

## **Implementation of Dry Port: Feasibility Study in Jeneponto Regency**

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### **ABSTRACT**

This research was conducted to analyze the feasibility of Jeneponto Regency as a location for a Dry Port in South Sulawesi and the impact it has on the selection of the Dry Port location. This research used a qualitative descriptive method and SWOT analysis aimed at analyzing data such as geographic data, supporting infrastructure, economic and social aspects, regional characteristics, and local government policies regarding regional development. In addition, field surveys and interviews were conducted with relevant parties, including government agencies, private institutions, academics or practitioners, and other stakeholders. The results of this research indicate that Jeneponto Regency has the potential to be a strategic location for a Dry Port, with a recorded area of 749.79 km<sup>2</sup>. The planning for the development of the Jeneponto Regency Dry Port is located in the Bontorappo Village area, Tarowang District, with an available land area of 1.85 hectares. This region has good accessibility through the main road network and is close to the Port of Makassar, one of the busiest ports in South Sulawesi. Furthermore, the potential for economic and industrial growth in this regency also provides promising opportunities for Dry Port development. The related impacts on the selection of the Dry Port location are assessed in terms of economic impact, impact on the smooth flow of cargo handling, and impact on regional development. The SWOT analysis results indicate that the positioning falls within quadrant I, which means that the development strategy of the Dry Port in Jeneponto Regency, South Sulawesi Province, supports an aggressive growth-oriented strategy. This situation is highly advantageous for the policies to be implemented, where the strength of the strategic location for Dry Port development positively impacts the efficiency and speed of goods delivery, and the opportunities for Dry Port development will create new job opportunities and have significant economic benefits for the local area. Therefore, based on the positioning in quadrant I, the Dry Port project in Jeneponto Regency has a high potential for rapid growth.

**Keywords:** Dry Port; transportation infrastructure; development impact

### **INTRODUCTION**

South Sulawesi Province is one of the highly strategic economic corridors in the Eastern part of Indonesia. Geographically, this corridor is situated between two sea shipping routes, the Indonesian Archipelago Sea Lane (ALKI) II and ALKI III, which are used by a significant portion of the world's major shipping activities. Therefore, Sulawesi has a significant opportunity to expand its national and international trade networks. The Sulawesi corridor holds high potential in economic and social aspects and has a competitive advantage in sectors such as agriculture, marine fisheries, food crops, and trade. All of these potentials are highly prospective for promotion in both regional and international markets (Campisi et al., 2022; Chang et al., 2019; Pham & Lee, 2019; Pourmohammad-Zia et al., 2023; Raad et al., 2022; Tsao & Thanh, 2019; Wang & Peng, 2023).

The economic growth of South Sulawesi Province has been quite stable, with an average growth rate exceeding 7%. In the last five years, there has been significant growth in the transportation of goods and passengers through the Port of Makassar, exceeding 10%. This indicates a conducive environment for regional development. However, the per capita Gross Regional Domestic Product (PDRB) is still relatively low compared to other provinces. This is mainly due to the fact that a significant portion of the population still relies on agriculture, which accounts for 30% of economic activity. The Master Plan for Acceleration and Expansion of Economic Development of Indonesia 2025 has set a policy framework for the economic corridor of the region, directing Sulawesi as a center for the production and processing of national agricultural, plantation, fisheries, and nickel mining products, along with the need for transportation infrastructure support, including ports, roads, and railways (Awad-Núñez et al., 2016; Black & Roso, 2022; Qiu & Lee, 2019; Sarmadi et al., 2020; Souza et al., 2023; Wilmsmeier & Monios, 2021).

A Dry Port is a terminal connected to a port through various transportation modes that can reduce barriers to the movement of goods due to container handling, document checking, and other additional services (Bouzekri et al., 2023; Facchini et al., 2020; Gu et al., 2023; Jeevan et al., 2022; Manupipatpong et al., 2023). A Dry Port serves as an extension of the port's operations. In this context, some container handling activities at the port can be performed at the Dry Port, thus reducing the burden on the port (Castrellon et al., 2023; Gonzalez-Aregall & Bergqvist, 2019; Gujar et al., 2019; T. Guo et al., 2023; Pasetto & Giacomello, 2023). The presence of a Dry Port also has the potential to stimulate economic activities in the surrounding area, such as the development of industrial zones, the growth of freight forwarding companies, warehousing providers, and more. South Sulawesi holds significant economic potential, and the implementation of a Dry Port in Jeneponto Regency can be a strategy to optimize the flow of goods and enhance logistics connectivity.

## **METHOD**

The research design employed in this study is qualitative descriptive research, which systematically, factually, and accurately portrays and describes the facts, characteristics, and relationships being investigated. In this research, data is collected in the form of detailed narratives from informants and is presented as it is, in accordance with the language and perspectives of the informants. This study also utilizes the SWOT analysis method, which is presented in the form of data and tables with SWOT analysis, based on the collection of both primary and secondary data and the analysis of the gathered data.

## **RESULT AND DISCUSSION**

The calculation of the weight score in IFAS (Internal Factors Analysis Summary) is generated from the assessment between the weight value and the rating (Díaz & Guedes Soares, 2023). The results of the weighting and rating of these factors can be seen in Figure 1.

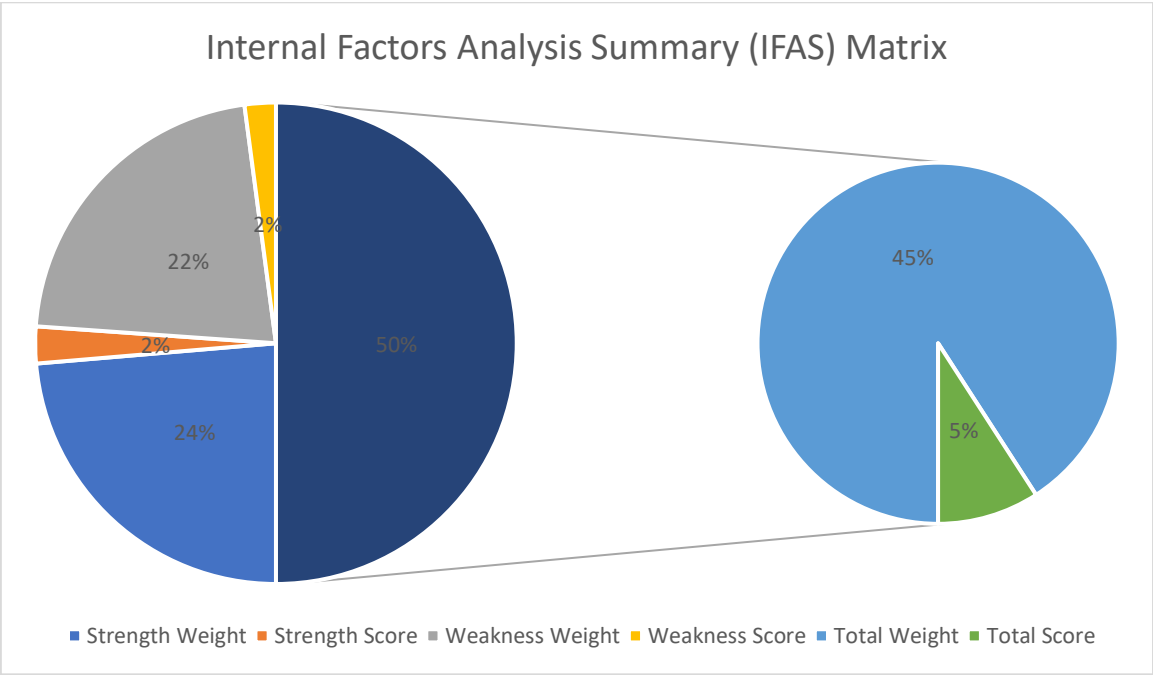


Figure 1. Internal Factors Analysis Summary (IFAS) Matrix

The calculation of weight scores in EFAS (External Factors Analysis Summary) is generated from the assessment between weight values and ratings (Díaz & Guedes Soares, 2023). The results of weighting and rating of these factors can be seen in Figure 2.

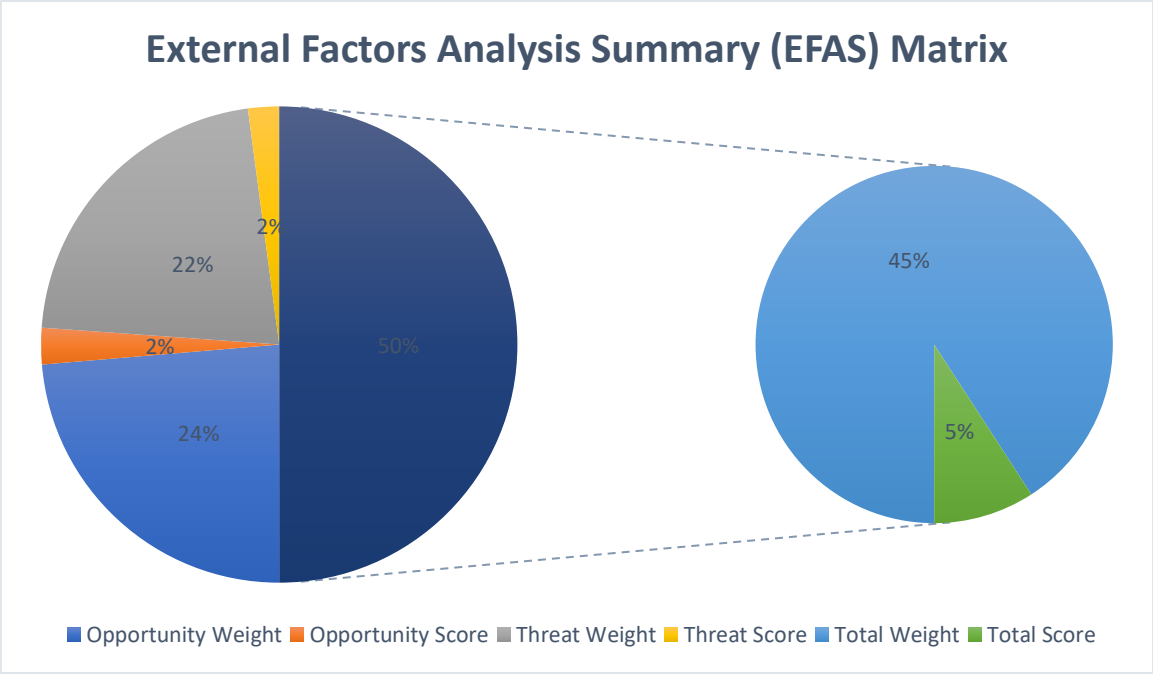


Figure 2. External Factors Analysis Summary (EFAS) Matrix

Figure 1 shows that the main strengths of the Dry Port development in Jeneponto Regency have the highest score of 0.50, indicating that its strategic location will have a positive impact on the efficiency and speed of goods delivery. This is the primary strength of the Dry Port project. On the other hand, for weaknesses, the highest score is 0.37, indicating that although the Dry Port could be an effective alternative in shipping and distributing goods, its construction may impact its operational efficiency and effectiveness. The total score in the IFAS matrix is 3.90, indicating that overall, the internal conditions of the Dry Port development in Jeneponto Regency are considered strong.

Based on the analysis results, the development of the Dry Port will create new job opportunities and have significant economic benefits for the local area, making it the greatest opportunity factor with a score of 0.46. Meanwhile, the development of the Dry Port can benefit economic growth, and Dry Port service offerings have a competitive advantage over other services, making it a threat factor with a score of 0.42. The total score in the EFAS matrix is 3.87. This indicates a strong external situation.

From the results of the score calculations in the IFAS and EFAS matrices, the following results were obtained:

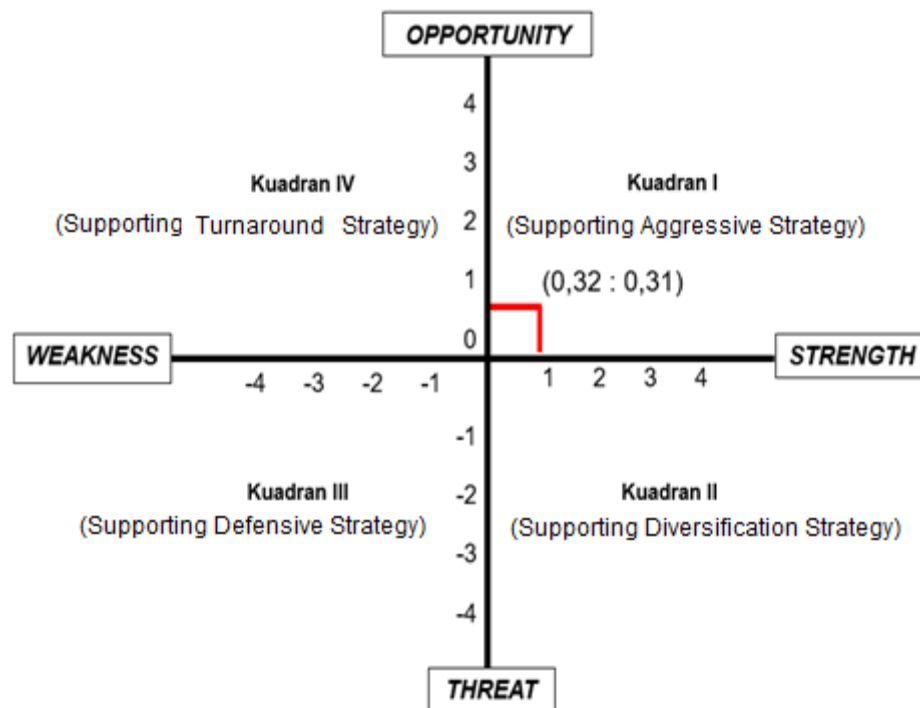
1. IFAS

- Total Strengths Score = 2.11
- Total Weaknesses Score = 1.79
- Coordinates for internal factors are calculated using the formula:
- Coordinate X (IFAS) = (Total Strengths Score - Total Weaknesses Score)
- IFAS =  $2.11 - 1.79 = 0.32$

2. EFAS

- Total Opportunities Score = 2.09
- Total Threats Score = 1.78
- Coordinates for external factors are calculated using the formula:
- Coordinate Y (EFAS) = (Total Opportunities Score - Total Threats Score)
- EFAS =  $2.09 - 1.78 = 0.31$

After obtaining the coordinates for each factor, both internal and external factors, the next step is to determine the strategy in the form of quadrant placement in the SWOT analysis diagram. The determination of the SWOT diagram serves to identify the strategic position to be implemented. Whether the strategy falls into Quadrant I, II, III, or IV. These quadrants help determine and identify whether the strategy is aggressive, diversification, turn-around, or defensive in nature. The determination of the quadrant can be seen in Figure 3.



**Figure 3. Position in SWOT Analysis**

Based on Figure 3 positioning in Quadrant I, the strategy for developing the Dry Port in Jeneponto Regency, South Sulawesi Province, supports an aggressive growth-oriented strategy. This is a highly advantageous situation for the planned policies, where the strength of the strategic location for the Dry Port development has a positive impact on the efficiency and speed of goods delivery, and the opportunities for Dry Port development will create new job opportunities and have significant economic benefits for the local area. So, based on the positioning in Quadrant I, the Dry Port project in Jeneponto Regency has a high potential for rapid growth.

### Discussion

The implementation of a Dry Port is a critical endeavor with the potential to significantly impact regional and national logistics and trade networks. In the case of Jeneponto Regency, this study has sought to assess the feasibility of establishing a Dry Port within the region. The findings of this research, supported by data and analysis, indicate that Jeneponto Regency possesses several key strengths for such a development. Its strategic location, with proximity to the busy Port of Makassar and excellent accessibility through the main road network, presents a strong advantage for efficient goods transportation. Additionally, the regency's economic and industrial growth potential offers promising prospects for the Dry Port's success. However, it is important to acknowledge the identified weaknesses and potential threats, as they may impact the efficiency and operational effectiveness of the Dry Port (Chen et al., 2023; Covas Moschovas et al., 2020; de Almeida Rodrigues et al., 2021; Kurtuluş, 2023; Langenus et al., 2022; Shu et al., 2023; Zhou et al., 2023). To achieve a comprehensive understanding of the project's viability, both internal and external factors have been considered in this feasibility study (J. Guo et al., 2022; Roso, 2007; Russo & Musolino, 2023; Sciomachen & Stecca, 2023; Sugimura et al., 2023; Van Nguyen et al., 2020; Zain et al., 2022). The assessment of these factors has led to the positioning of the Dry Port

project in Quadrant I of the SWOT analysis, signifying a supportive environment for an aggressive growth-oriented strategy. Therefore, based on its strategic positioning, the Dry Port project in Jeneponto Regency holds substantial potential for rapid growth and substantial economic benefits for the local community. This research serves as a valuable resource for stakeholders and policymakers considering the implementation of a Dry Port in the region.

## CONCLUSION

The development plan for the Dry Port in Jeneponto Regency is located in the Bontorappo Village area, Tarowang Subdistrict, with an available land area of 1.85 hectares. This regency has good accessibility through the main road network and is close to the Port of Makassar, which is one of the busiest ports in South Sulawesi. Furthermore, the potential for economic and industrial growth in this regency also provides promising opportunities for the development of the Dry Port.

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