SWOT Analysis of Strategy Development in Prominent Industries of Underdeveloped Regions: A Case Study of the Kepulauan Mentawai Regency, West Sumatra, Indonesia

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ABSTRACT

The purpose of this research is to determine the strategy and analyze the development of leading sectors in underdeveloped areas in West Sumatra. The data analysis method uses the Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis technique. Determination of research informants using the snowball procedure. The key respondents to this study were the Head of Planning, Regional Development and Infrastructure of the Regional Planning, Research and Development Agency (Bappeda) of the Kepulauan Mentawai Regency because the person concerned had served at the Bappeda Kepulauan Mentawai Regency for quite a long time and knew a lot of information related to the construction sector. The results of the study found that factor mapping through the sum of internal and external factors, it is known that the government of the Kepulauan Mentawai Regency in the construction sector is in quadrant I (aggressive strategy). The strategy adopted is the S-O strategy, namely taking advantage of opportunities with existing strengths, including developing international scale marine tourism resorts, developing landing facilities and processing sand sea fisheries. Kepulauan Mentawai Regency needs to apply the findings of the SWOT analysis, especially the S-O strategy, which is to take advantage of opportunities with existing strengths.

1. INTRODUCTION

Regional economic development in the era of autonomy faces various challenges. On one hand, unresolved issues persist, including inter-regional economic disparities leading to low community income and even poverty [1, 2]. On the other hand, development efforts remain primarily sector-oriented, with limited attention paid to the characteristics and conditions of a region's resources, while development resources become increasingly constrained [3]. The challenge for regional economic development going forward is to strive for effective and efficient management of the course of regional economic development. This entails optimal utilization of the region's potential, encompassing its natural and human resources, as well as optimizing all available sources of funding for regional economic development.

Meanwhile, in the era of globalization, regions within national territories are compelled to engage in competitive free trade with products from countries worldwide [4]. Regional economic development is expected to yield high-quality products that can compete effectively in both domestic and international markets [5]. Provinces, regencies, and cities, serving as the nation's frontiers in regional economic development, are urged to focus on accelerating regional economic growth by emphasizing their unique products. This emphasis is essential to avoid lagging behind in the global free market competition, at the very least within their own territories [6, 7]. As a result, various efforts are required to expedite the development of market-oriented superior products that leverage diverse business and investment opportunities. Such efforts can substantially enhance product competitiveness and contribute to the added value of regional economic development.

Economic conditions vary from region to region, depending on each area's unique structure and features. Concepts of regional development—such as natural resources, human resources, infrastructure, and policies—must be properly understood to accurately define the goals of economic development [8-10]. Achieving these goals requires sustainable management, increased productivity, innovation, and policy implementation based on best practices. Regional development should also align with national development to ensure coherence and set priorities in autonomous regions [11]. To facilitate this, a strategy and mapping of leading sectors or areas within a region is necessary. This will serve as a guide and reference in formulating government plans, ensuring optimal planning identification [6, 8].

According to Presidential Regulation Number 63 of 2020, dated 29 April 2020, regarding the Designation of Underdeveloped Areas for 2020–2024 in Indonesia, there is still one regency/city in West Sumatra classified as an underdeveloped area, namely the Kepulauan Mentawai Regency [12]. Previously, the underdeveloped areas determined by the central government from 2015-2019 included West Pasaman Regency, South Solok Regency, and Kepulauan Mentawai Regency [13]. Therefore, the West Sumatra regional government still has the task of aiding the Kepulauan Mentawai Regency in overcoming its
underdeveloped status.

The designation of the Kepulauan Mentawai Regency as an underdeveloped area is caused by its less developed community compared to other regions on a national scale. Furthermore, when viewed from the perspective of the development of various fields, this district is far behind compared to the urban districts in West Sumatra Province. This is evidenced by the condition of infrastructure such as roads, clean water, housing, electricity, telecommunications and ports that have not been optimally facilitated [14]. In fact, physical facilities and infrastructure are a very important part of the community service system to support various government, economic, industrial and social activities [15, 16]. Based on this phenomenon, the Kepulauan Mentawai Regency currently needs to accelerate improvements in the distribution of development, which must be addressed by the Government of West Sumatra as an extension of the central government. One of the efforts that can be made to get out of the underdeveloped status of the Kepulauan Mentawai Regency is by optimizing the region’s leading sectors [14]. This is because by knowing the leading regional sectors, local governments can map which sectors will be prioritized in development without also ignoring other sectors [17, 18]. It is hoped that the regions will be able to optimize their strengths so that they can encourage development.

This research is a development of studies that we have done before, which we have determined the same leading sector in underdeveloped areas in West Sumatra to be precise in the Kepulauan Mentawai Regency. There are 5 methods that we have used to determine the leading sectors in the area. The determination of the leading sector that is the same in the 5 methods is still very little used by previous researchers [6, 7, 9, 17, 19]. The methods consist of Klassen Typology, Location Quotient (LQ), Shift-Share (SS), Growth Ratio Model (MRP) and Overlay. Based on the 5 methods, there is 1 superior sector that is the same or intersecting as a result of these methods. This is because this sector is in quadrant I of the Klassen Typology, including the base sector according to the LQ method, has a positive sum of Mij and Cij according to the Shift-Share calculation, has a positive RPR and RPS according to the MRP method and has a positive LQ value and positive RPS based on the Overlay method. This sector is the construction sector.

Against the background of the absence of various empirical phenomena that have been carried out before, the novelty of our current study is to determine a strategy for developing leading sectors (construction) in the Kepulauan Mentawai Regency. This is important because the implementation of the development strategy will provide the right direction and steps for maximizing the advantages possessed by the Kepulauan Mentawai Regency. Based on the facts and previous empirical findings, in this study we will develop previous research by analyzing the construction sector development strategy and determining the best strategy that will be prioritized to accelerate the development of leading sectors in the Kepulauan Mentawai Regency as underdeveloped area in West Sumatra.

2. LITERATURE REVIEW

2.1 Underdeveloped areas

Underdeveloped areas are regions that exhibit a lower level of development compared to other areas in their vicinity [20, 21]. The development of underdeveloped areas represents a planned effort to transform a region inhabited by a community facing various socio-economic challenges and physical limitations, into a developed region with a community whose quality of life is on par with, or not significantly behind, other communities [22]. The criteria for determining underdeveloped areas are outlined in the Decree of the Minister of State for Development of Underdeveloped Regions of the Republic of Indonesia, Number 001/KEP/M-PDT/II/2005 [23]. This decree specifies that the designation of underdeveloped areas is based on several criteria, which include economic conditions, quality of human resources, infrastructure facilities, regional capacities, accessibility capabilities, and regional characteristics.

Various researchers have conducted studies on the problems of underdeveloped areas. However, studies on this topic are still limited, as they are predominantly carried out in developing countries. Studies conducted by Hidenori et al. [20] investigated the transformation of underdeveloped areas through the role of economic growth in the case for India which focused on Uttarakhand. They found that foreign direct investment was urgently needed to encourage industrialization and tourism development to get out of the status of underdeveloped areas. Furthermore, this study is more likely to be found for case studies in Indonesia, so that the same problem has been studied in various regions in Indonesia. For example, Jumon et al. [21] examined the dynamics of growth in underdeveloped areas in Indonesia, focusing on the Provinces of Papua and West Papua, in which they recommend a comprehensive economic policy to help these two provinces out of the category of underdeveloped areas. Furthermore, Maskur et al. [24] studied the development of underdeveloped areas in East Java Province, with a focus on Bondowoso Regency through the effectiveness of policies to reduce inequality between regions, they found that the implementation of the policies implemented were categorized as effective because there was a clear legal basis implemented by regional apparatus organizations in carrying out achieving targets which has been set.

Then, Rahman and Kumala [25] explained that in North Halmahera Regency the facilities or infrastructure were inadequate for the development of the tourism sector, especially marine tourism. Minimal access is the inhibiting factor for this area, it is difficult to achieve independence from an economic and social standpoint. In addition, Syahza and Suarman [26] found that in the coastal areas of Riau Province, there are still challenges in economic conditions for local communities, especially in rural areas. They argued that the concept of development in urban areas tends to make some areas lagging behind.

Further studies were carried out by Abidin [27], who examined the infrastructure of underdeveloped areas in South Buton Regency. They found that this area did not yet have adequate infrastructure for the trade sector as a support for the economy of the lower middle class people. Ineffective regional government policies are the reason this sector is underdeveloped because this trading sector is not supported by unstable market conditions for local producers.

On the other hand, Murni [28] analyzed the condition of underdeveloped areas in the Boalemo District. From a socio-economic perspective, the majority of the people are still classified as poor because they are unable to manage agricultural land due to a lack of knowledge. This problem
demands immediate resolution so that development can focus on fundamental issues, such as physical and non-physical development for the community.

In contrast, Teralsyah and Taher [29] examined the contribution of village funds, gross fixed capital formation, and labor force participation rates to economic growth in 62 underdeveloped areas in Indonesia. They found that the government needed to enhance village fund budgets and gross fixed capital formation to stimulate economic growth in the analyzed underdeveloped areas.

Based on insights from various relevant literature, it is evident that strategies to accelerate the development of underdeveloped areas are needed in order to improve the regional economy and encourage progress in the surrounding areas.

2.2 Leading sector

Leading sectors refer to the comparative values between sectors, whether they are local, national, or international. A sector is said to be a leading sector at the international level if it shows higher added value in a country compared to the same sector in other countries [30]. Development based on the potential of a region, sectorally, will certainly impact the overall economic conditions. The added value generated will encourage the formation and pace of economic development [31].

At the national level, a leading sector is defined as a sector in an area that has higher competitiveness when compared to the same sector in other regions [32]. Moreover, a leading sector is a sector that can compete with the same sector in other regions. When the sector is able to compete with others, it demonstrates its ability to export.

Various researchers have conducted studies on leading sectors in different countries. For instance, Wijaya et al. [7] analyzed economic performance based on leading sectors in Malinau Regency. They found that economic growth after regional autonomy showed a shift in the economic structure, which was dominated by the primary sector. Putra and Pratiwi [6] studied potential leading sectors to be developed in the Province of Kalimantan. They discovered that the mining, water supply, waste management, and recycling sectors were the base sectors that needed to be developed.

Further studies were conducted by Tallo et al. [33] on the leading sectors in East Nusa Tenggara Province. They found that mining, agriculture, forestry, and fisheries are the leading sectors that need to be developed. Additionally, Isabhandia and Setiartiti [34] examined the development of leading sectors in Progo Kulon Regency. They identified the crucial sectors for the basis of leading sectors as mining and quarrying, wholesale and retail trade, car and motorcycle repair, government administration, defense, and social security.

Additionally, Amalia [35] examined the determinants of leading sectors in the regional economy in Bone Bolango. She found that the sectors with advanced, basic, and competitive criteria are the financial and service sectors. On the other hand, Satrianto and Sasonko [36] examined the determinants of implementing leading sectors in Blitar. They discovered that several base sectors, including large and retail trade, information and communication, and financial and insurance services, require increased investment and facilitated licensing to continue contributing to the economy.

Furthermore, a study conducted by Kuncoro [37] in Magetan Regency revealed that the agricultural sector is the regional basis for development because it is the majority livelihood for the community and must be managed on target. In another study, Panjiputi [38] analyzed the Tangkallangka Region (Butang Regency, Pekalongan Regency, Pemalang Regency). The research found that Butang Regency excels in the agricultural, mining, and processing industry sectors. Pekalongan Regency has leading sectors in electricity, gas and clean water, hotels and restaurants, as well as transportation and communications. Pemalang Regency excels in the sectors of agriculture, mining and quarrying, trade, as well as hotels and restaurants.

Contrastingly, Rimet [39] found in a study of West Sumatra Province that the tourism sector is a leading sector attracting both local and foreign tourists. Meanwhile, Puspahan et al. [40] discovered that the agricultural sector is the mainstay of East Aceh District, differing from the findings of Hamzah [41] in Bangka Belitung Province, who found that the manufacturing industry sector is a key supporter of economic development.

Based on explanations from various relevant literature, the development of leading sectors in an area, as the focus of local governments, is necessary to encourage better and more advanced economic development.

2.3 Leading sector development strategy

A strategy is a series of decisions and actions aimed at achieving both short-term and long-term goals within an organization [9]. It is further explained that a strategy is crafted based on the capabilities or resources that exist within an organization. To formulate an appropriate strategy, an organization needs to understand the comprehensive strategy formulation process [42]. In principle, the development of the strategy is adapted to the conditions, potential, capabilities, and needs of the organization by accommodating various interests, goals, and collaborations with all parties related to achieving organizational goals [43].

This research focuses on using SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) to develop strategies. SWOT identifies strengths and weaknesses (internal), as well as opportunities and threats (external). It is expected to be a valuable tool for achieving goals [44]. Moreover, SWOT analysis requires leaders to find strategic compatibility between external opportunities and internal strengths, while mitigating external threats and internal weaknesses [45]. Given that SWOT is an acronym for the Strengths, Weaknesses, Opportunities, and Threats of an organization, all of these are strategic factors. Therefore, a SWOT analysis must identify organizational distinctive competencies, which are the specific skills and resources possessed by an organization and the superior ways they are utilized [46].

SWOT analysis has a close relationship with development goals. The application of SWOT analysis in development implementation can create economic stability across all sectors and spur optimal management of available resources. The most crucial analysis is how to maximize strengths and opportunities to mitigate weaknesses and threats for regional development.

Various researchers have conducted studies on SWOT analysis in supporting the development of leading sectors and selecting the best strategies in various countries. However, studies regarding the linkage of SWOT analysis with leading
sector development strategies in underdeveloped regions and the selection of the best strategies are still limited. Therefore, these results will provide a new and distinct contribution to the application of SWOT analysis in developing leading sectors, as SWOT analysis examines the relationship between strengths and weaknesses to seize opportunities and avoid threats.

Numerous studies related to SWOT analysis have been conducted, including those for the tourism sector. First, Aspian et al. [47] developed a strategy for the tourism industry in Iran. They found that tourism is the most prioritized factor among external factors, and the existence of unique entertainment venues such as Amarg is recognized as the most effective and prioritized factor among internal factors. Second, Mondal and Haque [48] analyzed sustainable tourism development strategies in Bangladesh. Their findings suggest various WT (weakness-threat) strategies, including ensuring the safety and security of tourists, planning for sustainable economic benefits, implementing stringent environmental regulations for ecological sustainability, and infrastructure development.

Third, Zhao et al. [49] developed a tourism strategy in Samosir Regency. They suggest that the government needs to improve the quality of supporting facilities and infrastructure, increase the scale of tourism activities, promote attractions sustainably, develop a variety of product values for tourist attractions, involve the community and all interested parties in the management of attractions, and improve the competence of human resources for tourism.

Fourth, Abya et al. [50] drafted a strategy for sustainable ecotourism development in Rameswaram. Their findings indicate that the government should focus on weaknesses and opportunities that will reduce environmental impact and provide quality services. Fifth, Tambunan [51] studied the development of sustainable ecotourism in Lorestan Province. They found that cooperation between the government and the community was needed to promote the natural beauty of the lake as ecotourism both nationally and internationally.

Sixth, Mallick et al. [52] analyzed the development of entrepreneurship in the agriculture and agribusiness sector in Kazakhstan. They recommend that the government needs to implement price stabilization policies and programs to overcome the factors that hinder the growth and development of entrepreneurship.

Seventh, Asadpourian et al. [53] studied the development of SWOT as a strategy for e-commerce tourism based on big data experience in China. They found that the sequence for choosing a business development strategy in the context of big data for tourism electronics is: SO strategy, ST strategy, WO strategy, and WT strategy.

Furthermore, studies have also been conducted in the industrial sector. For instance, Kumari and Sharma [54] analyzed strategies for accelerating the growth of the satellite industry in Korea. They found that opportunity items have a high priority, so the government needs to establish a strategy in the public sector to encourage private business. Meanwhile, Li [55] investigated indigenous and foreign contractors in Nigeria. They found that foreign contractors have better resources than natives, and thus, they enjoy more opportunities than threats.

In another study, Li [55] researched the importance of recycling vehicles as an End of Life Vehicles (ELV) solution in developing countries. They found that the opportunities were considerable and the threats significant for all countries analyzed. While the SWOT analysis clearly identified the weaknesses and threats, it also revealed strengths and opportunities for recycling ELV in both developed and developing countries.

Additionally, Guo et al. [22] studied the advantages, disadvantages, opportunities, and threats to determine the rural development strategy in China. They suggested that the government needs to seize the national strategic opportunity to develop modern agriculture, improve the level of rural human capital, and cultivate the concept of ecological civilization.

Based on explanations from various relevant literature, this research aims to fill the gap in previous studies by analyzing strategies for developing leading sectors in underdeveloped areas using SWOT analysis. By applying SWOT, the best strategy results will be obtained, such as aggressive strategy, competitive strategy, conservative strategy, or defensive strategy. This optimal strategy will be implemented in the form of policies to encourage and accelerate development in the Kepulauan Mentawai Regency. If this policy proves effective, this research hopes that the Kepulauan Mentawai Regency will emerge from its underdeveloped area status in the near future.

3. RESEARCH METHOD

This research uses the SWOT analysis technique to answer the research objectives. SWOT analysis considers internal factors (strengths and weaknesses) and external factors (opportunities and threats) facing the company/institution/region. SWOT analysis compares internal factors (strengths and weaknesses) with external factors (opportunities and threats) so that from this analysis strategic decisions can be made [45-49]. The use of the SWOT technique is different from previous researchers because SWOT reveals the internal and external factors of the Mentawai Islands Regency from information provided by parties who are trusted to provide relevant information.

SWOT analysis is used to identify priority strategies in developing leading sectors. For this reason, a survey was conducted through interviews with several stakeholders related to the leading sector, namely the construction sector in the Mentawai Islands Regency.

To identify internal and external factors, researchers used a snowball procedure to obtain information related to the construction sector. The first step is to determine key informants. The second step determines the second informant from the key informant’s information. The third and subsequent steps determine the next informant based on the second, third and so on informants. In this way, complete information will be obtained regarding the strengths, weaknesses, opportunities and threats of this construction sector.

The key informant for this research is the Head of the Planning, Regional Development and Infrastructure Division of the Regional Planning, Research and Development Agency (Bappeda) of the Mentawai Islands Regency. The reason the researcher chose the person concerned was because he had served for quite a long time (around 15 years) in the Mentawai Islands Regency Bappeda and had extensive knowledge about the construction sector. The second and subsequent informants were the Department of Public Works and Spatial Planning, the Department of Transportation, the Department of Cooperatives, Small and Medium Enterprises, Industry and Trade, business people, and academics from universities.
In the interview, indicators of each factor's strengths, weaknesses, opportunities and threats were obtained. From all these indicators, indicators were selected that were related to the answers of each informant. After that, the informant gave a weight and rating for each indicator. Weight shows the role of an indicator compared to other indicators. The weight value is obtained from the average weight value of each informant. The total role of the indicators is 1. Meanwhile, the rating shows the informant's perception of each indicator on a Likert scale (1 = not very high, 2 = not high, 3 = undecided, 4 = high, 5 = very high). Ratings are obtained from the average rating value of each informant. Then the score is obtained by multiplying the weight and rating. This score determines the priority strategy for developing leading sectors. The priority strategy is in the form of S-O (Strengths-Opportunities), W-O (Weaknesses-Opportunities), S-T (Strengths-Threats), W-T (Weaknesses-Threats).

The S-O strategy is chosen if the difference between the strength and weak score is positive while the difference between opportunities and threats is also positive. The W-O strategy is chosen if the difference between the strength and weakness score is negative while the difference between opportunities and threats is also positive. The S-T strategy is chosen if the difference between the strength and weakness scores is positive while the difference between opportunities and threats is also negative. The W-T strategy is chosen if the difference between the strength and weakness score is negative while the difference between opportunities and threats is also negative.

4. RESULTS AND DISCUSSION

Determination of the proposed development strategy for the leading sector in the Kepulauan Mentawai Regency, namely the construction sector, begins with the identification of internal and external strategic factors. Determination of each internal and external strategic factors based on the results of interviews with selected respondents.

The results of the identification of the strengths, weaknesses, opportunities and threats of the Kepulauan Mentawai Regency Construction sector based on the survey results are shown in Table 1. From the table it can be seen that there are 4 indicators of strength factors (strength) in the Kepulauan Mentawai Regency Construction sector. These indicators are:

1. The potential for marine tourism is quite large.
2. The potential for marine fisheries is quite promising.
3. Cultural wealth, and
4. Harmonization of social relations between ethnicities and religions is quite good.

From the weakness factor, there are also 4 indicators, namely:
1. The quality of human resources is still relatively low.
2. Infrastructure and transportation facilities are still limited.
3. The productivity of agricultural land is still relatively low.
4. The distance is far from the provincial capital.

From the opportunity factor, there are 3 indicators, namely:
1. Mentawai is increasingly known nationally and internationally.
2. Increasing people's income and purchasing power, and
3. Increasingly stable implementation of regional autonomy.

Finally, from the threat factor, there are also 3 indicators, namely:
1. There is an earthquake and tsunami threat.
2. Economic and social globalization is increasingly real.
3. There is an extreme climate threat.

Table 1. Identify strengths, weaknesses, opportunities and threats Kepulauan Mentawai Regency Construction Sector

<table>
<thead>
<tr>
<th>No.</th>
<th>Factor</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strength</td>
<td>1. The potential for marine tourism is quite large</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. The potential for marine fisheries is quite promising</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Cultural wealth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. The harmonization of social relations between ethnicities and religions is good enough</td>
</tr>
<tr>
<td>2</td>
<td>Weakness</td>
<td>1. The quality of human resources is still relatively low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Infrastructure and transportation facilities are still limited</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. The productivity of agricultural land is still relatively low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Long distance from the provincial capital</td>
</tr>
<tr>
<td>3</td>
<td>Opportunity</td>
<td>1. Mentawai is increasingly recognized nationally and internationally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. People's income and purchasing power are increasing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. The implementation of regional autonomy is increasingly stable</td>
</tr>
<tr>
<td>4</td>
<td>Threat</td>
<td>1. There is a threat of earthquakes and tsunamis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Economic and social globalization is increasingly evident</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. There is a threat of extreme climates</td>
</tr>
</tbody>
</table>

After identifying the factors, the weight and rating values are determined in the form of an IFAS (Internal Strategic Factor Analysis Summary) matrix. Weighting and rating are carried out on all factor indicators in the questionnaire that have been distributed to the respondents. Weighting is done by comparing the role of each factor identification or indicator. While the rating is assessed using a Likert Scale from 1-5. Score 1 indicates Very Undecided, 2 indicates Undecided, 3 indicates Doubtful, 4 indicates Determine, and 5 indicates Very Determined. The results of weighting and rating of internal factors are shown in Table 2.

In Table 2, it can be seen that the main strength factor in the Kepulauan Mentawai Regency Construction sector is the indicator that the marine fisheries potential is quite promising. This can be seen from the score of this indicator reaching 1.73 with a weight of 0.36 and a rating of 4.80. In other words, this indicator has a very strong influence on the construction sector development strategy. The development of the fisheries sector can become the foundation for the Kepulauan Mentawai Regency in managing resources which are dominated by the archipelago, making people in this area tend to work more as fisherman. The Kepulauan Mentawai Regency with a long coastline of 1,402.66 km has extraordinary marine wealth. The topography of the Kepulauan Mentawai Regency region is surrounded by the sea, so this area has promising potential from the fisheries sector. Fishery is a sector that is relied upon
for development because it has enormous potential and assets for economic growth in coastal areas. The fishery potential that is owned is an economic potential that can be utilized for regional development. The marine fisheries potential includes capture fisheries, marine aquaculture, and the marine biotechnology industry. This potential is very promising to be developed more broadly so that the benefits received can be felt by the community, such as improving the living standards of small fishermen and small fish cultivators, providing expansion and employment opportunities, increasing productivity, added value and competitiveness of fishery products and ensuring the sustainability of natural resources, fish, fish cultivation land and spatial planning. Therefore, the management of this fishery potential needs to be directed at the utilization of fish resources by taking into account the existing carrying capacity and its sustainability to increase the development of the construction sector in the Kepulauan Mentawai Regency.

Table 2. IFAS matrix analysis Kepulauan Mentawai Regency Construction Sector

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Weight</th>
<th>Rating</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The potential for marine tourism is quite large</td>
<td>0.34</td>
<td>5.00</td>
<td>1.70</td>
</tr>
<tr>
<td>2</td>
<td>The potential for marine fisheries is quite promising</td>
<td>0.36</td>
<td>4.80</td>
<td>1.73</td>
</tr>
<tr>
<td>3</td>
<td>Cultural wealth</td>
<td>0.16</td>
<td>4.00</td>
<td>0.64</td>
</tr>
<tr>
<td>4</td>
<td>The harmonization of social relations between ethnicities and religions is good enough</td>
<td>0.14</td>
<td>3.80</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.00</td>
<td>4.60</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Weight</th>
<th>Rating</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The quality of human resources is still relatively low</td>
<td>0.22</td>
<td>4.20</td>
<td>0.92</td>
</tr>
<tr>
<td>2</td>
<td>Infrastructure and transportation facilities are still limited</td>
<td>0.34</td>
<td>4.60</td>
<td>1.56</td>
</tr>
<tr>
<td>3</td>
<td>The productivity of agricultural land is still relatively low</td>
<td>0.32</td>
<td>4.00</td>
<td>1.28</td>
</tr>
<tr>
<td>4</td>
<td>Long distance from the provincial capital</td>
<td>0.12</td>
<td>4.60</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.00</td>
<td>4.32</td>
<td></td>
</tr>
</tbody>
</table>

| Strength + Weakness (S + W) | 0.28 |

In Table 2, it can be seen that the main strength factor in the Kepulauan Mentawai Regency Construction sector is the indicator that the marine fisheries potential is quite promising. This can be seen from the score of this indicator reaching 1.73 with a weight of 0.36 and a rating of 4.80. In other words, this indicator has a very strong influence on the construction sector development strategy. The development of the fisheries sector can become the foundation for the Kepulauan Mentawai Regency in managing resources which are dominated by the archipelago, making people in this area tend to work more as fishermen. The Kepulauan Mentawai Regency with a long coastline of 1,402.66 km has extraordinary marine wealth. The topography of the Kepulauan Mentawai Regency region is surrounded by the sea, so this area has promising potential from the fisheries sector. Fishery is a sector that is relied upon

for development because it has enormous potential and assets for economic growth in coastal areas. The fishery potential that is owned is an economic potential that can be utilized for regional development. The marine fisheries potential includes capture fisheries, marine aquaculture, and the marine biotechnology industry. This potential is very promising to be developed more broadly so that the benefits received can be felt by the community, such as improving the living standards of small fishermen and small fish cultivators, providing expansion and employment opportunities, increasing productivity, added value and competitiveness of fishery products and ensuring the sustainability of natural resources, fish, fish cultivation land and spatial planning. Therefore, the management of this fishery potential needs to be directed at the utilization of fish resources by taking into account the existing carrying capacity and its sustainability to increase the development of the construction sector in the Kepulauan Mentawai Regency.

Internal strategic factors for weaknesses that must receive attention are indicators of infrastructure facilities and transportation facilities that are still limited. This indicator has the highest score reaching 1.56. This condition shows that this indicator has a fairly strong influence on its weaknesses in efforts to develop the construction sector. This condition has become a concern for the regional government for the infrastructure sector which consists of the transportation sector, especially sea transportation. The difficulty of accessing infrastructure to bring resources to the city center makes the barriers in terms of time longer when compared to areas that have good infrastructure access. Infrastructure development in improving transportation facilities and infrastructure can be achieved through the development of potential and strategic areas in the Kepulauan Mentawai Regency. Based on this explanation, transportation infrastructure and facilities need to be improved in increasing the development of the construction sector in the Kepulauan Mentawai Regency because its network contributes to facilitating and supporting the smooth running of social and economic activities of the community, such as the distribution of goods and services.

The total score of the internal strategic factors resulting from the calculation of the IFAS matrix from the strength factor is 4.60 and the weakness factor is 4.32. Thus, the difference in the total value of the strengths and weaknesses factors is 0.28. This shows that internally the Kepulauan Mentawai Regency Construction sector is considered weak in development because the total score is below the average of 2.5. With the existence of obstacles in terms of construction, it is clear that this is an obstacle for the Kepulauan Mentawai Regency in utilizing local potential which should be a forum for improving social and economic conditions for the community to be better so that the level of welfare can increase. Determining the construction sector as a leading sector will have a positive impact on the economy of the Kepulauan Mentawai Regency by stimulating economic growth. This sector affects the economy through the inputs used or produced, either directly or indirectly by other sectors, thus contributing as a driving factor in the economy.

Furthermore, the construction sector has a direct impact on the economy through the materials and labor it uses. The construction sector is able to mobilize local materials and labor in an area so that it can directly increase the regional economy. Then, the construction sector and the local workforce have a close relationship, in which the role of the construction sector
in the economy will generate income, create jobs, distribute the resulting output in economic activity. Based on the results of this identification, it is hoped that the designation of the construction sector as a leading sector can push the Kepulauan Mentawai Regency to emerge as a disadvantaged area in West Sumatra Province.

From the external side, based on the results of the interviews, it is possible to identify the opportunities and threats faced by the Kepulauan Mentawai Regency Construction sector in terms of developing the selected leading sectors. These factors were then analyzed using the EFAS (External Strategic Factor Analysis Summary) matrix. Weighting and rating are carried out on all factor indicators in the questionnaire that have been distributed to the respondents. Rating is done by comparing the role of each factor identification or indicator. While the rating is assessed using a Likert Scale from 1-5. Score 1 indicates Very Undecided, 2 indicates Undecided, 3 indicates Doubtful, 4 indicates Determine, and 5 indicates Very Determined. The results of weighting and rating of external factors are shown in Table 3.

On the opportunity factor, the indicator with the highest score is the indicator that Mentawai is increasingly recognized nationally and internationally. The score for this indicator reaches 2.08. This condition means that this opportunity has quite a strong influence on the development of the Kepulauan Mentawai Regency Construction sector. Access far from the city center in West Sumatra Province makes Mentawai need transportation facilities both sea and air so that people's needs can be met. Moreover, the construction of the pioneer airport that is being built is expected to be an alternative to shorten the distance traveled so that it will have an impact on the people's economy.

On the hazard factor, the indicator with the highest score is the indicator of the existence of an earthquake and tsunami threat. This indicator has a score of 2.50. This figure shows that the earthquake and tsunami hazard indicators are strong threats in the development of the construction sector in this area. The geographical conditions of Mentawai, which is an archipelago, are also traversed by plates which at any time can trigger natural disasters that can harm various economic sectors in Mentawai. For this reason, this threat needs to be anticipated by providing education on disaster response or care to the public and using tsunami early warning technology.

### Table 3. IFAS matrix analysis Kepulauan Mentawai Regency Construction Sector

<table>
<thead>
<tr>
<th>No</th>
<th>Identification</th>
<th>Weight</th>
<th>Rating</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mentawai is increasingly recognized nationally and internationally</td>
<td>0.43</td>
<td>4.80</td>
<td>2.08</td>
</tr>
<tr>
<td>2</td>
<td>People's income and purchasing power are increasing</td>
<td>0.40</td>
<td>4.60</td>
<td>1.84</td>
</tr>
<tr>
<td>3</td>
<td>The implementation of regional autonomy is increasingly stable</td>
<td>0.17</td>
<td>4.40</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>1.00</td>
<td>4.65</td>
<td></td>
</tr>
</tbody>
</table>

#### 4.1 Alternative construction sector development strategy

Based on the results of the analysis of IFAS and EFAS, alternative strategies for the development of the Kepulauan Mentawai Regency Construction sector were formulated. The alternatives based on the SWOT matrix (Strengths, Weaknesses, Opportunities, Threats) can be seen in Table 4.

### Table 4. SWOT matrix Kepulauan Mentawai Regency Construction Sector

<table>
<thead>
<tr>
<th>IFAS</th>
<th>EFAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Strength (S) |
1. The potential for marine tourism is quite large
2. The potential for marine fisheries is quite promising
3. Cultural wealth
4. The harmonization of social relations between ethnicities and religions is good enough

#### Weakness (W) |
1. The quality of human resources is still relatively low
2. Infrastructure and transportation facilities are still limited
3. The productivity of agricultural land is still relatively low
4. Long distance from the provincial capital

#### S-O Strategy |
1. Develop international scale sea tourism resorts
2. Develop landing facilities and marine fishery processing

#### W-O Strategy |
1. Improving the quality of primary and secondary education
2. Improving the degree of public health

#### ST Strategy |
1. Installation of early earthquake and tsunami detection devices
2. Development of Tourism Information Technology Center
3. Development of integrated licensing services

#### WT Strategy |
1. Increase community preparedness to face natural disasters
2. Improving the English language skills of the community
4.2 Priority strategy in the development of the Kepulauan Mentawai Regency Construction Sector

The selection of priority strategies for the development of the Construction sector is carried out by mapping the strengths of the Kepulauan Mentawai Regency which consists of 4 quadrants. Quadrant I: aggressive strategy; quadrant II: competitive strategy; quadrant III: conservative strategy; and quadrant IV: defensive strategy. The selection of this strategy is done by comparing internal strengths and weaknesses with external factors of opportunities and threats. Each weight score is added up. The result of the sum is used to determine which priority strategies will be implemented. Internal factors Weaknesses (W) and external factors Threats (T), the value is negative (-) because they are factors that can weaken the government of the Kepulauan Mentawai Regency. The result of the sum of the weighted scores of each internal and external factor are Strength (S): 4.60; Weakness (W): 4.32; Opportunity (O): 4.65; Threat (T): 4.45. Then, axis of X = S + W = 4.60 + (4.32)= 60.28, and axis of Y = O + T= 4.65 + (-4.45) = 0.21.

Based on the mapping Figure 1, the Kepulauan Mentawai Regency government is in quadrant I, namely aggressive strategy. In this case the Kepulauan Mentawai Regency is in an advantageous situation because it has the strength to take advantage of the opportunities that exist. So based on these results the government of the Kepulauan Mentawai Regency in developing the Construction sector chose the S-O strategy. The S-O strategy is a strategy that takes advantage of opportunities with existing strengths, so the strategy is to develop international scale marine tourism resorts; and developing landing facilities and processing of sand sea fisheries.

From the mapping results above, the development of the construction sector using the S-O approach is more dominant to be carried out so that it becomes the focus of attention for the Kepulauan Mentawai Regency local government. Local governments need to strengthen institutions or agencies related to licensing issues in the development of the construction sector. Therefore, awareness of the importance of an accurate strategy accompanied by appropriate policies will certainly affect the results of the development carried out by the Kepulauan Mentawai regional government.

Improving the quality of institutions can encourage legal certainty to become a trust for the community to be more aware of the importance of collaboration for regional progress. On the other hand, this condition also attracts investors to be able to invest their capital and is accompanied by monitoring, coaching, guidance to investors as well as incentives for both regional taxes and regional levies so that the progress of the tourism, transportation and fisheries sectors becomes the backbone of the community's economy and there is an increase in income in Kepulauan Mentawai Regency area.

In order for this strategy to be achieved, it is important to carry out cooperation and partnership programs with various parties such as legal institutions, community organizations or with other parties that can support development in the Kepulauan Mentawai Regency. In addition, the availability of quality human resources must be sought for the needs of strategic sectors in regional development, because if the unavailability of quality human resources will hamper productivity so that development targets are difficult to achieve.

The development of international scale sea tourism resorts as part of the S-O approach to developing the construction sector in the Kepulauan Mentawai Regency is to build resorts based on visitor needs. First, based on functional needs, namely building a resort as a temporary residence that can make visitors feel like they are at home or in their own environment so that they feel comfortable. The mass layout of the building is very concerned with the freedom of visitors to move, so that a very wide circulation space is created. Apart from that, there are also public spaces that can be used for joint outdoor events. Second, based on performance needs, namely building a resort that is designed to be back to nature without being touched by nature so that it can attract visitors who are happy with the beauty of nature but are reluctant to be touched by nature directly. To support the natural feeling in this resort, a concept is needed that can support this, namely a design that blends with the surrounding nature, so that visitors feel that they are in a natural environment full of beauty and with fresh air (free from pollution) but without touching nature. The period of building that emphasizes the concept of back to nature with materials used are natural materials, because Indonesia is in the wet tropics, there are several problems, including moss or fungus and also termites.

The development of landing facilities and marine fisheries processing which is also part of the S-O approach to developing the construction sector in the Kepulauan Mentawai Regency is to use the foundation structure and the form of a stilt structure using Expanded Polystyrene (EPS) material which has strength properties almost equivalent to concrete, but with a much lighter weight, so that the building load can be reduced, easy to clean, has micro-sized pores so that water particles cannot stick and are stored in the pores of the material so that the EPS material is resistant to moisture on floors, columns, beams, pedestals, as well as landing facilities walls and partitions. Furthermore, the use of steel material in the space truss structure and roof truss can respond to wind and humidity conditions because steel material is relatively more stable, even the most stable in response to high-pressure wind conditions and steel material is also relatively resistant to moisture which cannot rot.

The results of this study indicate that there are fundamental differences from previous researchers who examined the strategy for developing leading sectors. This study found that the leading sector development strategy in the Kepulauan

![Figure 1. Mapping the strength of the Kepulauan Mentawai Regency Government in the development of the Construction Sector](image-url)
Mentawai Regency used SWOT analysis with the S-O strategy. Previous researchers were still relatively limited in studying this matter in the Kepulauan Mentawai Regency.

5. CONCLUSIONS

Based on the results of calculations and analysis in the previous section, this study concludes:

There are 4 indicators of the strength factor (strengthen) of the Kepulauan Mentawai Regency Construction sector. These indicators are: a). The potential for marine tourism is quite large, b). The potential for marine fisheries is quite promising, c). Cultural wealth, and d). The harmonization of social relations between ethnicities and religions is good enough.

From the weakness factor, there are also 4 indicators, namely: a). The quality of human resources is still relatively low, b). Transportation infrastructure and facilities are still limited, c). The productivity of agricultural land is still relatively low, and d). Long distance from the provincial capital.

From the opportunity factor there are 3 indicators namely: a). Increasingly known Mentawai nationally and internationally, b). The increasing income and purchasing power of the people, and c). The more stable the implementation of regional autonomy.

Finally, from the threat factor, there are also 3 indicators, namely: a). There is a threat of earthquake and tsunami, b). Economic and social globalization is increasingly evident, and c). There is a threat of extreme climate.

From the results of the SWOT analysis and after factor mapping through calculating internal and external factors, it is known that the Kepulauan Mentawai Regency government in the construction sector is in quadrant I (aggressive strategy). The strategy used is the S-O strategy, namely taking advantage of opportunities with existing strengths. The strategies are: a). Developing international marine tourism resorts; and Developing landing facilities, and b). Sand sea fishery processing.

Based on the results of the research that has been found, this research can provide advice in efforts to develop potential regional economic sectors that are competitive, the Kepulauan Mentawai Regency government should focus more on developing its leading economic sector, namely the Construction sector. This is because this sector has contributed greatly to the economy of the Kepulauan Mentawai Regency over the past few years. Of course, if this condition is managed properly, it will be able to provide a significant multiplier effect on the regional economy. The local government of the Kepulauan Mentawai Regency needs to apply the findings of the SWOT analysis, especially the S-O strategy, which is to take advantage of opportunities with existing strengths. The strategies are: a). Developing international marine tourism resorts; and Developing landing facilities, and b). Sand sea fishery processing. Other strategies such as WO, ST and WT also need to be considered in the future. The implementation of an effective development strategy is expected to encourage and accelerate development in the Kepulauan Mentawai Regency so that it can get out of the category of underdeveloped areas.

This research still has many limitations, only focusing on leading sectors and their development strategies with the SWOT matrix. It is suggested to other researchers to continue the analysis of this study with other analytical techniques, for example, the gravity technique to determine the attachment of other regions to the economy of the Kepulauan Mentawai Regency. Besides, the number of informants interviewed was still relatively small. Therefore, future researchers should be able to add other informants so that the information and information obtained can increase.

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