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The Analysis of Sustainable Construction Strategies on the Likupang Special Economic Zone (SEZ)

R. Arifuddin ^{1*}^o, R. U. Latief ¹, S. Hamzah ¹, D. Pangemanan ¹, E. Aprianti ², R. Fadlillah ¹

¹Department of Civil Engineering, Faculty of Engineering, Universitas Hasanuddin, Makassar, Indonesia. ²Department of Transportation Engineering, Hasanuddin University, Makassar, Indonesia.

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Abstract

Many challenges are faced in implementing sustainable construction in Indonesia. This research aims to find an effective method for adopting sustainable construction. The method used combines qualitative and quantitative methods by incorporating the identification of significant factors affecting the adoption of sustainable construction. In data collection with the SWOT system, FGDs and interviews provided accurate information regarding factors and strategies to promote sustainable construction, particularly in the Likupang SEZ Project. From the results of the study, the IFSC value for the promotion strategy of sustainable construction in the Likupang SEZ project is the social factor of 0.2, followed by the economic factor of 0.3, the environmental factor of 1.2, and the government support factor, business investment, and cultural factors of 1.4, respectively. The highest IFSC value was obtained for the human resource factor of 1.6. Thus, it can be concluded that human resources must be accompanied by government support along with business investment and cultural influences in order to realize adequate sustainable development projections for the Likupang SEZ project in the future.

Keywords: Likupang SEZ; Strategy; Sustainable Construction; SWOT Analysis.

1. Introduction

The main contributors which affected to the economy of all developing countries is the construction industry [1]. Growth in the construction industry has increased exponentially, but there are many challenges caused by the Covid-19 pandemic on operational and financial. Several factors which affected are rising material prices, the lack of labor and materials, and the delay in duration [2]. Meanwhile, Negash et al. (2021) [3] explained that the large amount of construction and demolition waste (CDW), coupled with poor management, creates burdens for the environment, society, and economy. Barriers hinder sustainable CDW management. Understanding the barriers can promote the development of eco-friendly, socially harmless, and economically viable strategies. This statement was also studied by several researchers; most of them found that sustainable construction will guide to a significant influence on economic factors and adequate government and reduce low investment values [4–7]. Other than that, human resources have a positive impact on sustainability after applying good government and defense culture factors. Several studies concluded that factors and variables must be directly related to sustainable building, which applies economic, environmentally friendly, comprehensive management, and social culture [6, 8–10]. Environmental sustainability has been implemented in several countries to solve those problems. Unfortunately, the economic and social aspects have proven to be

* Corresponding author: rosmarianiarifuddin@unhas.ac.id

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underutilized. Nonetheless, it comprehensively applies essential ecological, economic, and social sustainability and management topics. Strategies, funding, contracts, and government support are critical for sustainable project execution in the post-Covid-19 era in developing countries [2].

Further studies show that the construction industry consumes more energy and other natural resources, with a significant impact on the environment, the economy, and society [11]. Construction projects produce hazardous waste and CO2 emissions, which trigger global warming [12]. This is what encourages the construction industry not only to focus on increasing the level of customer satisfaction because of low costs, good product quality, and high-quality service, but also focus on respecting the environment, be ethical, and be socially responsible with an approach to sustainable construction. Sustainable construction has increased rapidly in the last decade. This is directed by defined resources and abounding operational and management objections in the construction industry [13]. On the other side, implementing sustainable construction still faces various challenges regarding government, cost, knowledge, information, human resources, customers, and markets [14].

Over the past decade, Indonesia's infrastructure construction projects have significantly boosted Indonesia to become a country focused on infrastructure development. Yet, a gap was found between the actual infrastructure implementation and the idea of construction sustainability in Indonesia [15]. Special Economic Zones (SEZs) are becoming one of the priorities of the Indonesian government, and developing the SEZ into an integrated national area, including buildings and supporting infrastructure, will make a barrier to the academic region, industrialization, economic value, as well as voyage region. Likupang Special Economic Zone is a special economic zone currently under construction by the Indonesia [3, 16]. Good sustainability in construction will apply regulations in the right way. However, sustainable construction practices still need to be explored, and the general level of sustainable construction formalities in the Indonesian construction industry needs to be higher. The most significant barriers to applying sustainability are poor construction practices, non-eligibility, and commercial restraint.

Based on this phenomenon, there is an urgent need for development approaches that apply the concept of sustainable construction to economic, social, and environmental sustainability. Much effort is being made to study the factors influencing the increasing adoption of sustainable construction. Considering these influencing factors, an effective strategy to encourage sustainable construction practices can be developed holistically. It will also promote an effective strategy for applying sustainable construction to the Likupang SEZ project.

2. Literature Review

2.1. Sustainable Construction

Sustainable construction aims to analyze the mandate of the construction industry in completing sustainable advancement [17]. Sustainability is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs; in ecology, it is the amount or rate at which the earth's resources can be exploited without incurring damaging impacts [18]. Green building is built around three essential pillars: environmental protection, social life, and economic prosperity [19]. In addition, sustainable construction means building and maintaining buildings in a healthy and environmentally responsible manner while applying ecological assumptions and making fair use of resources. It requires designers/consultants and contractors to use development practices that can reduce negative impacts such as pollution and carbon emissions from the environment. Sustainable construction ensures the preservation of the environment as well as serious development-related issues that include efficient use of resources, constant social growth, stable economic growth, and poverty reduction [20]. In the construction sector, sustainability tends to focus on the term 'sustainable construction' as part of sustainable development [21]. The implementation of sustainable construction is important to create sustainable infrastructure, which in turn, will contribute to sustainable development [15].

2.2. Factors Influencing the Implementation of Sustainability Construction

Previous research has further investigated the factors affecting the application of sustainable construction, from which these factors were developed during the improvement of the Likupang SEZ project, including (i) economic factors. Economic factors, (ii) environmental factors, (iii) social factors, (iv) government support factors, (v) human resource factors, (vi) business investment factors, and (vii) cultural factors.

• Economic Factor

The development of a Special Economic Zone (SEZ) is an economic factor that is a solid reason to be taken into account because it fulfills the community's needs as a user or beneficiary of the Likupang SEZ project [3]. Barriers to construction in developing countries are grouped into percipient and knowledge factors, administrative and industry factors, and economic and community [22]. The cost and economic constraints stem from the general global perception that sustainable construction is more overpriced than conventional construction [23]. Economic

aspects include the reduction of building operating costs, having applied modern solutions in the areas of design, applied materials, and exploitation [24].

• Environmental Factor

Understanding sustainable construction cannot be separated from environmental aspects because sustainability is related to the natural resources used in the building process. Environmental degradation has become a global issue in the last decade, so governments and people in developed and developing countries have paid serious attention to environmental problems. The world is increasingly aware that exploiting natural resources, which is only oriented toward the economy, brings both positive and negative effects for humans [3]. The sustainable construction approach in the project life cycle has a positive impact on reducing waste products and reducing environmental degradation [25]. The Likupang SEZ is an area built with the initial conditions of an open forest, so it needs a strategy to increase the application of sustainable construction from an environmental factor.

• Social Factor

Social development is a system efficient in accomplishing identity and availability of social convocation, including health, education, gender, and political responsibility. Further project implementation must follow human social development [26]. The Likupang area is comfortable and beautiful, so it is suitable as a family tourism facility and builds good social relations.

• Government Support Factor

Government involvement is significant in implementing sustainable construction. Government support as a regulator and disseminate sustainable construction to all stakeholders so that there is a prior understanding between the government and contractors, consultants, investors, and the community, to support the application of sustainable construction principles [27, 28]. The Likupang SEZ project is a government's super-priority projects to support the development of the tourism sector in Indonesia. To support the SEZ coverage project, the Government of Indonesia issued Government Regulation of the Republic of Indonesia Number 84 of 2019 concerning the Likupang Special Economic Zone [3]. This regulation is one of the full support from the Government of Indonesia for the Likupang SEZ Project.

• Business Investment Factor

The main obstacle facing the construction industry in developing countries is a concern about more advanced investment costs and the need for more financial incentives [29]. Investment policies are urgently needed to encourage the application of sustainable construction in the Likupang SEZ Project [3].

• Human Resource Factor

Labor is still a significant issue in implementing sustainable construction in Indonesia. Barriers to construction project labor are lack of knowledge, such as lack of ability and a limited workforce, and there still needs to be more construction labor to receive training in sustainable construction applications [14, 27, 30]. Furthermore, the human resource factor positively influences the application of sustainable construction in the Likupang SEZ Project [3].

• Cultural Factor

Cultural factors can be described as a complex system involving knowledge, beliefs, arts, morality, laws, customs, skills, and practices carried out by communities as stakeholders in sustainable construction projects [31]. In the context of sustainable construction projects, the cultural dimension refers to the use of local materials, respect for local culture, and the cultural impact of local communities on project operations in order to raise awareness and motivation for sustainable construction practices. It is about adapting to situations and conditions of construction [3, 31]. In the cultural dimension of sustainable construction projects, work culture provides an understanding of local culture in the context of the work schedule. It provides flexible working days off to pay respect to local cultural values, so that project implementation becomes effective [32].

2.3. SWOT Analysis

SWOT analysis is a strategic outlining approach used to evaluate strategies, alternatives, or decisions based on durability, weaknesses, convenience, and threats in projects, businesses, and organizations [33]. A SWOT analysis efficiently identifies the factors and methods that best describe the fit between them. This analysis assumes that an adequate strategy maximizes strengths and convenience while minimizing weaknesses and threats [34]. To carry out analysis, the objectives or objects to be analyzed are determined. "S" is the strength of the strategy, alternative, or decision of an internal project, business, or organization. "W" is the Weakness of the strategy, alternative, or decision of the internal project or business. "O" is the Opportunity of the strategy, the alternative, or decision of the external project or business, and "T" is the Threat of the strategy, alternative, or decision of the internal project or business.

A SWOT analysis consists of two approaches: qualitative and quantitative approaches. The SWOT analysis used in this study is a quantitative approach that calculates the scores (a) and weights (b) of factor points, the total count of multiplications of amount and weights for each S-W-O-T factor, and the scores of internal factors. (x) and external factor scores (y). The Internal Factor Score reduces the total Strength score with the Weakness score. In comparison, the external factor score is the reduction of the Opportunity score with the Treat score. Then determine the strategic position indicated by the Internal Factor score (x) and the External Factor score (y) with dots (x, y) in the SWOT quadrant, Quadrant I (positive; positive). This placement indicates a project, company, or internal organization in a solid and primal state to face challenges. The proposed strategy is a phased strategy, which means the organization is in perfect condition to expand for maximum growth and progress, Quadrant II (positive; negative). This position characterizes projects, companies, or internally strong organizations that face significant external challenges. The strategy proposed is strategic diversification. This means that the organization is stable but faces some daunting external challenges. Organizations are presumed to need to work on their previous strategies. Therefore, organizations should quickly increase the variety of strategies, Third quadrant (negative; positive). This position shows that the organization could be stronger internally but has excellent opportunities. Policy recommendations are change policies. This means that organizations will have to change their previous policies. The previously feared strategy is the challenge to seize opportunities while improving organizational performance, Quadrant IV (Negative; Negative), where this part is internally weak and vulnerable to significant external challenges. Characterize the facing tissue. The approved strategy is a survival strategy, connotation the internal state of the system is in a dilemma. Hence, organizations should adopt continuity strategies and internal performance management to avoid further declines. A strategy for tenacious progress while evolving from within.

3. Research Methodology

This research conducted by using combination between qualitative and quantitative mode. It is located on Likupang Special Economic Zone (SEZ) Project. Furthermore, based on the model of implementing sustainable construction in the Likupang SEZ project, an effective strategy is developed to increase sustainable construction in the Likupang SEZ Project through Focus Group Discussions (FGD). The FGD method was chosen as an in-depth discussion forum. The experts involved in the FGD were selected purposively randomly, consisting of government, academics, practitioners, and the community around the SEZ project coverage. Expert criteria include people who have competence and experience in the field of sustainable construction in the construction industry. The flowchart can be seen in Figure 1.

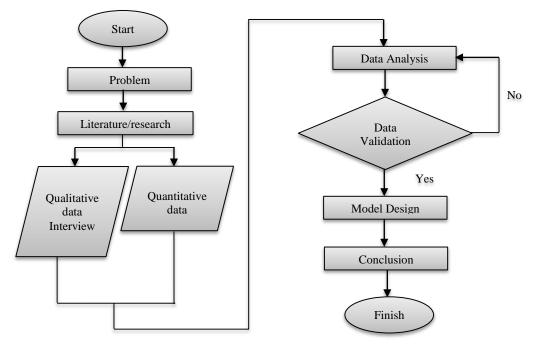


Figure 1. Research flowchart

Based on the results of building a model of sustainable construction in the Likupang Special Economic Zone, it is found that there are 7 (seven) factors with significant influence, including (i) economic factors, (ii) environmental factors, (iii) social factors, (iv) government support factors, (v) business investment factors, (vi) human resource factors, and (vii) cultural factors.

In addition, the SWOT of each factor is calculated by weight and rating. Weight is the proportion value of the SWOT where each Internal Factor (S-W) or External Factor (O-T) has a cumulative value of 1. The SWOT approach can be seen in Table 1.

Internal	Opportunity	Treats		
Strength	Comparative Advantage	Mobilization		
Weakness	Divestment/Investment	Damage Control		

Table 1. Table 1. The SWOT Approach

In comparison, the rating is the preference for the impact arising from each SWOT of each factor. The score assessment using a Likert scale: 5=very significant, 4=significant, 3=less significant, 2= significantly less significant, and 1=not significant. Then calculate the Internal Factors for Sustainable Construction (IFSC) and External Factors for Sustainable Construction (EFSC). The IFSC Score is the reduction of the total Strength score with the Weakness score. The EFSC score is the reduction of the Opportunity score with the Treat score. The IFSC and EFSC calculations are then plotted in the SWOT Analysis Quadrant.

4. Results and Discussion

Based on the results of building a model of sustainable construction in the Likupang Special Economic Zone, it is found that there are 7 (seven) factors with significant influence, including (i) economic factors, (ii) environmental factors, (iii) social factors, (iv) government support factors, (v) business investment factors, (vi) human resource factors, and (vii) cultural factors. Furthermore, the results of the first session FGD data processing with SWOT analysis are shown in Table 2.

Factors Influencing the Implementation of Sustainability Construction	Weight (a)	Rating (b)	W x 1 (axb
Economic Factors			
Strength (S)			
Most large contractors are capable of implementing sustainable construction	0.2	4	0.8
Large contractors are able to make efficient use of project resources	0.1	3	0.3
The use of local materials has an impact on increasing the local economy	0.1	4	0.4
Increase in contractor profits	0.1	3	0.3
Total	0.5		1.8
Weakness (W)			
Small and medium contractors have not implemented efficiency	0,1	3	0.3
Lack of standards for implementing sustainable construction	0,2	2	0.4
Availability of local materials that require expensive and long production time	0,2	4	0.8
Total	0.5		1.5
Opportunity (O)			
Increased visits to the Likupang special economic tourism area	0.2	4	0.8
The willingness of investors to invest	0.2	3	0.6
Knowledge transfer related to sustainable construction	0.2	4	0.8
Total	0.6		2.2
Treath (T)			
Inflation	0,2	2	0.4
Regulatory changes have had a negative impact on the economic sector	0,2	4	0.8
Total	0.4		1.2
Environmental Factor			
Strength (S)			
Increased use of local materials	0.2	4	0.8
Improvement of good construction waste management	0.2	4	0.8
Environmental quality improvement	0.2	3	0.6
Total	0.6		2.2
Weakness (W)			
Low Contractor Capacity in environmental management	0.2	2	0.4
The Contractor's Vision and Mission is not yet towards systemable construction	0.2	3	0.6
The Contractor's Vision and Mission is not yet towards sustainable construction			

Table 2. Results of Data Analysis using SWOT Analysis

Opportunity (O)			
Increase in tourists in the sector	0.2	4	0.8
ecotourism from and outside Indonesia	0.2	4	
Spatial planning and land use mapping in the Likupang SEZ has resulted in high investor interest	0.2	4	0.8
Application of efficiency in the use of materials and waste reduction	0.2	3	0.6
Total	0.6		2.2
Treath (T)			
Decrease in tourist arrivals caused by COVID-19 pandemic	0.2	3	0.6
Natural disasters	0.2	4	0.8
Total	0.4		1.4
Social Factor			
Strength (S)	0.2	4	0.8
Local community support	0.2		
Increase social participation	0.2	4	0.8
Total	0.4		1.6
Weakness (W)		2	0.6
Contractors have not provided wide employment opportunities for local people	0.2	3	0.6
The capacity of contractors and the government is lacking in sustainable construction practices	0.2	2	0.4
Poor monitoring and control of sustainable construction practices to contractors	0.2	2	0.4
Total	0.6		1.4
Opportunity (O)			
Increasing the welfare of local communities	0.2	4	0.8
Increasing community small and medium enterprises	0.2	3	0.6
Increasing the dignity of local communities	0.2	3	0.6
Total	0.6		2.0
Treath (T)			
The potential for social inequality in society	0.2	3	0.6
Social degradation	0.2	4	0.8
Total	0.4		1.4
Government Support Factor			
Strength (S)			
The government support through Minister of Public Works and Public Housing Regulation No. 9 of 2021	0.2	4	0.8
Government support with the establishment of Likupang SEZ as a national super priority object	0.2	4	0.8
Government facilities with ease of licensing	0.2	3	0.6
Total	0.6		2.2
Weakness (W)			
Some government stakeholders do not yet understand sustainable construction	0.2	2	0.4
Some government stakeholders do not yet understand sustainable construction Lack of government outreach regarding sustainable construction	0.2 0.2	2 2	0.4 0.4
Lack of government outreach regarding sustainable construction	0.2		0.4
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other	0.2 0.4		0.4
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries	0.2 0.4 0.2	2	0.4 0.8 0.8
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events	0.2 0.4 0.2 0.2	2 4 3	0.4 0.8 0.8 0.6
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach	0.2 0.4 0.2 0.2 0.2 0.2	2	0.4 0.8 0.8 0.6 0.8
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Total	0.2 0.4 0.2 0.2	2 4 3	0.4 0.8 0.8 0.6
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Total Total Total	0.2 0.4 0.2 0.2 0.2 0.2 0.6	2 4 3 4	0.4 0.8 0.8 0.6 0.8 2.2
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Likupang SEZ is a role model project for a sustainable construction approach Total Government political instability	0.2 0.4 0.2 0.2 0.2 0.6 0.2	2 4 3 4 2 2	0.4 0.8 0.8 0.6 0.8 2.2 0.4
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Total Government political instability Changes in national and regional leaders have led to changes in development priorities	0.2 0.4 0.2 0.2 0.2 0.2 0.6	2 4 3 4	0.4 0.8 0.8 0.6 0.8 2.2 0.4 0.4
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Total Government political instability Changes in national and regional leaders have led to changes in development priorities Total	0.2 0.4 0.2 0.2 0.2 0.6 0.2	2 4 3 4 2 2	0.4 0.8 0.8 0.6 0.8 2.2 0.4
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Total Government political instability Changes in national and regional leaders have led to changes in development priorities Total Business Investment Factor	0.2 0.4 0.2 0.2 0.2 0.6 0.2	2 4 3 4 2 2	0.4 0.8 0.8 0.6 0.8 2.2 0.4 0.4
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Likupang SEZ is a role model project for a sustainable construction approach Countries Government political instability Changes in national and regional leaders have led to changes in development priorities Total Business Investment Factor Strength (S)	0.2 0.4 0.2 0.2 0.2 0.6 0.2 0.2 0.2	2 4 3 4 2 2 2	0.4 0.8 0.8 0.6 0.8 2.2 0.4 0.4 0.4 0.8
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Likupang SEZ is a role model project for a sustainable construction approach Government political instability Changes in national and regional leaders have led to changes in development priorities Total Business Investment Factor Strength (S) Investors are attracted by the application of sustainable construction principles	0.2 0.4 0.2 0.2 0.2 0.6 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	2 4 3 4 2 2 2	0.4 0.8 0.8 0.6 0.8 2.2 0.4 0.4 0.4 0.4 0.8
Lack of government outreach regarding sustainable construction Total Opportunity (O) The opening of opportunities for good the government to the government cooperation with other countries Opportunities for international scale tourism events Likupang SEZ is a role model project for a sustainable construction approach Likupang SEZ is a role model project for a sustainable construction approach Countries Government political instability Changes in national and regional leaders have led to changes in development priorities Total Business Investment Factor Strength (S)	0.2 0.4 0.2 0.2 0.2 0.6 0.2 0.2 0.2	2 4 3 4 2 2 2	0.4 0.8 0.8 0.6 0.8 2.2 0.4 0.4 0.4 0.8

Weakness (W)			
Uncertainty of investor returns	0.2	2	0.4
Financial risks are still high due to global economic problems	0.2	2	0.4
Total	0.4		0.8
Opportunity (O)			
The tourism investment climate is getting better so as to attract investors	0.2	4	0.8
Increased business opportunities	0.2	3	0.4
Total	0.4		1.4
Treath (T)			
Risk of global economic uncertainty	0.2	2	0.4
Tourism business vulnerability with the COVID-10 Pandemic	0.2	2	0.4
The investment climate is still vulnerable to the Indonesian economy	0.2	2	0.4
Total	0.6		1.2
Human Resource Factor			
Strength (S)			
Strong national and regional leadership	0.2	4	0,8
Competence of good leaders related to sustainable construction	0.2	4	0,8
The companies involved are mostly national companies with leading organizations	0.1	3	0,3
Availability of many local construction workers	0.1	3	0,3
Total	0.6		2,2
Weakness (W)			
Poor competence of local labor	0.1	2	0.2
Poor work motivation of local workers	0.1	2	0.2
Insufficient local labor experience	0.2	1	0.2
Total	0.4		0.6
Opportunity (O)			
Potential increase in workforce competence due to knowledge transfer	0.2	4	0.8
Research and innovation potential related to sustainable construction	0.2	3	0.6
Total	0.4		1.4
Threat (T)			
Limited provision of competent labor in sustainable construction	0.2	2	0.4
Limited availability of labor with experience in sustainable construction	0.2	2	0.4
Labor demonstrations	0.2	2	0.4
Total	0.6		1.2
Cultural Factor			
Strength (S)			
Respect for local cultural	0.2	3	0.6
Introducing local cultural	0.2	4	0.8
Likupang's sustainable vision is in line with sustainable construction	0.2	4	0.8
Total	0.6		2.2
Weakness (W)			
The contractor does not adapt to local cultural	0.2	2	0.4
Contractors do not understand the cultural of the migrant community	0.2	2	0.4
		2	
Total	0.4		0.8
Opportunity (O)	0.2	4	0.0
Increasing tourists in the cultural sector from within and outside the country	0.2	4	0.8
Absorption of local cultural as an identity in implementing sustainable construction projects	0.2	3	0.6
Promotion of Likupang SEZ Project as a role model for implementing sustainable	0.2	4	0.8
Total	0.6		2.2
Threat (T)			
Shifts in local cultural due to the influx of foreign culturals	0.2	2	0.4
Rejection of local people with outside cultural	0.2	2	0.4
Total	0.4		0.8

Based on the results of calculating the weights and scores of the implementing factors of the sustainable construction of the Likupang SEZ project, the IFSC and EFSC values are obtained as outlined in Table 2.

Factor	Factor IFSC (x) S-W		Strategy		
Economic Factors	0.3	1.0	(x = Positive; y=Positive)		
Environmental Factor	1.2	0.8			
Social Factos	0.2	0.6			
Government Support Factor	1.4	1.4			
Business Investment Factor	1.4	0.2			
Human Resource Factor	1.6	0.2			
Cultural Factor	1.4	1.4			

Table	3	IFSC	and	EESC	Value
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Furthermore, based on the results of SWOT data processing, the IFSC and EFSC values are plotted in the SWOT analysis quadrant as outlined in Figure 2.

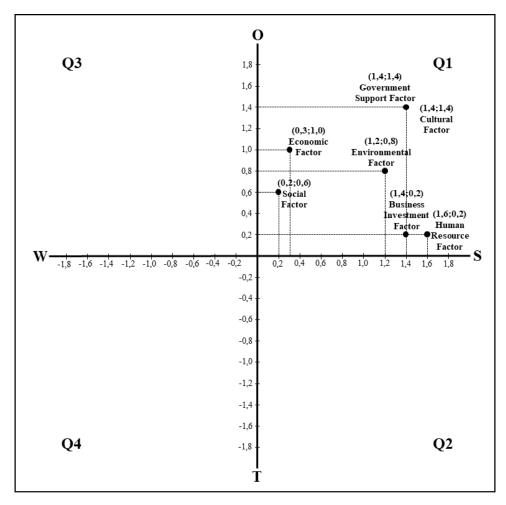


Figure 2. Results of SWOT Quadrant Analysis

Related to Figure 2, the results of the analysis described in the SWOT analysis quadrant are as follows:

- Economic factors are in quadrant 1 (positive, positive), which means that the strategy that matches the economic factors is progressive.
- Environmental factors are in quadrant 1 (positive, positive), which means that a strategy suitable for environmental factors is progressive.
- Social factors are in quadrant 1 (positive, positive), which means that a strategy that matches social factors is progressive.

- The government support factor is in quadrant 1 (positive, positive), which means that the strategy that matches the supporting factor is progressive.
- The investment element is in quadrant 1 (positive, positive), which means that the strategy suitable for the investment element is progressive.
- The human resource factor is in quadrant 1 (positive, positive), which means that the strategy suitable with the human resource element is progressive.
- The cultural factor is in quadrant 1 (positive, positive), which means that the strategy that matches the cultural factor is progressive.

A total of 16 experts were involved in the FGD. 4 (four) experts as government representatives, 4 (four) experts as academic representatives, 4 (four) experts as contractor representatives, and 3 (three) experts as community representatives. The FGD focuses on collecting data through in-depth discussions with experts regarding the 7 (seven) factors influencing the application of sustainable construction in the Likupang SEZ project, consisting of strength. The findings show that encouraging sustainable construction in the Likupang SEZ Project is a progressive strategy. The IFSC and EFSC values show that all supporting infrastructure for the development of Likupang SEZ is in prime condition internally and externally in every factor, including (i) the economic factor, (ii) the environmental factor, (iii) the social factor, (iv) the government support factor, (v) the investment factor, (vi) the human resource factor, and (vii) the cultural factor.

The SWOT analysis results show that support Government and Cultural Factors have the highest IFSC and EFSC (1.4; 1.4). This indicates that government involvement is the key to successfully implementing the sustainable construction of the Likupang SEZ project development. Government support as a regulator by producing regulations supporting sustainable construction implementation is essential [3]. The use of licensing from the government will encourage a favourable business climate for construction projects implementing sustainable construction [16, 27].

Cultural factors are also driving the application of sustainable construction in the Likupang SEZ project. Cultural factors include knowledge, beliefs, arts, morals, and habits that will influence the awareness and attitudes of stakeholders to massively increase the implementation of sustainable construction [30]. The community will more readily accept the same thing with sustainable construction if, in practice, it is in harmony with the local community's culture, mind-set, and values.

5. Conclusion

Several approaches need to be developed in order to reach sustainability, such as government support, local culture, human resources, and the social economy. While the environmental factor seems to be the most important strategy to increase the adoption of green buildings. The final results show that the most influencing factors encouraging sustainable construction activities with a positive IFSC value are human resources, followed by business investment and cultural factors, which are supported by government and environmental factors. More challenging circumstances will definitely affect the effectiveness of the strategy of sustainable construction. The barrier between influencing and challenging factors can be solved by good governance and human resources, which are capable of combining throughout the process of sustainability. The SWOT analysis results show that support Government and Cultural Factors have the highest IFSC and EFSC (1.4; 1.4). The use of licensing from the government will encourage a favorable business climate for construction projects implementing sustainable construction. Cultural factors are also driving the application of sustainable construction in the Likupang SEZ project. This indicates that government involvement is the key to successfully implementing the sustainable construction of the Likupang SEZ project development. Government support as a regulator by producing regulations supporting sustainable construction implementation is essential. This means that the strategy for implementing sustainable construction has internal factors that can be utilized to measure and maximize opportunities. Considering these influencing factors, an effective strategy to encourage sustainable construction practices can be developed holistically. It will also promote an effective strategy for applying sustainable construction to the Likupang SEZ project. The community will more readily accept the same thing with sustainable construction if, in practice, it is in harmony with the local community's culture, mindset, and values.

6. Declarations

6.1. Author Contributions

Conceptualization, R.A., R.U.L., S.H., and D.P.; methodology, R.A.; software, D.P.; validation, R.A., R.U.L., and S.H.; formal analysis, R.A.; investigation, R.A. and D.P.; resources, R.A. and D.P.; data curation, R.A. and R.U.L.; writing—original draft preparation, R.A., E.A., and R.F.; writing—review and editing, R.A., E.A., and R.F.; visualization, R.F.; supervision, E.A.; project administration, R.A. and D.P.; funding acquisition, R. A. and D.P. All authors have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

Data sharing is not applicable to this article.

6.3. Funding

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6.4. Conflicts of Interest

The authors declare no conflict of interest.

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