in legitimacy losses, which can lead to financial difficulties caused by stakeholder withdrawal (Dwekat & Abdelhaq, n.d.). Allegations of questionable activities harm the company's brand and reputation. When a company's legitimacy is threatened as a result of controversial activities, it must

develop an appropriate plan to re-legitimize its operations within society. As a result of the damage controversies often cause to a company's reputation, managers can engage in further CSR activities to showcase positive behaviour and ultimately regain stakeholder trust (Brinette et al., 2024). This theory thus posits that ESG controversies can directly erode that value in the firm. Empirical findings consistent with the legitimacy theory indicate that ESG controversies leads to a significant reduction in firms' profitability and escalates firm-specific risk (Treepongkaruna et al., 2024b).

Figure 2.2 Legitimacy Theory Diagram



Source: Jackson, J., & Bradford, B. (2022). On the nature of acquiescence to police authority: A commentary on Hamm et al. (2022).

2.1.3 Agency Theory

The relationship between principals (shareholders) and agents (managers) within a company is examined by Agency theory, which was developed by Jensen & Meckling (1976). The theory examines the potential conflicts of interest that occur when managers prioritize their personal goals at the expense of shareholders rather than maximizing shareholder wealth. Corporate governance structures, such as an independent board of directors are specifically designed to prevent agency conflicts and ensure that managers operate in the best interests of shareholders.

Engagement in CSR initiatives, according to traditional agency theory, is a cause of agency problems. According to this viewpoint, managers may participate in CSR to reap private benefits for themselves, such as improving their reputation or experiencing a 'warm glow' effect, so spending shareholders' money for broad social purposes, which was deemed harmful to shareholder value. Self-interested managers may engage in questionable behaviours to maximize their personal profits at the expense of shareholders (Nguyen et al., 2023). Consistent with this viewpoint, evidence shows that excessive liquidity allows for more wasteful spending in the form of negative Net Present Value (NPV) projects, implying larger agency concerns (Metwally et al., 2024). According to the traditional agency prospective, when positive news regarding CSR is generated by agency difficulties, shareholders reach unfavourable.

The newest iteration of the agency theory suggests that ESG practices and good governance are potentially beneficial and not just expensive (Treepongkaruna et al., 2024). Managers that engage in controversial rent-seeking behaviour can inflict extreme costs on the firm in terms of reputation and finance which, in turn, increases the firm risk and escalates the decline of shareholder value in the long run (Abu Khalaf et al., 2025). Well-structured governance systems help resolve these agency issues and simultaneously increase the value of the firm. Moreover, the disciplinary threat of the takeover market might reduce agency problems by forcing managers to avoid ESG-related controversies that destruct firm value(Treepongkaruna et al., 2024). In Krüger (2015) view, the difference between agency-driven and value-driven CSR was clearly apparent in the market. The former CSR aimed at offsetting

controversy whereas the latter was to improve stakeholder relations. Investors appear to respond less favourably to positive CSR initiatives in high liquidity firms, which the market perceives as agency-driven and thus, wasteful. Support for the theory that the market is more responsive to CSR when agency problems are less is given by positive CSR initiatives in heavily indebted firms where, due to the constraining of wasteful spending by debt, the firm is not seen as being able to drive CSR in an agency-driven manner.

2.2 Key Variables and Measurement

This section details the definition and measurement of the key variables fundamental to this study, including the independent variable (ESG Controversies), the dependent variable (Corporate Financial Performance), and the moderating variable (Board Independence).

2.2.1 Independent Variable: Environmental, Social, and Governance Controversies (ESGC)

ESG Controversies are significant drawbacks associated with the Environmental, Social, and Governance segments, also referred to as the 'dark side' of CSR (Nirino et al., 2021; Passas et al., 2022). Controversy arises when an entity performs and/or partakes in hostile actions/situations against its stakeholders and the environment. Such instances are in the form of negative media exposure or information concerning an entity in regard to ESG issues, such as having an adverse action or a corporate action controversy or a corporate product controversy (Mahyoub et al., 2024). ESGC means dubious, destructive, and/or illicit actions are taken, as well as corporate scandals or unethical and/or unlawful actions and/or behaviours (Abu Khalaf et al., 2025; Jucá et al., 2024).

García-Amate et al. (2023) and Mahyoub et al. (2024) highlight that ESGC often features such as environmental debate (pollutive activities, leaks, etc.), social debate (child exploitation, abuse of human rights, workplace bullying, etc.), and governance debate (fraud, lack of transparency, about insider trading, etc.). It receives considerable attention from members of the public due to the lawsuits, penalties, and other legal issues involved, and is the subject of criticism from the press. ESGC is measured for its value ESGC and for exact metrics drawn from public relations concerning problematic behaviour and measured by London Stock Exchange Group (LSEG). Davis & Jamie (2024) state that the ESGC score is based

on 23 core ESG Controversy thematic issues and evaluates the extent of controversy a firm had in its operations in its sector. Also often constructed is the case that the ESGC is higher as the less controversy or ESGC is the less risk exposure. For example, a score of 100 signifies that there were absolutely no controversies.

A company's sustainability and present and future profitability are negatively affected by ESG controversies, and these controversies have a substantial monetary impact (Treepongkaruna et al., 2024b). Questions arise regarding firms' organisational legitimacy when they become embroiled in controversial issues. Deterioration of legitimacy and dissolution of accumulated trust lead to adverse effects such as financial losses, reduced corporate value, and increased corporate risks, including volatility in stock prices and higher idiosyncratic risk (Jucá et al., 2024). Investors may punish companies with more ESG controversies, resulting in lower profit forecasts and a higher cost of capital. The market reaction is frequently strong, empirical findings indicate that negative publicity about a company has a higher impact than positive publicity (Okoye et al., 2025). Controversies may have an instantaneous influence on stock returns, with unfavourable ESG incidences leading to a reduction in market value.

Despite the obvious financial threat posed by ESGC, scholarly comprehension of the phenomena is difficult. Research on ESG controversies is still limited, especially in comparison to the huge literature concentrating on positive ESG performance. Nirino et al. (2021) using linear regression models suggests that a negative significant relationship between ESG controversies and financial performance and Jucá et al. (2024) founds that for every one-point increase in the ESG controversies score, the companies' ROE declined by 0.04. Nevertheless, a study focusing on North American financial institutions, suggests positive relationship between ESGC scores and financial performance (ROA and ROE), which in the same way means negative relationship between ESGC and financial performance (ROA and ROE).

The relationship between ESGC and the overall ESG strategy is often paradoxical; while investing in overall ESG practices is typically helpful, it is frequently insufficient to avoid a drop in performance due to controversies. Studies suggest that ESG strategies cannot return a company's condition to before controversy

levels. Furthermore, some research suggests that higher ESG scores are related with an increased chance of future controversies. This counterintuitive finding can be ascribed in part to the higher attention and scrutiny that high-scoring or larger companies endure, which results in more controversies. This problem is connected to market capitalization bias, in which large capitalization companies receive more media attention than smaller capitalization companies, however data providers try to address this through severity weightings. Finally, company managers agree that sustainable practices should be used as a main approach for avoiding controversies altogether, rather than seeking to ameliorate their considerable negative consequences after they occur. Analyzing ESGC is therefore critical for improving risk management and responsibility in a company climate that is increasingly focused on sustainable and ethical behaviour.

2.2.2 Dependent Variable: Financial Performance

2.2.2.1 Return on Assets (ROA)

Return on Assets (ROA) is commonly defined as a performance indicator in accounting. It functions as a proxy for profitability and is a reliable measure of a company's performance by leveraging its owned assets and internal procedures that raise shareholder' value (Johari & Komathy, 2019). ROA determines how efficiently and effectively an organisation garners profit from its investments and sheds light on how a company employs its assets. RA helps clarify a company's internal performance and resource utilisation and serves as an axis on which profit and investment ratio is plotted. Because of its focus on efficiencies derived from an operation as opposed to an organisation's strategic goals and aspirations, ROA is less impacted by a company's investor sentiment, market perceptions, and short-term fluctuations. Regardless of the size and monetary structure of a company, this metric can be used to assess the operational performance of a company with a high degree of accuracy. Therefore, this is a chosen metric by a plethora of researchers to study the financial performance of the companies, with ROA being one of the several dependent (or independent) variables in order to build a cause-effect model (Salim & Yadav, 2012). The formula for calculating ROA can be summarised as net income (after tax) of a company divided by total assets.

2.2.2.2 Return on Equity (ROE)

Conversely, Return on Equity (ROE) is one of the metrics that informs shareholders in business about the earnings generated on the equity, that is, on the shareholder capital (Johari & Komathy, 2019). ROE is perceived to be more than a one-

dimensional metric in that it can provide several indicators of the company's efficient operations as well as how profitable it is. Because of the predictive capacity of the metric, more profitable investment decisions can be made most of the time. Due to its focus on profits and equity, it is no wonder that most financial institutions have adopted its use (Macchiarella, 2024). Since ROE offers a more synoptic view of profitability and operational effectiveness, it enables investors and lenders to make more informed decisions on its financial well-being. Moreover, some studies suggest that ROE tends to perform better in models of the relationships of EGS dimensions to the financial sustainability of a firm. In econometric studies, ROE serves as a dependent variable in the assessment of financial performance (Dorfleitner et al., 2020).

2.2.3 Moderating Variable: Board Independence

The degree of corporate governance, specifically 'board independence', is paramount to assessing its effect, if any, on CSR performance in ameliorating the adverse consequences of corporate misconduct (Elamer & Boulhaga, 2024). It is posited as the ratio of independent directors or outboard directors on the board (Treepongkaruna et al., 2024a), or as the proportion of independent non-executive directors (Okoye et al., 2025). Some studies employ the count of independent directors on boards to operationalise this dimension (Brinette et al., 2024). Descriptive statistics illustrate the cross-sectional variance in this data of independent board members. For instance, in a large sample in Europe, the mean of board independence was 81.45 (Elamer & Boulhaga, 2024), reflecting compliance to a high level of board independence, whereas in a sample of companies in the MENA region, the mean percentage of board independence was 42% (Abu Khalaf et al., 2025). The rationale for championing independent directors is to foster governance on the boards while enhancing the supervision in a manner that sustains the value of the firm.

Independent directors serve as gatekeepers and provide transparency, which Abu Khalaf et al. (2025) claim are ingredients of optimal governance. Dispassionate independent directors are expected to align target managerial interests with those of the shareholders. Even though independent directors are within the firm, they lack specific knowledge and are either forced to rely on current publicly available information or financial statements, which makes them more predisposed to advocate for greater transparency on sustainability and ESG. In addition, because of the strength of their reputational concern, independent directors are more likely to promote beneficial ESG Citizenship. Rather than amateur reputation defenders, independent directors are shielded from tier 3 criticisms. During the existence of ESG controversies (ESGC), board independence provides a buffer, maintains accountability, and engages in the correct public rehabilitation and damage control. Indeed, boards with a greater degree of independence are able to limit their exposure to ESG risks, which ultimately results in the preservation of a firm's competitiveness and value.

2.3 ESG Controversies and Financial Performance

A number of empirical investigations, including studies as recent as Soschinski et al. (2024), Jucá et al. (2024) and Nirino et al. (2021), have identified across the board the negative impact the empirical ESG controversies have had on the profitability of organisations. Nirino et al. (2021) examine its impact on organisations covering a study geography involving 58 countries with a dataset covering 4025 organisations below. Aouadi & Marsat (2018) confirm the negative impact of ESG on corporate financial performance as well as market capitalisation on negative ESG intrinsic events. Corporate ESG events with negative ESG and the future of a firm's prospects and corporate reputation are events. Nirino et al. (2021) identified the negative correlation across 365 publicly traded organisations in Europe. Nirino identified the negative correlation across 365 public ESG controversies. For example, a large-scale worldwide study discovered that ESG controversies negatively affect companies' financial performance due reputation loss and negative effects on the company's activities (Soschinski et al., 2024).

However, when several performance proxies, particularly accounting indicators are examined, the relationship become complex. The same empirical studies involving European listed companies discovered that ESG controversies had no significant impact on accounting measurements such as ROE and ROA (Nirino et al., 2021). Similarly, studies on Indian companies showed the ESG controversies insignificant in the relationship with ROA, ROE, the Price-Earnings ratio, and Tobin's Q, showing that controversies may not have an immediate impact on competency or market value in the short run (Dutt et al., 2025). Nonetheless, the overall agreement is that ESG controversies significantly reduce profitability, emphasizing their real financial impact.

Numerous primary theorists predict negative impacts from ESGC. For example, out of many, the Stakeholder Theory perspective says that controversies fundamentally damage firms' stakeholder relationships, engendering distrust and possible withdrawal of support, which directly impacts sales and investment and consequently value creation (Aouadi & Marsat, 2018). Similarly, Legitimacy Theory contends that ESG controversies endanger a company's organizational

legitimacy since the alleged wrongdoing is viewed as a violation of the existing social contract (Abu Khalaf et al., 2025). This loss of legitimacy can lead to serious financial penalties as a result of stakeholder aversion (Treepongkaruna et al., 2024a). Furthermore, Agency theory implies that ESGC can result from self-serving managerial behaviours that harm the company while benefiting individual managers, resulting in financial and reputational damages (Nguyen et al., 2023).

Table 2.1 Literature on the relationship between ESG controversies and financial performance

Author(s)	**ESGC Measures**	**Financial Performance Measures**	**Country of Study**	**Relationship**
Nirino et al. (2021)	CONT (controversy score)	Tobin's Q, ROE, ROA	European listed companies	Tobin'd Q= negative and significant relationship ROE and ROA= insignificant relationship
Aouadi & Marsat (2018)	ESG Controversies (ESGCONTR)	Tobin's Q, Operating ROA, Operating ROS, ROE	International	Negative and significant relationship
Jucá et al. (2024)	ESGCT (controversy score)	ROE	Developed and Emerging	Developed countries= negative and significant Emerging= insignificant

Mahyoub et al. (2024)	ESG controversies score (LSEG)	Tobin's Q	Asia-Pacific region listed banks	Negative and significant relationship
Abu Khalaf et al. (2025)	ESG controversy score (ESGC)	ROA	MENA countries	Negative and significant relationship
Dutt et al. (2025)	ESG controversy score (ESG C)	ROA, ROE, PE, Tobin's Q	India	Insignificant relationship
García-Amate et al. (2023)	ESGC (Refinitiv)	Price, Tobin's Q, Market Value	Global	Negative and significant relationship
Fernandes et al. (2024)	Controversial ESG (ESGc) score	Tobin's Q ratio	BRICS companies	Negative and significant relationship
Brinette et al. (2024)	ESG controversies	Tobin's Q	French	Negative and significant
Soschinski et al. (2024)	ESG controversies (ESG_controvit) (Refinitiv)	Market-to-book ratio	20 highest GDP countries	Negative and significant
Macchiarella (n.d.)	ESG controversy score (ESGC_Score)	ROE, ROA	North American	Negative and significant relationship
Elamer & Boulhaga (2024)	ESG controversy score (ESG CON)	Tobin's Q	Europe	Negative and significant relationship
Staroverova (2022)	ESG Controversies (number of	Tobin's Q, MC to BV	Cross-country	Negative and significant relationship

	controversies during a quarter)			
Okoye et al. (2025)	ESG Controversies (ESGC) score	Market to Book Value	Malaysia	Insignificant relationship

Source: Developed for the research

2.4 Research Gaps

The existing research on ESG controversies has major limitation in generalizability, necessitating more extensive geographic and contextual analysis. A primary limitation is the concentration of research in developed markets, notably on European listed companies or non-financial institutions, prompting demands for studies in other geographical regions, like Asia or developing countries. Furthermore, the governance structures difference between various countries caused that the findings from other countries could not utilized in Malaysia.

A critical gap noted throughout several pieces of research is the need for better granularity when assessing both controversies and organisational factors. These researchers have highlighted the necessity of abandoning the view of CSR or ESG controversies as a unitary construct and concentrating on the disaggregated impacts of each individual ESG factor or the specific controversial factors and their differential impacts on business ethics, human rights, tax evasion, etc., and their differential financial impacts such as the cost of capital (Dutt et al., 2025; Jucá et al., 2024). A methodological constant is the low number of companies that have an ESG controversy score, leading to small and undiverse sample sizes. Critics have pointed out the potential for bias in controversy score measurement, as these scores, which look at media coverage, tend to overlook controversies in countries with low transparency or low press freedom (Dwekat & Abdelhaq, n.d.). To further this critique, some analyses have shown that ESG controversies tend to overrepresent English-speaking countries (Suomela, n.d.).

Gaps in understanding long-term strategy and timing of controversies are of a different order. There is an iterative, cyclical relationship that needs unpacking between the timing of controversies and the duration of changes in a firm's value. Alongside the novelty of non-correlation, there is an urgent need to (or reverse the direction of correlation) focus on organisational dynamics. For example, DasGupta (2022) suggests that organisations that implement greater ESG practices post-controversy, do these organisations acquire legitimacy, and if so, does that provide a basis for sustaining levels of higher profitability?

2.5 Hypotheses Development

There is overwhelming agreement regarding the antagonistic correlation between ESG Controversial Visibility (ESGCV) and financial performance, which is specifically market worth. These ESGCV issues iterate the many theorised ways in which they spearhead negative financial consequences (Brinette et al., 2024; Elamer & Boulhaga, 2024). Negative relationships across various continents have been demonstrated. In the analysis of publicly traded companies in Europe, ESG Controversies (ESGC) and financial performance (ROA and ROE) showed negative statistically significant relationships (Nirino et al., 2021). Negative relationships with market value for ROE have also persisted in the sample of non-financial globally public companies and BRICS nations (Fernandes et al., 2024). The negative relationships signal controversies within the market, which leads to a significant reduction in the profitability of the firm and an increase in the firm's specific risk (Jucá et al., 2024). This is also in line with the Legitimacy, Stakeholder, and Agency theories, which state that a firm's value decreases as the controversies the firm faces also diminish its reputation and legitimacy.

Although it is true that ESG controversies negatively impact finances, the extent to which this is true is only revealed through specific types of financial performance proxies (Halunga et al., 2017). DasGupta (2022) explains that this is the case and enhances the Market Based Hypothesis as it is clear that investors, particularly those with a long-term and risk-averse view, respond negatively to controversies in the news with regard to Tobin's Q and stock returns. According to Halunga et al. (2017), this is attributed to the ESG controversies being detrimental to the reputation of the company and thus causing financial strain as a result. When investigating these issues, the authors also use more traditional measures such as accounting-based measures of financial performance, i.e. ROA and ROE, which also tend to make the results more ambiguous. One such example is the European study, which found that there was no statistically significant correlation of controversies and other variables in the financial performance accounting measure ROE and ROA (Nirino et al., 2021). However, there is also evidence supporting the hypothesis that there is a negative relationship between financial performance and ESG controversies; for

example, a broad cross-section of 29 countries' public, non-financial companies studied ESG controversies and ROE and found a negative relationship in financial performance (Jucá et al., 2024).

Despite the overwhelming support for the hypothesis of negative relationship between ESG controversies and financial performance, numerous research show situations in which this negative relationship is reduced or reversed, providing essential context. In many developing economies, such as India, ESG controversies were shown to be insignificant in terms of financial metrics, which are ROA, ROE, PE ratio, and Tobin's Q, implying that the impact may be inconsequential in the short term (Dutt et al., 2025). Similarly, referring to Okoye et al. (2025), a research of Malaysian listed companies, an insignificant relationship examined between ESG controversies score and firm value, which is Market-to-Book, but the ESG combined score, which is the performance score after controversy outlay, had a significant positive influence on corporate value.

H1: ESG Controversies negatively influence financial performance among public listed companies in Malaysia

The theoretical foundation and empirical data from diverse geographical contexts in the literature strongly support that Board independence positive moderate the relationship between ESG controversies and financial performance (Abu Khalaf et al., 2025; Brinette et al., 2024; Elamer & Boulhaga, 2024). A positive moderating effect indicates that Board Independence (BI) mitigates or reduces the negative effects of ESG controversies (ESGC) on a company's financial performance. The assumption here is that external board members will enhance monitoring, oversight, and transparency, thus acting as a partial solution to agency and reputational damage concerns following controversial events (Abu Khalaf et al., 2025). In the context of Highly BI companies, controversies often convince investors that the independent directors will be more effective at implementing damage control and safeguarding financial interests (Elamer & Boulhaga, 2024).

Numerous studies from different countries have confirmed that BI positively impacts the link between ESG controversy and financial outcome. For example, the interaction between ESG controversy and board independence was positive and

significantly related to Tobin's Q for French companies, thus supporting the hypothesis that BI mitigates the negative effects of the controversy on company value (Brinette et al., 2024). Likewise, Elamer & Boulhaga (2024) confirmed that the role of independent directors is vital in fostering accountability and positive sustainability outcomes in their analysis of a positive coefficient for the ESG Controversy and Board Independence Connection on a dataset of European non-financial public companies. In addition, Abu Khalaf et al. (2025) have shown that better governance systems will mitigate the negative consequences of ESG Controversy on firm financial performance, that is, ROA. In the MENA countries, this was confirmed for the impact of Board Independence (IND) on ESG Controversy and on the financial performance outcome.

While the general agreement supports the positive moderating impact of BI, the effect varies depending on the precise performance measure or country examined. For example, in a study of FTSE4Good Bursa Malaysia (F4GBM) listed companies, the moderating effect of board independence on the ESGC-company value relationship was shown to be statistically insignificant (Okoye et al., 2025). However, even in this setting, BI has a strong moderating effect on market risk exposure (stock price volatility), proving its ability to mitigate the negative impact of controversies in terms of risk deduction. Overall, the consistency of findings, which link higher Bi with an improved ability to manage ESG crises and stabilize value or risk, provides robust support to the theoretical argument that board independence serves as a powerful governance mechanism, positively moderating the relationship between ESG controversy and financial performance (Abu Khalaf et al., 2025).

H2: IND positively moderates the relationship between ESG controversies and financial performance among public listed companies in Malaysia

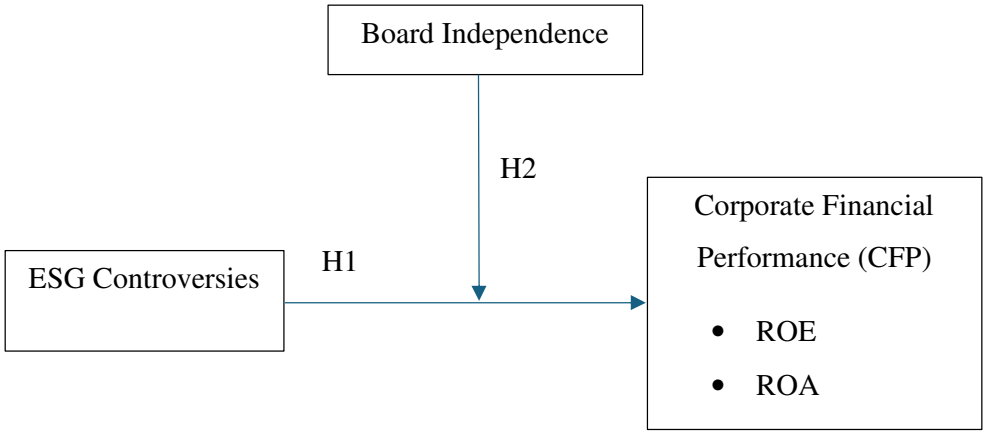
2.5.1 Summary of hypotheses

H1: There is a negative relationship between ESG controversies and financial performance among public listed companies in Malaysia

H2: IND positively moderates the relationship between ESG controversies and financial performance among public listed companies in Malaysia

2.6 Conceptual Framework

Figure 2.3 Proposed Conceptual Framework



Source: Created for this study

The conceptual framework includes the independent variable of ESG Controversies, the dependent variables of financial performance, such as ROE and ROA, and the moderating variable of Board Independence in the ESGC-financial performance relationship.

2.7 Summary of the Chapter

It is clear from the earlier literature review that earlier study on this topic has yielded a variety of results. The review of literature, which is supported by several underlying theories, will help in predicting how ESG controversies might affect financial performance. The proposed research framework and hypotheses are described in this chapter. The research methodologies will be discussed in the following chapter.

CHAPTER 3: METHODOLOGY

3.0 Introduction

A research methodology involves systematically exploring relevant material, including identifying and refining the research topic, developing theories or hypotheses, and collecting, organizing, and evaluating data, and forming conclusions. The results are examined to ensure they fit with the study's initial assumptions.

The purpose of this study is to examine how Malaysian public listed companies' financial performance and ESG controversies related to one another. This chapter describes the study's sampling method and research design, taking into account all of the variables that were found in the hypotheses. The following steps are the research instrument, construct measurement, data collection method, and data analysis tools. The chapter provides a thorough description of the analytical tests and explains why these techniques were chosen to analyzed the collected data. Finally, a summary concludes the chapter.

3.1 Research Design

This section provides an overview of the methods used to address the research questions. The study aims to evaluate the how ESG controversies affect financial performance among Malaysian public listed companies using the depicted research framework. The independent variable encompasses ESG controversies significantly influence financial performance among public listed companies in Malaysia**.** Moreover, this study examines one moderating variables, which is board independence, moderating the impacts of ESG performance among Malaysian public listed companies.

According to Ranganathan & Aggarwal (2018), research design is essentially the blueprint or structure that directs how a study is carried out; it describes what data will be collected, from which sources, when, and how, in order to properly and reliably answer the research question. In more specific terms, a research design includes decisions regarding methodologies, methods, data collection, measurement, and analysis, as well as how these aspects fit together logically while controlling for sources of bias and ensuring the research is viable and ethical. It ensures that research objectives, research questions, and empirical procedures are aligned, resulting in reliable conclusions.

3.1.1 Quantitative Research

Quantitative research is when data is collected and examined through a scientific approach. The data is then analysed via statistical techniques in order to test theories and analyse relationships and provide results that can be applied in the real world. Through the increased focus on measurement and data, traits like magnitude, frequency and extent are determined. Typically, quantitative research is conducted via surveys, secondary data and instruments, and research is done through a deductive approach. This approach is one that focuses on a theory. That theory is then tested with the collection of data in order to analyse the results (Mohajan, 2020). Businesses can use quantitative data and results in order to analyse data swiftly which is why research is highly conducted in that field. Quantitative research places more emphasis on numerical measures that enable statistical analysis and hypothesis testing than qualitative research, which provides data in non-numerical media such as text, video, and audio.

3.1.2 Descriptive Research

Descriptive research is a methodological technique that seeks to precisely and methodically depict the features of a population, entity, or situation without attempting to establish causal relationships. It uses techniques like as surveys, observations, case studies, and archival data to answer “who, what, where, when, and how” questions rather than “why”. Descriptive research collects, summarizes, and conveys data using frequencies, percentages, means, and other summary statistics to provide a factual snapshot of the issue being studied. It is especially beneficial when the issue is underexplored, or baseline data is required to set the stage for future study (Aggarwal & Ranganathan, 2019).

3.2 Data Collection Method

3.2.1 Secondary Data

According to Johnston (2014), secondary data refers to information that has already been collected and assembled by other parties for purposes other than the present study but may be reanalyzed to answer new research questions. Since this approach is inexpensive and easier to procure than primary data, it is popular within accounting, finance, and corporate governance.

The extent of secondary information used in this research study was obtained from reputable channels like Google Scholar, ResearchGate, and Scopus, where the researchers accessed numerous academic works. Also, all the data needed for this research was in the LSEG database, and the research focused on public PLCs' annual reports that are freely available. The official websites of the corresponding PLCs or Bursa Malaysia are the sources of the annual reports.

3.2.2 Research Instrument

To measure ESG controversies, ESG controversies scores will be collected from LSEG database, which are known for providing standardized and comparable ESG scores (Buallay, 2019). While company annual reports, integrated reports, and sustainability disclosures will be studied to measure the financial performance of the companies. Extracting control variables such as board size and capital structure will come from company annual reports. Given the term following the MCOC (MCCG, 2021) revision, the data collection period will be the years 2019 to 2023 to gain an understanding of the most recent trends in ESG controversies and financial performance. To ensure comparability and validity, financial institutions and firms with incomplete records will be dropped from the final sample.

Thereafter, the variables are assessed using EViews 13 Student Version for descriptive statistics, Pearson correlation, and panel data regression.

3.3 Sampling Design

Acharya et al. (2013) notes that sampling design is the arrangement of methods one uses to select units from a population to build a study sample. Target population, sampling frame, sample size and sampling method (probability or non-probability) must be determined. A well-structured sampling design allows the sample to reflect the population and thus increases the credibility, authenticity and scope of the results. Even though non-probability sampling methods like convenience or purposive sampling can be used, quantitative research usually employs probability sampling methods like simple random, stratified, cluster and systematic sampling to avoid bias.

3.3.1 Target Population

As of October 2025, Malaysia's top 150 Publicly Listed Companies (PLCs) by market capitalization will be the target population of this study. These are the largest companies in the equity market of Malaysia. These PLCs are companies with equity values that are ranked among the largest in Malaysia's capital market and are listed on Bursa Malaysia. These companies are economically significant and are likely to have more visibility, possibly more rigorous reporting, public scrutiny of their reporting, as well as inclusion of ESG controversies. Ranking these companies by market capitalisation allows for the capture of the most significant enterprises in Malaysia's economy and capital markets.

Figure 3.1 Top 150 PLCs in Malaysia by Market Cap in 2025

Rank	Name	Rank2	Name2
1	Malayan Banking Berhad	41	Sime Darby Property Berhad
2	Public Bank Berhad	42	IGB Real Estate Investment Trust
3	CIMB Group Holdings Berhad	43	TIME dotCom Berhad
4	Tenaga Nasional Berhad	44	Sunway Construction Group Berhad
5	IHH Healthcare Berhad	45	Chin Hin Group Berhad
6	Press Metal Aluminium Holdings Berhad	46	Malayan Cement Berhad
7	Celcomdigi Berhad	47	Inari Amertron Berhad
8	Hong Leong Bank Berhad	48	Alliance Bank Malaysia Berhad
9	YTL Power International Berhad	49	ViTrox Corporation Berhad
10	PETRONAS Gas Berhad	50	Batu Kawan Berhad
11	SD Guthrie Berhad	51	Yinson Holdings Berhad
12	PETRONAS Chemicals Group Berhad	52	My E.G. Services Berhad
13	Sunway Berhad	53	Sunway Real Estate Investment Trust
14	MISC Berhad	54	Pavilion Real Estate Investment Trust
15	Gamuda Berhad	55	Frontken Corporation Berhad
16	YTL Corporation Berhad	56	Eco-Shop Marketing Berhad
17	Telekom Malaysia Berhad	57	Eco World Development Group Berhad
18	RHB Bank Berhad	58	Hap Seng Consolidated Berhad
19	Maxis Berhad	59	Heineken Malaysia Berhad
20	Axiata Group Berhad	60	Bursa Malaysia Berhad
21	IOI Corporation Berhad	61	AFFIN Bank Berhad
22	Nestlé (Malaysia) Berhad	62	MBSB Berhad
23	Kuala Lumpur Kepong Berhad	63	LPI Capital Bhd
24	PETRONAS Dagangan Berhad	64	Malaysian Pacific Industries Berhad
25	99 Speed Mart Retail Holdings Berhad	65	Gas Malaysia Berhad
26	Hong Leong Financial Group Berhad	66	Greatech Technology Berhad
27	Westports Holdings Berhad	67	Bank Islam Malaysia Berhad
28	AMMB Holdings Berhad	68	Carlsberg Brewery Malaysia Berhad
29	QL Resources Berhad	69	Tanco Holdings Berhad
30	KLCC Property Holdings Berhad	70	S P Setia Berhad
31	Mr D.I.Y. Group (M) Berhad	71	Scientex Berhad
32	United Plantations Berhad	72	Top Glove Corporation Bhd.
33	PPB Group Berhad	73	Malakoff Corporation Berhad
34	Sime Darby Berhad	74	FGV Holdings Berhad
35	Genting Malaysia Berhad	75	UOA Development Bhd
36	IOI Properties Group Berhad	76	ITMAX System Berhad
37	KPJ Healthcare Berhad	77	Unisem (M) Berhad
38	Genting Berhad	78	Genting Plantations Berhad
39	Dialog Group Berhad	79	Hong Leong Industries Berhad
40	IJM Corporation Berhad	80	IGB Berhad

Rank3	Name3	Rank4	Name4
81	Oriental Holdings Berhad	121	Mi Technovation Berhad
82	Axis Real Estate Investment Trust	122	Southern Cable Group Berhad
83	OSK Holdings Berhad	123	V.S. Industry Berhad
84	Hartalega Holdings Berhad	124	PMB Technology Berhad
85	Kelington Group Berhad	125	MBM Resources Berhad
86	Farm Fresh Berhad	126	Eastern & Oriental Berhad
87	UWC Berhad	127	CapitaLand Malaysia Trust
88	UEM Sunrise Berhad	128	Binastra Corporation Berhad
89	Capital A Berhad	129	Bumi Armada Berhad
90	Mega First Corporation Berhad	130	CTOS Digital Berhad
91	Hextar Global Berhad	131	Keck Seng (Malaysia) Berhad
92	Johor Plantations Group Berhad	132	Magnum Berhad
93	Allianz Malaysia Berhad	133	Padini Holdings Berhad
94	Kossan Rubber Industries Bhd	134	YTL Hospitality REIT
95	Sarawak Oil Palms Berhad	135	Velesto Energy Berhad
96	Kerjaya Prospek Group Berhad	136	Sports Toto Berhad
97	Tropicana Corporation Berhad	137	DRB-HICOM Berhad
98	Mah Sing Group Berhad	138	Ta Ann Holdings Berhad
99	NationGate Holdings Berhad	139	Lianson Fleet Group Berhad
100	Syarikat Takaful Malaysia Keluarga Berhad	140	Dayang Enterprise Holdings Bhd
101	KSL Holdings Berhad	141	Aeon Co. (M) Bhd.
102	Pentamaster Corporation Berhad	142	Apex Healthcare Berhad
103	Matrix Concepts Holdings Berhad	143	Dutch Lady Milk Industries Berhad
104	AEON Credit Service (M) Berhad	144	Ideal Capital Berhad
105	Ranhill Utilities Berhad	145	Radium Development Berhad
106	Guan Chong Berhad	146	NEXG Berhad
107	SAM Engineering & Equipment (M) Berhad	147	Pharmaniaga Berhad
108	DXN Holdings Bhd.	148	Paradigm Real Estate Investment Trust
109	Far East Holdings Berhad	149	Berjaya Corporation Berhad
110	Hume Cement Industries Berhad	150	Kretam Holdings Berhad
111	Bintulu Port Holdings Berhad		
112	Hextar Technologies Solutions Berhad		
113	D & O Green Technologies Berhad		
114	WCE Holdings Berhad		
115	Oriental Kopi Holdings Berhad		
116	Kim Loong Resources Berhad		
117	7-Eleven Malaysia Holdings Berhad		
118	Malaysian Resources Corporation Berhad		
119	Leong Hup International Berhad		
120	Solarvest Holdings Berhad		

Source: MarketCap Watch. (2025). *Biggest listed companies in Malaysia by market cap*.

3.3.2 Sampling Period

The sampling period for this study is from 2019 to 2023, a five-year timeframe selected to examine the relationship between ESG controversies and financial performance among Malaysian public listed companies in Malaysia. This timeframe was chosen for two reasons. First, it summarizes recent developments in corporate governance and sustainability reporting practices since the implementation of the Malaysian Code of Corporate Governance (MCCG) 2021, which emphasized enhanced disclosure and accountability on ESG matters (MCCG, 2021). Due to data availability, year 2019 to 2023 are the latest data of ESG controversies that can obtained from LSEG database. Second, a five-year frame yields a balanced panel dataset that eliminates short-term fluctuations while ensuring sufficient observations for strong statistical analysis (Gujarati & Porter, 2009). As a result, selecting 2019 to 2023 as the sampling period provides a relevant and robust timeframe to capture the most recent ESG developments and their implications for company financial performance in Malaysia.

3.3.3 Sampling Technique

For this research, non probability sampling will be used. Non-probability sampling occurs when no element in the population has a known or equal chance of being selected, and the sample is selected at the discretion of the researcher or the criteria specified by the study (Etikan, 2017). Andrade (2021) suggests that a range of non-probability sampling methods are often subsumed under the term 'purposive sampling'. Purposive sampling is when participants are selected for inclusion as they meet certain criteria and are likely to provide the most relevant or accurate response. It is a form of non-probability sampling where the researcher selects organisations based on their industry, field and type of business. The focus of purposive sampling is to sufficiently address the research questions in relation to key characteristics of the population (Andrade, 2021).

This is applicable to the current research considering the focus is on the 150 PLCs listed on the Bursa Malaysia stock exchange with the following parameters in Malaysia based on the market capitalization. They are the biggest and most economically influential PLCs in Malaysia and are most likely to provide comprehensive and consistent sustainability disclosures. Their ESG disclosures allow for the data within the sample to be compared on sustainability. Also following from past research, financial institutions, such as banks, securities, and insurance companies have been excluded from the sample as they are governed by a different set of rules and regulations from Bank Negara Malaysia (BNM) and Securities Commission Malaysia (SC). Although generalizations cannot be made to the rest of the population of Malaysian companies, the choice of these firms with a rich data base is methodologically sound to scrutinize the relationship between ESG controversies and financial performance. This study will also exclude companies with missing scores on ESG controversies, outlier scores and also companies listed in the CSV, but are out of scope.

3.3.4 Sampling Size

A subset of the top 150 PLCs operating in Malaysia will be taken for this study. These PLCs will be collected over a 5-year period from 2019 to 2023 which aligns with the period of tightened regulations on ESG disclosure in the MCCG 2021 and Bursa Malaysia's Guidance on the Sustainability Reporting. This period will also show the most up to date changes in Malaysia. This period will also show the most up to date changes in Malaysia. To ensure comparability to each other, the last sample will only have the non-financial companies with no missing data on ESG reporting. Financial companies, in particular banks, insurances, and securities, are out of the sample because of the peculiar requirements of Bank Negara Malaysia (BNM) on ESG disclosure and financial performance which are vastly different from other sectors. After the exclusions of 78 PLCs, which are 32% financial companies and 68% reporting companies, the final sample dataset comprises 72 PLCs.

Table 3.1 List of Malaysian PLCs for the Study

Name	Name
AXIATA GROUP	MBM RESOURCES
BERJAYA CORPORATION	MI TECHNOVATION
BUMI ARMADA	MISC BHD.
CAPITAL A	MR DIY GROUP M BHD
CARLSBERG BREWERY MAL.	MY EG SERVICES
CELCOMDIGI	NESTLE (MALAYSIA)
CHIN HIN GROUP	PADINI HOLDINGS
DIALOG GROUP	PETRONAS CHEMICALS GP.
FGV HOLDINGS	PETRONAS DAGANGAN
FRONTKEN CORPORATION	PETRONAS GAS
GAMUDA	PHARMANIAGA
GENTING	PMB TECHNOLOGY
GENTING MALAYSIA	PPB GROUP

GENTING PLANTATIONS	PRESS METAL ALUMINIUM
GREATECH TECHNOLOGY	QL RESOURCES
GUAN CHONG	RANHILL UTILITIES
HAP SENG CONSOLIDATED	SAM ENGR.& EQU.(M)
HARTALEGA HOLDINGS	SAPURA ENERGY
HEINEKEN MALAYSIA	SARAWAK OIL PALMS
HEXTAR GLOBAL	SCIENTEX
HUME CEMENT INDUSTRIES	SIME DARBY
IHH HEALTHCARE	SP SETIA
IJM CORPORATION	SUNWAY
INARI AMERTRON	TELEKOM MALAYSIA
IOI CORPORATION	TENAGA NASIONAL
IOI PROPERTIES GROUP	TIME DOTCOM
KELINGTON GROUP	TOP GLOVE CORPORATION
KERJAYA PROSPEK GROUP	TROPICANA
KOSSAN RUBBER	UEM SUNRISE
KPJ HEALTHCARE	UMW HOLDINGS
KSL HOLDINGS	UNISEM (M)
KUALA LUMPUR KEPONG	VELESTO ENERGY
MALAYAN CEMENT	WESTPORTS HOLDINGS
MALAYSIAN PACIFIC INDS.	YINSON HOLDINGS
MALAYSIAN RESOURCES	YTL CORPORATION
MAXIS	YTL POWER INTERNATIONAL

3.4 Construct Measurement

The concept was based on past research, as described in Chapter 2. This study employs one independent variable, two dependent variable, one moderating variable, and three control variables.

3.4.1 Dependent Variable Definition

Finanacial performance depicts a company's overall profitability and economic achievement for a given period. This study intepretes financial performance using accounting metrics such as return on equity (ROE) and return on assets (ROA). ROA illustrates how well an organization has converted its assets into profit. This is calculated using the formula, ROA = net income/ total assets. While ROE demonstrates the extent to which the company is able to give profits back to its equity owners, this is computed using the formula, ROE = net income/ total equity. Both ROA and ROE are popular measures in financial analytics which makes them very useful in the analysis of the overall performance of a company(Ameer & Othman, 2012). Data for these variables are obtained from the LSEG database and compared with the company's annual report for accuracy.

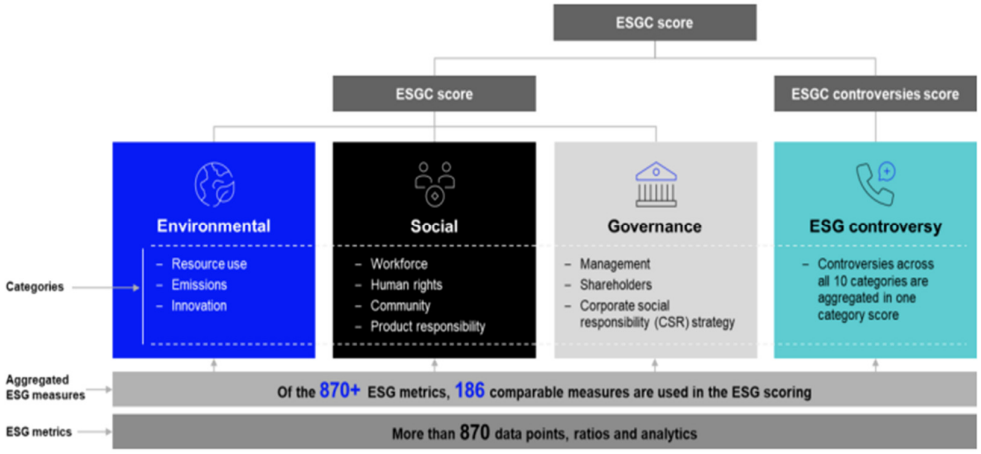
3.4.2 Independent Variable Definition

The independent variable in this research is ESG Controversies, which captures the extent of negative sustainability-related incidents associated with each company. According to Davis & Jamie (2024), ESG controversies is measured using the ESG Controversies Score obtained from the LSEG database. The ESGC score considers both the company's ESG performance and its engagement in ESG-related controversies, which accounting for unfavourable media attention and reputational risks.

The ESGC score ranges from 0 to 100, with higher scores indicating fewer controversies and better ESG management practices. Companies with higher ESGC scores are seen to be less exposed to ESG controversies. We recoded them as

dummies, 1 for companies having at least one controversy in the previous year, and 0 otherwise, to guarantee similar statistics on controversies.

Figure 3.2 ESG Scores from LSEG



Source: Davis, & Jamie. (2024). *Environmental, Social and Governance scores from LSEG Environmental, social and governance scores from LSEG 2*.

3.4.3 Moderating Variables Definition

The moderating variable, Board Independence (IND), assess the proportion or percentage of independent non-executive directors on a company's board. It is computed by dividing the number of independent directors by the total number of directors on the board (Kweh et al., 2022). This ratio measures the extent to which the board is free of management influence and capable of providing impartial scrutiny.

A greater board independence ratio indicates stronger governance procedures, which may impact how well a company responds to ESG controversies and protect its financial performance (Abu Khalaf et al., 2025). Data on board composition are sourced from LSEG database and company annual reports.

3.4.4 Control Variables Definition

In order to consider other aspects which could influence ESG performance, we include three control variables, all control variables are obtained from LSEG database and computed manually.

Firm Size (LNTA): Calculated as the natural logarithm of all the assets. Bigger companies are more prone to partaking in visibility and resource expensive sustainability projects (Kieschnick & Moussawi, 2018).

Capital Structure (LEV): Proxied by the ratio of total debt to total assets. Leverage impacts companies' risk appetite and financial flexibility, which can have an impact on their ESG obligations (Le & Phan, 2017).

Firm Revenue (LNREV): Calculated using the natural logarithm of total revenue. This control addresses disparities in operational size across companies. Companies with higher revenue may achieve superior financial results due to economies of scale, market domination, or improved operational capabilities (DasGupta, 2022).

Table 3.2 Variables of the study

Variables	Proxy	Measurement	Source
Dependent Variable	ROA	$\frac{Net\ Income}{Total\ Assets}$	Johari & Komathy (2019)
Dependent Variable	ROE	$\frac{Net\ Income}{Total\ Equity}$	Johari & Komathy (2019)
Independent Variable	ESG Controversies	ESG Controversies Score	Davis & Jamie (2024)
Moderating Variable	Board Independence	Percentage of Independent Directors	Cohen & Levinthal (1990)
Control Variable	Firm Size	Total Asset	Kieschnick & Moussawi (2018)
Control Variable	Capital Structure (Leverage)	$\frac{Total\ Debt}{Total\ Asset}$	Le & Phan (2017)
Control Variable	Firm Revenue	Total Revenue	LSEG Database

3.5 Model Specification

To test the hypotheses and examine the relationships between ESG controversies and financial performance among public listed companies in Malaysia, we use a series of econometric models. These models enable us to examine the possible moderating function of board independence as well as the impact of ESG controversies on financial performance. The Pooled Ordinary Least Squares (POLS) model is using as the final estimation model.

The base model to establish the relationship between ESG controversies and financial performance:

Model 1:

$$ROA_{it} = B_0 + B_1 ESG_Con_{it} + B_2 LNTA_{it} + B_3 LNREV_{it} + + B_4 LEV_{it} + \varepsilon_{it}$$

Model 2:

$$ROE_{it} = B_0 + B_1 ESG_Con_{it} + B_2 LNTA_{it} + B_3 LNREV_{it} + + B_4 LEV_{it} + \varepsilon_{it}$$

Model 3:

$$ROA_{it} = B_0 + B_1 ESG_Con_{it} + B_2 IND_{it} + B_3 (ESG_Con * IND)_{it} + B_4 LNTA_{it} + B_5 LNREV_{it} + + B_6 LEV_{it} + \varepsilon_{it}$$

Model 4:

$$ROE_{it} = B_0 + B_1 ESG_Con_{it} + B_2 IND_{it} + B_3 (ESG_Con * IND)_{it} + B_4 LNTA_{it} + B_5 LNREV_{it} + + B_6 LEV_{it} + \varepsilon_{it}$$

Where:

ROA_{it} represents the Return on Assets for firm i in year t.

ESG_Con_{it} represents ESG controversies scores for firm i in year t.

β represents the coefficients to be estimated for the explanatory variables.

IND_{it} represents board independence (proportion of independent directors).

$LNTA_{it}$ represents natural log of total assets (firm size).

$LNREV_{it}$ represents natural log of total revenue.

LEV_{it} represents capital structure.

ε_{it} represents the error term.

3.6 Data Analysis

Data analysis is thinking critically about data to find the unique elements and features within and the correlations among them to achieve the data project's goals (Thornhill et al., 2019). Quantitative data analysis, in particular, invokes some aspect of empirical research and employs statistical tools to summarize, analyze, and/or assess hypotheses and use the results to represent the whole (Loeb et al., 2017). The present study, for instance, is based upon three data analysis components—descriptive analysis, Pearson correlation analysis, and panel data analysis.

3.6.1 Descriptive Analysis

Trochim (2007) posits that descriptive analysis is the form of analysis that seeks to summarize and meaningfully present the basic features or the essential content and describe the body of knowledge that is the particular data set. Smattering of the measurements used in descriptive statistics to analyze data set distributions and variability include the average, central value, minimum, maximum, deviation, and frequency. The descriptive statistical analysis is the first step of the analysis to be used in the study to calculate ROA, ROE, ESG controversy, number of independent directors, firm size, revenue and capital, and be the liquity of the capital structure. The results of descriptive statistics analyses will be used to reveal the data set to be analyzed and describe the overall data set to be analyzed and describe the overall data set tersely and to facilitate the subsequent statistical analysis. This will, therefore, help the study reveal relative more the patterns among the data within the study.

3.6.2 Pearson Correlation Analysis

Keeping the data collection procedures and activities in mindset, it is proper to use Pearson's correlation coefficient to analyze the details and data in particular the linear relationships. Pearson's correlation coefficient is used to understand the data and the relationships. As Mukaka (2012) describes, "Pearson correlation is a statistical measure that expresses the strength of a linear relationship between two data values. In essence, it attempts to explain what happens to one variable when the value of the other is altered". In this case, it will concentrate on analyzing the correlation among and between the primary independent and dependent variables in the study. Pearson's correlation coefficient will be useful in estimating the multicollinearity of variables as well as tracking the relationships among the variables.

Figure 3.3 Rule of Thumb of Pearson Correlation Analysis

Coefficient Range	Strength of Association
± 0.91 to ± 1.00	Very Strong
± 0.71 to ± 0.90	High
± 0.41 to ± 0.70	Moderate
± 0.21 to ± 0.40	Small but definite relationship
± 0.00 to ± 0.20	Slight, almost negligible

Source: Hair, J., Money, A., Samuel, P., & Page, M. (2007). *Research methods for business. New York: John Wiley & Sons, Inc.*

3.6.3 Panel Data Analysis

Panel data analysis is the application of econometric techniques to datasets that have both cross-sectional and time-series characteristics. This method is particularly useful since it compensates for unobservable firm-specific effects and enhances estimation efficiency (Baltagi, 2008). Prior to doing the regression analysis, a correlation analysis will be performed. The relationship between explanatory and dependent variables may be ascertained with the use of correlation analysis. It also displays if multicollinearity influences these explanatory variables (Hsiao, 2022). Pooled data, which combines cross-sectional and time-series data, offers more variety, information, degrees of freedom, and effectiveness, according to Hooy & Tee (2009). When working with data that spans many time periods and cross-sections, panel data is most useful. Panel data often contain firm-specific unobservable effects, diagnostic tests like the Breusch-Pagan LM test for random effects and the F-test for fixed effects will be conducted to assess whether these are significant. If the tests indicate that individual effects are not statistically significant, Pooled OLS is appropriate and will be used as the main estimation method. Heteroscedasticity and autocorrelation will be taken into consideration using robust standard errors.

3.7 Diagnostic Tests

Diagnostic tests are required in panel data analysis to ensure that regression model assumptions are not violated, which improves the validity and reliability of the results. Within the scope of the study to address possible econometric issues such as normality, multicollinearity, heteroscedasticity, and autocorrelation, several diagnostic tests will be undertaken. These tests help to ascertain and enhance the findings' robustness by ensuring that the coefficients that have been estimated are unbiased, efficient, and consistent (Gujarati & Porter, 2009).

3.7.1 Normality Test

Testing the normality of the residuals in a regression model is of particular importance. The reason is that the invalidity of the hypotheses testing either is in relation to the dependent variable or renders the conclusion or statistical findings unreliable, particularly in small sample sizes (Ghasemi & Zahediasl, 2012). The normality of residuals in this study is investigated using the Jarque-Bera test. The skewness and kurtosis will also be examined. Where such testing indicates the presence of non-normality, robust estimation techniques will be applied, since regression estimates are said to be robust to the presence of non-normality in the residuals.

3.7.2 Multicollinearity Test

Multicollinearity describes the phenomenon of having too many independent attributes that are very similar and that can generate inflation of the variance and can cause the regression coefficients to lose significane. In order to find Varaince Inflation Factor (VIF) will be calculated for all the independent variables. A VIF score greater than 10 suggests possible multicollinearity issues (Hair et al., 2019). If strongly associated variables are identifies, the model can be changed by eliminating or converting them.

3.7.3 Heteroscedasticity

Heteroscedasticity arises when the variance of the term differs between data, resulting in inefficient estimates. The Breusch-Pagan and Modified Wald tests for groupwise heteroscedasticity will be used on panel data models. To overcome heteroscedasticity, robust standard errors (clustered by company) will be utilized in the regression analysis to ensure the reliability of coefficient estimates (White, 1980).

3.7.4 Autocorrelation Test

When error terms are associated across time, autocorrelation takes place and it can skew standards errors in panel regressions. The Wooldridge test for autocorrelation in panel data will be used to find serial correlation (Drukker, 2003). If autocorrelation is discovered, robust standard errors will be used to reduce its impact.

3.8 Summary of the Chapter

The research methodologies utilized to assess the study's findings are covered in this chapter. These methods are used to collect data, which is then thoroughly analyzed in the next chapter. Chapter 4 examines the interrelationships among various variables and the impact of ESG controversies on financial performance among Malaysian public listed companies (PLCs), moderating by board independence.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

The study's findings, which were examined using EViews 13 Student Version, are presented in this chapter. The goal of the analysis of secondary data from 2019 to 2023, which includes 72 PLCs in Malaysia, is find relationships between the variables. The descriptive analysis includes metrics like median, mean, as well as standard deviations for all variables. Pooled OLS regression will be used to analyze the significance of explanatory variables. The study's results will be used to provide a detailed explanation of the explanatory data.

4.1 Descriptive Analysis

The variables' descriptive statistics for the five-year period from 2019 to 2023 are displayed in Table 4.1. It is clear that ROA has a mean of 6.8257, a maximum of 65.66, and a minimum of -100.64. ROE's smallest value is -204.40, its maximum is 187.64, and its mean is 14.8343, all of which indicate significant differences in the tested companies' financial performance. Furthermore, the standard deviations for ROA and ROE are 13.1845 and 31.1329, respectively.

The findings of the independent variables show that ESG controversies, which was recoded as a dummy variable, has a mean of 0.20, a maximum value of 1, and a minimum value of 0. As for IND, it has a moderately ordered variable with a minimum of 28.57 ranging to 88.89 with a mean of 53.4438 which shows that the sample consists of actors in the industry with boards that have varying levels of independence.

When it comes to LEV, it has a 0.1880 standard deviation, which is the lowest, along with a minimum of 0.0015, a 0.2932 mean, and a maximum of 1.0178. LNREV is said to be 12.2971 for the minimum, 17.7871 for the maximum, and the mean is 15.1422. Moreover, for LNTA, the minimum is 12.5445, the maximum is 19.1412, and the mean is 15.9058.

Variable	Mean	Std. Dev.	Min	Max	Observations
ROA	6.8257	13.1845	-100.64	65.66	325
ROE	14.8343	31.1329	-204.40	187.64	325
ESG_Con	0.20	0.4006	0	1	325
ESG_Con*IND	9.8706	11.4886	0	70	325
IND	53.4438	11.4885	28.57	88.89	325
LEV	0.2932	0.1880	0.0015	1.0178	325
LNREV	15.1422	1.2215	12.2971	17.7871	325
LNTA	15.9058	1.4227	12.5445	19.1412	325

Table 4.1 Descriptive Analysis

4.2 Pre-Estimation Tests

4.2.1 Pearson Correlation Analysis

Pearson correlation analysis was used to investigate the linear relationships between the study's key variables, which are ROA, ROE, RSG controversies, firm size, revenue, and leverage. It helps to identify possible multicollinearity problems and gives early insights into how the variables related to one another before moving further with regression modelling.

The correlation results show the strength and direction of each pair-wise relationship. A positive coefficient implies that both variables move in the same

direction, whereas a negative coefficient shows the opposite relationship. The significance thresholds (*0.1, **0.05, and ***0.01) determine if correlations are statistically significant.

The table 4.2 indicate that ROA is positively strongly correlated with ROE (0.7666), showing that both metrics accurately reflect company profitability. ROA has weak negative correlations with ESG_Con (-0.1184), ESG_Con*IND (-0.0542), LEV (-0.4692), LNREV (-0.1119), and LNTA (-0.3398), implying that higher ESG controversies or larger firm size and revenue may marginally impair accounting-based performance.

The interaction term ESG_Con*IND has a very weak negative correlation with ROA (-0.054) but a substantial correlation with ESG_Con (0.9730), indicating that the ESG controversies variable is predominantly driving the interaction impact. Its correlations with LNREV and LNTA are weak to moderate, 0.3501 and 0.0610 respectively, showing a limited direct relationship with company size and revenue.

Among the control variables, Lev has modest positive correlations with LNTA (0.3936) and LNREV (0.2730), consistent with the hypothesis that larger companies operate with more leverage. LNREV and LNTA are strongly correlated (0.8203) since they both reflect company size proxies, but the correlation is below the critical threshold (0.90), indicating that multicollinearity is not an issue.

Overall, the correlation coefficients show that no pairwise correlations surpass 0.90, with the exception of LNREV and LNTA (0.8203), which is acceptable. This implies that multicollinearity is unlikely to skew the regression findings, and that all variables, including the interaction term ESG_Con*IND, are appropriate for inclusion in subsequent regression models.

Table 4.2 Pearson Correlation Analysis

Correlation	ROA	ROE	ESGC	IND	ESGC*IND	LEV	LNREV	LNTA
ROA	1							
ROE	0.7666***	1						
ESGC	-0.1184**	-0.1276**	1					
IND	0.0241	-0.0694	-0.1783***	1				
ESGC*IND	-0.0542	-0.8798	0.9730***	-0.0791	1			
LEV	-0.4692***	-0.1932***	0.0710	-0.0715	0.0121	1		
LNREV	-0.1119**	-0.0251	0.3490***	0.0680	0.3501***	0.2730***	1	
LNTA	-0.3398***	-0.2852***	0.2961***	0.1077*	0.2763***	0.3936***	0.8203***	1

Note: ***p-value 0.01, **p-value 0.05, *p-value 0.1

4.2.2 Hausman Test

Table 4.3 Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	64.639569	3	0.0000

The Hausman test is a statistical process that determines the most appropriate model specification for panel data analysis. The analysis determines whether the random effects (RE) or fixed effects (FE) model is more appropriate by evaluating the existence of individual-specific effects may have a correlation with explanatory variables, known as endogeneity.

H_0 = Random effects model is appropriate

H_1 = Fixed effects model is appropriate

In this analysis, the Hausman test result displays a p-value 0.0000 and a Chi-square statistic of 64.6396 with three degrees of freedom. Reject the null hypothesis that the random effects model is appropriate since the p-value is less than the 5% significance level. This shows that the FE and RE estimators diverge systematically, indicating a correlation between explanatory variables and unobserved firm-level heterogeneity. Because of it yields more precise and reliable results for this study, the fixed effects model is thus recommended. However, even though the Hausman test indicates that FE model is preferable, this study will using POLS to estimate the relationship between ESG controversies and financial performance due to the inclusion of time-variant and slow-moving variables (dummy variable).

4.2.3 Heteroscedasticity Test

Table 4.4 Heteroscedasticity Test Result

	Value	df	Probability
Likelihood ratio	653.6771475	72	0.0000

H_0 = Homoscedasticity

H_1 = Heteroscedasticity

Based on the result of the panel cross-section heteroscedasticity LR test, a significant LR statistic of 653.6771 (p-value = 0.000) leads to the rejection of the null hypothesis of homoscedasticity across firms. This indicates the presence of cross-sectional heteroscedasticity Table 4.4 Heteroscedasticity LR Test Result in the panel dataset, implying that the variance of the error term difference across companies (Halunga et al., 2017). As a result, standard errors using homoscedasticity assumptions would be unreliable. To solve this problem, the regression models are estimated with heteroscedasticity-robust standard errors (White cross-section), resulting in valid statistical inference.

4.2.4 Multicollinearity Test

The Variance Inflation Factor (VIF) was used to investigate multicollinearity among the explanatory variables. Following the standard norms, VIF values less than 5 suggest the absence of major multicollinearity issues.

Table 4.5 VIF Test Result

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
ESG_CON	2.612441601	1.425519142	1.140415314
LEV	12.44062163	4.112999406	1.195442616
LNREV	0.7885863361	496.51466	3.200531672
LNTA	0.6140139985	427.2056793	3.380542251
C	66.94091045	182.6367128	#N/A

H_0 = No multicollinearity

H_1 = Multicollinearity

The centered VIF in the table shows below 5, fail to reject the null hypothesis. The findings demonstrate that all explanatory variables have VIF values in the allowed range, indicating that no multicollinearity issue in the estimated model. As a result, the regression coefficients may be accurately interpreted, and the statistical conclusions obtained from the model are unlikely to be influenced by multicollinearity.

4.3 Results and Discussion

Table 4.3 presents the regression findings regarding the relationship between ESG controversies (ESG_Con) and financial performance, as evaluated by ROA and ROE. Four models were estimated: two baseline models (Model 1 and Model 2), and two moderation models (Model 3 and Model 4), which included board independence (IND) and the interaction term (ESG_Con*IND). All models use firm size (LNTA), revenue (LNREV), and leverage (LEV) as control variables.

Model 1 assess the direct impact of ESG controversies on accounting-based performance (ROA). The results indicate that ESG controversies has a negative and statistically significant effect on both ROA ($\beta = -3.1098$, $p < 0.10$). This shows that companies with greater degree of ESG controversies likely to face poorer profitability. Similarly, RSG controversies negatively affect ROE ($\beta = -9.9807$, $p < 0.05$). It shows that ESG controversies affect shareholder returns, which might be due to falling investor trust, increasing market penalties or higher financing costs. The result is consistent with the results in previous research (Aouadi & Marsat, 2018), and contrasts with the conclusion of insignificant relationship drawn in previous study (Dutt et al., 2025). Therefore, H1 is supported as well. For the control variables, LNREV positively and significantly increases ROA and ROE, in contrast, LNTA negatively affects both ROA and ROE. While LEV negatively impact ROA but not ROE.

While Model 3 and Model 4 test whether independent directors can mitigate the negative impact of ESG controversies on financial performance (ROA and ROE). The coefficient for ESG controversies becomes larger in magnitude and more significant compared to Model 1 and Model 2, $\beta = -24.9976$ and $\beta = -53.2016$ respectively. This demonstrates that when governance variable is included, the true negative effect of ESG controversies becomes clearer. Board independence weakens the negative relationship between ESG controversies and financial performance. It might because of independent directors detect misconduct earlier, ensure transparency, and encourage management to respond quickly to controversies. They also improve risk controls and prevent controversies from escalating into larger scandals. The interaction term ESG_Con*IND is positive and

significant in both Model 3 and Model 4 (β = 0.4371, β = 0.8368), showing that independent boards buffer the impact of ESG controversies. Hence, H2 is supported. In Model 3 and Model 4, similar to Model 1 and Model 2, LNREV positively and significantly increases ROA and ROE, while LNTA negatively affects both ROA and ROE. For LEV, it negatively impacts ROA but not ROE.

After accounting for the number of predictors, the adjusted R-Square shows the percentage of variance in the dependent variable that can be explained by the independent variables. The adjusted R-Square for Model 1 and Model 2 stand at 0.3147 and 0.2223 respectively, indicates that 31% of variation in ROA and 22% of variation in ROE is explained by ESG controversies and control variables. After adding the moderating variable and interaction term (IND and ESG_Con*IND), the slightly increases of adjusted R-Square (0.3292 and 0.2336) meaning the moderation model explains more of the variation in performance than the baseline models. All of the models are highly significant (38.2016, 24.1524,27.5019, and 17.4580 respectively), meaning the predictors collectively have explanatory power over company financial performance and showed moderated model fit, and strengthens the interpretation that models provide valid evidence for the hypotheses H1 and H2.

Overall, the four models give solid evidence that ESG controversies have a large negative impact on company financial performance, but this effect is moderated by board independence. Independent directors improve monitoring and strategic control, allowing companies to mitigate the financial implications of ESG failures. This demonstrates that effective governance not only supports ESG efforts, but also protects companies when ESG risks materialize.

Table 4.6 Panel Data Analysis

Variables	Model 1	Model 2	Model 3	Model 4
ESGC	-3.1098*	-9.9807**	-24.9976**	-53.2016*
IND			-0.0645	-0.3170**
ESGC*IND			0.4371***	0.8368**
LEV	-26.20***	-10.4762	-23.9957***	-8.0069
LNREV	5.2212***	17.0806***	4.8191***	16.2965***
LNTA	-5.2049***	-16.8924***	-4.88***	-15.8911***
C	18.8566	29.9514	22.6386	42.5036
Specification and Diagnostic Tests				
R-Square	0.3232	0.2319	0.3416	0.2478
Adjusted R-Square	0.3147	0.2223	0.3292	0.2336
F-Statistic	38.2016	24.1524	27.5019	17.4580
Breusch-Pagan test	0.0000	0.0000	0.0000	0.0000
Hausman test	0.0000	0.0000	0.0000	0.0000
No of Observation	325	325	325	325

Note: The asterisks * implies significant p-value < 0.10, ** implies significant at p-value < 0.05, *** implies significant at p-value < 0.01.

4.4 Conclusion

A summary of the collected data is presented in this chapter. Various research methods and hypotheses were used to analyze the relationship between explanatory and response variables in the regression model. Empirical results have been explained and illustrated with tables and figures. The subsequent chapter will provide a summary of key results, limitations, and recommendations for the future study.

CHAPTER 5: CONCLUSION AND IMPLICATIONS

5.0 Introduction

This chapter examines study findings and their implications. The study's limitations will be discussed to provide insights for future research and enhance its quality and outcomes. This chapter provides recommendations for future researchers to consider while conducting their research.

5.1 Summary of Statistical Analyses

The regression analysis provides strong, consistent evidence across all four models to support both of the hypotheses about the effects of ESG controversies (ESGC) and the moderating role of Board Independence (IND). In the first place, the fundamental relationship shows that ESGC negatively impacts financial performance, demonstrated by the presence of consistently negative and statistically significant coefficients across all models (H1 supported). This finding suggests that the negative reputation and the costs of operations of publicly listed companies in Malaysia due to environmental, social, and governance issues are directly translating to financial losses. Overall, the evidence is consistent with the view that ESGC hurts financial performance, like the case in Aouadi & Marsat (2018), Macchiarella (n.d.) and Mahyoub et al. (2024).

And this fits well with the accepted theoretical framework. Considerable support for H1 is in harmony with Legitimacy theory as well as Stakeholder theory. Considerable ESG controversies from a Stakeholder perspective is described as a rupture of the 'social contract' with core stakeholders (investors, the public, and the community) and in response to this, negative actions, such as divestment or boycott,

which threaten the firm's financial viability (Freeman, 2010) are taken. At the same time, Legitimacy theory suggests that controversies put a company's social license to operate in doubt, the negative coefficients represent the expenses involved with loss of legitimacy, in addition to the costs needed for implementing corrective measures or reputation restoration.

Moreover, the affirmation of the positive moderating impact of IND H2 validation is determined by the positive, significantly relevant multiplying variable of ESG_Con*IND in the estimation of model three and model four. Absent the direct negative impact of ESGC, it is apparent that more independence on the board mitigates the financial damage suffered during ESG controversies and represents an offsetting shield for the company's value. As noted by Abu Khalaf et al. (2025); Brinette et al. (2024) and Elamer & Boulhaga (2024), the positive reducing impact of Board Independence on ESGC-related Controversies is established for contrasted negative impacts on financials. Hence, the predicted results obtained from model three and four replicate the same logic and findings of the discussed studies.

The validation of the moderating effect in H2 also provides an unmistakable corroboration of the Agency Theory. Independent directors, acting as non-executive supervisors, can impose, as the now differentiated dominant stakeholders, is unilateral more severe control on both managerial discretion and self-interest and controversies by enfolding the direct negative controls. Their successful monitoring minimizes the financial penalty for ESGC, illustrating the importance of robust corporate governance in controlling non-financial risks and safeguarding shareholder value in Malaysian context.

Table 5.1 Summary of Hypotheses Results

Hypotheses	**ROA**	**ROE**	**Supported / Rejected**
H1: ESG Controversies negatively influence financial performance among public listed companies in Malaysia.	0.0789 ($p<0.10$)	0.0164 ($p<0.05$)	Supported
H2: IND positively moderates the relationship between ESG Controversies	0.0291 ($p<0.05$)	0.0661 ($p<0.10$)	Supported

and financial performance among public listed companies in Malaysia.			

5.2 Implications of the Study

The inclusion of real-world data from Malaysia, a developing country, validating the connection between ESG controversies and financial performance, the research enriches the literature on corporate governance and finance from a sustainability perspective. This is in the context of existing literature indicating there is no significant connection on ESG controversies and financial performance(Dutt et al., 2025; Nirino et al., 2021). This research efforts in addressing such gap provide evidence on the financial implications of ignoring ESG controversies and adds to the literature a contextual proof. While the negative relationship between ESG controversies and corporate financial performance is theorized globally, the strength and persistence can vary dramatically across institutional and regulatory environments. This study finds that ESG controversies consistently and negatively impact financial performance across public listed companies in Malaysia, shows the maturity of the local capital market and its response to non-financial information. This finding is important for regional finance studies because it confirms that capital markets in developing countries are sufficiently established to penalize companies for poor non-financial behaviour. The study demonstrates a significant relationship between controversies in social or environmental responsibility and concrete losses in shareholder value, offering a clear quantitative assessment of this reputational and operational risk.

The contribution to literature is again striking with the evidence of the role moderation of Board Independence (IND). Positive and significant coefficient of interaction term confirms the evidence that corporations with higher levels of board independence suffer financially from the controversy to a lower degree. This contributes to the discourse of business resilience by showing that the extent and intensity of internal governance highly dictates the negative consequences of an

ESG controversy. It is apparent that such interaction there is a need for future academic models aiming at quantifying the financial consequences of poor ESG practices to factor in governance. It is from the research clear; the governance structure is not passive during the ordinary course of business; it is a vital high-impact shock mitigator purposely built to absorb severe non-financial crises and, in the process, distinguish resilient from fragile organizations.

Next, the study equips investors with knowledge that is immediate and actionable. Investors need to integrate the structure of the governance with the assessment of non-financial risks. Investors need to know that the evidence is significant that ESG controversies result in a deterioration of financial performance, and thus, investors have to identify the firms that have had controversies in the recent past, and those that have had controversies in the recent past quite frequently. Investors have to understand that such controversies represent one of the most fundamental systemic weaknesses with respect to internal controls, and financial distress may be present, or may be on the way. Investors need to focus more on the controversy data than on the aggregated ESG scores. Controversy data is a good candidate to be one of the primary filters in the preliminary screening and in the thorough or detailed due diligence. The firm is exposed to such events of controversies and thus it needs to be monitored more closely, and the volatility and the loss of value that is associated with it is well documented.

The previously established correlations between ESG controversies and financial performance present yet another example of the empirical basis for changing approach to ESG investing. Analysts should use valuation discounting for firms faced with high controversy, particularly with low board independence. On the other hand, the result stating that high Board Independence lessens the damage indicates that firms with high board independence are, in a structural sense, more robust. This is an additional factor that can be incorporated into investors' valuation models, and portfolio strategies that overweight on firms with high board independence to mitigate their overall exposure to high risk ESG shocks in Malaysia are also validated.

Furthermore, the research built a documented record for better the evidence-based foundation for enhanced regulatory supervision of ESG risks and the efficacy of

corporate governance. There are ESG controversies ascertained financially, so regulatory bodies, like Securities Commission Malaysia and Buras Malaysia are on solid ground when they call for compulsory, regulatory, structured, and punctual disclosure of fundamental ESG controversies. There are considerable threats to be addressed, and there is a need for urgency and accuracy when it comes to the current sustainability reporting. Mandating disclosure is a means to ensure, to the extent possible, that the market is properly and timely informed of risks that are detrimental to the protection of shareholder value, which will reduce information asymmetry and increase overall market efficiency of the market. The overall integrity and transparency of the Malaysian listed market will be enhanced.

The research lends support to the claimed function of board independence as a stakeholder lawsuit shield. The body of work encourages teaching lesson regulators the importance of strict enforcement of board independence simplicity to better the independence itself. Quantity Independence policymakers need to loosen or tighten the independence of the concept as well. The research suggests that the time limits placed on independent directors should be more flexible along with the flexibility on the scope of skills. The more complex the board, the more supervision it provides on the contemporary ESG and operational risks. The results provide sufficient financial proof to support any regulatory actions aimed at altering corporate governance from mere compliance to effectiveness.

Moreover, this specific research illustrates the steps and measurable strategies that company managers may utilize to safeguard shareholders wealth and to preserve long-term sustainability. From a corporate standpoint, the most significant implications are to, at the very least, begin to assume positively the strategy for enhancing board independence as a component of risk management and, to an acceptable degree, ensure that the board does not merely fill in the charters for quotas on independent directors, but that enough of them have the requisite skills in. For example, the areas of environmental science, compliance, and socially responsible to address adequately the governance on the most complicated ESG issues and, most importantly, to empower independent directors to have a robust dialogue with management on ESG strategy as well as the remediation activities, not merely serving as a value-diminishing buffer to the backlash of controversy.

The information should be seen as a first alert on the potential costs associated with not having ESG related case Controversy Management Frameworks and their associated costs. These should include established procedural guidelines for the case which should include the formulation of internal fact-finding missions, intra-company corrective action and external communications. ESG related case Controversy Management Frameworks should include guidelines for the appointment of PSCs for oversight, as non-executive directors can help contain aggravation of potential costs. The company should include monitoring and triaging communications to stakeholders on the establishment of a credible, independent, and non-executive monitoring committee. Such a proactive approach is important for managing potential ignition of reputational costs, for optimally containment of associated financial costs and for restoration of the company's market's image within a reasonable time.

5.3 Limitations of the Study

This research suggests great insightful knowledge of Malaysia's market but it also hinges on generalizability and research scope. The lack of coverage in this research might form building blocks that will enhance the comprehension of ESG controversies as well as corporate governance. The unique feature of this study being its focus on public listed companies from Malaysia. The focus on specific sector does provide an in depth analysis but this also means that external validity is affected. The analysis and arguments made also have limited generalizability. The unique factors present in Malaysia do influence other factors such as the strictness of the financial penalty from the ESG controversies and the effectiveness of Board Independence in moderating. This also includes the ownership structure of the companies, the strictness of the financial regulations, and the composition of the investors of Malaysia. Therefore, companies in the system and region of Europe and North America, or in other parts of Asia like Thailand and Singapore, will have different results from the research based on the highly moderated system.

Another major constraint is that the moderating analysis is limited to Board Independence only. Corporate resilience to ESG shocks is a complex issue influenced by a myriad of internal governance and control systems. Centering on Board Independence only, the study may have overlooked other internal factors that are equally important and may substitute or serve to complement the role of independent directors. These unexplored factors include the efficacy of the Board Sustainability Committee, the presence and power of a Chief Sustainability Officer (CSO), the degree of CEO duality, and the intensity of firm-level ESG reporting and assurance. Consequently, while the study effectively isolates the influence of Board Independence, it provides an important view of the whole governance architecture needed to completely limit ESG controversies risk.

5.4 Recommendations for Future Research

Based on the discovered limitations, the following recommendations are proposed to guide future study, with the goal of improving the robustness, validity, and depth of the analysis in this domain.

Firstly, future study could investigate boosting the sample size within the area or internationally. Cross-country research incorporating many developing countries like Malaysia, Indonesia, Thailand, and Vietnam would greatly improve external validity. A comparative institutional framework might be used in this study to examine how variations in legal origin, investor protection legislation, and cultural variables influence both the financial impact of ESGC and the efficacy of Board Independence as a moderator. Alternatively, researchers might increase the domestic sample size or extend the time period to capture a broader range of ESG controversies events and better account for any time-variant impacts. This extension would enable for more robust conclusions about the general application of the findings on ESG risk management in developing countries.

Furthermore, to provide a more comprehensive picture of organizational resilience to ESG risks, future study should look at moderating variables other than Board

Independence. While board independence has been proved to be critical, other structural and compositional characteristics of the board may have a major impact on how well controversies is managed. Future research should focus on board-level characteristics including board size and board diversity. For example, an appropriate board size that not too large to impede decision-making, nor too small to lack required expertise may be more successful in organizing a quick and coordinated reaction to a controversy. In the same way, inclusion of different genders, ethnicities, and fields on boards may improve more than just the capacity of the board's oversight, but also the ability to grasp the intricacies of the different ESG controversies. Adding alternative governance mechanisms might allow researchers to construct a more solid model to determine which of a company's financial resilience controversies can be explained by the board's independence, board size, board diversity, or some combination of all three.

5.5 Conclusion

In conclusion, this chapter presents a succinct review of the empirical findings relevant to the research objectives. It emphasizes numerous consequences to help policymakers, corporations, and other stakeholders obtain a deeper understanding of the ESG controversies-corporate financial performance-corporate governance interrelationships. The limitations and recommendations to help future researchers enhance study quality and outcomes utilizing available data are mentioned in the chapter.

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APPENDICES

Appendix A: EViews Statistical Results

1. Descriptive Analysis Results

Variable	Mean	Std. Dev.	Min	Max	Observations
ROA	6.8257	13.1845	-100.64	65.66	325
ROE	14.8343	31.1329	-204.40	187.64	325
ESGC	0.20	0.4006	0	1	325
ESGC*IND	9.8706	11.4886	0	70	325
IND	53.4438	11.4885	28.57	88.89	325
LEV	0.2932	0.1880	0.0015	1.0178	325
LNREV	15.1422	1.2215	12.2971	17.7871	325
LNTA	15.9058	1.4227	12.5445	19.1412	325

2. Pearson Correlation Analysis Results

Correlation	ROA	ROE	ESGC	IND	ESGC*IND	LEV	LNREV	LNTA
ROA	1							
ROE	0.7666***	1						
ESGC	-0.1184**	-0.1276**	1					
IND	0.0241	-0.0694	-0.1783***	1				
ESGC*IND	-0.0542	-0.8798	0.9730***	-0.0791	1			
LEV	-0.4692***	-0.1932***	0.0710	-0.0715	0.0121	1		
LNREV	-0.1119**	-0.0251	0.3490***	0.0680	0.3501***	0.2730***	1	
LNTA	-0.3398***	-0.2852***	0.2961***	0.1077*	0.2763***	0.3936***	0.8203***	1

3. Panel Data Analysis Results

Variables	Model 1	Model 2	Model 3	Model 4
ESGC	-3.1098*	-9.9807**	-24.9976**	-53.2016*
IND			-0.0645	-0.3170**
ESGC*IND			0.4371***	0.8368**
LEV	-26.20***	-10.4762	-23.9957***	-8.0069
LNREV	5.2212***	17.0806***	4.8191***	16.2965***
LNTA	-5.2049***	-16.8924***	-4.88***	-15.8911***
C	18.8566**	29.9514	22.6386***	42.5036**
Specification and Diagnostic Tests				
R-Square	0.3232	0.2319	0.3416	0.2478
Adjusted R-Square	0.3147	0.2223	0.3292	0.2336
F-Statistic	38.2016	24.1524	27.5019	17.4580
Breusch-Pagan test	0.0000	0.0000	0.0000	0.0000
Hausman test	0.0000	0.0000	0.0000	0.0000
No of Observation	325	325	325	325