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Determinants of Environmental, Social, and Governance (ESG) Practices Among Malaysian Small and Medium Enterprises (SMEs)

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ABSTRACT

Given the greater recognition of the role played by small and medium enterprises (SMEs) within the Malaysian economy, this research provides insights into environmental, social, and governance (ESG) practices. In particular, this study examines the determinants of sustainability practices among SMEs in Malaysia. The questionnaire was distributed to 200 SME owners in the northern region of Malaysia. The findings of the study reveal that internal factors, such as awareness, knowledge, and organizational culture, positively and significantly contribute to sustainability integration practices among SMEs in their business activities. In addition, the competitor's variable is the only external factor that significantly influences SMEs to implement sustainability practices in their business. This study concludes that SMEs should prioritize sustainability to enhance their reputation and meet consumer expectations. Given the weak impact of government regulations and financial benefits in motivating SMEs to adopt sustainability practices, this study recommends that policymakers enhance the sustainability initiatives as this approach can help SMEs in Malaysia develop sustainable business practices that contribute to economic, environmental, and social well-being.

ملخص

في ظل الاعتراف المتزايد بالدور الذي تلعبه المؤسسات الصغيرة والمتوسطة في الاقتصاد الماليزي، يقدم هذا البحث رؤى حول ممارسات الأداء البيئي والاجتماعي والحوكمة. فيركز هذا البحث

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بشكل خاص على دراسة محددات ممارسات الاستدامة بين المؤسسات الصغيرة والمتوسطة في ماليزيا. وتم توزيع استبيان على 200 من أصحاب المؤسسات الصغيرة والمتوسطة في المنطقة الشمالية من ماليزيا. وتكشف النتائج أن العوامل الداخلية، مثل الوعي والمعرفة والثقافة التنظيمية، تسهم بشكل إيجابي وملحوظ في دمج ممارسات الاستدامة في أنشطة أعمال هذه المؤسسات. وبالإضافة، تبين أن متغير المنافسة هو العامل الخارجي الوحيد الذي يؤثر بشكل كبير على تبني المؤسسات الصغيرة والمتوسطة لممارسات الاستدامة. وتخلص الدراسة إلى أنه ينبغي على هذه المؤسسات إعطاء الأولوية للاستدامة لتعزيز سمعتها وتلبية توقعات المستهلكين. وفي ظل ضعف تأثير اللوائح الحكومية والمزايا المالية في تحفيز المؤسسات الصغيرة والمتوسطة على اعتماد ممارسات الاستدامة، توصي الدراسة صانعي السياسات بتعزيز المبادرات الاستدامية، حيث إن هذا النهج يمكن أن يساعد هذه المؤسسات في ماليزيا على تطوير ممارسات تجارية مستدامة تسهم في تحقيق الرفاهية الاقتصادية والبيئية والاجتماعية.

ABSTRACT

Given the greater recognition of the role played by small and medium enterprises (SMEs) within the Malaysian economy, this research provides insights into environmental, social, and governance (ESG) practices. In particular, this study examines the determinants of sustainability practices among SMEs in Malaysia. The questionnaire was distributed to 200 SME owners in the northern region of Malaysia. The findings of the study reveal that internal factors, such as awareness, knowledge, and organizational culture, positively and significantly contribute to sustainability integration practices among SMEs in their business activities. In addition, the competitor's variable is the only external factor that significantly influences SMEs to implement sustainability practices in their business. This study concludes that SMEs should prioritize sustainability to enhance their reputation and meet consumer expectations. Given the weak impact of government regulations and financial benefits in motivating SMEs to adopt sustainability practices, this study recommends that policymakers enhance the sustainability initiatives as this approach can help SMEs in Malaysia develop sustainable business practices that contribute to economic, environmental, and social well-being.

Keywords: ESG, Sustainability, Small and medium enterprises (SMEs), Malaysia.

JEL Classification: L10, L26, M14, M21

1. Introduction

Sustainability is shaping up to become a major trend in many countries around the world. It also has become a necessity and key global force towards transformation, encompassing almost every aspect of civilisation and economic practices, from production to consumption, from governance at the top level to staff culture, and from economic growth to protection, and the upliftment of vulnerable groups.
In Malaysia, sustainability is one of the pillars of Bursa Malaysia's Strategic Roadmap 2021 – 2023. As part of this initiative, Bursa Malaysia has made it mandatory for sustainability statement disclosure for listing, and for all listed companies to have a sustainability report in their annual report. To facilitate the disclosure of sustainability practices, the Sustainability Reporting Guide has been issued to assist public listed companies to prepare their sustainability statement in accordance with the listing requirements of Bursa Malaysia.

Furthermore, the introduction of the FTSE4Good Bursa Malaysia Index in 2014 and the adoption of the SDGs which came into effect in January 2016, have resulted in an apparent increase in ESG disclosures, underlining their objectives of reducing information asymmetry, improving transparency, and providing non-financial voluntary disclosures that are beneficial for investors' decision-making (Mohammad & Wasiuzzaman, 2021). Yet, the movement is still seen as nascent in Malaysia (Ng et al., 2020).

According to Bursa Malaysia's Chief Executive Officer (CEO), only 75 companies have qualified for the FTSE4Good Bursa Malaysia Index, which has become the local stock exchange's measure for ESG compliance (Kamaludin, 2022). He further argued that the quality of sustainability reporting depends on the quality of sustainability practices embedded in a company, and that the quality of disclosures will improve as practices mature (Voice of Asean, 2021). This implies that moving the needle on the sustainability 'clock' for the capital market requires significant momentum from all ecosystem actors. Therefore, it is very important to expose the sustainability practices in the early stages of the establishment of companies so that they will be well prepared and able to sustain their operations in a challenging economic environment, especially when they ultimately enter the capital market.

The Chairman of the Malaysian Institute of Corporate Governance (MICG) mentioned that good governance and ESG practices are not just for the big players; it must involve all companies regardless of size and market capitalization, including small and medium enterprises (SMEs). This is because the economic environment has been a challenging period for all businesses (Business Today, 2021). Moreover, SMEs have better potential to grow and have made immense contributions to the economic and social well-being of the people all over the world. The Malaysian SMEs contributed 38.2% to the gross domestic product (GDP) and employed 48.0% of the total workforce in 2020 (Department of Statistics Malaysia, 2021). The impact of SMEs is therefore, profound and it is relevant for SMEs to take part in the sustainability development agenda as a prerequisite towards achieving the national SDGs. In line with the government's continuous efforts to empower SMEs and social enterprises under the Twelfth Malaysia Plan (2021 – 2025), this study examines the determinants of sustainability practices among SMEs in Malaysia.

The novelty of the study lies in its specific focus on determining the factors influencing sustainability practices among Small and Medium Enterprises (SMEs) in Malaysia. This study addresses a significant gap in the existing research by zooming in on SMEs, which constitute a substantial portion of economic activity in Malaysia and globally. Findings of this study provides valuable insights that can inform policies, strategies, and interventions aimed at promoting sustainable business practices in this crucial sector.

2. Literature Review

2.1. Theory of The Resource-Based View (RBV)

The Resource-Based View (RBV) theory proposed by Barney (1991) is highly relevant to the current study as this theory argues that internal resources are highly important to allow organizations to incorporate sustainability practices in their business activities. In the context of the RBV theory, the term "resource" encompasses both tangible and intangible assets owned and controlled by the organization. This includes organizational processes, attributes, information, and knowledge, which contribute to their competitive advantage (Barney et al., 2011). According to the RBV theory, a company that effectively

utilizes and combines its resources in a unique and strategic manner, can gain a competitive edge over its rivals (Dyer & Singh, 1998). Researchers have widely employed the RBV theory to explain how company develop internal policies and processes that revolve around managing resources for sustainable business activities (Gold et al., 2010; Touboulic & Walker, 2015). By leveraging the RBV perspective, this study delves into how SMEs' internal resources, such as awareness, knowledge, business partnership, company reputation, organizational culture, employees, and financial benefits, influence them towards implementing sustainability practices in their business activities.

In addition to the RBV theory, this study adopts the Institutional theory, which focuses on how external factors influence organizations and shape their practices and behavior. The theory posits that companies operate within a structured environment and face pressures and demands to conform to legal, social, and normative expectations (DiMaggio & Powell, 1983). Consequently, company may adapt their structure, processes, and policies to ensure compliance and legitimacy in their operations within the structured environment. The institutional theory offers a comprehensive approach to understanding how external pressures and factors impact organizational operations (Adebanjo et al., 2018). Recent research, such as the review study by de Sousa Jabbour et al. (2020), has highlighted the significance of both the RBV and Institutional theories to comprehend the influences of external and internal factors on organizational performance, particularly in the context of sustainable practices for manufacturing SMEs. In the cited study, the RBV and Institutional theories are adopted as theoretical frameworks to identify critical antecedents of sustainability performance in manufacturing SMEs. By utilizing both the RBV and Institutional theories as lenses, this study uncovers the interplay between internal and external factors in driving sustainability performance among SMEs.

According to Goyal et al. (2015), sustainability practices are being grossly neglected in SMEs, more specifically, in SMEs of emerging markets. Consequently, several potential factors have been identified to understand which factors can significantly contribute to the adoption of the sustainability practices. The independent variables used in this study were categorized into two main factors, i.e., internal factors and external factors as shown in Figure 1. Internal factors refer to any factor within

the organization's control, while external factors refer to any factor that is beyond the organization's control.

2.2. Hypotheses Development

2.2.1. Awareness

A large body of research has examined and highlighted the barriers to the adoption of sustainability practices within SMEs (for example, Blundel et al., 2013; Brammer et al., 2012; del Brío & Junquera, 2003; Johnson & Schaltegger, 2016). Prior studies have identified barriers to the integration of sustainable practices in SMEs, which can be divided into two, first, is awareness; and second, is challenges. According to Johnson & Schaltegger (2016), lack of awareness of sustainability issues is the first shortcoming frequently attributed to the limited implementation of sustainability practices by most SMEs, as the owners are often unaware of their company's environmental and social impact. Bevan & Yung (2015) investigated the implementation of sustainability-related activities in small to medium-sized construction enterprises in Australia and revealed that lower awareness of the sustainability issue leads to a lower level of implementation by SME owners. Similar finding has been reported by other studies (Roxas & Chadee, 2012 in the Philippines; Verlag, 2014 in Hungary; and Dos & De, 2014 in Brazil). Therefore, this study proposed that:

Hypothesis 1: Awareness has a significant effect on sustainability practices among small and medium enterprises.

2.2.2. Knowledge

There are several knowledge factors that can contribute to the implementation of sustainability practices among MSMEs. These factors are essential for fostering sustainable business practices and aligning them with environmental and social responsibility. The entrepreneurs of MSMEs need to be aware of the benefits and implications of implementing sustainability practices. Training and educational programmes can raise awareness and provide the necessary knowledge for implementing sustainability initiatives (Atasu et al., 2008). Another factor is access to information. This can be achieved through networking with industries and government agencies, and by accessing online resources (Ranabahu & Wickramasinghe, 2022). In addition,

understanding the potential risks and benefits of sustainability practices can motivate MSMEs to invest in sustainability, as this can enhance long-term business viability (Sarkis & Cordeiro 2019).

Hypothesis 2: Knowledge has a significant effect on sustainability practices among small and medium enterprises.

2.2.3. Organizational culture

Organizational culture serves as a major driver for sustainability practices in SMEs (Ghadge et al., 2017; Uhlaner et al., 2012; Wahga et al., 2017). For example, an environmentally friendly culture, a pro-environmental culture, a sustainability culture, and a culture of green consciousness, play a significant role in driving SMEs towards integrating sustainability practices in their business. According to Chen (2011) and Linnenluecke & Griffiths (2010), these kinds of culture can shape employees' behavior and make them more committed to sustainability activities. Some researchers believe that manufacturing company can adopt a green culture if the top management shows stronger commitment and nurtures values to preserve the natural environment (Yang & Hsu, 2010). In another study, Gandhi (2018) highlighted that top management commitment is the most critical driver for successfully implementing Lean Manufacturing and Green Manufacturing practices. The social responsibility and ethical concerns of top managers also drive environmental practices (Johnson, 2015; Thanki & Thakkar, 2018).

Hypothesis 3: Organizational culture has a significant effect on sustainability practices among small and medium enterprises.

2.2.4. Business partner

Engagement with collaborative ventures with larger corporate entities, that focus on joint sustainability endeavors, such as the development of eco-friendly products or the execution of green supply chain initiatives, can stimulate the integration of sustainability practices within MSME operations (Kolk & Pinkse, 2013). Furthermore, the provision of financial support by business partners, including grants, low-interest loans, or investments, has emerged as a crucial mechanism that can aid MSMEs in the implementation of sustainability initiatives and the enhancement of their environmental and social performance (Van den

Heuvel et al., 2019). Moreover, these strategic partnerships can facilitate the transference of sustainable technologies, knowledge, and best practices from larger, more resourceful organizations to MSMEs, thereby aiding the latter in the establishment of environmentally responsible processes (Nidumolu et al., 2009).

Hypothesis 4: Business partner has a significant effect on sustainability practices among small and medium enterprises.

2.2.5. Company reputation

Company reputation has been widely recognized by researchers as a significant driver for the implementation of sustainability practices among SMEs. Agan et al. (2013), Battisti and Perry (2011), Gadenne et al. (2009), Ghazilla et al. (2015), Masurel (2007), Sáez-Martínez et al. (2016), and Teddlie & Yu (2007) supported this viewpoint. Wahga et al. (2017) and Font et al. (2016) reported that a company will integrate sustainability practices to improve company reputation by increasing their economic gains, attracting customers, increasing sales, and enhancing external stakeholder satisfaction. SMEs can improve their green public image, demonstrate environmental stewardship, and cultivate a green brand image through their environmental activities, as highlighted by Battisti & Perry (2011); Cambra-Fierro & Ruiz-Benítez (2011); Gandhi et al. (2018); Lee (2009); and Revell et al. (2010).

Hypothesis 5: Company reputation has a significant effect on sustainability practices among small and medium enterprises.

2.2.6. Employee

Zhang (2009) emphasized that employee demand is a crucial factor in driving SMEs to adopt environmental practices. Furthermore, Masurel (2007) pointed out that improving working conditions for employees can serve as a primary motivation for SMEs to invest in ecological measures. In terms of the Greek food supply chain, investors have been found to impact the environmental performance of SMEs by raising environmental consciousness and influencing their decision-making (Ghadge et al., 2017). Family stakeholders in SMEs also exert pressure for pro-environmental practices, as posited by Uhlaner et al. (2012). This pressure arises from a desire to maintain the company's reputation and uphold family values.

Hypothesis 6: Employees have a significant effect on sustainability practices among small and medium enterprises.

2.2.7. Financial benefit

Numerous studies have consistently highlighted the relationship between ESG practices and a company's financial performance (for example, Habermann, 2021; Hu et al., 2018; Weber, 2017). Thomas et al. (2021) examined the connection between ESG and financial performance of Malaysian enterprises and found that social practices have a significantly positive effect on a company's financial performance. SME owners are more likely to adopt ESG practices when they perceive financial benefits associated with sustainability. Epoh and Mafini (2018) and Mafini and Muposhi (2017) contended that SMEs which implement sustainable supply chain management practices have the potential to achieve financial success.

Hypothesis 7: Financial benefits have a significant effect on sustainability practices among small and medium enterprises.

2.2.8. Competitor

Lee and Klassen (2008) argued that entrepreneurs actively modify the materials used in their manufacturing processes by studying new trends in the worldwide market, particularly in response to their competitors' product developments. This leads them to set goals for improved recyclability, establishing formal procedures for assessing the environmental performance of their new product development processes, and incorporating environmental safety and recyclability as essential criteria for evaluating product performance. In a specific case study conducted in Italy, it has been discovered that the behavior of competitors plays a crucial role in motivating SMEs to adopt environmental management practices. The SMEs lacked internal capabilities to interpret market dynamics, and therefore, they looked to their competitors' practices and initiatives to guide their own adoption of environmental management practices (Testa et al., 2016).

Hypothesis 8: Competitors have a significant effect on sustainability practices among small and medium enterprises.

2.2.9. Supplier

According to Lee (2008), SMEs have actively participated in the greening of the supply chain based on the readiness of their suppliers. The incorporation of green procurement policies and environmental criteria by SMEs have led to significant changes in their supplier selection processes (Lee & Klassen, 2008). In the case of China, SMEs that have internationalized their operations face greater supply chain pressure compared to domestic SMEs. These internationalized SMEs demonstrate improved social and environmental performance, and a stronger motivation towards sustainability practices (Yu, 2007). Ghadge et al. (2017) emphasized that suppliers serve as a crucial driving force for SMEs in their efforts to promote sustainability within supply chain networks, as observed in the Greek dairy industry.

Hypothesis 9: Suppliers have a significant effect on sustainability practices among small and medium enterprises.

2.2.10. Customer

Numerous studies have provided substantial evidence that customers play a significant role in influencing the behavior of SMEs towards sustainability. This influence stems from factors, such as green demand, compliance-driven demand, and the dynamics of buyer organizations. Scholars, including Battisti & Perry (2011), Lee (2009), Sáez-Martínez et al. (2016), Shields & Shelleman (2015), and Studer et al. (2006), have argued that proactive demand for environmentally friendly products, processes, and services, drives the adoption of sustainability practices in SMEs. The support and expectations of buyers have motivated many SMEs to undertake initiatives aimed at efficient energy and resource management, which ultimately can reduce their environmental footprints (Lee & Klassen, 2008). In addition, Gadenne et al. (2009), Günerergin et al. (2012), and Lee & Klassen (2008) noted that customers are increasingly demanding that SMEs should possess ISO 14001 certification to be recognized as suppliers.

Hypothesis 10: Customers have a significant effect on sustainability practices among small and medium enterprises.

2.2.11. Government

Governments play a significant role in influencing the behavior of SMEs through various means, such as regulations, legislations, economic and structural support, and knowledge dissemination. According to Gandhi et al. (2018), government support is crucial for the successful implementation of lean-green paradigms. Cambra-Fierro and Ruiz-Benítez (2011) suggested that sustainability practices in SMEs are primarily driven by legislation. Zhang et al. (2009) also argued that the imposition of regulations is the most effective mechanism to enhance the environmental performance of small businesses. To ensure compliance, SMEs face the possibility of substantial fines and penalties, which compels them to adopt sustainability practices (Saéz-Martínez et al., 2016). In addition, incentives provided by the government, such as loans, grants, tax concessions, and other economic benefits, make it easier for SMEs to embrace sustainability practices and undergo behavioral change (Gandhi et al., 2018; Revell et al., 2010).

Hypothesis 11: Government have a significant effect on sustainability practices among small and medium enterprises.

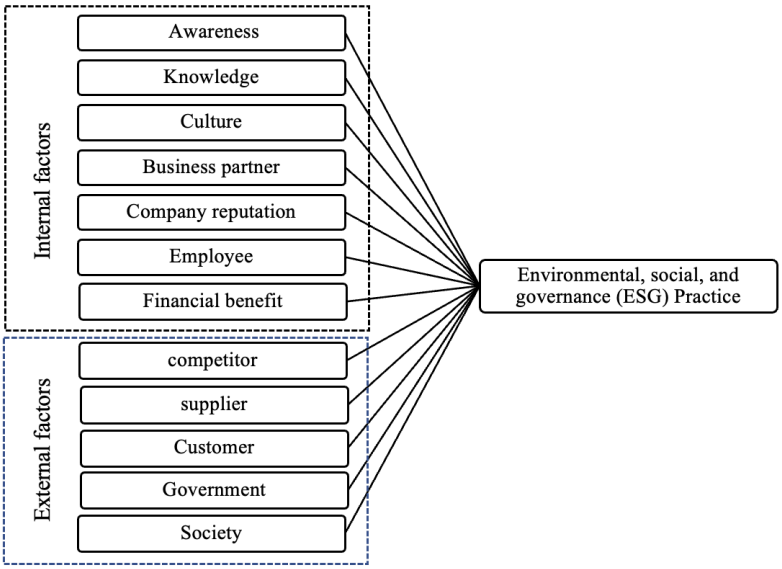
2.2.12. Society

The adoption of sustainable practices by SMEs is often motivated by the local community or society. For instance, in Australia, environmental pressure groups play a significant role in driving SMEs to incorporate environmental sustainability into their operations (Williams & O'Donovan, 2015). Zhang et al. (2009) reported that increased environmental awareness and demands from the local Chinese community, have exerted pressure on SMEs to prioritize environmental performance. In the United Kingdom (UK), Jansson et al. (2017) found that public demand has emerged as a major driver for the implementation of sustainability practices among SMEs. Similar findings have also been reported by Wattanapinyo & Mol (2013) in Thailand and Gandhi et al. (2018) in India.

Hypothesis 12: Society has a significant effect on sustainability practices among small and medium enterprises.

Based on the literature review and development of the 12 hypotheses above, the following research framework of this study is as in Figure 1:

Figure 1: Research Framework



Source: Author's own work

3. Methodology

3.1. Research Instrument

This study examines the determinant of sustainability practices among Malaysian SMEs located in in northern region. To achieve this research objective, a quantitative method was applied through the distribution of a structured self-administered questionnaire. The questionnaire was developed in two sections. The first section focused on general business demographics, while the second section addressed respondents' awareness of sustainability issues and factors influencing the implementation of sustainability practices. Sustainability practices among SMEs were measured using a five-point Likert scale.

3.2. Sampling procedures

Once the research problem has been clearly defined and data collection instruments have been developed, the next step in the research process is to identify the specific elements or subjects from which information will be gathered (Bougie & Sekaran, 2019). In this research, the unit of analysis is SMEs located in northern region of Malaysia, which

comprise of Perlis, Kedah, and Penang state. A sample of 250 respondents has been selected for this research using purposive sampling technique according to the definition of SMEs by SME Corporation as in Table 1. After the responses were screened, a total of 200 were found usable and valid for analysis, correlating with a valid response rate of 80%. This figure is considered reasonable for statistical analysis, as stated by Hair et al. (2019). Bagozzi and Yi (2012) also recommended that the ideal sample size for a study is above 100.

Table 1: Definition of Small and Medium Enterprises Used in this Study

Size	Manufacturing	Services & Other Sectors
Medium	Sales turnover between RM15 mil. and RM50 mil.; OR Between 75 and 200 employees	Sales turnover between RM3 mil. and RM20 mil.; OR Between 30 and 75 employees
Small	Sales turnover between RM300,000 and RM15 mil.; OR between 5 and 75 employees	Sales turnover between RM300,000 and RM3 mil.; OR between 5 and 30 employees

To determine the appropriate sample size for this study, G*Power 3.1.9.7 software was utilized. The calculation of sample size using a two-tailed test is as follow:

where,

$$n = \left(\frac{Z_{\alpha/2} + Z_{\beta}}{ES}\right)^2 \quad (1)$$

n = sample size per group

$Z_{\alpha/2}$ = Z value for the desired significant level (α)

Z_{β} = Z value for the desired power (1-β)

ES = Effect size (Cohen's d)

For this study, the significance level (α) is 0.05, corresponding to a Z_{α/2} value of approximately 1.96 for a two-tailed test. The desired power (1 - β) is 0.95, corresponding to a Z_{β} value of approximately 1.645, and the effect size (Cohen's d) is 0.3. Thus, the calculated sample size per group is approximately 144.4. Since the sample size must be a whole number, this is typically rounded up to 145 per group. Hence,

based on this study, the selected 200 respondents are accepted according to the recommendations by Cohen (1988).

3.3. Data Analysis

The research hypotheses were tested through the Ordinary Least Squares (OLS) regression using the SPSS software. OLS regression is one of the most widely used and accepted methods in statistical analysis for studying relationships between variables. The basic model is as below:

$$Y = \alpha + \sum_{j=1}^{m} B_j X_{ij} + \varepsilon_i \quad (2)$$

The regression analysis was run in four models, denoted as MODEL 1 (refer to Table 4), MODEL 2, MODEL 3, and MODEL 4 (refer to Table 5). In MODEL 1, regression analysis was conducted with ESG practices as the dependent variable as presented below:

$$\begin{aligned} ESG_i = \beta_o + \beta_1 awareness_i + \beta_2 knowledge_i + \beta_3 Org.culture_i \\ + \beta_4 Buss.partner_i + \beta_5 reputation_i + \beta_6 employee_i \\ + \beta_7 fin.benefit_i + \beta_8 competitor_i + \beta_9 supplier_i \\ + \beta_{10} customer_i + \beta_{11} gov.rules_i + \beta_{12} society_i + \varepsilon_i \end{aligned} \quad (3)$$

Firm's internal and external factors are used as the explonatory variables which were selected based on the previous studies. Among the internal variables included in this study are awareness and knowledge which measure the level of understanding and attention given to ESG issues within the organization. Variable organizational culture reflect how deeply ESG values are embedded in the company's practices. Additionally, the influence of business partners, company's reputation, employee, and financial benefit are included, as they can significantly affect ESG performance. Meanwhile, external factors are represented by influence of competitor, supplier, customer, government regulations, and societal expectations.

To further understand the impact of independent variables on ESG sustainability practices, another regression was run on three separate dependent variables, i.e., environmental (MODEL 2), social (MODEL 3), and governance (MODEL 4). Separate identification of determinants for environmental, social, and governance aspects is crucial due to the diverse impact of each factor (Crace and Gehman, 2022). Moreover,

analysing each component separately helps in providing a clearer picture of how explanatory variables contribute to different components of ESG practices. The models are presented below:

$$Environmental_i = \beta_o + \beta_1 awareness_i + \beta_2 knowledge_i + \beta_3 Org.culture_i + \beta_4 Buss.partner_i + \beta_5 reputation_i + \beta_6 employee_i + \beta_7 fin.benefit_i + \beta_8 competitor_i + \beta_9 supplier_i + \beta_{10} customer_i + \beta_{11} gov.rules_i + \beta_{12} society_i + \varepsilon_i \quad (4)$$

$$Social_i = \beta_o + \beta_1 awareness_i + \beta_2 knowledge_i + \beta_3 Org.culture_i + \beta_4 Buss.partner_i + \beta_5 reputation_i + \beta_6 employee_i + \beta_7 fin.benefit_i + \beta_8 competitor_i + \beta_9 supplier_i + \beta_{10} customer_i + \beta_{11} gov.rules_i + \beta_{12} society_i + \varepsilon_i \quad (5)$$

$$Governance_i = \beta_o + \beta_1 awareness_i + \beta_2 knowledge_i + \beta_3 Org.culture_i + \beta_4 Buss.partner_i + \beta_5 reputation_i + \beta_6 employee_i + \beta_7 fin.benefit_i + \beta_8 competitor_i + \beta_9 supplier_i + \beta_{10} customer_i + \beta_{11} gov.rules_i + \beta_{12} society_i + \varepsilon_i \quad (6)$$

4. Results and Discussion

4.1. Descriptive Statistics of Respondents Profiles

Descriptive analysis was performed to obtain information related to the respondents' business profile. From the perspective of the type of business, out of 200 respondents, 67% constitutes enterprises, 32% is private limited, and only 1% is of the public limited companies (Refer to Table 2). In terms of business ownership, 66% is sole proprietorship, while partnership and family business are 13% and 21%, respectively. More than three-quarters of businesses have been established for less than 20 years. About 97% of businesses have less than 50 employees. In terms of the business sector, the majority (64.5%) consists of trading/services, followed by the manufacturing sector (23%), and construction (7%). There is a balance in the respondents' business location in Kedah (34.5%), Perlis (34%), and Penang (31.5%).

Table 2: Demographic Characteristics of Respondents' Business

Demographic Characteristics (n=200)	Frequency	%
Business type		
Enterprise	134	67.0
Private limited company	64	32.0
Public limited company	2	1.0
Business ownership		
Sole proprietorship	132	66.0
Partnership	26	13.0
Family business	42	21.0
Establishment period (in years)		
0 – 5	31	15.5
6 – 10	48	24.0
11 – 20	90	45.0
21 – 30	23	11.5
> 31	8	4.0
Number of Employees		
1 – 5	79	39.5
6 – 15	96	48.0
16 – 25	10	5.0
26 – 50	9	4.5
> 50	6	3.0
Business Sector		
Construction	14	7.0
Manufacturing	46	23.0
Trading / services	129	64.5
Others	11	5.5
Business Location		
Kedah	69	34.5
Penang	63	31.5
Perlis	68	34.0

4.2. Descriptive Statistics of the Variables

Table 3 represents the descriptive statistics of the dependent and independent variables used in this study. Based on the analysis, the mean value for ESG practices among SMEs is 4.050, with a minimum value of 2 and a maximum value of 5. This study decomposed the ESG practices into three separate components of sustainability measures, i.e., environmental (E), social (S), and governance (G). Descriptive analysis reveals that the average (median) response for each of the components of E, S, and G is 3.780 (3.929), 4.298 (4.500), and 4.073 (4.286), respectively. From the dataset, the highest mean shows the determinants of sustainability practices among SMEs are knowledge (4.063), organizational culture (3.965), company reputation (3.878), and financial benefits (3.838). Business partnership shows the lowest mean (median) of 2.385 (3.000), with standard deviation of 1.922. Two factors indicate a minimum level of 2 and a maximum level of 5, i.e., awareness and knowledge. This indicates that the majority of the respondents agree that awareness and knowledge are among the most critical motivators for SMEs in integrating sustainability practices in their business activities.

Table 3: Descriptive Statistics of Dependent and Independent Variables Used

Variables	Mean	Median	Std. Dev.	Kurtosis	Skewness	Min.	Max.
Dependent Variables							
ESG practices (ESG)	4.050	4.193	0.516	0.556	-0.980	2	5
Environmental practice (E)	3.780	3.929	0.720	0.308	-0.786	1	5
Social practice (S)	4.298	4.500	0.473	2.159	-1.500	2	5
Governance practice (G)	4.073	4.286	0.673	0.960	-1.097	1	5
Independent Variables							
Awareness	3.633	3.750	0.882	-0.900	-0.369	2	5
Knowledge	4.063	4.167	0.588	-0.112	-0.620	2	5
Organizational culture	3.965	4.000	0.926	1.123	-0.965	1	5
Business partner	2.385	3.000	1.922	-1.567	-0.196	1	5
Company Reputation	3.878	4.000	0.806	-0.062	-0.483	1	5
Employees	3.460	4.000	0.987	0.191	-0.617	1	5
Financial benefits	3.838	4.000	0.820	0.362	-0.714	1	5
Competitors	3.587	3.600	0.639	1.328	-0.597	1	5
Suppliers	3.499	3.500	0.733	0.974	-0.563	1	5
Customers	3.375	3.500	0.820	-0.201	-0.379	1	5
Government Rules	3.505	3.500	0.702	1.342	-0.701	1	5
Society	3.698	3.500	0.748	0.765	-0.508	1	5

Source: Author’s own wor

4.3. Multiple Regression Analysis

Table 4 represents the regression results that explain the determinants of ESG practices among SMEs with ESG as the dependent variable. Overall, the adjusted R-squared value of 0.563 indicates that 56.3% of the independent variables used in this study can explain sustainability practices among SMEs. The F-statistics (F=22.33) is significant at the 1% level (Sig. F<0.01), thus confirming the fitness of the model. The findings reported in Table 4 show that awareness (β_1 = 0.144, t-value = 3.853, p<0.05) and knowledge (β_2 = 0.251, t-value = 4.907, p<0.05) are found to have positive correlations with sustainability practices. This implies that good awareness and knowledge among SME entrepreneurs on sustainability, can motivate them to integrate sustainability practices into their business operations. Hence, H1 and H2 are supported. Similarly, organizational culture has a significant influence on sustainability practices among SMEs, hence inferring that H3 is accepted. This finding is consistent with Ghadge et al. (2017), Uhlaner et al. (2012), and Wahga et al. (2017), who suggested that organizational culture serves as a significant driver for SMEs in implementing sustainability practices in their business. Consistent with H5, company reputation has a positive relationship with sustainability practices in SMEs. The positive coefficient suggests that SMEs tend to integrate sustainability practices into their business operations if they find that it will enhance their company's reputation. The results support the findings of Agan et al. (2013) and Ghazilla et al. (2015). This study reveals that business partnership has a significantly negative relationship (β_4 = -0.052, t-value = -3.288, p<0.05) with sustainability practices in SMEs. This indicates that business partners reduce the implementation of sustainability practices by SME owners. This might be due to the dependence of SME owners on their business partners particularly in adopting ESG practices in their business.

Among the external factors, only H8 is supported, implying that the competitors' factor (β_8 = 0.265, t-value = 3.445, p<0.05) is significantly and positively associated with sustainability practices among SMEs. This finding is in line with Lee and Klassen (2008) and Testa et al. (2016), who concluded that the competitors' concern with ESG factors motivates SMEs to consider sustainability practices in their business activities. Other external factors, such as suppliers, customers, and

government rules, are insignificant drivers for SMEs to adopt sustainability practices.

Financial benefits (H7) and government (H11) are found to be insignificant in motivating the implementation of sustainability practices among SMEs. The finding is consistent with Chaowanapong et al. (2018), who contended that the financial benefits and government factors are among the least critical variables in determining a company's decision to integrate sustainability practices, particularly for the benefit of the environment. Contrary to H9, the analysis reveals that suppliers do not have a significant influence on sustainability practices among SMEs. The role of suppliers in influencing sustainability practices within SMEs has been a subject of interest in sustainability and supply chain management literature. Finally, the results of this study show that customers (H10) and society (H12) are not the main determinants for SMEs to integrate sustainability practices in their business activities.

The results of this study shed light on the intricate web of influences that impacts sustainability practices by SMEs. It is evident that internal factors like awareness, organizational culture, and company reputation strongly drive sustainability practices among SMEs, emphasizing the need for fostering a sustainable corporate environment. External factors like suppliers, customers, and government regulations seem to have less impact on SMEs' sustainability adoption.

Table 4: Multiple Regression Analysis on the Determinants of Environmental, Social, and Governance (ESG) Practices among Small and Medium Enterprises (SMEs).

MODEL 1					
Independent Variables	**Unstandardized Coefficients**		**Standardized Coefficients**	**t-stat**	**p-value**
	Beta	**Std. Error**	**Beta**		
(Constant)	1.366	0.211		6.460	0.000
Internal Factors					
Awareness	0.144	0.037	0.246	3.853***	0.000
Knowledge	0.251	0.051	0.286	4.907***	0.000
Organisational culture	0.107	0.037	0.192	2.880***	0.004
Business partnership	-0.052	0.016	-0.194	-3.288***	0.001
Company Reputation	0.099	0.051	0.155	1.937*	0.054
Employees	-0.031	0.034	-0.060	-0.914	0.362
Financial benefits	-0.087	0.049	-0.138	-1.780	0.077
External Factors					
Competitors	0.265	0.077	0.328	3.445***	0.001
Suppliers	-0.021	0.061	-0.030	-0.351	0.726
Customers	0.031	0.036	0.050	0.876	0.382
Government rules	0.038	0.048	0.052	0.802	0.424
Society	-0.059	0.047	-0.085	-1.250	0.213
R-square: 0.589					
Adj. R-square: 0.563					
F-value(p-value): 22.33(0.000)					

Note: *p < 0.05; ** p < 0.001. N = 200

This study extends the analysis by decompose the dependent variable of ESG into three separate components of environmental (E), social (S), and governance (G). The results are presented in Table 5 below. Findings from MODEL 2 reveal that awareness, organizational culture, competitors, and customers, play a significant role in enhancing environmental protection among business owners. In particular, better awareness and good organizational culture can lead to environmental protection by SME entrepreneurs. In line with Baah et al. (2021), SMEs have higher tendency to protect the environment when their external stakeholders, such as competitors and customers are concerned with environmental issues. Surprisingly, business partnership is found to be negatively significant only in MODEL 2 (environmental). The results indicate that business partners who care for the environment reduce the tendency of SME owners to carry out environmental protection activities. This might be due to the dependence of SME owners on their business partners. If SME owners believe that their business partners are doing enough to comply with environmental regulations, they may not see the need to go beyond the minimum requirements. This perception could result in a lack of motivation to engage in additional environmental protection activities.

In MODEL 3 of Table 5, social practice is the dependent variable. The regression results show that knowledge, organizational culture, and competitors, significantly and positively relate to social sustainability practices among SMEs. A strong relationship between knowledge and social practices indicates that SMEs will be more likely to consider and implement social sustainability practices in their business activities. The top management of the company also plays a role in social practices by developing a social sustainability culture in the organization. This culture can encourage SMEs to make positive contributions to the society. Further, pressure from business competitors significantly motivates SMEs to integrate sustainability practices. Interestingly, company reputation and financial benefits are not the main factors for SMEs to carry out social activities.

Analysis of governance practices in SMEs (MODEL 4) reveals that internal factors, such as awareness, knowledge, organizational culture, company reputation, and employees, are the most critical determinants for SMEs to implement governance practices. In this context, governance practices refer to a set of principles, policies, procedures,

standards, and norms that are used to direct and control an entity in an ethical, equitable, and responsible manner (Briozzo, Albanese, & Santolíquido, 2017). The significantly positive relationship between awareness and knowledge and governance practices indicates that better awareness and knowledge related to governance can improve the governance practices among SMEs. In addition, organizational culture and company reputation are factors that motivate SMEs to implement good governance practices. This result supports the findings of Miladi (2014), who concluded that good governance practices are determined by the profile of the leader or owner of the SMEs. Leaders with extensive experience and knowledge tend to implement good corporate governance by creating a more responsible organizational culture. However, the analysis in MODEL 4 shows that the employees' factor is negatively related to governance practices. This suggests that employees reduce the tendency of SMEs to implement governance practices. This might be due to concentrated ownership practiced in the majority of Malaysian SMEs (Claessens et al., 2000). Thus, chances for the protection of minority shareholders and employee rights will be low (Silva & Majluf, 2008)

Table 5: Regression Analysis on the Determinants of Environmental (E), Social (S), and Governance (G) Practices among Small and Medium Enterprises (SMEs).

Independent Variables	MODEL 2 Environmental (E)		MODEL 3 Social (S)		MODEL 4 Governance (G)	
	Coeff.	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**
Intercept	0.781	2.453	2.805	10.768	0.512	1.818
Internal Factors						
Awareness	0.316	5.631***	0.009	0.195	0.106	2.134***
Knowledge	0.108	1.401	0.159	2.531***	0.485	7.122***
Organisational culture	0.113	2.032***	0.104	2.275***	0.103	2.084***
Business partnership	-0.104	-4.353***	-0.025	-1.303	-0.027	-1.281
Company reputation	0.020	0.266	0.113	1.796*	0.164	2.400***
Employees	0.055	1.058	-0.053	-1.265	-0.095	-2.083***
Financial benefits	-0.108	-1.478	-0.114	-1.891*	-0.038	-0.590
External Factors						
Competitors	0.347	2.997***	0.247	2.602***	0.202	1.965*
Suppliers	-0.062	-0.678	0.050	0.666	-0.052	-0.639
Customers	0.112	2.082***	-0.047	-1.076	0.029	0.616
Government rules	0.100	1.390	-0.018	-0.297	0.032	0.509
Society	-0.109	-1.540	-0.053	-0.910	-0.015	-0.234
R-square:	*0.522*		*0.258*		*0.570*	
Adj. R-square:	*0.491*		*0.211*		*0.542*	
F-value (p-value):	*17.04 (0.000)*		*5.427 (0.000)*		*20.67 (0.000)*	

5. Conclusion

This study underscores the need for a comprehensive understanding of the interactions between various factors influencing sustainability practices in the context of SMEs. It emphasizes that while internal factors are crucial, the influence of external factors should not be underestimated. A holistic approach that considers the interplay of these factors can provide a more accurate and actionable framework for SMEs seeking to enhance their sustainability practices, contributing to both their economic success and environmental and social responsibility. Interestingly, the findings suggest that internal factors, such as awareness, knowledge, and organizational culture, are the critical drivers for SMEs to integrate sustainability practices in their business activities. Further analysis using three separate components of sustainability reveals that organizational culture consistently enhances ESG sustainability practices among SMEs in Malaysia. The study finds that only one external factor, i.e., competitors, plays a role in motivating SMEs to engage with sustainable practices. SMEs appear to be more inclined to adopt sustainability practices when they perceive that their competitors are actively addressing ESG issues. This emphasizes the role of industry dynamics and market pressures in shaping sustainability practices among SMEs.

This study highlights the importance of internal factors like awareness and organizational culture, as well as the role of competitors in motivating sustainability adoption. Additionally, it emphasizes the link between company reputation and sustainability practices. The findings suggest that SMEs should prioritize sustainability to enhance their reputation and meet consumer expectations. The study finds that government regulations and financial benefits are not significant motivators for SMEs to adopt sustainability practices. It suggests that additional incentives and a strategic, long-term sustainability plan aligned with organizational goals are needed. Policymakers could enhance the appeal of sustainability initiatives for SMEs. By focusing on internal and external factors, SMEs in Malaysia can develop sustainable business models contributing to economic, environmental, and social well-being.

Yet, the findings of this study are subjected to certain limitations which need to be recognized. Samples of this study is confined to the northern

region of Malaysia, specifically focusing on the states of Kedah, Penang, and Perlis. This limited geographic scope may impact the generalizability of the findings to SMEs in other regions or states, potentially missing regional variations in sustainability practices. Thus, the findings may not fully represent the diversity of SMEs across different regions in Malaysia, each with its unique economic, social, and cultural context. Future research should broaden the geographical scope to capture a more representative sample. Additionally, while the study identifies internal and external variables influencing sustainability practices, certain relevant factors such as technological adoption and industry-specific influences are omitted, suggesting a need for a more comprehensive analysis. Integrating additional variables could enhance understanding of the complexities involved in SME sustainability adoption.

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Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500.

References

Adebanjo, D., Teh, P. L., & Ahmed, P. K. (2018). The impact of supply chain relationships and integration on innovative capabilities and manufacturing performance: the perspective of rapidly developing countries. *International journal of production research*, *56*(4), 1708-1721.

Agan, Y., Acar, M. F., & Borodin, A. (2013). Drivers of environmental processes and their impact on performance: a study of Turkish SMEs. *Journal of cleaner production*, *51*, 23-33.

Atasu, A., Sarvary, M., & Van Wassenhove, L. N. (2008). Remanufacturing as a marketing strategy. *Management science*, *54*(10), 1731-1746.

Baah, C., Opoku-Agyeman, D., Acquah, I. S. K., Agyabeng-Mensah, Y., Afum, E., Faibil, D., & Abdoulaye, F. A. M. (2021). Examining the correlations between stakeholder pressures, green production practices, firm reputation, environmental and financial performance: Evidence from manufacturing SMEs. Sustainable Production and Consumption, 27, 100-114. https://doi.org/10.1016/j.spc.2020.10.015

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

Barney, J. B., Ketchen Jr, D. J., & Wright, M. (2011). The future of resource-based theory: revitalization or decline?. *Journal of management*, *37*(5), 1299-1315.

Battisti, M., & Perry, M. (2011). Walking the talk? Environmental responsibility from the perspective of small-business owners. *Corporate Social Responsibility and Environmental Management*, *18*(3), 172-185.

Bevan, E. A. M., & Yung, P. (2015). Implementation of corporate social responsibility in Australian construction SMEs. *Engineering, Construction and Architectural Management*, *22*(3), 295–311. https://doi.org/10.1108/ECAM-05-2014-0071

Blundel, R., Monaghan, A., & Thomas, C. (2013). SMEs and environmental responsibility: a policy perspective. *Business Ethics: A European Review*, *22*(3), 246–262. https://doi.org/10.1111/beer.12020

Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill building approach*. John Wiley & Sons.

Brammer, S., Hoejmose, S., & Marchant, K. (2012). Environmental Management in SMEs in the UK: Practices, Pressures and Perceived Benefits. *Business Strategy and the Environment*, *21*(7), 423–434. https://doi.org/10.1002/bse.717

Briozzo, A., Albanese, D., & Santolíquido, D. (2017). Corporate governance, financing and gender: A study of SMEs from Argentinean Securities Markets. *Contaduría y administración*, *62*(2), 358-376.

Bursa Malaysia. (2015). Sustainability Reporting Guide. In *Sustainability Reporting Guide*.

Bursa Malaysia. (2020). *ESG Ratings of PLCs assessed by FTSE Russell* (Issue June).

Business Today. (2021). *Good Governance and ESG Not Just For Big Companies, SME's Should Practice*. Business Today. https://www.businesstoday.com.my/2021/05/23/good-governance-and-esg-not-just-for-big-companies-smes-should-practice/

Cambra-Fierro, J., & Ruiz-Benítez, R. (2011). Sustainable business practices in Spain: a two-case study. *European Business Review*, *23*(4), 401-412.

Chaowanapong, J., Jongwanich, J. and Ijomah, W. (2018), "The determinants of remanufacturing practices in developing countries: evidence from Thai industries", Journal of Cleaner Production, Vol. 170, pp. 369-378.

Chen, Y. (2011), "*Green organizational identity: sources and consequence*", Management Decision, Vol. 49 No. 3, pp. 384-404.

Christofi, A., Christofi, P., & Sisaye, S. (2012). Corporate sustainability: historical development and reporting practices. *Management Research Review*, *35*(2), 157–172. https://doi.org/10.1108/01409171211195170

Claessens, S., Djankov, S., & Lang, L. H. P. (2000). The separation of ownership and control in East Asian Corporations. Journal of Financial Economics, 58(1–2), 81- 112.

Cordeiro, J. J., & Sarkis, J. (1997). Environmental proactivism and firm performance: evidence from security analyst earnings forecasts. Business strategy and the environment, 6(2), 104-114. https://doi.org/10.1002/(SICI)1099-0836(199705)6:2<104::AID-BSE102>3.0.CO;2-T

Crace, L., Gehman, J., 2022. What really explains ESG performance? Disentangling the asymmetrical drivers of the triple bottom line. Organ. Environ. 36 (1), 150–178. https://doi.org/10.1177/10860266221079408.

Das, M., Rangarajan, K., & Dutta, G. (2020). Corporate sustainability in SMEs: an Asian perspective. *Journal of Asia Business Studies*, *14*(1), 109–138. https://doi.org/10.1108/JABS-10-2017-0176

de Sousa Jabbour, A. B. L., Jabbour, C. J. C., Hingley, M., Vilalta-Perdomo, E. L., Ramsden, G., & Twigg, D. (2020). Sustainability of supply chains in the wake of the coronavirus (COVID-19/SARS-CoV-2) pandemic: lessons and trends. *Modern supply chain research and applications*, *2*(3), 117-122.

del Brío, J. Á., & Junquera, B. (2003). A review of the literature on environmental innovation management in SMEs: implications for public policies. *Technovation*, *23*(12), 939–948. https://doi.org/10.1016/S0166-4972(02)00036-6

Department of Statistics Malaysia. (2021). *Small and Medium Enterprises (SMEs) Performance 2020*.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, 147-160.

Dos, S., & De, B. (2014). Social responsibility, sustainability and micro-enterprises: Contributions made by a micro-enterprise. *Megatrend Revija*, *11*(3), 123–134. https://doi.org/10.5937/MegRev1403123D

Duman, E. A., Topgül, M. H., & ES, H. A. Lean, Agile and Leagile (2015). Supply Chain Managements: A Review Study. In International Conference on Value Chain Sustainability (pp. 470-482). https://www.researchgate.net/profile/Eyuep Duman/publication/305650176_Lean_Agile_And_Leagile_Supply_Chain_Managements_A_Review_Study/links/59eeeced4585154350e83616/Lean-Agile-And-Leagile-Supply-Chain-Managements-A-Review-Study.pdf

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, *23*(4), 660-679.

Epoh, L. R., & Mafini, C. (2018). Green supply chain management in small and medium enterprises: Further empirical thoughts from South Africa. Journal of Transport and Supply Chain Management, 12, 1–2. https://doi.org/10.4102/jtscm.v12i0.393

Font, X., Garay, L., & Jones, S. (2016). A social cognitive theory of sustainability empathy. *Annals of Tourism Research*, *58*, 65-80.

Gadenne, D. L., Kennedy, J., & McKeiver, C. (2009). An empirical study of environmental awareness and practices in SMEs. *Journal of Business Ethics*, *84*, 45-63.

Gandhi, N. S., Thanki, S. J., & Thakkar, J. J. (2018). Ranking of drivers for integrated lean-green manufacturing for Indian manufacturing SMEs. Journal of Cleaner Production (Vol. 171). Elsevier B.V. https://doi.org/10.1016/j.jclepro.2017.10.041

Ghadge, A., Kaklamanou, M., Choudhary, S., & Bourlakis, M. (2017). Implementing environmental practices within the Greek dairy supply chain. Industrial Management & Data Systems, 117(9), 1995–2014. https://doi.org/10.1108/IMDS-07-2016-0270

Ghazilla, R. A. R., Sakundarini, N., Abdul-Rashid, S. H., Ayub, N. S., Olugu, E. U., & Musa, S. N. (2015). Drivers and barriers analysis for green manufacturing practices in Malaysian SMEs: a preliminary findings. *Procedia Cirp*, *26*, 658-663.

Gold, S., Seuring, S., & Beske, P. (2010). Sustainable supply chain management and inter-organizational resources: a literature review. *Corporate social responsibility and environmental management*, *17*(4), 230-245.

Goyal, P., Rahman, Z., & Kazmi, A. A. (2015). Identification and prioritization of corporate sustainability practices using analytical hierarchy process. *Journal of Modelling in Management*, *10*(1), 23–49. https://doi.org/10.1108/JM2-09-2012-0030

Habermann, Florian. 2021. "Corporate Social Performance and Over-Investment: Evidence from Germany." *Journal of Global Responsibility* 12 (3): 347–63. https://doi.org/10.1108/JGR-11-2020-0095.

Hu, Haiqing, Chun Ping Chang, Minyi Dong, Wei Na Meng, and Yu Hao. 2018. "Does Environmental Information Disclosure Affect the Performance of Energy-Intensive Firms' Borrowing Ability? Evidence from China." *Energy and Environment* 29 (5): 685–705. https://doi.org/10.1177/0958305X18757766.

Johnson, M. P. (2015). Sustainability Management and Small and Medium-Sized Enterprises: Managers‟ Awareness and Implementation of Innovative Tools. Corporate Social Responsibility and Environmental Management, 22(5), 271–285. https://doi.org/10.1002/csr.1343

Johnson, M. P., & Schaltegger, S. (2016). Two Decades of Sustainability Management Tools for SMEs: How Far Have We Come? *Journal of Small Business Management*, *54*(2), 481–505. https://doi.org/10.1111/jsbm.12154

Kamaludin, K., Ibrahim, I., Sundarasen, S., & Faizal, O. V. A. (2022). ESG in the boardroom: Evidence from the Malaysian market. *International Journal of Corporate Social Responsibility*, *7*(1), 4.

Kolk, A., Levy, D., & Pinkse, J. (2008). Corporate responses in an emerging climate regime: The institutionalization and commensuration of carbon disclosure. *European accounting review*, *17*(4), 719-745.

Lee, K. (2009). Gender differences in Hong Kong adolescent consumers' green purchasing behavior. *Journal of consumer marketing*, *26*(2), 87-96.

Lee, S. Y. (2008). Drivers for the participation of small and medium-sized suppliers in green supply chain initiatives. Supply chain management: an international journal, 13(3), 185-198. https://doi.org/10.1108/13598540810871235

Linnenluecke, M.K. and Griffiths, A. (2010), "*Corporate sustainability and organizational culture*", Journal of World Business, Vol. 45 No. 4, pp. 357-366

Mafini, C., & Muposhi, A. (2017). The impact of green supply chain management in small to medium enterprises: Cross-sectional evidence. Journal of Transport and Supply Chain Management, 11, 1–11. https://doi.org/10.4102/jtscm.v11i0.270

Masurel, E. (2007). Why SMEs invest in environmental measures: sustainability evidence from small and medium-sized printing firms. *Business Strategy and the Environment*, *16*(3), 190-201.

Miladi, A. I. (2014). Governance for SMEs: Influence of leader on organizational culture. *International Strategic Management Review*, *2*(1), 21-30

Mohammad, W. M. W., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. *Cleaner Environmental Systems*, *2*, 100015.

Ng, Y., Li, Z., Chua, Y. X., Chaw, W. L., Zhao, Z., Er, B., ... & Lee, V. J. (2020). Evaluation of the effectiveness of surveillance and containment measures for the first 100 patients with COVID-19 in Singapore—January 2–February 29, 2020. *Morbidity and mortality weekly report*, *69*(11), 307.

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard business review*, *87*(9), 56-64.

Peng, H., Wang, H., & Chen, D. (2019). Optimization of remanufacturing process routes oriented toward eco-efficiency. *Frontiers of Mechanical Engineering*, *14*, 422-433.

Poret, S. (2019). Corporate–NGO partnerships through sustainability labeling schemes: motives and risks. *Sustainability*, *11*(9), 2689.

Ranabahu, N., & Wickramasinghe, A. (2022). Sustainable Leadership in Microfinance: A Pathway for Sustainable Initiatives in Micro and Small Businesses?. *Sustainability*, *14*(9), 5167.

Revell, A., Stokes, D., & Chen, H. (2010). Small businesses and the environment: turning over a new leaf?. *Business strategy and the environment*, *19*(5), 273-288.

Roxas, B., & Chadee, D. (2012). Environmental sustainability orientation and financial resources of small manufacturing firms in the Philippines. *Social Responsibility Journal*, *8*(2), 208–226. https://doi.org/10.1108/17471111211234842

Sáez-Martínez, F. J., Lefebvre, G., Hernández, J. J., & Clark, J. H. (2016). Drivers of sustainable cleaner production and sustainable energy options. *Journal of cleaner production*, *138*, 1-7.

Silva, F., & Majluf, N. (2008). Does family ownership shape performance outcomes? Journal of Business Research, 61(6), 609-614.

Sroufe, R. (2017). Integration and organizational change towards sustainability. Journal of Cleaner Production, 162, 315-329. https://doi.org/10.1016/j.jclepro.2017.05.180

Swarnapali, R. M. N. C. (2017). Corporate sustainability: A Literature review. *Journal for Accounting Researchers and Educators*, *1*(1), 1–15.

Tay, M. Y., Abd Rahman, A., Aziz, Y. A., & Sidek, S. (2015). A review on drivers and barriers towards sustainable supply chain practices. International Journal of Social Science and Humanity, 5(10), 892. https://doi:10.7763/IJSSH.2015.V5.575

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of mixed methods research*, *1*(1), 77-100.

Thanki, S. J., & Thakkar, J. (2018). Interdependence analysis of lean-green implementation challenges: A case of Indian SMEs. Journal of Manufacturing Technology Management. https://doi.org/10.1108/JMTM-04-2017- 0067

Thomas, Christopher Jerry, Jasman Tuyon, Hylmee Matahir, and Samir Dixit. 2021. "The Impact of Sustainability Practices on Firm Financial Performance: Evidence from Malaysia." *Management and Accounting Review* 20 (3): 211–43. https://doi.org/10.24191/mar.v20i03-09.

Touboulic, A., & Walker, H. (2015). Theories in sustainable supply chain management: a structured literature review. *International Journal of Physical Distribution & Logistics Management*, *45*(1/2), 16-42.

Tsvetkova, D., Bengtsson, E., & Durst, S. (2020). Maintaining sustainable practices in SMEs: Insights from Sweden. Sustainability, 12(24), 10242. https://doi.org/10.3390/su122410242

Uhlaner, L. M., Berent-Braun, M. M., Jeurissen, R. J. M., & de Wit, G. (2012). Beyond Size: Predicting Engagement in Environmental Management Practices of Dutch SMEs. Journal of Business Ethics, 109(4), 411–429. https://doi.org/10.1007/s10551-011-1137-x

Van Holt, T., Delaroche, M., Atz, U., & Eckerle, K. (2021). Financial benefits of reimagined, sustainable, agrifood supply networks. *Journal of International Business Policy*, *4*, 102-118.

Verlag, R. H. (2014). *Corporate social responsibility of Hungarian SMEs with good environmental practices*. *19*(3), 327–347. https://doi.org/10.1688/JEEMS-2014-03-Nagypal

Voice of Asean. (2021). *Driving ESG in corporate Malaysia*. Voice of Asean. https://voiceofasean.com/business/economy/driving-esg-in-corporate-malaysia/

Wahga, A. I., Blundel, R., & Schaefer, A. (2017). Understanding the drivers of sustainable entrepreneurial practices in Pakistan‟s leather industry. International Journal of Entrepreneurial Behavior & Research, IJEBR-11-2015-0263. https://doi.org/10.1108/IJEBR-11-2015-0263

Walker, H., Di Sisto, L., & McBain, D. (2008). Drivers and barriers to environmental supply chain management practices: Lessons from the public and private sectors. Journal of purchasing and supply management, 14(1), 69-85. https://doi.org/10.1016/j.pursup.2008.01.007

Weber, Olaf. 2017. "Corporate Sustainability and Financial Performance of Chinese Banks." *Sustainability Accounting, Management and Policy Journal* 8 (3): 358–85. https://doi.org/10.1108/SAMPJ-09-2016-0066.

Yang, Y.C. and Hsu, J.M. (2010), "Organizational process alignment, culture and innovation", *African Journal of Business Management, Vol. 4 No. 11, pp. 2231-2240.*