OPERATIONALIZING THE ESG METRICS FOR SOCIAL AND GOVERNANCE PERFORMANCE (SGP) AND FIRM PERFORMANCE: FIRM LEVEL DETERMINANTS

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Declaration

I declare that the work in this thesis titled "Operationalizing the ESG metrics for Social and Governance Performance and Firm Performance: Firm level Determinants", in partial fulfilment of the requirement for the degree of Master of Research in Business and Management has been carried out by me in the Nottingham University Business School. This is an original piece of research work under the guidance of Dr. Hung Woan Ting, Associate Professor of Management Accounting, Nottingham University Business School Malaysia Campus. The information derived from the literature has been recognised in the text, and a list of references has been supplied. This thesis was not previously presented for any other degree at this or any other University.

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Abstract

The aim of this study will evaluate the extent to which ESG (Environmental, Social and Governance) metrics are used in managing Firm Performance, in terms of SGP (Social and Governance Performance) and FP (Financial Performance) among publicly listed companies in Malaysia. The study of relationship between ESG and SGP includes determinants such as industry, size, digital technologies and target-setting approach. The study of association between SGP and FP includes profitability and business growth. Further, this study intended to look at the future commitments and plans of top management in terms of pursuing the 17 UN-SDGs Goals.

The sample of the data is 781 firm-year observations from year 2019–2020 of 313 firms listed in the Bursa Malaysia. The raw data on determining the SGP for content analysis purposes were acquired from documentary sources downloaded from the Bursa Malaysia Website. The financial data in year 2021 were retrieved from the Thomson Reuters' DataStream, inclusive of TOTAL ASSETS (TA), RETURN ON ASSETS (ROA), MARKET TO BOOK VALUE (MTBV). While the leadership statements in year 2020 which were predominantly made in the voluntarily reports had been extracted to analyse the language of top management in relation to their sustainability commitments and plans. Inter-Quartile Range (IQR) had been applied to determine the range of SGP. Using the stakeholder framework and Goal-Setting Theory, a number of hypotheses that relate SGP to firm-specific characteristics had been developed. SPSS had been utilised to analyse the content analysis – SG scoring data to perform inferential statistics such as One Way ANOVA, independent-samples t-test, and regression. Further analysis had been performed using software programme NVivo 8 to explore companies' commitment and plans in their leadership statement in regards of pursuing the 17 UN-SDGs.

This study suggested that very majority of companies have yet embraced the full potential of ESG and very few have set targets for their SGP. The results also indicated that industry, firm size, digital technologies and target-setting approach do have significant impacts on the SGP of a company, with the target-setting approach being the most dominant one. The results further indicated that SGP has a persistent and significant impact on the profitability and business growth of a company. Meanwhile, the most dominant SG subject in the leadership statement is the *Product and Services Responsibility (3.8),* a mini case study had been performed to provide the justifications. This subject acts as an important accelerator for UN-SDG 9, 11, 12, 16.

This study offered implications in several folds. In terms of theoretical implication, the current study which placed a laser focus on the SG pillar due to the growing demand aroused by the unprecedented pandemic, would be able to fortify the findings of the benefits of desired SGP in light of the financial ground, which is currently a missing gap in most literature reviews. For managerial implication, it would contribute to the insufficient knowledge on suitable management approaches for businesses to steer sustainability strategies. In terms of policy contribution, this study aimed to generate value for policymakers and regulators, proposing strategies or suggestions in solving the contemporary problem of low sustainability performance in Malaysia, which in turn realised the objectives of accomplishing the "Agenda 2030" through its SDG Roadmap and Malaysia Plans. Some limitations of the current research and suggestions for future research were discussed at the end of the thesis.

Keywords: ESG Metrics, Social and Governance Performance, Sustainable Development Goals, Financial Performance, Business Performance, Firm Determinants

Reflexivity and Positionality Statement

In September 2021, I was awarded a scholarship by the University of the Nottingham, Malaysia Campus to carry out research on the current state of sustainability performance in Malaysia. The scholarship allowed me to continue pursuing my academic journey after my undergraduate, and conduct research under the supervision of Dr. Hung Woan Ting. I was confirmed as a post-graduate student with the University of Nottingham Malaysia (UNM) on 11 October 2021. The scholarship from UNM covered all the university fees and came with a stipend that covered all expenses associated with my research, funded by the Malaysian Ministry of Higher Education (MoHE).

During the content analysis of ESG scoring data reported, extracted from listed companies' sustainability reports, I included some reflexive processes, such as reflections, in my reflexive knowledge production. Reading through sustainability reports of more than 700, I acknowledged that there might be human errors and bias while providing the ESG scoring data, hence I performed cross-comparison of the scoring results with the other MRes candidate, namely Lee Yen Min for the Top 10 listed companies, using the highest market capitalisation companies' reports – specifically in Property Industry. We achieved intercoder reliability[1] and pre-tested the suitability of scores, to ensure that the analysis is consistent and valid, which is the ultimate goal for most research. Through these reflexive processes, I would be able to notice how my presence as the researcher influenced the research process, and eradicate bias in research analysis.

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[1] Intercoder reliability is the unanimous agreement between 2 different researchers agree on the coding content during the content analysis process, the purpose of it is for data analysis to be consistent and valid. Intercoder reliability ensures same conclusion when a few researchers code data

Credibility describes the reliability, plausibility, and trustworthiness of the study findings (Tracy, 2010). Credibility in quantitative research is achieved by reliability, replicability, consistency, and accuracy (Golafshani, 2003). I acknowledged that the study is credible as all the data collected are from reliable websites such as Bursa Malaysia and Data Stream. All of the data provided extensive tangible information and in-depth illustration (Bochner, 2000), such as the leadership statements from Annual Reports. These thick descriptions allows me to account for the complex specificity and circumstantiality of my data (Geertz, 1973). Further, in the notion of reliability and validity, we have also employed reliable software such as SPSS and Nvivo to perform the data analysis. These avoid any human calculation errors and enhance the credibility of the emerging analysis.

Acknowledgement

When the proposal of this Master thesis was initiated last year in 2021, I expressed my keen interest to my lecturer to apply and partake in this study. For that, I owed many thanks to University of Nottingham Malaysia (UNM) for giving a full scholarship and Malaysian Ministry of Higher Education (MoHE) for granting the stipends, this opportunity would not have materialised without the financial assistance from the honourable parties.

I am truly blessed to have a prominent supervisor – Dr. Hung Woan Ting. She has exhilarated me with her tremendous knowledge and encouraged me in many ways of the theoretical approach in terms of Management Accounting and Sustainability. I thank her for her kindness, patience and dedication. She will always be there to advice me on the finest details of writings and interpretations. I also express gratitude to Dr. Patricia Ang Mei Mei and Dr. Seow Hsin Vonn for lecturing and supporting the journey of this Master, by providing various related assignments and exams through the module BUSI4503 Research Methods.

I feel grateful to be one of the team members of this master research project, and truly thankful for all the supports harnessed from my peer, Lee Yen Min, who has helped me a lot with information of university administration and always geared up to assist no matter what. I owe gratitude to all the extended friends, coursemates, professionals in the sustainability pillar, and all others that have contributed directly or indirectly. The research would not have gone so well without their inputs.

Lastly, I would like to express my utmost gratitude to my beloved family, my main source of support, Kuan Sun Mei for truly believing in my passion and capability and allowing me to pursue without constraining my future plans. She always selflessly takes care of my diet and daily life so that I can focus on my studies. For

the most awesome siblings, Chow Nai Yin, Chow Nai Chi and Chow Suet Ling who always encourage and motivate me throughout the journey. I hope this journey would contribute a little effort in changing the world.

I am so grateful and it will never be enough to convey my gratitude.
Thank you.

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List of Acronyms and Abbreviation

Initial	Description
SGP	Social and Governance Performance
ESG	Environmental, Social, Governance
EES	Economy, Environmental, Social
CSR	Corporate Social Responsibility
CSP	Corporate Social Performance
COVID-19	Severe acute respiratory syndrome coronavirus 2 (also called SARS-CoV-2)
GRI	Global Reporting Initiative
UN-SDGs	United Nation Sustainable Development Goals
SMART	Specific, Measurable, Achievable, Realistic, and Timely
SPSS	Statistical Package for Social Sciences
EMS	Electronic Manufacturing Services
CBP	US Customs and Border Protection
TP	Target Price
PE ratio	Price-to-earnings ratio
EPF	Employees Provident Fund
SP	Sustainability Performance
Bursa Guide	Bursa Comprehensive Sustainability Reporting Guidelines
SPV 2030	Shared Prosperity Vision 2030
R&D	Research & Development
CLT	Central Limit Theorem

Chapter 1   Introduction

1.1   Introduction

The notion of sustainability is controversial, with little agreement on what it means or how it should be implemented for the better welfare of the world and its inhabitants (Hopwood et al., 2005; Brown & Fraser, 2006; Hahn et al., 2010). The ways to measure the businesses' actual commitment in achieving its sustainability ambitions is inferred from organization's participation in corporate social responsibility (CSR) (Veenstra & Ellemers, 2020). Definitions from the European Commission (2005) state that "Corporate social responsibility (CSR) refers to an organization's obligation to consider the impact they exert on society. Businesses should seek to implement a method that integrates social, environmental, ethical, consumer, and human rights issues into their core operations and strategy to maintain close partnership with their stakeholders."

Corporate sustainability means a business strategy to fulfil the expectations of current and future stakeholders by utilising the best business practices (Report of the United Nations World Commission on Environment and Development, 1987). Artiach et al. (2010) supported the statement that certain firms have a financial incentive to engage more in corporate sustainability programmes because it sustained the firm's competitive position, and eventually lead to superior long-term performance. As a result, various research had attempted to disentangle organisational motives from an accurate assessment of CSR operations. Several research had identified reporting standards that provide stakeholders (i.e. investors) with information on actual organisational sustainability performance that is unbiased, trustworthy, and predicts organisational value (i.e. stock returns) (Veenstra & Ellemers, 2020). Growing attention is being paid to mapping not only businesses' economic and environmental impact, but also their social impact, as well as their business practises in terms of governance and general

business conduct, in order to monitor the extent to which businesses acknowledge responsibility for their impact, using the ESG (environmental, social, and governance) metrics.

ESG metrics, also known as ESG themes and ESG pillars, is defined as the volumes of sustainability subject disclosure, according to the three pillars of subject: Environmental, Social and Governance. ESG ratings supplied by professional rating agencies are crucial for many research as well as the decision-making of managers and investors who care about social responsibility (Halbritter & Dorfleitner, 2015). Veenstra & Ellemers (2020) argued the role of ESG indicators as externally imposed performance targets is not only applicable for external parties to assess organisation's sustainability progress, but it may also impact organisational strategic aims and ambitions within the organisation. Kempf & Osthoff (2007) and Statman & Glushkov (2009) presented proof that stocks with high ESG ratings outperform the market. Fernando et al. (2009) examined how the environmental activities of corporations impacted various aspects such as a company's market value or the cost of equity capital. Further, the results of Chava (2014), El Ghoul et al. (2011) and Goss & Roberts (2011) indicated that firms' involvement in environmental concerns and, accordingly, CSR reduced the cost of equity and debt considerably.

The increasingly concern on the social and governance aspect has brought to the focus of this study, which is on Malaysian firms' Social and Governance Performance (SGP) as well as the relationship to Firm Performance (FP). In terms of this, effective management of SGP is crucial and businesses play a key role in sustainability management. Stakeholders' interests and expectations are to be carefully managed for business going concern.

Despite there are a handful of research studies in mostly developed countries such as the UK (Moussa et al., 2021), Australia (Lokuwaduge et al., 2020) and the US (Halbritter & Dorfleitner, 2015) which focussed on ESG performance, but the variations in different findings of the influence of ESG metrics on firm performance (in terms of SGP and financial performance) in the West and East are still existed. Further, there are limited studies that existed to gauge the firm performance in Malaysian listed companies. Hence, the aim of this study will evaluate the extent to which ESG metrics are used in managing Firm Performance, in terms of SGP and FP among publicly listed companies in Malaysia.

1.2   Problem Statement

Due to the fact that ESG rating agencies rely heavily on information provided by organisations (Diez-Cañamero et al., 2020), it is critical to assess whether corporate reporting accurately represents organisations' actual performance. In other words, if there is a match between the strategic (what companies say) and operational (what organisations do) levels of corporate responsibility. Trucost, a company that specialised in assessing environmental performance found that firms that voluntarily disclose more environmental information performed worse (Cho et al., 2012). Following the pressure exerted by stakeholders on listed companies, there are getting more mandatory socially responsible actions such as the publication of sustainability reports in accordance with the Global Reporting Initiative guidelines, the adoption of the Equator Principles, and the assumption of the United Nations' Sustainable Development Goals to determine that the companies are socially responsible. Numerous studies had demonstrated that socially responsible businesses adhere to better moral standards, more transparent financial reporting requirements, and less bad news hoarding. Particularly, businesses participated in CSR initiatives are with the goal to increase revenue (Tucker & Melewar, 2005; Dowling, 2006; Schuler & Cording, 2006); and enhance operating efficiency (Liang & Huang, 2013).

Recent studies showed that shortfalls in the social and governance pillar have been detrimental to companies, specifically electronic manufacturing services (EMS), gloves and plantation companies, not only from the share performance perspective, but have resulted in company losing sizable and material contracts as well as causing damage to management reputation, consistent with the concept of reputation effect (Argenti & Druckenmiller, 2004).

Some examples can be seen from the increasingly compliance issues in Malaysia. The lack of labour and heavy reliance on relatively low-skilled workers by many economically significant industries in Malaysia had caused severe cases of migrant worker exploitation and human rights violation. There were accusations about Top Glove factories in Malaysia, with signs of migrant labour exploitation, such as low pay, excessive overtime, unlawful deductions from employees' earnings, exorbitant recruiting fees, poor housing standards, and a lack of social distancing arrangements (Bsci, 2020). All these allegations confirmed Social and Governance Performance (SGP) failure incorporated under the pillar of Human Rights, Occupational Health and Safety, Labour Practices and Compliance.

An announcement was made on 13 May 2022 that the US Customs and Borders Protection (CBP) will set up a working committee in collaboration with the Malaysian Government to address the issue of alleged forced labour in the country (Bernama, 2022). Nonetheless, there had been controversies regarding the effectiveness of this committee to help clean up Malaysia's questionable reputation on labour practices. Domestic labour shortages and reliance on low-skilled workers made the social pillar minefield for these impacted firms. Following the National agenda for sustainable development, Malaysia adopted the Universal Declaration of Human Rights in 2012, and Malaysia is one of ten nations whose national budgets are completely aligned with the SDGs based on UN assessments, said by Finance Minister Tengku Datuk Seri Zafrul Tengku Abdul Aziz (Ong, 2021).

This showed that there are strong policies implemented in Malaysia, but there are more has to be known pertinent to the current state of SGP in Malaysia.

Strengthening the SGP is vital as there are a lot of negative repercussions in terms of a firm's value and reputation should there be any SG shortfall. In other words, the concerns of SGP are largely due to the insufficient knowledges in using suitable management approaches. Hence, it is essential for businesses to adopt effective management approaches/determinants to steer their sustainability strategies and deliver the desired SGP. To tackle the increasingly concern on SGP, a target-setting approach is advised to drive the purposeful agenda of the organisation. It is inevitable that the SGP and business value of a corporation will increase with the aid of digital technology. Not only it will generate a lucrative share price performance to investors, but it will also empower and foster companies and leaders in securing sizable and material contracts in addition to fortifying their management reputation and company goodwill.

Businesses need financial motivations to satisfy their shareholders expectations, as consistent with the stakeholder theory which contends that SG investment creates positive financial advantages through managing stakeholders (Artiach et al., 2010). The apparent inconsistencies in previous findings examining on the association between the SGP and financial performance had brought to the following objectives: Assessing the impact of SGP on profitability and business growth of a company in order to advance the knowledge in this area of research.

Other than examining whether improved financial performance serves as a repercussion of high SGP, this study focused on the commitments and plans of top management to invest in sustainability programmes, in terms of pursuing the 17 UN-SDGs Goals. There are currently very few literature reviews on the leadership aspiration towards SGP. In doing so, this thesis further contributed to the ongoing

research debate about the top management's future commitments and plans in regards to the SDGs' realisation.

All these previous research gaps had been identified, and hence correlated to the aim of this study, which is to investigate the Firm Level Determinants which would maximise the SGP and FP, by operationalizing the ESG Metrics, in order to effectively close these gaps. This study revealed the current SGP in the Malaysia context, identified the determinants in associated with increased SGP, the impact of SGP on profitability and business growth of the company. This study also disclosed the leadership's statements in pursing the 17 UN-SDGs Goals.

1.3   Research Questions

The performance of sustainability efforts in Malaysia and the drivers of it had been questioned.

These issues lead to the first research question (RQ1) which is to evaluate the current state of SGP within the Malaysia context, in view of the publicly listed companies on Bursa Malaysia. This RQ1 examined which levels of SGP that Malaysia public listed companies fall in, in the year of 2020. The aim of this RQ1 is to provide significance contribution to the public in terms of portraying the SG scoring performance using content analysis which does not currently existed to gauge the SGP in Malaysian listed companies, based on the ESG metrics. Moreover, RQ1 intended to provide contribution to external stakeholders (i.e. investors) to determine whether the company is an appealing and worthy investment to them.

There are insufficient knowledges using suitable management approaches/ determinants pertinent for businesses to steer their sustainability strategies and performance, which leads to the second research question (RQ2). There are fertile ground of SGP drivers currently existed but it is uncertain that which driver is the most dominant and effective. If a company's stakeholder environment influences

its investment in sustainability, then variations in Corporate Social Performance (CSP) among firms imply variations in the drivers related to the scope and significance of the firm's stakeholder demands (Artiach et al., 2010). This question delved into the impact of the important drivers of industry, firm size, digital technologies and target-setting approach on the SGP. This objective aimed to cultivate public's interest and motivation to prioritise the certain effective management approach, due to the nature of limited resources within an organisation.

As there are inconsistent studies on the benefits of desired SGP in light of the financial ground, this followed with the third research question (RQ3) – (i) whether desired SGP will bring an impact to the profitability of a company. Due to the fact that profitability performance has lag effect over the years, this study also studied on (ii) whether desired SGP will bring an impact to the business growth of a company. This question is crucial as businesses need financial motivations to satisfy their shareholders expectations, as consistent with the stakeholder theory. The paybacks of companies in terms of boosted SGP and lucrative financial performance within an organisation were examined, in favour of strengthening management reputation and goodwill.

As mentioned by Cramer (2011), leadership's role is important in catalysing the shift towards sustainability. Leaders' commitment is concerned by the public as they set the strategic direction of an organisation. Such commitments are important for stakeholders as it ensures that sustainability is implemented within an organisation. This had lead to the last research question (RQ4) which looked into the future commitments and plans of top management in terms of pursuing the 17 SDGs. The findings looked into the number of companies expressed attention in a given SG subject, top management's commitments and plans, and the justifications. This is also important in determining which subject acted as an

important accelerator for a particular UN-SDGs. In doing so, this thesis contributed to the ongoing research debate about the top management's future commitments and plans in regards to the SDGs' realisation.

1.4   Research Objectives

The aim of this study is to fortify studies on <u>Malaysian</u> firms on <u>ESG (SGP)</u> as well as the relationship to <u>Firm Performance</u>, by applying stakeholder theory and goal-setting theory.

Therefore, the following objectives were established;

1. To identify the current state of SGP in Malaysia.
2. To determine whether industry, company size, digital technology, target-setting approach & covid-19 have an impact on SGP.
3. To examine whether SGP have an impact on the profitability and business growth of a company.
4. To examine commitment and plan of the companies in terms of pursuing the 17 SDGs.

1.5   Significance of the Study

In terms of theoretical contribution, the findings will fortify the existing knowledge in the domain, allowing further research development at ease.

Theoretically relevant research contributes to, develops, and analyses disciplinary knowledge, and it is "intellectually implicative for the academic community" (Tracy, 1995). At its most fundamental, theoretical contribution is by investigating how existing ideas or concepts make sense in a new and distinct setting. The study's conclusions are significant for the current discussion over the benefits of corporate sustainability performance, specifically SGP. When it comes to the matter of SGP, many of the other researches revolve around the environmental pillar as Fernando et al. (2009) study mentioned that firms' environmental efforts could influence various aspects of an organisation such as a company's market value or cost of

equity capital. However, the current study placed a laser focus on the SG pillar due to the growing demand aroused by the pandemic, examining the determinants associated with the leading SGP and the leadership's commitments towards UN-SDGs achievement. The shift of focus towards SGP allows for a more in-depth examination of the factors that drive the decision-making on factors in sustainability principles, and hence give better insight into the anticipated financial consequences of SG investments. This would be able to contribute to the insufficient knowledges on suitable management approaches and theories to steer sustainability strategies and fortify the inconsistent studies on the benefits of desired SGP in light of the financial ground, which is currently a missing gap in most literature reviews.

In terms of managerial contribution, this study aims to generate value to businesses, proposing an argument case for these organisations to enhance the incorporation of SG principles in their strategic management, and to provide suggestions to organisations in solving the current problems/challenges as explained in 1.2. The paybacks of companies who aspire to quantify their future targets and employing digital technologies had been examined, in terms of boosted SGP and lucrative financial performance, to the extent of fortifying management reputation and goodwill. The outcomes of this study will support the notion that some types of organisations have incentives to engage more extensively in corporate sustainability programmes since it retained firms' competitive position (Artiach et al., 2010). This would be able to contribute to the insufficient knowledges using suitable management approaches pertinent for businesses to steer their sustainability strategies and provide motivations for businesses in light of the desired SGP's impact on the financial ground.

Furthermore, this study is heuristically relevant since fascinating techniques and objectives stimulate readers' curiosity and willingness to pursue new findings (Abbott, 2004). The level of heuristic importance can be increased by making

several suggestions for more studies and addressing all relevant options beyond the scope of this thesis. For instance, this study explores the determinants in affecting the organization's sustainability performance and its impact on the profitability and business growth. Clearly, this would be able to create societal value to put an emphasis on sustainability engagement, which serves as a major contribution in evaluating the relationship between researchers and the communities (Ellis, 2007). The practical significance of this study is also emphasized, since the heuristic research influences a wide range of audiences, including policymakers and the general public, to participate in aiding the organization's engagement in sustainable practises.

Whilst in terms of policy contribution, this study aims to generate value for policymakers and regulators, proposing strategies or suggestions to regulators in solving the contemporary problem of low sustainability performance in Malaysia. Should the Government of Malaysia steps in to provide more funds and subsidies to small & medium companies in realising the objectives in accomplishing the "Agenda 2030" through its SDG Roadmap and Malaysia Plans had also been studied. There must be strong support and close cooperation from the society, particularly companies to make the SDGs come true, alongside with various comprehensive efforts made by the government for the realisation of SDGs. Moreover, the development of Content Analysis of SGP Scoring Data of publicly listed companies on Bursa Main Market which does not currently existed, is a plethora contribution to the policy makers as the benchmark for future monitoring purpose.

1.6   Definitions of Key Terms

This section intends to look at the ESG key terms that will be highlighted in this study.

ESG metrics, also known as ESG themes and ESG pillars, is defined as the volumes of sustainability subject disclosure, according to the three pillars of subject: Environmental, Social and Governance). In this study, SG will be emphasized.

"Social" performance refers to how a corporation treats its clients, the community, and its employees by being responsible in the development of its products and services. Despite the fact that all of these factors benefit the company, the value of this information for financial stakeholders makes an indirect impact on the profitability and business growth of the company (Esteban-Sanchez et al., 2017). The term "Governance" refers to how power is exercised and how choices are made in an organisation to ensure that the management acts in the best interests of its shareholders in the long run.

However, in the course of this study, sustainability is considered in the framework of Economy, Environmental, and Social (EES), with "Governance" recognised as one of the fundamental pillars that underlie the emphasis on "Social" performance. This benchmark is based on the comprehensive sustainability reporting guidelines issued by the Bursa Malaysia Securities Berhad (2018). The main reason of incorporating "Governance" and "Social" pillar is because listed issuers must provide disclosures on the governance structure in place to address social risks and opportunities ("sustainability matters") in the Sustainability Statement, as according to the (Bursa Malaysia Securities Berhad, Practice Note 9, Paragraph 6.2 (a)). Additionally, corporate governance is another important part that assures compliance, responsibility, and transparency, of where it is shown in *subject 3.10 Compliance (social)* [2]. It is shown that the importance of "Governance" on management exercised their power and made decision that pursue the long-term shareholders' interests. In this case, *subject 3.10 Compliance (social)* is taken as an

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[2] It describes an organization's level of adherence to the laws and guidelines that govern its operations, as well as the efforts made to analyse the anticipated impact of its actions.

example, the management has the obligation to govern the organisation (strict processes to avoid any monetary fines of non-compliance) so that the stakeholders' interests will be assured and protected. Appendix A includes more detail on particular areas of disclosure for each subject. ESG metrics have also known as performance indicator for each theme listed in Bursa Malaysia Guideline. These metrics are used extensively in this study for the purpose of building the Content Analysis template.

This thesis also discuss corporate social responsibility (CSR) as a domain that includes Social and Governance performance, based on the ESG metrics, similar in Gillan et al. (2021). CSR is considered as the activities performed by organization, and ESG is used as a benchmark to gauge their performance, the foregoing performance is specifically in the Social and Governance pillar. Accordingly, this thesis examined the Social and Governance Performance (SGP) based on the ESG metrics.

The term UN-SDGs which is widely mentioned in RO4 refers to the United Nations Sustainable Development Objectives, also known as Agenda 2030, which is a set of 17 global goals and 169 targets that encompass the three elements of sustainable development which are economic growth, social inclusion, and environmental preservation.

Firm level Determinants, sometimes known as management approaches or drivers, is referring to the factors that affect the SGP, inclusive of industry, firm size, digital technologies and target-setting approach.

1.7   Organisation of Chapters

The entire thesis is organized as follows. Chapter 1 will provide a brief introduction of the problems and motivation in writing this thesis, along with the purpose, objectives and contribution of this study. Some key terms are also mentioned here to provide a better understanding and smooth readings for the readers. Chapter 2

will discuss the literature review inclusive of management theories and approaches being used. Some background literature reviews have been done and provided under this chapter. In addition, the association between management approaches (i.e. Industry, Firm size, Digital Technologies and Target-Setting Approach) and SGP is reviewed. This chapter provides a more in-depth grasp of current challenges and empirical evidence, allowing hypotheses to be developed and discussed in the following chapter. Chapter 3 intends to describe the research methodology and sample selection proposed for this empirical research. This chapter will explain the research instrument being used, the measurement of proxies for variables and the data collection methods. The purpose of this chapter aims to familiarize readers with the data analytical tools and variables that will be used. Chapter 4 introduces the data analysis, findings and results. The descriptive statistics and inferential statistics will be shown here, any data abnormality and assumption of tests will be stated under this chapter. This chapter intend to utilize different types of analysis to tackle the different research questions stated in 1.3. The output obtained will be provided here, and the extensive interpretation will be stated in the next chapter. Chapter 5 will be the main discussion and conclusion, provided with some recommendation. This chapter aims to provide readers a holistic view of the entire research and prove that it provides theoretical, managerial and policy significance towards the sustainability area.

Chapter 2   Literature Reviews

2.1   Introduction

This section will gives a brief introduction of the ESG metrics, and how often that it is viewed in the context of EES pillar, namely Economy, Environmental and Social. The detailed definition of each pillar will be explained. Moreover, the significant role of ESG in light of investors' perspectives and the differentiation between SDGs and ESGs had been mentioned here. CSR performance based on the ESG metrics had also been taken into account to discuss the value to firms in alleviating the negative impacts of bad news. The evidences of negative repercussions in terms of a firm's value and reputation should there be any ESG shortfalls also shown here to fortify the stated assumptions. The following section will introduce the theoretical theories which gave a guidance in structuring the following section - the effective management approaches and financial incentives to steer businesses' sustainability strategies and deliver the desired SGP. These includes the discussion of industry, firm size, digital technologies, and target-setting approach, profitability, business growth and the top management's future commitments and plans in terms of pursuing the 17 UN-SDGs.

Corporate social responsibility (CSR) acts as credibility and trust bridge building between all the stakeholders or interest groups because the definition of it refers to the activities performed by a company that is beyond the company's interests and required law, by voluntarily contributing to the local communities in terms of the social good (Aminia & Bienstock, 2014). To determine the firm's social performance, ESG is used as a benchmark to gauge their SGP. It is well known that ESG indicators are commonly utilised in the financial sector to help investors make investment decisions based on business behaviour. In this study, however, sustainability is considered in the framework of EES (Economy, Environmental, and Social), with "Governance" recognised as one of the fundamental pillars that

underlie the emphasis on "Social" performance. Furthermore, the Listing Requirements, the Malaysian Code on Corporate Governance 2017 and the Corporate Governance Guide, already include detailed and extensive disclosure requirements for corporate governance. As previously stated, the focus of this study will be on SG, which falls under the ESG pillar.

According to the GRI Standards, Economic evaluates the impacts of an organisation on the economic circumstances of its stakeholders and economic systems on the local, national, and global front. It does not place much emphasis on the organization's financial status. Environmental refers to the influence of an organisation on living and non-living natural systems, such as land, air, water, and ecosystems. While it is true that not all industries caused significant environmental pollution, corrective environmental improvement actions can be taken in order to significantly reduce costs associated with electricity, water, fuel, and paper usages (Jeucken, 2010). Moreover, "social" performance refers to how a corporation treats its customers, the community, and its employees by being responsible in the development of its products and services. Despite the fact that all of these factors benefited the company, the value of this information for financial stakeholders makes an indirect impact on the profitability and business growth of the company (Esteban-Sanchez et al., 2017). The term "governance" refers to how power is exercised and how choices are made within an organisation to ensure that the management acts in the best interests of its shareholders over the long run. Additionally, a crucial aspect of CSR that ensures accountability, compliance, and openness is corporate governance. Responsible governance therefore entails minimising the agency's issues with financial stakeholders (Hill & Jones, 1992), which is anticipated to have an immediate effect on the profitability and business growth of the company.

The emphasis of this study will be on the financial stakeholders' pressure. Not only shareholders, but also potential investors and analysts, are increasingly demanding for ESG information in order to better appraise the company's shares and, eventually, make better investment decisions or offer investment recommendations (Amel-Zadeh & Serafeim, 2018). Analysts on the buy and sell sides would have to emphasise a specific company's ESG performance, especially because large institutions like the Employees Provident Fund (EPF) wants ESG factors to be incorporated alongside standard financial metrics. This new information is an important tool to mitigate the uncertainties and dangers that the financial stakeholders might encountered (Miralles-Quirós et al., 2019).

According to RHB Research analyst Alan Lim, ESG themes will play a larger role in the future as there are increasingly awareness from the investors' side (Shankar, 2020). ESG criteria can be used to define the business model and the strategic direction of the business, hence creating a company that shareholders and stakeholders would want to invest in. Every business sector or company can customize ESG adoption that supports unique strategies tailored to their specific goals in terms of what is relevant to their business model or the economic environment they operate in.

An ESG perspective makes the SDGs tangible for business. SDGs and ESGs are mostly differentiated by the element of materiality for business – ESG issues may differ across different business sectors, but they are interrelated in contributing to the sustainability. It is critical to use ESG as performance measurements when assessing how well CSR activities are incorporated within an organization's business structure and operations by incorporating SDGs into its core strategy.

The next session will present the SGP in the Malaysia Context.

2.2 Malaysia Context

As far as the financial performance of firms are concerned in relation to SGP which is measured by the ESG metrics, the SGP in Malaysia needs to be investigated rigorously. As Malaysia is a rapidly emerging economy, it should be aware of its companies' ESG compliance and commitments in order to sustain business longevity. The introduction of the FTSE4Good Bursa Malaysia Index in 2014, as well as the adoption of the Sustainable Development Goals (SDGs) in January 2016, resulted in an increase in ESG disclosures, highlighting their objectives of reducing information asymmetry, improving transparency, and providing non-financial voluntary disclosures that are beneficial for investors' decision-making. This shows that the use of social practices is steadily increased within the Malaysia context, leading to the motivation of this study - to examine the relationship of SGP (ESG) and FP using a sample of Malaysian listed firms.

However, even if organizations aim to achieve satisfactory SGP, it might not be feasible for small and medium firms (Ren et al., 2020) due to limited resources. This is profound in Malaysia where the size of majority firms is mainly ranging from small to medium-sized and hence lacking the ability to execute mandatory SG disclosures. Furthermore, disclosure of social issues in Malaysia is merely voluntary. Therefore, the SGP in Malaysia, based on the ESG disclosure was apparently poor and low (Said et al., 2013). However, in 2016, sustainability reporting has been made mandatory for all public listed companies under Bursa Malaysia. Bursa required listed firms to disclose narrative statements of the management of material economic, environmental, and social risk and opportunities in their annual report. This will clearly improved the SGP in Malaysia, as benchmarked by the ESG metrics.

As previously mentioned in Problem Statement, Social and Governance (SG) violation issues can be generally found among economically important sectors in

Malaysia, which is mainly due to the domestic labour shortages and high reliance on relatively low-skilled workers. The social pillar has been detrimental to several manufacturing companies and their social performance has been highlighted. Top Glove (TG) which is one of the largest manufacturer companies of medical gloves had been taken as an example for compliance issues.

Apparently, allegations have been levelled against Top Glove factory in Malaysia, which is the world's largest manufacturer of medical gloves and has purportedly seen a 366% increase in quarterly revenues because the increased PPE demand during the COVID-19 epidemic. A Channel 4 investigation revealed evidence of migrant worker exploitation in June 2020, including low pay, excessive overtime, unlawful deductions from workers' earnings, exorbitant recruiting costs, terrible living circumstances, and a lack of social distancing arrangements (Bsci, 2020). Top Glove has previously been linked to migrant worker exploitation, as well as charges of forced labour, passport seizure, unlawful withholding of wages, and restricted freedom of movement. All of these charges demonstrated SGP failure in the areas of Human Rights, Occupational Health and Safety, Labour Practices, and Compliance.

Despite the fact that Top Glove's stock price has clearly benefited from the Covid-19 epidemic, rising by more than 350% in a few months from RM1.55 to RM25.30. However, its stock price has dropped drastically due to lingering news about the development and commercialization of Covid-19 vaccines, as well as a worker housing issue that forced the temporary shutdown of its operations. The stock has decreased by 26.77% since its October 19 closing price of RM9.60. Furthermore, on July 15, 2020, the US Customs and Border Protection (CBP) imposed a detention order against Top Glove's subsidiaries to prohibit the importation of goods from firms suspected of utilising forced labour, leading the company to lose significant and major contracts. Despite keeping its "add" call for Top Glove, CGS-CIMB has

reduced its target price (TP) by 11% to RM8.90 per share from RM10 earlier. This reduction is based on a reduced price-to-earnings (PE) ratio of 16 times for calendar year 2022 (CY22) as opposed to 17 times earlier (Shankar, 2020). All of these evidences demonstrated the detrimental consequences of an ESG shortfall in terms of a firm's value and reputation.

Fortunately, Top Glove has been complying with "positive outcomes of audits" conducted by SMETA, as evident by the "A rating" received from BSCI (2020) BSCI that its labour practices do really meet international standards. It is undeniable that previous efforts put in place to perform socially responsible actions have helped the firm in alleviating the impacts of bad rumours. Such findings are consistent with the insurance effect of CSR (Bhattacharya & Sen, 2004; Tucker & Melewar, 2005; Schnietz & Epstein, 2005).

It is proven that in the Top Glove case that destruction in SGP will lead to many undesirable consequences, however, CSR performance based on the ESG metrics acts as an insurance mechanism (Klein & Dawar, 2004); despite the fact that it does not immediately boost business profitability, CSR possesses high potential to bring value to firms as it can mitigate the negative impacts of bad news. According to Kim et al. (2012), CSR enterprises have greater financial disclosure, more financial reporting transparency, and higher accounting information quality (Gelb & Strawser, 2001). Furthermore, referring to the stakeholder theory in Freeman (1984), managers can enhance firm value by increasing CSR involvement, partly due to their responsibility in maximizing shareholder value.

2.3 Theory

This section intends to review theories applied to support the purpose of this study "by operationalizing ESG metrics in terms of SGP to prove that it eventually strengthen FP". The first one is Goal-Setting Theory (Veenstra & Ellemers, 2020) which narrates that with clear goals set on SGP, companies are to achieve goals led by a clear direction, and following with Stakeholder Theory (Artiach et al., 2010) which supports that good SGP provides attractive financial advantages through managing stakeholders.

2.3.1 Goal-Setting Theory

The Goal-Setting Theory is a comprehensive philosophy of human motivation and success. This theory defines the influence of what is sought (i.e., goal orientation) and why (i.e., behavioural control) on the priorities individuals establish and the efforts they engage in reaching specified objectives (Veenstra & Ellemers, 2020). The main purpose of setting goals is to increase performance as benchmarked by the Goal-Setting Theory. Locke & Latham (2002) created goal-setting theory over 35 years of study to affect, predict, and explain performance on organisational tasks through goals. Their main conclusion was that setting high and explicit goals boosted performance, tenacity, and motivation when compared to ambiguous goals (Locke & Latham, 1990).

It is proven that setting precise goals help organization to achieve better performance and maintain competitive position. First, goals have a selective role in that they guide people to prioritise important activities in the expense of alternative distractions. Second, goals have an energising role by regulating effort and promoting that sufficient energy is expended in achieving established goals. Third, objectives drive individuals to persist with a task over time and effectively overcome obstacles that comes along the way (Locke & Latham, 2002). On the contrary, some interesting counter findings can be found in Hopfner & Keith (2021)

in where the author highlighted the potential detrimental effects on intrapersonal and self-related factors for goal-missed individuals.

ESG indicators can provide businesses with tools and inspiration by pinpointing specific topics and targets to focus on. This is vital due to the fact that these indicators make businesses understand and clear about the outcomes that are considered important as well as expectations from external stakeholders. In this way, they shape business goals by providing a direction for the activities in which they invest in and pay attention to (Tenbrunsel et al., 2000). As a result, the nature and content of ESG ratings and benchmarks have the ability to act as a compass, showing not just where the organisations stand, but also where they should be headed and what they should not disregard. However, if various stakeholders have competing interests, organisations may go in completely different ways, hence making goal congruence more difficult which is not desirable (Veenstra & Ellemers, 2020).

In sum, by applying the Goal-Setting theory, this thesis will highlight the importance with clear goals set on SGP, companies are to achieve goals led by a clear direction. The evidence of how these objectives are defined have implication for which organisation should put in more efforts to attend and prioritise on sustainability initiatives, to the extend of strengthening their SGP to outperform other companies. While the data was gathered in the social domain, it demonstrated how the creation of precise performance objectives may help companies and the individuals who work in them focus and strive toward these goals.

2.3.2   Stakeholder Theory

According to the stakeholder theory, stakeholders ultimately govern a firm's access to finite resources, and enterprises must manage their relationships with important stakeholders to guarantee that such access is secured (Roberts, 1992). Stakeholders are anyone who can affect or is influenced by the company's activities and procedures. Customers, employees, shareholders, governments, societies, and suppliers are all examples of stakeholders.

The advent of considering the demands of the firm's broader stakeholders is also proven from a socially responsible investor, who often uses a social responsibility screen or evaluation process as part of their investment decision-making process, exemplifies this trend toward company's policies towards business risk and sustainability management. In addition, there is rising evidence of direct pressures on firms to engage in a more socially responsible manner.

Prior research indicates that investing in corporate social responsibility programmes provides a number of benefits. Recent research has revealed association between corporate social responsibility and competitive advantage (Porter & Kramer, 2006). The prominence of global issues such as human rights violation has raised public awareness on business's impact on society as a whole, resulting in a trend toward the broader concept of the 'stakeholder society' (Tirole, 2001). Stakeholders in a company are defined generically as "any group or individual who may affect or is influenced by the attainment of the firm's objectives" (Freeman, 1984). The present collection of ESG ratings and benchmarks provided not only establish a standard by which external stakeholders may monitor and assess the performance of enterprises.

In sum, this thesis will highlight the incentives of SGP towards generating positive financial benefits by managing stakeholders, based on the Stakeholder theory. The evidence of determining the suitable management approaches defined have

implication for which organisation should put in more efforts to attend and prioritise on sustainability initiatives. According to the stakeholder theory proposed by Freeman (1984), managers can increase business value by engaging ESG as part of their obligation to maximise shareholder value.

2.4   Determinants of Firm Performance

2.4.1   Industry

Despite the controversies on the drivers of SGP, it is still uncertain whether the type of industry to which a firm belongs has a substantial impact on the firm's SGP. When companies align their SGP decisions with the interests to legitimate stakeholders' interests, they in turn maximise the shared value simultaneously. The industry in which a company operates is a crucial factor in determining which ESG initiatives to pursue.

According to Caputo et al. (2019), ESG reporting is significantly tied to the industry in which a company operates. This implies that a set of common regulations for enterprises operating in diverse sectors may be necessary, as companies are influenced differently by external sectorial events as well as negative effects in the related sector (Broadstock et al., 2020). The majority of academic papers discovered that the type of industries has a substantial impact on sustainability activities (Reverte, 2009; Melo & Garrido-Morgado, 2012).

COWEN et al. (1987); Adams et al. (1995); ADAMS et al. (1998); Freedman (1988) discovered that specific disclosure areas are related to industry sectors. COWEN et al. (1987) concluded that the industry explains community disclosures, whereas Adams et al. (1995) and ADAMS et al. (1998) concluded that the industry explains employee disclosures. Caputo et al. (2019) study where the type of sector was shown to be substantially linked with Sustainability Reporting (SR). This is due to varying degrees of exposure to societal, stakeholder, and present and future regulatory constraints (Kim & Lee, 2020). Industry affiliation determines SP of the

companies (Chiu & Wang, 2014). Further studies such as Vormedal & Ruud (2009) who discovered a relationship between sector affiliations and the level of SR, claiming the fact that the type of industry is shown to be statistically significant when it comes to explaining the level of social disclosure.

While Matakanye et al. (2021) studies give a contradictory view that the type of industry has no significant effect in establishing a company's ESG rating. It has been debatable to determine the recognisable relationship between social disclosures with the measures of industry affiliation (Gray et al., 2001). This follows that:

H1: There is a significant positive relationship between industry and SGP

2.4.2 Firm size

Firm size is a determinant of SGP (Artiach et al., 2010) and it is commonly used as the important firm characteristic. Although firm size matters in empirical corporate finance, the existing literature is vague on the rationale for selecting a certain measure of firm size, and limited literature provides a full review of the sensitivity of empirical results in corporate finance to different measures of firm size (Dang & Li, 2015).

Firm Size is important to determine the SGP because there will be a significant different result if comparing both small and large firms. Larger firms have better financial capability to engage in sustainability initiatives. In order to establish more sustainability programmes or to ensure compliance, it requires financial sources such as monetary compensation to raise awareness among the public. For example, companies are responsible to invest in employees' equipment, infrastructures and workplace to ensure that the occupational safety and health of employees is protected. It is undeniable that companies have to implement safety hazards, risk management and prevention control which would involved human workforce in

planning. As a result, monetary compensation is needed to reimbursed the workforce. Budget constraint issue might constraint the smaller firm to implement the sustainability efforts in the long run.

On the contrary, when it comes to establishing sustainability programmes, large firms are also better positioned to benefit from economies of scale (Artiach et al., 2010). Hence, it is vital to prove this statement in order to seek for more financial subsidies from the relevant parties.

This is also supported by (Wu et al., 2006) that the excellence of a company's performance is derived from the robust synergy between an array of human and financial resources (i.e. size), which could eventually contribute to the stellar SGP of a company. This follows with the second hypothesis:

H2: There is a significant positive relationship between firm size and SGP

2.4.3   Digital Technologies

Technology shapes industry structures, creates competitive advantages, and has the potential to change the rules of competition. Furthermore, technology is integrated into nearly every function within an organisation, covering manufacturing, purchasing, distribution, accounting, and marketing. In other words, IT application is an essential component of a company's strategy, affecting many aspects of the business (Edwards, 2001). IT serves as a source of competitive advantage (Weill & Woodham, 2002), by having a shared customer database (Weill & Aral, 2003), reducing marketing effort on new business initiatives (Weill & Aral, 2004), analysing customer needs so that better decisions can be made while taking customer needs into account (Weill & Aral, 2006), as well as promoting better interaction between companies and their customers. Therefore, when companies

perform well in fulfilling product and services responsibility, it is expected that they make sensible investment in digital technology. Hence, it is expected that:

H3: There is a significant positive relationship between Digital Technology and SGP

2.4.4 Target-Setting Approach

Targets are defined as specified performance targets that must be met within a particular timeframe. For the purpose of this study, target may be either hard or soft targets (Haffar & Searcy, 2018). Hard targets are measurable targets with clear-cut underlying quantification and an intended target timeframe. For example, Chin Teck Plantation Berhad Malaysia pledge to improve their health and safety practices and strive for zero workplace accidents by 2021 (Chin Teck Plantation Berhad, Annual Report 2020, p. 48).

In this case, it is shown that the target is quantified and has a specific timeframe in order to justify accountability. However, there are times when target quantification can be difficult, for example, it is hard to set a baseline target for contribution to community welfare and to measure whether the organization's engagement in CSR is successful, hence no firm is accountable for the target quantification (Moussa et al., 2021).

Hard targets can be categorised as either absolute targets (numerically, such as Guocoland Malaysia Berhad envisages to maintain zero workplace fatalities (Guocoland Malaysia Berhad, Annual Report 2020, p. 55) or as intensity targets (percentage, such as Sime Darby Property aims to incorporate 30% women's participation on the BOD (Sime Darby Property, Annual Report 2020, part 2, p. 162). Furthermore, each target should have a timeframe to attain the required result, as a lack of timeframes demotivates firms (Rietbergen & Blok, 2010). For example, FGV targets to achieve 100% Traceability to Plantation for external indirect

suppliers by 2021 (FGV Holdings Berhad, Annual Integrated Report 2020, part 2, p. 111). Although this target is well stated and quantifiable, but it lacks a clear timetable.

On the contrary, "Soft" targets are more qualitative, without specific quantifications and are not time-bound. For example, OSK Holdings Berhad planned its goal to 'ensure equal and fair opportunities for all talents' (OSK Holdings Berhad, Sustainability Report 2020, p.14). Even though this target is clearly defined, it is not practical to measure the overall equality and fairness among the employees.

As explained in the accounting literature Jones & Slack (2013) and Maas (2018) reports that compared to hard targets, soft targets are less organised, have less objective, and are more prone to firm biases, making them less accurate and reliable. This is also used to measure whether the publicly listed companies employed target-setting approach in their SG engagements. Companies that score a 5 in any subjects imply that they employed target setting approach. Hence, it is assumed that:

H4: There is a significant positive relationship between Hard-Target-Setting and SGP

2.5   Profitability and Business Growth

Examining the relationship between financial performance and sustainability performance has taken up a significant portion of the Corporate Sustainability Performance research literature that had already published (Al-Tuwaijri et al., 2004). To relate it to the Goal-Setting Theory, most managers' ultimate goal is to make decisions that would maximize a company's financial value (Kaplan, 2009). It also acts as a motivation for managers to invest more in sustainability programmes.

Artiach et al. (2010) stated that corporate sustainability investments can be value-adding because it improves a firm's goodwill, averts stakeholder and regulatory actions, and enable a company to be a more appealing investment for socially responsible investors. The return on assets and book-to-market value were used as the proxies for profitability and business growth, similar to the variables used in Artiach et al. (2010) and Cotter & Silvester (2003) respectively. However, most researchers have argued on the three possible associations between a firm's CSP and its financial performance: negative, positive, and neutral. Hence, this leads to the following hypothesis:

H5: There is a significant positive relationship between SGP and profitability

H6: There is a significant positive relationship between SGP and business growth

2.6 Leadership's Commitments and Plans in terms of pursuing the 17 UN-SDGs

A supportive culture and strong leadership are essential for integrating sustainability in firms. The leaders inclusive of Board members and the Chief Executive Officer within an organisation is encouraged to portrait strong stewardship by engaging sustainability into an organization's daily operation, moving focus beyond compliance, hence resulting in sustainable decision making (Bursa Malaysia Securities Berhad, 2018). As mentioned by Cramer (2011), the greatest long-term option is to integrate sustainability into all board operations so that it will eventually becomes a new norm. Embracing and expanding sustainable leadership behaviours and interactions positively adds to more ethical and responsible leadership, positioning businesses as active change agents in strengthening ESG (Lokuwaduge et al., 2020).

To be more explicit, executives' dedication is highlighted here because they establish an organization's strategic direction. Such dedication is essential for ensuring that an organization's sustainability is implemented, with adequate

resources, tight protocols, and systematic processes in place at the same time. Incorporating sustainability concerns into the organization's current risk management structure is part of this.

The way on showing organisation's actual commitment towards sustainability is by setting corporate targets and report on them (Moussa et al., 2021). It is organisation's responsibility to include a Sustainability Statement[3] that reflects its sustainability commitment in their annual report, or in the form of standalone sustainability report. Policies are put in place to handle sustainability issues, and they symbolise the organization's commitment. They are also used to motivate and delegate responsibility within the organisation. Such disclosures are crucial corporate communications because they assist stakeholders to evaluate performance risks and gain a better knowledge of organisation's progress toward company goals (DEFRA, 2013). Some similar research works can be shown in Narayanan & Adams (2016) where they employed sustainability reports to determine the level of commitment by examining the state of the sustainability initiatives.

The United Nations developed the 2030 Agenda for Sustainable Development in 2015 to advice society on topics that should be prioritised in order to enhance people's quality of life and the world's environmental circumstances. It is also known as Sustainable Development Goals (UN-SDGs) which is a model that have emerged in terms of acting as a guide in disclosing ESG matters. The Agenda, also known as the Sustainable Development Goals (SDG), was developed cooperatively by many societal actors. The Agenda covers a series of 17 goals (Figure 1) and 169

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[3] In its annual disclosures to stakeholders, the organisation must submit a Sustainability Statement that indicates its commitment to consider material sustainability issues in a thorough and strategic manner.

targets aimed at addressing a wide variety of issues. The topics include no poverty, gender equality, concerns on ecosystems and etc (Parkes, 2017).

Figure 1: Sustainable development goals (SDGs)

Extracted from Bursa Malaysia Securities Berhad (2018)

The adoption of the Sustainable Development Goals (SDGs) in Malaysia has came into effect in January 2016. Following the National agenda for sustainable development, Malaysia adopted the Universal Declaration of Human Rights in 2012, and Malaysia is one of ten nations whose national budgets are completely aligned with the SDGs based on UN assessments, said by Finance Minister Tengku Datuk Seri Zafrul Tengku Abdul Aziz (Ong, 2021). Malaysian Government's initiatives can be seen from the Budget 2022 which includes the transition towards diversity, community empowerment (Ong, 2021). Current efforts from the government and regulatory bodies are needed to enhance SGP which will in turn realised the objectives and pledge in accomplishing the "Agenda 2030" through its SDG Roadmap and Malaysia Plans.

Some other interesting findings include Lokuwaduge et al. (2020) where they suggested that nations worldwide should possess specialist expertise to safeguard

ESG and SDG performance, this will lead to improved ESG decision-making and reporting practises throughout the world. Arruda Filho et al. (2019) also argued for the need of building a new mindset for sustainable leadership aligned with the 2030 Agenda by incorporating SDGs into the education of globally responsible leaders.
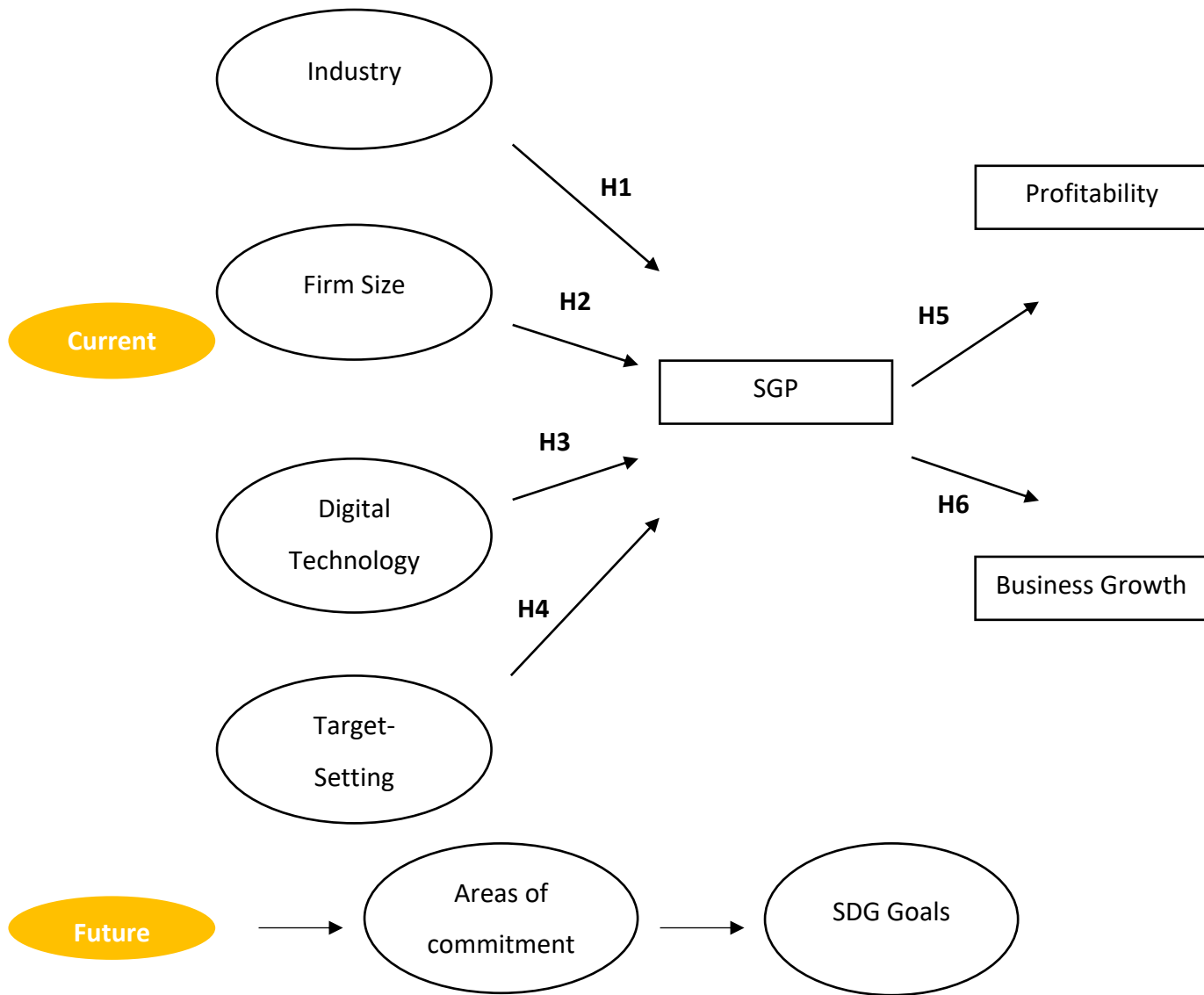
2.7   Conceptual Framework

Figure 2: The Conceptual Framework

Chapter 3   Research Methodology

3.1   Research Instruments

This study had utilised mixed method methodology to investigate the SGP among listed companies in Bursa Malaysia. This study employed two years of SGP data in Year 2019 to 2020 and one year of financial data in year 2021. For the purpose of research objective 1, 2, 3 and 4, content analysis has been performed on the EES disclosures presented in the voluntarily published reports of the companies listed on the main market to analyse the SGP in Malaysia. The SGP is based on disclosure content quality which is measured from target setting approach and ESG metrics. The relationship between social disclosure and social performance can be seen in (Ullmann, 1985).

The reports were extracted, and the data was collected as volumes of disclosure which are categorized based on the three pillars (EES) of subject disclosure, as in the comprehensive sustainability reporting guidelines issued by the Bursa Malaysia Securities Berhad (2018), as shown in Appendix A. Each subject offers more precise information regarding various areas of disclosure, as listed in Table 1.

Theme	Subjects covered
Social	3.1 Diversity
	3.2 Human rights
	3.3 Occupational safety and health
	3.4 Anti-competitive behaviour
	3.5 Anti-corruption
	3.6 Labour practices
	3.7 Society
	3.8 Product and services responsibility (social)
	3.9 Supply chain (social)
	3.10 Compliance (social)

Table 1: Table of Themes and Indicators (SG)

Extracted from Bursa Malaysia Securities Berhad (2018)

Reporting Standards acts as a scoring system, most subjects included in these guidelines can be addressed at varying levels of comprehensiveness, ranging from being stated briefly to being thoroughly quantitatively mentioned (Morhardt et al., 2002). Thus, the research instrument - levels of SG scoring (see Appendix D) have also been created based on Dragomir (2010) to gauge the SGP in Malaysian listed companies. The levels of SG scoring indicate how thoroughly the subjects were being discussed. This study uses a five-level ordinal scale to measure the degree of SG disclosure, ultimately seeking to award quantitative, comparable and benchmarked information against vague narratives. The levels of SG scoring are separated into 5 levels:-

"1" = Narrative only, not quantified

"2" = Actual performance of the year is clearly explained and quantified

"3" = Progress of performance (comparative over the years) is clearly explained

"4" = Action plans moving forward (to close the gap / to manage risks and opportunities) are clearly explained

"5" = Targets set for next year (SMART)

Hard targets have been captured as a score of 5 based on SMART - specific, measurable, achievable, realistic and time bounded (Doran et al., 1981). The rest of the scores lower than 5 are defined as soft targets. Therefore, the content analysis of the SG Scoring template has been created, as listed in Table 2 and in Appendix B.

Below is the content analysis scoring template (research instrument) created for the study. This instrument is used to capture good quality data in a manner that is rigorous and comprehensive, and acts as a powerful input for the following data analyses.

Year of Sustainability Report	2020		
Company Name:			
Listed Number:			
Industry:			
Market listed:	Main Market		
Type of report:	Annual Report / Integrated Report / Stand Alone Report		
Subjects of sustainability	Score	Page	Remarks
Social			
3.1 Diversity and Equal Opportunity			
3.2 Human rights			
3.3 Occupational Health and Safety			
3.4 Anti-competitive behaviour			
3.5 Anti-Corruption			
3.6 Labour Practices			
3.7 Society			
3.8 Product and services responsibility			
3.9 Supply Chain			
3.10 Compliance			

Table 2: Content Analysis Template

In terms of examining the leadership commitment on pursuing the 17 UN-SDGs, leadership commitment for all companies was compounded into one master format as shown in Table 3 to enable the successful exportation to Nvivo.

Below is the content analysis leadership statement template created for the study.

Year of Sustainability Report	2020
Company Name:	
Listed Number:	
Industry:	
Market listed:	Main Market
Type of report:	Annual Report
Leadership aspirations towards sustainability development agenda	

Table 3: Leadership Commitment Template

The leadership statements in Nvivo as in Table 3 have been content analysed to conduct the data analysis in Table 27 by analysing the number of companies that expressed attention in a given SG subject. Based on the scoring through the content analysis, the subject of focus can be identified, and the outcome of case study acts as an entry to analyse the subject. The information in leadership statements was coded by using the software programme NVivo 8 in order to allow patterns to emerge. The codes to examine the commitments and plans for companies in pursuing the 17 SDGs is based on the SG subjects in 'Bursa Guide'. After the data had been coded, descriptive summaries of the major theoretical constructs were created. For instance, a comment about a future commitment and plan such as employing digital technologies (e.g. Big Data, Cybersecurity, Artificial Intelligence) initiated by any of the 313 companies was coded under subject Product and Services Responsibility (3.8). Following this, an initial narrative was produced from the coded data to analyse mini case studies (Miles & Huberman., 1994; Yin, 2003).

3.2   Data Collection

As of the end of 2021, 781 businesses were listed on the Malaysian Bourse's main stock market index, the Main Market. Main Market is a prime market for publicly listed companies in Malaysia that have met the quality, size, and operations standards, based on industry representation, market size, and trade volume. The data were drawn from the voluntarily reports (i.e. Annual Report, Integrated Report and Stand Alone Report) of sample firms via their announcements on the BURSA Malaysia website (see www.bursamalaysia.com) and financial measures/ performance in the Thomson Reuters' Datastream. The annual report is a key corporate document that depicts precise information of an entire organisation structure (see, for example (Gray et al., 1995). The information were obtained under the assumption that it is highly credible because it is appeared in the annual reports (Tilt, 1994).

As of the time of this study, the database contained 781 companies as at 22 Dec 2021. However, companies in the database are instable over time. Particularly, a handful of listed companies have been delisted as they fall under the PN17 status and breach the rules of the Listing Requirements, or if not, for some other reasons. In addition, some data values are missing for a small number of firms which further diminishes the data set. The sample further excludes firms that are listed on the stock exchange after year-end of 2015, firms that have undergone merger and acquisition exercises between 2015 to 2021, firms whose sustainability statements are absent in the annual report, those whose annual reports are not readily accessible through the Bursa Malaysia website, or if not, having two annual reports in one financial year between 2015 to 2021, as well as firms whose financial data cannot be found on DataStream. The full list of sample exclusion criteria can be found under Appendix C. As a result, the final sample was reduced to 313. Data sources employed in this study are explained as follows.

3.2.1 Data sources

Documentary sources downloaded from the Bursa Malaysia Website represent the major source of data for the study. The documents analysed included annual reports, integrated reports, stand alone report. For Research Objective 1 and 2, reports for year 2019 were extracted to act as measurement of proxies for variables (see 3.3 - RO 2iii & 2iv) for target-setting approach and digital technologies, due to the fact that the employment of these 2 variables might need longer time to verify on the performance. This can be proven from Boesso et al. (2013) where he suggested that researchers are advised to examine that corporate initiatives may have a lagged relationship with corporate performance. While the reports in year 2020 were extracted to investigate the overall SGP.

As the leadership statements were predominantly made in the annual / sustainability reports to examine top management's language in respect to sustainability concerns and commitments (Narayanan & Adams, 2016), information in year 2020's voluntarily reports was coded by using the software programme NVivo 8 in order to allow patterns to emerge in order to serve Objective 4. Codes were derived according to the subjects covered in Bursa Malaysia Guideline. After the data had been coded, descriptive summaries of the major theoretical constructs were created.

However, for the purpose of Research Objective 3, reports in year 2019 were extracted to investigate the overall SGP to tackle the time lag effect with the financial performance. Financial data relevant to the determination of TOTAL ASSETS (TA), RETURN ON ASSETS (ROA), MARKET TO BOOK VALUE (MTBV) for year 2021 were retrieved from DataStream. TA was used as a proxy for company size, ROA and MTBV were used as a proxy to evaluate on companies' financial performance. In addition. In this study, financial data in year 2021 were used to tackle the time lag effect on profitability and business growth. The reason of taking

business growth is due to the fact that the effect on Profitability might have a lag effect over the years, and due the data constraint which might impede the accuracy of the results, hence business growth had been tested to bring more validity and reliability. The use of this time lag is similar to Waddock & Graves (1997) in their examination and discussion of the possible association between SGP and future financial performance of organisations. Moreover, as Year 2020 is heavily impacted by COVID-19, it might provide an inaccurate result such as fluctuated share price or other inaccurate financial performance. Thus, the employment of the two-years lag effect between SGP and Financial Performance: Total SG Score in year 2019 and financial data in year 2021 have been utilised

Table 4 contains a complete list of the documents examined in this study.

Document Type	Purpose	Research Objectives	Time period/source
Annual Reports / Integrated Report / Sustainability Report	Scoring template	1,2	Every reports from the year 2019 - 2020
	Leadership statements	4	Every reports in year 2020
Financial Data from DataStream	SGP & FP	3	Every financial data in year 2021

Table 4: Lists of data collected

These are all the main sources being employed in this study. The next session will shows the measurement of proxies for the variables used in this study.

3.3   Measurement of proxies for variables

There are several research objectives embodied in this study. Following this, a number of hypotheses had been developed and tested, each employing with different variables. The research variables were derived from the research objectives.

Table 5 shows the summary of variables used in this study.

Variables	SPSS indicators	Definition	Independent samples	Expected Sign
RO 1 & 2 Dependent				
SGP	2020_TotalSGScore	Social & Governance Performance (SGP) in 2020	-	-
Independent				
Industry	IND BURSA	13 industries listed in Bursa Malaysia	-	-
Size	Size	Natural Log of Total Assets (Log10TA)	Large	Positive
			Small	Negative
Digital Technology	2019_DIG	Scoring template on subject 3.8 in 2019	Digital	Positive
			Non-digital	Negative
Target Setting	2019_Target	Scoring template in 2019	Hard-target	Positive
			Soft-target	Negative

Variables	SPSS indicators	Definition	Independent samples	Expected Sign
RO 3				
Dependent				
Profitability	2021_ROA	Return on Assets (ROA)	-	-
Business Growth	2021_MTBV	Market to Book Value (MTBV)	-	-
Independent				
SGP	2019_TotalSGScore	Social & Governance Performance (SGP) in 2019	-	-

Table 5: Summaries of variables employed in this study

RO1: To identify the current state of SGP in Malaysia.

There are no statistical tests conducted under this section, and hence no hypothesis is needed.

As this study focuses on the SG pillar, the study first delved into the current status of the SGP within Malaysia. The aggregate score of SG scoring by all industries was used as a proxy for the current state of SGP. The possible SG scores range from 1 to 5 for the respective EES themes, 5 being the highest score. Taking the Social - 3.1 Diversity as an example, the lowest score is 1 and the highest score is 5. The SGP in Malaysia was classified into 3 levels, namely the "low, medium and high disclosure" depending on the sum score of their SGP. In view of this, to devise the respective cut-off points, interquartile range of 25th and 75th percentile had been applied on the maximum possible score for all the companies in Malaysia, specifically in the SG Pillar. The maximum possible score for all the companies was the sum of total sampled companies, maximum score of 5 and the total subjects. For example, the maximum possible score for all the companies is 15,650 (i.e. 313 companies X maximum score of 5 X 10 subjects). Following this, any score that is below 3,913 (i.e. 25% X maximum possible score of 15,650) is classified as "low disclosure", for any score that is above 11,737 (i.e. 75% X maximum possible score of 15,650) is classified as "high disclosure", whilst for any score that lies between 3,913 and 11,737 is classified as "medium disclosure".

RO2: To determine which determinants have an impact on SGP.

To tackle the concerns on SGP of a company, it is important to identify the drivers of the performance. If a company's stakeholder environment influences its investment in sustainability, then variations in CSP among firms imply variations in the drivers related to the scope and significance of the firm's stakeholder demands (Artiach et al., 2010). The SGP of 2020 was treated as dependent variable in all

these studies to examine which determinants is statistically significant in determining the SGP of a company.

i. Industry

In this study, the type of industries was treated as independent variable. Caputo et al. (2019) study used the same variable, and they discovered that SR was substantially correlated to the type of sector. This is due to varying degrees of exposure to societal, stakeholder, and present and future regulatory constraints (Kim & Lee, 2020). Companies' SP is determined by their industry association (Chiu & Wang, 2014). While Matakanye et al. (2021) study gave a contradictory view that the type of industry has no significant effect in establishing a company's ESG rating. It has been difficult to establish a clear association between social disclosures and industry affiliation indicators (Gray et al., 2001).

For the purpose of data collection, the industries have been coded accordingly:-

1=Construction, 2=Consumer Products and Services, 3=Energy, 4=Financial

Services, 5=Health Care, 6=Industrial Products & Services, 7=Plantation,

8=Property, 9=Real Estate Investment Trusts, 10=Technology,

11=Telecommunications and Media, 12=Transportation and Logistics, 13=Utilities

ii. Firm size

As total assets measures the firm's total resources, natural log of total assets had been used as the proxy of firm size. The representative specification in Dang & Li (2015) literature is based on Mehran (1995), who uses the log of total assets as the measure of business size. Since the total assets for all 313 companies can be extracted from DataStream, natural log of total assets was transformed by using the formula Log10TA; where TA is Total Assets. In order to differentiate size of the companies, descriptive statistic had been performed to see the mean for the

Log10TA, which gave a value of 5.37 (see Table 8). Furthermore, firm size had been categorized into "large" and "small" firms with a cut-off point of 5.37, this study deal with binary independent variables which are defined as follows:

$$Y_{\text{Size}} = \begin{cases} 0 & \text{small firm if the Log10 TA is less than 5.37} \\ 1 & \text{large firm if the Log10 TA is more than 5.37} \end{cases}$$

In order to examine the effect of firm size on the overall SGP, the dependent variable will be Total SG Score for 2020; Whilst Natural Log of Total Assets (proxy for Firm size) is coded with dummy variables. The detailed explanation will be:-

Size is measured as 0/1 dummy variable where 0 is small firm or 1 is a large firm, based on the natural log of total assets.

iii.   Digital Technologies

For this section, 3.8 Product and Services Responsibility in 2019 was used as a proxy for digital technologies. According to the 'Bursa Guide', the coverage of this subject is inclusive of innovation, cybersecurity and customer satisfaction. This is consistent with Mohamad et al. (2017)'s statement that continuous improvement in innovation and learning is vital so that it allows businesses to adapt to changing demands by developing new products that fulfil the needs of their consumers; Weill & Aral (2006)'s statement which assessing customer needs in order to make better decisions that take customer needs into consideration and foster better engagement between organisations and their customers. Therefore, when companies perform well in fulfilling product and services responsibility, it is expected that they make sensible investment in digital technology. As the score of the theme might varies from 0 to 5, hence the companies had been differentiated into "Non-digital" and "Digital". 3.8 Product and Services Responsibility in 2019 was used as it will provide a more accurate result due to the fact that the employment of digital technologies might need longer time to verify on the

performance. This study deal with binary independent variables which are defined as follows:

$$Y_{\text{DT}} = \begin{cases} 0 & \text{Non-digital if the company have 0 under 3.8} \\ 1 & \text{Digital if the company have a score of between 1 to 5 under 3.8} \end{cases}$$

In order to examine the effect of presence of digital technologies on the overall SGP, the dependent variable will be Total SG Score for 2020; Whilst 3.8 Product and Services Responsibility is coded with dummy variables. The detailed explanation will be:-

2019_DIG is measured as 0/1 dummy variable where 0 is company who employed digital technology or 1 is company who did not employed digital technology, based on the scoring on subject Product and Services Responsibility (3.8).

The dummy variable of 2019_DIG was treated as the independent variable.

iv.   Target-Setting Approach

For this section, the presence of hard-target setting in SGP subjects in Year 2019 was used as a proxy for target-setting approach, and act as the independent variable here. As the overall target setting approach has a score varies from 0 to 5 (as shown under 3.1 Research Instruments), hence the companies have been differentiated into "Soft-Target" and "Hard-Target" (Haffar & Searcy, 2018). Hard-Target Setting[4] Approach is companies who have at least a score of 5, regardless in which subjects; whilst Soft-Target Setting Approach is companies who do no have

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[4] Hard targets have been captured as a score of 5 based on SMART - specific, measurable, achievable, realistic and time bounded (Doran et al., 1981)

a score of 5 under any subjects. Targets set in Year 2019 were used as it will provide a more accurate result due to the fact that the target might need longer time to take effect on the performance. This study deal with binary independent variables defined as follows:

$$Y_{\text{Target}} = \begin{cases} 0 & \text{Soft-target if the company do not have a score of 5 under each of the subjects} \\ 1 & \text{Hard-target if the company have at least a score of 5 under each of the subjects} \end{cases}$$

In order to examine the effect of absence of hard-target setting approach on the overall SGP, the dependent variable will be Total SG Score for 2020; Whilst 3.8 Product and Services Responsibility is coded with dummy variables. The detailed explanation will be:-

2019_Target is measured as 0/1 dummy variable where 0 is company who employed soft-target setting approach or 1 is company who employed hard-target setting approach, based on the score of 5 under each subjects.

The dummy variable of 2019_Target was treated as the independent variable.

RO3: To examine whether SGP has an impact on the:-
   i.   Profitability of a company.

Return on Assets (ROA) is a metric that quantifies how lucrative a company's assets are at producing revenue, hence ROA was used as a proxy of profitability, similar to the variable used in Artiach et al. (2010). The dependent variable was ROA in Year 2021; While the independent variable was Total SG Score in Year 2019. The use of this time lag had been justified under 3.2.1 Data sources. The ROA for all 313 companies were extracted from DataStream. Descriptive statistic had been performed to see the mean of the ROA in year 2019, which gave a value of 3.76 (see Table 8). To evaluate if the ROA increases with the SGP, a linear regression analysis had been generated to analyse the degree and character of the

relationship between Total SG Score and ROA. The reason of including 2 preceding years is due to the fact that the increment in profitability might have a lag effect over the years, and hence it requires at least a few years to verify the findings.

ii.   Business Growth of a company.

As the effect on Profitability might have a lag effect over the years, and due to the data constraint which might impede the accuracy of the results, business growth had been tested to bring more validity and reliability.

As Market to Book Value (MTBV) is a financial valuation statistic used to compare a company's current market value to its book value, it was used as a proxy for business growth, similar in Cotter & Silvester (2003). The current stock price of all outstanding shares is used to calculate the market value, in where that the market believes the company is worth the price). The dependent variable was MTBV in Year 2021; While the independent variable was Total SG Score in Year 2019. The use of this time lag have been justified under 3.2.1 Data sources. The MTBV for all 313 companies were extracted from DataStream, descriptive statistic had been performed to see the mean for the MTBV in year 2021, which gave a value of 2.08 (see Table 8). To see if there's an increase in ROA in terms of SGP, a linear regression analysis was generated to analyse the degree and character of the relationship between Total SG Score and MTBV.

RO4: To examine the commitment and plan of the companies in terms of pursuing the 17 SDGs.

This RO was achieved via the use of content analysis and case study. There are no statistical tests conducted under this section, and hence no hypothesis and variable is needed.

<u>Conclusion</u>

To conclude for this section, these variables were identified as the proxies for the conceptual framework and were examined to provide evidences for the hypotheses discussed in Chapter 2.

The analyses of the variables and findings were presented in Chapter 3 and 4 respectively.

3.4　Data Analysis and Tools

3.4.1　IBM SPSS Statistics

The IBM® SPSS® software platform offers strong statistical analysis, a broad library of machine learning algorithms, text analysis, open source extensibility, big data integration, and application deployment that is frictionless. Because of its ease of use, scalability as well as adaptability, SPSS is accessible to users of all skill levels. Furthermore, it is suitable for projects of all sizes and levels of complexity, and it may help firms uncover new opportunities, improve efficiency, and reduce risk. SPSS Statistics supports a top-down, hypothesis-testing method to data analysis. In other words, SPSS is a huge spreadsheet that enables the evaluator to enter, alter, and analyse numerous sorts of data via a series of drop-down choices (Morgan et al., 2010).

In the course of this study, the scoring template in Excel format was exported to SPSS for the purpose of data analysis. "Data View" will consist of all the data in the Excel format, and "Variable View" will show the Measure of each variable. Some measures in SPSS include Nominal, Ordinal and Scale. When a variable's values indicate categories without any inherent ranking, it might be viewed as nominal (for example, the department of the company in which an employee works). Nominal variables include things like region, zip code, and religion affiliation. When

a variable's values indicate categories with some sort of inherent ranking, it can be viewed as ordinal. Ordinal variables, which indicate a person's level of contentment or confidence, include attitude scores and preference rating scores. When a variable's values indicate ordered categories with an appropriate metric, it can be considered a scale (continuous) and distance comparisons between values are valid. Age expressed in years and income expressed in thousands of dollars are two examples of scale variables.

In this study, Table 6 indicates the Nominal, Ordinal and Scale variables respectively.

As the SG scoring ranges from 1 to 5 is classified as ordinal dataset, for descriptive statistics, the most appropriate measures of "central tendency" is the mode (the value which has highest frequencies), or the median (the central value), while range, interquartile range are suggested for variability. The use of all these measures are more meaningful than using Mean as ordinal dataset are discrete and have a limited dataset (Frost, NA). While taking mean of the data is acceptable, the limitation is such as it is not agreeable by all scholars depends on the view of management view.

For inferential statistics, given that the parametric tests assume that data are continuous and follow a normal distribution, the 5 levels of scoring as likert data are ordinal and in particular are unlikely to conform to the distributional assumptions of parametric tests. However, de Winter (2010) confirmed that parametric tests are valid with nonnormal data, condition is that with a large enough sample, hence parametric tests such as 2-sample t-test is valid. As mentioned in Wadgave & Khairnar (2019): "According to the central limit theorem (CLT), the sampling distribution of means will be normal in small sample sizes if the sample data are approximately normal, while in big samples [> 30 or 40], the

sampling distribution of means tends to be normal regardless of the shape of the data" (Ghasemi & Zahediasl, 2012). It should also be emphasized that parametric tests are not affected by minor deviation from the normal distribution of continuous data (Fagerland, 2012; ÖZTUNA et al., 2006; Skovlunda & Fenstadb, 2001). As the total sample size for this study is 313 (which is more than 30), it is fine to proceed with parametric tests such as One Way ANOVA, Independent-Samples t-test and regression.

Name	Label	Measure	Values
YEAR	Year of Sustainability Report	Nominal	2020=Year 2020
NAME	Company Name:	Nominal	
NUM	Listed Number	Nominal	
IND BURSA	Industry (Bursa)	Nominal	1=Construction, 2=Consumer Products and Services, 3=Energy, 4=Financial Services, 5=Health Care, 6=Industrial Products & Services, 7=Plantation, 8=Property, 9=Real Estate Investment Trusts, 10=Technology, 11=Telecommunications and Media, 12=Transportation and Logistics, 13=Utilities
REPORT	Type of report:	Nominal	1=Annual Report, 2=Integrated Report, 3=Stand Alone Report
3.1	Diversity	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.2	Human rights	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.3	Occupational safety and health	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.4	Anti-competitive behaviours	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets

3.5	Anti-corruption	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.6	Labour practices	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.7	Society	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.8	Product and services responsibility	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.9	Supply Chain	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
3.10	Compliance	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets
ROA	Return On Assets	Scale	
MTBV	Market To Book Value	Scale	
TA	Total Assets (WS) (Key item)	Scale	
2020_TotalSGScore	Sum of SG Score	Scale	
2019@3.8	2019 3.8	Ordinal	1=narrative, 2=actual performance, 3=comparative performance, 4=action plans, 5=targets

2019_DIG	2019 Digital Technology	Nominal	0=not employing digital technologies, 1=employing digital technologies
2019_Target	2019 Target	Nominal	0=soft target, 1=hard target
Log10TA	Natural Log of Total Assets	Scale	Natural Log of TA

Table 6: List of measures

Descriptive Analysis

Descriptive Analysis is used to describe data characteristic and data distribution, it basically provides summaries of the entire data characteristics in a table by showing different measures. It allows users to visualize data, and always acts as the first step in all different statistical analyses. It usually provides measure of shape, measure of location, measure of spread. These methods allow researchers to detect numerical and visual patterns in data that are not immediately apparent (Morgan et al., 2010). In the course of this study, descriptive analysis gave me important figures such as frequency counts and distribution, summary measures such as measures of central tendency (i.e. mean, mode, median), variability[5], skewness[6] and relationship[7.] The first part of the analysis kickoff with descriptive statistic which is shown in tabular representation. Other descriptive studies, such as analyzing the Pearson correlation test is available in addition to these standard descriptive statistics.

Inferential Analysis

Inferential Analysis draws conclusion about a population based on sample that extracted from that population. Inferential analysis compares data, tests hypotheses, and forecasts future results. Inferential Statistic employed parametric method that has an assumption about the data and is more powerful because their data are derived from interval and ratio measurements. Inferential statistics explain the possibility of an event occurring and the final result is shown as a probability. inferential statistics are used when the evidence of the relationship between variables occurring throughout the whole population is required.

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[5] Variability is a term that describes how far the data spreads out from the centre.

[6] A metric that determines whether a value distribution is symmetric or skewed, it can be shown in numbers and graphs.

[7] Variables are correlated to each other, influence the behavior / impact on your observation

inferential statistics is divided into two areas: (i) parameter estimation and (ii) hypothesis testing. For example, hypothesis testing is used this study to test which determinant is effective in SGP. For instance, 313 listed companies have been sampled from Bursa Malaysia. With inferential statistics, the same sample data from a small number of people are surveyed to see whether the data can forecast if the determinant will work for everyone. Calculating a t-score is a method of displaying where the data would fall on a bell curve.

Some examples of Inferential analysis in this study include Inter-Quartile Range (IQR) had been applied to determine the range of SGP, from low, medium to high disclosure levels. Using the stakeholder framework and Goal-Setting Theory, a number of hypotheses that relate SGP to firm-specific characteristics had been developed. SPSS had been utilised to analyse the content analysis – SG scoring data to perform inferential statistics such as One Way ANOVA, independent-samples t-test, test of homogeneity of variance and regression.

3.4.2   NVivo

Further analysis had been performed using software programme NVivo 8 to explore companies' commitments and plans in their leadership statement in regards of pursuing the 17 UN-SDGs. The NVivo software tool was utilised for coding documentary sources as well as for cautiously documenting and preserving the researcher's opinions distinct from the raw data. The findings will show the number of frequency, detailed commitments and plans mentioned, and justifications.

The annual / sustainability reports' leadership statements were exported into a single spreadsheet file in Microsoft Excel. The coding method entailed extensively analysing the reports to locate sections of text that pertained to a certain code, which were then linked to the corresponding node that was created. Based on the

'Bursa Guide', the codes were primarily focused on leadership's commitment to the three pillars of themes: economy, environment, and social/government. These guidelines were created to guarantee that all of the important aspects of the comprehensive sustainability issues were covered and retrieved from the documentary reports.

3.5   Validity and Reliability

As defined by Ryan et al. (2002), "internal" and "external" validity is being emphasized, as well as "reliability" of quantitative work. Internal (contextual) validity of quantitative work might be jeopardised at any point during the research process. Threats to internal validity during research design include insufficient knowledge of, or conflicts in, the logic. Deficits in subsequent phases of research, such as data collection, data analysis or even interpretation of findings, can also result in studies with low internal validity (Ihantola et al., 2011).

During data collection, possible threats to contextual validity are many including, instrumentation issues (Campbell, 1963; Tashakkori & Teddlie, 1998; Ihantola et al., 2011), order bias and researcher bias in the use of techniques (Onwuegbuzie, 2003). In terms of researcher bias, the sample size was chosen from one of the largest bourses in ASEAN – Bursa Malaysia (Economics, 2020), hence eliminating the possibility of selection or participant bias, and sampling bias. It is also crucial to request other members in the team to evaluate the results and findings (Formplus Blog, 2022). This can help researcher to see items that they might have overlooked or discover gaps in the argument that need to be filled.

Hence, pre-test on sampling selection and content analysis scoring process was conducted. The sampling selection had been verified by an independent scorer who was properly briefed on the content analysis procedure and criteria before cross-checking. It had also been reviewed and confirmed by our supervisor. It is important in ensuring intercoder reliability and pre-test the suitability of our

sample selection, to ensure contextual validity, which is a key criterion in "quantitative research" (Ryan et al., 2002).

3.6   Ethical Consideration

This study was conducted with the full compliance of Research Codes of Conduct and Ethical Principles. The data source of this study only involved secondary data which are available in the public domain. These included surveys of published information or voluntarily reports (i.e. Annual Report, Integrated Report and Stand Alone Report) that is published on Bursa Malaysia Website and financial data (Total Assets-TA, Return on Assets-ROA, Market to Book Value-MTBV) which are available on the Thomson Reuters' DataStream.

As the data source being employed in this study did not involve contact with any participants, hence this study falls under the Level A approval. The study did not cause offence to participants for particular reasons such as ethnicity, religion, gender, sexual orientation or culture. The study did not involve the discussion of any topics that are sensitive such as sexual activity as well as drugs offence. The data collected was anonymised. The datafile employed in this study was encrypted and only accessible by supervisor and student researcher. The proposed study did not present any risk to the researchers. As a result, the application had been reviewed and approved by the research ethics committee.

Chapter 4   Analysis and Findings

4.1   Introduction

This Chapter will introduce the data analysis and findings. SPSS had been utilised to analyse the content analysis – SG scoring data, in order to perform both descriptive and inferential analysis. The output of these analyses was shown here, any data abnormality and assumption of tests was stated here.

The SG scoring data from content analysis had been keyed into Microsoft Excel. Companies' disclosure based on the ESG metrics within their voluntarily reports was used to determine their SGP. While the leadership statements by company leaders including board, CEO, chairman or any representative person from top management level in annual or sustainability reports were compounded into one excel file. A set of codes was developed based on the themes in the Guide for the purpose of data analysis. These are two separate Microsoft Excel files, which are scoring template and leadership statement respectively. Financial data are extracted from Data Stream database and compounded into the Excel scoring template. Some data cleaning has been performed here to match the data from different database and remove any redundant and duplicated data. After that, scoring template and leadership statement had been imported to SPSS and NVivo respectively to perform thorough data analysis.

The first part of the analysis started with the test of normality of the dependent variable that was employed in this study. It then followed with the descriptive statistics which is shown in diagrammatic or tabular representation to portrait the important figures such as frequency counts and distribution, measures of central tendency (i.e. mean, mode, median), variability and relationship are stated here, analyzing the Skewness test, Person correlation test, and crosstabulation are available in addition to these standard descriptive statistics.

The subsequent part showed the inferential analysis used in this study, with the sequence of Research Objectives 1 to 4. T-distribution was used in all inferential statistic as the population variance of the study is unknown. Inter-Quartile Range (IQR) had been applied to determine the range of SGP, from low, medium to high disclosure levels. Using the stakeholder framework and Goal-Setting Theory, a number of hypotheses that relate SGP to firm-specific characteristics had been developed. Some examples of inferential statistics are One Way ANOVA, test of homogeneity of variance, independent-samples t-test and regression.

4.2   Descriptive Analysis

Frequency Distribution of Industry

Table 7 provided a breakdown of the final sample of Bursa listed companies by industry. It showed 13 groups of industry represented in the sample, with Industrial Products & Services being the most dominant one at 28.8 percent. The smallest representation of 1.6 per cent is the Telecommunications and Media.

IND BURSA	Frequency	Percent	Valid Percent	Cumulative Percent
Construction	20	6.4	6.4	6.4
Consumer Products and Services	66	21.1	21.1	27.5
Energy	8	2.6	2.6	30.0
Financial Services	17	5.4	5.4	35.5
Health Care	9	2.9	2.9	38.3
Industrial Products & Services	90	28.8	28.8	67.1
Plantation	19	6.1	6.1	73.2
Property	39	12.5	12.5	85.6
Real Estate Investment Trusts	5	1.6	1.6	87.2
Technology	17	5.4	5.4	92.7
Telecommunications and Media	5	1.6	1.6	94.2
Transportation and Logistics	12	3.8	3.8	98.1
Utilities	6	1.9	1.9	100.0
TOTAL	313	100.0	100.0	

Table 7: Break-down of the final sample of Bursa listed companies by industry

<u>Descriptive Statistics for Variables Employed</u>

Table 8 provides the descriptive statistics for Variables Employed which were used in Data Analyses.

	N	Mean	Median	SD	Mode	Max	Min
Log10TA	313	5.365	5.208	0.836	4.410	8.328	3.360
2019_TotalSGScore	313	9.300	9	4.547	5	21	0
2020_TotalSGScore	313	9.655	9	4.388	6	22	1
IND BURSA	313	5.640	0.5	3.105	1	1	0
Size	313	0.399	0	0.491	0	1	0
2019_DIG	313	0.799	1	0.402	1	1	0
2019_Target	313	0.006	0	0.080	0	1	0
2021_ROA	313	3.762	3.410	15.553	0	84.040	188.76
2021_MTBV	313	2.076	0.880	5.300	0.660	57.120	-0.670

Table 8: Descriptive Statistics

The descriptive statistics for "Log10TA", "2021_ROA" and "2021_MTBV" had been performed to categorised the variables or devise a respective cut-off point stated under 3.3 Measurement of proxies.

4.2.1   Data Normality

Besides the usual descriptive statistics as stated in Table 8, a standard Test of Normality was applied to the selected variables used in this study. A histogram, P-P-Plot and goodness of fit test, such as the Kolmogorov-Smirnov (KS) test are the best normality test. In the course of this study, Kolmogorov-Smirnov (KS) had been used to determine whether research variables such as 2020_TotalSGScore, 2021_ROA, 2021_MTBV are normally distributed.

The results are as follow:

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
2020_TotalSGScore	0.104	313	<.001
2021_ROA	0.245	313	<.001
2021_MTBV	0.356	313	<.001

Table 9: Tests of Normality

The hypotheses are formulated as below:

H_0: Observations of variable is normally distributed

H_1: Observations of variable is NOT normally distributed

(i) Total SG Score in Year 2020 (2020_TotalSGScore)

According to the "Table 9: Test of Normality – Kolmogorov-Smirnov", the F-statistic and p-value readings are 0.104 and <0.001 respectively, with 313 degree of

60

freedom. As the p-value is less than 0.05, therefore null hypothesis (H_0) is rejected at 5% significance level, where confirmed that the variable is NOT normally distributed.

(ii) Return on Assets in Year 2021 (2021_ROA)

According to the "Table 9: Test of Normality – Kolmogorov-Smirnov", the F-statistic and p-value readings are 0.245 and <0.001 respectively, with 313 degree of freedom. As the p-value is less than 0.05, therefore null hypothesis (H_0) is rejected at 5% significance level, where confirmed that the variable is NOT normally distributed.

 (iii) Market to Book Value in Year 2021 (2021_MTBV)

According to the "Table 9: Test of Normality – Kolmogorov-Smirnov", the F-statistic and p-value readings are 0.356 and <0.001 respectively, with 313 degree of freedom. As the p-value is less than 0.05, therefore null hypothesis (H_0) is rejected at 5% significance level, where confirmed that the variable is NOT normally distributed.

<u>Violation of distributional assumptions of parametric tests</u>

Given that the acceptance of Kolmogorov-Smirnov (KS) confirmed that the research variables are normally distributed, the results shown in Table 9 suggested that 2020_TotalSGScore, 2021_ROA and 2021_MTBV in particular are unlikely to conform to the distributional assumptions of parametric tests. However, parametric tests are not affected by minor deviation from the normal distribution of continuous data (Fagerland, 2012; ÖZTUNA et al., 2006; Skovlunda & Fenstadb, 2001) as long as the sample size is more than 30. The full justification is presented under last two paragraphs of 3.4.1 IBM SPSS Statistics.

Research Objective 1: To identify the current state of SGP in Malaysia.

<u>SGP by subjects</u>

Descriptive Statistics

2020_TotalSGScore

Subjects	Sum	Mean	Median	Std. Deviation	Mode	Max	Min
3.1 Diversity	514	1.642	2	1.143	2	3	0
3.2 Human rights	155	0.495	0	0.712	0	3	0
3.3 Occupational Safety and Health	566	17.151	2	1.183	1	5	0
3.4 Anti-competitive behaviours	27	0.086	0	0.352	0	2	0
3.5 Anti-corruption	369	1.179	1	0.604	1	3	0
3.6 Labour practices	549	1.753	2	0.947	1	4	0
3.7 Society	9	0.029	0	0.202	0	2	0
3.8 Product and Services Responsibility	363	1.16	1	0.923	1	4	0
3.9 Supply Chain	176	0.562	0	0.778	0	5	0
3.10 Compliance	294	0.939	1	0.66	1	3	0
Sum	3022						
N (no of companies)	313						

Table 10: Descriptive Statistics for SGP based on subjects

As this study focuses on the SG pillar, it is important delve into the current status of the SGP within Malaysia. The total sample size of 313 companies, and 10 subjects under the SG Pillar. The possible SG scores range from 1 to 5 for the respective EES themes, where 3 is the median and 5 is the highest score. The SGP in Malaysia is classified into 3 levels, namely the "low, medium and high disclosure" depending on the aggregate score of their SGP. In view of this, the levels of disclosures have been distinguished by applying a cut-off point that is 1st quarter and 3rd quarter of the maximum score for all the companies in Malaysia. The maximum possible score for all the companies is 15,650 (i.e. 313 companies X maximum score of 5 X 10 subjects). To devise the respective cut-off points, the interquartile range of 25th and 75th percentile on the maximum possible score for the SG Pillar has been applied. Following this, any score that is below 3,913 (i.e. 25% X maximum possible score of 15,650) is classified as "low disclosure", for any score that is above 11,737 (i.e. 75% X maximum possible score of 15,650) is classified as "high disclosure", whilst for any score that lies between 3,913 and 11,737 is classified as "medium disclosure". As according to the "Table 10: Descriptive Statistics for SGP based on subjects - Sum", the aggregate score for all industries is 3022, hence it falls under the "low disclosure" category based on the target definition.

As the possible SG scores range from 1 to 5 is an ordinal dataset, the most appropriate measure is the mode the most frequent responses, or the median. According to Table 10, the mode for all 10 subjects was fall between "2", "1" or "0", that basically means that most companies merely providing narrative statements on subject 3.1 to 3.10 without providing comparative performance over the year and set clear targets. For example, the mode for subject 3.1 Diversity was 2, most companies from the 313 companies only managed to provide quantitative performance for the year itself. As far as for the median, there were equal counts (3) for "2" and "1" across the 10 subjects. The subjects that have a median of "2"

included 3.1 Diversity, 3.3 Occupational Safety and Health and 3.6 Labour practices which made up 3 counts. The highest count is still fall under the median of 3.

In conclusion, SG disclosure is categorized under the low disclosure level, which indicated the low SGP in Malaysian listed companies.

4.3   Firm-Level Determinants of SGP

Research Objective 2: To determine whether industry, firm size, digital technology and target-setting approach have an impact on SGP.

4.3.1   Industry (BURSA)

H1: There is a significant positive relationship between industry and SGP

Test of overall significance using One Way ANOVA

The objective of this test is to measure the difference of a metric dependent variable (i.e. Total SG Score) based on a set of categorical (non-metric) independent variables (i.e different industries). In other words, whether the Total SG Score differs across different industries. In this test, the F test had been employed as there are 13 independent samples, a 5% default significance level ($\alpha=0.05$) had been utilised. The decision rule is, H_0 will be rejected if the p-value from the "ANOVA" table is less than 0.05. The assumptions of ANOVA are (i) Dependent variable is normally distributed, (ii) Variances are equal for all treatment groups (to check with Levene's test of equal variances). The hypotheses are formulated as below:

$H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7 = \mu_8 = \mu_9 = \mu_{10} = \mu_{11} = \mu_{12} = \mu_{13} = 0$
$H_1 :$ At least one $\mu_1 \neq 0$

The assumptions of ANOVA are (i) Dependent variable is normally distributed. This assumption had been justified under 4.2 Data Normality. Subsequently, it follows to check assumption (ii) whether variances are equal for all treatment groups by using the Levene's test of equal variances.

It then followed with the result from the Levene's test of equal variances:

		Levene Statistic	df1	df1	Sig.
2020_TotalSGScore	Based on Mean	1.318	12	300	0.207

Table 11: Test of Homogeneity of Variances

H_0: Variances are equal

H_1: Variances are not equal

According to the "Table 11: Test of Homogeneity of Variances – Based on Mean", the readings for p-value is 0.207 respectively. As the p-value is more than 0.05, therefore do not reject the null hypothesis (H_0) at 5% significance level, where the variances are equal, fulfilled the second assumption of One Way ANOVA test. It then followed with the final result of the One-Way ANOVA test.

2020_TotalSGScore

	Sum of Squares	df	Sig.
Between Groups	407.727	12	0.044
Within Groups	5599.008	300	
Total	6006.735	312	

Table 12: ANOVA test for Industry

According to the "Table 12: ANOVA test for Industry – Between Groups", the reading for p-value is 0.044 respectively. As the p-value is less than 0.05, therefore

the null hypothesis (H_0) is rejected at 5% significance level, at least one of the population means is not equal to 0. In other words, the SGP differs across industries.

4.3.2 Firm size, Digital Technology and Target Setting Approach

H2: There is a significant positive relationship between Firm Size and SGP

H3: There is a significant positive relationship between Digital Technology and SGP

H4: There is a significant positive relationship between Hard-Target-Setting and SGP

Independent-samples t-test

The objective of this test is to measure whether there is a statistical difference between the SGP and the different variables (Firm Size, Digital Technology and Target-Setting Approach) at the 5% significance level. In this test, the t-test is chosen because the samples are independent. A 5% default significance level (α=0.05) have been utilised. The decision rule is, H_0 will be rejected if the p-value from the "Independent Sample Test" table is less than 0.05.

The assumptions for independent-samples t-test are (i) 2 independent samples, (ii) metric measurement and (iii) The standard error is calculated based on whether the variances of the two groups are equal or unequal.

2020_TotalSGScore				
	Variable	N	Mean	SD
N=313				
SIZE	Small	188	8.53	3.902
	Large	125	11.35	4.544
2019_DIG	Non-digital	63	7.57	3.618
	Digital	250	10.18	4.415
2019_Target	Soft-target	311	9.59	4.33
	Hard-Target	2	19.5	

Table 13: Group Statistics

2020_TotalSGScore				
		Significance		
	df	One-sided p	Two-sided p	Mean Difference
SIZE	311	<.001	<.001	-2.825
2019_DIG	311	<.001	<.001	-2.609
2019_Target	311	<.001	.001	-9.908

Table 14: Independent Samples Test

In SPSS, SIZE is measured as 0/1 dummy variable where 0 is small firm or 1 is a large firm. As explained under 3.3 (ii), the mean for natural log of total assets (Log10TA) has been extracted, firms are divided into "large" and "small" based on a cut-off point of 5.37. For example, companies with a mean of less than 5.37 will be categorised as "small" firm, while companies with a mean of more than 5.37 will be categorised as "large" firm. Referring to table 13, 188 are small firms and 125 are large firms. While 2019_DIG is measured as 0/1 dummy variable where 0 is companies who employed digital technology or 1 is companies who did not employ digital technology. As explained under 3.3 (iii), since the score of the subject varies

from 0 to 5, the score of 3.8 Product and Services Responsibility in 2019 had been utilised, firms were divided into "non-digital" and "digital". As long as the company has a score of at least 1 to 5 under subject 3.8, it will be categorised as "digital", whilst it will be categorised as "non-digital" if there is a score of 0. According to Table 13, 63 companies are "non-digital", and 250 companies are "digital". While 2019_Target is measured as 0/1 dummy variable where 0 is companies who employed soft-target setting approach or 1 is companies who employed a hard-target setting approach. As explained under 3.3 (iv), since the score of the subject varies from 0 to 5, firms are divided into "Soft-Target" and "Hard-Target". As long as the company who has at least a score of 5 under regardless of the subjects, it will be categorised as "Hard-Target", whilst it will be categorised as "Soft-Target" if the firm does not have a score of 5 under any subject. According to Table 13, 311 companies employed "Soft-target", and 2 companies employed "Hard-target" setting approach.

Pertinent to proving independent sample of the variables, it is proven that the 2 samples for SIZE are independent by showing a cut-off mean point of 5.37 (see Table 8); it is also presented in "Table 13: Group Statistics" where SPSS automatically separated the 2 independent samples of "Small" and "Large". The evidence that the 2 samples for 2019_DIG are independent is presented in "Table 13: Group Statistics" where SPSS automatically separated the 2 independent samples of "Non-digital" and "Digital". In addition to prove that the 2 samples for 2019_Target are independent by seeing the "Table 13: Group Statistics" where SPSS automatically separated the 2 independent samples of "Soft-target" and "Hard-target".

As the total sample size of this study is 313 (which is more than 30), it is fine to proceed with parametric tests such as independent-samples t-test, regardless of

whether observations of variable are normally distributed (see Chapter 4.2 Data Normality).

To test the final assumption of t-test, Levene's test for equality of variances is required to test whether the variances of the two groups are equal. The decision rule is to reject H_0 if the p-value from "Independent Samples Test" table is less than 0.05. This will be able to determine whether there is statistical difference of SGP between large and small firms at the 5% level. The hypotheses are formulated as below:

H_0 : μ_{large} = μ_{small}

H_1 : μ_{large} > μ_{small}

Since the one-sided p in "Table 14: Independent Samples Test" from the "Equal Variance assumed" row is less than 0.01 (which is less than 0.05), H_0 is rejected, larger firm tend to demonstrate better SGP compared to smaller firm, confirmed that firm size does matters in SGP.

Following to determine whether there is a statistical difference of SGP between companies who employed and who did not employ digital technology at the 5% significance level. The hypotheses are formulated as below:

H_0 : $\mu_{digital}$ = $\mu_{non-digital}$

H_1 : $\mu_{digital}$ > $\mu_{non-digital}$

Since the one-sided p in "Table 14: Independent Samples test" from the "Equal Variance Assumed" row is less than 0.01 (which is less than 0.05), H_0 is rejected, confirmed that the use of digital technology to manage SG initiatives have achieved better SGP. Hence, the investment in digital technology had paid off.

It follows with whether there is a statistical difference of SGP between the companies who employed soft and hard-target setting approach at the 5% significance level. The hypotheses are formulated as below:

$H_0 :$ $\mu_{hard-target}$ $=$ $\mu_{soft-target}$

$H_1 :$ $\mu_{hard-target}$ $>$ $\mu_{soft-target}$

Since the one-sided p in "Table 14: Independent Samples Test" from the "Equal Variance Assumed" row is less than 0.01 (which is less than 0.05), H_0 is rejected, confirmed that the companies who employed hard-target setting approach have achieved better SGP. Hence, the hard-target setting approach (SMART) is effective in managing SGP.

4.4   Overall Relationship

Regression

Multiple regression analysis has been performed to see the effect of each independent variable. In order to conduct a regression analysis, there are a few assumptions to fulfil: (i) variables are normally distributed, (ii) Homoscedasticity of Residuals, (iii) independence of the residuals, (iv) Linearity of the relationship between dependent and each independent variable, (v) No strong presence of multicollinearity among predictor variables.

Firstly, in the linear regression analysis, all variables must be multivariate normal. In the Kolmogorov-Smirnov test, the result came out that the dependent variable (i.e. 2020_TotalSGScore) is not normally distributed. The total sample size of this study is 313 (which is more than 30), it is fine to proceed with parametric tests such

as regression, regardless of whether observations of variable are normally distributed (see Chapter 4.2 Data Normality).

Furthermore, linear regression analysis presupposes residual homoscedasticity. The scatter plot may be used to determine if the residuals are equal across the regression line (homoscedastic). If homoscedasticity exists, no pattern can be observed in the scatter plot. When heteroscedasticity is present, points in the scatterplot spread out or follow a certain pattern. The results of the "scatter plots" are shown in "Appendix E: Figure 7 to Figure 10"; This assumption is not violated since the observed points are randomly distributed, and the scatterplot shows no pattern, demonstrating that there are no significant changes in residual variability for each level of independent variables, as well as residual homoscedasticity and independence.

It is necessary to demonstrate residual independence while doing linear regression analysis. Autocorrelation often occurred when the residuals are not independent of one another. The Durbin-Watson test may be used to examine the linear regression model for autocorrelation. The Durbin-Watson test is used to test the null hypothesis that the residuals are not linearly auto-correlated. The values range from 0 to 4, with values close to 2 implying independence amongst residuals. Referring to "Table 16: Model Summary - Durbin-Watson", the Durbin-Watson value is 1.805 which is around 2, hence confirmed the independence of the residuals.

Moreover, linear regression requires a linear relationship between the independent and dependent variables. It is critical to check for outliers because linear regression is subject to outlier effects. Scatter plots are the finest tool for evaluating the linearity assumption. Scatter plots are used to investigate the probable association between two variables that both pertain to the same event. In "Appendix E: Figure 6", this assumption is not violated because the partial

regression plot shows a linear positive slope with outliers, and hence prove that there is a linear relationship between the independent and dependent variables.

Finally, linear regression presupposes that there is no significant multicollinearity among predictor variables. When the independent variables are too correlated with each other, multicollinearity occurs. To address this issue, do a factor analysis and rotate the components in the linear regression analysis to ensure factor independence. Furthermore, eliminating independent variables with tolerances less than 0.5 is the simplest way to fix the problem. According to the "Table 18: Coefficients – Collinearity Statistics - Tolerance", the tolerance levels for all the independent variables are more than 0.5, named "IND BURSA, Size, 2019_DIG and 2019_Target" based on the tolerance readings of "0.965, 0.971, 0.967 and 0.970" from the table, hence it confirmed that no multicollinearity issue existed and no elimination of variables is required.

After all the assumptions have been fulfilled, the equation is as below:

$$2020\_TotalSGScore = \alpha_1 + \beta_1 \text{ IND BURSA} + \beta_2 \text{ Size} + \beta_3 \text{ 2019\_DIG} + \beta_4 \text{ 2019\_Target}$$

Where 2020_TotalSGScore is the Total SG Score in Year 2020 (dependent variable) affected by each of the independent variables, while holding the other independent variables constant. α_1 is the constant; IND BURSA is the 13 industries listed in Bursa Malaysia; Size is measured as 0/1 dummy variable where 0 is small firm or 1 is a large firm, based on the natural log of total assets; 2019_DIG is measured as 0/1 dummy variable where 0 is companies who employed digital technology or 1 is companies who did not employed digital technology in Year 2019, based on the scoring on subject 3.8 Product and Services Responsibility; 2019_Target is measured as 0/1 dummy variable where 0 is companies who

employed soft-target setting approach or 1 is companies who employed hard-target setting approach in Year 2019, based on the score of 5 under each subjects.

The purpose of conducting multiple regression analysis here is to measure to what extent is Total SG Score influenced by 4 predictor variables: IND BURSA, Size, 2019_DIG and 2019_Target. Firstly, "correlation analysis" was conducted, and the result is under "Table 15: Pearson Correlation Test".

The Pearson Correlation is used to determine the relationship between 2 different variables. Here is an example of reading the "Pearson Correlation", it actually acts like a triangle shape to read, either read the upper triangle or lower triangle. To measure to what extent the Total SG Score in Year 2020 is influenced by determinants, let i = industry or size or digital technology or target setting approach. As a result, all the variables in "Table 15: Pearson Correlation Test" have a correlation coefficient of less than 0.75 which shows that they are not correlated to each other, hence it further confirmed that there are no multicollinearity issue exists.

The coefficient of determination (R^2) is the ratio of the error in the line of best fit to the error in utilising Y. One purpose of testing is to see whether the regression equation is a better predictor than the mean of the dependent variable. It is regarded as the overall proportion of variation in Y explained by X as a measure of fit. It tells us how well the regression line fits the data as a measure of linear connection. It is also an important predictor of the equation's correctness. In most circumstances, an R^2 of 80% or more is needed to explain the variance. While adjusted R-squared is a modified R-squared that takes into account the number of predictors in the model. When adjusted R-squared increases, it means that the additional predictors enhance the model more than expected, but when R-squared decreases, it means that the predictors improve the model less than expected.

From the "Table 16: Model Summary", R Square (R^2) is 0.16 and the adjusted R^2 is 0.149. Hence, 16.0% of the variation in Total SG Score in YA2020 is explained by the variation in the industry, size, digital technology and target setting approach. 14.9%, after adjusting for the sample size and number of predictor variables such as industry, size, digital technology and target setting approach. R^2 is modified to account for the model's goodness of fit to the population. This change reduces the R^2 from 0.16 to 0.149, making it comparable to other R^2s from equations with varied numbers of independent variables. Because the R^2 is less than 80%, it demonstrates very poor goodness of fit and so is not an acceptable model. This implies that the regression test result will need to be interpret with caution.

To continue with the test of overall significance, ANOVA test is performed (see Table 17: ANOVA Test). The hypothesis is

$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$
$H_1 :$ At least one $\beta_1 \neq 0$

Where β_1 = coefficient of 14 industries in Bursa, β_2 = coefficient of size of companies (large and small), β_3 = coefficient of presence of digital technologies, β_4 = coefficient of presence of hard-target setting approach

In this test, the F test is chosen because there are 4 independent samples such as industry, size, digital technologies and target setting approach, and a 5% default significance level (α=0.05) will be utilised. The decision rule, H_0 will be rejected if the p-value from "ANOVA" table is less than 0.05. According to the "Table 17: ANOVA Test", the readings for F-statistic and p-value are 14.694 and <0.001 respectively, with 312 degree of freedom. As the p-value is less than 0.05, therefore the null hypothesis (H_0) is rejected at 5% significance level. As a result, at least one β_1 is not equal to 0, indicating that at least one β_1 is statistically

significant in this model. There is no linear relationship among the 4 independent variables at the 5% significance level. It proves that at least one independent variable is statistically significant to determine the Total SG Score.

In order to determine which β_i is significant, the test of significance was carried out for each individual independent variable. The "Table 18: Coefficients" table is the individual test for each independent variable. In this test, the t-test is chosen. Assume the underlying population is normal and the sample is randomly selected from the population. A 5% default significance level ($\alpha=0.05$) will be used. The decision rule is, H_0 will be rejected if the p-value for each of the individual beta coefficient test of significance (β_i) from the "Coefficients" table is less than 0.05.

The first hypothesis for "IND BURSA" is:

$H_0 : \beta_1 = 0$
$H_1 : \beta_1 \neq 0$

According to the "Table 18: Coefficients - IND BURSA row", the readings for t statistic and p-value are 0.248 and 0.804 respectively. As the p-value for industry is more than 0.05, therefore do not reject the null hypothesis (H_0) at 5% significance level. This concludes that β_1 is not statistically significant.
The second hypothesis for "Size" is

$H_0 : \beta_2 = 0$
$H_1 : \beta_2 \neq 0$

According to "Table 18: Coefficients – Size row" table, the readings for t statistic and p-value are 5.188 and <0.001 respectively. As the p-value for Size is less than 0.05, therefore null hypothesis (H_0) is rejected at the 5% significance level. This concludes that β_2 is statistically significant.

The third hypothesis for "2019_DIG" is

$H_0 : \beta_3 = 0$
$H_1 : \beta_3 \neq 0$

According to the "Table 18: Coefficients - 2019_DIG row", the readings for t statistic and p-value are 3.728 and <0.001 respectively. As the p-value for 2019_DIG is less than 0.05, therefore reject the null hypothesis (H_0) at 5% significance level. This concludes that β_3 is statistically significant.

The last hypothesis for "2019_Target" is

$H_0 : \beta_4 = 0$
$H_1 : \beta_4 \neq 0$

According to the "Table 18: Coefficients - 2019_Target row", the readings for t statistic and p-value are 2.705 and 0.007 respectively. As the p-value for 2019_Target is less than 0.05, therefore the null hypothesis (H_0) is rejected at 5% significance level. This concludes that β_4 is statistically significant.

In conclusion, the beta coefficients for Size (β_2), 2019_DIG (β_3) and 2019_Target (β_4) is statistically significant at 5% significance level while the beta coefficients for IND BURSA (β_1) is statistically insignificant at the 5% significance level.

According to the partial regression coefficient, formula $\beta_j = \frac{\partial Y_i}{\partial X_j}$.

The regression equation extracted from reading the "Un-standardized Coefficients" in "Regression Coefficients" table is:

$$\hat{y}_{2020\_TotalSGScore} = 6.79 + 0.019\ \chi_{IND\ BURSA} + 2.459\ \chi_{Size} + 2.163\ \chi_{2019\_DIG} + 7.884\ \chi_{2019\_Target}$$

Where $\hat{y}_{2020\_TotalSGScore}$ = predicted Total SG Score in YA2020; $\chi_{IND\ BURSA}$ = 13 industries listed in Bursa ; χ_{size} = Size of company; χ_{2019_DIG} = Company that employed digital technologies at YA2019 ; χ_{2019_Target} = Company that employed hard-target setting approach in YA2019

$$\beta_{Size} = \frac{\partial \hat{Y}_{2020\_TotalSGScore}}{\partial \chi_{Size}} = 2.459$$

When holding other variable constant, large firms will have an increase of 2.459 in the Total SG Score in YA2020.

$$\beta_{2019\_DIG} = \frac{\partial \hat{Y}_{2020\_TotalSGScore}}{\partial \chi_{2019\_DIG}} = 2.163$$

While when holding other variable constant, companies that employed digital technologies will have an increase of 2.163 in the Total SG Score in YA2020.

$$\beta_{2019\_Target} = \frac{\partial \hat{Y}_{2020\_TotalSGScore}}{\partial \chi_{2019\_Target}} = 7.884$$

While when holding other variable constant, companies that employed hard-target setting approach will have an increase of 7.884 in the Total SG Score in YA2020.

After removing the insignificant variable "Industry", a further regression was performed. From the "Table 20: Model Summary" table, the R^2 remained the same at 0.16 and the adjusted R^2 increased slightly for only 0.003 from 0.149 to 0.152. Hence, 16% of the variation in Total SG Score in YA2020 is explained by the variation in the size, digital technology and target setting approach. 15.2%, after

adjusting for the sample size and number of predictor variables such as size, digital technology and target setting approach. Despite the changes is only 0.0013 which is very minimal, but the main reason of removing the "Industry" variable is to defend the low R^2 in the previous model.

In conclusion, Target setting approach is the significant predictor among the other 4 independent variables, followed by digital technology. As a result, this test would be able to contribute to the companies who are actually having budget restriction, to make a final decision to prioritise target setting approach instead of growing in terms of size or digital technologies.

Predictors: (Constant), 2019_Target, 2019_DIG, Size, IND BURSA
Dependent Variable: 2020_TotalSGScore

Correlation

		2020_TotalSGScore	IND BURSA	Size	2019_DIG	2019_Target
Pearson	2020_TotalSGScore	1.000	0.025	0.316	0.239	0.180
Correlation	IND BURSA	0.025	1.000	0.048	-0.109	0.139
	Size	0.316	0.048	1.000	0.133	0.098
	2019_DIG	0.239	-0.109	0.133	1.000	0.040
	2019_Target	0.180	0.139	0.098	0.040	1.000

Table 15: Pearson Correlation Test

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	0.400	0.160	0.149	1.805

Table 16: Model Summary Table

Model		Sum of Square	Df	Mean Square	F	Sig.
1	Regression	962.580	4	240.645	14.694	<.001
	Residual	5044.155	308	16.377		
	Total	6006.735	312			

Table 17: ANOVA Test

Model		B	t	Sig.	Tolerance	VIF
1	(Constant)	6.790	9.648	<.001		
	IND BURSA	0.019	0.248	0.804	0.965	1.036
	Size	2.459	5.188	<.001	0.971	1.030
	2019_DIG	2.163	3.728	<.001	0.967	1.034
	2019_Target	7.884	2.705	0.007	0.970	1.030

Table 18: Coefficients table

The regression result after the insignificant variable "Industry" was removed

		2020_TotalSG Score	Size	2019_DIG	2019_Target
Pearson Correlation	2020_TotalSGScore	1.000	0.316	0.239	0.180
	Size	0.316	1.000	0.133	0.098
	2019_DIG	0.239	0.133	1.000	0.040
	2019_Target	0.180	0.098	0.040	1.000

Table 19: Pearson Correlation Test

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	0.400	0.160	0.152	1.807

Table 20: Model Summary

Model		Sum of Square	Df	Mean Square	F	Sig.
1	Regression	961.574	3	320.525	19.631	<0.001
	Residual	5045.161	309	16.327		
	Total	6006.735	312			

Table 21: ANOVA test

Model		B	t	Sig.	Tolerance	VIF
1	(Constant)	6.906	13.160	<.001		
	Size	2.465	5.215	<.001	0.974	1.027
	2019_DIG	2.145	3.731	<.001	0.982	1.019
	2019_Target	7.984	2.771	0.006	0.990	1.011

Table 22: Coefficients table after variable "Industry" is removed

4.5 Financial Performance

Research Objective 3: To examine whether SGP have an impact on the profitability and business growth of a company.

4.5.1 Profitability (ROA)

H5: There is a significant positive relationship between SGP and profitability

Regression

In order to conduct a regression analysis, there are few assumptions to fulfil: (i) variables are normally distributed, (ii) Homoscedasticity of Residuals, (iii) independence of the residuals, (iv) Linearity of the relationship between dependent and each independent variable.

Firstly, all variables in the linear regression analysis must be multivariate normal. In the Kolmogorov-Smirnov test, the result came out that the dependent variable (i.e. 2020_TotalSGScore) is not normally distributed. The total sample size of this study is 313 (which is more than 30), it is fine to proceed with parametric tests such as regression, regardless of whether observations of variable is normally distributed (see Chapter 4.2 Data Normality).

Furthermore, linear regression analysis presupposes residual homoscedasticity. The scatter plot may be used to determine if the residuals are equal across the regression line (homoscedastic). If homoscedasticity exists, no pattern can be observed in the scatter plot. When heteroscedasticity is present, points in the scatterplot spread out or follow a certain pattern. The results of the "scatter plots" are shown in "Appendix E: Figure 13"; this assumption is not violated because the observed points are randomly scattered, and the scatterplot has revealed no pattern, proving that there are no significant differences in residual variability for each level of X variable, and there is residual homoscedasticity and independence.

It is necessary to demonstrate residual independence while doing linear regression analysis. When the residuals are not independent of one another, autocorrelation occurs. The Durbin-Watson test may be used to examine the linear regression model for autocorrelation. The Durbin-Watson test is used to test the null hypothesis that the residuals are not linearly auto-correlated. The values range from 0 to 4, with values close to 2 implying independence amongst residuals. Referring to "Table 24: Model Summary - Durbin-Watson test", the Durbin-Watson value is 2.096 which is around 2 in the "Table 24: Model Summary Table", hence confirmed the independence of the residuals.

Moreover, linear regression requires a linear relationship between the independent and dependent variables. It is critical to check for outliers because linear regression is subject to outlier effects. Scatter plots are the finest tool for

evaluating the linearity assumption. Scatter plots are used to investigate the probable association between two variables that both pertain to the same event. In "Appendix E: Figure 12", this assumption is not violated because all partial regression plots show a linear positive slope with outliers, and hence prove that there is a linear relationship between the independent and dependent variables.

The objective of this test is to statistically confirm that there is an increase in profitability in terms of Return On Assets (ROA). The generic assumptions for all types of t-test are (i) Scale of measurement of the quantities in the sample: interval or ratio level of measurement, (ii) Items in sample are obtained by random and (iii) scores normally distributed in the population. In this test, the t-test is chosen. Assume the underlying population is normal and the sample was randomly selected from the population. A 5% default significance level (α=0.05) will be used. The decision rule is to reject H_0 if the p-value from "Coefficient" table is less than 0.05. The equation is as below:

$$2021\_ROA = \beta_1 + \beta_2 \, \chi_{2019\_TotalSGScore}$$

Where β_1 = constant, β_2 = coefficient of total SG Score in Year 2019

From the "Model Summary" table, the R^2 is 0.034 and the adjusted R^2 is 0.031. Hence, 3.4% of the variation in Total SG Score in YA2020 is explained by the variation in the industry, size, digital technology and target setting approach. 3.1%, after adjusting for the sample size and number of predictor variables such as industry, size, digital technology and target setting approach. R^2 is adjusted to reflect the model's goodness of fit for the population. As a result of this modification, the R^2 is decreased from 0.034 to 0.031, making it comparable to other R^2s from equations with varied numbers of independent variables. Because the R^2 is less than 80%, it indicates a very poor goodness of fit and so this is not an acceptable model.

In order to find whether β_2 is significant, test of significance for the individual independent variable has been carried out. The "Coefficients" table shows the result of individual test for each independent variable. In these hypothesis testing, one sample t-test is chosen. Assume the underlying population is normal and the sample is randomly selected from the population. A 5% default significance level (α=0.05) will be utilised. The decision rule for each of the individual beta coefficient test of significance is to reject H_0 if the p-value from the "Coefficients" table is less than 0.05.

The hypotheses are formulated as follow:

$H_0 : \beta_2 = 0$
$H_1 : \beta_2 > 0$

The 2 coefficients β_1 and β_2 are estimated by applying the ordinary least squares method. Ordinary least squares (OLS) method estimates the coefficients by minimising the RSS.

According to the "Table 26: Coefficients", the readings for t statistic and p-value are 3.314 and 0.001 respectively. As the p-value for 2019_TotalSGScore is less than 0.05, therefore the null hypothesis (H_0) is rejected at the 5% significance level. This concludes that $\beta2$ is statistically and significantly positive, and confirmed that the SGP have a significant positive impact on the profitability of a company, taking into account the lag effect.

4.5.2 Business Growth (MTBV)

H6: There is a significant positive relationship between SGP and business growth

<u>Regression</u>

In order to conduct a regression analysis, there are few assumptions to fulfil: (i) variables are normally distributed, (ii) Homoscedasticity of Residuals, (iii) independence of the residuals, (iv) Linearity of the relationship between dependent and each independent variable.

Firstly, all variables in the linear regression analysis must be multivariate normal. In the Kolmogorov-Smirnov test, the result came out that the dependent variable (i.e. 2020_TotalSGScore) is not normally distributed. The total sample size of this study is 313 (which is more than 30), it is fine to proceed with parametric tests such as regression, regardless of whether observations of variable is normally distributed (see Chapter 4.2 Data Normality).

Furthermore, linear regression analysis presupposes residual homoscedasticity. The scatter plot may be used to determine if the residuals are equal across the regression line (homoscedastic). If homoscedasticity exists, no pattern can be observed in the scatter plot. When heteroscedasticity is present, points in the scatterplot spread out or follow a certain pattern. The results of the "scatter plots" are shown in "Appendix E: Figure 15"; this assumption is not violated because the observed points are randomly scattered, and the scatterplot has revealed no pattern, proving that there are no significant differences in residual variability for each level of X variable, and there is residual homoscedasticity and independence.

It is necessary to demonstrate residual independence while doing linear regression analysis. When the residuals are not independent of one another, autocorrelation occurs. The Durbin-Watson test may be used to examine the linear regression model for autocorrelation. The Durbin-Watson test is used to test the null

hypothesis that the residuals are not linearly auto-correlated. The values range from 0 to 4, with values close to 2 implying independence amongst residuals. Referring to "Table 24: Model Summary - Durbin-Watson test", the Durbin-Watson value is 2.077 which is around 2, hence confirmed the independence of the residuals.

Moreover, linear regression requires a linear relationship between the independent and dependent variables. It is critical to check for outliers because linear regression is subject to outlier effects. Scatter plots are the finest tool for evaluating the linearity assumption. Scatter plots are used to investigate the probable association between two variables that both pertain to the same event. In "Appendix E: Figure 16", this assumption is not violated because all partial regression plots show a linear positive slope with outliers, and hence confirmed that there is a linear relationship between the independent and dependent variables.

The objective of this test is to statistically confirm that there is an increase in profitability in terms of Market-to-Book value (MTBV). In this test, the t-test is chosen. Assume the underlying population is normal and the sample is randomly selected from the population. A 5% default significance level ($\alpha=0.05$) will be utilised. The decision rule is to reject H_0 if the p-value from "Coefficients" table is less than 0.05. The equation is as below:

$$2021\_MTBV = \beta_1 + \beta_2 \chi_{2019\_TotalSGScore}$$

Where β_1 = constant, β_2 = coefficient of total SG Score in Year 2019

From the "Table 24: Model Summary", the R^2 is 0.023 and the adjusted R^2 is 0.02. Hence, 2.3% of the variation in Total SG Score in YA2019 is explained by the variation in the industry, size, digital technology and target setting approach. 2%,

after adjusting for the sample size and number of predictor variables such as industry, size, digital technology and target setting approach. R^2 is adjusted to reflect the model's goodness of fit for the population. The R^2 is reduced from 0.023 to 0.02 as a result of this modification, making it comparable to other R^2s from equations with different numbers of independent variables. Since the $\overline{R}^2$ is less than 80 percent, hence it shows a very weak goodness of fit and hence this is not really a good model.

In order to find whether β_2 is significant, test of significance for the individual independent variable has been carried out. The "Coefficients" table is the individual test for each independent variable. In this test, the t-test is chosen. Assume the underlying population is normal and we have randomly selected the sample from the population. A 5% default significance level ($\alpha=0.05$) will be used. The decision rule for the individual beta coefficient test of significance is to reject H_0 if the p-value from the "Coefficients" table is less than 0.05.

The hypotheses are formulated as follow:

H_0 : β_2 = 0
H_1 : β_2 > 0

The 2 coefficients β_1 and β_2 are estimated by applying the ordinary least squares method. Ordinary least squares (OLS) method estimates the coefficients by minimising the RSS.

According to the "Table 26: Coefficients", the readings for t statistic and p-value are 2.72 and 0.007 respectively. As the p-value is less than 0.05, therefore reject the null hypothesis (H_0) at 5% significance level. This concludes that $\beta2$ is statistically and significantly positive, and confirmed that the SGP have a significant

positive impact on the business growth of a company, taking into account the lag effect.

H5
a. Predictors: (Constant), 2019_TotalSGScore
b. Dependent Variable: 2021_ROA

H6
a. Dependent Variable: 2021_MTBV
b. Predictors: (Constant), 2019_TotalSGScore

Correlation

Hypothesis			N	2021_ROA	2019_TotalSGScore
H5	Pearson	2021_ROA		1.000	0.185
	Correlation	2019_TotalSGScore	313	0.185	1.000
	Sig. (1-tailed)	2021_ROA		.	<.001
		2019_TotalSGScore		0.001	.
Hypothesis			N	2021_MTBV	2019_TotalSGScore
H6	Pearson Correlation	2021_MTBV		1.000	0.152
		2019_TotalSGScore	313	0.152	1.000
	Sig. (1-tailed)	2021_MTBV		.	0.003
		2019_TotalSGScore		0.003	.

Table 23: Pearson Correlation table

Hypothesis	Model	R	R Square	Adjusted R Square	Durbin-Watson
5	1	0.185	0.034	0.031	2.096
6	1	0.152	0.023	0.020	2.077

Table 24: Model Summary

Hypothesis	Model		Sum of Square	Df	Mean Square	F	Sig.
5	1	Regression	2574.861	1	2574.861	10.986	0.001
		Residual	72892.483	311	234.381		
		Total	75467.344	312			
6	1	Regression	203.577	1	203.577	7.396	0.007
		Residual	8559.932	311	27.524		
		Total	8763.508	312			

Table 25: ANOVA test

Hypothesis	Model		B	t	Sig.	Tolerance	VIF
5	1	(Constant)	-2.114	-1.072	0.285		
		2019_TotalSGScore	0.632	3.314	0.001	1.000	1.000
6	1	(Constant)	0.424	0.627	0.531		
		2019_TotalSGScore	0.178	2.720	0.007	1.000	1.000

Table 26: Coefficients
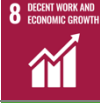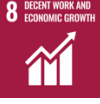
4.6   Commitments and Plans
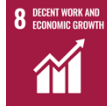
Research Objective 4: To examine the commitment and plan for companies in terms of pursuing the 17 SDGs.

This part is relied heavily on the tone from the top. These commitments and plans from companies are extracted from Nvivo Leadership Statement. The Leadership Statements are collected from the Annual Report or Integrated Report or Sustainability Report. As stated in the Bursa Malaysia Securities Berhad (2018) Guide, responsibility should be at the highest level in order to successfully implement sustainability. Board commitment is critical because the Board determines the organization's strategic direction. Such dedication is also necessary to ensure that sustainability is embedded throughout the organisation and that adequate resources, systems, and processes are in place to manage sustainability issues. In this study, the focus is placed on sustainability – social and governance pillar, and look into the commitments and plans for most listed companies. A supportive culture and excellent leadership are required to incorporate sustainability in an organisation. Leaders within an organisation, such as Board members and the CEO, must provide strong stewardship in incorporating sustainability into business strategies and applying a sustainability lens to business decisions, shifting the focus beyond from compliance with the Guide of the Bursa Malaysia Securities Berhad (2018).

Table 27 showed the result of the leadership statement's content analysis, number of companies that expressed their attention in a given SG subject. The information in leadership statements was coded to examine the commitment and plan for companies in pursuing the 17 SDGs is based on the SG subjects in 'Bursa Guide'. The mapping of various ESG to UN SDGs is based on the 'Bursa Guide" which can be seen under Appendix A

SG Subjects	No of companies expressed attention in a given SG subject	Philosophy and Goal	Commitment and Plan	UN-SDGs
Social				
3.1 Diversity	8	• Corporate Philosophy	• Inspiring women	
3.2 Human rights	10	"No evidence"	• Fair labour treatment	
3.3 Occupational Safety and Health	40	"No evidence"	• Lost-Time Injury (LTI) as measurement (i) Improve working conditions • Improve safeguards against work hazards (ii) Develop Safety Cultures • Organising safety-related events and educational projects • Eg: Weekly safety briefings, Mental and Physical Health Programme (iii) Covid precautions • Temperature checks	

		• Provision of hand sanitisers	
3.4 Anti-competitive behaviour	0	"No evidence"	"No evidence"	SDG 16
3.5 Anti-corruption	13	"No evidence"	(i) Zero-tolarance (ii) E-learning course (iii) Pledge	SDG 16
3.6 Labour practices	22	• Business Continuing Plan • Corporate Philosophy	(i) Training & Assessments • Code of Conduct Ethics • Employee training Programme/ Employee Career Growth/ Personal Development (i.e. Commercial Excellence, Leadership Competency, Technical Expertise, Future-ready skills) (ii) Feedback & Empowerment • Responsive Employee Retention • Work-Life Balance • Engagement Strategies • Whistleblowing policy (iii) Productivity & Reward	SDG 1, 4, 5, 8

3.7 Society	4	"No evidence"	(i) Community Engagement • Maintain Effective Communication Channel (ii) Provide assistance to local communities • Distribute face masks	
3.8 Product and Services Responsibility (Social)	58	• "Ever searching for Better Living" "It's all about Innovative creations" • Corporate Philosophy • PETRONAS Enterprise • Cyber Security • Governance Framework • Fourth Industrial Revolution • Innovative Value Creation • Shared Prosperity Vision 2030 ("SPV 2030") • Industrial 4.0 • Digital Roadmap	(i) Innovation • Learning Working Culture • Operation Solutions (i.e. Accelerate Sustainability innovation and collaboration, Automation) (ii) Digital Technologies <u>Digital Transformation</u> (contactless technology, seamless personalised services) • Internet of Things (IoT) • Social Media • Big Data • Information Economy • Blockchain • Smart Technology • AI Adoption • Research & Development (R&D) • Cybersecurity • Human Firewall Campaign <u>Other aspects</u>	

- Creativity & Craftmanship
- Internal Data Collection
- Project Management Software
- E-communicaton & E-reporting
- In-house inspection and testing
- System Integration Maintenance Services

(iii) Affordable Products
- Roadmap (medium to long term)
- Competitive pricing
- Campaign and Discounts
- Restructuring & Production Control
- Wastage Control
- Improve margin & Cost Reduction

(iv) Product Quality & Value-Added Services
- Strategic Alliance
- 5S Standard
- Follow-up after sales services
- Integrity and sincerity
- Geographical Expansion/ Market diversification/ Strengthen Regional Product

| 3.9 Supply Chain (Social) | 7 | "No evidence" | (i) Maximise Resource Productivity
Production
Supply Chain
Operations
In terms of: | |

			• Critical Materials Used • Eliminate Wastes • Reducing Variable Cost (ii) Formulate Rigorous Guidelines <u>Supply Chain</u> • Traceability		
3.10 Compliance (social)	1	"No evidence"	"No evidence"		16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Total: 313 Companies	Total being mentione d: 163				

Table 27: Mapping leadership statements on commitment and plans under SG pillars to UN SDGs, 2020

Inspired based on Bursa Malaysia Securities Berhad (2018)
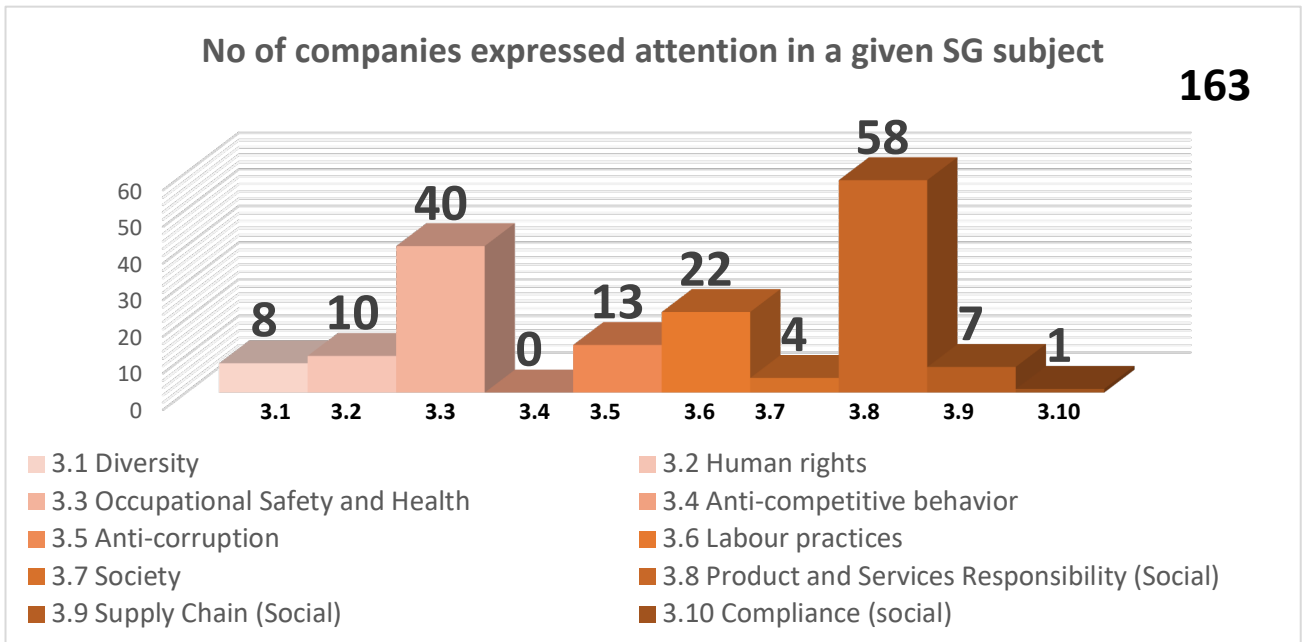
Figure 3: Number of companies that expressed attention in a given SG subject

The maximum possible sample is 313 listed companies in the sample period 2020. Table 27 provides a break-down of the themes under the SG pillar respectively and portrays the number of companies expressed attention in a given SG subject within their leadership statement. The leaders showcased their future commitments and plans, according to the philosophy and goal that they benchmarked. Figure 3 above shows that 10 subcategories are represented in the sample, with 3.8 Product and Services Responsibility (Social) being the most dominant at 58 mentions, out of the 313 valid companies. Followed by 3.3 Occupational Safety and Health being the second dominant, with 40 mentions. The smallest representation at 0 mention is the 3.4 Anti-competitive behaviour. These commitments and plans are mentioned in the Leadership Statement, and act as a future action plan moving the way forward, it might not be quantified nor provided with a timeframe.

As the current social performance identified in this study Objective 1 is fall in the "low disclosure" category, regulatory requirements and stakeholder's expectations may be the driving forces that motivate leaders in the company to

aim higher in their leadership statement. These are supported by Vormedal & Ruud (2009): "In light with the stakeholder-theory approach, it can be expect that the quality and extent of reporting to be related to the level of societal (stakeholder) pressure on companies to disclose information on their social and environmental performance" and "Country specific regulatory developments also influence the level and quality of reporting".

The timely factor of 3.8 Product and Services Responsibility (Social) being the most dominant would be due to the unfortunate onset of the global Covid-19 pandemic. As according to the table above, this subject is inclusive of 4 sectors: Innovation, Digital Technologies, Affordable Products and Product Quality & Value-Added Services. Since the outbreak of COVID-19, the Malaysian government has begun the implementation of the Movement Control Order (MCO) with the aim of combating the deadly virus. Subsequently, no industry was spared from the global economy downturn which impacted the domestic economic environment in Malaysia including retails, logistics, tourisms and etc. This has forced businesses around the world to innovate and undertake new approaches to operate, hence most of the Group have tapped into digital technology to ensure consistent and timely two-way communication with every employee. Figure 4 is the percentage breakdown of companies that mentioned their commitment and plan in 3.8 Product and Services Responsibility allocated based on industry. The result deduced that Industrial Products & Services tend to mention more on this subject, with a percentage of 38%, this figure is derived from the total 58 mentions in 3.8 Product and Services Responsibility.
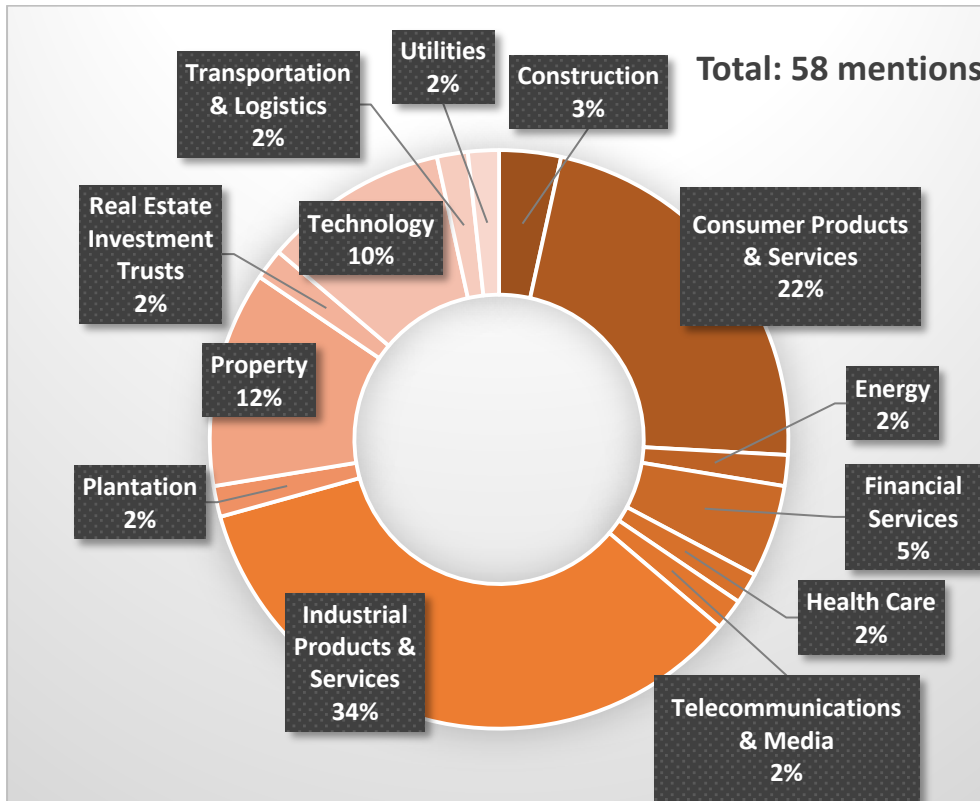
Figure 4: Industry breakdown of the most dominant themes - 3.8 Product and Services Responsibility (Social)

COVID-19 is also the main cause of the second dominant item: 3.3 Occupational Safety and Health. Sustainability issues have become more important than ever in the decision-making of stakeholders, particularly with the emergence of the COVID-19 pandemic. As most of the companies faced disruptive changes to their organisations during pandemic times, they since shifted their focus to the welfare of the employees, with primary concern revolving around their health and safety, in tandem with the employee retention to ensure job protection. At the same time, they are staying in compliance with current government regulations and ensuring an effective Business Continuity Plan to protect the wellbeing of their employees and stakeholders. Since the onset of this global health crisis, companies have undertaken measures to protect the health of their employees, customers and business partners to strengthen the occupational safety and health. Strict

protocols and work organisation changes have been put in place including the provision of hand sanitisers and temperature checks in the workplace.

Various companies have also provided several probable justifications of highlighting the 2 most dominant subjects during this disruptive COVID-19.

> "We are seeing sustainability issue gaining greater importance in decision making of our stakeholders particularly with the emergence of the COVID 19 pandemic. GLM has faced disruptive changes brought about as a results of the pandemic and we have subsequently shifted our focus toward the welfare of our employees. Our primary concern revolves around their health and safety in tangent with employee retention to ensure job protection. Whilst many of our key initiative aimed at improving our sustainable practices were halted GLM hones on remaining compliance with the current government regulations and ensuring an effective Business Continuity Plan as means of safeguarding our employee and stakeholders."

YBhg Datuk Edmund Kong Woon Jun
Group Managing Director
GUOCOLAND (MALAYSIA) BERHAD
Listed Number 1503
Annual Report 2020, page 42, Group Managing Director's Statement, paragraph 3

> "At the time of writing this report, the world is experiencing major economic and social disruption brought about by the global Covid19 pandemic. From the onset of this crisis, we have implemented measures to protect the health of our employees, customers and business partners. Strict protocols and work organisation adjustments have been put in place and will be adapted according to the evolution of the situation."

Mr Kok Tuck Cheong
Managing Director
EASTERN & ORIENTAL BERHAD
Listed Number 3417
Annual Report 2020, page 41, Sustainability Statement, SUSTAINABILITY AT E&O, paragraph1

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In conclusion, the leaders showcased their future commitments and plans in terms of pursing the 17 SDGs based on the ESG metrics, according to the philosophy and goal that they benchmarked. The result shows that 3.8 Product and Services Responsibility (Social) is the most dominant subject at 58 mentions, out of the 313 valid companies. It is foreseeable that there will be more improvement in this area over the years due to the disruption of COVID-19, and it will be an important accelerator for UN-SDG 9, 11, 12, 16, which is a way nearer to realised the objectives in accomplishing the "Agenda 2030".

Chapter 5   Discussion, Recommendation and Conclusion

5.1   Introduction

Chapter 5 will be the main discussion and conclusion, provided with some recommendation. This chapter aims to provide readers a holistic view of the entire research and prove that it provides theoretical, managerial and policy significance towards the sustainability area. This chapter will interpret the analysis findings presented in Chapter 4. The findings will be discussed and concluded based on a several management theories such as Stakeholder Theory and Goal-Setting Theory. This chapter will first kickstart with the discussion, follows with significance of the study in terms of theoretical, managerial and policy implication. Subsequently, the limitation is presented to acknowledge the weaknesses that is inevitable and encourage further work by other researchers, which leads to the following part of the study – Suggestions for Future Research. This thesis will then provide an overall conclusion for the entire study.

5.2   Discussion

This part will discussed the implications of the findings. The summary of the findings is presented under "Table 28: Summary of Key Findings" to ease the readers in overseeing the holistic view of the study.

5.2.1   Current State of SGP

The Malaysian context has been characterised by the increased attention of listed companies to sustainable development. The results highlight that the aggregate score of 2020_SGScore has been equal to 3022, which is categorized as low disclosure level and indicates weak SGP in Malaysia. In this sense, the result confirmed that the existence of ESG metrics as a performance measurement is still developing in Malaysia and have very majority of companies have yet embraced the full potential of ESG. However, there are robust local and international initiatives for sustainability disclosure such as the Global Reporting

Initiatives (GRI) standards, Sustainability Accounting Standards Board (SASB) standards, Taskforce on Climate-Related Financial Disclosures (TCFD) Framework, IFRS Standards (Sustainability Standards Board), ISO14064, Integrated Reporting (IR), Bursa Malaysia's Sustainability Reporting Guidelines to enhance the SGP within Malaysia. The shift towards a better understanding of organisations' social impact is clearly necessary, and it has encouraged organisations to pay more attention to such outcomes (Veenstra & Ellemers, 2020), especially during this unprecedented pandemic period. The nature and content of ESG indicators, according to goal-setting theory, may also affect the definition and priorities defined inside the organisation to outline its CSR strategy. Because they advise businesses on the outcomes that are regarded significant and clarify what is expected of them by external stakeholders, ESG indicators may give organisations with tools and inspiration by identifying particular themes and goals to work on (Veenstra & Ellemers, 2020).

5.2.2 Determinants of SGP

To enhance the social performance of a company, it is important to identify the drivers of SGP. The analysis of the determinants of the SGP has provided some insights into the role covered by the firms' characteristics.

Industry

The results also SGP differs across industry. In accordance with the assumptions underlying hypothesis 1, consistent with Caputo et al. (2019), ESG reporting is significantly tied to the industry in which a company operates. This implies that a set of common regulations for enterprises operating in diverse sectors may be necessary, as companies are influenced differently by external sectorial events as well as negative sector-related consequences (Broadstock et al., 2020). Furthermore, the study finds that industry type is a strong predictor of sustainability performance. The majority of academic papers discovered that

industry type has a substantial impact on CSR activities (Reverte, 2009; Melo & Garrido-Morgado, 2012). However, in the Regression Model conducted under 4.5 Overall Relationship, the result shows that the industry is not statistically significant to determine the SGP, while holding Size, Digital Technologies and Target-Setting Approach constant. This is contradicts with our assumption but consistent with Matakanye et al. (2021)'s studies who give a contradict view that the type of industry has no significant effect in establishing a company's ESG rating.

<u>Firm Size</u>

The results also indicate a persistent and significant positive relationship between firm size and SGP. In accordance with the assumptions underlying hypothesis 2, consistent with Artiach et al. (2010) statement where when it comes to establishing sustainability programmes, large firms are also better positioned to benefit from economies of scale. It is proven that Firm Size is important to determine the SGP because there will be a significant difference result if comparing between small and large firm. Larger firms have better financial capability to engage in sustainability initiatives. In order to establish more sustainability programmes or to ensure compliance, it requires financial sources such as monetary compensation to raise awareness among the public. Budget constraint issue might made the smaller firm harder to implement the sustainability efforts. This is also supported by (Wu et al., 2006) that the excellence of a company's performance is derived from the robust synergy between an array of human and financial resources (i.e. size), which could eventually contribute to the stellar SGP of a company. Current efforts from the government and regulatory bodies are needed to enhance SG which will in turn realised the objectives and pledge in accomplishing the "Agenda 2030" through its SDG Roadmap and Malaysia Plans.

<u>Digital Technologies</u>

The results also suggest some evidence that digital technologies is associated with high SGP. In accordance with the assumptions underlying hypothesis 3, proving that the investment in digital technology to manage SG initiatives paid off. It is supported by a few works of literatures that IT provided a competitive advantage (Weill & Woodham, 2002), having a shared customer database (Weill & Aral, 2003) reducing time it took to market new business initiatives (Weill & Aral, 2004), assessing consumer needs so that good decisions could be made (Weill & Aral, 2006), and facilitating greater contact between companies and their customers were some of the potential advantages of taking the customer perspective into consideration.

<u>Target-Setting Approach</u>

The results indicate that target-setting approach is strongly and consistently associated with high levels of SGP. Target-setting approach is most likely to be the most dominant determinant among the others. Consistent with the arguments underlying hypothesis 4, hard targets have been captured as a score of 5 based on SMART - specific, measurable, achievable, realistic and time-bounded (Doran et al., 1981). It is consistent with the accounting literature Jones & Slack (2013) and Maas (2018) who reports that compared to hard targets, soft targets are less manageable, less objective, and frequently subject to firm biases, making them less accurate and reliable.

5.2.3 Financial Motivation

In addition, as most managers' ultimate goal is to make decisions that would maximize a company's financial value (Kaplan, 2009), this highlights the importance of assessing the impact of SGP on the profitability and business growth of a company. According to stakeholder theory, corporations would prioritise stakeholder claims, with financial stakeholders taking precedence over social

stakeholders (Artiach et al., 2010). The results indicate a persistent and significant positive relationship for hypotheses 5 - between profitability and SGP. It is also found that a good SGP impacted on the profitability of the company, in terms of ROA. The assumption underlying hypotheses 6 - between business growth and SGP has been verified as well, It is found that a good SGP impacted on the profitability of the company, in terms of ROA. Furthermore, the unprecedented COVID-19 crisis has also been taken into account, as the companies' performance might be affected pre, during or post-pandemic, it may be a significant factor that affect the accuracy of the research. Stakeholder theory supports a compatible viewpoint that says CSP investment provides good financial advantages through managing stakeholders (Artiach et al., 2010). Furthermore, according to the stakeholder theory of Freeman (1984), managers managers can increase company value by enhancing SGP as part of their obligation to maximise shareholder value.

5.2.4 Leadership Aspiration

Other than examining whether improved financial performance serves as a repercussion of high SGP, the commitments and plans of top management to invest in sustainability programmes have been studied. Business executives are generally conscious that they are accountable for their influence on society. This is also evident in corporations' rising emphasis on contributing to the United Nations Sustainable Development Goals (SDGs) (PricewaterhouseCoopers). The result of this study shows that companies have heavier commitment under the subject 3.8 Product and Services Responsibility, which is mainly due to demanded regulatory requirements and stakeholders' expectation, with the aim to "have a mechanism in place to incorporate social, environmental, ethical, consumer, and human rights concerns into their company operations and core strategy in conjunction with its stakeholders" (Veenstra & Ellemers, 2020). As the current social performance identified in this study Objective 1 is fall in the "low disclosure" category, regulatory requirements and stakeholder's expectations may be the driving forces

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that motivate leaders in the company to aim higher in their leadership statement. These are supported by Vormedal & Ruud (2009): "According to the stakeholder-theory approach, the quality and extent of reporting to be related to the level of societal (stakeholder) pressure on companies to disclose information on their social and environmental performance is assured and specific regulatory developments different countries also influence the level and quality of reporting."

RQ	RO	Hypothesis	Findings
What is the current state of SGP?	To identify the current state of SGP in Malaysia.	IQR – descriptive	In low disclosure category
What are the determinants of SGP?	To determine whether industry, firm size, digital technology and target-setting approach have an impact on SGP.	H1: SGP differs across different industries H2: Firm size and SGP are positively related. H3: Digital Technology and SGP are positively related H4: Hard-Target-Setting Approach and SGP are positively related	SGP does not differ across the different industries (H1 accepted at 5% significance level) Larger firms exhibit better SGP (H2 accepted at 5% significance level) Firms with greater use of digital technology have demonstrated better SGP (H3 accepted at 5% significance level) Firms that have set HARD targets have shown better SGP (H4 accepted at 5% significance level) Target setting approach is the significant predictor among the other 4 independent variables, followed by digital technology and firm size

Will SGP bring impact on the profitability and business growth of a company?	To examine whether SGP have an impact on the profitability and business growth of a company.	H5: A firm's SGP is positively associated with its profitability.	Firm's profitability is positively associated with its SGP. (H5 accepted at 5% significance level)
		H6: A firm's SGP is positively associated with its business growth.	Firm's business growth is positively associated with its SGP (H6 accepted at 5% significance level) Firm's SGP does have an impact on their financial performance and growth.
What is the future commitment and plan of the companies	To examine commitment and plan of the companies in terms of pursuing the 17 SDGs.	Mini Case Study	Most reported on: 1. Product and services responsibility 2. Occupational Safety and Health

Table 28: Summary of key findings

5.3 Conclusion

The shift towards a better understanding of organisations' SGP is clearly necessary, and it has encouraged organisations to pay more attention to such outcomes (Veenstra & Ellemers, 2020). To monitor the shifting attention towards SG, the current state of SGP (SGP) within Malaysia has been examined (RO1). Strengthening the SGP is vital as there are a lot of negative repercussions in terms of a firm's value and reputation should there be any SG shortfall. To enhance the SGP of a company, it is important to identify the effective management approaches in performance management (RO2) which may explain variations in the levels of investment in corporate SGP. The apparent ambiguity of previous findings examining on the association between the SGP and financial performance has brought to the following objectives – (RO3) Assessing the impact of SGP on profitability and business growth of a company in order to ameliorate this variation of research. The commitments and plans of top management in terms of pursuing the 17 UN-SDGs Goals (RO4) has also been examined. In doing so, this thesis further contributes to the ongoing research debate about the board's commitment by measuring and managing their contribution with regards to the SDGs' realisation.

The final sample of 313 companies listed on the largest bourses in ASEAN - Bursa Malaysia as at 2021 had been employed. The documentary sources were downloaded from the Bursa Malaysia Website. The documents analysed included annual reports, integrated reports and sustainability reports (Year 2019-2020). The financial data were retrieved from the Thomson Reuters' DataStream. While the leadership statements (Year 2020) had been extracted to analyse the language of top management in relation to sustainability commitments and plans. SPSS had been utilised to perform inferential statistics such as One Way ANOVA, independent-samples t-test, and regression analysis.

In conclusion, to drive the purposeful agenda of the business – the target-setting approach is suggested to better manage the increasingly concern on SGP. In this sense, result shows that the existence of ESG metrics as a performance measurement is still developing in Malaysia and very majority of companies have yet embraced the full potential of ESG. This study provides evidence that Target setting approach is an effective management approach and most companies should notice that it would be able to make a remarkable enhancement on SGP. Thus, the companies should intensely place their concentration on setting targets for the following year and implementing action plans to attain their goals. Eventually, these efforts will act as an impetus to boost the Total SG Score.

This study provides convincing evidence that it pays to elevate the current SGP level that is found to be low across the different industries. The findings show that higher SGP is lead to better financial performance and business growth. Most managers' ultimate goal is to make decisions that would maximize a company's financial value (Kaplan, 2009). This is actually aligned with the Goal-Setting Theory, i.e., highlighting specific topics and targets to focus on which would enlighten businesses about the outcomes that are considered important and specify what expectations of them from the external stakeholders are. In this way, business goals provide a direction for the activities in which they invest in and pay their attention to (Tenbrunsel et al., 2000). Not only do they where businesses stand, but also where they should be heading and what they should not ignore. As a result, here is where the stakeholder theory comes in, where the different stakeholders exhibit unanimous interests that can allow organisations to be inclined towards mutual directions, making goal achievement more feasible (Veenstra & Ellemers, 2020). This paper represents effort in ameliorating the variation research between SGP and financial performance which has previously brought mixed result.
Further, this paper contributes to the ongoing research debate about the measures and manages of leaders' contribution with regards to the realisation of the SDGs.

Although the SDGs give direction for the future and depict a clear global package of goals to strive for, however, there are further work and efforts needed, such as leadership's commitment is required to attain the established goals. Current emphasis in leadership commitments is mostly in the area of product and services responsibility (UN-SDG 9,11,12,16) and occupational Safety and Health (UN-SDG 3,8). Despite these are the important accelerator in achieving "Agenda 2030", the other areas requires more attention and management towards achieving a better state of SGP. The use of target setting approach could prove useful to facilitate management in these neglected SG areas.

There are more ongoing efforts needed to realize the satisfactory SGP. It is inevitable that there must be strong support and close cooperation from the society, particularly companies to make the SDGs come true, alongside with various comprehensive efforts made by the government for the realisation of SDGs. Current efforts from the government and regulatory bodies to enhance SG will in turn realised the objectives and pledge in accomplishing the "Agenda 2030" through its SDG Roadmap and Malaysia Plans. In conclusion, this study provides more assistance and guides to further support company in this journey to enhance the current SGP in the private sector hence contributing to the overall sustainability wellbeing of the country.

5.4   Significance and implications of the findings

In terms of theoretical contribution, the findings fortified the existing knowledge in the domain, allowed further research development at ease. The findings of this study are important for the ongoing debate on the benefits of the corporate sustainability performance, specifically SGP. The current study which placed a laser focus on the SG pillar due to the growing demand aroused by the pandemic, examining the determinants associated with the leading SGP and their leadership's commitments towards UN-SDGs achievement. This shift in focus

allows for a more in-depth examination of the factors that drive the decision-making to factors in sustainability principles, and hence gives better insight into the anticipated financial consequences of SG investment.

For example, the findings indicate that size, digital technologies and target setting approach are associated with high levels of SGP, consistent with the stakeholder management Theory and Goal-Setting Theory used in this paper. In addition, the results also contribute to claims that SGP is positively related to profitability and business growth of the company. First, goal-setting theory shapes business goals by providing a direction and priority for the activities in which they invest in and pay attention to (Tenbrunsel et al., 2000). Second, researchers suggest that the financial benefits of investing in sustainability performance exceed its costs (McGuire et al., 1988; Barnett, 2005). It is argued that good SGP brings benefits such as increased employee morale, increased goodwill, improved connections with bankers, investors, and the government, and greater access to financing; each of these is intended to lead to improved financial performance. Third, a compatible view backed by stakeholder theory claims that SGP investment provides positive financial advantages through stakeholder management. This would be able to contribute to the insufficient knowledges on suitable management approaches and theories to steer sustainability strategies and fortify the apparent ambiguity of the benefits of desired SGP in light of the financial ground, which filled up the missing gap in most literature reviews. By doing so, this study has theoretical significance because It builds on previous studies while also providing new conceptual understandings that future researchers might exploit.

In terms of managerial contribution, this study generated value to businesses, offered a supporting argument rationale for these organisations to expand the use of SG principles in their strategic management, and to provide strategies or suggestions to organisations in managing their sustainability strategies in Malaysia. These findings support the notion that some types of organisations have incentives

to spend more extensively in corporate sustainability programmes because such involvements assist the firm retain its competitive position (Artiach et al., 2010). For instance, this study explores the determinants of SGP extensively and how it impacts the financial performance of a company. The payback of companies who aspire to quantify their future targets and employing digital technologies has been proven, in terms of boosted SGP and lucrative financial performance, to the extent of fortifying management reputation and goodwill. This has contributed to the insufficient knowledges within organisation in using suitable and effective management approaches pertinent for businesses to steer their sustainability strategies when they are actually constraint to budget restriction and providing motivations for businesses in light of the desired SGP's impact on the financial ground.

In terms of policy contribution, this study generated value for policymakers and regulators, proposing strategies or suggestions to regulators in solving the contemporary problem of low sustainability performance in Malaysia. This study helps to shed light on it and look into further possibilities to drive the sustainability initiatives (SGP and UN-SDGs). The findings proven that larger firms exhibit better social governance performance, and as a result, the Government of Malaysia should steps in to provide more funds and subsidies to small firms in SGP, which will in turn realised the objectives in accomplishing the "Agenda 2030" through its SDG Roadmap and Malaysia Plans. There must be strong support and close cooperation from the society, particularly companies to make the SDGs come true, alongside with various comprehensive efforts made by the government for the realisation of SDGs. Moreover, the development of Content Analysis of SGP Scoring Data of private sector businesses listed on Bursa Main Market which does not currently existed, is a plethora contribution to the policy makers as the benchmark for future monitoring purpose.

5.5   Limitations of the current research

The results here should be interpreted with care because there exist potential limitations within this study. First, consistent with the related research in Larcker et al. (2007), the SGP of scoring had been hand-collected for only two years (2019, 2020) and was only able to provide a standalone view on SG in the Main Market, subject to the time constraint. Therefore, this study is unable to provide a comprehensive view of the entire ESG, and to the extent of comparing the SGP over the years. The data constraint has result in failure to conduct a time-series analysis of SGP which will in turn provide a more better and accurate result. In conclusion, this study is less comparative due to time constraint and workforce restriction.

Second, the non-availability of available data impede the generalisation of the inferences. The sample size have been further diminished due to non-availability of data sources which makes the sample size reduced from 781 to 313. Particularly, a handful of listed companies have been excluded due to PN17 status, breach the rules of the Listing Requirements, listed year issue and missing data values. Moreover, as this study is focused in the Malaysia publicly listed companies' context, hence the findings may not be generalizable for firms operating in different business landscape and regulatory environment. In conclusion, the findings is not applicable in other countries and other Malaysia listing market such as ACE and LEAP market.

Third, the regression model that we have created for determinants relationship has a very low R square, which implies that the predictors improve the model by less than predicted, and hence a weaker goodness of fit. The violation of this assumption implies that the results will need to be interpret with cautions. Low goodness-of-fit is subject to issue such as violation of normality in residual, violation of normal distribution of data as well as multicollinearity issue. In the

study, the test of normality result had rejected the null hypothesis that assume that the variable is normally distributed. However, result in Wadgave & Khairnar (2019) and Ghasemi & Zahediasl (2012) have been used to justified that parametric tests are not affected by small deviation in normal distribution of continuous data (Fagerland, 2012; ÖZTUNA et al., 2006; Skovlunda & Fenstadb, 2001).

Last, there are possibilities where prejudice and bias will exist in the content analysis - scoring process of of SGP. As there are human intervention in the data collection process, where the SGP scoring data were hand-collected by researchers, there is a possibility of personal judgement which would affect the data accuracy. Fortunately, the levels of SG scoring that has been created to gauge the SGP in Malaysian listed companies, ranging from 1 to 5. Intercoder reliability and suitability of scores have been pre-tested and assured, to ensure that the analysis is consistent and valid, which is the ultimate goal for most research.

5.6 Suggestions for future research

This study has built on the existing knowledge by suggesting the suitable management approaches and theories to steer sustainability strategies and fortify the apparent ambiguity of the benefits of desired SGP in light of the financial ground, which provided brand new conceptual understandings that future researchers can employ.

Future research may further study on qualitative approach for a longitudinal study of SGP and provide a more comprehensive view on the entire ESG pillar. If the time permitted, it is suggested to test the generalizability of the results presented in this study in different context, in terms of country and region. In the favor of all these important viewpoint have been taken account, it would be able to provide a holistic view on the sustainability impact to a wide variety of audiences.

Furthermore, although industry, firm size, digital technologies and target setting approach were identified as positive moderators of the relationship, it is acknowledged that the fact that there might be other different variables influencing this relationship, such as structure of ownership, executive compensation, and other environmental effect such as COVID-19. However, the foregoing variables are not considered in this study. Hence, it would be fascinating to explore them in the future work.

Apart from that, this paper examines only the leadership statements in each annual report. In fact, firms do constantly divulge commitments and plans through a wide range of channels, be it quarterly financial reports, conference calls, internet and social media platforms (such as Twitter, official websites and interviews). Thus, future research is strongly encouraged to take companies' commitments and plans released from other sources into account.

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Appendices

Appendix A: ESG Metrics from the 'Bursa Guide'

The table below is the Social and Governance (SG) performance subjects that extracted from ESG Metrics Table created by Bursa Malaysia Securities Berhad (2018).

Themes	Definition	Indicators	Guidance on sector applicability	References (to the Toolkits and external references)
Social				
Diversity	Diversity, specifically in the workforce, management and the Board is characterized by the gender, age, etc.	The percentage of employees per employee category in each of the following diversity categories: (a) gender; (b) age group; (c) ethnicity; and (d) disability	All sectors	Refer to: • Toolkit: Themes and Indicators - Diversity • GRI: 405-1 • SDGs:
		The percentage of directors in each of the following diversity categories: (a) gender; (b) age group; (c) ethnicity; and (d) disability	All sectors	Refer to: • Toolkit: Themes and Indicators - Diversity • GRI: 405-1 • SDGs:
		Ratio of foreign to local hire of low-skilled workers	• Construction and real estate • Consumer goods • Manufacturing • Oil & gas • Plantation • Telecommunications • Utilities	Refer to: • Toolkit: Themes and Indicators - Diversity • International Labour Organisation • SDGs:

Themes	Definition	Indicators	Guidance on sector applicability	References (to the Toolkits and external references)
Social				
		Employment arrangement – local and foreign	All sectors	Refer to: • Toolkit: Themes and Indicators – Diversity • International Labour Organisation • SDGs: 8 DECENT WORK AND ECONOMIC GROWTH 10 REDUCED INEQUALITIES
Human Rights 🟧 🟪	In accordance with the United Nations Universal Declaration on Human Rights, this is defined as/to include: • the right to not be discriminated against; • not be enslaved; • be treated with dignity; • have the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay; and • the right to freedom of opinion and expression.	Percentage of employees trained in human rights policies or procedures concerning aspects of human rights that are relevant to operations	All sectors	Refer to: • Toolkit: Themes and Indicators – Human Rights • GRI: 412-2 • SDGs: 8 DECENT WORK AND ECONOMIC GROWTH 10 REDUCED INEQUALITIES 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

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		Percentage of existing and new suppliers assessed for human rights policies and practices.	All sectors	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 414-2 • SDGs: 8 DECENT WORK AND ECONOMIC GROWTH 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
		Number of discrimination incidents	All sectors	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 406-1 • SDGs: 5 GENDER EQUALITY 8 DECENT WORK AND ECONOMIC GROWTH 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
		Number of child labour incidents	• Construction and real estate • Consumer goods • Manufacturing • Plantation • Utilities	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 408-1 • SDGs: 8 DECENT WORK AND ECONOMIC GROWTH 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

		Measures taken to support freedom of association	• All sectors	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 407-1 • SDGs: [SDG 8] [SDG 16]
		Number of grievances about human rights issues	• Construction and real estate • Consumer goods • Manufacturing • Plantation • Utilities	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 103-2, Clause 1.8 • SDGs: [SDG 1] [SDG 2] [SDG 16]
		Number of forced or compulsory labour incidents	• Construction and real estate • Consumer goods • Manufacturing • Plantation • Utilities	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 409-1 • SDGs: [SDG 8]

		Percentage of investment agreements that underwent human rights screening	• Financial services • Construction and real estate • Oil and gas • Utilities	Refer to: • Toolkit: Themes and Indicators - Human Rights • GRI: 412-3 • http://www.global-business-initiative.org • SDGs:
Occupational Safety and Health ▢ ▢	In accordance with the International Labour Organisation, occupational safety and health refers to the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers.	Percentage of workers undergoing safety and health training per annum	All sectors	Refer to: • Toolkit: Themes and Indicators - Occupational Safety and Health • GRI: 403-5 • SDGs:
		Number of work-related injuries per annum Rate of work-related injuries per annum Number of work related fatalities (includes employees and contractors) Accident frequency rate Severity rate	All sectors	Refer to: • Toolkit: Themes and Indicators - Occupational Safety and Health • GRI: 403-2 • Register of Occupational Accidents, Dangerous Occurrence, Occupational poisoning and Occupational Disease - JKKP 8 for annual submission to DOSH • SDGs:

		Number and percentage of workers undergoing health surveillance	All sectors	Refer to: • Toolkit: Themes and Indicators - Occupational Safety and Health • Factories and Machineries Act 1967 • SDGs:
		Brief description of the Health, Safety and Environment ("HSE") organisational chart and the HSE Committee (if available) at the work site	All sectors	Refer to: • Toolkit: Themes and Indicators - Occupational Safety and Health • Refer to OSHA 1994 • SDGs:
Anti-competitive behavior	Concerning ethical business practices without affecting consumer choice, pricing, and market efficiency.	Number of legal actions pending or completed regarding anti-competitive behavior	All sectors	Refer to: • Toolkit: Themes and Indicators - Anti-competitive behaviour • GRI: 206-1 • Competition Act 2010 • SDGs:

Anti-corruption	In accordance with Transparency International Malaysia, corruption is defined as the abuse of entrusted power for private gain. This theme discusses activities that promote transparency and guard against various forms of corruption (e.g. bribery, extortion, fraud, undue pressure or influence, and collusion / anti-competitive behavior).	Percentage of employees that have received training on anti-corruption by employee category	All sectors	Refer to: • Toolkit: Themes and Indicators - Anti-corruption • GRI: 205-2 • SDGs:
		Percentage of operations assessed for risks related to corruption	All sectors	Refer to: • Toolkit: Themes and Indicators - Anti-corruption • GRI: 205-1 • SDGs:
Labour practices	The fair treatment of employees with regard to terms and conditions of employment and developments of employee's skills and knowledge.	Average hours of training per annum per employee by employee category	All sectors	Refer to: • Toolkit: Themes and Indicators - Labour practices • GRI: 404-1 • SDGs:
		Total number of employee turnover (broken down by employee type) during the reporting period, by: (a) age group (b) gender (c) disability	All sectors	Refer to: • Toolkit: Themes and Indicators - Labour practices • GRI: 401-1 • Employment Act 1955 • SDGs:

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		Rate of employee turnover (broken down by employee type) during the reporting period, by: (a) age group (b) gender (c) disability	All sectors	
		Employee benefits	All sectors	Refer to: • Toolkit: Themes and Indicators - Labour Practices • GRI: 401-2 • Employment Act 1955 • SDGs:
Society □	Relates to the impacts organisations have on society and local communities.	Initiatives to improve access of financial services to disadvantaged people	Financial services	Refer to: • Toolkit: Themes and Indicators - Society • GRI Sector Disclosures: Financial Services, FS14 (page 24) • SDGs:

		Disclosure of social impact assessment (SIA) performed (if any) and current practices in order to mitigate negative impacts	Plantations	Refer to: • Toolkit: Themes and Indicators – Society • RSPO, Principles 1.1, 5.1 and 3.4 • SDGs:
		Number of people physically or economically displaced and compensated, broken down by utility project	Utilities	Refer to: • Toolkit: Themes and Indicators – Society • GRI Sector Disclosure: Electric Utilities, EU22 (page 49) • SDGs:
		Operations where involuntary resettlement took place, the number of households resettled in each, and how their livelihoods were affected in the process	• Oil and gas • Plantation	Refer to: • Toolkit: Themes and Indicators – Society • GRI Sector Disclosures: Oil and Gas, OG12 (page 52) • SDGs:

Product and Services Responsibility (Social)	The impact of products and services on the wellbeing of society, including privacy, health and safety.	Number of complaints	All sectors	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • GRI: 418-1 • SDGs:
		Customer relationship management (grievance mechanism)	All sectors	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • GRI: 103-2, Clause 1.8 • SDGs:
		Transparency in product information and labelling	• Consumer goods • Financial services	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • GRI: 417-1 • GRI Sector Disclosures: Financial Services, G4-DMA – Product Responsibility (Product and Service Labelling) (page 25) • Bank Negara Malaysia's Guidelines on Introduction of New Products • GRI Sector Disclosures: Food Processing, G4-DMA – Product Responsibility (Product and Service Labelling) (page 33) • http://www.theconsumergoodsforum.com/ • SDGs:

				SDG 12, SDG 16 icons
		Number of incidents of cyber attacks	All sectors	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • Information Security Forum • SDGs: SDG 12, SDG 16 icons
		Product adherence to chemical content/ composition specification	• Consumer goods • Manufacturing	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • http://www.theconsumergoodsforum.com/ • SDGs: SDG 12 icon
		Health risks from exposure to electromagnetic radiation from use of products and services	Technology	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • SDGs: SDG 3, SDG 11, SDG 12 icons

		Ingredients used in personal care products	Consumer goods	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • http://www.theconsumergoodsforum.com/ • SDGs:
		Financial literacy	Financial services	Refer to: • Toolkit: Themes and Indicators - Products and Services Responsibility • GRI Sector Disclosures: Financial Services, G4-DMA – Product Responsibility (Product and Service Labelling) (page 26) • SDGs:
Supply Chain (Social)	Relates to significant and potential social impacts on society in the supply chain.	Assessment of new and existing suppliers to identify existing or potential negative social impacts	All sectors	Refer to: • Toolkit: Themes and Indicators - Supply Chain • GRI: 414-1, 414-2 • SDGs:
		Results of supplier monitoring/auditing		
		Actions on supplier's non-compliance to social impacts assessment		
Compliance (Social)	Compliance identifies the adherence of an organisation's activities to relevant laws and guidelines. It outlines an organisation's degree of observance to laws and guidelines governing its business, as well as efforts undertaken in assessing the anticipated impact of its activities.	Total monetary value of fines and total number of non-monetary sanctions for non-compliance with laws and regulations	All sectors	Refer to: • Toolkit: and Indicators - Compliance • GRI: 419-1 • SDGs:

Table 29: SG Metrics Table created by Bursa Malaysia

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Appendix B: Content Analysis for SGP Scoring Template

The table below is the Content Analysis for SGP Scoring Templated based on the Social and Governance (SG) performance subjects that extracted from ESG Metrics Table created by Bursa Malaysia Securities Berhad (2018).

Year of Sustainability Report	2020		
Company Name:			
Listed Number:			
Industry:			
Market listed:	Main Market		
Type of report:	Annual Report / Integrated Report / Stand Alone Report		
Subjects of sustainability	Score	Page	Remarks
3.0 Social			
3.1 Diversity and Equal Opportunity			
3.2 Human rights			
3.3 Occupational Health and Safety			
3.4 Anti-competitive behavior			
3.5 Anti-Corruption			
3.6 Labour Practices			
3.7 Society			
3.8 Product and services responsibility			
3.9 Supply Chain			
3.10 Compliance			

Table 30: Content Analysis Template

Appendix C: Sample Exclusion Criteria

The list below is the sample exclusion criteria:

1. Delisted companies under the PN17 status and breach the rules of the Listing Requirements

2. Whose financial data cannot be found on DataStream

3. Firms that are listed on the stock exchange after year 2015

4. Firms that have undergone merger and acquisition exercises between 2015 to 2021

5. Firms that have at least one missing report between 2015 to 2021

6. Firms whose sustainability statements are absent in the annual report

7. Those whose annual reports are not readily accessible through the Bursa Malaysia website

8. Firms that have two annual reports in one financial year between 2015 to 2021 due to change of financial year

9. The only firm that is in the industry

Appendix D: Scoring Levels of Content Analysis

Below is the scoring levels used during the Content Analysis.

In the course of this study, the levels of SG scoring have also been created to gauge the SGP in Malaysian listed companies, which are separated into 5 levels:-

"1" = Narrative only, not quantified
"2" = Actual performance of the year is clearly explained and quantified
"3" = Progress of performance (comparative over the years) is clearly explained
"4" = Action plans moving forward (to close the gap / to manage risks and opportunities) are clearly explained
"5" = Targets set for next year (SMART)

Hard targets have been captured as a score of 5 based on SMART - specific, measurable, achievable, realistic and time bounded (Doran et al., 1981). The rest of the scores lower than 5 are defined as soft targets.

Appendix E: SPSS Output

RO2: Multiple Regression Analysis Output – Histogram and Scatter Plots
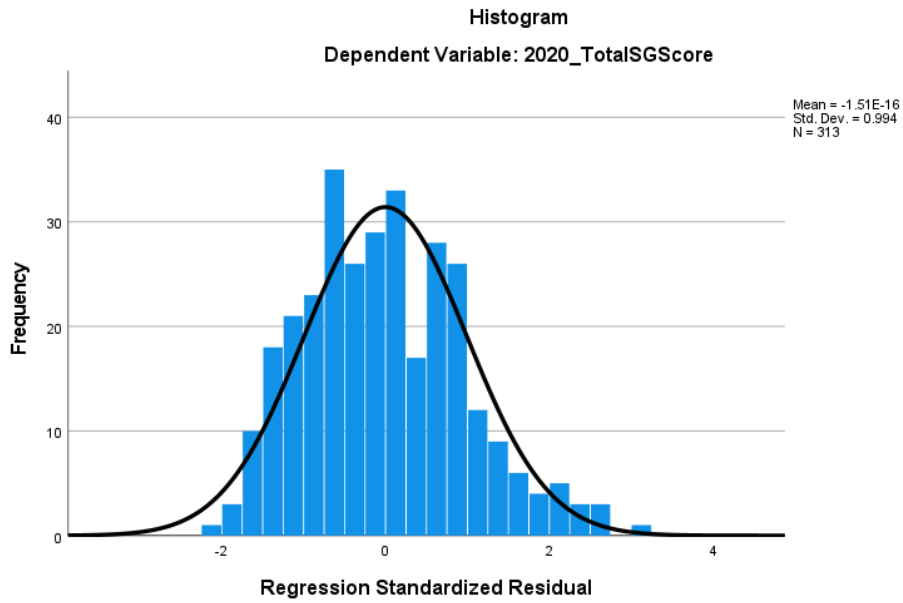
Figure 5: Histogram
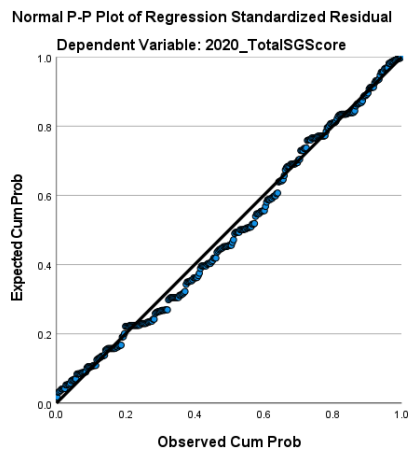
Figure 6: Scatter Plots
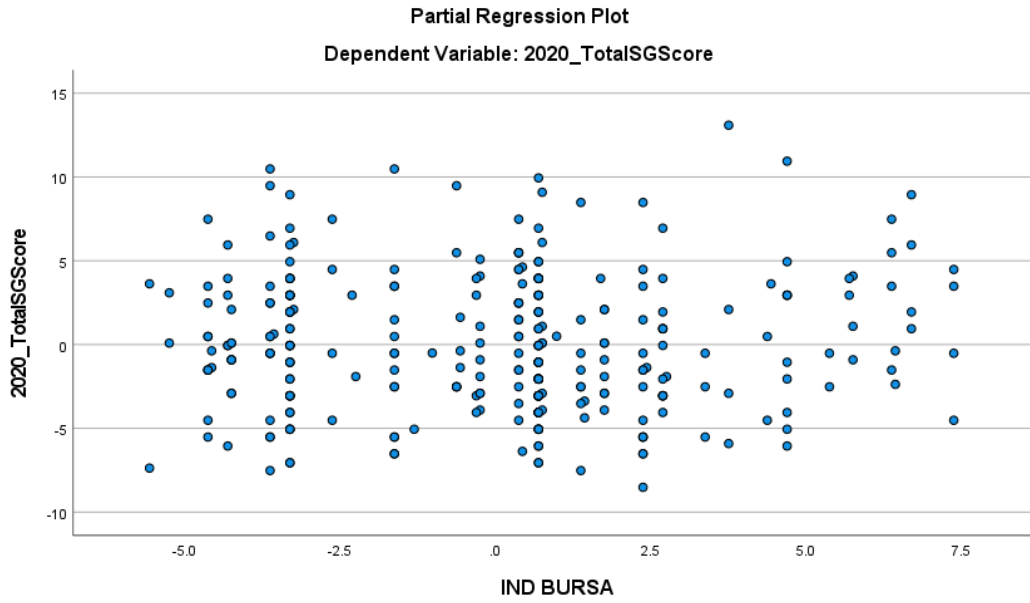
Figure 7: Partial Regression Plot (IND BURSA)
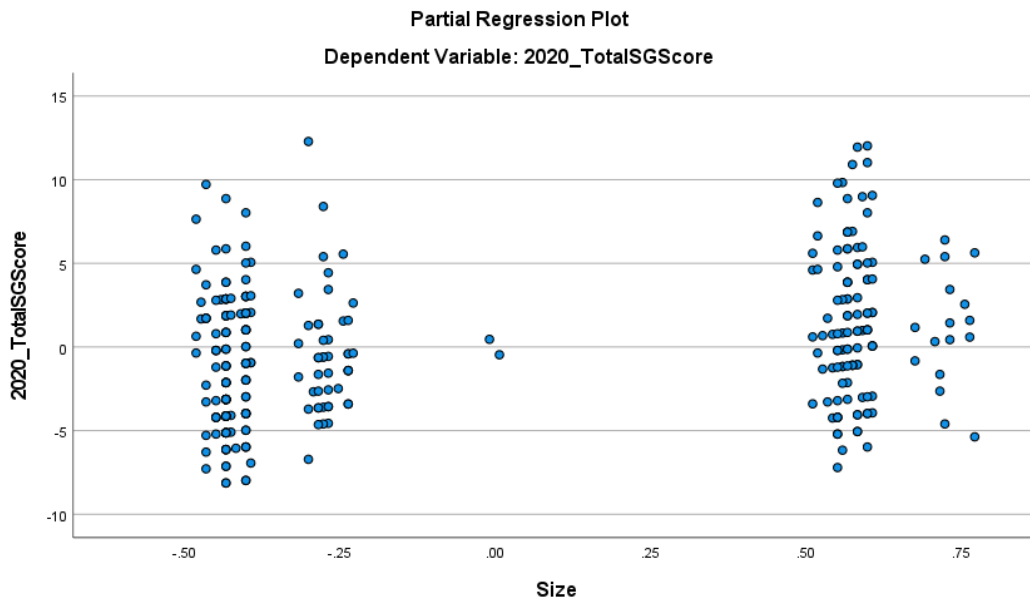
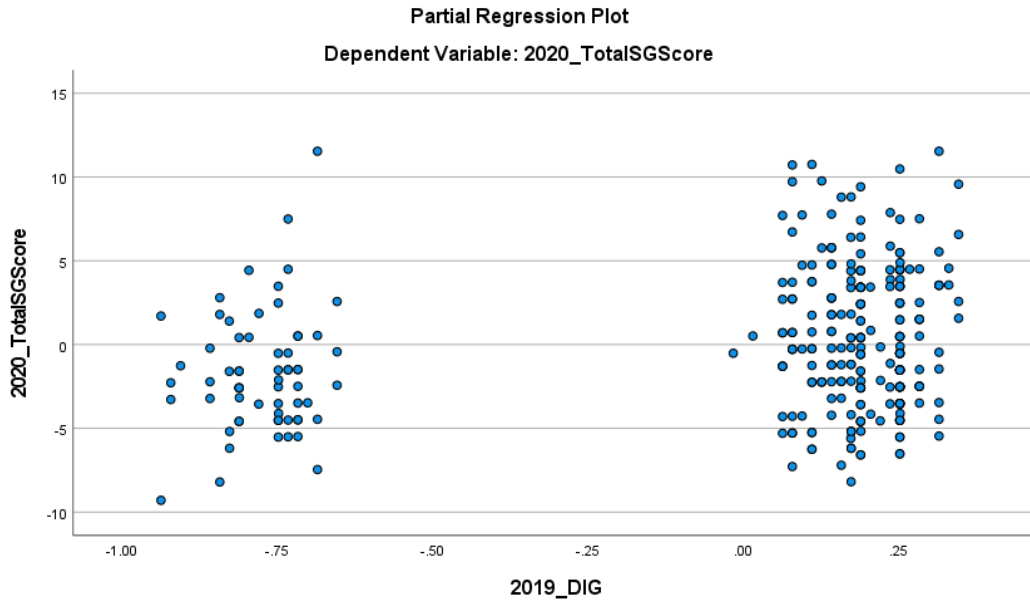*Figure 8: Partial Regression Plot (Size)*

Figure 9: Partial Regression Plot (2019_DIG)

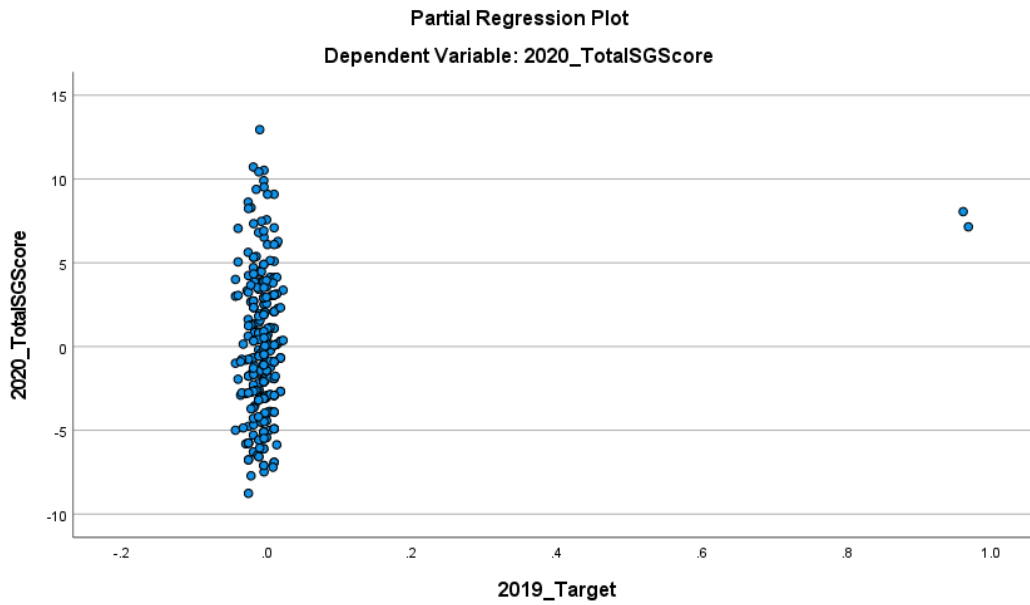*Figure 10: Partial Regression Plot (2019_Target)*

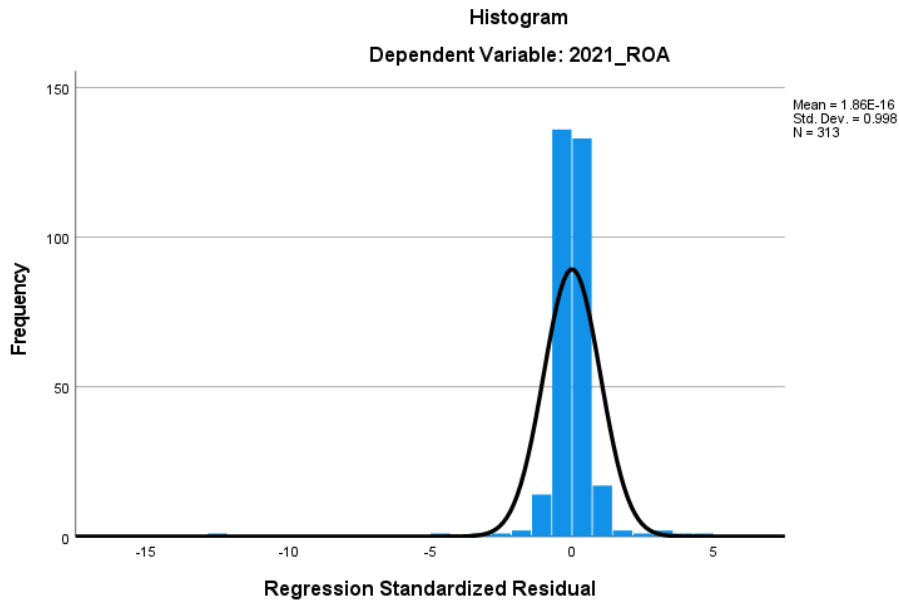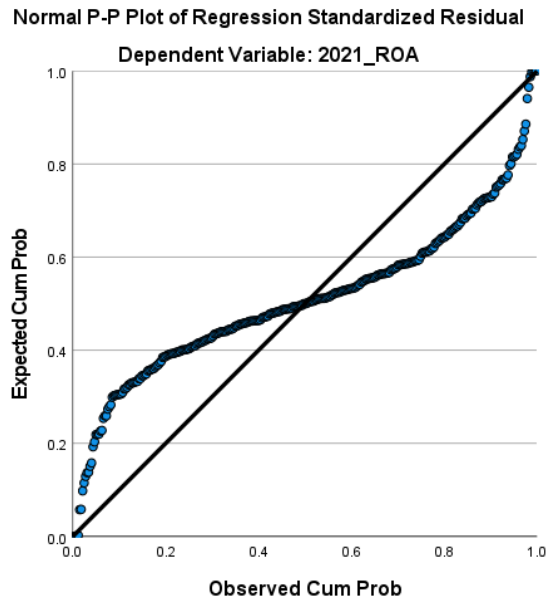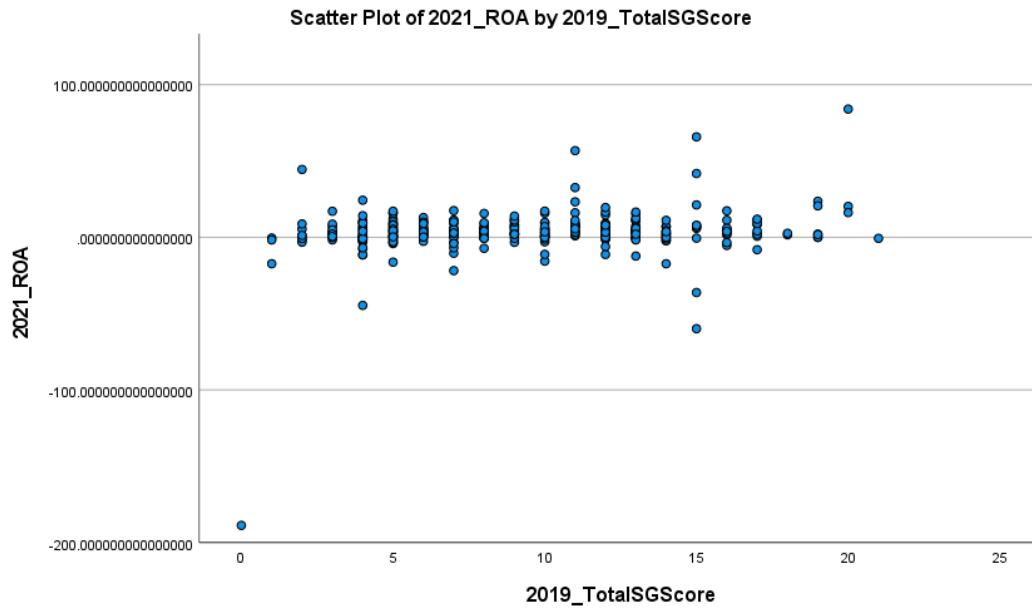RO3: Multiple Regression Analysis Output – Histogram and Scatter Plots

Histogram

Dependent Variable: 2021_ROA

Mean = 1.86E-16
Std. Dev. = 0.998
N = 313

Figure 11: Histogram

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: 2021_ROA

Figure 12: Scatter Plots

Figure 13: Scatter Plots of 2021_ROA by 2019_TotalSGScore

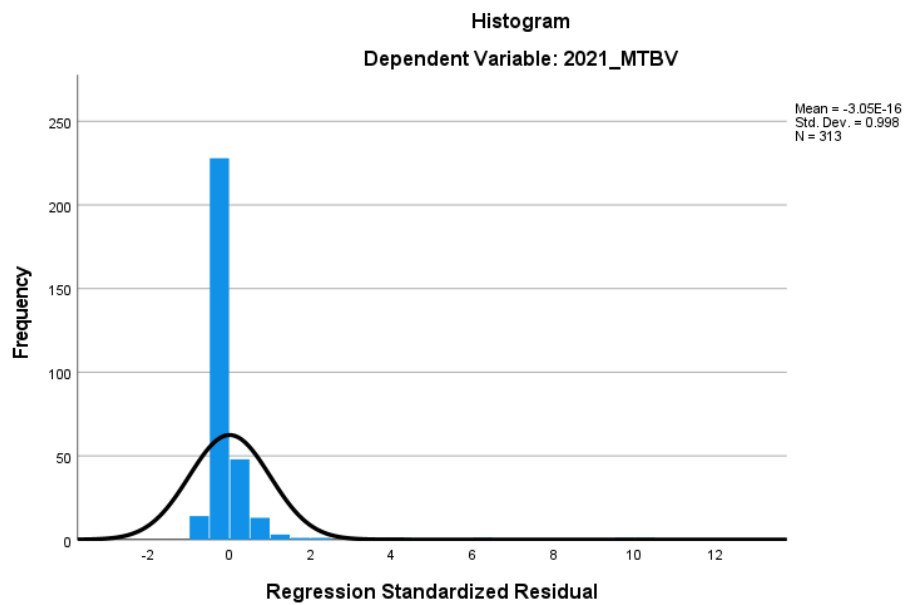## RO4: Multiple Regression Analysis Output – Histogram and Scatter Plots
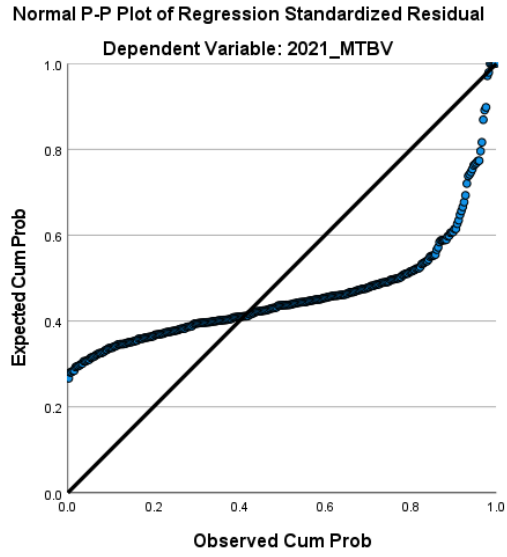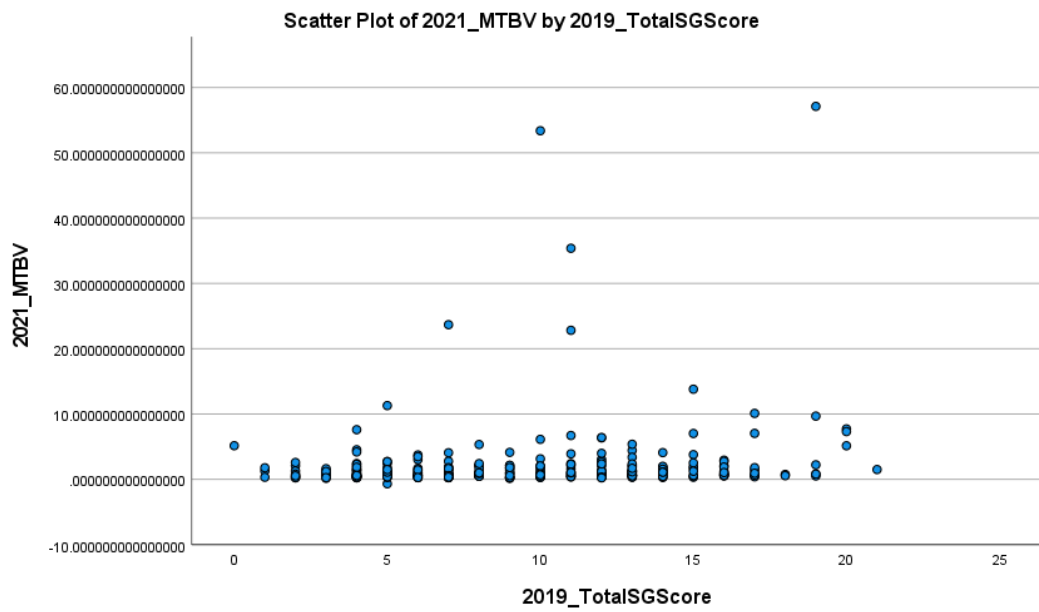

Figure 14: Histogram

Figure 15: Scatter Plots

Figure 16: Scatter Plots of 2021_MTBV by 2019_TotalSGScore