



The Influence of Economic, Social and Environmental Dimensions on Small and Medium-Sized Enterprises (SMEs) Sustainability in Selangor

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ABSTRACT

This study seeks to identify the factors that shape the sustainability of Small and Medium-sized Enterprises (SMEs), with a particular focus on SMEs in Selangor. SMEs' sustainability refers to the ability of Small and Medium-sized Enterprises (SMEs) to maintain and enhance their economic, social, and environmental performance over the long term. It involves responsible and efficient use of resources, the development of resilient business practices, and a commitment to addressing social and environmental challenges. Sustainable SMEs strive for economic viability while considering societal well-being and minimizing environmental impacts. This includes efforts to foster innovation, ethical business conduct, community engagement, and environmental stewardship, contributing to long-term business success and positive societal outcomes. By gathering and analyzing data from a sample of 100 SMEs operating in the Selangor region, this research examines the factors influencing SME sustainability. It employs a quantitative research approach by disseminating a questionnaire through a Google Form developed by the researcher. The statistical significance of the data was assessed using Statistical Package for the Social Sciences (SPSS) Software version 29. The findings indicate that all the variables had a substantial impact on the firm's performance. Consequently, to enhance understanding of financial transparency within the company, it is imperative to pay particular attention to improving the organizational structure to improve overall firm performance.

Keywords: *Economic, Social, Environment, SMEs, Sustainability*

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1. INTRODUCTION

The sustainability of Small and Medium-sized Enterprises (SMEs) is increasingly recognized as a vital element in the economic landscape, particularly within the Malaysian context, where SMEs are pivotal in driving economic growth and reducing unemployment. The growth of SMEs worldwide has been notable due to the relatively low capital required to start such businesses. As defined by SMEcorp, SMEs span various sectors, including manufacturing, services, and agriculture, each adhering to specific thresholds for revenue and employee numbers (Moursellas et al., 2022). However, this economic promise is often accompanied by significant environmental challenges, including climate change and resource depletion, necessitating that SMEs adopt more sustainable practices. An increasing body of research highlights that SMEs face mounting pressures not only from regulatory frameworks but also from customer demand for greener products and sustainable practices, often serving as external motivators for these businesses (Ali et al., 2021; Clemente-Almendros et al., 2025).

Despite their essential role in the economy, SMEs often lag in implementing comprehensive sustainability measures. A study by Moursellas et al. suggests that SMEs' engagement with sustainability practices varies significantly across industries, reflecting the complexity of integrating sustainable operations into diverse business models (Moursellas et al., 2022; Ali et al., 2021). Effective sustainable entrepreneurship must balance economic growth with social and environmental responsibilities, yet many SMEs still struggle to recognize the full spectrum of benefits that sustainable practices can provide. These benefits can include improved competitive capabilities and enhanced performance metrics within economic, environmental, and social domains (Malesios et al., 2018; Min et al., 2023).

Characteristically, SMEs are often constrained by limited resources, which can hinder their ability to invest in sustainable practices. This limitation is compounded by a general lack of awareness and expertise regarding environmental impacts and sustainability options (Boiral et al., 2013; Durrani et al., 2024). However, studies have identified that innovative approaches tailored to SMEs' specific needs can facilitate greater engagement with sustainability initiatives. For instance, fostering organizational flexibility and integrating sustainable principles into strategic management can enhance business performance and enable SMEs to contribute positively to the Sustainable Development Goals (SDGs) (Malesios et al., 2018; Hanan et al., 2021).

This research thus aims to elucidate the key factors influencing the sustainability of SMEs in Selangor, Malaysia. It will scrutinize the interrelationships between economic, social, and environmental dimensions as pivotal components of SME sustainability. Such insights will be invaluable for SMEs seeking to harmonize their operational pursuits with sustainable development principles, ultimately contributing to a more robust academic discourse on the sustainability of SMEs (Malesios et al., 2018; Hanan et al., 2021).

2. LITERATURE REVIEW

The increasing focus on sustainability within Small and Medium-sized Enterprises (SMEs), particularly in Malaysia, reflects a growing recognition of the need to harmonize economic viability, environmental stewardship, and social engagement. This synthesis presents a comprehensive overview of the literature surrounding the multidimensional approach to SME sustainability, specifically addressing the economic, social, and environmental dimensions as articulated within the Triple Bottom Line (TBL) framework.

2.1 Sustainability and the TBL Framework

Sustainability has emerged as a central paradigm in contemporary business strategy, particularly among Small and Medium-sized Enterprises (SMEs), which play a critical role in economic development. The **Triple Bottom Line (TBL)** framework conceptualizes sustainability as a multidimensional construct encompassing economic, social, and environmental performance. Unlike traditional business models that prioritize profit maximization, the TBL approach

advocates a more holistic evaluation of firm performance by integrating social responsibility and environmental stewardship alongside financial outcomes.

Empirical studies suggest that SMEs adopting the TBL framework tend to achieve long-term resilience and competitive advantage, as sustainability practices enhance firm reputation, stakeholder trust, and operational efficiency (Malesios et al., 2018; Castellani et al., 2023). However, the adoption of TBL practices varies significantly across contexts, particularly between developed and developing economies. In advanced economies, institutional pressures and regulatory frameworks often compel firms to adopt sustainability practices more systematically, whereas SMEs in developing countries, including Malaysia, tend to adopt such practices more selectively due to resource constraints and limited awareness (Durrani et al., 2024; Suchek et al., 2022).

This divergence highlights the importance of contextualizing sustainability within the operational realities of SMEs, where trade-offs between short-term financial performance and long-term sustainability goals are often more pronounced.

2.2 Economic Dimension of Sustainability

The economic dimension of sustainability remains fundamental, as financial viability is a prerequisite for the survival and growth of SMEs. It encompasses profitability, cost efficiency, market competitiveness, and long-term financial stability. Prior studies have consistently demonstrated a positive relationship between sustainable practices and economic performance, particularly through cost savings, efficiency gains, and improved access to financing (Hermawan et al., 2023; Ali et al., 2020).

Nevertheless, contrasting evidence suggests that the economic implications of sustainability may not always be favorable in the short term. For instance, investments in environmentally friendly technologies and socially responsible practices often require substantial upfront costs, which may strain the financial capacity of SMEs (Bag et al., 2022). This is particularly relevant in developing economies, where SMEs operate under tighter financial constraints compared to their counterparts in developed countries.

Comparatively, while SMEs in developed economies may benefit from subsidies, tax incentives, and access to green financing, SMEs in Malaysia may experience sustainability initiatives as a financial burden rather than an opportunity, especially in the absence of adequate institutional support. This dichotomy underscores the need to critically assess the economic dimension not only as a driver but also as a potential constraint to the adoption of sustainability.

2.3 Social Dimension of Sustainability

The social dimension of sustainability focuses on the role of SMEs in promoting social well-being, ethical practices, and stakeholder engagement. This includes corporate social responsibility (CSR), employee welfare, community involvement, and ethical governance. Empirical evidence indicates that SMEs actively engaging in social sustainability practices tend to experience enhanced customer loyalty, improved employee satisfaction, and stronger stakeholder relationships (López-Pérez et al., 2018; Masocha, 2019).

From a comparative perspective, SMEs in developed economies often institutionalize CSR practices as part of their strategic orientation, driven by stakeholder pressure and regulatory requirements. In contrast, SMEs in developing economies typically adopt a more informal and reactive approach to social sustainability, often driven by cultural norms or ad hoc initiatives rather than structured strategies (Mengistu & Panizzolo, 2023).

Despite these differences, the social dimension is increasingly recognized as a strategic asset that contributes to long-term sustainability and competitive advantage. In the Malaysian context, where SMEs are deeply embedded within local communities, social engagement can play a pivotal role in enhancing business legitimacy and trust.

2.4 Environmental Dimension of Sustainability

Environmental sustainability has gained increasing attention as SMEs are urged to minimize their ecological footprint through practices such as waste reduction, energy efficiency, and eco-innovation. Existing literature consistently reports a strong positive relationship between environmental practices and firm performance, as these initiatives often lead to resource efficiency and cost savings in the long run (Yacob et al., 2021; Sawang et al., 2024).

However, comparative studies reveal that SMEs in developing economies face greater challenges in implementing environmental sustainability due to limited technological capabilities, lack of expertise, and financial constraints (Durrani et al., 2024). In contrast, SMEs in developed economies benefit from more robust institutional support, including environmental regulations and incentives that facilitate the adoption of green practices.

Despite these constraints, there is growing evidence that environmental sustainability can serve as a key driver of innovation and competitiveness, particularly when firms integrate eco-innovation into their business models (Hermawan et al., 2023). This suggests that environmental practices, although initially costly, may yield significant long-term benefits.

2.5 Synthesis and Comparative Insights

The literature highlights that the three dimensions of sustainability are interrelated yet may exert differing levels of influence on SME performance. While most studies report positive relationships between sustainability practices and firm performance, the strength and direction of these relationships vary across contexts.

Notably, studies in developed economies often find balanced contributions from all three dimensions, whereas studies in developing economies tend to report stronger environmental and social impacts but ambiguous or even negative economic effects. This inconsistency suggests that the sustainability-performance nexus is context-dependent, influenced by institutional environments, resource availability, and market conditions.

2.6 Research Gap and Justification

Despite the growing body of literature on SME sustainability, several critical gaps remain. First, while previous studies have extensively examined the individual effects of economic, social, and environmental dimensions, there is limited empirical evidence that simultaneously evaluates these dimensions within a unified framework, particularly in the context of Malaysian SMEs. Most existing studies either focus on a single dimension or are conducted in developed economies, thereby limiting their applicability to developing-country contexts (Malesios et al., 2018; Durrani et al., 2024).

Second, the literature presents mixed and inconclusive findings on the economic dimension, with some studies reporting positive effects while others highlight potential financial constraints associated with the adoption of sustainability (Bag et al., 2022; Hermawan et al., 2023). This inconsistency indicates the need for further empirical investigation to clarify the role of economic factors in influencing SME sustainability.

Third, there is a lack of context-specific studies focusing on Selangor, despite its status as one of the most economically dynamic regions in Malaysia with a high concentration of SMEs. The unique socio-economic and institutional characteristics of Selangor necessitate localized analysis to generate more relevant policy and managerial implications.

Therefore, this study seeks to address these gaps by examining the simultaneous influence of economic, social, and environmental dimensions on SME sustainability within the Selangor context, thereby contributing to a more nuanced understanding of sustainability practices in developing economies.

3. METHODOLOGY

This study aims to assess the extent to which Small and Medium-sized Enterprises (SMEs) in Selangor adopt the Triple Bottom Line (TBL) framework—encompassing economic, social, and environmental dimensions—as part of their sustainability practices. A quantitative research approach was selected to ensure objectivity and generalizability. This

involved using online questionnaires distributed via digital platforms such as WhatsApp, Microsoft Teams, and Facebook, enabling efficient data collection from a diverse sample.

Primary data were prioritized for their reliability and relevance, offering greater control over sampling design and data quality than secondary data. The study used a cross-sectional design, capturing responses at a single point in time, which is suitable for identifying patterns in sustainability practices among SMEs.

The target population comprised SMEs in Selangor, selected due to the state's high concentration of SMEs. Based on Krejcie and Morgan's (1970) sample size table, a total of 100 SMEs were surveyed. The sampling technique combined simple random sampling, in which each SME had an equal chance of selection, with purposive sampling, targeting respondents from medium-sized enterprises who were willing to participate.

The research instrument was a structured questionnaire developed from validated tools in previous sustainability studies, ensuring both reliability and replicability. The questionnaire included two sections: Section A gathered demographic data (age, gender, academic background, position), while Section B explored sustainability dimensions using a 5-point Likert scale (from strongly disagree to strongly agree). A total of 25 concise questions were included to minimize respondent fatigue. A cover page outlined the study's objectives and assured respondents of confidentiality under data protection regulations.

A pilot test involving 10 SMEs in Selangor was conducted to assess reliability. Using SPSS, Cronbach's Alpha values exceeded 0.90 for all constructs, and inter-item correlations ranged from 0.70 to 0.95, demonstrating excellent internal consistency.

After data collection, responses were checked for missing or inconsistent data and then coded and transcribed into SPSS for statistical analysis. Descriptive analysis summarized demographic profiles and central tendencies (mean, standard deviation, skewness, and kurtosis). Scale measurement included normality testing to confirm the data's suitability for inferential analysis and reliability analysis to ensure response consistency.

Inferential statistics included Pearson Correlation to determine relationships between independent variables (economic, social, and environmental factors) and sustainability adoption, with correlation coefficients above 0.70 indicating strong relationships. Multiple Linear Regression Analysis was used to identify significant predictors of sustainability practices. The model's effectiveness was evaluated through R-squared, F-ratio, and t-statistics, with significance set at the 95% confidence level ($p < 0.05$).

In conclusion, the study employs a robust quantitative methodology that combines structured data collection, rigorous sampling, validated instruments, and comprehensive statistical analysis to explore how SMEs in Selangor implement sustainability through the TBL framework.

4. FINDINGS AND DISCUSSION

4.1 Summary of Statistical Analysis

This chapter provides a summary of the statistical analysis, including descriptive, reliability, inferential, and regression analyses, along with discussions of major findings and results.

4.2 Descriptive Analysis

The demographic profile of the respondents (N=100) was analyzed based on type of sector, company size, job position, age, and education.

4.2.1 Type of Sector

The research found that SMEs were predominant in the Services sector (83% of the sample), with 16% in Manufacturing and 1% in other sectors. This highlights a potential connection between sector specialization and SME sustainability, suggesting the need for tailored support mechanisms.

4.2.2 Company Size

The majority of SMEs had less than 5 employees (52%), followed by 37% with 6 to 30 employees, 9% with 31 to 75 employees, and 2% with more than 75 employees. This breakdown underscores the prevalence of micro-enterprises and small businesses, implying that sustainability factors may need to consider the unique challenges of smaller-scale enterprises.

4.2.3 Job Position

Senior management constituted a substantial 73% of the sample; owners accounted for 18%; executives and the board of directors represented 5% and 3%, respectively; and supervisors 1%. This prominence suggests that key decisions influencing SME sustainability are often shaped by individuals in leadership roles.

4.2.4 Age of the Respondents

The majority of respondents (60%) were aged between 31 and 40 years, with 29% below 31 years. Smaller percentages were observed in older age brackets: 6% between 41-50 years, and 1-2% for 51-60, 61, 62, and 63 years and above. This age distribution suggests that a significant portion of participants are in early- to mid-career stages, offering insights into varying experiences and priorities regarding sustainability strategies.

4.2.5 Level of Education

The highest percentage of respondents (61%) had undertaken Short Courses, followed by Bachelor's/Degree holders (20%), Diploma holders (10%), Postgraduate (Master's/PhD) holders (5%), and Matric holders (4%). This diverse educational background may influence perspectives and decision-making on SME sustainability, underscoring the value of tailored strategies.

4.2.6 Reliability Analysis

Reliability analysis in SPSS assessed the degree of error-free, consistent results. Cronbach's Alpha indicated the internal consistency of the measurement scales. For SMEs' Sustainability, the Alpha value was 0.761 (good). The Economic Dimension showed 0.82 (very good), the Social Dimension 0.765 (good), and the Environment Dimension 0.802 (very good). These results confirm the reliability and consistency of the measurement scales across the economic, social, and environmental dimensions, contributing to a robust evaluation of the factors influencing SMEs' sustainability.

4.2.7 Inferential Analysis

Inferential analysis provided insights into the relationships between variables.

4.2.7.1 Pearson Correlation Analysis

- Economic Dimension: A Pearson Correlation coefficient of 0.412 with a p-value less than 0.001 (0.000) indicated a strong positive correlation between the Economic Dimension and SMEs Sustainability. This suggests that improvements in economic factors positively impact SME sustainability.
- Social Dimension: A Pearson Correlation coefficient of 0.433 with a p-value less than 0.001 (0.000) demonstrated a strong positive correlation between the Social Dimension and SMEs Sustainability. This implies that improvements in social factors positively impact SME sustainability.
- Environment Dimension: An exceptionally strong and significant positive correlation was found between the Environment Dimension and SMEs Sustainability, with a Pearson Correlation coefficient of 0.782 and a p-value less than 0.001 (0.000). This suggests that improvements in environmental factors are strongly associated with a positive impact on SME sustainability.

4.2.8 Multiple Regression Analysis

Multiple linear regression analysis aimed to explain the relationship between independent variables and the dependent variable, examining determinants influencing SMEs' sustainability in Selangor.

4.2.8.1 Regression Statistics

The Model Summary table revealed a multiple correlation coefficient (R) of 0.810, signifying a robust positive relationship. The coefficient of determination (R Square) of 0.656 indicated that approximately 65.6% of the variability in SMEs sustainability is accounted for by the combined influence of Social, Economic, and Environmental factors. The Adjusted R Square was 0.645, and the standard error of the estimate was 0.30070, indicating a good fit of the model.

4.2.8.2 Analysis of Variance (ANOVA)

The ANOVA table confirmed the statistical significance of the regression model. The regression sum of squares was 16.550 (3 degrees of freedom), and the residual sum of squares was 8.680 (96 degrees of freedom), with a total sum of squares of 25.230 (99 degrees of freedom). The F-statistic (61.010) with a significance level of 0.000 indicates that the model is statistically significant in explaining SMEs' sustainability.

4.2.8.3 Model Coefficients

The Model Coefficients table provided insights into the impacts of individual factors. Environmental factors showed a highly significant positive impact (coefficient = 1.041, Beta = 0.908, Sig = 0.000), indicating a strong association with enhanced sustainability. Conversely, Economic factors exhibited a statistically significant negative impact (coefficient = -0.307, Beta = -0.274, Sig = 0.002), underscoring potential challenges. Social factors contributed significantly and positively (coefficient = 0.153, Beta = 0.136, Sig = 0.049). While the constant term was not statistically significant, the overall findings emphasize prioritizing environmental and social considerations while addressing economic challenges.

4.2.9 Conclusion of Hypotheses

Based on the model coefficients:

- H1: Economic dimension has a positive effect on SMEs' sustainability. Result: Reject. The study found a negative relationship between economic factors and SMEs' sustainability.
- H2: There is a positive relationship between the social dimension and SMEs' sustainability. Result: Accept. Social factors demonstrated a positive influence on SMEs' sustainability.
- H3: There is a positive relationship between environment dimension and SMEs' sustainability. Result: Accept. Environmental factors had a highly significant positive impact on SMEs' sustainability.

5. CONCLUSION

This study sheds light on factors influencing the sustainability of SMEs in Selangor, with a focus on the Services sector, where micro and small enterprises dominate. The findings reveal that senior management plays a crucial role in decision-making, directly impacting sustainability. Correlation analysis indicated positive relationships between economic, social, and environmental dimensions and SME sustainability, with environmental factors showing the strongest association. However, multiple regression analysis revealed a surprising result: economic factors were significantly and negatively associated with sustainability, suggesting that certain economic pressures may hinder SME sustainability. Hypothesis testing confirmed positive impacts of social and environmental dimensions but rejected the economic dimension due to the negative correlation.

The study has important implications for SME managers and policymakers. It recommends prioritizing social responsibility and environmental sustainability, while acknowledging and addressing economic challenges. The role of senior management in strategy development is emphasized.

Limitations include a small, geographically limited sample size, sectoral bias, and a cross-sectional design. Future research should include broader samples, longitudinal studies, and mixed-methods approaches. Comparative sectoral studies and international perspectives are also suggested to identify global best practices. Interventions to alleviate economic burdens on SMEs could further inform practical strategies for sustainable development in this sector.

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7. CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in the paper.

8. AUTHOR CONTRIBUTION STATEMENT

Author 1 contributed to the conceptualization, research design, and writing of the original draft.

Author 2 was responsible for data collection, analysis, and validation of the results.

Author 3 provided supervision, critical review, and editing of the final manuscript.

All authors have read and approved the final version of the manuscript.

9. ETHICS STATEMENT

This research was conducted in accordance with the ethical standards of Universiti Poly-Tech Malaysia and adhered to the principles outlined in the Declaration of Helsinki. Ethical approval was obtained from the Review Board under reference number AJ327. All participants were informed about the purpose of the study and provided written informed consent prior to participation. Participants' privacy and confidentiality were strictly maintained, and data collected were used solely for academic purposes.

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