

Corporate Strategy for Sustainability: Reflections of Prospective Entrepreneurs

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Abstract

Universities play a crucial role in training and educating future businesspeople to help them comprehend sustainable thinking holistically. This demonstrates the importance of preparing the future businesspeople about students' factual knowledge, practical skills, and responsibility toward sustainability. The aim of this research is to identify economic students, think about corporate strategy planning toward sustainability, and understand and reconcile the different sustainability perspectives. This study examined 534 economic students' ideas in Can Tho City, Vietnam, and 102 scholars' opinions (international and

local scholars and transporter/logistics) about sustainable business practices. It was revealed that students in general are highly aware of the principles of sustainable development, ready to implement them in practice during business planning, and some aspects are even more important than experts. With the help of matrices of factor analysis four alternative realistic patterns of corporate strategies for sustainable development, with appropriate recommendations for their implementation were compiled. They can serve as a basis for decision-making by current and future entrepreneurs in the formation of their own business plans.

Keywords: business strategy; green supply chain management; sustainability perspectives; internal factors; external factors; strategic matrix

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Introduction and literature review

Eco-efficiency and remanufacturing are becoming increasingly vital for enhancing routine operations (Ashley, 1993; Srivastava, 2007). Porter and Van der Linde (1995) explain “greening” as a “competitive endeavor”. They believe that green actions to save resources, reduce waste, and enhance productivity may boost corporate competitiveness¹. Hence, “greening” may reduce firms’ environmental impacts, increase productivity, and provide new ways to compete (Hajikhani et al., 2012). Consumer expectations and regulatory restraints drive sustainable business practices (Guide, Srivastava, 1998). Owing to government legislation and public environmental responsibility, strategic planners have had to address environmental issues and adopt many green initiatives (Mutingi, 2013).

“Green supply chain management” (GSCM) has evolved as environmental consciousness grows (Srivastava, 2007). Recently, academic and industry interest in cross-disciplinary GSCM has increased (Sarkis et al., 2011). Air pollution, solid waste disposal, and natural resource use must be monitored and managed throughout the development (Zhu et al., 2007). Product control trumps environmental effects in GSCM manufacturing and delivery. A company must be lucrative and environmentally friendly (Ho et al., 2009; Luthra et al., 2013). Green supply chains contribute to sustainability and provide firms with a competitive edge in cost reduction, revenue growth, risk management, employee motivation, and environmental compliance (Tekin et al., 2020).

The success of the sustainability initiative is analyzed from a variety of perspectives, including economic, environmental, and social aspects.

Economic performance, which refers to total profitability, is a significant reason why organizations use GSCM procedures. Economic performance refers to an organization’s ability to save expenses through smart purchasing decisions, waste management, energy use, waste disposal methods, and penalties for environmental damage (Zhu et al., 2008; Nishitani et al., 2016). Therefore, we categorized the GSCM practice-economic performance relationship studies that evaluated economic performance using objective or perceived sales, profit, and market share increases (Chan et al., 2012; Lee et al., 2013; Kuei, Lu, 2013; Abdullah, Yaakub, 2014).

Environmental performance usually incorporates energy savings, waste reduction, and emission reduction. Environmental performance includes reducing air emissions, water waste, and solid wastes, and reducing hazardous product usage. Energy conservation, waste, pollution, and emission reduction are environmental performance criteria (Rao, 2002; Zhu et al., 2005; Chiou et al., 2011; Lee et al., 2012).

Social performance is used to measure the impact of GSCM practices on product and company image, employee health and safety, and customer loyalty and satisfaction (Zailani et al., 2012; Ashby et al., 2012).

The concept of a sustainable business model has been embraced by a wide range of industries and businesses in an effort to simultaneously meet economic, environmental, and social objectives (Saeed et al., 2019). Sustainable business models are different from conventional ones since they try to strike a fair balance between environmental, social, and economic concerns (Lewandowski, 2016). Sustainable performance is defined as the integration of economic, social, and ecological considerations into the daily running of a company. It’s how well a company does across the board in terms of sustainability metrics. Long-term success for SMEs (Small and Medium-sized Enterprises) depends on their capacity to maintain sustainable performance (Muhammad et al., 2019). Sustainability in business practices is being more adopted by contemporary companies as a result of technological advancements². The social audit (Gray, 2002), reverse logistics (Dong et al., 2020; Jermstittiparsert et al., 2019) are some examples of new sustainable practice models that have emerged as a consequence (for more details see Table 1).

Our study evaluates the student economists’ awareness of the criteria governing the development of comprehensive corporate sustainability strategies, including the formation of green supply chains. Internal factors (strengths and weaknesses) and external factors (opportunities and threats) are analyzed. This helps the respondents to understand the nature of sustainability and give an objective opinion on such strategic course. The opinion of economics students is relevant in the context of their potential role as future entrepreneurs. The discourse space regarding sustainable development is enriched, there is additional “information for reflection” on possible directions of adjustment efforts for human capital formation.

Sampling technique and empirical model of the study

The primary data used in this study were used in two questionnaires to conduct the survey. Each questionnaire is suitable for research subjects in the green supply chain and sustainable development, such as economics students (international business, business administration, marketing digital, hospitality management, multimedia communication) and experts with masters and doctoral degrees in various field, in which survey questionnaires for students and in-depth interviews and survey questionnaires for experts. The survey started from November 01, 2022, to January 15, 2023, obtaining 534 economic students (Google form survey questionnaire), and 102 scholars (in-depth in-

¹ «Green» is sometimes used interchangeably with «sustainable,» which emphasizes environmental, social, and economic impact. This article uses both terms.

² <https://www.aeologic.com/blog/role-of-technology-in-sustainable-development/>

Table 1. Selected Works on Sustainable Corporate Strategies

Source	Description / Findings
Young, Tilley, 2006	To evaluate sustainability degree of businesses, an integrated structural model has been proposed, that includes six criteria - eco-effectiveness, socio-effectiveness eco-efficiency, socio-efficiency, sufficiency of undertaken efforts towards sustainability, as well as ecological equity, i.e. sharing ecological risks with partners and stakeholders.
Shahid et al., 2020; Owusu et al., 2021	Companies with an environmental management program were more successful in keeping their economic, social, and environmental footings stable over time.
Tekin et al., 2020	Strategy management helps firms profit from green measures. Companies gain benefits from contributing to the development of GSCM. Thus, the GSCM strategy indirectly enhanced firm's economic and environmental performance via cost reduction and innovation
Fahad, Iffat, 2018	According to Unilever's GSCM strategy, a sustainable supply chain requires collaboration, integration of key players, operations, distribution, redesign, purchase, and the ability to execute sustainability initiatives
Laurin, Fantazy, 2017	Considers the evidence from IKEA that makes durable, high-quality furniture using as little material as possible to reduce shipping, petrol, and labor expenses
Malti, 2021; Daddi et al., 2016; Pryshlakivsky, Searcy, 2015	GSCM solutions such as green purchasing, manufacturing, distribution, packaging, marketing, environmental education, environmental certification, internal environmental management, and return on investment may increase competitiveness and save money. Green operations improve efficiency and competitiveness. Green purchasing, manufacturing, distribution, packaging, marketing, environmental education, internal environmental management, and ROI (return on investment) are important. Managers should include employees, suppliers, and customers in GSCM. Administrators should establish a thorough set of rules, processes, and duties for all personnel involved in integration. ISO 14001 is required to fulfill global emissions, waste, resources, and environmental protection standards.
Shih-Fang, 2010	Following a sustainable model does not mean that a company must act altruistically and choose between profit and environmental responsibility. Adopting this new approach encourages innovation, which, in turn, increases efficiency, promotes product diversification and strategic advantage.
Lüdeke-Freund, 2010	Discusses business concepts that provide consumer value while growing the organization and society
Haanaes et al., 2012; Kron et al., 2013	Companies benefit from addressing sustainability in a number of ways, both directly and indirectly Direct benefits include lower costs and lower risk of doing business. Indirect benefits include increased brand reputation, attractiveness to talent, and competitiveness.
Gray, 2002	An overview of social audit practices is presented, which is understood as an expert assessment of a company's activities, its management procedures and approaches, and corporate codes with respect to social responsibility and impact on society. Ideally, companies should maintain a balance between profitability and social responsibility.
Dong et al., 2020; Jermstipparsert et al., 2019	The principles and best practices of "reverse logistics" – the return of products by consumers to the manufacturer due to damage, loss of performance, or end-of-life disposal are examined. By investing time and effort in mastering different types of reverse logistics and their associated supply chain management challenges, companies can reap the benefits of cost optimization and customer image enhancement.

Source: compiled by the authors using the mentioned works.

interviews and Google form survey questionnaire). The sampling observation structure of scholars are domestic scholars (57), foreign scholars (23), and transporter/logistics (22). Experts who have had at least 10 experience years in their sector.

Based on the analysis of the existing literature (scientific reports, articles in scientific journals and documents of government agencies) on green supply chains and sustainable development indicators, a structural model of the study was developed, as shown in Figure 1. On its basis, the scope, potential participants, sample size were determined. The initial version of the questionnaire was tested on a pilot sample of respondents. Based on their comments, the questionnaire was refined, after which a full-scale collection of primary data was conducted. The study of respondents' opinions and their comparison with conclusions from previously published literature allowed to develop a number of general recommendations for green supply chain management.

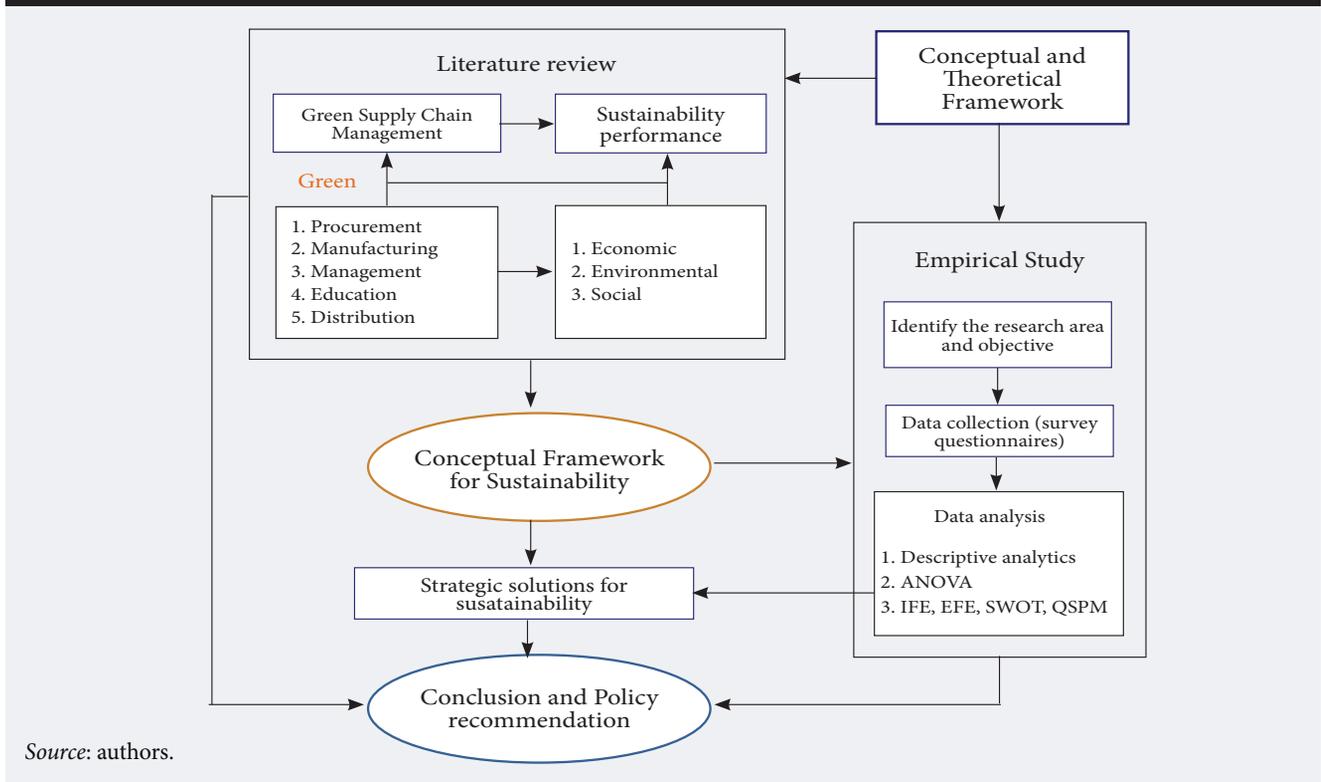
Matrixes for strategic analysis

In this study, four matrixes, namely IFE (Internal Factor Evaluation), EFE (External Factor Evaluation), SWOT, and QSPM, were used to determine feasible

strategies. The study used SWOT (Strength, Weakness, Opportunity, Threat) and Quantitative Strategic Planning Matrix (QSPM) frameworks for strategic planning. External factors affect product development, market segmentation and positioning, service offerings, and company acquisition and sales. Internal analysis assesses operational capabilities and performance. Comparing and analyzing prior firm performance, significant rivals, and industry may help determine internal strategic variables. Internal and external factors for sustainable business strategies are summarized in Tables 2 and 3 accordingly. SWOT matrix allows to match firm's strengths and weaknesses with emerging threats and opportunities.

The synthesis of IFE, EFE and SWOT matrixes forms the ground for applying QSPM matrix. It objectively compares plausible strategies and actions. It uses management tools to objectively choose an optimal plan. It helps organize and prioritize critical internal, external, and competitor data for strategic planning. QSPM ranks plans by how well they help businesses capitalize on strengths and opportunities, address weaknesses, and avoid or reduce external risks (Abratt, 1993; Dibb, 1995; David, 2016). The QSPM now includes Attractiveness Scores (AS), Total Attractiveness Scores (TAS),

Figure 1. Research Framework



Source: authors.

Table 2. Internal Factors for Sustainable Business Strategies

No.	Aspects	Code	Literature
Strength factors			
<i>Economic</i>			
1	Reduce the cost for environmentally friendly input procurement	SE1	Hervani et al. (2005); Zhu et al. (2007b); Azevedo et al. (2011); Chardine-Baumann (2011); Ageron et al. (2012)
2	Reduce cost of delivery and inventory	SE2	
3	Reduce fee to waste discharge	SE3	
4	Reduce fines for environmental accidents	SE4	
5	Increase demand flexibility, delivery flexibility, and production flexibility	SE5	
6	Ensure procurement and delivery on time	SE6	
<i>Environmental</i>			
7	Optimize processes for waste and emission reduction, pollution control	SEN1	Beamon (1999); Hervani et al. (2005); Zhu et al. (2007a); Azevedo et al. (2011); Deif (2011)
8	Recognize products of eco-labeling, recycled material, and design-for-assembly	SEN2	
9	Save energy consumption and recycling process	SEN3	
10	Encourage green and clean technologies used	SEN4	
<i>Social</i>			
11	Increase social and environmental responsibility	SS1	Gunasekaran et al. (2004); Zhu et al. (2007b); Markley, Davis (2007); Pochampally et al. (2009); Azevedo et al. (2011)
12	Increase organizational capability	SS2	
13	Increase employees' motivation, health, and Safety	SS3	
14	Increase customer interest and satisfaction with green products	SS4	
Weakness factors			
<i>Economic aspect</i>			
15	Constrained finance/capital	WE1	Rogers, Tibben-Lembke (1998); AlKhidir, Zailani (2009); Ravi, Shankar (2005); McLaren et al. (2004)
16	Lack of organizational encouragement	WE2	
17	Lack of IT implementation	WE3	
18	Hesitate to convert to new systems	WE4	
<i>Environmental aspect</i>			
19	Hesitate to change GSCM from supplier	WEN1	Ravi, Shankar (2005); Hsu, Hu (2008); Chien, Shih (2007a)
20	Lack of sustainable guidance	WEN2	
21	Lack of sustainability training courses/consultancy/mentor	WEN3	
<i>Social aspect</i>			
22	Lack of corporate social responsibility	WS1	Digalwar, Metri (2004); Hamel, Prahalad (1989); Sarkis (2012); Mudgal et al. (2009); Mudgal et al. (2010); Ravi, Shankar (2005); Zhu et al. (2007b)
23	Lack of top management commitment	WS2	
24	Do not want technology advancement adoption	WS3	

Source: Authors' synthesis.

Table 3. External factors for sustainable business strategies

No.	Aspects	Code	Sources
Opportunity			
<i>Economic aspect</i>			
1	Promote green image, global marketing, and competitiveness	OE1	Hervani et al. (2005); Zhu et al. (2007b); Chardine-Baumann (2011); Azevedo et al. (2011); Ageron et al. (2012)
2	Capture demand for environmentally friendly product market	OE2	
3	Obtain certificates for the green product warranty	OE3	
4	Attract investors and shareholders	OE4	
<i>Environmental aspect</i>			
5	Increase green business strategies	OEN1	Beamon (1999); Hervani et al. (2005); Zhu et al. (2007a); Azevedo et al. (2011); Deif (2011)
6	Increase efficiency in scarcity of Resources, higher waste generation and waste disposal problem	OEN2	
7	Adapt to global climate pressure and ecological change	OEN3	
8	Contribute to government rules and legislation systems related to sustainability	OEN4	
<i>Social aspect</i>			
9	Support from green movement activism by non-government organizations	OS1	Gunasekaran et al. (2004); Zhu et al. (2007b); Markley, Davis (2007); Pochampally et al. (2009); Azevedo et al. (2011)
10	Create trust in society or public	OS2	
11	Get government support for enforcement	OS2	
Threat			
<i>Economic aspect</i>			
12	Impact economic uncertainty	TE1	Hosseini (2007); Mudgal et al. (2010); Hosseini (2007); Mudgal et al. (2009); Ravi, Shankar (2005); AlKhidir, Zailani, (2009)
13	Impact market competition	TE2	
14	Need for big investment	TE3	
<i>Environmental aspect</i>			
15	Poor legislation related to sustainability	TEN1	Hosseini (2007); Hsu, Hu (2008); Mudgal et al. (2009); Mudgal et al. (2010); Srivastava (2007)
16	Lack of effective environmental measures	TEN2	
17	Lack of government support system	TEN3	
<i>Social aspect</i>			
18	Weak pressure from society	TS1	Hsu, Hu (2008); Chien et al. (2007b); Rao, Holt (2005); Perron (2005)
19	Lack of quality human resources	TS2	

Source: Author’s synthesis.

and TAS Sum (Felicia et al., 2019). The use of QSPM in general increases the likelihood that the final strategic decisions are optimal for the organization.

The IFE, EFE, SWOT and QSPM matrices were based on 19 external and 24 internal factors (Tables 2 and 3). The variables were measured and evaluated as follows. A coefficient weight was assigned to each element to represent the importance of that factor in comparison with the others. After the variables were identified, a weighted score was assigned based on the economic literacy level of the respondents (534 students, questionnaires), and a rating score was assigned based on the consensus of the academic community (102 scholars, key informant panels). From a score of 0.0 (which indicates that the factor is not essential) to a value of 1.0 (which indicates that the item is very important), the goal is to assign the most weight to the element that has the greatest influence on the organization (very important). It is expected that the total of these coefficients will be 1. The final total score for each factor is calculated first, followed by computation of the overall weighted score for the factor as a whole.

Using the tools listed above, a set of management strategies has been compiled that will allow future startups

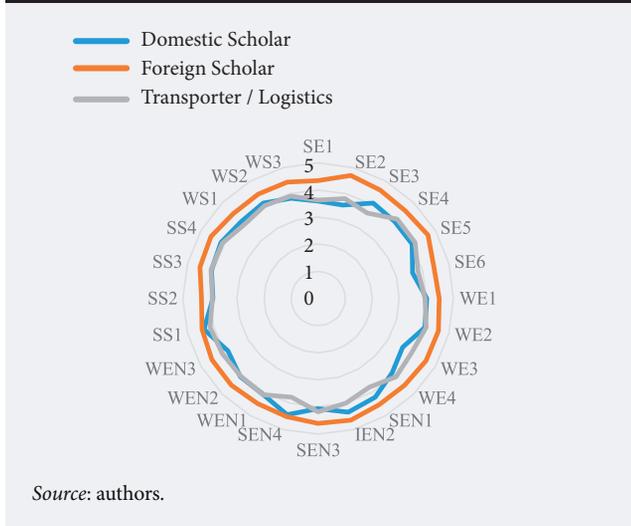
to improve their decision-making process in achieving their sustainability goals. Strategists may build and assess different strategies by making modest judgments in the input matrices regarding the relative relevance of external and internal components (David, 2011).

Results and Discussions

In assessing internal factors, it is seen from 14 strengths of three aspects (six strengths of the economic aspect (SE), four strengths of the environmental aspect (SEN), and four strengths of the social aspect (SS)). Similarly, there are 10 weaknesses in three aspects (four weaknesses in the economic aspect (WE), three weaknesses in the environmental aspect (WEN), and three weaknesses in the social aspect (WS)). All the participating respondents agreed with each statement.

External factors also focus on three main dimensions of sustainability with eleven opportunity components (four opportunities of the economic category (OE), four opportunities of the environmental category (OEN)), three opportunities of the social category (OS)), and eight threat components (three threats of the economic aspect (TE), three threats of the environmental aspect (TEN), and two threats of the social aspect (TS)).

Figure 2. Scholars' share about internal factors of sustainability



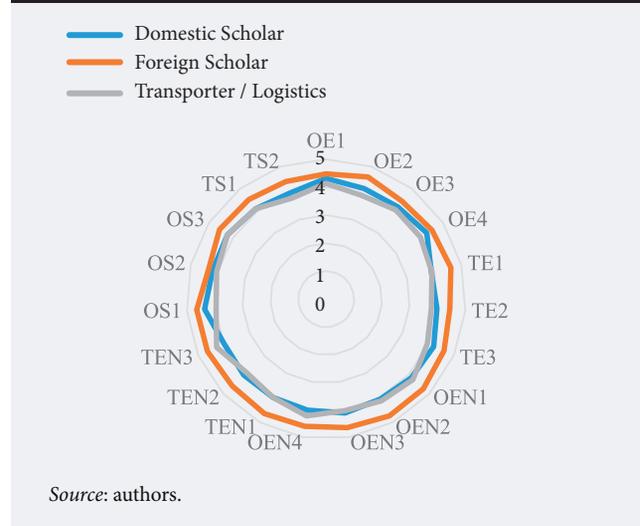
Perception of scholars and economic students about sustainability

Scholars generally agreed with the core components, but their views shifted when asked about long-term viability. It is noteworthy that students from a broad range of scholarly backgrounds were able to incorporate the idea of sustainability into their projects. All the scholars said that they appreciated the internal components. The difference in the selection trend based on the internal variables of sustainable performance is shown in Figure 2. If the value of the selection criteria exceeds 2.5 on a scale of 0 to 5, the evaluation is good; otherwise, the assessment is poor. The three fundamental pillars of sustainability (economic, environmental, and social aspects) have received extraordinary attention from international researchers. The trend of picking components by foreign scholars is relatively similar, with values greater than 4.5. The concepts of domestic scholars and Transporter/Logistics groups are similar in that they share around 4.0.

The radar chart (Figure 3) shows the differences in the selection trends of the internal factors of sustainable performance. The results show that the group of foreign scholars has the highest value and tends to be similar to each factor, but prominently shows in factors OS1, TEN3, TEN1, OE2, TE1, and TE3 with values above 4.5. For the logistics/transporter group, the trend was in favor of TEN3, OEN4, and the domestic scholar group was OS1.

ANOVA was used to compare the differences in opinions and perceptions of scholars and economic student groups on the internal factors affecting sustainable performance. Levene Sig = 0.003 for environmental performance, 0.006 for social, and 0.319 for economic performance. In particular, the average value of foreign scholars has always reached its highest value (Table 4). Analysis of differences in the perception and opinion

Figure 3. Scholars' share about external factors of sustainability



of each item with each internal factor of sustainable performance showed significant differences. Specifically, when analyzing economic performance, the foreign scholar group has a significant disparity in opinion with others. For the analysis of environmental and social performance, there is a remarkable difference in the awareness of foreign scholars compared to the IB/BA group.

The ANOVA findings (Table 5) show substantial variations in sustainability awareness between economic students and scholars. There was a statistically significant difference among economic performance (Levene Sig = 0.006), environmental performance (Levene Sig = 0.001), and social performance (Levene Sig = 0.364) in terms of sustainable performance. A comparison of the perspectives of these three categories reveals that foreign scholars have the most positive outlook on economic success (4.52), followed by MC students (4.25). Both environmental and social performance were lower in the foreign scholar group (4.65 and 4.50).

Analysis of internal and external factors in sustainability

Table 6 shows that when analyzing the identified strengths, the main strengths SE3, SE4, SE5, SEN1, SEN1, SEN4, SS1, SS3, and SS4 showed similar average scores, that is, between 0.1668 and 0.1708 each, while SE1, SE2, SE6, and SS2 ranged between 0.1230 and 0.1290. In analyzing the weaknesses, the most outstanding feature is that WS3 is the most common weakness at 0.0824, whereas the opposite is true for WE2 (0.0410). WE3 ranked second in terms of weakness (0.0818), followed by WE1 (0.0418). Notably, WE2, WE4, WEN1, WS1, WS2, WEN2, and WEN3 had similar levels, that is, between 0.0410 and 0.0416, respectively. The results of the analysis of IFEM obtained a number of strengths of 2.1799 and 0.4952 weaknesses

Table 4. The scholars and economic students, opinion about internal factor of sustainability

	Performance type		
	Economics (EP)	Environmental (ENP)	Social (SP)
Dometric Scholar (n=57)	3.84 ^{bc}	4.15 ^a	4.05 ^a
Foreign Scholar (n=23)	4.55 ^d	4.54 ^c	4.44 ^{bc}
Transporter (n=22)	3.93 ^{ac}	3.99 ^a	3.99 ^a
IB/BA (n=393)	4.09 ^{ac}	4.04 ^a	4.12 ^a
HM (n=45)	3.93 ^{abc}	3.97 ^{ab}	4.10 ^{ab}
MC (n=96)	4.18 ^{ac}	4.23 ^{bc}	4.22 ^{ac}
ANOVA Sig.F ≤0.05	***		**
Robust Test Sig.Welch ≤0.05		***	

Note: *, p-value < 0.1; **, p-value < 0.05; ***, p-value < 0.001. Significant at the 0.05 level. If the value of Levene is less than 0.05, the Rrobust test is used. If the value of Levene is more than 0.05, the Anova test is used. The numbers in the same row followed by different letters are significant at the 5% level via the statistical Anova or Robust test.

Source: authors.

Table 5. The scholars and economic students, opinion about external factor of sustainability

	Performance type		
	Economics (EP)	Environmental (ENP)	Social (SP)
Dometric Scholar (n=57)	4.15 ^{ac}	4.04 ^a	4.17 ^{ac}
Foreign Scholar (n=23)	4.52 ^{bc}	4.65 ^b	4.50 ^{bc}
Transporter (n=22)	3.96 ^a	4.11 ^a	4.02 ^a
IB/BA (n=393)	4.17 ^a	4.13 ^a	4.13 ^a
HM (n=45)	4.02 ^a	4.09 ^a	4.12 ^a
MC (n=96)	4.25 ^{ab}	4.31 ^{ab}	4.29 ^{ab}
ANOVA Sig.F ≤0.05			***
Robust Test Sig.Welch ≤0.05	***	***	

Note: *, p-value < 0.1; **, p-value < 0.05; ***, p-value < 0.001. Significant at the 0.05 level. If the value of Levene is less than 0.05, the Rrobust test is used. If the value of Levene is more than 0.05, the Anova test is used. The numbers in the same row followed by different letters are significant at the 5% level via the statistical Anova or Robust test.

Source: authors.

Table 6. The internal factor evaluation matrix (IFEM)

Code	Internal Factor	Weight	Rating*	Score
Strengths				
SE1	Reduce cost for environmentally friendly input procurement	0.0424	3	0.1272
SE2	Reduce the cost of delivery and inventory	0.0417	3	0.1251
SE3	Reduce fee to waste discharge	0.0421	4	0.1684
SE4	Reduce fines for environmental accidents	0.0417	4	0.1668
SE5	Increase demand, delivery, and production flexibility	0.0421	4	0.1684
SE6	Ensure procurement and delivery on time	0.0410	3	0.1230
SEN1	Optimize processes for waste and emission reduction, pollution control	0.0423	4	0.1692
SEN2	Recognize products of ecolabeling, recycled material, and design-for-assembly	0.0403	4	0.1612
SEN3	Save energy consumption and recycling process	0.0410	4	0.1640
SEN4	Encourage green and clean technologies used	0.0417	4	0.1668
SS1	Increase social and environmental responsibility	0.0424	4	0.1696
SS2	Increase organizational capability	0.0430	3	0.1290
SS3	Increase employees' motivation, health, and Safety	0.0427	4	0.1708
SS4	Increase customer interest and satisfaction with green products	0.0426	4	0.1704
	Total	0.587		2.1799
Weaknesses				
WE1	Constraining finance/capital	0.0418	1	0.0418
WE2	Lack of organizational encouragement	0.0410	1	0.0410
WE3	Lack of IT implementation	0.0409	2	0.0818
WE4	Hesitate to convert to new systems	0.0412	1	0.0412
WEN1	Hesitate to change GSCM from supplier	0.0412	1	0.0412
WEN2	Lack of sustainable guidance	0.0416	1	0.0416
WEN3	Lack of sustainability training courses/consultancy/mentor	0.0416	1	0.0416
WS1	Lack of corporate social responsibility	0.0413	1	0.0413
WS2	Lack of top management commitment	0.0413	1	0.0413
WS3	Do not want technology advancement adoption	0.0412	2	0.0824
	Total	0.4131		0.4952
	Total weighted score			2.6751

Source: authors.

and a total weighted final score of 2.6751. In light of these findings, organizations may use the power factor to mitigate the disadvantages experienced by sustainable businesses and boost competitive advantage.

Internal characteristics such as strengths and weaknesses impact the IFEM analysis. The investigation found three key parameters that determine the green sustainability performance dynamics. The highest-scoring qualities of this strategy are employee motivation, health, and safety (SE1). This suggests that a corporation may provide a safe working environment and excellent remuneration, and top managers can assist their people in embracing the idea and fully comprehending green sustainability performance, making it simpler to execute the sustainability plan.

Consumer satisfaction with green goods was the second-most important aspect of this survey (SS4). This suggests that buyers are more interested in environmentally friendly goods and want to know their environmental information, which encourages GSCM and sustainable performance by increasing competition from manufacturers of green products.

Enhanced social and environmental responsibility was next found (SS1). Thus, socially responsible companies help corporations recruit, develop, and manage people as investments. Environmental social responsibility considers people, environment, and profits for long-term competitive advantage. Socially responsible and sustainable employment strategies help organizations satisfy their present and future needs.

Internal sustainability factor (weakness). This study discovered three primary elements that determine sustained output performance. WS3 was initially discovered. This suggests that it is difficult to transform a company’s fundamental technology will be tough. Hence, technological skepticism hinders GSCM implementation. The absence of IT implementation is another performance obstacle (WE3). Businesses struggle to adapt technology to green supply chains. Constraining finance/capital prevents sustainable performance (WE1). This indicates that green supply chain implementation requires capital and financial resources.

Table 7 shows an analysis of the external variables (opportunities and threats). In analyzing opportunities, the key point to take advantage of in the matrix is (OE4) in sustainable development, with an average score of 0.2188. The second and most important level is (OE1), which builds a company’s image of the environment and increases its international competitiveness, with an average score of 0.2176. Next, non-governmental organizations (OS1) support for green movement advocacy is crucial, averaging 0.2168. When examining the opportunity, the lowest score may assist the organization in running more effectively in the context of finite natural resources, pollution, and emissions challenges (OEN2). The average score increased from 0.2016. For instance, economics learners and scholars have argued that ineffective environmental policies hurt sustainable green performance. (TE3) and (TEN3) had the

Table 7. The external factor evaluation matrix (EFEM)

Code	External Factor	Weight	Rating	Score
<i>Opportunities</i>				
OE1	Promote green image, global marketing, and competitiveness	0.0544	4	0.2176
OE2	Capture demand for environmentally friendly product market	0.0536	4	0.2144
OE3	Obtain a certificate for a green product warranty	0.0525	4	0.2100
OE4	Attract investors and shareholders	0.0547	4	0.2188
OEN1	Increase green business strategies	0.0529	4	0.2116
OEN2	Increase efficiency in scarcity of resources, higher waste generation and waste disposal problem	0.0504	4	0.2016
OEN3	Adapt to global climate pressure and ecological change	0.0513	4	0.2052
OEN4	Contribute to government rules and legislation systems related to sustainability	0.0522	4	0.2088
OS1	Support from green movement activism by non-government organizations	0.0542	4	0.2168
OS2	Create trust in society or public	0.0525	4	0.2100
OS3	Get government support for enforcement	0.0533	4	0.2132
	Total	0.5820		2.3280
<i>Weaknesses</i>				
TE1	Impact economic uncertainty	0.0519	3	0.1557
TE2	Impact market competition	0.0522	3	0.1566
TE3	Need for big investment	0.0526	4	0.2104
TEN1	Poor legislation related to sustainability	0.0522	4	0.2088
TEN2	Lack of effective environmental measures	0.0518	3	0.1554
TEN3	Lack of government support system	0.0526	4	0.2104
TS1	Weak pressure from society	0.0522	4	0.2088
TS2	Lack of quality human resources	0.0525	3	0.1575
	Total	0.4180		1.4636
	Total weighted score			3.7916

Note: The rating for the EFE Matrix is as follows: 1= low response, 2=average response, 3= good response, and 4= high response.

Source: authors.

Table 8. SWOT Matrix

SO Strategies	WO Strategies
<ul style="list-style-type: none"> • SE₁₂₃₄OE₁₂: Advertising image of eco-brand for smart consumers (SO₁) • SE₁₂₃₄₅OE₄: Investing a synchronic process of GSCM in organizations (SO₂) • SE₄OEN₁₂₃: Enhancing enterprise production for ecology (SO₃) • SE₅₆OEN₄: Fortifying role and position of enterprises (SO₄) • SEN₁₂₃₄OS₁₂₃: Approaching green fund with priority loan (SO₅) • SS₁₂₃₄OE₁₂₃₄: Increasing domestic and international competition by environmental and social responsibility actions (SO₆) 	<ul style="list-style-type: none"> • WE₁₂₃₄OE₄: Appealing investor for GSCM (WO₁) • WEN₁₂₃OS₁₃: Improving GSCM knowledge for human resource in enterprises by training program of government and non-government (WO₂) • WS₁₂₃₄OEN₄: Applying advanced technology in production and management to increase efficiency (WO₃)
ST Strategies	WT Strategies
<ul style="list-style-type: none"> • SE₁₂₃₄TE₁₂: Establishing risk fund for unexpected situations (ST₁) • SS₁₂₃₄TS₁₂: Building a green association comprises Enterprise-Government-Consumer (ST₂) 	<ul style="list-style-type: none"> • WEN₁₂₃TEN₁₂₃: Inviting foreign consultancy and using international criteria related to sustainability (WT₁) • WS₁₂TS₁₂: Conducting campaign smart consumer and manufacturer for a green planet (WT₂)
Source: authors.	

highest average values of 0.2014. This yields 2.3280 dominant elements of opportunity, 1.4636 threats, and a difference of 0.8644. This indicates that corporate sustainability strategies have the potential to combat danger and improve companies.

EFEM analysis determines external elements such as opportunity and threat. External factor analysis makes the three main drivers of sustainable performance manageable and discussable. The top element was attracting investors and stockholders (OE4). This study matches those of (Peijia, Siqi, 2013; Roychowdhury et al., 2019; Bansah et al., 2018). Maintaining good supplier connections is crucial to GSCM’s long-term success of GSCM. Long-term supplier relationships may encourage suppliers and investors to work with businesses to achieve green buying and sustainability objectives.

Green image, worldwide marketing, and competitiveness promote sustainable performance (OE1). This indicates that companies advertise eco-friendly items. Green goods boost a company’s reputation and revenue. Environmental organizations may compete for and export globally. If a company learns that its competitors are exporting, it may be motivated to develop more sustainable manufacturing practices.

The sustainability promotion study showed that NGO green movement action support was the final component (OS1). Meanwhile these groups have designed environmental and competitiveness policies for industrial companies, and encourage global green production and consumption among the national governments. Full government support is required to promote GSCM in industry.

This study discovered two important external challenges for sustained success. (TE3) and (TEN3) scored the highest scores. This means that to adopt GSCM, firms must invest in green techniques, including green procurement, green design, green manufacturing, green distribution, and green labeling for packaging. They must also pay environmental management expenses. Hence, the biggest obstacle to GSCM adoption is the

lack of financial backing. According to Luthra et al. (2011), the absence of a government support system (TEN3) reveals that governments do not exert pressure on non-compliant enterprises regarding environmental performance and regulatory punishment policies.

SWOT and QSPM analyses for strategic solutions in sustainability

The SWOT analysis generates viable alternatives. The SWOT analysis provides four possible strategies: expansion (SO), stability (WO), incentive (WT), and ST diversification, with each of the four zones displaying a distinct set of tactics (Table 8,9). Expansion Strategy (SO) plan boosts sustainability by attracting investments. Stability Strategy (WO) aims at increasing innovation in order to overcome weaknesses by addressing emerging opportunities. Diversification Strategy (ST) is a resource-based approach to sustainability issues. The ST strategy addresses the vulnerabilities and threats. Considering these outcomes, sustainability requires considerable investment resources and government support. Defensive Strategy (WT) reduces internal vulnerabilities and avoids external threats.

The QSPM helps to analyze and prioritize internal, external, and competitor data for strategic planning. This method impartially selects the firm’s best strategy. QSPM matrix is provided within Table 9. QSPM’s left column of the QSPM includes the IFE and EFE matrix factors. The attractiveness Score (AS) reflects the factor’s significance to other approaches. AS is (1-4) or (not attractive – highly attractive). The total attractiveness score (TAS) ranks strategies by significance. The QSPM sum of the total attractiveness scores shows the strategy choices.

A score of 2.6751 for internal variables and 3.7916 for external factors showed that corporations had significant sustainability potential. The SWOT analysis shows that economic students’ sustainability awareness is positive. The SWOT matrix with 13 sustainable business strategy solutions revealed SO (Expansion), WO (Stability), ST (Diversification), and WT (Defen-

Table 9. QSPM Matrix

No.	Strategic solutions	Code	Score	Rank/ Priority
SO Strategies				
1	SO ₂ : Investing a synchronic process of GSCM in the organization	SE ₁₂₃₄₅ OE ₄	6.8185	I
2	SO ₄ : Fortifying role and position of enterprise	SE ₅₆ OEN ₁₂₃	6.6388	II
3	SO ₃ : Enhancing enterprise production for ecology	SE ₅₆ OEN ₄	6.5705	III
4	SO ₆ : Increasing domestic and international competition through environmental and social responsibility actions	SS ₁₂₃₄ OE ₁₂₃₄	6.5295	IV
5	SO ₁ : Advertising image of eco-brand for smart consumers	SE ₁₂₃₄ OE ₁₂	6.4004	V
6	SO ₅ : Approaching green fund with priority loan	SEN ₁₂₃₄ OS ₁₂₃	6.3102	VI
WO Strategies				
7	WO ₃ : Applying advanced technology in production and management to increase efficiency	WS ₃ OEN ₂	6.5662	I
8	WO ₁ : Appealing to investors for GSCM	WE ₁₂₃₄ OE ₄	6.5318	II
9	WO ₂ : Improving GSCM knowledge for human resource in the enterprise by training programs of government and non-government	WEN ₁₂₃ OS ₁₃	6.4345	III
ST Strategies				
10	ST ₂ : Building a green association comprising Enterprise-Government-Consumer	SS ₁₂₃₄ TS ₁₂	6.1904	I
11	ST ₁ : Establishing risk fund for unexpected situations	SE ₁₂₃₄ TE ₁₂	6.1062	II
WT Strategies				
12	WT ₂ : Conducting a campaign for smart consumers and manufacturers for a green planet	WS ₁₂ TS ₁₂	6.4423	I
13	WT ₁ : Inviting foreign consultancy and using international criteria related to sustainability	WEN ₁₂₃ TEN ₁₂₃	6.3777	II

Source: authors.

Table 10. Proposed activities of four strategy groups toward sustainable business operations for prospective entrepreneurs

Strategy Code	Activity
Expansion Strategy (SO)	
SO ₁ : Advertising image of eco-brand for smart consumers	1. To convey environmentally friendly messages to the minds of consumers. 2. To carry out green advertising by holding a company campaign related to environmental responsibility
SO ₂ : Investing a synchronic process of GSCM in the organization	3. To consult GSCM processes in the international organization
SO ₃ : Enhancing enterprise production for ecology	4. Invest in friendly technological innovation in line with environmental changes.
SO ₄ : Fortifying role and position of enterprise	5. Businesses should have action programs to protect the environment and improve social responsibility. 6. Capturing customers' feelings and needs in connecting with customers. 7. Train loyal and effective staff in the process of creating a brand image
SO ₅ : Approaching green fund with priority loan	8. To make detailed plans to appeal for green funds organizations to consider, approve and receive support packages for green development programs.
SO ₆ : Increasing domestic and international competition	9. To improve reputation to enhance competitiveness.
Diversification Strategy (ST)	
ST ₁ : Establishing risk fund for unexpected situations	10. To extract 5-10% enterprise's annual profit for risk fund
ST ₂ : Building a green development association comprising Enterprise-Government-Consumer	11. To collect and analyze green data related to circular economy, green growth and sustainable development. 12. To consult sustainability policies with Enterprise-Government-Consumer
Stability Strategy (WO)	
WO ₁ : Appealing investors for GSCM	13. To introduce organization's green planning and strategies for medium and long periods to investors, and green financial institutions. 14. To participate in environmental improvement, and sustainable development campaigns that NGOs, government carry out.
WO ₂ : Improving GSCM knowledge for human resources of enterprise by training programs of government and non-government	15. To participate actively in sustainable courses and training to upgrade human resources.
WO ₃ : Applying advanced technology in production and management to increase efficiency	16. To approach GSCM for stakeholders in supply chain towards a synchronic and green technology system. 17. To establish budgets for green technology exchange.
Defensive Strategy (WT)	
WT ₁ : Inviting foreign consultancy and using international criteria related to sustainability	18. To approach evaluating, monitoring criteria and production, management standardization towards international regulation.
WT ₂ : Conducting smart consumers and manufacturers' campaigns for the green planet	19. To carry out the advertisement and public relationship benefits from green products and manufacturing.

Source: Authors' proposal.

sive). After reaching this level, the QSPM matrix was expected to provide a more accurate analysis. Based on the analysis, SO (Expansion) “Investing a synchronic process of GSCM in the organization” with TAS of 6.8185, WO (Stability) “Applying advanced technology in production and management to increase efficiency” with TAS of 6.5662, ST (Diversification) “Building a green association comprising Enterprise-Government-Consumer” with TAS of 6.1904, and WT (Defensive) “Conducting a campaign for the smart consumer and manufacturer were prioritized business strategies to carry out.

As a result, this paper suggests 19 activities of four strategy groups toward sustainable business operations for prospective entrepreneurs (Table 10).

Conclusion and Recommendations

Education plays an important role in providing sustainable business knowledge for business learners. Universities have the ability to contribute to a world that is healthier and more sustainable. The establishment of business people and businesses toward social responsibility, community involvement, and eco-friendly manufacturing for sustainability depends heavily on raising economic learners’ understanding. Today’s economics students are tomorrow’s managers and entrepreneurs. Their understanding of sustainable business is an important tool to help guide business decisions that care about the environment, and social responsibility, in addition to the profit goals of the business. Even if they are just employees at the company, they can share sustainable business knowledge with their colleagues and managers. These bring a sense of business responsibility towards the value of sustainability.

This study assessed the awareness and perception of respondents - future entrepreneurs of the principles underlying successful strategies for sustainable development. A total of 534 students studying economics in the city of Can Tho (Vietnam) were interviewed. For comparison, 102 professionals with a master’s or PhD degree in fields related to the subject of the study were interviewed. In general, the students showed a high awareness of all the considered factors determining the success of corporate sustainability strategies and demonstrated their willingness to consider them in their academic and qualification projects (and later on in their professional activities). Some of the analyzed aspects were given even higher importance by students than by the group of “professionals”.

Based on the results of the survey, matrices of internal factors (strengths and weaknesses of the company, which it is able to influence) and external factors (opportunities and threats) were compiled. On their basis the SWOT-matrix was synthesized, which allowed to outline four alternative realistic variants of corporate sustainable development strategy (expansionary, stabilization, diversification, protective). The subsequent application of the QSPM matrix allowed to rank these strategies and their constituent measures by priority. Finally, for each of the four strategic directions a total of 19 strategic initiatives were proposed, which can be used by current and future entrepreneurs to form their own corporate sustainability strategy.

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Appendix. Contents of the block of questionnaire to assess the factors determining the success of business strategies for sustainable development

Please read the following statement and indicate your opinion. Please only mark X in the one column that you have chosen for each statement (1 = totally disagree; 2 = disagree; 3 = no idea; 4 = agree; 5 = completely agree)

Why should enterprises carry out their business strategy towards sustainability?

1. Reduce cost for environmentally friendly input procurement
2. Reduce cost of delivery and inventory
3. Reduce fee to waste discharge
4. Reduce fine for environment accidents
5. Increase demand flexibility, delivery flexibility, and production flexibility
6. Ensure procurement and delivery on time
7. Optimize process for waste and emission reduction, pollution control
8. Recognize products of eco-labeling, recycled material, and design-for-assembly
9. Save energy consumption and recycling process
10. Encourage green and clean technologies use
11. Increase social and environmental responsibility
12. Increase organizational capability
13. Increase employees' motivation, health and safety
14. Increase customer interest and satisfaction from green products
15. Promote green image, global marketing and competitiveness
16. Capture demand for environmentally friendly product market
17. Obtain certificate for green product warranty
18. Attract investors and shareholder
19. Increase green business strategies
20. Increase efficiency in scarcity of resources, higher waste generation and waste disposal problem
21. Adapt to global climate pressure and ecological change
22. Contribute to government rules and legislation system related to sustainability
23. Support from green movement activism by non-government organization
24. Create trust to society or public
25. Get government support for enforcement

Which main barriers must enterprises confront with when they conduct business strategy towards sustainability?

26. Constrain finance/capital
27. Lack organization encouragement
28. Lack IT implementation
29. Hesitate to convert to new systems
30. Hesitate to change GSCM from supplier
31. Lack sustainable guidance
32. Lack sustainability training courses/consultancy/mentor
33. Lack corporate social responsibility
34. Lack top management commitment
35. Do not want technology advancement adoption
36. Impact economic uncertainty
37. Impact market competition
38. Need big investment
39. Poor legislation related to sustainability
40. Lack effective environmental measures
41. Lack government support system
42. Weak pressure from society
43. Lack quality human resources

Source: authors.