

# Magnetic Indicators of Economic Agglomeration for Industrial Investment Environment in Malaysia

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DOI: <https://dx.doi.org/10.47772/IJRISS.2024.815EC007>

Received: 06 November 2024; Accepted: 09 November 2024; Published: 13 December 2024

## ABSTRACT

Economic agglomeration plays significant roles in uplifting the industrial properties market. The setting includes various magnetic indicators that attract the investors locally and globally. Recent property market reports reveal a significant overhang of unsold industrial properties, highlighting a pressing need to enhance the investment appeal of this sector. Addressing these overhang issues is crucial for revitalizing the industrial properties market and sustaining economic growth. This research aims to identify the magnetic indicators of economic agglomeration within Malaysia's industrial investment environment. Participants were purposively selected from both public and private agencies involved in industrial investment. A focus group discussion with fifteen industry experts was conducted to determine the factors that create an optimal investment environment. Thematic analysis was then applied to the discussion data, enabling the identification and categorization of key themes related to magnetic indicators that influence industrial investment. From the discussion, nineteen magnetic indicators were identified. The provision of infrastructure, strategic location, supply of raw material and labor are among the main magnetic indicators that were identified. These findings provide a basis for the related government agencies, local government as well as developers in formulating an economic agglomeration of industrial properties that contribute to the economic growth of Malaysia.

**Keywords:** Commercial, Industrial Properties, Economic Agglomeration, Magnetic Indicators

## INTRODUCTION

The industrial market in Malaysia has experienced significant growth and development in recent years. The government has implemented favorable policies and incentives to promote industrial growth and attract foreign investments. With a strong emphasis on sustainability and digitalization, Malaysia's industrial market is poised for continued expansion and remains an attractive destination for businesses seeking growth opportunities in the region (Hossain et al., 2024). For year 2022, Johor is one of the states in Malaysia that recorded highest approved investment with amount RM70.6 billion (MIDA, 2022). In contrast to this achievement, the property market report revealed Johor stood as among the main contributor of the industrial overhang units for the part 10 years. In 2022, Johor recorded as the second highest of completed unsold industrial units in Malaysia worth RM470.59 million (NAPIC, 2022).

There is an increasing trend of industrial property overhang until 2019 and a slight drop over the past two years (NAPIC, 2022). In sustaining the decreasing trend of this property overhang, the magnetic indicators that contribute to the economic agglomeration of industrial properties should be investigated. Economic agglomeration refers to the spatial concentration of economic activities, such as industries and businesses, in a specific geographic area. Agglomeration has been shown to promote regional economic development through product channels, knowledge transfer, and government and trade union cooperation (Xu et al., 2020). It can also contribute to the improvement of economic production efficiency and resilience (Tian et al., 2023). Furthermore, agglomeration economies, such as cost savings and productivity gains, can be obtained by spatially concentrating industries (Otsuka et al., 2014).

Within the industrial and business investment environment, economic agglomeration creates a setting that facilitates intermediate product sharing, labor matching, and learning effects. These factors lead to improved labor productivity and overall industrial efficiency (Liu & Wu, 2023). Economic agglomeration also contributes to environmental sustainability by promoting improved waste utilization and comprehensive pollution treatment (Zhou et al., 2023). The agglomeration becomes a strength that may attract local and international investors. Thus, this study sought to investigate the magnetic indicators of economic agglomeration for industrial investment in Malaysia.

## LITERATURE REVIEW

### Industrial Property Market in Malaysia

The growth of industrial properties has been a significant aspect of economic development and urbanization. Industrial properties encompass a wide range of real estate assets, including factories, warehouses, distribution centers, and manufacturing facilities, among others. These properties serve as the backbone of various industries, supporting production, storage, and distribution activities (Mattarocci and Pekdemir, D, 2017). During the global economic downturn, the Malaysian property industry, including the industrial property sector, was impacted by oversupplying properties and slow sales. However, effective marketing strategies have been recognized as having a significant positive impact on all types of businesses, including traditional property developers in Malaysia (Woon & Suki, 2020). Digital marketing has been widely adopted in various industries in Malaysia, including the property development industry (Low et al., 2020).

The concept of industrial park or industrial hub is increasing. An industrial properties hub in Malaysia refers to a centralized location or area that focuses on the development and promotion of industrial properties (Rashiah and Krishnan, 2020). These hubs are designed to attract businesses and industries, provide necessary infrastructure and support services, and foster collaboration and innovation within the industrial sector. One example of an industrial properties hub in Malaysia is the Halal Industrial Park. Malaysia has positioned itself as a global Halal hub champion, aiming to capitalize on the lucrative Halal market (Ramli et al., 2014). The development of the Halal Industrial Park is part of Malaysia's strategy to strengthen its competitive advantage in the global Halal industry (Nasir et al., 2021). The park provides a dedicated space for the production and processing of Halal products, ensuring compliance with Halal standards and regulations.

Technology parks are another type of industrial properties hub that are designed to attract high technology industries and promote innovation and research and development activities. One example is the Kulim Hi-Tech Park, which has been studied to understand the impact of technology park services on industrial tenants (Abidin et al., 2014). Technology parks provide a conducive environment for high-tech industries, offering infrastructure, support services, and networking opportunities (Abidin et al., 2014). The Multimedia Super Corridor (MSC) is another significant industrial property hub in Malaysia. It encompasses various clusters, including Cyberjaya, Putrajaya, and Technology Park Malaysia (S et al., 2010). The MSC is designed to attract multimedia industries, research centers, and IT facilities, fostering a knowledge-based economy and promoting innovation and technology-driven growth (S et al., 2010).

### Factors attracting investors in selecting industrial properties

Over the years, the growth of industrial properties has been driven by several factors, including location suitability, government intervention, fundamental analysis, credibility of the developers, as well as facilities and services (Razali et al., 2020). Komarovska et al., (2015) introduced a theoretical model of strategic investments to identify the opportunities to increase the investment attractiveness. The model has four parts: macro-economic analysis, analysis of the investment climate, analysis of the investment strategy and decision-making. This integration indicates that value of industrial properties is affected by both macroeconomic and microeconomic factors, including location, property characteristics, economic conditions, government intervention, industrial agglomeration, transportation, infrastructure, technology level, climate, and environmental factors (Razali et al., 2020). Understanding these factors is crucial for investors and policymakers in making informed decisions regarding industrial property investments and development.

Location suitability plays a vital role in the selection of industrial properties. It involves evaluating a range of factors to determine whether a location aligns with the specific goals and requirements of a property investment. The preferences of occupiers, particularly headquarters (HQs) of companies, play a role in location suitability. Ramantswana et al. (2020) found that occupiers prefer facilities with good security systems, backup generators, air conditioning, parking facilities, energy management, access to the internet, efficient water supply, and quality meeting places. These factors should be taken into consideration when assessing the suitability of a location for attracting investors. The availability of abundant and diverse human resources is an attractive factor for businesses considering investment. Xuan (2020) highlights the importance of human resources in investment decisions, particularly skilled and disciplined labor suitable for industrial production chains, as well as managerial and technical workers with foreign language skills.

The quality of public services provided by the government also influences investor decisions. A government that offers good public service quality, such as quick customs procedures, market information support, and trade promotion, can save time and money for investors and create a favorable investment environment (Xuan, 2020). The provision of quality public services positively impacts investor decisions. Government intervention can also take the form of industrial policies and subsidies. In imperfectly competitive international markets, governments may implement industrial strategies such as research and development (R&D) or export subsidies to capture a greater share of rent-earning industries (Spencer, 1983). These interventions can influence industry outcomes and attract investors.

Investors often scrutinize the reputation of developers as a predictor of future revenues and success (Tomaselli et al., 2021). The credibility of a developer can be influenced by its commitment to environmental, social, and governance (ESG) initiatives. Sustainability ratings agencies play a role in providing analysis and results on corporate non-financial performance to investors, enhancing their credibility (Lo & Kwan, 2017). Therefore, developers who choose locations with strong market dynamics and favorable economic conditions may have a higher chance of attracting investors.

The quality of industrial parks and their service offerings also influence investor decisions. Service quality in industrial parks has been found to be an important factor for foreign direct investment firms (Ngan & Khoi, 2019). Investors value well-maintained and well-managed industrial parks that provide a conducive environment for their operations. Furthermore, the availability of data and information is important. Investors value access to market information, advertising support, and industrial property information (Xuan, 2020). The use of big data and technology in the real estate industry can also provide valuable insights and analysis for investors.

## METHODOLOGY

Focus group discussions (FGDs) were employed to achieve the study's aim by gathering nuanced insights directly from industry experts. FGDs typically bring together five to twelve participants to engage in a structured discussion on a specific topic (Byers et al., 2002), allowing participants to elaborate on their thoughts, experiences, and perspectives. For this study, purposive sampling was used to select nineteen participants from a diverse range of public and private sector experts involved in industrial investment, including representatives from regional development authorities, investment promotion agencies, local government bodies, and property developers. These nineteen participants, representing the full sample for the study, were divided into four groups (G1, G2, G3 and G4). Each session began with an introduction, followed by guided questions to explore participants' perspectives on magnetic indicators contributing to economic agglomeration in the industrial property market. The main themes in the data were identified based on these discussion questions.

## RESULTS

The experts were asked to discuss the magnetic indicators in groups and present the output of the discussion. Based on the presentation, nineteen magnetic indicators that may attract investors and contribute to the economic agglomeration for industrial were identified. Table 1 presents the nineteen magnetic indicators identified during focus group discussions as important factors for supporting economic agglomeration in

Malaysia’s industrial investment environment. Each indicator reflects a factor that influences the attractiveness of an industrial area to investors, with marks (☑) indicating which focus group discussed each factor.

Table 1: Magnetic Factors to Attract Investors in Industrial and Business Property Market

	<b>Magnetic factors</b>	<b>G 1</b>	<b>G 2</b>	<b>G 3</b>	<b>G4</b>
1.	Employee accommodation	☑	☑		
2.	Infrastructure readiness	☑	■	■	■
3.	Sufficient land supply	■			
4.	Rebate/ incentive provided	■			
5.	Supply of raw materials	■	■	■	
6.	Disaster management at the area	■			
7.	Labor readiness	■	■	■	
8.	Strategic location		■	■	■
9.	Accessibility to the location			■	■
10.	Theme / industry type based on locality		■		■
11.	Technology				■
12.	Safety				■
13.	Existence of key player industry operated at the industrial area		■		■
14.	Stable investment performance (Local 60%)		■		
15.	Green element within the area		■		
16.	Centralized/ shared facilities to reduce cost		■		
17.	Gated & guarded industrial area		■		
18.	Gred A building readiness		■		
19.	Maintenance of infrastructure	■	■	■	■

Note: G = Group

It is evident from Table 1 that the element of infrastructure, in terms of availability and also maintenance was mentioned by all groups as a fundamental requirement for a sustainable and attractive industrial investment environment. Infrastructure readiness, particularly regarding water, electricity supply, etc., is crucial for attracting investors and promoting industrial development. A reliable, affordable, and scalable infrastructure not only ensures uninterrupted operations but also enhances cost competitiveness, sustainability, and expansion opportunities for industries. According to Roshani et al. (2018), adequate infrastructure ensures smooth operations, efficient logistics, and connectivity to markets, which are crucial for businesses to thrive. The analysis reveals that well-maintained infrastructure is regarded by all groups as a fundamental requirement for a sustainable and attractive industrial investment environment. Participants emphasized that reliable infrastructure creates a conducive setting for industrial development and fosters investor confidence. By prioritizing infrastructure maintenance, a region demonstrates its commitment to providing a strong and

dependable foundation for business growth. Additionally, the infrastructure must have adequate capacity to meet the needs of both current and prospective investors. This encompasses not only basic utilities, such as water and electricity supply, but also essential components like transportation networks and broadband connectivity, which support efficient communication and data transfer, which are vital for modern industrial operations. Understanding the specific requirements of investors and ensuring infrastructure can cater to their needs is crucial.

The next crucial indicator identified from the discussions was the strategic location. Industrial locations with excellent access to transportation infrastructure, such as highways, railways, ports, and airports, provide clear logistical advantages. Efficient connectivity not only facilitates the smooth movement of goods and materials, but also helps streamline supply chain operations, directly impacting cost and time efficiency. Investors prioritize properties that offer easy access to these transportation networks, as it leads to reduced shipping costs and improved operational performance. Moreover, proximity to suppliers and other industrial clusters offers tangible benefits, including shorter lead times, better coordination, and potential cost savings in procurement. The close access to a network of suppliers also supports collaboration, knowledge sharing, and fosters synergistic relationships among industry players, creating a stronger, more competitive industrial ecosystem.

The supply of raw materials was one of the most frequently mentioned indicators in the discussions. Investors prioritize regions with a reliable and stable supply of raw materials, as a consistent and predictable supply minimizes disruptions to production schedules, ensuring smooth operations. Proximity to raw material sources is highly valued, as it reduces transportation costs, simplifies supply chains, and minimizes delays in accessing essential inputs. Being located near raw material suppliers provides a competitive advantage by ensuring a steady and timely supply, which is crucial for maintaining uninterrupted production and controlling costs.

In terms of labor, investors closely evaluate wage rates and labor regulations in a region to assess the competitiveness of labor costs. They seek a balance between competitive labor costs and high productivity levels to optimize operational efficiency and profitability. Regions with a sufficient pool of skilled workers tailored to their industry are highly favored, as this ensures labor availability and supports the efficient functioning of operations.

The other important indicators that were mentioned by more than one group are employee accommodation, theme or industry type based on the locality, as well as the existence of key player industries operating in the industrial area. All these indicators are among the aspects that will be prioritized by the investor in selecting industrial properties.

## **CONCLUSION**

This study aimed at identifying the magnetic indicators of economic agglomeration for industrial investment environment. This study found that the elements of infrastructure, location, supply raw material and labor are among the main indicators that can attract the local and international investors. The provision of these indicators should be considered at both pre and post development of industrial properties. Local authority as well as developers play crucial roles in ensuring the supply of industrial development fit the current demand for industrial investment environment. Although this paper has contributed to an understanding of magnetic indicators for economic agglomeration for industrial properties, it has also created a need for further research. It is essential to analyze the findings further and quantify the critical magnetic indicators to determine their relative importance in shaping the industrial investment environment. Given the importance of these magnetic indicators, further studies are also recommended in Malaysia and internationally to assess and refine the existing factors influencing location decisions for industrial investments. This can help the stakeholders to choose appropriate measures to be adopted to improve the provision of industrial sectors for the country.

## **ACKNOWLEDGEMENT**

The authors would like to acknowledge Fundamental Research Grant Scheme (FRGS) under Ministry of Education, Malaysia with reference code FRGS/1/2020/SS02/UTM/02/2 and Vot. number 5F335 for funding the publication of this study.



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