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Exploring determinants affecting the sustainable performance of Vietnamese Small and Medium-sized Enterprises

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ABBREVIATIONS AND ACRONYMS

ADB	:	Asian Development Bank
AVE	:	Average Variance Extracted
CR	:	Composite Reliability
CSR	:	Corporate Social Responsibility
EC	:	European Commission
ESG	:	Environmental, Social, and Governance (issues)
EU	:	European Union
FDI	:	Foreign Direct Investment
GDP	:	Gross Domestic Products
HTMT	:	Heterotrait-Monotrait
ICT	:	Information and Communication Technology
OECD	:	Organisation for Economic Co-operation and Development
PLS-SEM	:	Partial Least Squares - Structural Equation Modeling
SDGs	:	Sustainable Development Goals
SMEs	:	Small and medium-sized enterprises
UK	:	United Kingdom
UN	:	Unite Nations

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CHAPTER 1
INTRODUCTION

Globalization implicates many political, sociological, environmental, and economic phenomena as global challenges. "Globalization" is more commonly used when referring to the growing interrelationship of economies and industrial systems between nations that is boosted by the trading of products and services, international capital flows, worldwide collaborative partnerships, mergers, and modern technology transfers. More broadly, globalization refers to the expansion of a global specialization of labor, accomplished through the worldwide "decomposition" of productive processes and a more accessible global political position on economic issues. At a broad level, globalization is expected to create a homogenizing effect by internationalizing the provision of goods, services, and organizational structures that were previously confined to nation-states (Bijaoui, 2017).

Globalization has generated numerous benefits and disadvantages. It facilitates greater flexibility in workforce mobility between nations, enhancing the exchange of talents, creativity, and technological advancements globally. This increased competition within economies reduces monopoly profits and compels businesses to innovate with cost-saving technologies. Moreover, globalization has strengthened investment markets, allowing emerging economies to secure funds to address local savings shortfalls. It also raises consumer awareness about environmental issues and wealth inequality (Mwika et al., 2018).

Conversely, globalization has dramatically caused a great deal of issues, especially with wealth and income gaps, as the very lowest incomes are left without access to indispensable technology and social services. This also brings about inflation, where, through globalization, demands on food or fuel have caused the costs to go up. National markets that are interlinked together are more susceptible to global financial crises. On the other hand, globalization has also been characterized by weakened cultural and economic distinctions since many multinational companies have taken over local markets in many economies, creating a trade imbalance, with some nations experiencing large export surpluses, leading to tensions and triggering other countries to implement protective measures (Liñán et al., 2020).

Emerging economies experience a challenge as they suffer from export dumping by firms in developed countries, which affects their local small- to medium-sized enterprises (SMEs) (Mwika et al., 2018).

Sustainability is a concept that has achieved an important position in public consciousness, became relevant in the 1990s, and has already started receiving substantial analytical and political interest. Sustainable development concerns have overhauled the world's industry, making it a key component of economic performance. To achieve long-term advantages, international firms need to incorporate sustainability measures into their organizational strategy (Martins et al., 2022).

Sustainability has become a considerable concern for businesses globally due to environmental, social responsibility, and economic limitations. The concept of organizational sustainability aims to integrate environmental, social, and economic aspects within the operation

activities of an organization in carrying out the planning processes toward a sustainable future and favorable effect (Adamu et al., 2019).

Sustainability is integrated into firm strategies for various reasons, from governmental regulations and consumer preference to business competitiveness. Governments worldwide are laying down rigorous environmental and social standards to which firms must adhere if they are to continue with their businesses legally and responsibly. Customers are demonstrating a greater inclination towards those organizations that can prove long-term sustainability behavior; this affects the way people buy and, most importantly, their loyalty towards the organization. Besides, companies that adopt these environmentally friendly practices can gain a competitive advantage simply because they will be able to differentiate from their competition and get into a new class of consumers who are searching for sustainability in their products (Bhatti et al., 2022).

Accordingly, sustainability may be challenging for SMEs due to their limited resources and competencies compared to large organizations. A more flexible and innovative approach for SMEs enables them to take advantage of sustainable practices more readily and effectively. Partnerships with other firms, government bodies' funding, and international market access are some ways SMEs could have the resources and knowledge to strengthen their sustainability attempts. Not only that, the inclusion of sustainability as a main business activity would result in better productivity, cost reductions, and resilience in the market (Chowdhury, 2022).

Business sustainability has gained increased importance in the context of globalization. With increasing involvement in the international supply chain, SMEs are exposed to global regulations and practices that often concentrate on sustainability. In this case, an SME may be pressured to take up higher standards and more sustainable practices to remain competitive and compliant. Besides, globalization creates new market segments and technologies accessible to SMEs and allows for innovation and improved sustainable performance of companies in various ways (Martins et al., 2022).

1.1. Problem statement

In the last few years, companies have started to understand the importance of such sustainable practices in their businesses and offer environmentally friendly products or services. The ability to manage and higher financial stability make the larger firms able to be the most efficient in the implementation of such sustainable practices. Nevertheless, it is crucial to consider the role of SMEs in this context of the argument on sustainable business practice as well, since SMEs hold a significant part of a nation's overall economy and, at the same time, the labor market (Adamu et al., 2019).

SMEs may differ according to various distinguishing factors, such as size, business structure, number of employees, age, net profit, and innovation and technology ownership (Kerlin, 2006). In essence, most SMEs share the same characteristics, such as flexibility, fast feedback, and short decision-making chains with profit-oriented approaches. Even if there is no standard definition of SME for all countries, generally, the state defines them as small private companies playing an essential role in job creation and GDP. More than half of these companies implement simplified processes that lead to rapid responses and fast decision-making. SMEs can also provide

more transparent and quicker feedback to respond to customers's expectations than most large companies (Yadav et al., 2018).

In most emerging economies, SMEs are the biggest contributors to economic development. SMEs are responsible for sustainable development through job creation and entrepreneurial ability development, in addition to being the main contributors to a large share of export earnings (Mwika et al., 2018). SMEs play a critical role in driving economic growth, particularly in developing countries. They are widely accepted as the primary drivers of national and regional development. SMEs make up most of the businesses around the world and make vast contributions to the economy through job creation and economic output. About 90% of all companies and over half of world employment are provided by SMEs. In emerging economies, formal SMEs account for as much as 40% of the GDP, while this ratio rises further when informal SMEs are included. On average, the ratio came up to 96% being SMEs in enterprises, and 62% employed people, according to a survey conducted by the Asian Development Bank (ADB) across 20 countries in Asia and the Pacific region. The latest data reveals that, on average, SMEs account for 42% of GDP, or manufacturing value added. The current export value share of international trade is above 40% in China and India, over 26% in Thailand, 19% in South Korea, and almost 16% in Indonesia (Yoshino & Taghizadeh-Hesary, 2018).

Research indicates that most SME entrepreneurs are generally uninformed about sustainable business practices and their overall impact on performance. Since SMEs have made substantial contributions to national economic growth, they need to build sustainability into their core principles. Therefore, the growing practices of sustainable businesses worldwide will force SMEs in different sectors to adopt sustainability as one of their core principles. The role of SMEs in the reduction of environmental issues is most important. Research reports have also shown that SMEs contribute 60–70% of total pollution (Hoogendoorn et al., 2015). The research has shed light on the vital importance of SMEs in reducing the environmental footprint and thereby signifies the need for schemes for the development of such SMEs that would adopt sustainable practices (Yadav et al., 2018).

Adoption of green business or sustainable business practices envisages new management strategies integrated with diversified goals, norms, and knowledge to develop more efficient and effective plans. As a result of the present study, there have emerged new management strategies integrated with diversified goals, norms, and knowledge in the current concept of the adoption of green business or sustainable business practices, coupled with the evolution of more efficient and effective plans. This includes minimizing the environmental impacts and maximizing the efficiency of resources through processes that reduce waste and pollution through innovative means. This practice might consist of conserving resources and energy in green manufacturing and recycling initiatives to plug back into the ecosystem with circumspection while using resources. There are tendencies within businesses to inculcate eco-friendly energy solutions, environmental products, services, and training activities for employees to be more sensitized to these practices and the risks of resource exhaustion (Yadav et al., 2018). It should be noted that the drivers and barriers to this practice are different for SMEs as opposed to large organizations, due mainly to the limited skills and resources in small businesses (Revell et al., 2009).

According to the General Statistics Office of Vietnam (2022), the number of SMEs reached nearly 710 thousand enterprises in 2022, accounting for 98% of the total number of enterprises in Vietnam and up by 5.2% compared to the period a year ago. Also this year, Vietnam witnessed the establishment or reactivation of about 200 thousand SMEs, marking a 30% rise from the previous year. Conversely, about 140 thousand SMEs ceased operations, reflecting an increase of 19.5%. This issue indicates that Vietnamese SMEs face significant challenges in maintaining their operations in the current environment. Table 1 provides a summary of the SME sector in Vietnam in 2022.

Table 1. Overview of the SME sector in Vietnam 2022

Indicators	**Value**
Contribution to GDP	40%
Employment	50%
Percentage of Total enterprises	98%
Innovation Engagement	53%
Median R&D investment (SMEs)	VND 100 million (USD 4,200)
Average labor productivity	Industry: USD 35,000; Services: USD 33,000
Percentage of SMEs in Manufacturing	Significant
Financial access challenges	High

***Source**: Ministry of Planning and Investment of Vietnam (2023)*

SMEs are vital to Vietnam's economy, contributing over 40% to the national GDP and employing approximately half of the workforce. Despite their significant presence, Vietnamese SMEs face considerable challenges in achieving efficiency and innovation. Employee productivity in SMEs, particularly within the manufacturing sector, is substantially lower than the OECD average (about USD 110,000), highlighting issues of institutional inefficiency and a need for enhanced management and technological skills. Furthermore, although a notable proportion of SMEs engage in innovative activities (about 53% have implemented improvements in goods or processes), R&D expenditure remains low, leading to incremental rather than transformative advancements. Access to finance is another major constraint, as traditional banking systems often fail to meet the needs of SMEs, necessitating more tailored and responsive financial solutions (Ministry of Planning and Investment of Vietnam, 2023).

Vietnamese SMEs face many challenges to sustainable performance, mainly because they are unable to penetrate global markets, which restricts their growth and capacity to invest in sustainable technologies. Budget constraints sometimes hinder SMEs from implementing proficient sustainability measures or substantial community responsibility programs. Furthermore, SMEs in Vietnam face a great deal of difficulty complying with regulations as they have to manage complicated global standards while continuing to operate profitable businesses. The strong competition prevailing in the global market, which involves continuous innovation and adoption, makes it harder for them to face such challenges. Globalization, while offering opportunities to enter new marketplaces, international partnerships, and sophisticated technology that might support sustainability, opens the possibility of SMEs facing even higher competition, continuously pressing them to come up with new ideas to improve their policies on sustainability to remain in a

competitive position. This may impose a burden on the constrained resources of Vietnamese SMEs as they try to catch up with international standards and manage different market requirements, hence making it difficult for such firms to achieve sustained success over the long term (Le & Tran, 2021).

This thesis, "***Exploring Determinants Affecting the Sustainable Performance of Vietnamese Small and Medium-Sized Enterprises***", will discover insights into factors—both internal and external—forming the sustainable performance of SMEs in Vietnam. The study will further establish how globalization moderates the determinants and the subsequent effects on the sustainable performance of SMEs in Vietnam. This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to test whether or not a set of constructs, including the most influential factor on sustainable performance, depended significantly on the moderating effect of globalization.

1.2. The significance of the study

In Vietnam, there is a big gap in sustainable performance research and what influences that performance in SMEs. Of the previous studies, most concentrated on internal or external factors and did not provide an overall, comprehensive analysis for both categories. Besides, a significant gap may be found in this strand of research conducted within the context of the sustainable performance of SMEs in Vietnam.

As Vietnamese SMEs increasingly engage in the global marketplace, they face pressure to adopt sustainable practices to comply with international regulations and meet customer demands. This study aims to identify the factors influencing the sustainable performance of Vietnamese SMEs, providing insights that can help these firms navigate the complexities of globalization while maintaining their commitment to sustainability. In addition, investigating the determinants of sustainable performance within the SME sector is essential to guaranteeing their enduring viability and economic contribution.

By providing new insights into the factors influencing SMEs' sustainable performance in the context of emerging economies like Vietnam, this study will contribute to the academic literature of knowledge on sustainability and SMEs. The findings will enhance our understanding of how globalization impacts SME sustainability, offering a comprehensive viewpoint that could inspire future research and theoretical development in this area.

This study's practical implications are substantial for Vietnamese SMEs. By identifying the key determinants influencing sustainable performance, the research will provide actionable recommendations to enhance sustainability practices and leverage globalization for long-term success. SMEs can use these insights to improve operational efficiency, reduce costs, and strengthen their market position. Furthermore, the study's findings will aid Vietnamese policymakers in understanding the necessary support and measures to enhance the sustainable performance of SMEs. This may include recommendations for regulatory improvement, financial incentives, or support programs to encourage the adoption of sustainable practices. Policymakers can use these findings to develop targeted policies that promote the growth and sustainability of SMEs in the global market.

1.3. Objectives of the study

The primary purpose of this research study is to identify the significant factors that critically determine the sustainable performance of SMEs in Vietnam within the operating environment of globalization. To accomplish the research objectives of this study, the study will follow the following four objectives:

O1. Systematic literature review to outline the conceptual framework, introduce, examine, and thoroughly assess empirical findings regarding the sustainable performance of SMEs, including the influence of various determinants and globalization on their sustainability outcomes.

O2. Investigate the external and internal determinants that influence the sustainable performance of SMEs in Vietnam within the context of globalization.

O3. Examine how globalization, through its impact on external and internal determinants, influences sustainability. The understanding of how the process of globalization structures and interacts with the factors, either from outside sources or inside an organization, that drive the sustainable performance of SMEs in Vietnam is aimed at this objective.

Addressing these objectives, the research tries to improve our understanding of the determinants that will play a significant role in fostering the sustainable performance of SMEs in Vietnam, particularly within the dynamic framework of globalization.

1.4. Research questions and Hypotheses

1.4.1 Research questions

Based on the study's objectives, the research design looked at answering the following research questions:

1. How can the relevant literature be conceptualized to explore the relationships between the factors influencing the sustainable performance of Vietnamese SMEs?

2. Which external and internal factors affect the sustainable performance of SMEs in Vietnam in the context of globalization?

3. How does globalization affect the sustainable performance of SMEs in Vietnam by influencing both external and internal factors?

1.4.2 Hypotheses

This research proposes the following hypotheses to investigate the direct and moderating effects of the examined variables.

Direct effect

Hypothesis 1a: External and internal determinants have impacts on the economic performance of SMEs in Vietnam.

Hypothesis 1b: External and internal determinants have impacts on the social performance of SMEs in Vietnam.

Hypothesis 1c: External and internal determinants have impacts on the environmental performance of SMEs in Vietnam.

Moderating effect

Hypothesis 2a: Globalization indirectly influences the economic performance of Vietnamese SMEs by moderating the effects of External and Internal determinants.

Hypothesis 2b: Globalization indirectly influences the social performance of Vietnamese SMEs by moderating the effects of External and Internal determinants.

Hypothesis 2c: Globalization indirectly influences the environmental performance of Vietnamese SMEs by moderating the effects of External and Internal determinants.

1.5 Conceptual framework of the study

The conceptual framework for this research, based on the proposed hypotheses, is visually depicted in Figure 1.

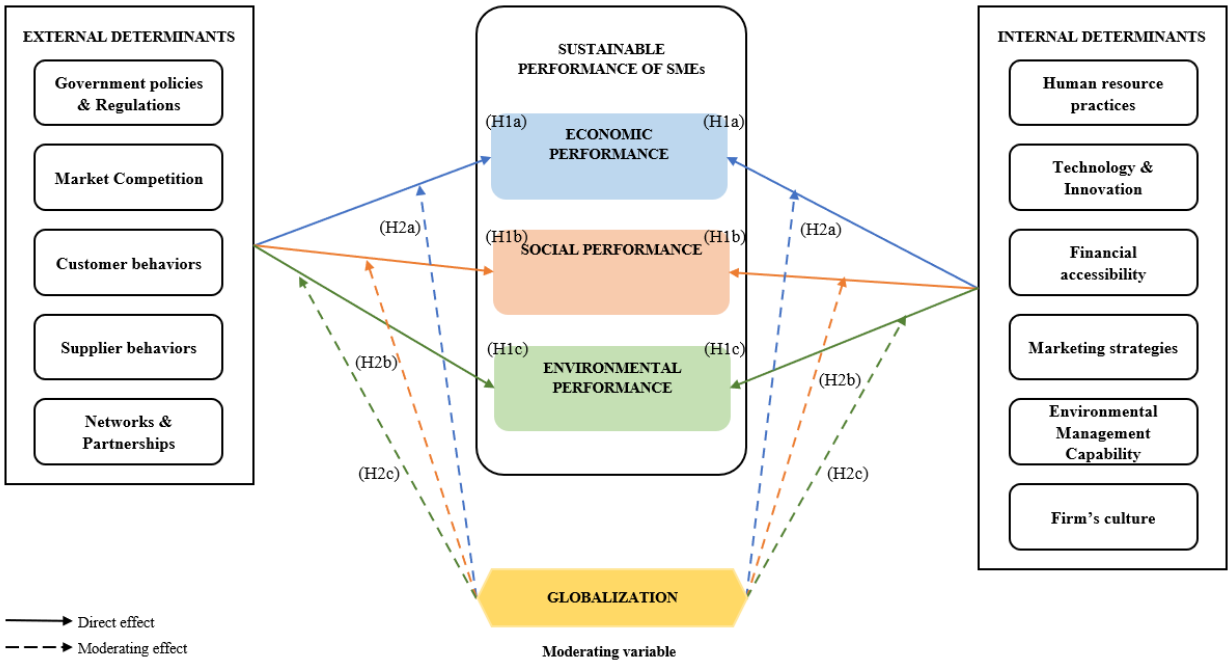


Figure 1. The conceptual framework

Source: *Author's construction*

The primary objective of this research is to identify the key factors that significantly influence the sustainable performance of small and medium-sized enterprises in Vietnam, particularly in the context of globalization. The endogenous variable in this study is the sustainable performance of Vietnamese SMEs, which encompasses three dimensions: economic performance, social performance, and environmental performance. The blue, orange, and green arrows represent the impacts of exogenous variables on the economic performance, social performance, and environmental performance of SMEs, respectively.

The study categorizes the predictors into two groups: external determinants (five predictors) and internal determinants (six predictors). External determinants refer to factors outside the firm that can impact its performance. On the other hand, internal determinants are factors within the firm itself that shape its performance. The study aims to evaluate the effects of each

predictor on the three aspects of sustainable performance to determine whether they have a significant impact. The direct effects of these predictors on sustainable performance are represented by solid arrows in the model.

In addition, the study includes "globalization" as a moderating variable. This variable is expected to indirectly influence different aspects of sustainable performance through the 11 predictors in the model. These indirect effects are represented by dashed arrows in the conceptual framework.

1.6 Systematic map of the study

The study has developed a comprehensive correlation system, integrating all key components such as hypotheses, research methodologies, and objectives. This systematic framework is visually depicted in Figure 2. The study, titled "Exploring Determinants Affecting the Sustainable Performance of Vietnamese Small and Medium-Sized Enterprises" outlines three primary objectives, detailed in Section 1.3.

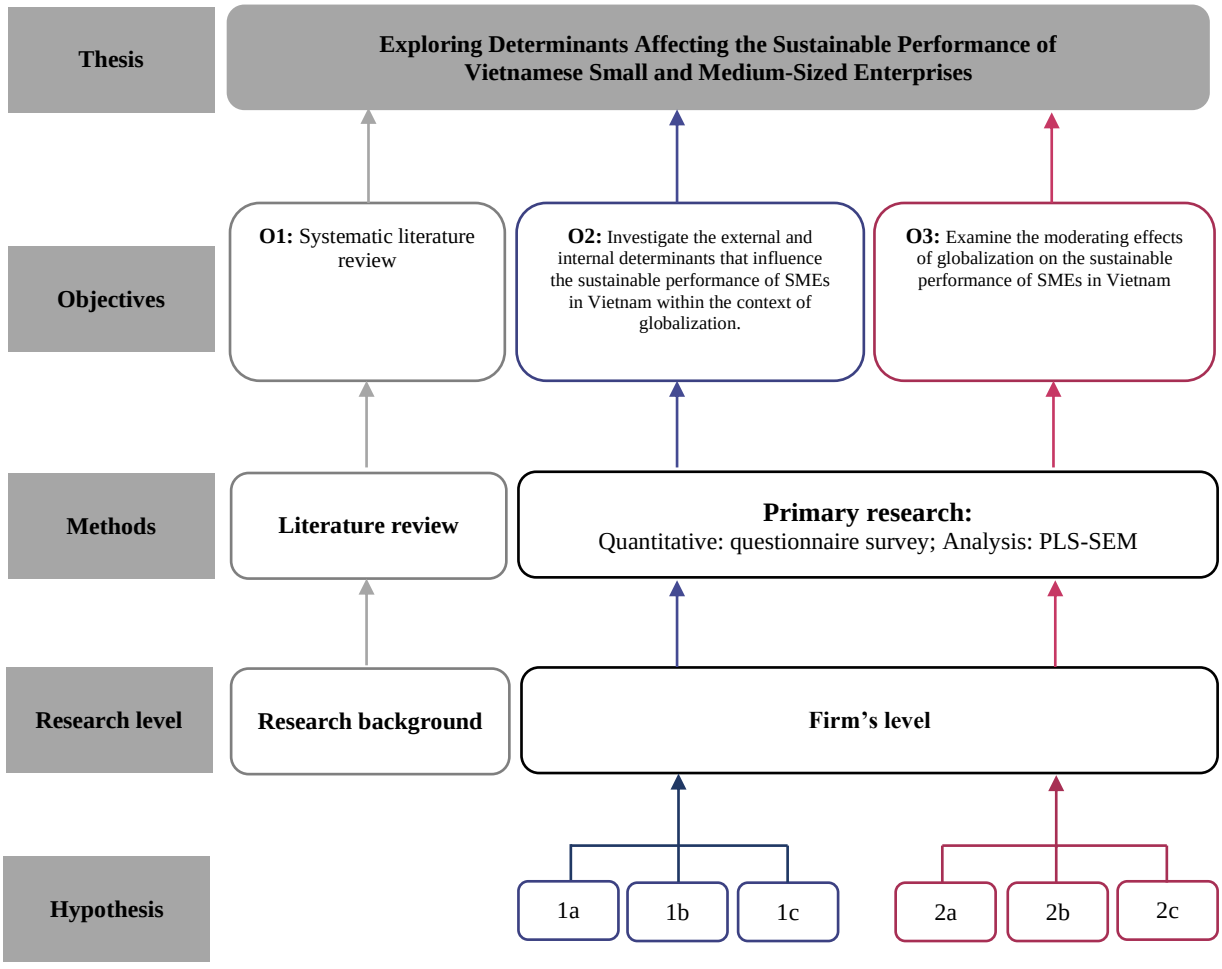


Figure 2. The systematic map of the study

***Source**: Author's construction*

Objective 1 involves reviewing existing literature on SMEs and their sustainable performance to identify potential predictors for the study. The remaining two objectives focus on firm-level analysis by testing the 6 hypotheses presented in sub-section 1.4.2. Data for testing these hypotheses will be collected through a questionnaire survey on Vietnamese SMEs and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results from the PLS-SEM analysis will shed light on the influence of the predictors and moderating variables on the sustainable performance of SMEs in Vietnam.

CHAPTER 2
LITERATURE REVIEW

2.1. Small and Medium-sized Enterprises

2.1.1. The Concept of Small and Medium-sized Enterprises

SMEs exhibit diverse characteristics and face unique challenges and opportunities in adopting sustainable practices. The definition of SMEs varies across countries, influenced by economic, cultural, and social factors. Classification criteria, such as workforce size, revenue, and financial statements, differ regionally (Martins et al., 2022). The European Commission typically defines SMEs as enterprises with fewer than 250 employees, an annual revenue under EUR 50 million, or a balance sheet total below EUR 43 million (EU Commission Recommendation of 6 May 2003). The criteria for categorizing SMEs vary by country, with some nations defining SMEs as having a maximum of 200 employees, while in the United States, SMEs are considered businesses with fewer than 500 employees (OECD, 2005). In Vietnam, SMEs are characterized by having up to 200 employees, annual revenues not exceeding $8,500, and operational capital below $4,250 (Vietnamese Law on Supporting SMEs 2017). SMEs are vital to the economies of numerous nations, especially in developing regions. They are commonly recognized as key drivers of both national and regional development. On a global scale, SMEs constitute the bulk of businesses and significantly contribute to employment and economic expansion, representing about 90% of all enterprises and over half of global employment. In emerging economies, formal SMEs can account for up to 40% of the national income or Gross Domestic Product (GDP), and their impact is even greater when including informal SMEs (World Bank, 2022).

A firm's characteristics are essential in influencing the implementation and growth of sustainable initiatives within SMEs. The size differences between SMEs and larger firms lead to unique economic, organizational, and behavioral aspects. SMEs are typically managed by owners, highly personalized, independent, and involved in multitasking. Due to restricted financial capability, SMEs perform business under constraints and depend on personal connections and informal networks. Additionally, SMEs are embedded in local production systems and closely linked to their communities. Unlike large firms, SMEs rely heavily on the decisions and actions of individual managers. These variations, especially in ownership structure, result in significant differences in managerial approaches to sustainability. Research indicates that owner-managers are crucial in influencing the foundational aspects of sustainability practices within SMEs, making them crucial actors within broader social and cultural contexts (Martins et al., 2022).

According to the International Finance Corporation, most SMEs operate in commerce and services (72%), with manufacturing (20%), agriculture (8%), and other sectors following. SMEs are mainly found in labor-demanding sectors, defined by minimal entry barriers, relatively low fixed production expenses, and goods produced for market prices. Research into labor conditions within SMEs has uncovered that work quality, job security, and stability for staff are frequently inferior to those in bigger corporations, and a wage disparity is evident between SMEs and larger enterprises (Prasanna et al., 2019). Additionally, SMEs show diminished productivity levels,

primarily because of their restricted ability to accomplish economies of scale in production operations and other business aspects (Adamu et al., 2019).

SMEs have become vital engines of economic development and growth on both national and global scales. Enabling SMEs to flourish in a progressively connected and digitalized world is crucial for advancing economic progress and encouraging a more inclusive globalization. Irrespective of their development stage, SMEs play a vital role in reaching the Sustainable Development Goals (SDGs) by promoting inclusive and sustainable economic growth, generating employment, encouraging sustainable industrialization and innovation, and reducing income disparities (OECD, 2017). In Europe, SMEs constitute the backbone of the economy, making up 99% of all enterprises according to the European Commission (2022). They employ around 100 million employees and contribute over half of Europe's GDP. SMEs are dynamic entities that enhance every economic sector, fostering innovation, productivity, and competitiveness. They also play a crucial role in tackling urgent global issues like climate change, resource efficiency, and social cohesion. Through their capacity to create and spread innovative solutions, SMEs advance sustainable development across various regions of Europe. By backing SMEs and creating a conducive environment for their expansion, policymakers and stakeholders can leverage their potential to propel economic progress, generate employment opportunities, and encourage sustainable practices. Investing in the growth and strengthening capacity of SMEs will not only benefit individual enterprises but also enhance societal well-being and further the collective goals of sustainable development.

The Asian Development Bank (ADB) conducted the Asia SME Finance Monitor survey across 20 nations in Asia and the Pacific, offering key insights into the crucial role of SMEs in the region. The survey reveals that, on average, SMEs make up 96% of all businesses in the surveyed countries and employ approximately 62% of the national labor force. These statistics underscore SMEs' significant contribution to job creation and economic growth in the region. Furthermore, recent data shows that SMEs, on average, account for 42% of the gross domestic product (GDP) or manufacturing value added in these nations (Yoshino & Taghizadeh-Hesary, 2018).

SMEs in Asia have been instrumental in global trade. SMEs in China and India, for example, represent over 40% of their total export values. Other economies like Thailand, South Korea, and Indonesia also see substantial contributions from SMEs in their export sectors. The participation of SMEs in international trade highlights their competitiveness and crucial role in economic growth (Yoshino & Taghizadeh-Hesary, 2018). In China, SMEs illustrate their importance by constituting 99% of all businesses, contributing 60% to exports, 40% to GDP, and providing 75% of employment. Similarly, in India, micro, small, and medium enterprises employ over 80 million individuals and contribute about 8% to the national GDP (Yadav et al., 2018). These entities produce a diverse array of over 6,000 products and significantly boost manufacturing output and exports (Juergensen et al., 2020). It is essential to recognize that SMEs, especially in manufacturing, can significantly impact the environment (Martins et al., 2022). Studies indicate that SMEs can account for 60-70% of overall pollution, emphasizing the necessity for sustainable practices in this industry (Musa & Chinniah, 2016). Investigations in the European Union and the United Kingdom have also shown the significant waste and pollution produced by SMEs (Revell et al., 2009). These results highlight the responsibility and opportunity for SMEs to

implement sustainable practices and aid in environmental preservation. Considering the prominent role of SMEs in the Asian economy and their environmental impact, it is crucial to advance initiatives that motivate SMEs to embrace sustainable practices. Assisting SMEs in adopting eco-friendly strategies can yield benefits for both businesses and the environment. Raising awareness, offering capacity-building support, and crafting policies that encourage and enable SMEs to adopt sustainable practices in the region are essential (Yadav et al., 2018).

Despite their potential environmental and societal impact, SMEs frequently fall short of embracing sustainable practices. A widespread lack of environmental awareness and action among small businesses exacerbates their negative environmental effects. The absence of sustainable practices in SMEs' operations, strategies, and long-term plans is a major contributing factor (Rita et al., 2018). Unlike larger corporations that have adopted sustainability initiatives, many SMEs find it challenging to define and integrate sustainability into their operations. Environmental issues often rank low on their priority list, and they frequently lack the resources and tools to implement environmental efforts effectively (Musa & Chinniah, 2016). SMEs are typically owner-managed with a local focus, leading to limited formal structures and specialized personnel, which shape their approach to sustainability concerns (Russo & Tencati, 2009). A lack of knowledge about their environmental footprint, combined with limited resources and time, makes SME owners hesitant to address environmental issues (Revell et al., 2009). The belief that implementing environmental practices is costly and difficult further discourages SMEs from taking action. Regrettably, SMEs collectively contribute up to 70% of global pollution (Yadav et al., 2018). In manufacturing, SMEs are responsible for 64% of air pollution, yet only a mere 0.4% have implemented an environmental management system (Behjati, 2017).

Although numerous SMEs encounter difficulties in adopting sustainable practices, sustainability can serve as an incentive for some businesses. Rodgers (2010) discovered that sustainable entrepreneurs in the UK emphasize social change and are driven by ethical principles, values, and a readiness to take risks and pursue knowledge about sustainability issues, even at the expense of financial gain. Similarly, Kearins et al. (2010) noted a business-nature relationship consistent with ecological paradigms in a study of three SMEs in New Zealand. Interestingly, younger and smaller enterprises seem to be more proficient at integrating sustainability into their objectives compared to older firms (Choongo et al., 2016). This can be attributed to the flexibility and adaptability of younger businesses, as well as their readiness to adopt innovative approaches. Adopting environmentally sustainable practices is essential for SMEs to ensure a better future for upcoming generations. However, adopting such practices can be difficult due to intense competition on both the demand and supply sides of their businesses (Yadav et al., 2018). SMEs must address these challenges while acknowledging the long-term benefits and positive impact that sustainability can offer to their businesses, the environment, and society as a whole. By prioritizing sustainability and utilizing their agility and innovative mindset, SMEs can lead the way towards a more sustainable future.

2.1.2. Small and Medium-sized Enterprises – Current situation, opportunities, and challenges in the global economy

SMEs are crucial components of the economy and the broader business ecosystem. Their ability to grow and succeed in a more open and digitalized environment is essential for driving economic

growth and promoting more inclusive globalization. SMEs play a significant role in achieving the Sustainable Development Goals across countries at all phases of development, contributing to equitable and sustainable economic growth, job creation, innovation, and reduced disparities in earnings. In recent decades, the role of SMEs in innovation has become increasingly prominent, as factors such as rising incomes, categorized consumer demand, and technological advancements have empowered them to enhance their competitive edge while overcoming resource limitations and restricted economies of scale (OECD, 2017).

According to the OECD (2023b), over half of SMEs with a digital presence in OECD countries experienced increased sales between 2020 and 2021, with more than 40% reporting sales contracts. Notably, over 10% of small firms recorded a significant increase in sales of over 60%. In 2021, sectors such as manufacturing or information and communications witnessed higher percentages of SMEs with increased sales (close to 60%), while transportation and storage and hotel and restaurants reported around 40%. Chile, France, and Norway demonstrated particularly high rates of sales growth among SMEs, with over 60% reporting an increase, compared to 40% in Germany and Korea. In 2023, SMEs were a dominant force in the European Union's economy, with 25.8 million enterprises, comprising 99.8% of all firms in the non-financial business sector. These SMEs utilized 88.7 million employees, representing a major proportion of the EU's workforce and value contributed. The number of SMEs' employees accounted for nearly two-thirds of the EU-27's non-financial business sector employment and slightly more than half of its value added. While new SME firm entries jumped by 2.6% in 2023, SME bankruptcies surged by 13%, reflecting the challenging economic environment faced by SMEs in the EU (Katsinis et al., 2024). In our present interdependent and fast-changing global economy, SMEs are critical to promoting sustainability. SMEs, as the backbone of global economies, may make major contributions to international growth in productivity, innovation, and creating employment opportunities (UN, 2024).

In recent years, the global economy has faced significant shocks, including the COVID-19 pandemic and escalating geopolitical tensions (OECD, 2023b). During this time, SMEs experienced considerable and sharp increases in the pricing of various commodities, particularly costs for energy like natural gas and electricity, which soared faster than demand recovered (Katsinis et al., 2024). While governments provided substantial support to protect SMEs during the pandemic, new challenges have arisen due to escalating global conflicts. Growing geopolitical tensions, global financial risks, rising inflation, tightening monetary and fiscal policies, financial industry pressure, lack of labor, trade constraints, and less efficient integration in international supply chains contribute to an increasingly difficult economic scenario. Increasing interest rates may lead to higher debt payback expenses for SMEs, which are significantly reliant on debt (OECD, 2023b).

SMEs play a vital role in the broader business ecosystem. Start-ups and young firms, often categorized as small or medium enterprises, are the principal contributors to net employment growth in many nations. Business dynamics, such as the creation and growth of new firms, are a significant driver of productivity improvements. However, a significant portion of new enterprises either quit during their initial several years of operation or remain comparatively small. Fast-

growing enterprises of various ages and industries also make disproportionate contributions to workforce growth (OECD, 2017).

While the digital age elevated during the early stages of the COVID-19 crisis, numerous small companies remain short of the skills required for the successful implementation of digital technology, increasing the risk of widening digital gaps. These firms may also face challenges in accessing networks that provide digital solutions, data, and information sharing. Additionally, while small businesses have a huge opportunity to participate in and gain from the environmental shift and the integration of more sustainable, accountable, and circular supply chains, these shifts also pose considerable obstacles (OECD, 2024).

Recent studies indicate a decline in start-up creation during the COVID-19 pandemic, although variations may exist across countries. Even before the pandemic, the global proportion of start-up SMEs was on a declining slope. In 2021, the number of start-ups experienced a significant decrease, with a 60% drop in the European Union, the United Kingdom, and the United States. However, in Germany, the number of start-ups in knowledge-intensive services sectors witnessed a slight increase in 2021, following a declining trend since the early 2000s (OECD, 2023b). Figure 3 shows the changes in the number of start-up SMEs from 2018 to 2021.

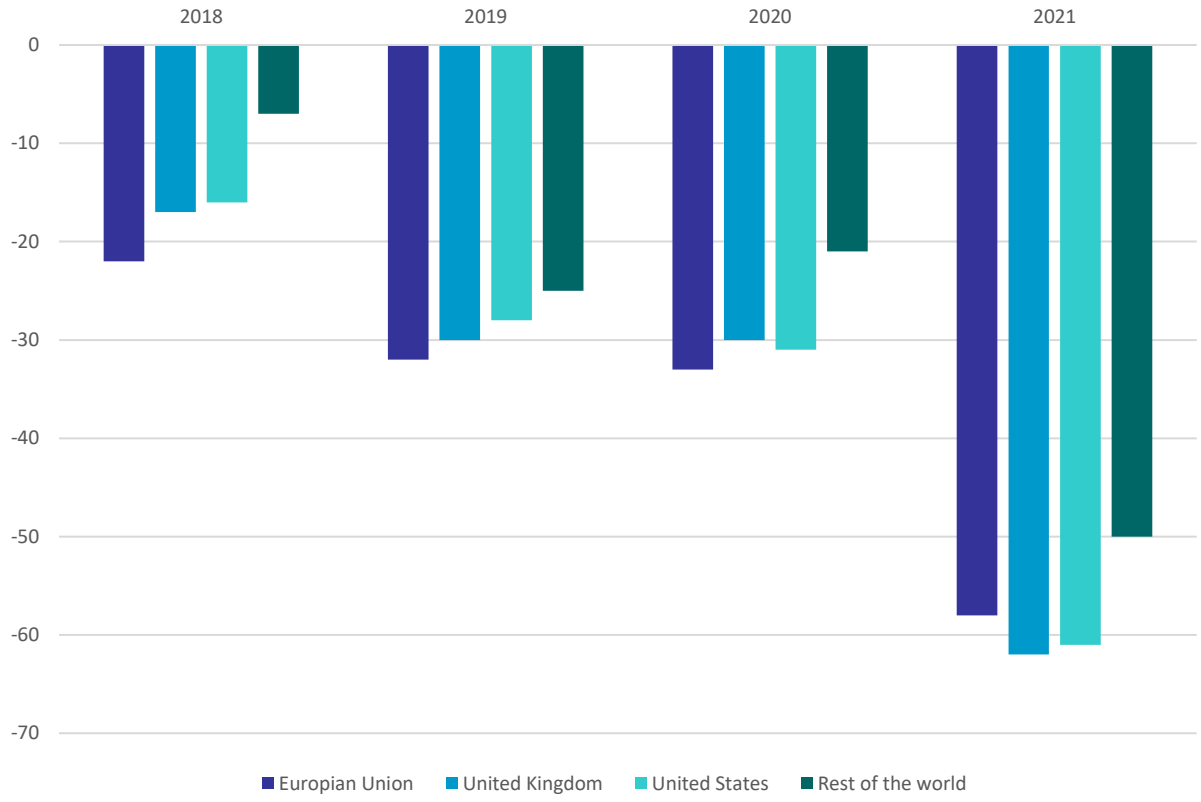


Figure 3. Growth in the number of start-up SMEs

***Source**: OECD, 2023b*

The decline in start-up SMEs can have long-term negative consequences for productivity growth. In the past, substantial economic recessions related to a lack of start-ups or poor

performance among those that have survived. The lack of these young businesses can have a substantial influence on long-term efficiency. Start-ups play a crucial role in competition, innovation, and the diffusion of new technologies and business models. Some start-ups additionally represent a considerable expansion perspective, which leads to significant economic benefits (OECD, 2023b).

Economic globalization includes cross-border operations such as international investment, trade, and strategic partnerships for innovation, production, procurement, and marketing, that influence the global business environment for all enterprises. The accelerated pace of globalization, driven by advancements in information and communication technology, has prompted many SMEs to adopt similar strategies to enhance their market competitiveness. Globalization is widely acknowledged as a driving force for business competitiveness. The global economic landscape, characterized by globalization, presents both opportunities and challenges for business operations. Therefore, businesses cannot afford to disregard globalization and its associated challenges (OECD, 2024).

In the context of global economic integration, SMEs have a significant opportunity to support their businesses internationally. One of the most significant prospects is having the capability to enter global marketplaces, which allows SMEs to expand their customer segment and strengthen their overseas trading activity. Global trade agreements and foreign direct investment initiatives establish a conducive environment for SMEs to cooperate in global value chains and benefit from decreased trade barriers, such as lower tariffs and broader availability of services offered by member nations. This expansion of market access presents new business opportunities and enhances the global presence of SMEs (Vuong, 2020).

SMEs benefit from a heightened approach to financial capital through international investment, which enhances their growth prospects and global competitiveness. As these enterprises establish themselves in the global market, they become more appealing to foreign investors seeking innovative and high-potential business opportunities. International investors are often attracted to SMEs with scalable operations and clear growth strategies. By securing this capital, SMEs may invest in advanced technologies, boost production capabilities, and enter new markets, enabling them to compete with larger firms on a global stage. Moreover, international investors frequently offer more than just financial support; they bring valuable expertise, networks, and mentorship, all of which further bolster the SME's development. Attracting international investment is essential for SMEs aiming to expand operations and grow their global market presence, providing a strong financial base to achieve long-term strategic objectives (Bijaoui, 2017).

Global markets provide SMEs with significant opportunities to enhance their business performance. Accessing foreign markets allows SMEs to source cheaper and more diverse inputs, which can help reduce operating expenses. Additionally, entering new overseas markets can drive output expansion and enable firms to diversify their offerings, extending beyond the limitations of domestic demand. Research shows that SMEs participating in the international market - through imports, exports, or foreign direct investment - experience better performance of turnover growth, job creation, and innovation. As global specialization grows, innovative and adaptable SMEs play a crucial role in supplying a variety of goods and services within global supply chains.

Consequently, many economies are focusing on widening their export capability by supporting SMEs (Lejárraga et al., 2014).

Participating in global value chains presents substantial advantages for SMEs exploring the international market. By becoming part of these networks, SMEs can access a wider variety of resources, raw materials, and advanced technologies that may be scarce or expensive in their home markets, boosting their production capabilities and operational efficiency. Integration into global supply chains also helps SMEs diversify their customer base, reducing reliance on local markets and making them more resilient to economic fluctuations. Furthermore, collaborating with international partners fosters knowledge exchange, boosting innovation and the adoption of best practices across different sectors and regions (Bijaoui, 2017).

Additionally, participating in the global supply chain enhances the reputation and opportunities of SMEs, thereby leading to new business opportunities and supporting sustainable development. Globalization offers SMEs valuable opportunities to engage with large-scale enterprises, which can enhance their competitiveness in the market. Through these interactions, SMEs can learn and adopt competitive strategies utilized by larger firms, helping them to improve their own operations and market positioning. As a result, the economic competition brought about by globalization has concentrated significant attention, particularly concerning SMEs (Vuong, 2020). The fragmentation of production, combined with advances in technologies, has opened up new business opportunities for SMEs. These developments have created niches for the supply of innovative products and services, allowing small firms to leverage their flexibility and agility in entering emerging markets. SMEs with valuable tangible and intangible assets, such as niche products and modern innovations, are increasingly emerging as strategic partners, targets for international mergers and acquisitions, and specialized suppliers to large corporations. They are also actively participating in both physical and virtual global business partnerships. In manufacturing industries like automotive and precision instruments, SMEs that focus on multipurpose technologies have successfully acquired their market positions by serving multiple global value chains as specialized suppliers. This adaptability enables them to maintain competitiveness and relevance in the international market (OECD, 2008).

SMEs can significantly enhance their operational capabilities by accessing cutting-edge technologies through international market participation, especially via bilateral and multilateral trade agreements. Exposure to increasingly advanced technical ecosystems enables SMEs to implement innovative procedures for production, automation systems, and electronic devices, enhancing productivity, accuracy, and flexibility. These developments would allow SMEs to generate greater-quality products that satisfy international requirements, thereby increasing their viability in the global marketplace. Moreover, the adoption of advanced technologies can lead to cost savings through optimized resource use, improved supply chain management, and reduced delivery time. These benefits not only contribute to increased productivity but also enhance long-term viability. SMEs that embrace such technological innovations can move beyond outdated approaches, positioning themselves strategically in both local and international markets. This transformation provides them with the means to improve their global standing and seize new growth opportunities (Vuong, 2020).

The advancement of technologies and the rise of a global supplier base have made outsourcing, including offshore outsourcing, a practical option for SMEs as well. Like large enterprises, SMEs are increasingly outsourcing efforts to enhance their competitiveness by streamlining production and optimizing resource allocation. This strategy allows them to focus on core competencies while reducing costs and improving efficiency. Often, SMEs' offshoring strategies are driven by the need to follow their contractors abroad, enabling them to maintain close relationships with suppliers and capitalize on cost advantages offered by international markets (OECD, 2008).

SMEs have the opportunity to significantly enhance their workforce quality as they integrate into international markets. International standards often necessitate higher levels of skill, knowledge, and expertise, encouraging SMEs to focus on extensive staff training and development campaigns, as well as operations and internal innovation. By focusing on technical skills, intercultural interaction, and market-specific knowledge, SMEs can foster a more capable workforce. This adaptability is crucial in the fast-paced global market, where the ability to quickly respond to changing demands and standards offers a competitive advantage. SMEs that prioritize continuous learning and employee development are better positioned to handle the complexities of global trade, sustain a competitive advantage, and support sustainability (Vuong, 2020).

In addition to the benefits of economic globalization, SMEs face numerous difficulties and obstacles:

Increased uncertainty and geopolitical tensions: Global socioeconomic and policy instabilities have remained considerable, though dropping from their highest point in 2020 (OECD, 2023b). Figure 4 shows the Global Economic and Policy Uncertainty Index from 1997 to 2022, which is a GDP-weighted average of national Economic and Policy Uncertainty indices for 21 countries, including Australia, Brazil, Canada, Chile, China, Colombia, France, Germany, Greece, India, Ireland, Italy, Japan, Mexico, the Netherlands, Russia, South Korea, Spain, Sweden, the United Kingdom and the United States.

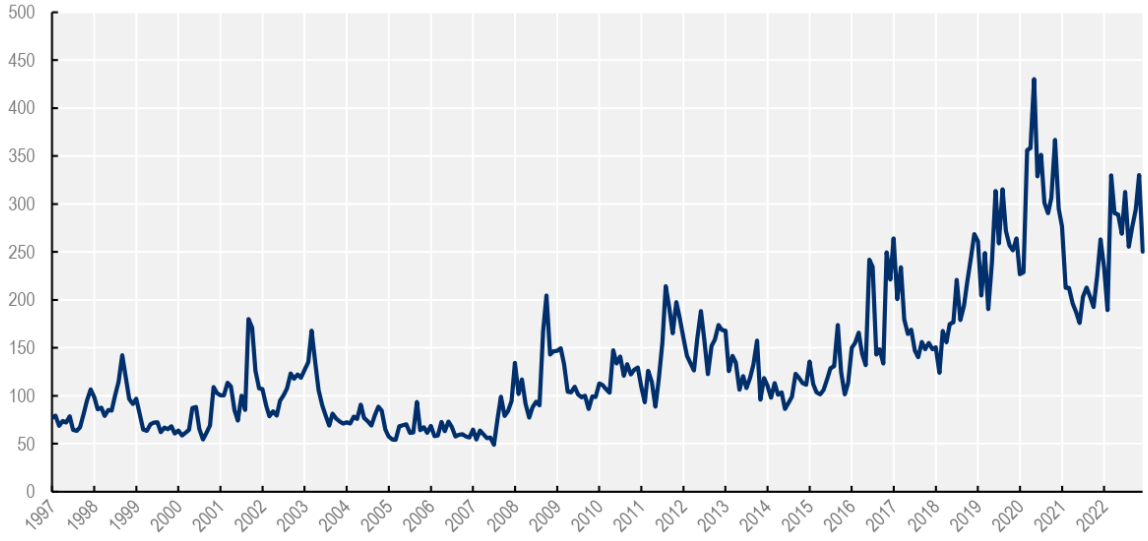


Figure 4. Global economic and policy uncertainties

***Source**: OECD, 2023b*

Recent financial shocks have intensified worries regarding economic growth and monetary policy measures. This unpredictable economic and political context is predicted to result in numerous impacts on SME performance. Firstly, the combination of increased indebtedness due to the COVID-19 pandemic and heightened uncertainty could lead to higher risk premiums on loans and other types of external finance sources. Secondly, this uncertain environment may lower demand and business performance expectations. These issues are expected to restrict investment, particularly in the context of increasing demand for funding driven by digital transformation and carbon reduction (OECD, 2023b).

Access to finance: Compared to large multinational corporations, SMEs generally possess low financial resources. SMEs commonly are family-owned or individually organized, lacking or restricted access to capital markets, and mostly inadequate to entirely depend on internal funding for business and growth. Their smaller size can make them less attractive to lenders, as they may have limited collateral and be considered higher-risk borrowers. This can result in reduced access to finance or higher interest rates from financial institutions. Furthermore, some financial institutions may exclude SMEs from their client portfolio due to the costly process of assessing and supervising small loans spread across broad geographic regions. Limited access to finance has several implications for SMEs, including limits on their liquidity, which may negatively impact their capacity to manage further payment and cash conversion cycles. Insufficient investment capital can also slow globalization efforts, particularly foreign investment, which often requires substantial initial capital. Financial barriers may significantly interrupt SMEs, particularly when they lack the financial resources to explore new markets and adjust their marketing strategies for worldwide markets. These financial constraints can also impact time horizons, limiting SMEs' ability to engage in long-term planning. As a result, SMEs may miss out on opportunities that would be available if they could plan for a more extended timeframe (UN, 2024).

High inflation: According to OECD (2024), in recent years, the sharp increase in inflation, together with rising energy and raw material prices, has significantly impacted the performances of numerous SMEs worldwide. In Europe, inflation-adjusted SME value added decreased by 2.3% in 2022 compared to 2021. Medium-sized enterprises experienced the most significant decline, with a 3% decrease in value-added, followed by small firms at 2.6%. In contrast, large firms witnessed a more moderate decline of 1% in inflation-adjusted added value between 2021 and 2022. Inflation remained a significant challenge for SMEs in 2023.

Figure 5 shows the annual change in 2023 of real value-added, employment, and number of enterprises in the EU-27 by enterprise size class. While nominal value added increased, real price terms declined across all size classes. Small SMEs experienced the most substantial decline (-2.4%), then the SMEs as a whole (-1.6%) and large enterprises (-1.1%). High inflation poses significant challenges for SMEs, primarily through increased operating costs. Rising prices for raw materials, supplies, and wages, driven by inflation, can put pressure on profit margins as SMEs may struggle to pass on these costs to customers due to competitive pressures. Additionally, inflation reduces consumers' purchasing power, leading to lower demand, especially for non-essential goods and services, further impacting SME revenues.

Figure 5. Annual change (%) in 2023 of real value-added, employment, and number of enterprises in the EU-27 by enterprise size class

***Source**: Katsinis et al., 2024*

Inflation also creates cash flow challenges, as maintaining inventory becomes more expensive and borrowing costs rise with higher interest rates. The uncertainty caused by fluctuating input prices and volatile market conditions makes financial planning difficult for SMEs, reducing business confidence and hindering investment. SMEs, with their limited financial resilience and market power compared to larger firms, are at a competitive disadvantage (Katsinis et al., 2024).

Skills and technology constraints: Due to their smaller size, SMEs may face challenges in acquiring the necessary management skills and knowledge for their operations. This constraint is particularly evident in areas such as planning globalization, employee training (language and technical abilities), dealing with cultural differences, such as intercultural skills, and navigating technical complexities of international business, including taxes, customs, tracking, technical standards, regulations, and certification requirements (UN, 2024).

Technological constraints: Technological constraints can significantly hinder SME performance by limiting their ability to improve operations, improve efficiency, and maintain market competitiveness. Without access to advanced tools and digital infrastructure, SMEs may struggle with outdated processes, increased operational costs, and reduced productivity. This lack of technology can also limit their ability to scale, innovate, and effectively engage with customers through digital platforms. Moreover, limited technological resources can prevent SMEs from adopting automation and data-driven decision-making, which are essential for long-term growth and competitiveness in the international market (OECD, 2024).

International competition: International competition can pose significant challenges for SMEs by exposing them to competitors with greater resources, economies of scale, and advanced technologies. Larger global companies can often offer lower prices, better products, and more efficient services, putting pressure on SMEs to either lower their prices or improve their offerings. Additionally, SMEs may struggle to navigate complex international trade regulations, currency fluctuations, and logistical challenges, further disadvantaging them in the global marketplace. This heightened competition can limit their market share, reduce profitability, and create barriers to growth, making it crucial for SMEs to innovate and adapt to stay competitive (UN, 2024).

2.2. Sustainability and Sustainable Performance

The notion of sustainability was first addressed in 1989 when some publicly listed companies started submitting separate environmental reports alongside their financial statements to reveal details about their social and environmental policies (Haidar, 2021). During the 1990s, scholarly literature on sustainability became more extensive, with researchers developing theoretical principles and practical frameworks for sustainability within organizational settings. Gray & Kouhy (1993) introduced sustainability accounting, incorporating methods like input-output analysis, sustainable cost accounting, and natural capital accounting. At the same time, interest grew in developing new indicators to evaluate an organization's value based on non-financial and economic metrics (Rappaport, 1998). In 1997, two significant governing bodies, the Global Reporting Initiative and the Coalition for Environmentally Responsible Economies, were founded, marking a major milestone in advancing organizational sustainability (Montiel & Delgado-Ceballos, 2014). In 1999, Elkington conceptualized the triple bottom line (TBL), which emphasized reporting a company's social, economic, and environmental impacts. This approach laid the foundation for sustainability accounting and shaped the development of the GRI guidelines, playing a crucial role in globalizing the concept of sustainability.

As the new millennium began, organizations increasingly acknowledged the importance of incorporating environmental and social aspects into their business operations. External pressure from stakeholders compelled them to manage and disclose their social and environmental performance and their impact on the surrounding social environment (Haidar, 2021). In 2015, the United Nations (UN) General Assembly officially adopted the 2030 Agenda for Sustainable Development, establishing a comprehensive framework for global sustainable development goals. In 2016, the European Commission (EC) released "The European Consensus on Development," aligning the European Union's development policy with the 2030 Agenda and prioritizing poverty eradication. This consensus incorporated sustainable development into various policy areas, including peace and security, humanitarian aid, and migration (Martins et al., 2022). These milestones have fostered greater awareness and integration of sustainability principles in organizational practices globally.

The definition of sustainability has sparked significant debate, with various viewpoints presenting different interpretations. Some perceive sustainability as a conservative strategy aimed at conserving and reinforcing natural resources that could become scarce in the future, while others regard it as a principle guiding policy-making (Mani et al., 2020). The United Nations World Commission on Environment and Development (1987) provided a widely accepted definition of sustainability "meeting the needs of the present without compromising the ability of future

generations to meet their own needs." This definition offers a comprehensive framework for researchers to pinpoint the essential elements of sustainability. It underscores a human-centric approach, prioritizing the needs of both current and future generations. Moreover, sustainability prioritizes meeting needs over wants, acknowledging the importance of balancing economic, social, and environmental factors. It also emphasizes the intergenerational aspect of sustainability, recognizing the duty to safeguard the well-being of future generations. Additionally, sustainability includes intragenerational equity, recognizing the importance of meeting the needs of both developed and developing nations equally (Haidar, 2021).

As cited in Haidar (2021), authors like Igalens & Gond (2005) and Van der Woerd & Van de Brink (2004) frequently use sustainability and corporate social responsibility (CSR) interchangeably, yet they offer distinct definitions. To link these terms, defining CSR is crucial (Haidar, 2021). Watts & Holme (1999) describe CSR as an organization's continuous commitment to ethical business practices that foster economic prosperity, improve the well-being of employees and their families, and meet the needs of society and local communities. This definition highlights the organization's duty to consider economic, social, and environmental factors in its operations. Contemporary definitions of sustainability include both CSR and sustainable development concepts (Windolph et al., 2014). In a business context, sustainability is defined as engaging in activities or processes that do not inflict irreversible environmental harm, are economically viable, and enhance local community well-being. Therefore, sustainability entails a balanced interaction between economic, social, and environmental factors. Economic factors relate to investments, profitability, and cost management, ensuring that business activities are financially sustainable. Social factors address the collective needs of society, including access to education, healthcare, and employment opportunities. Environmental factors emphasize ecological aspects, such as minimizing negative impacts on natural resources and ecosystems (Haidar, 2021).

In a globalized economy, companies are recognizing that focusing solely on short-term profit maximization is inadequate for thriving in competitive markets. To achieve long-term success, businesses must also prioritize sustainable practices. Thus, companies need to incorporate financial, social, and environmental performance into their overall strategy to maintain sustainable operations (Stanciu et al., 2014). The concept of "sustainable performance" encompasses a company's performance across all aspects and drivers of corporate sustainability (Schaltegger & Wagner, 2006). McWilliams et al. (2006) focused on societal benefits, assessing how a firm achieves social benefits beyond financial gains. Artiach et al. (2010) clarified this by defining organizational performance as the degree to which an organization integrates considerations of profit, environment, people, and governance into its operations, aiming to create impacts on both the organization and society. Stanciu et al. (2014) described organizational performance as an organization's ability to meet stakeholder needs and expectations through long-term, balanced, and effective management. This includes raising awareness among staff and promoting learning, improvement, and innovation. In today's competitive marketplace, organizations are pressured to pursue long-term development by focusing on sustainable performance (Nguyen, 2019). By incorporating sustainability considerations into their business practices, organizations can improve their overall performance, meet stakeholder expectations, and contribute to a more sustainable future.

Sustainable performance provides numerous advantages to companies, allowing them to showcase their planned objectives, both financial and non-financial (Vincenza Ciasullo & Troisi, 2013). It offers a comprehensive viewpoint of a firm's performance across various dimensions—economic, social, and environmental—while focusing on efficiency and effectiveness in these domains (Yadav et al., 2018). Implementing sustainable performance in a company involves employing strategies and measures that fulfill business needs and address current and future social expectations (Ayuso & Navarrete-Báez, 2018). To ensure business survival and sustained growth, companies must focus on meeting objectives, improving market position, achieving consistent profit growth, and exploring potential expansion areas (Wang & Huang, 2022). Adamu et al. (2019) contend that sustainable performance is a crucial element of sustainable development. Sustainable development seeks to meet the needs of the present generation while ensuring future generations can meet theirs. Sustainable performance entails integrating economic, social, and environmental performance. Previous studies (Rennings, Schroder, & Ziegler, 2003; Connelly & Limpaphayom, 2004; as cited in Adamu et al., 2019) have analyzed the relationship between each component of sustainable performance individually, rather than collectively. Conversely, other researchers (Balabanis, Phillips, & Lyall, 1998; Brinkø et al., 2015; Hillman & Keim, 2001; Waddock & Graves , 1997; as cited in Adamu et al., 2019) adopt a holistic view of sustainable performance. They argue that these components are interconnected and cannot be considered separately. Economic, social, and environmental performance are regarded as essential components of sustainable performance.

- *Economic Performance*:

Economic performance aims to ensure businesses remain financially stable while incorporating sustainable practices into their operations. Economic sustainability entails creating long-term value for both the company and its stakeholders by balancing short-term financial goals with long-term strategic objectives that account for environmental and social impacts. Adopting energy-efficient technologies, reducing waste, and optimizing resource use can result in significant cost savings, improving the bottom line and freeing up resources for additional sustainability initiatives (Ayuso & Navarrete-Báez, 2018). Furthermore, sustainable practices can assist firms in mitigating risks related to resource scarcity and price fluctuations, leading to more stable financial performance. By incorporating sustainability, firms can differentiate from competitors, attract environmentally and socially conscious customers, and enhance brand loyalty, driving market competitiveness and growth (Martins et al., 2022).

Ensuring economic performance requires evaluation and examination through various techniques. Various methods have been devised to assess economic success. Companies can employ straightforward methods to boost their economic success and meet the primary objectives of their owners and investors. Describing a firm's capacity to create value and generate acceptable returns on investments is essential. Most companies prioritize long-term value maximization and growth as their main objectives (Adamu et al., 2019).

- *Social Performance*:

Social performance centers on the impact of business activities on diverse stakeholders, such as employees, customers, communities, and society overall. For SMEs, social sustainability

includes adopting fair labor practices, fostering diversity and inclusion, ensuring product safety, and participating in community development. Prioritizing these aspects allows SMEs to generate a positive social impact, improve their reputation, and build long-term relationships with stakeholders (Prasanna et al., 2019). For example, fair labor practices ensure that employees work in safe conditions, receive fair wages, and are treated with respect. This approach not only boosts employee morale and productivity but also reduces turnover rates and attracts top talent. Additionally, fostering diversity and inclusion in the workplace can create a more innovative and resilient organization, better equipped to adapt to varying market demands and challenges (Styaningrum et al., 2020).

Social performance encompasses achieving the social mission and involves key elements like safety management systems, occupational health, and initiatives such as the Safe Company program. Evaluating social performance is especially crucial in the realm of human resources. Economically, performance can be gauged by the quantity of work completed over a certain period, with labor productivity acting as a reliable efficiency metric. Socially, optimal performance is achieved when individuals harness their full potential, experience personal satisfaction and fulfillment, and cultivate their personality (Venkatraman & Nayak, 2015).

- *Environmental Performance*:

Environmental performance emphasizes reducing the negative effects of business activities on the natural environment. The environmental performance includes the organization's environmental actions and responsibilities, offering a complete view of its environmental impact (Adamu et al., 2019). Environmental sustainability entails adopting practices that minimize waste, reduce greenhouse gas emissions, conserve energy and water, and use renewable resources. Previous studies show that environmental initiatives can result in economic advantages. By adopting these practices, SMEs can substantially enhance their environmental footprint and contribute to the broader goal of sustainable development (Styaningrum et al., 2020). For example, using energy-efficient technologies and renewable energy sources can help companies lower their energy consumption and carbon emissions, resulting in cost savings and improved environmental performance. Additionally, practices like waste reduction, recycling, and embracing circular economy principles can minimize waste production and resource depletion, fostering long-term sustainability (Ayuso & Navarrete-Báez, 2018).

Several methods have been used to improve the environmental status of organizations, including optimizing resource consumption, adopting cleaner technologies, implementing environmental management systems, and employing other sustainable practices. Integrating environmental and quality management systems has created new opportunities for organizations, such as reducing resource consumption and enhancing relationships with internal and external stakeholders, authorities, and communities (Adamu et al., 2019). The environmental dimension of sustainable performance aids SMEs in adhering to regulatory standards and improves their reputation among consumers, investors, and other stakeholders who prioritize environmental responsibility. Companies that proactively manage their environmental impact are better equipped to mitigate risks linked to resource scarcity and environmental regulations, ensuring long-term resilience and success for the business (Martins et al., 2022).

Evaluating an organization's sustainable performance requires considering its management system. This entails creating effective and efficient subsystems that address deviations from equilibrium. Implementing sustainable performance practically in SMEs necessitates processes that uphold the enterprise's sustainability. This mutually beneficial process requires every management-level decision to be made with a focus on sustainability (Yadav et al., 2018).

2.3. Determinants of the Sustainable Performance of Small and Medium-sized Enterprises

SMEs can significantly contribute to sustainable development and foster positive change in local communities, especially amid globalization and technological advancements (Westman et al., 2019). Although SMEs endeavor to adopt corporate sustainability measures to comply with policies and regulations, the link between social and environmental practices and economic performance in SMEs remains debatable (Bhatti et al., 2022). However, involving all SMEs in sustainable practices poses challenges, and there are numerous barriers to implementing sustainability management activities in SMEs (Martins et al., 2022).

The factors influencing the sustainable performance of SMEs fall into two categories: external and internal. These categories are detailed below.

2.3.1. External determinants

External factors play a crucial role in motivating SMEs to attain sustainable performance. Studer (2006; as cited in Yadav et al., 2018) suggests that SMEs frequently hesitate to adopt sustainability practices without external pressure or influence. This hesitation can arise from several factors, such as limited resources, lack of awareness, and the belief that sustainability initiatives are expensive and complex. However, when SMEs perceive a significant external push towards sustainability, they are more inclined to prioritize and implement sustainable practices in their operations.

Government policies and regulations

Government policies and regulations, including environmental rules, financial incentives, and support programs, greatly affect the sustainable performance of SMEs. Stringent environmental regulations enforced by government policies can compel SMEs to implement more sustainable practices (Sitharam & Hoque, 2016). The legal framework governing their operations is often hard for SMEs to comprehend, further hindering their ability to maintain compliance. Adamu et al. (2019) mentioned that regulatory frameworks mandating emissions reductions and waste management standards drive SMEs to innovate and enhance their environmental performance.

The government can significantly influence the relationship between a firm's capabilities, practices, resources, and environmental performance, especially in emerging economies where governmental resources can impact industrial performance (Songling et al., 2018). Although firms can enhance sustainability outcomes using internal resources, external support is crucial for achieving high profitability. In emerging economies, small firms struggle to access the necessary resources for business expansion and often depend on building networks with government and political bodies to secure valuable resources essential for innovation and competitiveness (Anwar & Ali Shah, 2020).

The government functions as an external driver that influences SME behavior through regulations, legislation, economic and structural support, and knowledge dissemination (Yadav et al., 2018). Governments in emerging economies invest in innovative research projects to boost industrial performance and promote firm growth. Considering the constraints faced by SMEs in emerging economies, government financial and non-financial incentives, such as investments in technology and industrial development, can enhance their innovative performance and maintain their competitive edge (Witjes et al., 2017).

Government support is crucial for the successful implementation of sustainable practices, such as lean-green paradigms (Gandhi et al., 2018). These supports help SMEs access capital, invest in innovation, and improve their competitiveness in the market. For instance, targeted financial support and favorable tax policies can alleviate the financial constraints faced by SMEs, allowing them to invest in growth and development (OECD, 2018). Government policies that enforce labor laws, promote fair trade practices and encourage corporate social responsibility (CSR) initiatives positively impact the social performance of SMEs. These policies ensure that SMEs operate ethically, treat their employees fairly, and contribute positively to their communities. By fostering a regulatory environment that prioritizes social welfare, SMEs can build stronger relationships with their stakeholders, enhance their reputation, and improve overall social outcomes (OECD, 2023a).

Government regulations significantly influence firms' environmental practices and economic performance in terms of sustainability (Ullah et al., 2021). Legislation often motivates sustainable practices, as fines and penalties for non-compliance compel SMEs to adopt these practices (Sáez-Martínez et al., 2016). Environmental regulations compel SMEs to adopt greener practices and technologies, which can lead to improved environmental performance. Such regulations may include requirements for waste management, emission reductions, and energy efficiency. Compliance with these regulations not only helps SMEs avoid penalties but also encourages them to innovate and adopt sustainable practices that benefit the environment. For example, policies promoting green technology and sustainable practices have been shown to drive significant improvements in the environmental performance of SMEs (Dasanayaka et al., 2022). Gandhi et al. (2018) assert that SMEs receiving financial support for environmental initiatives are more inclined to invest in sustainable technologies and processes, resulting in better economic and environmental outcomes.

Market Competition

Market competition significantly influences the sustainable performance of SMEs. In a globalized economy, SMEs encounter heightened competition from larger firms, posing challenges in adopting sustainable practices and maintaining competitiveness (Yadav et al., 2018).

Competition among SMEs has significantly intensified over the years (Sitharam & Hoque, 2016). Market competition drives SMEs to improve efficiency, innovate, and adopt best practices, all of which enhance their performance. Competitive markets encourage SMEs to optimize their operations, reduce costs, and increase productivity, leading to better economic outcomes (OECD, 2023a). A firm's competitive advantage is built on several criteria, including offering lower prices, rapid product innovation, superior quality, greater reliability, and faster delivery times. These

factors help improve a firm's overall performance. Furthermore, firms that can sustainably innovate, quickly develop products, and promptly introduce them to the market can achieve a first-mover advantage, resulting in increased market share and sales volume (Le & Ikram, 2022).

Competition pushes SMEs to innovate and differentiate their products and services, which can result in increased sales and market share. This competitive pressure often leads to better resource allocation and more strategic investment in technology and skills, enhancing overall economic performance (Ekanayake et al., 2020). This approach can result in higher sales and profitability, as customers increasingly demand sustainable practices from businesses. Although competitors may present challenges for SMEs in adopting sustainability, they also offer opportunities for differentiation, enabling SMEs to use sustainability as a competitive advantage. Prioritizing sustainability enables SMEs to boost their competitiveness and contribute to a more sustainable future (Lopez-Torres, 2023). Additionally, the need to compete effectively can lead SMEs to pursue higher quality standards and customer satisfaction, which directly impacts their profitability and market position (OECD, 2023a).

Competitive markets drive SMEs to create new products and processes that minimize environmental impact and boost social responsibility. Ekanayake et al. (2020) discovered that SMEs in highly competitive industries are more inclined to invest in green innovations to stay ahead of competitors and meet evolving market standards. Companies that operate in competitive environments are often motivated to enhance their reputation and build stronger relationships with stakeholders, including employees, customers, and the community. This can lead to better working conditions, more ethical business practices, and greater community engagement (Marolt et al., 2022). Furthermore, SMEs in competitive markets might engage more actively in Corporate Social Responsibility (CSR) initiatives to distinguish themselves from competitors and build a loyal customer base (OECD, 2023a).

However, in highly competitive markets, SMEs may adopt cost-leadership strategies that focus on minimizing costs to maintain competitiveness. This can result in less investment in environmentally friendly technologies and practices, as these often require significant upfront costs (Duanmu et al., 2018). Moreover, SMEs operating in competitive markets might face resource constraints that limit their ability to invest in green technologies and sustainable practices. The need to allocate limited resources to areas that directly influence competitiveness, such as production efficiency and marketing, can lead to underinvestment in environmental initiatives (Grether et al., 2010).

Customer behaviors

Customer loyalty is a vital component in the sustainable performance of SMEs. Loyal customers who prioritize sustainability are more inclined to support businesses practicing responsibility. Customer-focused strategies significantly enhance SME performance by fostering customer loyalty, improving market insights, and creating value through tailored products and services. According to research, SMEs that prioritize understanding and meeting customer needs can achieve competitive advantages, leading to increased sales and profitability (Abrokwah-Larbi, 2024). Additionally, customer-focused approaches encourage customer engagement and satisfaction, further driving economic success for SMEs (Madhani, 2020). Customer-focused

strategies also enable SMEs to adapt to market demands swiftly and effectively, leveraging insights gained from customer interactions to refine their offerings and operational processes. This approach not only boosts customer satisfaction but also fosters repeat business and positive word-of-mouth, which are critical for sustaining economic growth (Choi et al., 2019).

SMEs effectively communicating their sustainable initiatives to customers can foster stronger relationships and improve customer retention, thus boosting their economic performance. The proactive demand for eco-friendly products, processes, and services motivates SMEs to implement sustainable practices (Yadav et al., 2018). Many SMEs have launched initiatives to manage energy and resources efficiently and to minimize their environmental footprint, driven by buyer support (Lee & Klassen, 2008). Moreover, customer pressure for corporate social responsibility (CSR) drives SMEs to embrace sustainable practices. Nowaday's customers are increasingly aware of social and environmental issues and expect businesses to act responsibly. The interaction between customer behaviors and SME sustainability highlights the importance of understanding and meeting customer expectations to achieve better environmental, social, and economic outcomes (Abrokwah-Larbi, 2024).

Hoogendoorn et al. (2015) conducted a study across 36 countries, revealing that consumer-facing SMEs are more likely to integrate environmental considerations into their products and services than those serving other businesses. This indicates that customers, as stakeholders, play a crucial role in shaping SME behavior. A comprehensive study across the European Union (EU) found that SMEs are more inclined to enhance their environmental performance in response to the perceived needs of civil society rather than government regulations (Graafland & Smid, 2017).

However, Gadenne et al. (2009) found limited evidence for customer influence on owner/managers' environmental awareness and attitudes, with partial support observed only for supplier influence on cost-benefit awareness. Madhani (2020) supposes that the pressure to meet customer demands can lead SMEs to prioritize short-term economic gains over long-term social and ethical considerations. This often results in overworking employees, ignoring labor rights, or engaging in practices that may harm local communities. Sometimes, customer behaviors may influence SMEs to adopt unsustainable practices due to high consumer demand for low-cost products. This can lead to poor working conditions and inadequate environmental practices, which, while economically beneficial in the short term, can deteriorate the social performance of SMEs (Marolt et al., 2022). The drive to keep costs low to satisfy price-sensitive customers can compromise the firm's ability to invest in socially responsible initiatives. Addressing these challenges requires SMEs to balance customer satisfaction with their social responsibilities. Implementing comprehensive Corporate Social Responsibility (CSR) strategies can help mitigate negative social impacts. By engaging customers in the value of socially responsible practices, SMEs can foster a more supportive consumer base that values ethical practices as much as product quality and cost (Choi et al., 2019).

Supplier behaviors

The sustainable performance of SMEs is greatly affected by their suppliers' behaviors, which include environmental practices, social responsibility, and economic efficiency. Suppliers dedicated to green procurement, efficient waste management, and energy conservation can

significantly enhance SMEs' environmental footprint. Collaborating with suppliers that prioritize sustainability helps SMEs enhance their sustainability performance and reputation, leading to higher sales and profitability as customers increasingly demand sustainable practices (Yadav et al., 2018).

Research shows that ethical sourcing and responsible labor practices boost the social performance of SMEs. When suppliers engage in socially responsible practices, such as fair labor practices, community engagement, and ethical sourcing, they contribute to the overall social sustainability of the SMEs they work with. This, in turn, enhances the social reputation and stakeholder trust of these SMEs, leading to better social performance (Dubey et al., 2018). Choi et al. (2019) found that dynamic capabilities like knowledge access, co-development, supply chain rebuilding, partner development, and flexibility can aid the adoption of Corporate Social Responsibility (CSR) practices among Chinese SMEs. Wu (2017) suggested that socially responsible supplier development can effectively help SMEs enhance their sustainability capabilities. Active participation in networks, collaboration with various partners, and access to government support mechanisms can mitigate the resource and capability shortages among SMEs.

Economic performance, which is closely linked to supplier reliability, cost efficiency, and innovation, is crucial. Dependable suppliers provide consistent quality and timely deliveries, minimizing operational disruptions. Cost-efficient suppliers enable SMEs to maintain competitive pricing and profitability, while innovative suppliers facilitate the development of new products and services, driving market growth (Mani et al., 2020).

Multiple studies have emphasized the importance of SMEs in greening the supply chain, which depends on their suppliers' readiness. SMEs incorporating green procurement policies and environmental criteria in their supplier selections have noted significant improvements (Lee & Klassen, 2008). Research shows that green procurement practices reduce carbon footprints, while efficient waste management and energy-efficient suppliers lead to cost savings and regulatory compliance. In China, supply chain pressure is more prevalent for internationally operating SMEs, leading to better social or environmental performance and increased motivation for sustainable practices (Yu & Bell, 2007). Ghadge et al. (2017) highlighted that suppliers have driven SMEs to green their supply chain networks, as seen in the Greek dairy industry.

In contrast, some studies reveal barriers that supplies may bring to the SMEs. SMEs often have limited control and influence over their suppliers compared to larger enterprises. This lack of leverage can hinder SMEs from enforcing sustainable practices or demanding significant environmental improvements. As a result, SMEs might have to accept the environmental shortcomings of their suppliers, which can undermine their own environmental performance and sustainability efforts (Kusi-Sarpong et al., 2016). Furthermore, when suppliers do not adhere to environmental standards or engage in unsustainable practices, it can result in increased costs and inefficiencies for SMEs, ultimately affecting their economic performance negatively (Valdez-Juárez et al., 2018).

Networks and Partnerships

The influence of networks and partnerships on SMEs' sustainable performance has been widely examined in recent years. Numerous researchers have underscored the importance of collaborative

relationships in improving SMEs' sustainability (Ghadge et al., 2017). Partnerships are essential in expanding market access for SMEs, enabling them to seize new opportunities and boost their competitiveness. Through strategic alliances, SMEs can access larger markets and diverse customer bases, fostering economic growth and sustainability (Anwar & Ali Shah, 2020). Sharing knowledge of environmental practices and their cost-benefit advantages positively impacts SMEs (Yadav et al., 2018). Networks and partnerships also can assist SMEs in implementing eco-innovation and eco-design practices, resulting in the creation of sustainable products and services (Korsakienė & Raišienė, 2022). This factor enables SMEs to access a broader range of resources, knowledge, and technologies, which can enhance their capabilities to implement sustainable practices. According to Xie et al. (2024), network embeddedness significantly boosts green innovation performance in manufacturing SMEs, indicating that strong network ties facilitate the adoption of environmentally friendly technologies and practices.

Collaborations between SMEs and non-profit organizations can grant SMEs access to expertise in sustainable practices and regulations, promoting more sustainable business operations (Gandhi et al., 2018). SME owners and managers hold favorable views toward local business networks and environmental agencies, which are vital in fostering cooperative relationships and building the trust needed for collective action to address ecological challenges (Revell et al., 2009). Additionally, networks and partnerships often involve shared sustainability goals and practices, which can create a supportive environment for SMEs to pursue social and environmental objectives. These collaborations enable SMEs to leverage the expertise and resources of larger or more experienced partners to improve their sustainability initiatives (Xie et al., 2024). This collaborative approach not only enhances the SMEs' sustainability performance but also contributes to a broader positive impact on the community and environment.

Socially, partnerships and networks help SMEs build and strengthen relationships with various stakeholders, including customers, suppliers, and community organizations. These relationships can lead to enhanced social performance through improved community engagement and better working conditions. Collaborative efforts, such as those seen in formal business networks, can lead to greater social capital, which benefits SMEs by fostering trust and cooperation among network members (OECD, 2023a).

However, the success of networks and partnerships in improving sustainable performance depends on various factors, such as relationship quality, trust, and alignment of values and goals (Korsakienė & Raišienė, 2022). Thus, SMEs must carefully assess potential partners and networks to ensure alignment with their sustainability objectives and values.

2.3.2. Internal determinants

Internal drivers play a significant role in shaping the sustainability practices of SMEs. By leveraging these internal factors, SMEs can enhance their sustainable performance, ensuring long-term viability and a positive impact on the environment and society. (Yadav et al., 2018). These drivers encompass a wide range of factors that are intrinsic to the organization, including human resources, technology and innovation, financial accessibility, marketing strategies, capability for environmental management, and the firm’s culture.

Human resource practices

Effective human resource practices contribute significantly to the overall sustainability of SMEs by enhancing their economic viability, environmental responsibility, and social equity. Employees are viewed as vital assets for organizations, and their skills and attitudes greatly influence organizational performance. Research has demonstrated a positive correlation between employees' knowledge, experience, capabilities, skills, and their commitment to organizational sustainability performance (Afzal & Lim, 2022). Skilled and motivated owners/managers can foster a positive work environment and culture, boosting employee satisfaction and productivity, which in turn enhances business operations and growth (Styaningrum et al., 2020). Human resource practices that focus on employee development, empowerment, and engagement are crucial for improving the productivity and innovation capabilities of SMEs. By investing in skills development and creating a supportive work environment, SMEs can enhance their competitive advantage and achieve better economic outcomes. Research shows that strategic HR management can lead to higher employee satisfaction and retention, which in turn boosts organizational performance and profitability (Brown et al., 2015).

Employee demand and better working conditions have been identified as motivations for SMEs to invest in ecological measures (Adamu et al., 2019). Human resource practices that incorporate environmental sustainability principles, often referred to as green human resource management, can significantly improve the environmental performance of SMEs. This includes training employees on sustainable practices, promoting eco-friendly behaviors, and integrating environmental objectives into performance appraisals. Green human resource management practices help reduce waste, conserve resources, and minimize the environmental footprint of SMEs, as highlighted in studies by Chaudhary (2019).

Socially responsible human resource practices, such as ensuring fair labor practices, promoting diversity and inclusion, and fostering a healthy work-life balance, enhance the social performance of SMEs. These practices not only improve employee well-being but also enhance the reputation of SMEs as socially responsible entities. Improved social performance can lead to stronger community relationships and increased customer loyalty, which are vital for long-term success (Bubicz et al., 2021).

Technology & Innovation

Past academics have highlighted the significance of technological innovation and hypothesized that technological innovation aids in achieving a firm's sustainability. In this context, Battisti et al. (2019) propose that technological innovation is the most critical factor in attaining organizational sustainability. Technological capabilities boost efficiency, and productivity, and support training and development, thus enhancing the sustainability performance of construction firms (Afzal & Lim, 2022). As SMEs evolve, leveraging technology becomes crucial for customer outreach and supporting their growth (Adamu et al., 2019).

The adoption of new technologies and innovative practices helps SMEs increase their operational efficiency and reduce waste, leading to cost savings and higher profitability. For instance, digitalization and the integration of advanced technologies such as big data analytics and

cloud computing have been shown to significantly enhance SME performance by streamlining operations and enabling data-driven decision-making (Bouwman et al., 2018).

Technological advancements also improve the sustainable performance of SMEs by fostering better communication, employee engagement, and customer relationships. Social media platforms and digital communication tools enable SMEs to interact with their customers more effectively, gather feedback, and build stronger community ties (Ahmad et al., 2019). Technologies play a crucial role in enhancing the environmental performance of SMEs by enabling eco-innovation and sustainable practices. The adoption of green technologies, such as energy-efficient systems and sustainable production processes, helps SMEs reduce their carbon footprint and minimize waste. The use of smart technologies in monitoring and managing resource consumption leads to more sustainable operations (El-Kassar & Singh, 2019). Furthermore, digitalization supports the implementation of circular economy principles, where resources are reused and recycled, promoting environmental sustainability (Xin et al., 2023).

Innovativeness involves converting ideas or inventions into valuable products or services that customers are willing to purchase (Akinwale et al., 2017). It characterizes individuals or organizations that generate or adopt new ideas, processes, products, or services to add value to customers and enhance firm performance (Yunis et al., 2017).

Innovative practices are essential for enhancing sustainability performance, and highly innovative firms often achieve positive sustainability outcomes (Fernández Fernández et al., 2018; da Silva et al., 2019). Innovations drive a firm's growth by enhancing productivity, operational efficiency, and market competitiveness. SMEs that adopt innovative practices, such as new technologies and business models, can streamline their operations, reduce costs, and improve product quality, which in turn boosts profitability. Innovations in digital tools and processes enable SMEs to expand their market reach and respond more swiftly to changing customer demands, leading to increased revenue and market share (Geng et al., 2021).

Innovations also positively impact the social performance of SMEs by improving employee engagement, customer satisfaction, and community relations. Innovations in customer service and product offerings can lead to higher customer satisfaction and loyalty, which strengthens the firm's social capital and community standing (Ahmad et al., 2019). Furthermore, the adoption of green technologies and sustainable practices, significantly improve the environmental performance of SMEs. These innovations help SMEs reduce their environmental footprint by minimizing waste, reducing emissions, and conserving resources. For example, eco-innovations in production processes and product design lead to more sustainable operations and products that meet the growing consumer demand for environmentally friendly options (Rustiarini et al., 2022; Oduro, 2024).

Financial accessibility

Financial accessibility denotes a business's capacity to access financial capital and associated services. It includes the availability of financial resources like debt or equity for SMEs. Limited financial access has been recognized as a significant barrier to SME growth and viability (Adamu et al., 2019). Financial accessibility has an impact on accessing a variety of financial products and services, which can help SMEs overcome credit constraints and invest in growth and sustainability

initiatives. This increased access to finance allows SMEs to purchase more efficient and environmentally friendly equipment, adopt cleaner production methods, and implement sustainability practices that reduce waste and emissions. Consequently, these investments lead to improved economic performance by enhancing productivity and competitiveness (Jin & Zhang, 2019). Xin et al. (2023) found that SMEs with increased financial accessibility were more inclined to invest in sustainable practices, resulting in better financial performance and long-term sustainability. Similarly, Chowdhury et al. (2022) indicated that SMEs with improved access to finance were more likely to adopt sustainable practices, leading to increased operational efficiency and greater market competitiveness. A study by Palazuelos et al. (2018) found that better access to finance improves the overall economic activity and growth prospects of SMEs, which in turn enhances their ability to engage in sustainable practices.

Furthermore, financial accessibility supports SMEs in building resilience against environmental risks and complying with environmental regulations, which can otherwise be costly. Ullah et al. (2021) emphasize that SMEs with greater access to financial resources are better equipped to implement sustainable practices, resulting in enhanced environmental performance. By having access to finance, SMEs can afford to make necessary adjustments and improvements to their operations, ensuring that they meet regulatory standards and avoid potential fines and sanctions. This compliance not only safeguards the environment but also secures the economic stability of the SMEs (Mazanai & Fatoki, 2012).

In contrast, financial accessibility may lead SMEs to prioritize short-term financial gains over long-term social goals. When SMEs gain easier access to financial resources, they may focus intensively on expanding their economic activities and improving their profitability, sometimes at the expense of their social responsibilities. Furthermore, insufficient financial access can limit SMEs' capacity to invest in sustainability and attain sustainable growth. Numerous SMEs in developing countries encounter difficulties in accessing financial resources (Adamu et al., 2019). Financial constraints can force SMEs to cut costs in areas that are not directly tied to economic performance, such as community engagement, employee well-being programs, and other socially beneficial activities (Msomi & Olarewaju, 2021). As a result, while financial accessibility provides the means for economic growth, it can inadvertently reduce the resources available for improving SMEs' sustainable performance. Additionally, financial accessibility can sometimes lead to increased stress and workload for SME owners and employees, negatively impacting their well-being and social relations. The pressure to achieve financial targets can create a high-stress environment, reducing job satisfaction and overall employee morale, which are critical components of social performance (Hussain et al., 2018).

Marketing strategies

Marketing strategies and competitiveness are crucial in shaping the sustainable performance of SMEs. Effective marketing allows SMEs to access their target markets, boost sales, and improve overall performance (Yadav et al., 2018). In today's fast-paced and competitive business environment, companies are challenged to make decisions that ensure survival and promote growth (Sitharam & Hoque, 2016).

Studies have examined how marketing strategies affect the sustainability of SMEs. Prasanna et al. (2019) indicated that SMEs with greater competitiveness and effective marketing strategies showed superior financial performance and a higher likelihood of achieving long-term sustainability. Adamu et al. (2019) suggested that SMEs using effective marketing strategies could reach more customers, boost sales, and enhance financial performance. The study also revealed that social media marketing is an effective strategy for SMEs to target their markets and improve sustainability. As stated in the studies of Ahmad et al. (2019) and Syaifullah et al. (2021), marketing strategies that incorporate social media allow SMEs to build and strengthen relationships with their customers and the community. This interaction fosters trust, brand loyalty, and customer satisfaction, which are vital components of social performance. For example, SMEs using social media marketing can engage with their audience more effectively, addressing their needs and feedback promptly, which helps in building a positive social image and reputation.

Many researchers have identified a firm's image as a key factor in driving sustainable performance in SMEs. Sustainable branding enables SMEs to stand out by highlighting their dedication to environmental and social responsibility. Promoting eco-friendly products and services allows SMEs to attract a growing segment of consumers who prioritize sustainability. SMEs use social capital to boost their reputation as environmentally responsible companies, aiming to achieve economic gains, legitimize their existence, attract customers, increase sales, and satisfy external stakeholders. SMEs participate in environmental activities to highlight their green public image, environmental stewardship, and green branding (Yadav et al., 2018).

Moreover, the integration of innovative marketing approaches, such as influencer collaborations and content marketing, can further strengthen the social impact of SMEs. These strategies help SMEs to connect with wider audiences, foster community engagement, and create a more inclusive brand image, contributing to improved social performance (Amoah & Jibril, 2020).

Environmental Management Capability

Strong environmental management capability can be crucial for enhancing the operational performance of SMEs, ultimately leading to sustainability (Thanki & Thakkar, 2018). Effective environmental management can enhance economic performance by reducing waste, improving resource efficiency, and lowering operational costs. These capabilities help SMEs optimize their processes and leverage cost savings from sustainable practices, thus boosting profitability and competitive advantage (Ali et al., 2021). It can be inferred that green management practices significantly influence an organization's sustainability, contributing to its overall success (Bhatti et al., 2022). For SMEs aiming to achieve success through sustainability, implementing green management practices is crucial, as eco-innovation and green management practices are essential for reaching that goal.

Moreover, implementing green practices can lead to a positive corporate image, attracting socially conscious consumers and investors, and fostering a supportive and motivated workforce. This holistic approach to environmental management not only drives economic benefits but also cultivates a positive social impact by promoting corporate social responsibility and ethical business practices (Eikelenboom & de Jong, 2019). Additionally, SMEs that integrate environmental

management into their core strategies often witness improved stakeholder relationships and enhanced reputation, which are critical for long-term success and resilience in the market (Stanciu et al., 2014).

SMEs with extensive environmental experience and well-developed internal environmental management capabilities are more proactive and better prepared to implement sustainable practices that enhance the firm's performance (Yadav et al., 2018). Implementing environmental management systems like ISO 14001 allows SMEs to systematically manage their environmental impacts and enhance resource efficiency. SMEs with strong environmental management systems frameworks achieve superior environmental performance and operational efficiency. A comprehensive study by Graafland & Smid (2017) across European countries revealed that ISO14001 certification significantly improves the environmental impacts of SMEs.

Firm's culture

A firm's culture encompasses the values, attitudes, behaviors, and patterns that evolve within an organization over time, guiding employee conduct. Fostering an organizational culture that prioritizes sustainability is crucial for SMEs. A strong sustainability-oriented culture motivates employees to integrate sustainable practices into their daily operations and decision-making. Wang & Huang (2022) found that a firm's flexibility culture positively correlates with innovation capability, while a control culture negatively affects it, thereby influencing sustainable performance. Embracing a learning organizational culture that fosters innovative behavior and a no-blame attitude enhances employee commitment to achieving sustainable performance goals (Afzal & Lim, 2022). This supports the notion that a firm's culture can impact sustainable performance positively or negatively through its effect on innovation capability. The researchers suggest that the differing impacts of organizational culture on SME sustainability, as noted in prior studies, can be due to the various cultural forms within these organizations. Specifically, a control culture was found to harm sustainable performance, while a flexibility culture had a beneficial effect.

Additionally, environmental responsibility in SMEs is shaped by factors such as the personal values and ethics of owners and managers, social responsibility, management support, and knowledge management. The personal commitment of SME managers to pro-environmental attitudes is essential for their performance (Yadav et al., 2018). Chowdhury et al. (2022) also suggest that visionary leadership prioritizing sustainability promotes the adoption of green practices and nurtures an environment conducive to sustainable innovation.

Employee involvement in sustainability initiatives is another essential element of a firm's culture that affects sustainable performance. A firm's culture encompasses the values, beliefs, and behaviors that shape how employees interact within the company and with external stakeholders. Actively engaged employees contribute to developing and implementing eco-friendly practices. Chaudhary (2019) suggests that SMEs promoting employee participation in sustainability programs achieve better environmental outcomes and higher employee satisfaction and commitment. In contrast, a rigid or negative corporate culture in SMEs can stifle innovation, reduce employee morale, and limit effective communication, which are critical components of social performance (Kadam et al., 2019). When the organizational culture does not prioritize social

responsibility or community engagement, it can lead to practices that neglect the broader social implications of business activities.

Moreover, SMEs with a culture that is heavily focused on traditional hierarchical structures might struggle with adopting socially progressive practices. For example, if the firm's culture does not support diversity and inclusion or employee well-being initiatives, it may result in lower social performance. Research has shown that SMEs that fail to integrate inclusive cultural practices often face challenges in engaging effectively with their employees and the community, leading to a decline in social capital and corporate reputation (Bocquet et al., 2017).

2.4. Sustainable performance of Small and Medium-sized Enterprises in the context of globalization

Entering international markets is regarded as one of the most effective strategies for boosting business competitiveness and enhancing production processes. Globalization provides distinct advantages, enabling companies to broaden their technical expertise by learning from other nations and accessing more affordable inputs (Braito et al., 2021). Access to global markets enables SMEs to address diverse consumer demands for sustainable products, thus enhancing their environmental and economic outcomes (Ekanayake, 2020).

In the current business environment, globalization is essential for businesses globally. The trend of global convergence has been developing for a while and seems to be speeding up. This trend has created new global opportunities and heightened competition that was not present a few years ago (Sitharam & Hoque, 2016). As a result, SMEs are increasingly exposed to global competition and are compelled to integrate into the international market. Furthermore, empirical research on SME internationalization indicates that the advantages of the international market and significant growth opportunities are more frequently attained by SMEs than by large multinational corporations (Hsu et al., 2017). However, globalization presents challenges that SMEs must overcome to achieve sustainable performance. Intense global competition compels SMEs to innovate and enhance their sustainability practices to stay competitive. Moreover, adhering to international regulatory standards ensures that SMEs meet strict environmental and social criteria, thereby promoting higher sustainability standards (Liñán et al., 2020).

In the competitive global market, small businesses can no longer limit their operations to domestic borders. Expanding globally has become a necessity rather than just a preference or choice. Failing to explore global markets can be a fatal mistake for businesses of any size. In today's business environment, companies must adopt the concept of "businesses without borders" to succeed. However, global expansion can significantly strain small companies (Sitharam & Hoque, 2016).

Researchers have investigated various issues faced by SMEs in both advanced and emerging economies during economic globalization, including capital instability, innovation, regulatory licenses and taxes, workers' rights, and competitiveness (Naradda Gamage et al., 2020). From a business management perspective, Noe et al. (2023) identified three primary challenges: global challenges, sustainability issues, and technology challenges.

The impact of internal and external factors on the sustainable performance of SMEs under the influence of globalization will be presented in detail below.

Policies, regulatory standards, and compliance

Policies, regulatory standards, and compliance play a crucial role in harnessing the benefits of globalization for SMEs, leading to improved sustainable performance. Policies that facilitate access to international markets, provide financial incentives and reduce bureaucratic hurdles enable SMEs to expand their operations and compete globally (Permatasari & Gunawan, 2023). Trade agreements and export promotion policies help SMEs enter new markets and increase their sales revenue. According to Graafland & Smid, 2017, supportive government regulations that streamline export procedures and offer tax incentives significantly enhance the economic performance of SMEs by reducing costs and increasing profitability. Additionally, initiatives such as grants and low-interest loans aimed at fostering innovation and technological adoption further bolster SMEs' economic growth (Moursellas et al., 2022).

Globalization-driven social responsibility mandates significantly enhance the sustainable performance of SMEs. These mandates typically require compliance with labor standards, human rights practices, and community engagement, promoting improved social outcomes. SMEs must ensure fair labor practices, workplace safety, and respect for human rights within their operations globally. Regulations that enforce labor standards, promote fair wages and ensure safe working conditions help SMEs improve their social responsibility (Naradda Gamage et al., 2020). Government policies that incentivize corporate social responsibility (CSR) initiatives encourage SMEs to invest in community development and employee welfare programs. According to Khan et al. (2022), SMEs that comply with stringent labor regulations and engage in CSR activities report higher employee satisfaction and better social reputations. Furthermore, globalization exposes SMEs to international best practices, prompting them to adopt higher social standards and contribute positively to their communities. Unfortunately, this is particularly challenging for SMEs in developing countries, where labor laws and regulations may be less stringent (OECD, 2017).

Globalization harmonizes regulatory standards across borders, compelling SMEs to adhere to stringent environmental and social criteria (Bijaoui, 2017). SMEs in the global market are under growing pressure to adhere to global environmental, social, and governance (ESG) standards and regulations. These standards and regulations aim to foster sustainability and responsible business practices. Regulations that mandate environmental protection, promote green technologies, and offer subsidies for sustainable practices encourage SMEs to adopt eco-friendly operations. The growing emphasis on green production methods from international integration incentivizes SMEs to build robust environmental management systems, reducing waste and minimizing ecological footprints (Permatasari & Gunawan, 2023). SMEs adhering to environmental regulations and utilizing government incentives for sustainable practices experienced significant improvements in their environmental performance. These policies not only help SMEs comply with international environmental standards but also boost their competitiveness in global markets that increasingly prioritize sustainability (Ali et al., 2021).

However, SMEs frequently face challenges in implementing and monitoring these standards because of limited resources and capacity (Bansal & DesJardine, 2014). Adhering to

global ESG standards and regulations presents environmental challenges for SMEs. SMEs might need to invest in new technologies and processes to reduce their carbon footprint and minimize waste, which can be expensive and necessitate operational changes (Christmann & Taylor, 2001). Additionally, SMEs may face difficulties in water management, land use, and biodiversity conservation, which are crucial for complying with global environmental standards (Korsakienė & Raišienė, 2022).

Global Competition

Global economic competitiveness greatly affects domestic SMEs, especially those concentrating on localized products. Trade liberalization and advancing technology allow producers from other economies to penetrate various market sectors, including remote areas. This puts pressure on SMEs to maintain their existing businesses and market niches (Naradda Gamage et al., 2020).

Global competition forces SMEs to enhance their sustainability efforts to maintain and strengthen their market position. This competitive pressure drives SMEs to innovate and adopt environmentally and socially responsible practices to remain competitive internationally. Exposure to global competition encourages environmental and social innovation, which is vital for the sustainability of SMEs (Prasanna et al., 2019).

Moreover, globalization has lowered entry barriers in numerous industries, allowing both domestic and foreign firms to compete with SMEs in their markets. SMEs are now confronted with a broader range of competitors, including multinational corporations and other global SMEs. This increased competition necessitates that SMEs differentiate themselves, innovate, and continually enhance their products, services, and operational efficiency to stay competitive (Mwika et al., 2018). Global competition indirectly incentivizes innovation as a key effect of globalization. International competition motivates SMEs to develop new products, processes, and business models that minimize environmental impact and boost social responsibility. This push for innovation can result in substantial improvements in sustainable performance. Naradda Gamage et al. (2020) found that SMEs in highly competitive industries are more likely to invest in eco-innovations, leading to improved sustainability outcomes and adherence to evolving global standards.

However, under intense global competitive pressures, SMEs might prioritize cost reduction and market share expansion over sustainable practices. This focus on short-term economic gains can lead to environmentally detrimental decisions, such as cutting corners on environmental regulations or investing in cheaper but more polluting technologies. In highly competitive markets, SMEs may face pressure to reduce operational costs by foregoing investments in green technologies or sustainable practices, which can lead to increased emissions and waste production (Masroor & Asim, 2019). Singh et al. (2022b) suggest that SMEs in highly competitive global markets often struggle to balance economic performance with environmental sustainability. The pressure to remain competitive can result in reduced investments in environmental management systems, leading to a deterioration in overall sustainable performance. Additionally, SMEs may engage in practices such as excessive resource extraction and pollution-intensive manufacturing processes to maintain competitive pricing, further exacerbating their negative environmental impact (Ikram et al., 2021).

Global market access and International customers

Globalization has enabled SMEs to expand beyond domestic markets and access international ones, which offers opportunities for growth and revenue diversification. The reduction of trade barriers and advancements in transportation and communication have enabled SMEs to connect with international customers and form trade relationships (Liñán et al., 2020). The expansion of global markets allows SMEs to access a broader customer base, fostering increased demand for products and services that meet international standards of quality and sustainability (Choi et al., 2019). International customers often prioritize ethical sourcing, eco-friendly practices, and social responsibility, which encourages SMEs to align their operations with these expectations to remain competitive (Abrokwah-Larbi, 2024).

However, globalization has exposed customers to a broader range of products, services, and cultural influences. This exposure has shifted customer preferences towards unique, high-quality, and culturally diverse offerings. To effectively target and retain customers in a globalized market, SMEs must understand and adapt to these evolving preferences (Braito et al., 2021). Moreno-Gómez et al. (2023) emphasize that SMEs utilizing global market access can grow and adapt their practices to align with global sustainability standards, thereby improving their overall performance.

Moreover, exposure to global markets compels SMEs to innovate their marketing approaches, embrace digital marketing tools, and engage in strategic brand positioning to attract a broader customer base. According to Ahmad (2019), SMEs that leverage global marketing strategies are better positioned to expand their market reach, increase sales, and boost profitability. The adoption of e-commerce and social media marketing allows SMEs to tap into international markets, driving revenue growth and market share expansion. Additionally, globalization-driven marketing strategies enable SMEs to better understand and respond to diverse customer needs, thereby enhancing customer satisfaction and loyalty, which translates into improved economic performance (Wu et al., 2024).

Globalization also positively influences the social performance of SMEs through improved marketing strategies. By adopting ethical and socially responsible marketing practices, SMEs can enhance their reputation and foster stronger relationships with customers and communities. Global exposure often encourages SMEs to align their marketing strategies with international standards of corporate social responsibility (CSR), promoting transparency, fairness, and social equity. SMEs that emphasize ethical sourcing, fair trade, and community engagement in their marketing campaigns can build a socially responsible brand image. SMEs that integrate CSR into their marketing strategies report higher levels of consumer trust and loyalty, which contribute to long-term social sustainability (Le, 2023).

Global networking and supply chain integration

Supply chain integration, facilitated by globalization, also plays a crucial role in the sustainable performance of SMEs. Integrating effectively into global supply chains enables SMEs to optimize operations, reduce waste, and improve resource efficiency. Globalization has created opportunities

for SMEs to access specialized inputs and resources unavailable domestically. SMEs can utilize global supply chains to acquire specialized components, advanced technologies, or unique expertise to enhance the quality, innovation, and differentiation of their products or services. Access to specialized inputs can give SMEs a competitive edge in the global market (Jinjarak & Wignaraja, 2016). SMEs can now source inputs, components, and raw materials from various countries, leveraging cost efficiencies, specialized expertise, and diverse offerings. This expanded supplier network boosts the flexibility and competitiveness of SMEs in the global market (Govindan et al., 2013).

Engaging in global supply chains often necessitates adherence to better labor practices and social standards, improving the social footprint of these enterprises. The research highlighted by Lee & Klassen (2008) underscores the role of close supplier relationships in fostering socially sustainable practices, which enhance social capital and overall social performance. Moreover, globalization encourages SMEs to adopt socially responsible behaviors to maintain their global market positions, ultimately leading to better social outcomes.

Globalization has also created opportunities for SMEs to form strategic alliances and partnerships. Through international networks and strategic partnerships, SMEs gain access to diverse resources, knowledge, and best practices that promote social responsibility. These collaborations often involve sharing CSR strategies, labor standards, and ethical practices, which SMEs can implement within their operations (Han et al., 2024). According to Audretsch et al. (2023), SMEs that engage in international networks report higher levels of employee satisfaction and social reputation due to the adoption of global best practices. Moreover, these relationships facilitate the exchange of sustainable technologies, practices, and innovations, enabling SMEs to reduce their environmental footprint. Through partnerships with environmentally conscious organizations, SMEs can access eco-friendly technologies and practices that they may not have developed independently. A study by Ekanayake et al. (2020) highlighted that SMEs involved in global networks were more likely to adopt energy-efficient processes, waste-reduction techniques, and sustainable sourcing practices.

However, with a larger pool of potential global suppliers, SMEs may face challenges in selecting the right ones. Evaluating suppliers' reliability, quality standards, pricing, and ethical practices becomes crucial but challenging for SMEs with limited resources and expertise. This is often due to increased competition and pressure to lower costs, which can lead to compromised economic stability and reduced profitability (Govindan et al., 2013). In addition, supply chain integration exposes SMEs to risks such as supply disruptions, quality issues, and intellectual property concerns. Relying on a limited number of suppliers or regions increases vulnerability to disruptions (Naradda Gamage et al., 2020).

The environmental performance of SMEs also tends to suffer under the pressure of globalization. SMEs, particularly those in developing regions, might resort to less sustainable practices to remain competitive. This often involves working with suppliers who do not prioritize environmental standards, leading to increased pollution and resource depletion. SMEs engaged in international trade frequently face difficulties in enforcing environmental compliance among their suppliers, contributing to a deterioration in their overall sustainable performance (Dzikriansyah et al, 2023).

Global talent pool

The sustainable performance of SMEs is significantly influenced by their access to the global talent pool, which encompasses skilled workforce acquisition, diverse perspectives, and enhanced innovation capacity. Access to a global talent pool allows SMEs to recruit skilled professionals from around the world, bringing in expertise that can drive sustainable practices and innovations. For instance, a study by Iqbal et al. (2021) highlights that the availability of a diverse and skilled workforce enhances the innovative capabilities of SMEs, leading to improved environmental and social performance.

Globalization may enhance the sustainable performance of SMEs by influencing and transforming their organizational culture through access to a global talent workforce. The integration of diverse international talent fosters a culture of innovation, inclusivity, and adaptability, which are essential for SMEs to thrive in competitive and dynamic global markets (Chaudhary, 2019). According to Bhatti (2022), cultural diversity within the workforce encourages SMEs to adapt and innovate, which can significantly improve their sustainability performance. Cross-cultural interactions and exposure to varied perspectives encourage SMEs to adopt globally relevant practices, improve problem-solving approaches, and foster collaboration, all of which contribute to sustainability-oriented innovation and operational efficiency (Afzal & Lim, 2022). Additionally, the ability to attract and retain talent from diverse backgrounds ensures that SMEs are better equipped to address the challenges of globalization, such as environmental sustainability and compliance with international standards, thereby enhancing their overall performance and long-term resilience (Styaningrum et al., 2020). On the other hand, globalization may enhance sustainable performance by instilling a culture of resilience and adaptability within SMEs. Firms with access to international talent tend to foster cultural initiatives that embrace change, knowledge sharing, and ethical decision-making, which are crucial for navigating the complexities of global markets. This cultural transformation helps SMEs to address regulatory and market pressures for sustainability while building long-term stakeholder trust (Adamu et al., 2019).

Moreover, access to global talent enhances the capacity of SMEs to implement advanced technologies and best practices in sustainability. Skilled professionals from various regions bring unique knowledge and experiences that can help SMEs optimize their operations and adopt more sustainable methods. A study by Jooss et al. (2023) found that the transfer of knowledge and technology facilitated by a global talent pool is crucial for the sustainable development of SMEs. Overall, the interplay between access to global talent, diverse perspectives, and innovative capacity underscores the importance of leveraging a global workforce to achieve enhanced environmental, social, and economic outcomes for SMEs.

Global Capital Accessibility and Economic Crisis

Globalization improves SMEs' access to diverse financial resources, which positively impacts their sustainable performance. Enhanced financial accessibility allows SMEs to invest in advanced technologies, expand their operations, and improve their competitiveness in the global market (Prasanna et al., 2019). According to Lee & Klassen (2008), globalization has facilitated SMEs' integration into global value chains, providing them with the financial means to scale their operations and improve profitability.

Financial accessibility through globalization also contributes to improved environmental performance for SMEs. Access to international funding and investment often comes with stipulations for adopting sustainable practices and technologies. This can drive SMEs to implement environmentally friendly processes and products, reducing their ecological footprint. International financial institutions and investors frequently mandate environmental compliance, encouraging SMEs to align with global environmental standards (Dzikriansyah et al., 2023). A study by Yadegaridehkordi et al. (2023) highlighted that SMEs with better financial resources were more likely to invest in renewable energy and waste management technologies, leading to significant environmental benefits.

In contrast, globalization's influence on financial accessibility can negatively impact some aspects of the sustainable performance of SMEs. The pressure to remain competitive in a global market often leads SMEs to prioritize financial gains over social responsibilities. This shift can result in cost-cutting measures that adversely affect employee welfare and labor conditions (Liñán et al., 2020). SMEs facing intense global competition may resort to outsourcing labor to countries with lower wage standards, compromising their social performance. Moreover, the focus on financial metrics can divert attention from corporate social responsibility initiatives, weakening SMEs' commitment to social sustainability (Bux et al., 2024).

Economic crises present significant challenges but also offer opportunities for SMEs to innovate and adapt. SMEs, heavily reliant on consumers, suppliers, and markets, faced escalating difficulties in maintaining production during the crisis (Naradda Gamage et al., 2020). The global economic crisis led to a severe shortage of international liquidity, a decline in trade, and rising unemployment rates (Jinjarak & Wignaraja, 2016). Depreciation of domestic currencies during the crisis could worsen financial positions for businesses, causing increased unemployment (Naradda Gamage et al., 2020). During downturns, SMEs often face financial constraints that can impede their ability to maintain sustainable practices.

However, SMEs that show financial resilience and adaptability can navigate these challenges and emerge stronger. Kim & Cho (2020) assert that SMEs with strong financial management practices and a focus on sustainability are better equipped to withstand economic crises and maintain sustainable performance. SMEs' stronger local industry presence and lesser reliance on the financial sector help them endure economic downturns (Estensoro et al., 2022). Govindan et al. (2013) identified key areas for SMEs to focus on to mitigate the financial crisis's negative effects and promote sustainable growth and competitiveness. These areas include finance, innovation, intellectual property activities, globalization, and implementing best practices. Additionally, adaptability and flexibility are crucial for SMEs to overcome financial crisis challenges.

Moreover, economic crises can catalyze innovation, prompting SMEs to find more cost-effective and sustainable solutions. The pressure to survive during downturns can lead SMEs to adopt practices that improve resource efficiency and reduce environmental impact. Singh et al. (2022a) highlight that economic pressures can drive the adoption of innovative practices that enhance sustainability. Overall, the interaction between global capital access, economic crises, and the indirect effects of globalization emphasizes the importance of financial resilience, strategic

adaptation, and innovation in achieving improved environmental, social, and economic outcomes for SMEs.

Technology Accessing and Innovation

Advancements in information and communication technology (ICT) significantly contribute to the globalization of SMEs. The Internet is particularly recognized as an efficient tool for knowledge transfer among SMEs (Naradda Gamage et al., 2020). The growth of the electronic environment has promoted e-commerce and e-marketing, boosting productivity, profit growth, and competitiveness for SMEs (OECD, 2017).

Mobile commerce (m-commerce) has become a powerful platform for SMEs globally, offering benefits like enhanced productivity, increased customer satisfaction, and reduced operational costs. However, SMEs encounter challenges in transitioning to e-commerce, such as insufficient ICT capabilities, inadequate funding, dependency on collaborators, limited knowledge of e-commerce benefits and adoption, restricted access to investments, and inadequate technical skills (Naradda Gamage et al., 2020). As smartphones become ubiquitous, mobile internet usage is increasingly vital for businesses, including SMEs (OECD, 2017). However, operating in the electronic environment also exposes SMEs to risks like cyberattacks, spammers, and criminal activities. This risk is particularly significant for SMEs, which often lack the resources and cybersecurity measures necessary within their organizations (Liñán et al., 2020).

Innovation driven by globalization is crucial for enhancing the sustainable performance of SMEs. Exposure to international markets and competitive pressures motivates SMEs to create new products and processes that reduce waste, lower energy consumption, and enhance overall sustainability. Battisti et al. (2020) found that SMEs implementing process innovations achieve better sustainability outcomes by optimizing production methods and minimizing their environmental footprint. Innovation boosts the resilience and adaptability of SMEs amid changing market dynamics and global disruptions. Fostering a culture of innovation makes SMEs more agile and able to respond to challenges and seize opportunities. Innovative SMEs can swiftly adapt their business models, products, or processes to remain relevant despite disruptive technologies, shifting customer preferences, or unforeseen crises. However, technology evolves rapidly in a globalized environment. SMEs may struggle to keep pace with the latest technological advancements and trends, hindering their ability to innovate effectively. The fast-evolving landscape requires SMEs to continually update their knowledge, invest in new technologies, and adapt their business models to stay competitive (Estensoro et al., 2022).

Moreover, globalization promotes the transfer of advanced technologies and best practices across borders, allowing SMEs to adopt more sustainable methods. Access to advanced technologies enables SMEs to lower their environmental impact and enhance resource efficiency. Bhatti et al. (2022) found that SMEs investing in green technologies see significant improvements in environmental performance and operational efficiency.

Digital transformation, driven by globalization, is vital for the sustainable performance of SMEs. Integrating digital technologies enables SMEs to streamline operations, enhance supply chain transparency, and improve customer engagement. Wu et al. (2024) found that SMEs using digital tools and platforms are more agile and capable of addressing sustainability challenges,

resulting in enhanced environmental, social, and economic performance. It can be said that the interaction between technology access, innovation, and the indirect effects of globalization highlights the importance of continuous technological advancements and innovative practices for achieving sustainable business outcomes for SMEs.

In conclusion, although globalization presents sustainability challenges for SMEs, it also offers opportunities to adopt sustainability as a catalyst for innovation, impact, and growth. By taking a proactive stance on sustainability, SMEs can address these challenges and help create a more sustainable future.

2.5. The gap in literature

Research on the effectiveness and sustainability of SMEs in Vietnam is limited. Previous studies (Vu et al., 2019; Le & Ikram, 2022; Le et al., 2023; Nguyen et al., 2023) have examined factors like human resources, innovation, competition, and debt diversification on SME performance in Vietnam, but did not specifically address sustainability. Nguyen et al. (2015) studied internal variables like business owners' experience, education level, gender, business type, enterprise size, years in operation, and revenue growth rate, but their research was confined to a specific province in Vietnam.

Several studies have explored the factors affecting the sustainable performance of SMEs in Vietnam. Vo Thai et al. (2024) investigated the relationship between dynamic capabilities and sustainable business performance in Vietnamese SMEs, focusing on the mediating role of digitalization strategies. Nguyen (2019) investigated the application of the Kaizen management model to sustainable performance in Vietnamese SMEs. Chowdhury et al. (2022) analyzed internal factors like leadership, culture, innovation, and employee skills and competencies on SME performance. Nguyen & Nguyen (2022) adopted a similar approach but included globalization via exports, alongside internal factors like innovation, labor, assets, and ownership. However, their study only considered the impact of exports as one aspect of globalization and did not examine the effects of globalization on internal factors. Similarly, Thu & Xuan (2023) analyzed the influence of internal factors on sustainable performance but focused only on foreign direct investment enterprises.

Nguyen & Ngo (2021) focused solely on external factors like supply chain, environmental, social, and governance responsibilities, assessing their impact on the sustainable development goals of Vietnamese SMEs. Their findings showed that technological progress and environmental and social responsibility were positively linked to SMEs' sustainable development goals. The study also revealed that supply chains significantly moderated the relationship between technological progress and sustainability goals.

Overall, there is a lack of research on the sustainable performance of SMEs in Vietnam and the factors influencing their sustainability. Existing studies often focus on either internal or external factors, lacking a comprehensive analysis of both. Additionally, there is a shortage of research addressing the sustainable performance of SMEs in Vietnam within the context of globalization.

Therefore, this dissertation titled "*Exploring Determinants Affecting the Sustainable Performance of Vietnamese Small and Medium-sized Enterprises*" aims to investigate the internal and external factors influencing the sustainable performance of SMEs in Vietnam. Recognizing the profound influence of globalization on contemporary business operations, this research will specifically examine globalization as a moderating variable. By analyzing how globalization interacts with internal and external factors, the study seeks to uncover how changes in the global context may amplify or mitigate the impact of these factors on the sustainable performance of Vietnamese SMEs.

CHAPTER 3
MATERIALS AND METHODS

3.1. Data collection

3.1.1. Questionnaire Design

Questionnaires, as the primary and widely used method for collecting primary and quantitative data, standardize and compare the data collection phase. Consequently, they offer a more efficient and precise way of collecting data and promoting data analysis (Krosnick, 2018).

Closed-ended questionnaires have predefined response templates and consist of questions with set options. The advantage of closed-ended questions is that they provide strategically chosen response options, allowing all participants to select an option based on the same reference point. Besides, these questions have predetermined responses, making them easier to answer than open-ended questions and more likely to ensure consistency in participants' understanding of the questions and their responses. Moreover, using closed-ended questions allows for a quicker and more systematic evaluation of the data collected. To measure the study's impact, it is possible to simply calculate the frequency of responses, or the means, using a Likert scale (Taherdoost, 2022).

Given these advantages and their application in many previous studies (Le & Ikram, 2018; Ahmad et al., 2019; Ullah et al., 2021; Afzal & Lim, 2022; Wang & Huang, 2022) on SME sustainability, this study gathered data using a closed-ended structured questionnaire.

SMEs are recognized as crucial actors in addressing environmental challenges (Hoogendoorn et al., 2015). However, their diverse characteristics make implementing sustainable practices complex (Martins et al., 2022). To bridge this gap, this study aims to examine the factors influencing the sustainable performance of Vietnamese SMEs. Specifically, we will investigate both internal and external determinants of sustainable performance, as well as the moderating role of globalization. By understanding these relationships, we seek to contribute to the development of strategies that promote sustainable practices within the SME sector. The proposed model includes four groups of constructs, as follows:

- Sustainable performance of Vietnamese SMEs: 3 constructs, including Economic performance, Social performance, and Environmental performance.

- External determinants: 5 constructs, including Government policies & Regulations, Market Competition, Customer behaviors, Supplier behaviors, and Networks & Partnerships.

- Internal determinants: 6 constructs, including Human resource practices, Technology & Innovation, Financial accessibility, Marketing strategies, Environmental management Capability, and Firm’s culture.

- Globalization: 1 construct.

Table 2 lists the indicative variables for each construct.

Table 2. Constructs and respective indicators with codes

Construct	Items		Sources
Sustainable performance of Vietnamese SMEs			
Economic performance	EcP1	"Trend in sales of your enterprise within the last 3 years"	Ndiaye et al. (2018); Le & Ikram (2018); Afum et al. (2020); Afzan & Lim (2022)
	EcP2	"Trend in profit of your enterprise within the last 3 years"	
	EcP3	"Trend in product costs of your enterprise within the last 3 years"	
	EcP4	"Trend in market share of your enterprise within the last 3 years"	
	EcP5	"Trend in productivity of your enterprise within the last 3 years"	
	EcP6	"Trend in the number of customers of your enterprise within the last 3 years"	
	EcP7	"Trend in investment planned for future business innovation of your enterprise within the last 3 years"	
Social performance	SP1	"Your enterprise effectively identifies and manages social risks"	Kraus et al. (2017); Kumar et al. (2022)
	SP2	"The equality and well-being of employees are constant concerns"	
	SP3	"The product's impact and the well-being of customers are constant concerns"	
	SP4	"Your enterprise creates and uses up effectively the resources to sustain well-being over time"	
Environmental performance	EnP1	"Your enterprise has significantly reduced its carbon footprint"	Aboelmaged (2017); Le & Ikram (2018); Afum et al. (2020)
	EnP2	"Your enterprise has deployed and operated a waste reduction program effectively"	
	EnP3	"Your enterprise has enhanced its energy efficiency significantly"	
	EnP4	"Your enterprise has effectively implemented sustainable sourcing practices"	
External determinants			
Government Policies & Regulations	GPR1	"Your enterprise complies with government sustainability policies and regulations without difficulty"	Tomsic et al. (2015); Aghelie (2017); Ullah et al. (2021)
	GPR2	"The government's sustainability policies and regulations have benefited your enterprise's long-term sustainability plan"	
	GPR3	"Government policies and regulations provide a conducive environment for your enterprise to adopt sustainable business practices"	
	GPR4	"There are not any barriers in government policies that hinder your enterprise's sustainable performance"	

Construct	Items	Sources	Construct
Market Competition	MC1	"Your enterprise has adopted more sustainable practices to differentiate itself in a competitive market"	Le & Ikram (2018); Pratono et al. (2019)
	MC2	"Competitive pressures have led your enterprise to improve its environmental practices"	
	MC3	"Intense market competition has driven your enterprise to enhance its sustainability initiatives"	
	MC4	"Your enterprise has a high level of competitiveness compared to others in the industry"	
Customer behaviors	CB1	"It is critical to consider the preferences and interests of your enterprise 's customers for sustainable goods and services"	Hosseininia & Ramezani (2016); Afum et al. (2020);
	CB2	"Customer feedback is vital in developing your enterprise's strategy and initiatives"	
	CB3	"Customer satisfaction and expectations are crucial for your enterprise's business practices"	
	CB4	"Your enterprise has attempted to strengthen its sustainability obligations in order to attract and keep client loyalty"	
Supplier behaviors	SB1	"The social responsibility obligation of your enterprise's suppliers is maintained"	Vachon & Klassen (2008); Yeh et al. (2020)
	SB2	"Your enterprise's goals are aligned with those of its key suppliers"	
	SB3	"Collaboration with suppliers has enhanced Your enterprise's sustainability performance"	
Networks & Partnerships	NW1	"Your enterprise has leveraged industry networks to improve its sustainability performance"	Acosta et al. (2018); Mikhailitchenko (2021)
	NW2	"Partnerships with other organizations have enhanced your enterprise's sustainability efforts"	
	NW3	"Collaborative efforts with stakeholders have strengthened your enterprise's sustainability initiatives"	
Internal determinants			
Human resource practices	HR1	"Your enterprise 's HR policies support the integration of sustainability into our business operations"	Tomsic et al. (2015); Hosseininia & Ramezani (2016); Aboelmaged (2017)
	HR2	"Employee performance appraisals include sustainability-related criteria"	
	HR3	"Employees in your enterprise understand and embrace the company's sustainability goals and values"	
	HR4	"Your enterprise has implemented incentives to encourage employees to participate in sustainability initiatives"	
	HR5	"Your enterprise provides sustainability training for employees to enhance their awareness and skills"	
Technology & Innovation	TI1	"New technologies that assist sustainable practices are adopted and implemented"	

Construct	Items	Sources	Construct
Technology & Innovation	TI2	"Innovation in your enterprise is driven by sustainability goals"	Aboelmaged (2017); Le & Ikram (2018); Afzan & Lim (2022)
	TI3	"Your enterprise regularly develops policies and prioritizes funding in R&D in the field of sustainable technology"	
	TI4	"Your enterprise uses advanced technologies to increase resource efficiency and decrease environmental impact"	
	TI5	"Your enterprise regularly promotes sustainability-related product, process, and service innovation"	
Financial accessibility	FA1	"Your enterprise is capable of getting grants, subsidies, and other types of financial assistance"	Ratnawati (2020); Ullah et al. (2021)
	FA2	"The financial solutions are designed to be consistent with the goals and objectives of sustainability"	
	FA3	"Your enterprise can obtain credit from financial institutions without difficulty"	
	FA4	"No financial obstacles are limiting your company's capacity to embrace sustainable practices"	
Marketing strategies	MS1	"Your enterprise's marketing strategies emphasize sustainability"	Cao & Weerawardena (2023); Le (2023)
	MS2	"Sustainable branding has enhanced your enterprise's market performance"	
	MS3	"Your enterprise's marketing efforts focused on sustainability have improved customer loyalty"	
Environmental management Capability	EM1	"Environmental considerations are integrated into your enterprise's daily operations, production processes, and supply chain management"	Arda et al. (2019); Le et al. (2021)
	EM2	"Your enterprise can address and manage potential environmental risks associated with its activities and operations"	
	EM3	"Your enterprise measures and monitors its environmental performance against relevant standards and benchmarks"	
	EM4	"Your enterprise engages with external stakeholders to enhance its environmental management practices"	
Firm's culture	FC1	"Your enterprise has established a culture that appreciates and emphasizes sustainability"	Aghelie (2017); Afzan & Lim (2022); Chowdhury et al. (2022)
	FC2	"Your enterprise fosters a culture of sustainability within the workplace and among employees"	
	FC3	"Your enterprise incorporates sustainability into its recruitment, onboarding, and training programs"	
	FC4	"Your enterprise's communication on sustainable issues is transparent and honest"	

Construct	Items	Sources	Construct
Globalization			
Globalization	GLB1	"Globalization has significantly facilitated your enterprise's access to global markets"	Vladimirov et al. (2013); Şengül et al. (2015); Emmanuel (2017); Mikhailitchenko (2021)
	GLB2	"Globalization has greatly improved your enterprise's ability to integrate into international supply chains"	
	GLB3	"Globalization has intensified the level of competition your enterprise faces in the global market"	
	GLB4	"Global competition has significantly influenced your enterprise's strategic decisions"	
	GLB5	"Globalization has enhanced your enterprise's access to global financial resources"	
	GLB6	"Your enterprise's economic stability has been significantly impacted by global economic crises due to globalization"	
	GLB7	"Globalization has improved your enterprise's access to advanced technologies"	
	GLB8	"Globalization has led to significant innovation within your enterprise"	
	GLB9	"Globalization has influenced your enterprise's adherence to international regulatory standards"	
	GLB10	"Globalization has expanded your enterprise's access to a global talent pool"	
	GLB11	"The availability of international talent due to globalization has affected your enterprise's human resource strategies"	

***Source**: Author's construction*

Questionnaire items are specific questions designed to elicit data from respondents. It is imperative to maintain objectivity throughout the data collection process, avoiding any bias that might influence participant responses (Sonderen et al., 2013). The measurement scales employed in this study were either adapted from existing research or validated in previous studies conducted by the researcher.

The questionnaire was divided into four distinct sections, utilizing a 5-point Likert's scale to gauge respondents' level of agreement with statements. This scale ranged from "1" indicating "strongly disagree" to "5" representing "strongly agree" (Joshi et al., 2015). The initial section focused on gathering demographic information about respondents and key characteristics of their SMEs. The subsequent section delved into assessing the sustainable performance of Vietnamese SMEs across three primary dimensions: economic, social, and environmental. The third part of the questionnaire was dedicated to examining the moderating influence of globalization on Vietnamese SMEs. The final section concentrated on evaluating two primary categories of determinants or variables: external and internal factors that potentially impact the sustainable performance of SMEs in Vietnam.

3.1.2. Pilot study

A pilot study constitutes a critical preliminary step in the research process, serving to refine and validate the questionnaire before its administration to a larger sample. This phase facilitates the identification of potential issues within the questionnaire design, such as confusing questions, inadequate options, or technical issues. The primary objectives of the pilot study encompass: (1) ensuring the clarity, unambiguity, and comprehensibility of all questions for respondents; (2) assessing the internal consistency and construct validity of survey items; (3) detecting technical issues associated with the questionnaire design; and (4) determining the average time necessary for answering the questionnaire to ensure it is feasible for participants (Connelly, 2008).

The questionnaire was meticulously developed based on a comprehensive literature review and expert consultations. Its structure incorporated sections dedicated to demographic information, sustainability practices, and a comprehensive range of determinants (external and internal factors, globalization). Adhering to the general guideline of a pilot sample size equivalent to approximately 10% of the main study or a minimum of 30–50 respondents (Johanson & Brooks, 2010), a pilot sample of 50 participants was deemed appropriate for this study given its multiple constructs. This sample size effectively balances the need for meaningful feedback with practical constraints related to time and resources.

The pilot questionnaire was disseminated via email to a selected group of SME employees, with follow-up reminders employed to optimize response rates. A total of 50 individuals participated in the pre-test conducted in January 2024. Subsequent to the collection and evaluation of participant feedback, minor modifications were implemented to refine individual question formulations and overall questionnaire intensity.

3.1.3. Collecting method and sample size

The study is grounded in survey data collected from Vietnamese SMEs to investigate their sustainable performance. Respondents were selected based on their knowledge of sustainability performance issues and their employment within the SME sector. To overcome challenges associated with accessing survey participants, a snowball sampling approach was employed (Sedgwick, 2013). The study commenced by directly contacting SMEs in Vietnam, followed by encouraging initial participants to disseminate the survey among their acquaintances and colleagues within the SME sector.

Data collection spanned from February to June 2024, resulting in 407 completed surveys. After excluding invalid responses, a usable sample of 384 responses was obtained for analysis.

Given the study's reliance on PLS-SEM for data analysis, sample size determination is crucial. Adhering to the commonly accepted 10-times rule (Hair et al., 2011), the sample size should ideally be ten times the largest number of predictors in the structural model. Focusing on the most complex construct with the highest number of predictors, the model necessitates a minimum sample size of 110 observations due to the presence of 11 predictors.

The Gamma-Exponential method offers a robust and contemporary approach to sample size estimation within the context of Partial Least Squares Structural Equation Modeling (PLS-SEM). Compared to traditional methods such as the 10-times rule, this method provides more

conservative and often more precise sample size estimates (Kock & Hadaya, 2018). Key parameters influencing the calculation include alpha, beta, and effect size. To determine an appropriate sample size, this study employed the 'pwr' package in R Studio (Champely et al., 2020). Alpha, set at 0.05, signifies the significance level, corresponding to a 5% risk of a Type I error (rejecting the null hypothesis when it's actually true). Beta, established at 0.2, represents the probability of a Type II error (failing to reject the null hypothesis when it's actually false), equating to a power level of 0.80. The effect size, set at 0.15, indicates a medium-sized effect, suggesting a reasonable likelihood of detecting a meaningful relationship between variables. With these parameters, the calculated sample size of 349 provides a strong foundation for conducting a rigorous PLS-SEM analysis, enabling the exploration of determinants influencing SME sustainable performance in the context of globalization with high confidence.

Considering both traditional and contemporary sample size estimation methods, the obtained sample of 384 observations is deemed adequate for conducting a robust PLS-SEM analysis to investigate the determinants influencing the sustainable performance of SMEs within a global context.

3.2. Methodology

To analyze the primary data and derive inferences, R Studio (R Core Team, 2022) was employed as the statistical software.

Descriptive statistics were generated using the 'psych' package (Revelle, 2023). The 'psych' package is a comprehensive tool that offers a wide range of functions for conducting descriptive statistics, reliability analysis, exploratory factor analysis, principal component analysis, and item analysis for scale construction. The package also supports multivariate analysis, such as correlation matrices, cluster analysis, and multidimensional scaling. With tools for data simulation and graphical visualizations, 'psych' helps researchers assess test reliability, explore data structure, and develop valid assessments.

PLS-SEM was conducted to test the hypotheses, utilizing the 'plspm' package (Bertrand et al., 2024). The 'plspm' package in R studio is designed for conducting Partial Least Squares Path Modeling, a structural equation modeling technique used to analyze complex cause-effect relationships between latent variables and their indicators. It is particularly suited for exploratory analysis, small sample sizes, and non-normal data. The package allows users to specify both reflective and formative measurement models, estimate path coefficients, and validate models through bootstrapping and diagnostic metrics like R-squared. It is commonly applied for predictive modeling and understanding structural relationships.

Moreover, the 'ggplot2' and 'dplyr' packages (Wickham et al., 2023; 2024) were instrumental in creating visualizations to illustrate the demographic profiles of respondents and the characteristics of the SMEs. The 'ggplot2' and 'dplyr' packages are fundamental tools for data visualization and manipulation. 'ggplot2' provides a powerful framework for creating sophisticated and customizable graphics using the Grammar of Graphics, enabling users to build complex plots with layers, themes, and aesthetics for effective data presentation. 'dplyr' complements this by offering a suite of functions for data manipulation, including filtering, selecting, grouping, and summarizing data, which streamline data cleaning and preparation tasks. Together, these packages

facilitate a streamlined workflow for analyzing and visualizing data, making them essential for data scientists and analysts working with R.

3.2.1. Partial Least Square Structural Equation Modeling (PLS-SEM)

Partial Least Squares Structural Equation Modeling (PLS-SEM) is a versatile statistical technique employed to model intricate relationships between observed (manifest) and latent variables. Particularly well-suited for exploratory research and situations with small sample sizes or non-normal data, PLS-SEM prioritizes maximizing the explained variance of endogenous constructs. This flexibility accommodates sophisticated models with multiple constructs, indicators, and relationships, rendering it applicable for predictive-oriented studies (Hair et al., 2011). This study leverages PLS-SEM to investigate how external and internal factors influence SMEs' sustainable performance, considering the moderating effect of globalization. By focusing on predictive power, PLS-SEM allows for the identification of key factors impacting sustainable performance and understanding how globalization modifies these relationships. PLS-SEM's adaptability is particularly advantageous for exploratory research, where relationships between variables may be uncertain and measurement errors or unmeasured confounders might exist (Chin, 2010; Hair et al., 2019b).

The PLS-SEM model comprises two sub-models: the measurement model and the structural model.

Measurement Model Evaluation

The measurement model within PLS-SEM focuses on evaluating the relationships between latent constructs and their corresponding manifest variables (indicators). This process involves evaluating both reflective and formative constructs. Reflective constructs are characterized by indicators that are expected to be highly correlated, as they share a common underlying construct. Conversely, formative constructs are composed of indicators that represent distinct dimensions of the construct without the requirement of exhibiting high correlations (Hair et al., 2020).

For reflective constructs, crucial assessment indices include loadings, composite reliability (CR), average variance extracted (AVE), discriminant validity (Fornell & Larcker and Heterotrait-Monotrait), and Cronbach's alpha. Indicator loadings quantify the correlation between an indicator and its respective latent variable, with values exceeding 0.70 generally suggesting reliable indicators (Hair et al., 2019b). Composite reliability evaluates the internal consistency of a construct's indicators, with acceptable values surpassing 0.70. Although less preferred than CR, Cronbach's alpha can also be used to evaluate internal consistency, with acceptable values exceeding 0.70 (Field, 2005). The average variance extracted (AVE) measures the proportion of a construct's variance explained by its indicators relative to measurement error, with values above 0.50 considered satisfactory (Fornell & Larcker, 1981). Discriminant validity confirms that constructs are conceptually distinct. The Fornell-Larcker (1981) criterion evaluates this by comparing the variance a construct shares with its indicators to the variance it shares with other constructs. If the former is greater, it suggests stronger discriminant validity. The Heterotrait-Monotrait (HTMT) ratio of correlations is a modern approach to assessing discriminant validity in PLS-SEM. Proposed by Henseler, Ringle, and Sarstedt (2015), HTMT overcomes the limitations of traditional methods like the Fornell-Larcker criterion by providing a more reliable assessment

of construct distinctiveness. It measures the ratio of between-construct correlations (heterotrait-heteromethod) relative to within-construct correlations (monotrait-heteromethod). A commonly accepted threshold for HTMT is 0.85, where values below this indicate sufficient discriminant validity.

In the case of formative constructs, the Variance Inflation Factor (VIF) is a critical indicator of multicollinearity among the construct's indicators. VIF values exceeding 5 suggest potential multicollinearity issues, while values below 3 are generally considered acceptable. Besides, outer weights hold paramount importance in formative measurement models as they quantify the contribution of each indicator to the formation of the latent construct. These weights elucidate the relative significance of individual indicators within the formative construct. To assess the statistical significance of outer weights, bootstrapping, a resampling technique, is employed to generate standard errors, t-values, and confidence intervals (Diamantopoulos & Winklhofer, 2001).

Structural Model Evaluation

The structural model within PLS-SEM examines the relationships between latent constructs. Key metrics for evaluating the structural model include path coefficients, effect sizes (f^2), R-squared (R^2) values, and Q-squared (Q^2) values. Path coefficients quantify the strength and direction of relationships between constructs, similar to regression coefficients (Chin, 2010).

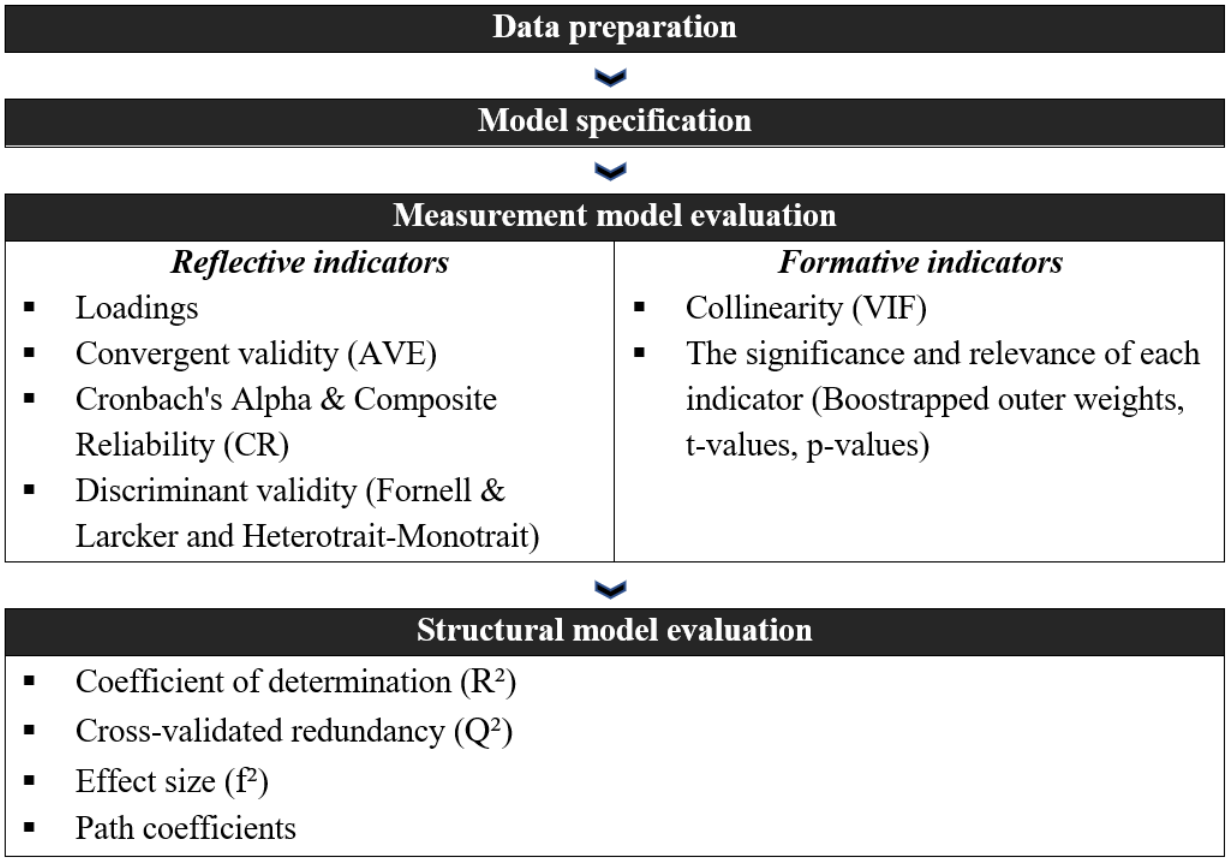


Figure 6. Analysis process by PLS-SEM

***Source**: Hair et al. (2014)*

Effect sizes (f^2) estimate the magnitude of the impact of an exogenous construct on an endogenous construct, with benchmarks of 0.02, 0.15, and 0.35 representing small, medium, and large effects, respectively. R-squared values indicate the proportion of variance in endogenous constructs explained by exogenous constructs, with higher values signifying stronger explanatory power. Q-squared values assess predictive relevance through cross-validated redundancy, where positive values denote predictive relevance (Hair et al., 2020).

Recognizing the exploratory nature of this research, which investigates the multifaceted relationships between globalization, external factors, internal factors, and sustainable performance within the context of Vietnamese SMEs, PLS-SEM was selected as the most appropriate analytical technique. PLS-SEM is particularly well-suited for this study due to its flexibility in handling complex models with both reflective and formative measurement models, and its ability to accommodate a relatively small sample size, which is often the case in exploratory research. The methodological approach employed in this study adheres to the rigorous guidelines outlined by Hair et al. (2014), a widely recognized framework for conducting PLS-SEM analyses. This ensures the reliability and validity of the findings. Figure 6 provides a visual representation of the key stages involved in the PLS-SEM process, offering a roadmap for the subsequent analysis.

The following sections of this chapter will focus on data preparation and model specification, outlining the steps taken to ensure data quality and accurately translate the conceptual model into a testable form. The remaining three sections will be presented in the following chapters, where we will discuss the results of the PLS-SEM analysis, evaluate the model's fit and predictive validity, and provide a comprehensive interpretation of the findings.

3.2.2. Data Preparation

The initial step following data collection involved rigorous data preparation to facilitate subsequent analysis. This process encompassed addressing missing values, coding, editing, outlier detection and removal, and normality assessment (Hair et al., 2011).

The data collection instrument employed in this study was a structured questionnaire comprising 26 items. As detailed in Section 3.1.1, these items were categorized into four distinct sections. The initial section, encompassing items 1 to 11, focused on gathering essential demographic information about the respondents and key characteristics of their respective SMEs.

Subsequently, items 12 to 26 delved into the core research variables, collecting respondents' perceptions and evaluations regarding the key constructs within the conceptual framework. The data collected from these items will serve as input for the subsequent PLS-SEM analysis, which will be detailed in the following chapter.

To ensure data integrity and reliability, the dataset underwent detailed examination and correction for errors, omissions, inconsistencies, and clarity. Subsequently, data coding was implemented, assigning characters and symbols to questionnaire variables to render them compatible with statistical software, such as R Studio. Table 3 presents a detailed overview of the assigned codes for questionnaire items.

Table 3. Types of questionnaire items and their codes

Number of items in the questionnaire	Type	Codes
12	Business indicators	"Greatly decreased" – 1 "Decreased" – 2 "Stable" – 3 "Increased" – 4 "Greatly increased" – 5
13 - 26	Likert scale-based questions	"Strongly Disagree" – 1 "Disagree" – 2 "Neutral" – 3 "Agree" – 4 "Strongly Agree" – 5

***Source**: Author's compilation*

3.2.3. Model specification

This study employs a two-stage modeling approach: a measurement model and a structural model. The measurement model, depicted by dotted shapes in the figure 7, establishes the relationships between latent constructs and their respective manifest indicators. Fifteen constructs are included in the analysis, categorized into four groups: sustainable performance of SMEs (3 constructs), external determinants (5 constructs), internal determinants (6 constructs), and globalization (1 construct).

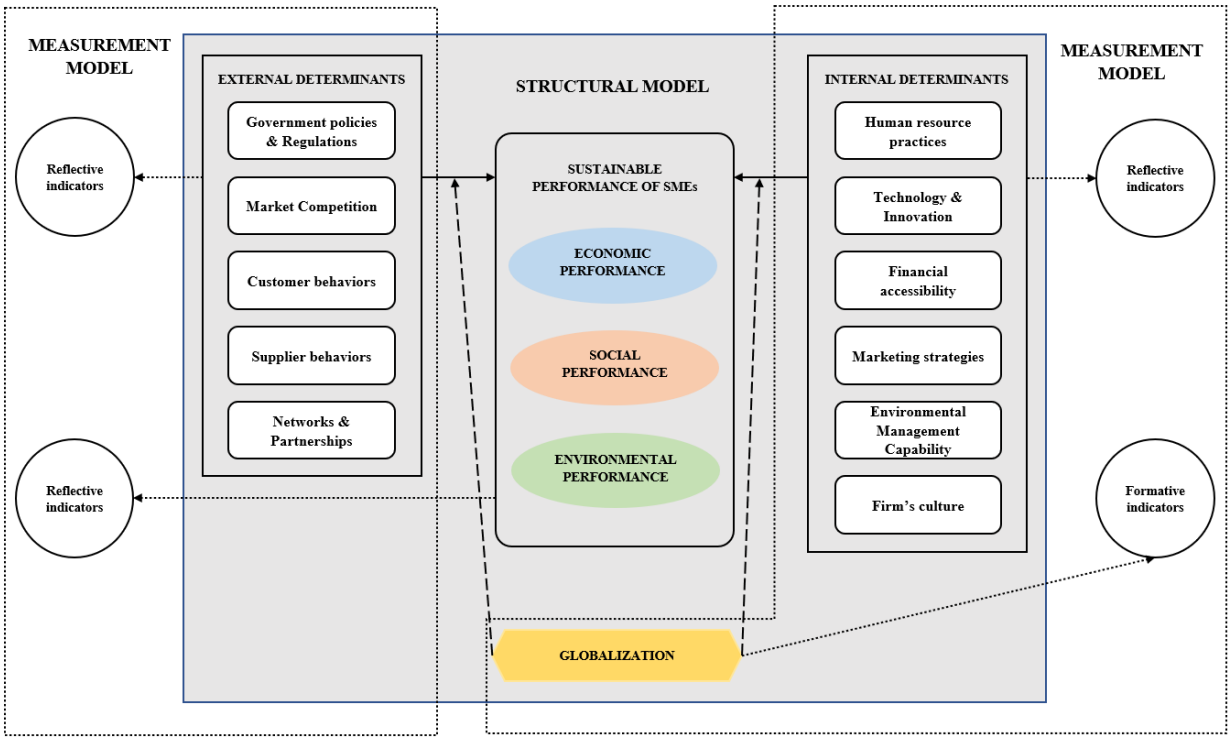


Figure 7. Measurement and structural models illustration

***Source**: Author's construction*

Notably, globalization is measured using formative indicators, while the remaining constructs utilize reflective measurement models, where multiple observed variables (manifest indicators) are assumed to reflect the underlying latent construct. Formative constructs are built from distinct, independent components that together define the overall concept. If any of these components are removed, the construct's meaning fundamentally changes. Globalization exemplifies this, as it's composed of various independent dimensions, such as policies, regulatory standards, and compliance; global competition; global market access and international customers; global networking and supply chain integration; global talent pool; global capital accessibility and economic crises; and technology access and innovation, as discussed in the literature review. Each of these dimensions contributes uniquely to globalization's impact, and removing anyone would alter the concept of globalization itself. Conversely, reflective constructs are latent variables that manifest through observable indicators. Changes in the latent variable cause changes in these indicators. In this context, the external and internal factors influencing sustainable SME performance are best understood as reflective constructs. Their indicators are effects of these underlying factors, rather than independent causes. Therefore, globalization should be modeled as a formative construct due to the independent and defining nature of its dimensions. Meanwhile, external and internal determinants are appropriately modeled as reflective constructs, as their indicators reflect the presence and strength of the underlying, unobservable factors.

The structural model, represented by solid gray shapes in the figure 7, focuses on the hypothesized relationships between the latent constructs. Solid arrows indicate direct effects, while dashed arrows represent indirect effects mediated through other constructs. The primary objective of this research is to identify the critical factors that determine the sustainable performance of Vietnamese SMEs within the context of globalization.

The study categorizes the predictors into two groups: external determinants (five predictors) and internal determinants (six predictors), analyzing the effects of each predictor on all three dimensions of sustainable performance to determine if they significantly impact SMEs' performance. Additionally, globalization is included as a moderating variable, expected to influence sustainable performance indirectly through the eleven predictors.

CHAPTER 4
RESULTS AND DISCUSSION

4.1. Respondent's demographic profile

This section presents descriptive statistics pertaining to the respondent's socio-demographic characteristics. To gather this information, participants were initially requested to provide details regarding their gender, age, education level, job position, and employment duration. As previously mentioned, a total of 384 valid responses were obtained during the data collection period.

Gender profile

Table 4 illustrate the distribution between males and females among survey participants. Notably, a slight predominance of male respondents was observed, constituting 55.5% (n = 213) of the sample, while women represented 44.5% (n = 172).

Table 4. The gender profile of respondents

Indicator	Frequency	Proportion
Female	213	44.5%
Male	171	55.5%

***Source**: Author's calculation*

Education level and Employment duration

Table 5 depict the distribution of Education level of the survey respondents. The survey results indicate that a majority of respondents, 71.6% (n = 275), have undergraduate degrees, while 28.4% (n = 109) have postgraduate qualifications. This distribution suggests that the sample is primarily composed of individuals with bachelor's-level education.

Table 5. The education level of respondents

Indicator	Frequency	Proportion
Postgraduate	109	28.4%
Undergraduate	275	71.6%

***Source**: Author's calculation*

Figures 8 provide a visual representation of the relationship between gender and education level among survey participants. Approximately 100 respondents, evenly distributed between men and women, held postgraduate degrees. The remaining participants possessed undergraduate degrees, with a slightly higher proportion of male graduates (over 150) compared to female graduates (over 100).

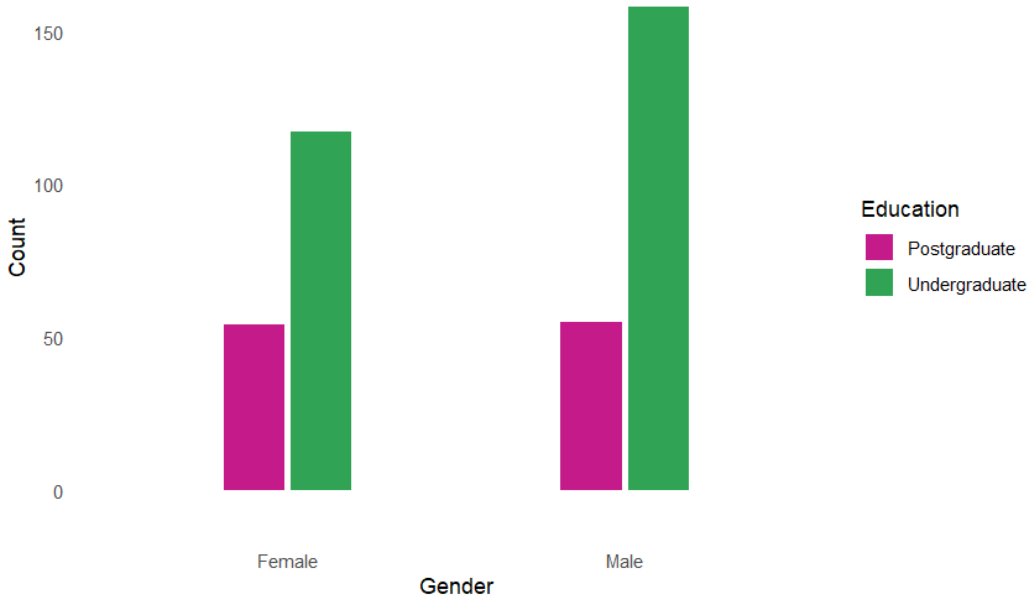


Figure 8. The gender and Education level of respondents

***Source**: Author's calculation based on surveyed data*

Table 6 illustrates a breakdown of respondents' employment durations. The survey results show that the largest group of respondents, 46.1%, have between 11 to 15 years of experience, followed by 24.2% with 6 to 10 years of experience. Those with 1 to 5 years represent 12.0%, while 12.8% have over 15 years of experience. Lastly, 4.9% of participants have less than one year of experience. This distribution suggests a wide range of experience levels, with the majority being mid-career professionals.

Table 6. Employment duration of respondents

Indicator	Frequency	Proportion
Less than 1 year	19	04.9%
1 to 5 years	46	12.0%
6 to 10 years	177	24.2%
11 to 15 years	93	46.1%
More than 15 years	49	12.8%

***Source**: Author's calculation*

Regarding the relationship with gender profile, a comparable number of male and female participants reported 1 to 5 years of experience within SMEs, as visualized in Figure 9. However, across all other experience levels, male participants outnumbered their female counterparts. Notably, the 6-to-10-year and 11-to-15-year experience groups constituted the largest segments of both categories of gender, while the "Less than 1 year" category exhibited the lowest participant count.

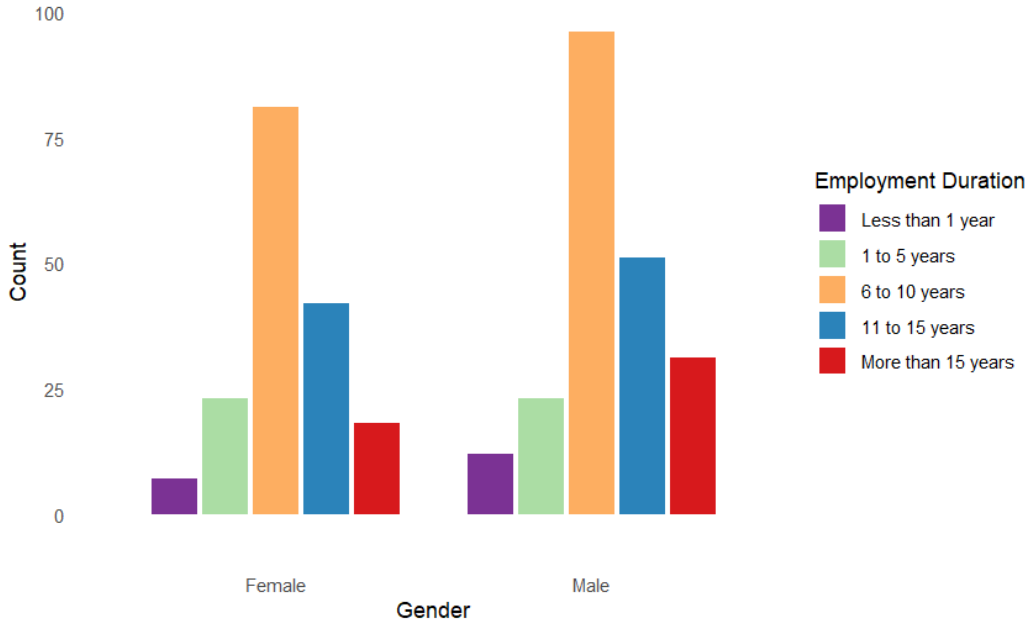


Figure 9. Gender and Employment duration of respondents

***Source**: Author's calculation based on surveyed data*

Age and Job position

In Table 7, the survey results show that a significant proportion of respondents, 43.5%, are between the age range of 25 to 35 years. This group is followed by 25.5% of participants who are over 45 years old and 23.7% who are between 35 and 45 years old. A smaller proportion, 7.3%, consists of individuals under 25. This age distribution indicates that the majority of respondents are young to middle-aged adults, with a relatively small representation of the youngest age group.

Table 7. Age groups of respondents

Indicator	Frequency	Proportion
Under 25	28	07.3%
25 - 35	167	43.5%
35 - 45	91	23.7%
Over 45	98	25.5%

***Source**: Author's calculation*

Table 8. Job positions of respondents

Indicator	Frequency	Proportion
Junior staff	53	13.8%
Senior staff	97	25.3%
Manager	179	46.6%
Owner	55	14.3%

***Source**: Author's calculation*

As presented in Table 8, managers account for nearly half of all respondents (46.6%), making them the largest group. Senior staff make up 25.3% of participation, followed by owners at 14.3%. Junior staff account for the smallest proportion, 13.8% of the total. This distribution indicates that a substantial number of the respondents have leadership or higher-level positions in their firms.

Figure 10 illustrates a detailed analysis of the relationship between age group and job position among the surveyed Vietnamese SMEs. It reveals that managers are the predominant occupational group across most age categories, except those under 25, where no managers were present. Meanwhile, the number of managers in the remaining three age groups is not too different, being most prevalent among individuals over 45 years old, followed by those aged 36-45, and then 25-35 years old.

In contrast, senior staff displays a younger demographic profile, predominantly concentrated within the 25–35 age range. This category experiences a notable decline in representation in other age brackets, particularly among those under 25.

A distinct pattern emerges when examining SME owners and junior staff. Both groups exhibit comparable participant numbers. While SME owners predominantly belong to the 25 and older age groups, with minimal representation in the under-25 category, junior staff are primarily concentrated in the 25-35 and under-25 age brackets, with negligible representation in the older age groups.

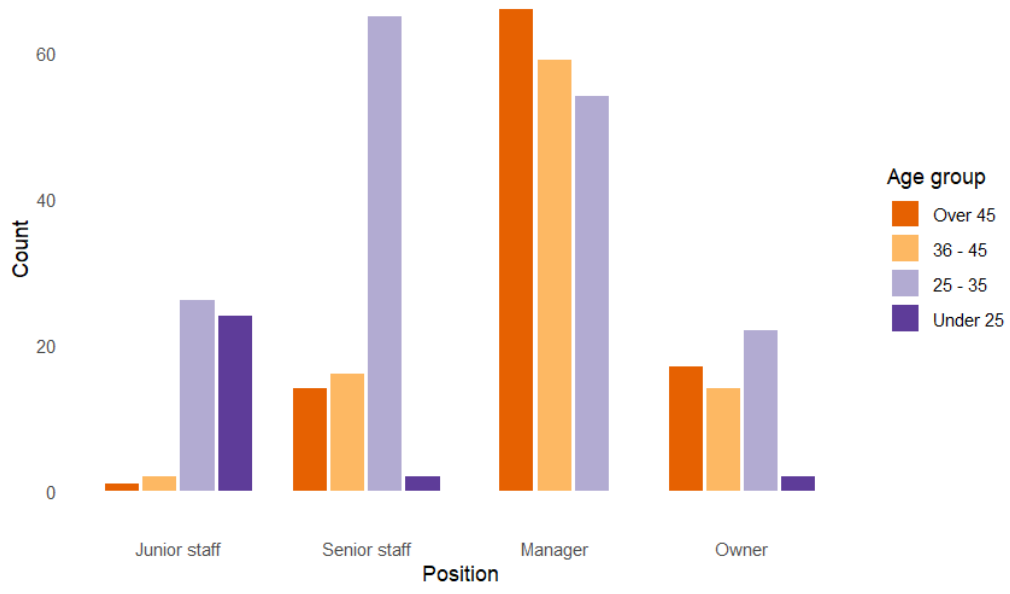


Figure 10. Age groups and Job position of respondents

***Source**: Author's calculation based on surveyed data*

The sample accurately reflects the demographics of respondents, who are working in Vietnamese SMEs, showcasing a slightly male-dominated workforce, a high proportion of

bachelor's degrees, and a concentration of mid-career professionals. This aligns with the typical profile of Vietnamese SMEs, which often value experienced, well-educated employees. The age distribution mirrors Vietnam's youthful workforce, and the concentration of older individuals in leadership roles reflects cultural norms linking age and authority in Vietnamese business contexts. While early-career roles show gender parity, senior positions are predominantly held by males, mirroring broader labor market trends in Vietnam. This demographic accuracy ensures the sample's methodological soundness and strengthens the research's ability to generate relevant, context-specific insights into sustainable SME development in Vietnam.

4.2. Overview of surveyed Vietnamese Small and Medium-sized Enterprises

The survey questionnaire also captured essential characteristics of participating SMEs, including geographic location, legal status, industry sector, employee count, annual revenue, and total capital. This data provides a comprehensive overview of the surveyed Vietnamese SMEs.

Located regions

Table 9 and Figure 11 present the geographic distribution of SMEs participating in the study across various regions of Vietnam.

Table 9. Located regions of surveyed SMEs

Indicator	Frequency	Proportion
Northeast	49	12.8%
Northwest	67	17.4%
Red River Delta	95	24.7%
North Central	35	09.1%
South Central Coast	38	10.0%
Central Highlands	16	04.2%
Southeast	42	10.9%
Mekong River Delta	42	10.9%

***Source**: Author's calculation*

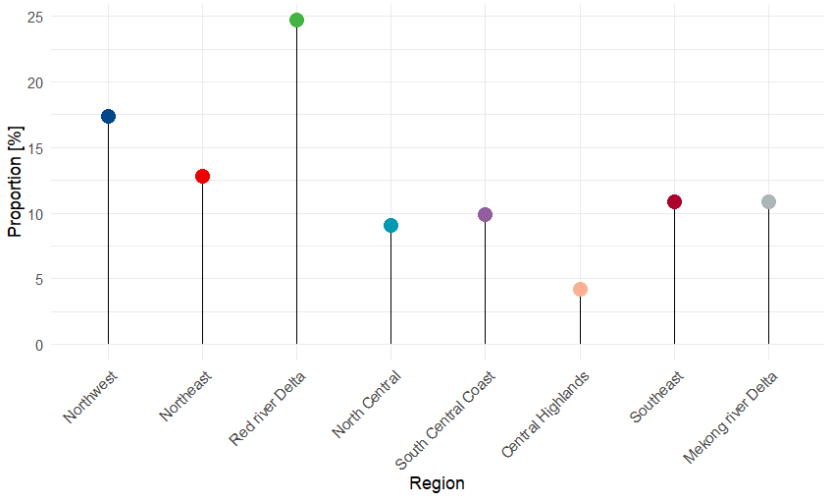


Figure 11. Located regions of surveyed SMEs

***Source**: Author's calculation based on surveyed data*

The Red River Delta stands out as the most represented region, contributing 24.7% of the total sample. The Northwest and Northeast regions follow, with 17.4% and 12.8% of SMEs, respectively. Conversely, the Central Highlands show a notably lower level of representation, with 4.2% of participants. The participation rates in the other regions are relatively similar, hovering just above or below 10%.

Industries

Table 10 and Figure 12 provide a detailed overview of the business sectors represented within the surveyed SMEs.

Table 10. Industries of surveyed SMEs

Indicator	Frequency	Proportion
Manufacturing	31	08.1%
Construction, Mining	26	06.8%
Transportation, logistics	62	16.1%
Agriculture	42	10.9%
Tourism, leisure, communication	56	14.6%
Insurance, banking, finance	17	04.4%
Education, Health care	41	10.7%
Retail	65	16.9%
Other industries	44	11.5%

***Source**: Author's calculation*

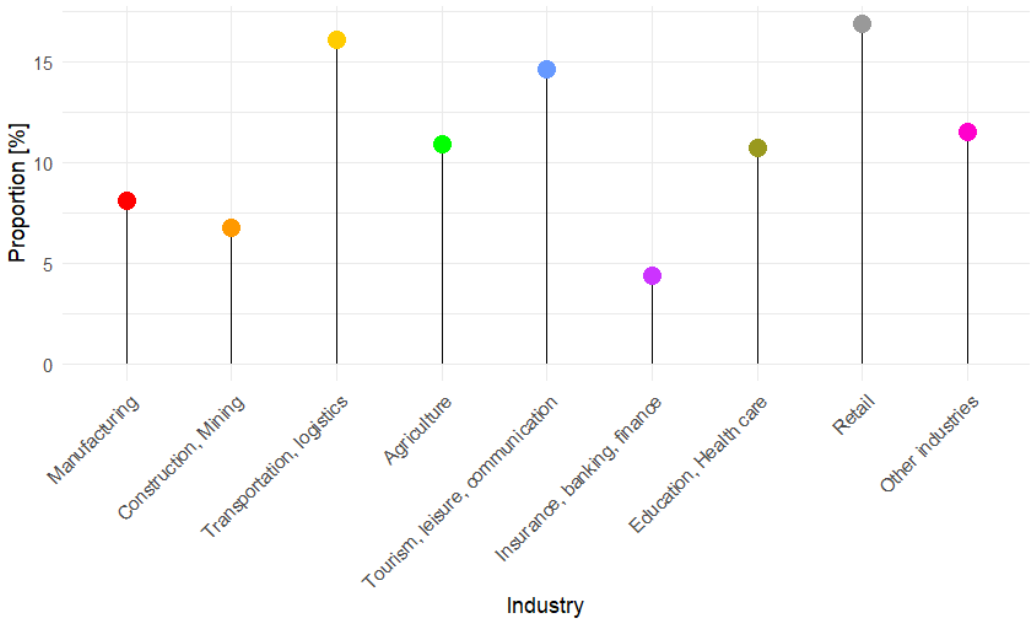


Figure 12. Industries of surveyed SMEs

***Source**: Author's calculation based on surveyed data*

The retail industry emerged as the leading sector, comprising 16.9% of the sample. The transportation and logistics sectors, closely followed by the tourism, leisure, and communication sectors, each accounted for 16.1% and 14.6% of participants, respectively. The agriculture sector and the education and healthcare sectors exhibited comparable representation, with approximately 11% of SMEs in each category. The heavy industry sector, encompassing manufacturing, construction, and mining, contributed modestly to the overall sample, with 8.1% and 6.8% representation, respectively. The insurance, banking, and finance sectors constituted the smallest proportion of the sample, at 4.4%. The remaining 11.5% of participating SMEs were classified under the "other sectors" category.

Legal status

Table 11 illustrate the distribution of legal status among surveyed SMEs in Vietnam. The results indicate that limited liability companies constitute the largest group, making up 46.1% (n = 177) of respondents. Private enterprises follow closely, representing 40.4% (n = 155)of the total. Joint-stock companies account for the smallest portion, at 13.5% (n = 52). This highlights a predominance of limited liability companies and private enterprises among the surveyed organizations, with fewer joint-stock companies participating.

Table 11. Legal status of surveyed SMEs

Indicator	Frequency	Proportion
Private enterprise	155	40.4%
Limited liability company	177	46.1%
Joint-stock company	52	13.5%

***Source**: Author's calculation*

Number of employees, Annual revenue, and Total capital

As presented in Table 12, SMEs with 51 to 100 employees make up the largest proportion, at 33.8%, closely followed by those with 11 to 50 employees at 33.1%. Firms with over 100 employees represent 21.9%, while those with under 10 employees account for the smallest share at 11.2%. This suggests a relatively even distribution between SMEs, with a notable portion of firms employing more than 50 people.

Table 12. Number of employees of surveyed SMEs

Indicator	Frequency	Proportion
Under 10 employees	43	11.2%
11 - 50 employees	127	33.1%
51 - 100 employees	130	33.8%
Over 100 employees	84	21.9%

***Source**: Author's calculation*

Figure 13 reveals that SMEs with 11 to 50 and 51 to 100 employees represent the most significant portions of all three types of legal status. However, a distinct pattern emerges within these size categories. While companies with 11 to 50 employees are predominantly limited liability companies, those with 51 to 100 employees lean towards the private enterprise structure. This trend persists among companies with over 100 employees, where limited liability companies hold the majority, followed by private enterprises and joint-stock companies. It is noteworthy that joint-stock companies are entirely absent from the smallest size category (fewer than 10 employees), where private enterprises and limited liability companies exhibit equal representation.

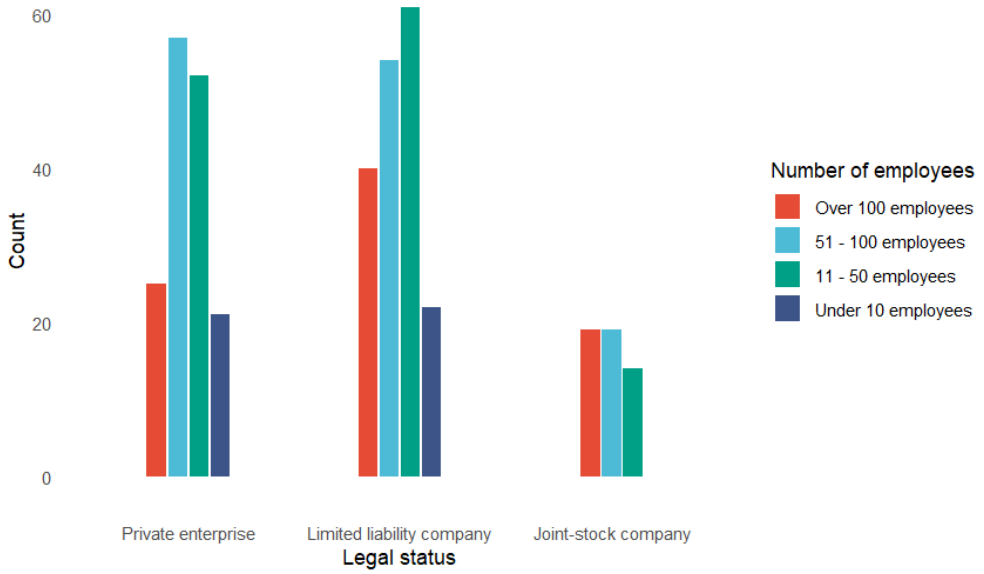


Figure 13. Legal status and Number of employees of surveyed SMEs

***Source**: Author's calculation based on surveyed data*

Table 13 describes the different categories of annual revenue of surveyed SMEs in Vietnam. The survey results indicate that the majority of respondents (63%) fall within the medium-sized business category, with a relatively even distribution between the 0.36 to 3.6 million EUR and 3.6 to 11 million EUR ranges. A smaller proportion (26.8%) are small businesses with assets under 0.36 million EUR, while only 9.9% are SMEs with assets exceeding 11 million EUR.

Table 13. Annual revenue of surveyed SMEs

Indicator	Frequency	Proportion
Under 0.36 million EUR	103	26.8%
0.36 - 3.6 million EUR	142	37.0%
3.6 - 11 million EUR	101	26.3%
Over 11 million EUR	38	09.9%

***Source**: Author's calculation*

Figure 14 depicts the distribution of SMEs according to annual turnover and legal status. The turnover group of EUR 0.36 to EUR 3.6 million is the most prevalent, encompassing a significant number of all three types of enterprises. Specifically, there are over 60 limited liability companies within this turnover range, while private enterprises and joint-stock companies each have approximately 60 and 20 enterprises, respectively.

Conversely, enterprises with annual turnovers exceeding EUR 11 million are the least represented, with fewer than 20 companies in each legal status category. The remaining two turnover groups show relatively similar distributions across different legal statuses.

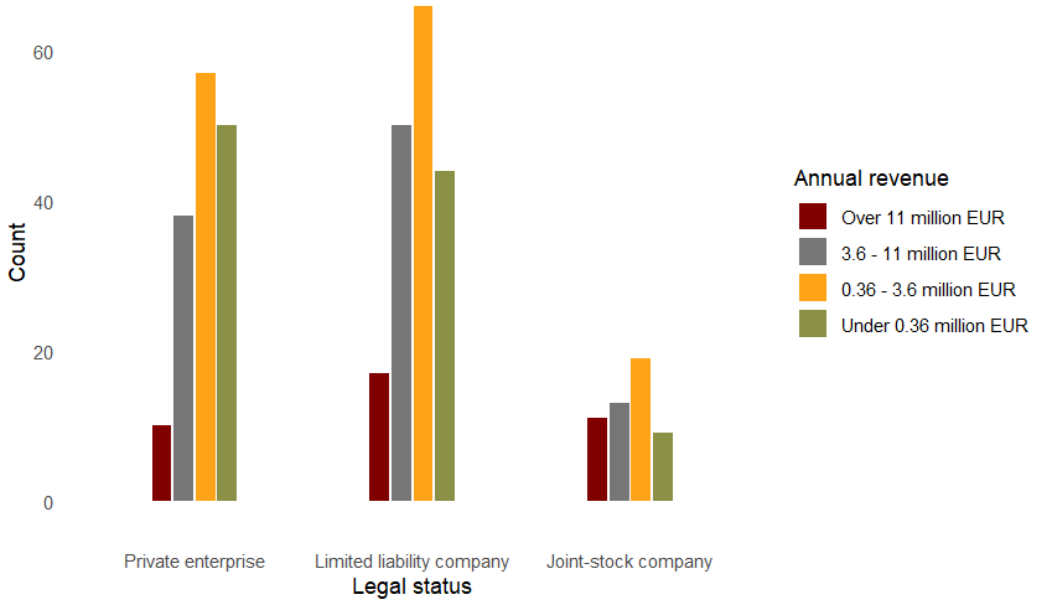


Figure 14. Legal status and Annual revenue of surveyed SMEs

***Source**: Author's calculation based on surveyed data*

Limited liability companies dominate most revenue categories, except the "Under 0.36 million EUR" bracket, where private enterprises hold the lead. Both private enterprises and limited liability companies feature a substantial presence within the 0.36 to 3.6 million EUR range, indicative of a predominance of mid-sized revenue businesses. While less numerous, joint-stock companies are represented across all revenue brackets, with their highest concentration falling within the 0.36 to 3.6 million EUR category.

Table 14. Total capital of surveyed SMEs

Indicator	Frequency	Proportion
Under 0.11 million EUR	132	34.4%
0.11 - 1.8 million EUR	117	30.5%
1.8 - 3.6 million EUR	96	25.0%
Over 3.6 million EUR	39	10.2%

***Source**: Author's calculation*

The data in Table 14 reveals that the largest proportion of respondents, 34.4% (n = 132), fall into the smallest business category with assets under 0.11 million EUR. This is followed closely by the 0.11 to 1.8 million EUR range, accounting for 30.5% (n = 117) of respondents. While the 1.8 to 3.6 million EUR and over 3.6 million EUR categories account for smaller proportions, with 25% (n = 96) and 10.2% (n = 39) respectively, it's clear that the majority of businesses surveyed are relatively small.

Figure 15 illustrates the distribution of SMEs based on total capital and legal status. Limited liability companies demonstrate the highest frequency across most capital brackets, except for the "Over 3.6 million EUR" category, where private enterprises hold the dominant position. Both private enterprises and limited liability companies exhibit a substantial presence within the "Under 0.11 million EUR" capital bracket, indicative of a prevalent small-cap business segment. Private enterprises display a concentration within lower capital ranges, particularly below 0.11 million EUR, emphasizing a predominance of small-cap businesses within this legal structure. Limited liability companies demonstrate a broader distribution across the capital spectrum, suggesting a mix of both small and medium-capitalized enterprises. While numerically fewer, joint-stock companies maintain a relatively balanced presence across capital brackets, with a tendency towards moderate capitalization, as evidenced by the highest concentration within the "0.11–1.8 million EUR" range.

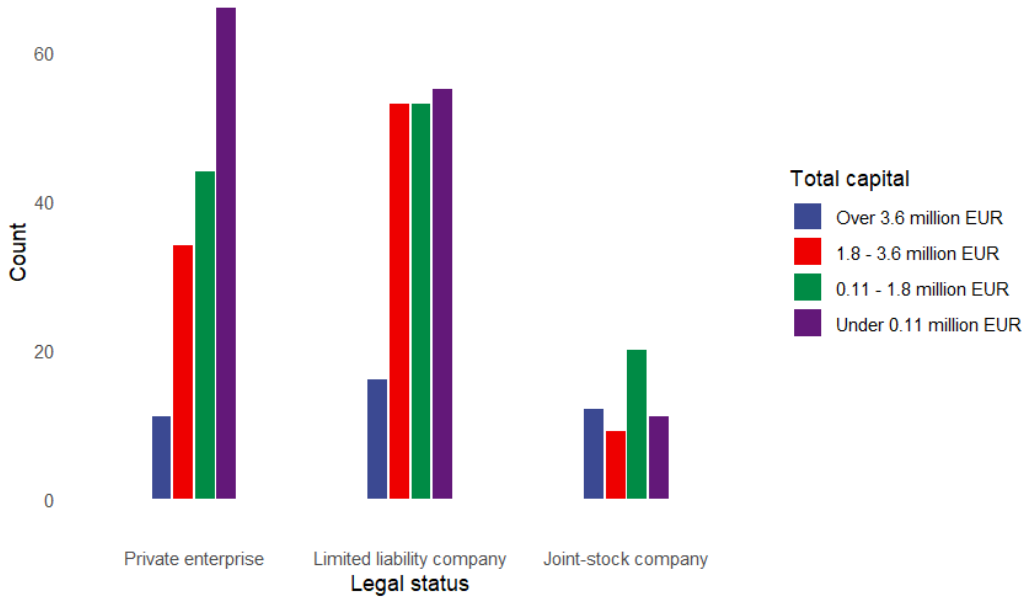


Figure 15. Legal status and Total capital of surveyed SMEs

***Source**: Author's calculation based on surveyed data*

The sample demonstrates strong alignment with the operational characteristics of Vietnamese SMEs, ensuring relevance for an exploratory analysis of sustainable performance in the context of globalization. It strategically encompasses diverse geographic regions, including both economically dynamic and less-developed areas, while encompassing key industries that reflect the sectoral composition of Vietnam’s SME ecosystem. Firm sizes and legal structures

adhere to national definitions, with a focus on small and medium enterprises that drive the country's economy. It can be said that the sample provides a purposeful foundation to investigate determinants of sustainable performance, aligning with the study's objectives to generate insights into this underexplored area.

4.3. Mesurement model evaluation

By performing the assessment of the measurement models, the study can determine the accuracy with which constructs, serving as the foundation for inner model relationships, are measured and represented. The evaluation of outer models necessitates a clear distinction between reflectively and formatively measured constructs. Given the fundamentally different conceptual underpinnings of these two measurement approaches, distinct evaluation criteria must be applied (Hair et al., 2014).

4.3.1. Reflective Constructs

Reflective constructs represent latent variables conceptualized as the underlying cause of their corresponding observed indicators. In essence, these indicators (manifest variables) serve as reflections of the latent construct. To ensure the accurate and reliable measurement of these constructs, a detailed evaluation of the measurement model is essential. This process involves examining individual-item reliability, convergent validity, internal consistency, and discriminant validity (Hair et al., 2014).

Individual-item reliability

In the context of PLS, individual item reliability is assessed by examining indicator loadings, which represent the correlation between each indicator and its corresponding latent construct. A commonly accepted threshold of 0.707 for loadings, suggests that an indicator should contribute more shared variance than error variance to be retained (Barroso et al., 2010).

Table 15 presents the loadings for the reflective constructs in this study, calculated using the 'plspm' package in R Studio. Figure 16 provides a visual representation of the loading results, grounded in the conceptual framework, representation offers a clear and concise overview of the study's theoretical framework and the hypothesized relationships between the key variables under investigation. The diagram illustrates three distinct groups of reflective constructs: external factors, internal factors, and sustainable performance aspects. Bold arrows within the figure depict the hypothesized impact relationships between these groups of factors. To further clarify the model, dashed arrows connect each construct to its corresponding manifest variables. The calculated loading values, indicated at the destination of these dashed arrows, represent the strength of the relationship between each manifest variable and its respective construct.

The evaluation of constructs and indicators reveals strong measurement validity across most constructs. Specifically, indicators for these constructs consistently display high loadings above 0.7, suggesting they are well-defined and appropriate measures. While indicator EcP3 (related to the trend in product costs of the firm within the last 3 years) in the construct of Economic Performance exhibits a negative loading of -0.764, this is consistent with the expected negative relationship between product costs and overall business performance. This divergence from the other positive indicators within the construct is therefore justifiable.

Table 15. Loadings of reflecting constructs

Constructs and Indicators	Loadings	Constructs and Indicators	Loadings	Constructs and Indicators	Loadings
Economic Performance		***Environmental Performance***		***Environmental Performance***	
EcP1	0.750	SP1	0.856	EnP1	0.854
EcP2	0.758	SP2	0.888	EnP2	0.788
EcP3	-0.764	SP3	0.740	EnP3	0.788
EcP4	0.746	SP4	0.888	EnP4	0.810
EcP5	0.774				
EcP6	0.744				
EcP7	0.859				
Government Policies & Regulations		***Market Competition***		***Customer behaviors***	
GPR1	0.780	MC1	0.910	CB1	0.809
GPR2	0.741	MC2	0.961	CB2	0.919
GPR3	0.746	MC3	0.940	CB3	0.933
GPR4	0.775	MC4	0.928	CB4	0.920
Supplier behaviors		***Networks & Partnerships***			
SB1	0.789	NW1	0.949		
SB2	0.926	NW2	0.715		
SB3	0.849	NW3	0.742		
Human resource practices		***Technology & Innovation***		***Financial accessibility***	
HR1	0.848	TI1	0.833	FA1	0.916
HR2	0.802	TI2	0.799	FA2	0.808
HR3	0.841	TI3	0.812	FA3	0.855
HR4	0.880	TI4	0.794	FA4	0.882
HR5	0.868	TI5	0.789		
Marketing strategies		***Environmental management Capability***		***Firm's culture***	
MS1	0.906	EM1	0.727	FC1	0.759
MS2	0.907	EM2	0.713	FC2	0.855
MS3	0.869	EM3	0.730	FC3	0.853
		EM4	0.745	FC4	0.830

***Source**: Author's calculation*

Overall, the model demonstrates strong convergent validity, with indicators effectively capturing their respective constructs.

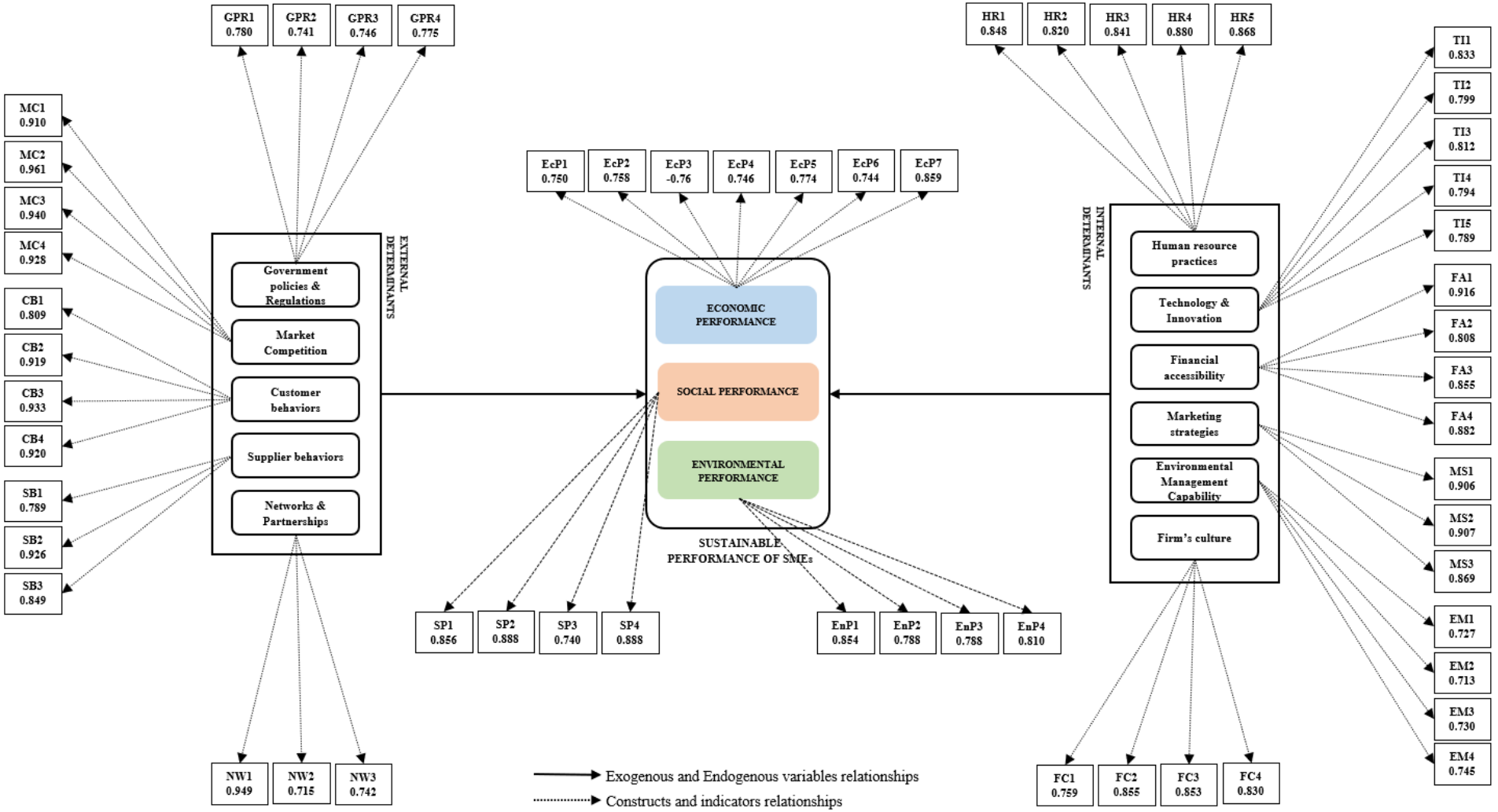


Figure 16. Loadings of reflecting constructs

***Source**: Author's calculation*

Convergent validity

Convergent validity establishes that a construct's indicators accurately measure the suggested theoretical concept rather than extraneous variables. This is necessary for ensuring the validity and reliability of both the constructs and the overall estimation results. Convergent validity is supported when individual item loadings exceed 0.70 and the Average Variance Extracted (AVE) for each construct surpasses 0.50. The AVE quantifies the proportion of a construct's variance explained by its indicators relative to error variance, essentially representing the construct's commonality (Hair et al., 2014). An AVE exceeding 0.50 indicates that the construct explains more than half of the variance in its indicators.

Table 16 presents the AVE values for the study's reflective constructs, calculated using the 'plspm' package in R Studio. The AVE values for the constructs collectively demonstrate a high level of convergent validity, with all values surpassing the recommended threshold of 0.50. This indicates that the constructs effectively capture a substantial portion of the variance inherent in their respective indicators, thereby establishing strong convergent validity.

Among the constructs, Market Competition, Customer Behaviors, and Marketing Strategies illustrate particularly robust convergent validity, as evidenced by their exceptionally high AVE values of 0.87, 0.80, and 0.80, respectively. While Government Policies & Regulations (0.58) and Environmental Management Capability (0.53) display slightly lower AVE values, they nevertheless meet the minimum acceptable threshold. These findings collectively underscore the model's overall consistency and reliability, providing a solid foundation for subsequent analyses.

Table 16. Average variance extracted from reflecting constructs

Constructs	AVE
Economic Performance - EcP	0.60
Social Performance - SP	0.71
Environmental Performance - EnP	0.66
Government Policies & Regulations - GPR	0.58
Market Competition - MC	0.87
Customer Behaviors - CB	0.80
Supplier Behaviors - SB	0.73
Networks & Partnerships - NW	0.65
Human Resource Practices - HR	0.72
Technology & Innovation - TI	0.65
Financial Accessibility - FA	0.75
Marketing Strategies - MS	0.80
Environmental Management Capability - EM	0.53
Firm's Culture - FC	0.68

***Source**: Author's calculation*

Discriminant validity

Discriminant validity ensures the conceptual distinctiveness of constructs. The Fornell-Larcker (1981) criterion assesses this by comparing a construct's shared variance with its indicators to its shared variance with other constructs. A higher value for the former indicates greater discriminant validity. Table 17 presents the AVE values for the study's reflective constructs, calculated using the 'plspm' package in R Studio. The data indicates that discriminant validity is supported by the Fornell-Larcker criterion. The square root of each construct's AVE exceeds its correlation with other constructs, indicating the constructs' distinctness.

Table 17. Fornell & Larcker theory's discriminant validity of reflecting constructs

	EcP	SP	EnP	GPR	MC	CB	SB	NW	HR	TI	FA	MS	EM	FC
EcP	0.771													
SP	0.435	0.845												
EnP	0.679	0.271	0.810											
GPR	0.629	0.315	0.462	0.761										
MC	0.366	0.686	0.115	0.177	0.935									
CB	0.406	0.564	0.180	0.355	0.555	0.897								
SB	0.243	0.689	0.055	0.236	0.737	0.692	0.857							
NW	0.230	0.770	0.157	0.207	0.803	0.533	0.746	0.809						
HR	0.323	0.622	0.246	0.267	0.550	0.436	0.490	0.637	0.848					
TI	0.358	0.620	0.154	0.142	0.621	0.482	0.617	0.498	0.388	0.806				
FA	0.631	0.549	0.403	0.309	0.723	0.558	0.639	0.602	0.605	0.585	0.866			
MS	0.299	0.551	0.178	0.208	0.397	0.645	0.498	0.351	0.502	0.500	0.553	0.894		
EM	0.642	0.281	0.369	0.593	0.290	0.329	0.186	0.143	0.195	0.214	0.371	0.210	0.728	
FC	0.113	0.303	0.094	0.221	0.276	0.466	0.504	0.393	0.266	0.239	0.393	0.578	0.114	0.825

***Source**: Author's calculation*

Table 18. HTMT index of reflecting constructs

	EcP	SP	EnP	GPR	MC	CB	SB	NW	HR	TI	FA	MS	EM	FC
EcP	0.000													
SP	0.435	0.000												
EnP	0.679	0.271	0.000											
GPR	0.629	0.315	0.462	0.000										
MC	0.642	0.281	0.369	0.593	0.000									
CB	0.406	0.564	0.180	0.355	0.555	0.000								
SB	0.243	0.689	0.055	0.236	0.737	0.692	0.000							
NW	0.230	0.770	0.157	0.207	0.803	0.533	0.746	0.000						
HR	0.323	0.622	0.246	0.267	0.550	0.436	0.490	0.637	0.000					
TI	0.358	0.620	0.154	0.142	0.621	0.482	0.617	0.498	0.388	0.000				
FA	0.631	0.549	0.403	0.309	0.723	0.558	0.639	0.602	0.605	0.585	0.000			
MS	0.299	0.551	0.178	0.208	0.397	0.645	0.498	0.351	0.502	0.500	0.553	0.000		
EM	0.366	0.686	0.115	0.177	0.290	0.555	0.737	0.803	0.550	0.621	0.723	0.397	0.000	
FC	0.113	0.303	0.094	0.221	0.276	0.466	0.504	0.393	0.266	0.239	0.393	0.578	0.114	0.000

***Source**: Author's calculation*

HTMT also was applied to assess discriminant validity in the PLS-SEM analysis. The results in Table 18 indicate that all HTMT values were below the recommended threshold of 0.85, confirming that the constructs in the model exhibit sufficient discriminant validity. This suggests that each latent variable in the model is distinct and does not overlap significantly with other constructs, thereby supporting the reliability of the measurement model.

Construct reliability

Construct reliability assesses the consistency of a variable or set of variables in measuring the suggested construct (Straub et al., 2004). Nunnally (1978) suggests a benchmark of 0.7 for acceptable reliability in early research stages and a more stringent threshold of 0.8 for established research. It is essential to note that both composite reliability and Cronbach's alpha are applicable exclusively to latent variables with reflective indicators (Barroso et al., 2010).

Composite reliability, which was developed by Jöreskog (1974), serves as a measure of internal consistency. Composite reliability offers a more precise estimate of internal consistency reliability in PLS-SEM compared to Cronbach's alpha, as it accounts for the actual loadings of individual indicators rather than assuming equal loadings (Hair et al., 2011). A higher composite reliability value indicates greater construction reliability. Generally, a value of 0.7 or above is considered acceptable, with values exceeding 0.8 signifying excellent reliability (Barroso et al., 2010). Table 19 presents the calculated Cronbach's alpha and composite reliability values for the study's reflective constructs, obtained using the 'plspm' and 'psych' packages in R Studio.

Table 19. Cronbach's alpha and Composite Reliability of reflecting constructs

Constructs	Cronbach's alpha	Composite Reliability
Economic Performance - EcP	0.89	0.84
Social Performance - SP	0.87	0.91
Environmental Performance - EnP	0.83	0.88
Government Policies & Regulations - GPR	0.76	0.85
Market Competition - MC	0.95	0.97
Customer Behaviors - CB	0.92	0.94
Supplier Behaviors - SB	0.82	0.89
Networks & Partnerships - NW	0.72	0.85
Human Resource Practices - HR	0.90	0.93
Technology & Innovation - TI	0.86	0.90
Financial Accessibility - FA	0.89	0.92
Marketing Strategies - MS	0.87	0.92
Environmental Management Capability - EM	0.71	0.82
Firm's Culture - FC	0.85	0.89

***Source**: Author's calculation*

The model demonstrated robust construct reliability, as indicated by consistently high Cronbach's alpha values across all measures. While Network & Partnerships and Environmental

Management Capability exhibit slightly lower, yet acceptable alpha coefficients (0.72 and 0.71, respectively), the remaining constructs, particularly Customer Behaviors and Market Competition, display exceptional internal consistency. These findings provide strong evidence for the reliability and validity of the measurement instruments.

Furthermore, composite reliability indices for all constructs exceeded the recommended threshold of 0.70, confirming the internal consistency and overall reliability of the model. Customer Behaviors (0.94) shows outstanding composite reliability, while Network & Partnerships and Environmental Management Capability demonstrated adequate levels (0.85 and 0.82, respectively). These results collectively support the conclusion that the model's constructs are reliably measured, thus enhancing its applicability for subsequent analyses and practical implications.

According to Hair et al. (2014), composite reliability should not surpass 0.95, as exceeding this threshold may lead to indicator redundancy, thereby reducing the model's validity. In this model, the market competition construct is measured using four indicators, demonstrating a high value of construct reliability (Cronbach's alpha and composite reliability ≥ 0.95). A high construct reliability index may indicate redundancy among indicators. In other words, an excessively high-reliability score might mean that several items are essentially measuring the same narrow aspect of the construct, rather than capturing its full breadth (Tavakol & Dennick, 2011; Sijtsma, 2009). However, in this study, all four indicators demonstrated strong factor loadings (> 0.9) and excellent convergent validity (AVE = 0.87). The HTMT index further confirmed discriminant validity, indicating that the construct is distinct from other constructs in the model. In this context, the high reliability is acceptable because the construct is unidimensional, and all indicators are theoretically justified, as argued by Hair et al. (2019a). Furthermore, DeVellis (2017) emphasizes that high reliability is not inherently problematic if the indicators collectively capture the full scope of the construct, which is true in this study. Finally, since this research is exploratory in nature, high reliability is acceptable as long as the construct is refined in subsequent studies, as suggested by Netemeyer et al. (2003). Thus, in this case, composite reliability can be accepted, and retaining all four indicators of the Market Competition construct ensures a comprehensive measurement of market competition while maintaining theoretical and methodological precision.

4.3.2. Formative Construct

Formative constructs in PLS-SEM are conceptualizations defined by their constituent indicators. Unlike reflective constructs, where indicators are considered manifestations of an underlying latent variable, formative indicators actively contribute to the construction of the concept. Consequently, alterations in formative indicators directly impact the construct itself. This approach is particularly suitable when the construct is comprehensively represented by multiple, distinct facets or dimensions. Assessing the measurement model of formative constructs necessitates distinct evaluation criteria compared to reflective constructs. Key considerations encompass multicollinearity among indicators and the substantive significance and relevance of individual indicators (Hair, 2011).

Multicollinearity

Multicollinearity among formative indicators can compromise the reliability of a measurement model, as it suggests redundancy in the information provided by these indicators. To assess this issue, the Variance Inflation Factor (VIF) was calculated. A VIF value below 5, preferably below 3, indicates an acceptable level of multicollinearity (Hair et al., 2011).

Table 20. Multicollinearity test of the formative indicators

Indicator	VIF
GLB1	1.130
GLB2	1.109
GLB3	1.356
GLB4	1.317
GLB5	1.370
GLB6	1.082
GLB7	1.293
GLB8	1.401
GLB9	1.263
GLB10	1.593
GLB11	1.154

***Source**: Author's calculation*

A multicollinearity analysis was conducted on the formative indicators of the GLB construct using the 'plspm' and 'car' packages in R, as shown in Table 20. The 'car' package in R includes functions for testing and diagnosing multicollinearity, a common issue in regression analysis where predictor variables are highly correlated. Key features of the 'car' package for addressing multicollinearity include the vif() function, which calculates VIFs to measure how much the variance of a regression coefficient is inflated due to collinearity with other predictors (Fox et al., 2023).

The results indicate an absence of significant multicollinearity issues. All VIF values for the GLB indicators (GLB1 to GLB11) ranged from 1.082 to 1.593, well below the recommended threshold. This suggests that each indicator contributes independently to the GLB construct, reinforcing the reliability and validity of the formative measurement model.

The significance and relevance of each formative indicator

Outer weights are crucial parameters in formative measurement models within the framework of PLS-SEM. Unlike reflective models, where indicators are manifestations of a latent construct, formative indicators actively contribute to the construct's definition. Consequently, evaluating the relevance and significance of these indicators is paramount for ensuring the construct's accurate representation (Diamantopoulos & Winklhofer, 2001).

Outer weights quantify the relative contribution of each indicator to the construct. To evaluate their significance, bootstrapping is employed. This resampling technique generates a distribution of indicator weights, enabling the calculation of standard errors, t-values, and

confidence intervals. A significant outer weight (typically, a t-value exceeding 1.96 for a 95% confidence level) indicates the indicator's relevance to the construct. However, practical significance should also be considered, as indicators with minimal weights might not substantially contribute. By examining bootstrapped outer weights, standard errors, t-values, and confidence intervals, researchers can validate the measurement model (Hair et al., 2014).

The determination of optimal bootstrap samples in PLS-SEM is a crucial aspect of model estimation. A standard practice involves 500 resamples, which often yield reliable estimates for standard errors, confidence intervals, and significance levels. However, for enhanced precision and stability, particularly in complex models or when demanding higher accuracy, increasing the number of resamples to between 1000 and 5000 is recommended. This elevated number of resamples contributes to reduced standard errors and more dependable confidence intervals. While 500 bootstrap resamples are often sufficient, increasing this number to 1000 or 5000 can enhance precision and stability, especially in larger models or when greater accuracy is required (Hair et al., 2014). Given the sample size of 384 in this study, using 500 bootstrap resamples is generally sufficient to obtain reliable estimates. Nevertheless, 1000 bootstrap resamples were employed for improved precision and reliability.

Table 21 presents the calculated outer weights, t-values, and p-values for the formative indicators (globalization) using the 'plspm' package in R. Figure 17 provides a visual representation of the relationships between the globalization construct and its manifest indicators. In this figure, each arrow symbolizes the contribution of a specific indicator to the overall globalization construct. The strength and direction of these arrows visually depict the relative importance of each indicator in shaping the overall globalization phenomenon.

Table 21. Outer weights, t-values, and p-values of the formative indicators

Indicator	Outer weight	t-value	p-value
GLB1	0.253	5.835	0.000
GLB2	0.147	3.211	0.001
GLB3	0.120	2.653	0.008
GLB4	0.243	5.465	0.000
GLB5	0.205	4.366	0.000
GLB6	0.101	2.569	0.010
GLB7	0.320	8.083	0.000
GLB8	0.223	5.407	0.000
GLB9	0.142	3.232	0.001
GLB10	0.081	1.718	0.086
GLB11	0.180	4.451	0.000

***Source**: Author's calculation*

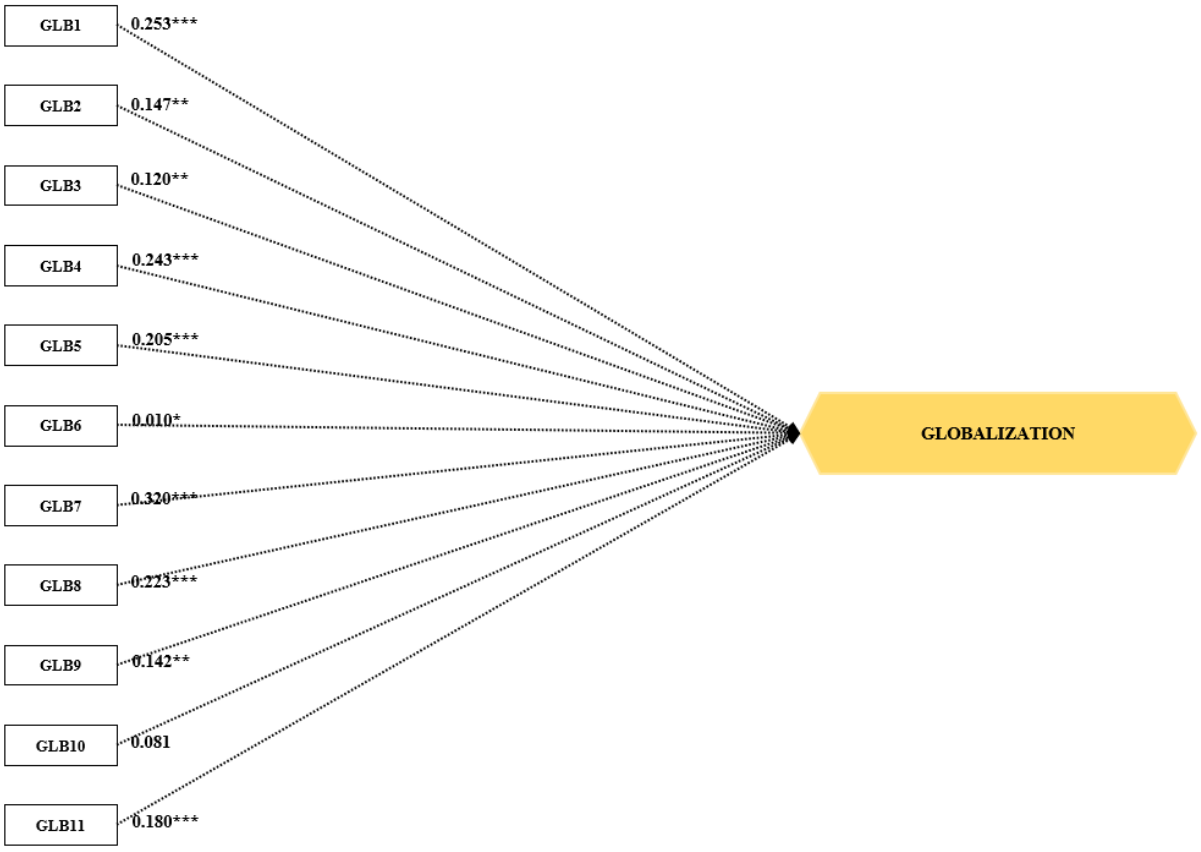


Figure 17. Relationtionships between globalization construct and its indicators

*(***, **, *: p-value is less than 0.001, 0.01, 0.05 respectively)*

***Source**: Author's calculation*

The results indicate that the majority of indicators significantly contribute to the globalization construct, supporting the construct's validity and reliability. GLB7 emerges as the most influential indicator, displaying the highest outer weight (0.320) and t-value (8.083). Additionally, GLB1, GLB4, GLB5, and GLB8 demonstrate substantial contributions based on their respective outer weights and significant t-values. The overall high significance levels of the indicators strengthen confidence in the robustness and reliability of the formative measurement model for GLB.

GLB10 shows a lower outer weight (0.081) and was found to be statistically insignificant (t-value = 1.718, $p > 0.05$), suggesting a comparatively weaker contribution to the GLB construct. However, indiscriminate removal of formative indicators is generally discouraged. Formative measurement theory posits that indicators collectively define the construct, necessitating comprehensive domain coverage (Hair et al., 2014). While GLB10's direct impact on GLB is relatively minor and statistically insignificant, it may contribute indirectly to the model. Moreover, retaining GLB10 ensures a more comprehensive representation of the construct, potentially capturing subtle distinctions and complexities. Consequently, its inclusion facilitates a comprehensive and detailed analysis of the construct's influence within the broader theoretical framework.

4.4. Structural model evaluation

Structural model evaluation in PLS-SEM is a crucial phase to assess the validity of hypothesized relationships among constructs. Compared to covariance-based SEM, PLS-SEM prioritizes predictive power and the explained variance of endogenous constructs over strict model fit (Hair et al., 2014).

Structural model evaluation in PLS-SEM is a critical step to ensure that the hypothesized relationships between constructs are supported by the data. Unlike traditional covariance-based SEM, which focuses on model fit, PLS-SEM emphasizes prediction and the explained variance of the endogenous constructs. Several important factors are considered while evaluating the structural model, such as the coefficient of determination (R^2), cross-validated redundancy (Q^2), path coefficients, the effect size (f^2), and the overall quality of the model.

4.4.1. Coefficient of determination (R^2)

The coefficient of determination (R^2) serves as a metric for evaluating the predictive accuracy of a model. Essentially, it quantifies the proportion of variance in the endogenous variables explained by the exogenous variables. R^2 values range from 0 to 1, with 1 indicating perfect predictive accuracy. While there is no universally agreed-upon threshold, common benchmarks suggest that R^2 values of 0.75, 0.50, and 0.25 represent substantial, moderate, and weak predictive accuracy, respectively (Hair et al., 2011).

The endogenous constructs within this study encompass EcP, SP, and EnP. Given the incorporation of moderating effects of globalization on external and internal determinants, R^2 values were additionally computed for those constructs.

Table 22. R^2 values

Constructs	R^2 values	Adjusted R^2 values
Endogenous variables		
Economic Performance - EcP	0.833	0.828
Social Performance - SP	0.829	0.824
Environmental Performance - EnP	0.551	0.538
Constructs under the moderating effect		
Government Policies & Regulations - GPR	0.575	0.574
Market Competition - MC	0.820	0.820
Customer Behaviors - CB	0.679	0.678
Supplier Behaviors - SB	0.796	0.796
Networks & Partnerships - NW	0.864	0.863
Human Resource Practices - HR	0.609	0.608
Technology & Innovation - TI	0.638	0.637
Financial Accessibility - FA	0.835	0.835
Marketing Strategies - MS	0.754	0.753
Environmental Management Capability - EM	0.512	0.511
Firm's Culture - FC	0.594	0.593

***Source**: Author's calculation*

Table 22 presents the calculated R^2 values as determined using the 'plspm' package in R. The model demonstrates strong predictive power for Economic Performance (EcP) and Social Performance (SP), explaining approximately 83% of the variance in both constructs. This indicates that the model effectively captures the factors influencing these performance dimensions. However, the predictive power for Environmental Performance (EnP) is comparatively lower, explaining around 55% of the variance and showing a moderate level of predictive accuracy.

Regarding the constructs under the moderating effect, Networks & Partnerships demonstrates exceptional explanatory power with an R^2 of 0.864, indicating that approximately 86% of its variance is explained by the model. Financial Accessibility and Market Competition also reveal strong explanatory power, with R^2 values of 0.835 and 0.820, respectively. While other constructs displayed satisfactory explanatory power, Government Policies & Regulations, Market Competition, and Firm's Culture show moderate levels of explanation, with R^2 values ranging from 0.512 to 0.594. Overall, the model's strong explanatory power for most constructs supports its robustness and reliability.

4.4.2. Cross-validated redundancy (Q^2)

Cross-validated redundancy (Q^2) serves as a crucial indicator of a model's predictive relevance. This metric employs a sample reuse technique where a portion of the data is excluded, model parameters are estimated using the remaining data, and the omitted data is predicted based on these estimates. A smaller discrepancy between predicted and actual values signifies a higher Q^2 and, consequently, stronger predictive accuracy. A Q^2 value greater than zero for a specific endogenous construct signifies the model's predictive relevance for that construct.

Table 23. Q^2 values

Constructs	Q^2 values
Endogenous variables	
Economic Performance - EcP	0.980
Social performance - SP	0.986
Environmental performance - EnP	0.964
Constructs under the moderating effect	
Government Policies & Regulations - GPR	0.945
Market Competition - MC	0.970
Customer Behaviors - CB	0.964
Supplier Behaviors - SB	0.981
Networks & Partnerships - NW	0.983
Human Resource Practices - HR	0.966
Technology & Innovation - TI	0.966
Financial Accessibility - FA	0.984
Marketing Strategies - MS	0.980
Environmental Management Capability - EM	0.948
Firm's Culture - FC	0.941

***Source**: Author's calculation*

When combined with R^2, Q^2 offers a comprehensive evaluation of a model's interpretive and predictive potentialities (Hair et al., 2011). Table 23 presents the calculated Q^2 values for the constructs.

The model reveals exceptional predictive capabilities, as evidenced by the Q^2 values. Economic Performance and Social Performance both achieve outstanding Q^2 values of 0.980 and 0.986, respectively, indicating nearly perfect prediction accuracy. Environmental Performance also demonstrate excellent predictive power with a Q^2 of 0.964. Moreover, all 11 determinants that are impacted by the moderating variable displayed high Q^2 values exceeding 0.94, further emphasizing the model's strong predictive performance.

The combined analysis of R^2 and Q^2 values unequivocally demonstrates the model's exceptional ability to both explain and predict the studied phenomena. This combination of high R^2 and Q^2 values underscores the model's reliability and its potential for accurate forecasting and decision-making.

4.4.3. Effect size (f^2)

Effect size (f^2) is a valuable metric in PLS-SEM used to quantify the practical contribution of an exogenous construct on an endogenous construct. It offers an understanding of the relative significance of each predictor variable in clarifying the variance of the dependent variable (Hair et al., 2014).

Table 24. Effect size

Constructs	EcP	SP	EnP
GPR	0.152	0.030	0.170
MC	0.001	0.001	0.230
CB	0.066	0.060	0.002
SB	0.180	0.116	0.220
NW	0.121	0.487	0.240
HR	0.021	0.015	0.001
TI	0.046	0.058	0.003
FA	0.477	0.309	0.351
MS	0.074	0.344	0.000
EM	0.182	0.021	0.008
FC	0.002	0.088	0.074
GLB	0.078	0.181	0.054

***Source**: Author's calculation*

To assess this index, Cohen's f^2 is computed. This metric quantifies the change in R^2 when a specific exogenous construct is removed from the model. The process involves estimating two PLS path models: a full model incorporating all hypothesized relationships and a reduced model excluding the target exogenous construct (Hair et al., 2014). The difference in R^2 between these models yields the f^2 value, which indicates the construct's effect size. Cohen's guidelines classify

effect sizes as small ($f^2 \geq 0.02$), medium ($f^2 \geq 0.15$), or large ($f^2 \geq 0.35$). A substantial f^2 value implies a strong contribution of the exogenous construct to explaining the endogenous variable. By evaluating effect sizes, researchers can not only confirm the existence of relationships but also quantify their magnitude (Cohen, 1988).

Table 24 presents the calculated effect sizes for the research model. The findings reveal a spectrum of effect sizes, allowing for categorization into large, medium, and small/negligible impact groups, providing a nuanced understanding of their relative importance.

Factors exhibiting a large effect demonstrate a substantial positive influence on SME sustainability. Financial Accessibility emerges as a crucial driver, showing strong positive impacts across all three performance dimensions (EcP, SP, and EnP). This underscores the critical role of financial resources in enabling sustainable practices and growth for SMEs. Similarly, Networks and Partnerships demonstrate a significant positive impact, particularly on social performance, highlighting the importance of collaborative relationships for enhancing social outcomes within SMEs.

Several factors demonstrate a medium effect, indicating a moderate influence on SME performance. Supplier Behavior shows moderate effect sizes across all three dimensions, suggesting its importance for both economic and environmental performance. Marketing Strategies demonstrate a moderate positive effect specifically on social performance. Environmental Management Capabilities shows a small but noteworthy effect on economic performance, suggesting a focused impact on economic sustainability. Globalization contributes to both economic and social performance with small to moderate effects. Government policies and regulations (GPR) is found to have a medium effect on both economic and environmental performance.

Finally, a number of factors demonstrate small or negligible effects, indicating minimal or no significant impact on SME performance within the context of this study, suggesting their limited direct contribution to explaining the current model while signaling potential areas for deeper exploration.

4.4.4. Path coefficients

Direct effects

Following the execution of a PLS model, estimates for the path coefficients, which indicate the hypothesized links between the constructs, are generated. Path coefficients quantify the strength and direction of relationships between constructs in a structural model. Similar to standardized regression coefficients, they range from -1 to +1, with values closer to the extremes indicating stronger relationships. Positive coefficients represent positive relationships, while negative values signify inverse associations. To assess the significance of path coefficients, bootstrapping is employed to determine standard errors, t-values, and confidence intervals. Coefficients with t-values exceeding 1.96 (for a 95% confidence level) are considered statistically significant, supporting the hypothesized relationship (Hair et al., 2014). Table 25 presents the path coefficients, t-values, and p-values for the structural model.

Table 25. Path coefficients, t-values, and p-values of the structural model

Path	Path coefficients	Standard Deviation	t-values	p-values
GPR → EcP	0.367	0.034	10.751	0.000
GPR → SP	0.113	0.031	3.642	0.000
GPR → EnP	0.327	0.052	6.234	0.000
MC → EcP	-0.053	0.043	-1.253	0.210
MC → SP	-0.023	0.035	-0.642	0.521
MC → EnP	-0.405	0.082	-4.964	0.000
CB → EcP	0.161	0.041	3.971	0.000
CB → SP	-0.090	0.033	-2.709	0.007
CB → EnP	0.028	0.067	0.415	0.678
SB → EcP	-0.286	0.052	-5.454	0.000
SB → SP	0.170	0.045	3.784	0.000
SB → EnP	-0.376	0.074	-5.118	0.000
NW → EcP	-0.046	0.058	-0.789	0.430
NW → SP	0.609	0.050	12.248	0.000
NW → EnP	0.319	0.079	4.045	0.000
HR → EcP	-0.061	0.035	-1.771	0.077
HR → SP	0.073	0.045	1.624	0.104
HR → EnP	-0.042	0.050	-0.839	0.401
TI → EcP	0.122	0.031	3.873	0.000
TI → SP	0.186	0.031	5.921	0.000
TI → EnP	0.082	0.057	1.443	0.149
FA → EcP	0.643	0.047	13.658	0.000
FA → SP	-0.215	0.038	-5.691	0.000
FA → EnP	0.603	0.058	10.332	0.000
MS → EcP	-0.064	0.042	-1.518	0.129
MS → SP	0.388	0.048	8.083	0.000
MS → EnP	-0.003	0.061	-0.053	0.957
EM → EcP	0.221	0.035	6.228	0.000
EM → SP	0.099	0.035	2.847	0.004
EM → EnP	0.083	0.055	1.507	0.132
FC → EcP	-0.120	0.033	-3.608	0.000
FC → SP	-0.213	0.028	-7.527	0.000
FC → EnP	-0.067	0.058	-1.168	0.243

***Source**: Author's calculation*

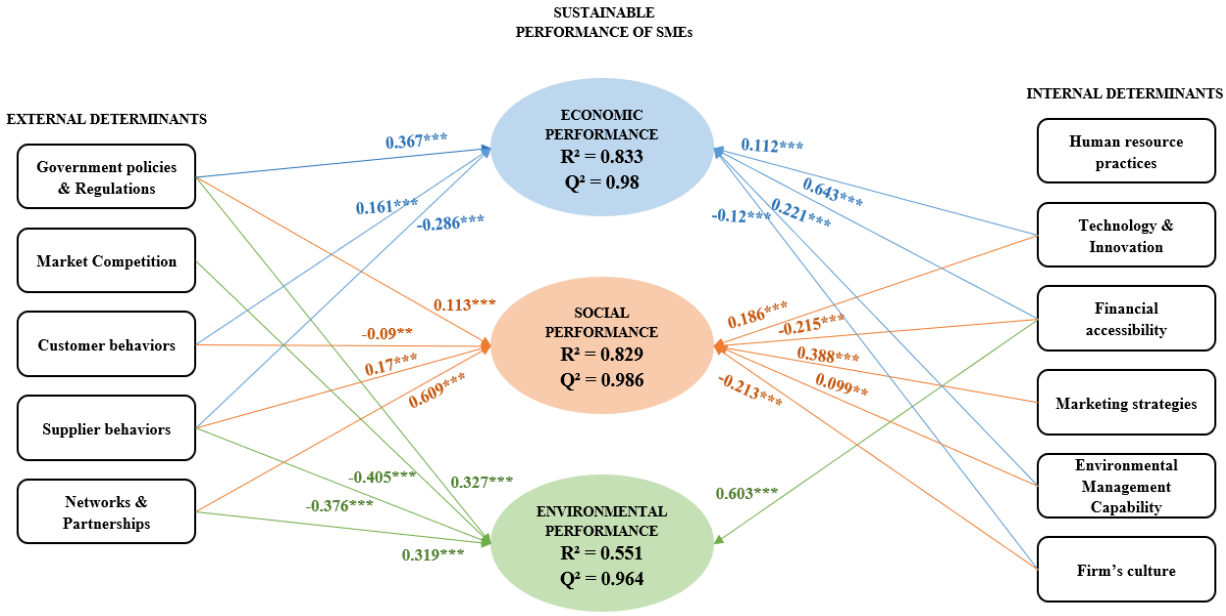
Path coefficient analysis reveals the significant influence of external determinants on performance outcomes. Government Policies & Regulations exert a strong positive impact on EcP (0.367, p-value < 0.001), SP (0.113, p-value < 0.001), and EnP (0.327, p-value < 0.001), indicating a crucial role in driving overall performance. Market Competition negatively impacts EnP (-0.405,

p-value < 0.001), indicating potential challenges in balancing environmental sustainability with other performance dimensions. Customer Behaviors significantly enhance EcP (0.161, p-value < 0.01) but negatively influence SP (-0.09, p-value < 0.01). Supplier Behaviors positively impact SP (0.17, p-value < 0.001) but negatively affect EcP (-0.286, p-value < 0.001) and EnP (-0.376, p-value < 0.001). Networks & Partnerships strongly influence SP (0.609, p-value < 0.001) and positively impact EnP (0.319, p-value < 0.001) but show no significant effect on EcP (p-value > 0.05). These findings underscore the complex interplay of external factors in shaping organizational performance.

Internal determinants demonstrate varying influences on performance outcomes. Technology & Innovation construct positively contributes to EcP (0.122, p-value < 0.001) and SP (0.186, p-value < 0.001), demonstrating its role in driving overall performance improvements. However, its impact on EnP is negligible (0.082, p-value > 0.05). Financial Accessibility strongly and positively affects EcP (0.643, p-value < 0.001) and EnP (0.603, p-value < 0.001) but negatively influences SP (-0.215, p-value < 0.001), suggesting a trade-off between financial gains and social outcomes. Marketing Strategies positively impact SP (0.388, p-value < 0.001) but have minimal effects on EcP and EnP (p-value > 0.05).

Environmental Management Capability positively affects EcP (0.221, p-value < 0.001) and SP (0.099, p-value < 0.01) but shows no significant impact on EnP. The Firm's Culture negatively influences both EcP (-0.120, p-value < 0.001) and SP (-0.213, p-value < 0.001), highlighting the importance of organizational culture in achieving positive performance outcomes.

Notably, Human Resource is the sole construct without significant impacts (p-values > 0.05) on any of the three performance dimensions (EcP, SP, and EnP), suggesting a limited influence on sustainable performance.



*(***, **, *: p-value is less than 0.001, 0.01, 0.05 respectively)*

Figure 18. Statistical significance of path coefficients

***Source**: Author's calculation*

Figure 18 visually represents the significant relationships between external and internal determinants and the three performance aspects of Vietnamese SMEs. The blue, orange, and green arrows represent the impacts of the predictors on the economic performance, social performance, and environmental performance of SMEs, respectively.

Moderating effects

Latent constructs reveal varying degrees of influence on the sustainable performance of Vietnamese SMEs. As hypothesized, globalization is supposed to indirectly impact these relationships. To further investigate the potential influence of globalization on these relationships, this section explores the moderating effects of globalization on the examined constructs.

The subsequent analysis will examine how globalization interacts with both exogenous and endogenous variables, as presented in Table 26.

Table 26. Path coefficients between GLB and the determinants

Path	Path coefficients	Standard Deviation	t-values	p-values
GLB → GPR	0.330	0.037	8.809	0.000
GLB → MC	0.704	0.028	25.571	0.000
GLB → CB	0.625	0.054	11.495	0.000
GLB → SB	0.681	0.037	18.584	0.000
GLB → NW	0.597	0.039	15.474	0.000
GLB → HR	0.545	0.053	10.275	0.000
GLB → TI	0.711	0.035	20.252	0.000
GLB → FA	0.663	0.037	17.929	0.000
GLB → MS	0.548	0.075	7.268	0.000
GLB → EM	0.309	0.041	7.616	0.000
GLB → FC	0.442	0.074	5.974	0.000

***Source**: Author's calculation*

Globalization exerts a strong and significant positive influence on its related constructs, with particularly pronounced effects on Technology & Innovation (0.711), Market Competition (0.704), and Supplier Behaviors (0.681). Moderate impacts are observed on Human Resources (0.545), Network and Partnership (0.597), and Market Strategies (0.548), indicating that GLB also fosters connections, talent management, and strategic positioning. The lowest path coefficients are seen for Environmental Management (0.309) and Government Policies and Regulations (0.330), which, though significant, reflect relatively weaker influence areas. These highly significant relationships ($p < 0.001$) underscore the pivotal role of GLB in driving these constructs.

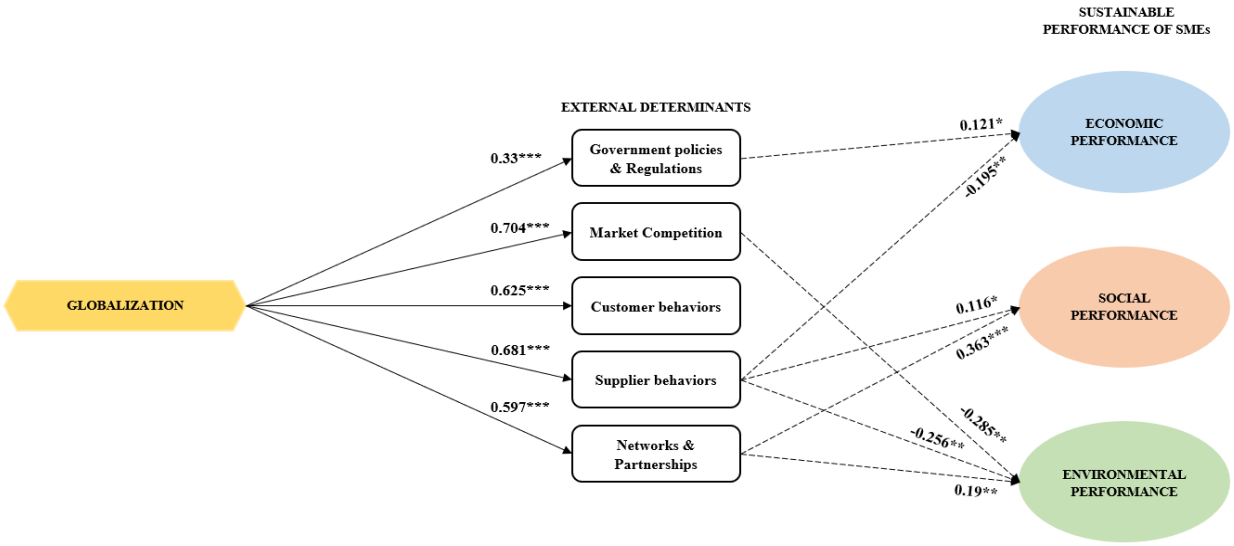
To examine the moderating impact of globalization on sustainable performance, the interaction effects between globalization and external variables are calculated and presented in Table 27.

Table 27. Moderating effects through external determinants

Moderating path	Moderating effects	Standard Deviation	t-values	p-values
GLB → GPR → EcP	0.121	0.050	2.422	0.015
GLB → GPR → SP	0.037	0.049	0.768	0.443
GLB → GPR → EnP	0.108	0.064	1.690	0.091
GLB → MC → EcP	-0.038	0.048	-0.781	0.435
GLB → MC → SP	-0.016	0.045	-0.354	0.723
GLB → MC → EnP	-0.285	0.088	-3.243	0.001
GLB → CB → EcP	0.101	0.068	1.481	0.139
GLB → CB → SP	-0.056	0.063	-0.885	0.376
GLB → CB → EnP	0.017	0.086	0.203	0.839
GLB → SB → EcP	-0.195	0.065	-2.981	0.003
GLB → SB → SP	0.116	0.059	1.971	0.049
GLB → SB → EnP	-0.256	0.088	-2.902	0.004
GLB → NW → EcP	-0.027	0.071	-0.387	0.699
GLB → NW → SP	0.363	0.063	5.767	0.000
GLB → NW → EnP	0.190	0.086	2.211	0.027

***Source**: Author's calculation*

The moderating influence of globalization on the relationship between external determinants and sustainable performance exhibits varying patterns. Figure 19 illustrates the significant relationships of globalization with external factors as well as aspects of the sustainable performance of SMEs. In which, solid arrows indicate direct effects, while dashed arrows indicate indirect relationships.



*(***, **, *: p-value is less than 0.001, 0.01, 0.05 respectively)*

Figure 19. Moderating effects through external determinants

***Source**: Author's calculation*

Globalization significantly strengthens the positive impact of Government Policies & Regulations on Economic Performance (0.121, p-value < 0.05) but does not significantly influence the relationships between this construct and Social Performance or Environmental Performance. Regarding Supplier Behaviors, globalization emphasizes the negative impact on EcP (-0.195, p-value < 0.01) and EnP (-0.256, p-value < 0.01) while amplifying the positive effect on SP (0.116, p-value < 0.05). For Networks & Partnerships, globalization notably strengthens the positive relationship with SP (0.363, p-value < 0.001) and EnP (0.19, p-value < 0.01), but its moderating effect on the relationship with EcP is insignificant. Besides, it also reveals the negative impact of globalization on Environmental Performance (-0.285, p-value < 0.01) through the Market Competition.

The analysis of moderating effects also reveals significant influences of globalization on the relationships between internal determinants and the sustainable performance of Vietnamese SMEs. Table 28 presents a detailed analysis of the pathways through which globalization influences various aspects of sustainable performance.

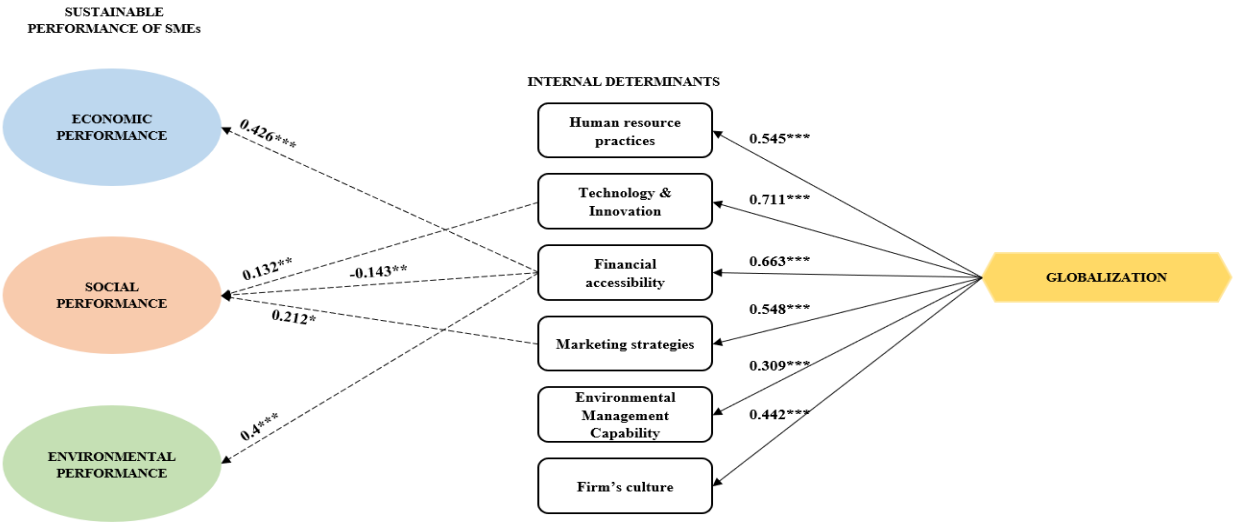
Table 28. Moderating effects through internal determinants

Moderating path	Moderating effects	Standard Deviation	t-values	p-values
GLB → HR → EcP	-0.033	0.064	-0.524	0.600
GLB → HR → SP	0.040	0.071	0.561	0.575
GLB → HR → EnP	-0.023	0.072	-0.322	0.748
GLB → TI → EcP	0.087	0.047	1.857	0.063
GLB → TI → SP	0.132	0.048	2.753	0.006
GLB → TI → EnP	0.059	0.070	0.836	0.403
GLB → FA → EcP	0.426	0.060	7.069	0.000
GLB → FA → SP	-0.143	0.055	-2.612	0.009
GLB → FA → EnP	0.400	0.071	5.631	0.000
GLB → MS → EcP	-0.035	0.085	-0.412	0.680
GLB → MS → SP	0.212	0.090	2.356	0.018
GLB → MS → EnP	-0.002	0.097	-0.019	0.985
GLB → EM → EcP	-0.038	0.048	-0.781	0.435
GLB → EM → SP	0.068	0.053	1.277	0.202
GLB → EM → EnP	0.031	0.055	0.562	0.574
GLB → FC → EcP	0.026	0.069	0.369	0.712
GLB → FC → SP	-0.094	0.080	-1.183	0.237
GLB → FC → EnP	-0.030	0.093	-0.319	0.750

***Source**: Author's calculation*

To further visualize these findings, figure 20 provides a graphical representation of the pathways with statistically significant impacts. This visual representation will serve as a valuable

tool in identifying the specific internal factors that most effectively transmit the influence of globalization on the sustainable performance of Vietnamese SMEs. Solid arrows represent direct impacts, whereas dashed arrows represent indirect impacts.



*(***, **, *: p-value is less than 0.001, 0.01, 0.05 respectively)*

Figure 20: Moderating effects through internal determinants

***Source**: Author's calculation*

Globalization significantly enhances the positive impact of Technologies & Innovations on Social Performance (0.132, p-values < 0.01). However, the moderation effects of this construct on Economic Performance and Environmental Performance are negligible. Regarding Financial Acessibility, globalization strengthens its positive impacts on EcP (0.436, p-values < 0.001) and EnP while mitigating its negative impact on SP (0.4, p-values < 0.001). Furthermore, globalization significantly enhances the positive impact of Marketing Strategies on SP (0.212, p-values <0.05). These findings suggest that globalization plays a crucial role in optimizing the impact of internal factors on sustainable performance.

The moderating effects of GLB on relationships involving Customer Behaviors (CB), Human Resources (HR), Environmental Management Capability (EM), and Firm's Culture (FC) are found to be generally insignificant. Thus, there are no pathways of these constructs to the three aspects of sustainable performance presented in Figure 22. These findings suggest that GLB does not significantly influence the impact of these constructs on the three aspects of the sustainable performance of Vietnamese SMEs.

The analysis of path coefficients and moderating effects revealed a nuanced picture of the factors influencing Vietnamese SMEs' sustainable performance. Our findings demonstrate that several external factors exhibit significant influence on these outcomes. Specifically, Government Policies & Regulations (GPR), Supplier Behaviors (SB), Networks & Partnerships (NW), Technology & Innovation (TI), Financial Accessibility (FA), and Marketing Strategies (MS) are found to have a substantial impact on various dimensions of sustainable performance. Notably, globalization (GLB) plays a crucial moderating role in these relationships, influencing the strength and direction of these impacts. While Government Policies & Regulations (GPR) and Marketing

Strategies (MS) consistently demonstrate positive influences on various aspects of sustainable performance, the remaining four factors display more complex relationships. Some variables demonstrated positive impacts on certain dimensions of sustainable performance while showing negative or insignificant impacts on others.

Conversely, Environmental Management Capability (EM), Customer Behaviors (CB), Human Resources (HR), and Firm's Culture (FC) possess limited or no significant direct or moderated effects on sustainable performance. These findings underscore the need for further research to fully understand the role of these internal factors and their potential interactions with other variables.

Table 29 provides a concise summary of the empirical findings, presenting the test results for all 6 proposed hypotheses.

Table 29. Summary of Hypotheses test results

Hypo-theses	Result											
	Government Policies & Regulations	Market Competition	Customer Behaviors	Supplier Behaviors	Networks & Partnerships	Human Resource Practices	Technology & Innovation	Financial Accessibility	Marketing Strategies	Environmental Management Capability	Firm' s Culture	Globalization
1a	O	X	O	O	X	X	O	O	X	O	O	
1b	O	X	O	O	O	X	O	O	O	O	O	
1c	O	O	X	O	O	X	X	O	X	X	X	
2a	M			M				M				O
2b				M	M		M	M	M			O
2c		M		M	M			M				O

O: Accepted; X: Rejected; M: significant moderating effect

Hypothesis 1a: External and internal determinants have impacts on the economic performance of SMEs in Vietnam.

Hypothesis 1b: External and internal determinants have impacts on the social performance of SMEs in Vietnam.

Hypothesis 1c: External and internal determinants have impacts on the environmental performance of SMEs in Vietnam.

Hypothesis 2a: Globalization indirectly influences the economic performance of Vietnamese SMEs by moderating the effects of External and Internal determinants.

Hypothesis 2b: Globalization indirectly influences the social performance of Vietnamese SMEs by moderating the effects of External and Internal determinants.

Hypothesis 2c: Globalization indirectly influences the environmental performance of Vietnamese SMEs by moderating the effects of External and Internal determinants.

***Source**: Author's compilation*

The table employs an organized coding system to clearly indicate the significance of each predictor's influence on various aspects of SMEs' sustainable performance. Specifically, the symbol "O" is used to denote a statistically significant influence of a predictor on a particular

dimension of sustainable performance. Conversely, the symbol "X" indicates that a predictor did not exhibit a statistically significant impact on the respective aspect of sustainable performance. Recognizing the potential moderating role of globalization, the symbol "M" is used to denote cases where globalization significantly moderates the relationship between a predictor variable and the dependent variables (sustainable performance).

4.5. Discussion

4.5.1. Direct effects

This study aimed to identify critical factors influencing the sustainable performance of SMEs in Vietnam within the context of globalization. Given the pivotal role of SMEs in economic development and their contribution to the Sustainable Development Goals, understanding the determinants of their sustainability is essential (OECD, 2017). Despite the growing recognition of SMEs' importance, research on the factors influencing their sustainable performance in Vietnam remains limited, with existing studies often focusing narrowly on either internal or external factors. This research addressed this gap by investigating the impacts of both external (Government policies & Regulations, Market Competition, Customer behaviors, Supplier behaviors, and Networks & Partnerships) and internal (Human resources, Technology & Innovation, Financial accessibility, Marketing strategies, Environmental management capability, and Firm's culture) determinants on SME's sustainable performance in Vietnam. Moreover, the study explored the moderating effects of globalization on these relationships. By employing a survey-based research design and utilizing PLS-SEM for data analysis, the study examined the proposed relationships, tested hypotheses, and evaluated the model's fit.

Empirical findings derived from PLS-SEM reveal that, except for human resources, all proposed determinants significantly influence Vietnamese SMEs' sustainable performance. Regarding external factors, Government Policies and Regulations positively correlate with all three pillars of sustainability, aligning with previous research (Songling et al., 2018; Gandhi et al., 2018; Ullah et al., 2021; Witjes et al., 2017; OECD, 2023a) and emphasizing the government's pivotal role in supporting SMEs. Vietnam's centralized governance model exemplifies this correlation, where institutional frameworks actively steer SMEs toward compliance with national sustainability agendas, underscoring the strong positive influence of governmental interventions in aligning business practices with broader environmental, social, and economic goals. Conversely, supplier behaviors demonstrate a more complex impact on SMEs' sustainable performance, exhibiting a moderate negative correlation with both economic and environmental performance. The negative economic impact suggests that while SMEs may align goals with key suppliers and adopt sustainable practices in the supply chain, these actions do not necessarily translate into financial benefits. The pressure to collaborate with suppliers on sustainability efforts might increase operational costs, reduce efficiency, or create supply chain disruptions, ultimately hindering economic performance. The strong negative effect on environmental performance indicates that while enterprises may attemp to enhance sustainability through supplier collaboration, external supplier practices may still lead to environmental inefficiencies. Dependence on suppliers with unsustainable practices may harm the environmental outcomes. These findings align with the arguments drawn in the studies by Kusi-Sarpong et al. (2016), and Valdez-Juárez et al. (2018). In contrast, this factor positively influences social performance,

indicating that interactions with suppliers can enhance the social dimensions of a business. These enhancements may include improved employee satisfaction, stronger stakeholder relationships, and contributions to corporate social responsibility initiatives, consistent with the observations of Dubey et al. (2018).

Market competition possesses a strong negative impact on environmental performance, implying that competition can force small and medium-sized enterprises to focus intensely on cost reduction and efficiency, sometimes at the expense of environmental considerations. This pressure may lead to reduced investment and initiatives in environmental sustainability as companies prioritize short-term financial survival over long-term sustainability goals. These results align with the findings of Duanmu et al. (2018), and Grether et al. (2010).

Customer behavior shows a moderately positive impact on economic performance, similar to the suggestions of Abrokwah-Larbi (2024) and Madhani (2020), which imply that businesses can increase sales, revenue growth, and financial efficiency by analyzing and responding to customer behavior. However, this variable exerts an insignificant negative impact on social performance. As mentioned by Marolt et al. (2022), catering to customer behaviors may diminish certain social aspects of the organization, such as employee morale or public perception. Evaluations of networks and partnerships reveal a substantial positive impact on environmental performance and a strong positive impact on social performance. These results indicate that effective networks and partnerships play a pivotal role in enhancing a company's environmental outcomes through collaborations that foster sustainable practices, resource and technology sharing for environmental conservation, and joint initiatives to reduce the environmental footprint. Moreover, these relationships can facilitate improved stakeholder relations, community engagement, and corporate social responsibility initiatives. This leads to better working conditions, enhanced employee morale, and a stronger corporate social image. These findings complement the evidence drawn from studies by Xie et al. (2024); OECD, (2023b), and Gandhi et al. (2018).

Regarding the internal determinants, financial accessibility has significantly positive effects on both economic and environmental performance. SMEs with greater financial access can invest more in economic growth and sustainability initiatives, enhancing both financial health and environmental practices. Financial resources facilitate investments in technology, infrastructure, and innovative solutions, driving economic success and environmental conservation. This aligns with the findings of Jin & Zhang (2019), Chowdhury et al. (2022), and Ullah et al. (2021). However, this determinant moderately negatively impacts social performance, implying that while it promotes economic and environmental improvements, it may inadvertently reduce social outcomes. SMEs might prioritize financial and environmental investments over corporate social responsibility initiatives, leading to a decline in social performance. This situation has also been noted in studies by Msomi & Olarewaju (2021) and Hussain et al. (2018).

Technology and innovation positively contribute to both economic and social performance. This result is also supported by the studies of Bouwman et al. (2018), Ahmad et al. (2019), Geng et al. (2021), Rustiarini et al. (2022), and Oduro (2024). The weak impact on economic performance suggests that while technological advancements and innovative practices enhance efficiency, productivity, and financial performance, they are not the main drivers of economic success for Vietnamese SMEs. Similarly, the weak positive impact on social performance indicates

that technology and innovation can improve working conditions, employee satisfaction, and corporate social responsibility, but this impact is not strong enough to be the primary determinant of social performance. This dynamic aligns with Vietnam's emphasis on digital transformation, where institutional efforts to modernize SMEs have fostered efficiency gains but underscore the need for complementary strategies to amplify broader economic and social progress. Marketing strategies also positively impact social performance, but with a stronger effect. As Prasanna et al. (2019) and Syaifullah et al. (2021) noted, effective marketing strategies can enhance public awareness, communicate corporate social responsibility initiatives, promote ethical practices, and engage the community, thereby improving the company's social standing. This can result in increased customer loyalty, improved employee morale, and stronger community relationships, all of which contribute to overall social performance.

Empirical evidence on the firm's culture reveals a negative influence on both economic and social performance, supporting the arguments of Kadam et al. (2019) and Bocquet et al. (2017). While integrating sustainability into recruitment and training programs may enhance long-term resilience, it could initially lead to higher operational costs, workforce adaptation challenges, or resource allocation which put pressure on the financial performance. Although the impact is not significant, it suggests that some aspects of the firm's culture may need reevaluation to improve economic outcomes. A moderate negative effect on social performance indicates that corporate culture can lead to lower employee morale, reduced engagement, and poor internal communication, all adversely affecting social performance. Although fostering a sustainability-oriented workplace culture is expected to improve employee engagement and social responsibility, it may face misalignment with existing workforce values. Employees and stakeholders may struggle to adapt to new regulation and working rules, and increased focus on a new sustainable culture may distract attention from current social concerns such as employee satisfaction, leading to unintended negative effects on social performance.

The assessment of environmental management capability indicates that it has a weak positive impact on the economic and social performance of SMEs. Effective environmental management can enhance economic performance by achieving waste reduction, improved resource efficiency, and reduced operational costs. These capabilities empower SMEs to optimize their processes and leverage cost savings from sustainable practices, thereby driving profitability and competitive advantage. Furthermore, the implementation of green initiatives can lead to a positive corporate image, attracting socially conscious consumers and investors. It can also foster a supportive and motivated workforce. This comprehensive approach to environmental management not only promotes economic benefits but also generates positive social impacts by advancing CSR and ethical business practices. These findings are consistent with the research of Ali et al. (2021), Bhatti et al. (2022), and Eikelenboom & de Jong (2019). However, the magnitude of the effect suggests that this factor is not one of the significant factors contributing to the improved sustainable performance of SMEs in Vietnam.

Research on human resources indicates no significant impact on any of the three dimensions of sustainable performance, contradicting the studies of Afzal & Lim (2022), Styaningrum et al. (2020), and Chaudhary (2019). The influence of human resources on these dimensions is negligible, suggesting that human resource activities within the company do not

significantly affect these operational outcomes in Vietnamese SMEs. Effective human resource management typically plays a crucial role in improving financial performance, enhancing employee satisfaction, and promoting corporate social responsibility or environmental awareness; however, this appears to be lacking in the current human resource approach of Vietnamese SMEs.

4.5.2. Moderating effects

In examining the moderating effects of globalization on the sustainable performance of Vietnamese SMEs, the estimated results indicate that globalization, through supplier behaviors and financial accessibility, impacts all three proposed dimensions. Through supplier behaviors, globalization demonstrates a complex influence on sustainable performance. The negative impact on economic and environmental performance suggests that the interaction between globalization and supplier behavior can lead to higher costs, operational inefficiencies, or increased competitive pressures, adversely impacting financial results and potentially worsening environmental challenges. These findings align with the conclusions drawn by Govindan et al. (2013), Naradda Gamage et al. (2020), and Dzikriansyah et al. (2023). The weak negative impact on economic performance (-0.195) can be attributed to increased costs or inefficiencies associated with global supply chain management, where fluctuations in supplier reliability or cost-effectiveness can negatively affect economic performance. Though this effect is not significant, it highlights the potential for globalization to introduce economic challenges through supplier behaviors. Regarding environmental performance, difficulties in enforcing consistent environmental practices among all suppliers can have significant negative impacts. The complex effect of Supplier Behavior reflects the global challenge of aligning supply chain partners with sustainability goals. Conversely, the medium positive correlation with social performance suggests that globalization, mediated through supplier behaviors, can slightly improve social outcomes. This positive impact can be attributed to improvements in labor practices, better working conditions, and a stronger emphasis on corporate social responsibility initiatives, driven by global norms and expectations. However, the effect's magnitude is relatively small, corroborating the suggestions of Han et al. (2024).

Concerning financial accessibility, globalization through this variable has had a strong positive impact on both economic and environmental performance, aligning with the evidence from the studies of Dzikriansyah et al. (2023) and Prasanna et al. (2019). The robust positive impact on economic performance indicates that as globalization enhances access to finance, it fosters access to financial resources, providing opportunities for growth, innovation, and improved efficiency. Global markets can offer better access to capital, lower financial costs, and open up new revenue streams, yielding significant economic benefits. Similarly, the strong positive impact on environmental performance suggests that globalization, by increasing financial accessibility, enables firms to invest in sustainable technologies, energy-efficient processes, and comprehensive environmental management systems, reducing their ecological footprint and improving overall environmental performance. In Vietnam, integration into global financial markets and attraction of foreign investment enhance financial accessibility, fostering improvements in both economic and environmental performance. These results, which highlight Financial Accessibility's significant impact on economic and environmental performance, align with international studies demonstrating that SMEs globally require accessible funding for investments in sustainability.

Conversely, the weak negative impact on social performance may arise from an excessive focus on financial and environmental investments at the expense of social initiatives. Firms might prioritize economic growth and environmental sustainability, thereby neglecting social issues such as employee welfare, community engagement, or corporate social responsibility. This concern is also highlighted in the research of Liñán et al. (2020) and Bux et al. (2024).

The moderating effect of globalization through networks and partnerships has a positive impact on both social and environmental performance, consistent with the research of Han et al. (2024), Audretsch et al. (2023), and Ekanayake et al. (2020). The strong positive impact on social performance indicates that globalization, when mediated through robust networks and partnerships, facilitates the exchange of best practices, fosters collaboration, and promotes corporate social responsibility initiatives. These relationships can lead to improved working conditions, higher employee satisfaction, greater stakeholder engagement, and stronger community relations, thereby significantly enhancing their social performance. Additionally, partnerships and networks within a global context can help companies gradually improve their environmental performance. The significant impact of networks and partnerships, particularly their strong positive effect on social performance, aligns with global findings suggesting that SMEs benefit from collaborative relationships to enhance knowledge sharing, access new markets, and improve social sustainability outcomes in increasingly interconnected and globalized business environments.

Additionally, globalization has unique impacts on individual dimensions of SMEs' sustainable performance. It has a positive effect on economic performance through government policies and regulations, positive effects on social performance via technologies, innovation, and marketing strategies, and a negative effect on environmental performance due to market competition. These findings are supported by previous research, such as Moursellas et al. (2022), Bhatti et al. (2022), and Singh et al. (2022b). These results also underscore the multifaceted influence of globalization on different aspects of SMEs' sustainable performance through a variety of external and internal factors.

The findings underscore the critical role of globalization as a moderator in enhancing SMEs' sustainable performance through globally applicable mechanisms, including, financial accessibility, supplier behaviors, and networks and partnerships, and technology and innovation. These determinants align with global SME literature, where technology adoption and resource efficiency are recognized as cross-border drivers of sustainability, particularly in emerging economies navigating competitive and interconnected markets. The role of globalized networks and supply chain collaboration emphasizes the transferability of these insights to SMEs in similar institutional and economic contexts. The results of moderating effects also highlights the critical role of cross-border capital flows, such as remittances and foreign direct investment, togerther with local financial ecosystems in achieving sustainable performance, particular the emergin economies. Additionally, the moderating effect of globalization on marketing strategies highlights the universal relevance of aligning market-oriented practices with global standards to achieve sustainable growth. These results contribute to a broader understanding of how SMEs can leverage globalization to advance sustainability, offering actionable pathways for policymakers and firms operating in diverse yet interconnected economies.

CHAPTER 5
CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Small and Medium-Sized Enterprises (SMEs) have emerged as pivotal drivers of economic growth and development both nationally and globally. Their success in an increasingly interconnected and digitalized world is essential for fostering economic progress and inclusive globalization. SMEs, regardless of their development stage, significantly contribute to achieving the Sustainable Development Goals by promoting inclusive and sustainable economic growth, job creation, innovation, and reducing income inequalities. This research aimed to identify key determinants of sustainable performance among Vietnamese SMEs operating within a globalized environment. Utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM), the study examined the impact of these determinants on sustainable performance and explored the moderating influence of globalization.

This study represents a novel contribution to the literature by comprehensively examining all three dimensions of sustainable performance - economic, social, and environmental - within the context of Vietnamese SMEs. By adopting a comprehensive perspective, the research underscores the importance of a balanced approach to sustainability. Understanding the factors influencing these three sustainable performance aspects is crucial for developing effective strategies to enhance the overall performance of SMEs in Vietnam. By identifying key factors influencing each dimension, this research provides a structured framework for designing targeted measures that simultaneously enhance economic growth, social responsibility, and environmental sustainability.

The study investigated the influence of external and internal determinants on Vietnamese SMEs' sustainable performance. Government Policies and Regulations (GPR), Supplier Behaviors (SB), and Financial Accessibility (FA) emerge as key factors impacting all three performance dimensions. Government policies and regulations demonstrated a strong positive correlation with both economic and environmental performance, highlighting their critical role in fostering SME growth and sustainability. Similarly, financial accessibility displays as a critical determinant of both economic and environmental performance. Adequate financial resources facilitate investments in growth and sustainability initiatives, enhancing financial health and environmental practices. In contrast, supplier behaviors exerted a negative influence on economic and environmental performance and may be attributed to factors such as increased costs, operational inefficiencies, and unsustainable practices. The remaining variables influence one or two dimensions of sustainable performance with varying degrees of intensity.

The study further investigated the moderating effects of globalization on the relationship between determinants and the sustainable performance of Vietnamese SMEs. Globalization, operationalized through financial accessibility, has significantly enhanced economic and environmental outcomes. Conversely, globalization through supplier behaviors presented a complex interplay, with negative effects on economic and environmental performance but a

positive influence on social performance. Networks and partnerships, in the context of globalization, positively influenced social and environmental performance, highlighting the benefits of international collaboration. Notably, globalization's influence on market competition poses challenges to maintaining effective environmental practices.

This research represents a foundational contribution to the emerging body of knowledge on sustainable performance within the Vietnamese SME context. The developed model offers a comprehensive framework for investigating the complex interplay of factors influencing SME sustainability. These findings serve as a crucial reference for future researchers exploring this field and offer policymakers insights for formulating strategies to strengthen SME sustainability in a globalized economy.

5.2. Recommendations and implications

Based on the research findings, actionable recommendations for policymakers, SME managers, and future research can be formulated to enhance the sustainable performance of Vietnamese SMEs.

To Policymakers

Policymakers should prioritize enhancing financial accessibility for SMEs through the implementation of financial support programs, including grants, low-interest loans, and tax incentives. Research indicates that improved financial access positively correlates with economic and environmental performance. Additionally, stringent environmental regulations, coupled with clear guidelines and support mechanisms, are essential for driving sustainable practices among SMEs. Furthermore, fostering domestic and international networks and partnerships can significantly enhance social and environmental performance by facilitating knowledge exchange, innovation, and resource optimization.

Effective supplier management is crucial for enhancing sustainable performance. Implementing policies that promote sustainable practices, such as supplier certifications, incentives, and penalties for non-compliance, can mitigate negative environmental and economic impacts. Additionally, fostering technological innovation through incentives and support programs may be essential for enhancing SME competitiveness and long-term sustainability, despite the presently weak impact of technology and innovation on Vietnamese SMEs' sustainable performance.

Globalization influences SMEs' sustainable performance by shaping supplier behaviors, expanding financial accessibility, and fostering international networks. To leverage these effects, policymakers should facilitate SMEs' integration into global supply chains by promoting sustainable sourcing requirements and international supplier certifications. Expanding access to global financial markets, foreign investment, and trade credit can help SMEs invest in sustainability-driven innovations. Additionally, policies that encourage cross-border collaborations and international partnerships can enable SMEs to adopt global best practices, enhance social responsibility, and improve environmental performance while remaining competitive in global markets.

To SME managers

SME managers should prioritize a balanced approach to sustainability by integrating social initiatives with economic and environmental goals. This includes enhancing corporate social responsibility, employee welfare, and community engagement to boost social performance. Since social performance is weakly impacted by government regulations, managers should emphasize internal policies and practices that cultivate a positive workplace culture and actively engage with their communities. Simultaneously, strengthening financial strategies through strategic investments in sustainable technologies is essential for long-term economic and environmental viability.

The study's findings underscore the need for a critical reassessment of current human resource practices. The absence of a significant correlation between human resource practices and sustainable performance underscores the necessity for strategic adjustments. Aligning human resource strategies with sustainability objectives could enhance SMEs' overall performance. This may involve introducing comprehensive sustainability-focused training programs, fostering a corporate culture centered on environmental and social responsibility, and improving employee engagement and satisfaction. Such revisions should aim to develop human resource practices that not only optimize operational efficiency but also advance broader sustainability initiatives, ensuring the workforce plays an active role in achieving the firm's sustainability goals. Effective human resource management can thus become a crucial factor in achieving comprehensive sustainability and long-term success for SMEs.

SME managers should strategically navigate the complexities of globalization to optimize sustainable performance. It is vital to prioritize financial strategies that are aligned with sustainability goals. This involves actively seeking financial support programs and investing in sustainable technologies to ensure both long-term economic growth and environmental sustainability. Effective supplier management, which includes selecting sustainable partners and fostering long-term relationships, is key to reducing the negative environmental impacts of globalization and enhancing social responsibility. At the same time, leveraging global networks to drive innovation and sustainability is crucial for gaining access to new technologies, markets, and best practices. Additionally, internal policies should emphasize sustainability awareness and provide training to cultivate a corporate culture that values environmental and social responsibility. Striking a balance between economic, social, and environmental objectives is essential to ensuring that the benefits of globalization are achieved without compromising societal or environmental well-being.

To researchers

Future research should prioritize in-depth exploration of Financial Accessibility (FA), Supplier Behaviors (SB), and Government Policies & Regulations (GPR) due to their significant impact on economic and environmental performance. Researchers should examine the specific mechanisms through which financial accessibility, supplier behaviros, and government regulations promote sustainability outcomes. This could involve investigating the types of financial support most

effective for encouraging sustainable practices or identifying specific regulatory policies that have the most significant impact on SMEs' sustainable performance.

The absence of a significant relationship between human resources and sustainable performance necessitates further investigation. Future research should focus on developing more refined human resource metrics to better capture their potential impact on sustainability. Additionally, investigating indirect effects and mediating variables of this factor, such as leadership styles or employee engagement, could offer valuable insights into how human resources contribute to driving sustainable outcomes. These areas of study could help clarify the complex role of human resources in enhancing sustainability performance within SMEs.

The role of globalization as a moderating factor requires further examination. Future research should explore how globalization impacts SME sustainability across different sectors, regions, and timeframes to gain a more comprehensive understanding of its influence. Studies would provide valuable insights into the long-term effects of globalization on SMEs. Additionally, investigating the relationship between globalization, innovation capabilities, and digital transformation could reveal strategies that maximize the benefits of globalization while addressing its potential challenges. This would help SMEs better navigate the global landscape and enhance their sustainability outcomes.

By implementing the recommended strategies, policymakers can create a supportive environment for Vietnamese SMEs to thrive sustainably. SME managers can adopt a balanced approach to enhance overall performance, while researchers can continue to advance knowledge in this field. The findings highlight the need for integrated strategies that capitalize on the benefits of globalization while addressing its challenges, thereby improving sustainable performance. This multifaceted approach is essential for ensuring that Vietnamese SMEs can prosper economically, socially, and environmentally in a globalized world.

5.3. Limitations and Future research directions

Despite the study's comprehensive analysis of Vietnamese SME sustainable performance, certain limitations emerged that require further investigation in future research to strengthen the validity and applicability of its conclusions.

Firstly, the cross-sectional design limits insights to a static perspective, preventing an evaluation of how sustainable performance evolves over time. Future longitudinal research could track dynamic changes in practices and outcomes, offering a clearer understanding of long-term trends.

Secondly, the geographic focus on Vietnam constrains the generalizability of findings. SMEs in other regions may operate under differing economic, cultural, or regulatory conditions, necessitating comparative studies to assess the transferability of the results.

Thirdly, given the research's reliance on self-reported surveys, future studies should consider adopting mixed methods, combining qualitative and quantitative approaches. This integration will provide a deeper understanding of contextual factors influencing responses.

Additionally, incorporating third-party assessments and objective performance metrics can strengthen data validity and mitigate potential biases inherent in self-reported data.

Lastly, the lack of significant links between human resources (HR) practices and sustainable performance suggests that the existing human resources metrics may not fully capture their potential influence. Future research could develop more sophisticated human resources metrics (such as training programs, employee engagement in sustainability initiatives) that better reflect how human resources practices contribute to sustainability, potentially revealing indirect effects and mediating variables not captured in this study.

By addressing these limitations, future research can build on the findings of this study to provide deeper, more comprehensive views into the sustainable performance of SMEs and the factors that drive it.

CHAPTER 6
NEW SCIENTIFIC RESULTS

The findings of this study contribute new knowledge to the field of SME sustainability by identifying critical determinants of sustainable performance and the moderating role of globalization. These results provide a foundational framework for future research, enabling further exploration and expansion of the research through the application of the analytical approach employed to other contexts or by incorporating additional constructs into the model.

1. This study represents a pioneering effort to comprehensively examine all three dimensions of sustainable performance —economic, social, and environmental—within the context of Vietnamese SMEs. By adopting a comprehensive perspective, the research underscores the importance of a balanced approach to achieving sustainability. The findings offer valuable insights into the factors influencing each performance dimension, enabling the development of targeted strategies to enhance overall sustainability. This comprehensive framework provides a foundation for organizations to simultaneously pursue economic prosperity, social responsibility, and environmental stewardship.

2. This study offers a thorough examination of both external and internal determinants impacting the sustainable performance of Vietnamese SMEs, filling a significant gap in the literature, which has typically explored these groups of factors separately. These results underscore Vietnam's distinct socio-economic environment, characterized by rapid globalization, a state-influenced market economy, and localized business practices that influence SME sustainability. For instance, the strong positive influence of Government Policies and Regulations reflects Vietnam’s centralized governance model, where institutional frameworks actively steer SMEs toward compliance with national sustainability agendas. The conflicting effects of Supplier Behaviors—hindering economic and environmental performance while boosting social outcomes—reflect the challenges Vietnamese SMEs face in balancing sustainability commitments with operational costs, supply chain disruptions, and dependencies on suppliers with unsustainable practices. Internally, Financial Accessibility plays a dual role: it significantly improves economic and environmental performance, but paradoxically, it negatively impacts social performance. This highlights the difficult trade-offs Vietnamese SMEs face between financial priorities and social initiatives within their limited resources. Meanwhile, the positive impact of Technology and Innovation aligns with Vietnam's focus on digital transformation, allowing SMEs to modernize and improve efficiency. The negative influence of Firm Culture on economic and social performance—evidenced by operational costs, workforce adaptation challenges, and misalignment with existing values—highlights the tension between sustainability integration and immediate operational demands in Vietnamese SMEs. These findings highlight the necessity of customized strategies to enhance sustainable performance in Vietnamese SMEs, taking into account the interactions between state influence, supply chain informality, and cultural traditions such as hierarchical firm structures, rather than relying on general models. By focusing on Vietnam's unique institutional and cultural contexts, this study offers a framework for

policymakers and SMEs to navigate the challenges of a transitioning economy, where sustainability success depends on balancing top-down policies with the realities of grassroots business operations.

3. The study provides an in-depth analysis of how globalization interacts with other determinants to affect the sustainable performance of SMEs. The results show that globalization creates a double-edged effect. It enhances Financial Accessibility, driven by Vietnam's integration into global finance and reliance on foreign investment, which improves economic and environmental performance. However, it also brings challenges, like the conflicting pressures of Supplier Behaviors. Global supply chains can negatively impact economic and environmental performance, while simultaneously driving social improvements through ethical sourcing requirements. Similarly, Global Networks and Partnerships, facilitated by Vietnam's trade connections, improve social and environmental performance. However, SMEs must confront with unequal power dynamics within global supply chains. These contradictions highlight the multifaceted nature of globalization: it simultaneously empowers Vietnamese SMEs with resources and markets while exposing them to risks like supply chain volatility and compliance costs.

This study offers a comprehensive assessment of Vietnamese SMEs' sustainable performance, delving into economic, social, and environmental dimensions. By examining the interplay of external and internal factors, as well as the moderating influence of globalization, the research provides valuable insights into the complexities of achieving sustainability. The findings underscore the need for integrated management strategies that capitalize on globalization's opportunities while mitigating its challenges. This study serves as a foundation for future research and informs policymakers and practitioners seeking to enhance SME sustainability in Vietnam and worldwide.

CHAPTER 7
SUMMARY

The intensifying globalization and economic integration have profoundly influenced the operational landscape for SMEs. This study focuses on Vietnamese SMEs, recognizing their pivotal role in driving economic growth, generating employment, and fostering innovation. As key contributors to the nation's economic trajectory, these enterprises are increasingly expected to adopt sustainable practices. Vietnam's rapid economic development, characterized by industrial expansion and deeper global market integration, has heightened the pressure on SMEs to operate responsibly and sustainably. This study underscores the potential of SMEs to significantly contribute to the country's economic, social, and environmental well-being through their commitment to sustainable practices.

Therefore, this research sought to identify the significant factors influencing the sustainable performance of Vietnamese SMEs within the globalized business landscape. A core objective was to investigate the moderating role of globalization on the interplay between internal and external determinants and their subsequent impact on sustainability outcomes. By incorporating a diverse range of constructs, including Government policies & Regulation, Market Competition, Customer behaviors, Supplier behaviors, Networks & Partnerships, Human resources, Technology & Innovation, Financial accessibility, Marketing strategies, Capability for Environmental management, and Firm’s culture, this study aimed to provide a comprehensive understanding of the factors driving sustainable performance.

Data collected from Vietnamese SMEs was analyzed using PLS-SEM in RStudio. The resulting model identified key determinants of sustainable performance. Financial accessibility and government policies emerged as critical factors positively influencing economic and environmental performance, emphasizing the importance of financial support and regulatory frameworks. Customer behaviors and firm culture also demonstrated a positive impact on multiple performance dimensions, underscoring the significance of understanding customer expectations and cultivating a strong organizational culture. In contrast, human resource practices exhibited no significant impact, indicating a need for SMEs to revise their human resource strategies to better support sustainability objectives.

The study further examined the moderating role of globalization on the relationship between determinants and sustainable performance. Globalization, particularly through financial accessibility, and networks and partnerships, positively influenced sustainability outcomes, providing Vietnamese SMEs with access to resources and collaborative opportunities. However, the study also highlighted the challenges posed by globalization, particularly in managing supply chain impacts. By uncovering these dynamics, the research provides valuable insights into navigating the complexities of globalization to achieve sustainable performance across economic, social, and environmental dimensions.

This research provides a comprehensive evaluation of Vietnamese SMEs' sustainable performance, examining economic, social, and environmental dimensions. By analyzing the interplay of external and internal factors, as well as the moderating influence of globalization, the

study offers valuable insights into the complexities of achieving sustainability. The findings underscore the need for integrated management strategies that leverage globalization's benefits while addressing its challenges.

This study can be described as a comprehensive assessment of Vietnamese SMEs' sustainable performance, providing actionable insights for policymakers and SME managers. By identifying key determinants and the moderating influence of globalization, the research establishes a foundation for enhancing SME sustainability within a globalized context. Future research should expand upon these findings by incorporating additional variables and employing diverse methodological approaches to further advance the understanding of sustainable business practices.

APPENDIX 1
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APPENDIX 2
QUESTIONNAIRE

EXPLORING DETERMINANTS AFFECTING THE SUSTAINABLE PERFORMANCE OF VIETNAMESE SMALL AND MEDIUM-SIZED ENTERPRISES

Thank you for taking your time to respond to this research questionnaire. Be assured that your response will be strictly confidential and shall be solely used for the purpose of this research.

PART 1: OVERALL OF RESPONDENT AND THE ENTERPRISE

Q1. Age:

- ☐ Under 25
- ☐ 26-35
- ☐ 36-45
- ☐ Above 45

Q2. Gender:

- ☐ Male
- ☐ Female

Q3. The time you have been with your enterprise:

- ☐ Under 1 year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ Above 15 years

Q4. Level of education:

- ☐ Primary
- ☐ Secondary
- ☐ High School
- ☐ Bachelor's degree
- ☐ Postgraduate

Q5. Job position:

- ☐ Owner
- ☐ Manager
- ☐ Senior staff
- ☐ Junior staff

Q6. Region where your enterprise located:

- Northwest
- Northeast
- Red river Delta
- North Central
- South Central Coast
- Central Highlands
- Southeast
- Mekong river Delta

Q7. Legal status of your enterprise:

- Private enterprise
- Limited liability company
- Partnership
- Joint-stock company

Q8. Which industry does your enterprise work in:

- Agriculture
- Manufacturing
- Construction, Mining
- Transportation, logistics
- Tourism, leisure, communication
- Insurance, banking, finance
- Education & Health care
- Retail
- Others

Q9. The number of employees in your enterprise:

- <=10
- 11 - 50
- 51-100
- >100

Q10. Annual revenue of your enterprise:

- <=10 billion VND
- 10 – 100 billion VND
- 100 – 300 billion VND
- 300 billion VND

Q11. Total capital of your enterprise:

- <= 3 billion VND
- 3 – 50 billion VND
- 50 – 100 billion VND
- >100 billion VND

PART 2: SUSTAINABLE PERFORMANCE OF THE ENTERPRISE

Q12. What have been trend in these indicators of your enterprise within the last 3 years (*Kindly tick the relevant box for each)*

In which:

1: Greatly decreased
2: Decreased
3: Stable
4: Increased
5: Greatly increased

Indicator	***1***	***2***	***3***	***4***	***5***
Sales					
Profit					
Product costs					
Market share					
Productivity					
Number of customers					
Investment planned for future business innovation					

From Question 13 to question 14*, kindly tick the relevant box for each, in which:*

1: Totally disagree
2: Disagree
3: Neutral
4: Agree
5: Totally agree

Question	**1**	**2**	**3**	**4**	**5**
Q13. Please give your opinion on these statements regarding the social performance of your enterprise:					
Your enterprise effectively identifies and manage social risks					
The equality and well-being of employees are constant concerns.					
The product impact and well-being of customers are constant concerns.					
Your enterprise creates and use up effectively the resources to sustain well-being over time.					
Q14. Please give your opinion on these statements regarding the environmental performance of your enterprise:					
Your enterprise has significantly reduced its carbon footprint.					
Your enterprise has deployed and operated waste reduction program effectively.					
Your enterprise has enhanced its energy efficiency significantly.					
Your enterprise has effectively implemented sustainable sourcing practices					

PART 3: GLOBALIZATION

Q15. Please give your opinion on these statements regarding the aspects of globalization (*Kindly tick the relevant box for each)*

In which:

1: Totally disagree
2: Disagree
3: Neutral
4: Agree
5: Totally agree

Question	**1**	**2**	**3**	**4**	**5**
Globalization has significantly facilitated your enterprise's access to global markets.					
Globalization has greatly improved your enterprise's ability to integrate into international supply chains.					
Globalization has intensified the level of competition your enterprise faces in the global market.					
Global competition has significantly influenced your enterprise's strategic decisions.					
Globalization has enhanced your enterprise's access to global financial resources.					
Your enterprise's economic stability has been significantly impacted by global economic crises due to globalization.					
Globalization has improved your enterprise's access to advanced technologies.					
Globalization has led to significant innovation within your enterprise					
Globalization has influenced your enterprise's adherence to international regulatory standards.					
Globalization has expanded your enterprise's access to a global talent pool.					
The availability of international talent due to globalization has affected your enterprise's human resource strategies.					

PART 4: EXTERNAL AND INTERNAL DETERMINANTS

***From Question 16 to question 26**, kindly tick the relevant box for each, in which:*

1: Totally disagree
2: Disagree
3: Neutral
4: Agree
5: Totally agree

Question	**1**	**2**	**3**	**4**	**5**
Q16. Please give your opinion on these statements regarding the government's policies and regulations:					
Your enterprise complies with government sustainability policies and regulations without difficulty.					

The government's sustainability policies and regulations have benefited your enterprise's long-term sustainability plan.					
Government policies and regulations provide a conducive environment for your enterprise to adopt sustainable business practices.					
There are not any barriers in government policies that hinder your enterprise's sustainable performance.					
Q17. Please give your opinion on these statements regarding the market competition:					
Your enterprise has adopted more sustainable practices to differentiate itself in a competitive market.					
Competitive pressures have led your enterprise to improve its environmental practices.					
Intense market competition has driven your enterprise to enhance its sustainability initiatives.					
Your enterprise has a high level of competitiveness compared to others in the industry.					
Q18. Please give your opinion on these statements regarding the customer behaviors:					
It is critical to consider your customers' preferences and interests for sustainable goods and services.					
Customer feedback is vital in developing your enterprise's strategy and initiatives.					
Customer satisfaction and expectations are crucial for your enterprise's business practices.					
Your enterprise has attempted to strengthen its sustainability obligations in order to attract and keep client loyalty.					
Q19. Please give your opinion on these statements regarding the supplier behaviors:					
Your enterprise has adopted sustainable practices in the supply chain in response to supplier behavior.					
Your enterprise's goals are aligned with those of its key suppliers.					
Collaboration with suppliers has enhanced your enterprise sustainability performance.					
Q20. Please give your opinion on these statements regarding the networks & partnerships of your enterprise:					
Your enterprise has leveraged industry networks to improve its sustainability performance.					
Partnerships with other organizations have enhanced your enterprise's sustainability efforts.					
Collaborative efforts with stakeholders have strengthened your enterprise's sustainability initiatives.					

Q21. Please give your opinion on these statements regarding the human resources of your enterprise:					
Your enterprise 's HR policies support the integration of sustainability into our business operations.					
Employee performance appraisals include sustainability-related criteria.					
Employees in your enterprise understand and embrace the company's sustainability goals and values.					
Your enterprise has implemented incentives to encourage employees to participate in sustainability initiatives.					
Your enterprise provides sustainability training for employees to enhance their awareness and skills.					
Q22. Please give your opinion on these statements regarding the technology & innovation of your enterprise:					
New technologies that assist sustainable practices are adopted and implemented.					
Innovation in your enterprise is driven by sustainability goals.					
Your enterprise regularly develops policies and prioritizes funding in R&D in the field of sustainable technology.					
Your enterprise uses advanced technologies to increase resource efficiency and decrease environmental impact.					
Your enterprise regularly promotes sustainability-related product, process, and service innovation.					
Q23. Please give your opinion on these statements regarding the financial accessibility of your enterprise:					
Your enterprise is capable of getting grants, subsidies, and other types of financial assistance.					
The financial solutions are designed to be consistent with the goals and objectives of sustainability.					
Your enterprise can obtain credit from financial institutions without difficulty.					
No financial obstacles are limiting your company's capacity to embrace sustainable practices.					
Q24. Please give your opinion on these statements regarding the marketing strategies of your enterprise:					
Your enterprise's marketing strategies emphasize sustainability.					
Sustainable branding has enhanced your enterprise's market performance.					
Your enterprise’s marketing efforts focused on sustainability have improved customer loyalty.					
Q25. Please give your opinion on these statements regarding the capability for environmental management of your enterprise:					

Environmental considerations are integrated into your enterprise's daily operations, production processes, and supply chain management.					
Your enterprise can address and manage potential environmental risks associated with its activities and operations.					
Your enterprise measures and monitors its environmental performance against relevant standards and benchmarks.					
Your enterprise engages with external stakeholders to enhance its environmental management practices.					
Q26. Please give your opinion on these statements regarding the firm's culture of your enterprise:					
Your enterprise has established a culture that appreciates and emphasizes sustainability.					
Your enterprise fosters a culture of sustainability within the workplace and among employees.					
Your enterprise incorporates sustainability into its recruitment, onboarding, and training programs.					
Your enterprise's communication on sustainable issues is transparent and honest.					

APPENDIX 3
COVER LETTER FOR THE QUESTIONNAIRE

Dear Participants,

Warm Greetings,

I am Duong Minh Ngo, currently a 3rd-year PhD student at the Hungarian University of Agriculture and Life Sciences in Hungary. I would like to invite you to participate in a survey focused on your firms, Vietnamese small and medium-sized enterprises (SMEs). My study aims to identify the key factors that influence the sustainable performance of SMEs in Vietnam, particularly in the context of globalization.

Your insights would be greatly appreciated, and I kindly ask you to complete the attached questionnaire with responses that best represent your experiences. I would like to ensure that all your answers will be treated with strict confidentiality and will be used exclusively for academic research purposes.

I am sincerely grateful for your time. Your participation is vital to the success of this study.

Thank you and Best Regards,

Duong Minh Ngo

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