



Makassar Industrial Estate Transformation in Developing South Sulawesi's Industrial and Economy

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Abstract. Industrial estates have become hallmark and are considered as powerful content in the context of development and growth of industrialization, economy, and regional competitiveness. In line with industry growth, the needs and demands for improving the quality of services for logistics facilities, energy, water and environmental safety in industrial estates have also increased. This study aims to analyze Makassar Industrial Estate's internal and external environment and develop strategies that support any industrial activities. Through explanatory research, data in this study are in the form of words, pictures and a few numbers which collected from company. The results show that Makassar Industrial Park has a competitive advantage and is in grow, invest, and build position to become center of industrial and economic growth in South Sulawesi. This study also finds that to ensure business sustainability, the Makassar Industrial Estate needs to provide services and facilities that can support any business activities in the area and attract potential investors.

Keywords: Business · Strategy · Transformation · Industry · Industrial Estate

1 Introduction

Industrial estates are areas that are categorized and planned for the purpose of industrial development. In the Government Regulation of the Republic of Indonesia No. 24 of 2009, stated that industrial estates are areas where industrial activities are concentrated, equipped with supporting facilities as well as infrastructure developed and managed by industrial estate companies which already have an industrial estate business permit. United Nations Industrial Development Organization defined industrial estate as developed land and divided into plots according to a comprehensive plan with the provision of roads, transportation and public utilities for use by a group of producers [11].

Industrial estate usually dominated by industrial activity and has facilities consisting of industrial plants, research and laboratories for development, office buildings, banks, and other infrastructure such as social and public facilities which include offices, housing area, schools, worship places, open public space and others [1].

The Government Regulation of the Republic of Indonesia No. 24 of 2009 stated that the development of industrial estates intended to control space utilization, increase efforts

to develop environmentally sound industries, accelerate industrial growth in the regions, increase industrial and investment competitiveness, and provide location certainty in infrastructure planning and development, which coordination between related sectors. The main reason for setting up industrial estates is to allow industry to settle and develop in specific locations that are planned and scaled up to that effect [4].

Industrial parks are currently a point of economic growth for the region which also serves to attract direct investment in the area [5]. The main competitive advantages of such locations for resident companies include the possibility of reducing time and financial costs for organizing production, favorable location in relation to transportation routes, markets for raw materials and finished goods, as well as targeted support for residents of industrial parks by state [8].

Increasing number of industrial areas, urbanization and the growth of residential and multi-purpose areas, needs of better management of environmental externalities in recent years, and digital transformation related to Industry 4.0, have shaped not only opportunities but also challenges for the future of industrial estates [11]. The Industrial Revolution 4.0 is a big leap for the modern industrial sector or where information and communication technology is fully utilized, not only in the production process, but also throughout the industrial value chain so as to give birth to a new business model with a digital basis in order to achieve high efficiency and better-quality products and services [4].

Those trends also affect the growth of industrial estate business in Indonesia, however poor planning and weak policy implementation have led to policy problems, administrative inefficiency, poor infrastructure, antagonistic labor relations, and limited incentives [7]. Moreover, the development of industrial estates is also faced with the issue of limited land at an expensive price, the dominance of the private sector in the development of industrial estates and the lack of government involvement have resulted in soaring industrial land prices, which makes investment in industrial estates more expensive than in neighboring countries.

In 2014, Makassar Industrial Estate took the second position as the “Best Industrial Area Outside Java”, however, currently the development of Makassar Industrial Estate is experiencing obstacles while industrial growth continues to increase. Based on the Central Statistics Agency of South Sulawesi, the growth rate of large and medium manufacturing industries in the fourth quarter of 2019 increased by 9.91% compared to the third quarter of 2019 and exceeded the national growth rate of only 4.01%.

Available land area for the Makassar Industrial Estate is getting smaller, from the previous 338 Ha to 28.4 Ha (2020). In addition, the remaining land area is also not all in one stretch, the land that is ready to be managed covering an area only 6.5 hectares (2021) and that is very limited compared to industrial growth in South Sulawesi.

Therefore, it is important for the Makassar Industrial Estate to formulate a sustainable strategy. The development of industrial parks requires careful planning and supervision. The principle stages in industrial park planning include: business case formulation, pre-feasibility studies; pre-identification of a short list of suitable regional sites; detailed feasibility analysis of the selected site; and financial arrangements and agreements with financial backers [11].

Therefore, this research seeks to analyze Makassar Industrial Estate environments and investigate customer needs which are the basis for planning the development and carrying out its business activities, the company must also formulate a business model that is in accordance with the existing business competition conditions. However, the need to follow established standards while creating a competitive advantage escalate the complexity of formulating industrial estate development strategies.

2 Methodology

This research is an explanatory design, applied research without any hypothesis-test with a focus on analyzing Makassar Industrial environment, provide an overview of its business process, and formulating alternatives to a much broader business scope that can be implemented. This study utilizes primary and secondary data such as individual responses, descriptive conclusions, or both that can be transferred to certain situations that shares characteristics.

Data collection techniques are carried out in natural settings, primary data sources, and data collection techniques are mostly on observation, questionnaire, interviews, and documentation. The data were analyzed using three main performance indicators of industrial estates according to the United Nations Industrial Development Organization (UNIDO) and General Electric (G.E.) Analysis.

3 Results

This study measures the performance of the Makassar Industrial Estate based on 3 (three) main performance indicators of industrial estates according to the United Nations Industrial Development Organization (UNIDO); (i) Economic Performance Indicators concerning Good Economic Governance, areas, infrastructure and services that have economic value; (ii) Social Performance Indicators regarding the suitability of the location and social infrastructure, quality of social management systems and services, occupational health and safety (K3) as well as work relations and welfare; and (iii) Environmental Performance Indicators regarding the suitability of the location with the environment, environmentally friendly infrastructure and systems, as well as measuring the efficiency of production, emissions, and waste management.

This performance measurement was carried out using a questionnaire distributed to the leaders and managers of the Makassar Industrial Estate (Fig. 1).

Based on the chart above, the results of the overall performance evaluation of the Makassar Industrial Estate are still below optimal results. Therefore, it is very important to formulate a more comprehensive strategy to improve its performance while making Makassar Industrial Estate a driver of industrial and economic growth in South Sulawesi.

The General Electric matrix uses two factors, industrial attractiveness and competitive strength [6]. In the following, General Electric's matrix data of industrial attractiveness and competitive strength factors of Makassar Industrial Estate is presented (Table 1).

Based on the index of the two factors, Makassar Industrial Estate is in a position that shows the possibility of a 'Grow, Invest and Build' strategy, which means the company

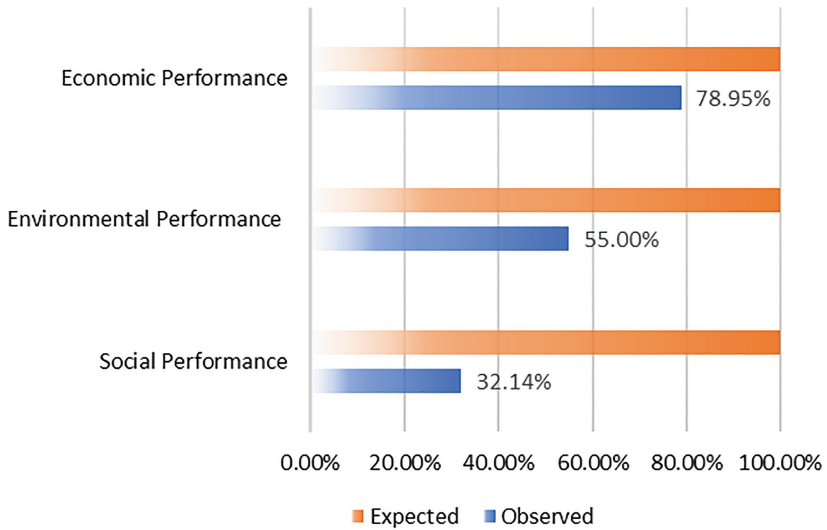


Fig. 1. Makassar Industrial Estate Performance. (Processed Data, 2022)

Table 1. General Electric (G.E.) Factors

Factors		Weight	Rating	Product
Industry Attractiveness	Market Growth Rate	19	0.87	16.53
	Market Size	21	0.72	15,12
	Demand Variability	8	0.56	4.48
	Industry Profitability	22	0.69	15.18
	Industry Competition	12	0.41	4.92
	Global Opportunity	18	0.88	15.84
	Industry Attractiveness (I.A.) Index			72,07
Competitive Strength	Market share	20	0.68	13.60
	Market Share Growth	10	0.55	5.50
	Brand Equity	21	0.62	13.02
	Distribution Channel Access	22	0.83	18.26
	Production capacity	11	0.77	8.5
	Profit Margin	16	0.80	12.8
	Competitive Strength (C.S.) Index			72,07

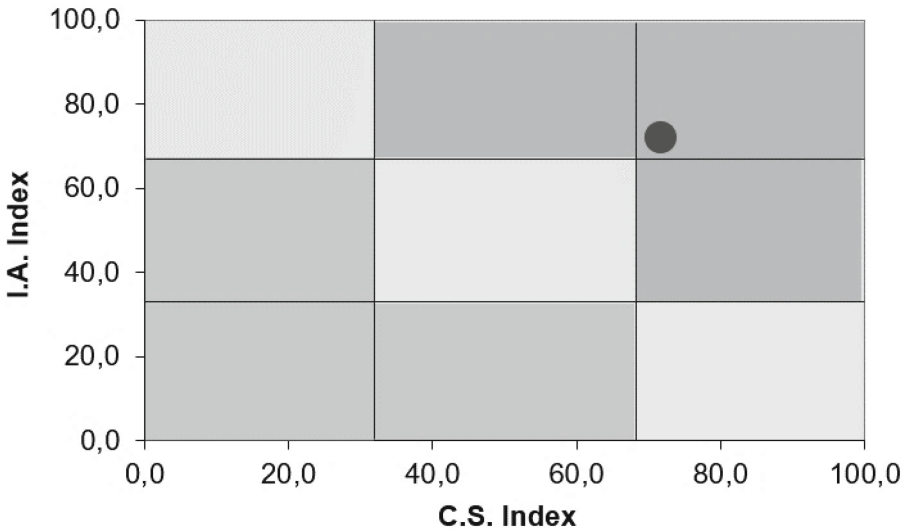


Fig. 2. G.E. Matrix Chart (*Processed Data, 2022*)

has business opportunities to grow because it is located in a cell that has a large market appeal, with high priority income and has a competitive advantage (Fig. 2).

4 Discussion

By taking advantage of good economic performance, investment strategies can be focused on improving the environmental and social performance of the Makassar Industrial Estate. However, this strategy must still aim to improve or at least maintain the existing economic performance and minimize the negative impact of industrial estate on its environments, including social aspect. This can be done through approaches to green design infrastructure, pollution prevention, and energy efficiency [3].

These approaches can be achieved by applying the concept of Eco-Industrial Parks, which is an industrial area concept specifically designed to improve these three key performance indicators through the promotion of a symbiotic industry and green technology that provides resource efficiency and socially responsible with surrounding communities [11].

The eco-industrial area concept not only provides commercial benefits, but also adds to its strategic value which leads to increased competitiveness and a better reputation with key stakeholders [10]. Its business members are collectively enabled to seek environmental, economic and social performance improvements through collaboration in managing environmental and resource problems and turning them into business solutions [3].

The Makassar Industrial Estate business, which focuses on selling and leasing very limited land, has become increasingly difficult to maintain. In addition, the diversity and completeness of facilities are also important factors to attract investors or tenants to want to operate in the industrial area as supporting business. If it is associated with the results of the analysis above, this business has the opportunity to be used as an investment

solution to overcome the limited land faced by the Makassar Industrial Estate at this time.

By restructuring loans that focus on recurring income businesses, it will not only provide a consistent and reliable income but also attracts more potential customers [4]. Makassar Industrial Estate will be able to rely more reliable and predictable source of revenue, determine business value in multiple ways with more stable metrics, sell additional products and services to existing customers, and maintain business in tune with changing customer needs.

Focusing the company's goals on industrial support businesses needed by tenant companies such as rental of heavy equipment, optimizing logistics facilities, as well as building modern with green technology waste treatment facilities, can be used as a solution to maintain the company's business sustainability and overcome environmental and social performance problems in the Makassar Industrial Estate. The availability of heavy equipment facilities, alternative energy, clean water, logistics facilities, industrial waste management, and employee housing facilities are key factors and can be as sources of sustainable income [4].

As an industrial estate managed by the Government as a shareholder, the most important goal in restructuring the industrial sector, and in the broader context—the entire economy, is to make a real contribution to the wealth and welfare of the region [9]. Sustainable development like this can be achieved if the investment made by the Makassar Industrial Estate can maintain human survival by preserving ecosystem functions and capabilities and providing opportunities for other sectors in the region to develop together through procedures and procedures that take into account the preservation of ecosystem functions and capabilities to support life both now and in the future [2].

5 Conclusion

By taking into account the results of the Makassar Industrial Estate performance evaluation through key performance indicators, it is very important to carry out a more comprehensive strategic planning. Analyzing the advantages and disadvantages of the Makassar Industrial Estate and formulating the best strategy that can be done to improve its performance while making it a driver of regional economic growth. The results of the General Electric (G.E) Matrix analysis found that the Makassar Industrial Estate is in a position that indicates a possible 'Grow, Invest and Build' strategy, which indicates that this area has the opportunity to grow because it has a large market appeal, with high priority income and have a competitive advantage. Refocusing the company's goals on supporting businesses may be one solution to maintain sustainability in the competitive industrial estate business. However, this research has not paid attention to the "real needs" for Makassar Industrial Estate tenants to provide more comprehensive point of view in formulating strategies in the future.

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