The Impact of Transit-Oriented Development (TOD) on Retail Property Rental Value in Jakarta's Block M Area

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ABSTRACT

This study aims to analyze the impact of Transit-Oriented Development (TOD) development on the rental value of retail properties in the Blok M area, Jakarta. The background of this research is based on the increasing adoption of TOD as a solution to traffic congestion and increased accessibility in urban areas. This research uses a qualitative method with an approach to interviews, observations, and document analysis. The results of the study showed a significant increase in the rental value of retail properties after the implementation of TOD, especially in three main shopping centers: Blok M Square, Blok M Plaza, and Blok M Mall. The percentage increase in rental prices per year reaches an average of 15%. These findings show that TOD contributes positively to the increase in retail property value in areas with high accessibility. In conclusion, TOD has an important role in supporting the economic growth of urban areas through increasing the value of retail properties.

Introduction

The development of Transit-Oriented Development (TOD) areas has become one of the main strategies in urban planning in various major cities in the world. The TOD concept, which integrates land use with public transportation systems, aims to create a more sustainable and efficient urban environment. (Arsyad & Handayeni, 2018). According to a report (WRI, 2021), the implementation of TOD can improve accessibility, reduce congestion, and reduce carbon emissions. In Indonesia, especially in Jakarta, the development of TOD has begun to be implemented in several areas, one of which is Block M. (Heriyanto, 2018).

According to the Central Statistics Agency (BPS), the retail sector accounted for 15.24% of the total GDP in 2016 and absorbed around 22.4 million workers, or around 31.81% of the total non-agricultural workforce (Wildison, 2017). Retail's contribution to the economy continues to grow every year. According to Aprindo data, the value of modern retail sales in Indonesia reached Rp205 trillion in 2016, increased by 3.7% in 2017 to Rp212 trillion, and is expected to reach Rp233 trillion in 2018 (Modigliani et al., 2024). In addition to providing goods and services to consumers, the retail sector also has

a positive impact on the economy through job creation, which also contributes to overall economic growth (Agus Budi Purwantoro, 2020).

One of the challenges faced by the leisure sector in Indonesia is traffic congestion, which limits consumer mobility and accessibility. (Khairunnisa et al., 2021). To overcome this obstacle, one of the proposed solutions is to implement the concept of Transit Oriented Development known as TOD. TOD is a development strategy that focuses on mass public transportation, by integrating mixed land use, high-density, and pedestrian facilities. The application of TOD can be found in the Blok M area, South Jakarta. This business and shopping area, which is located in Kebayoran Baru District and is bounded by Jalan Iskandarsyah, Jalan Bulungan, Jalan Falatehan, and Jalan Melawai (Mungkasa, 2023), applies the TOD concept by having three main integrated malls, namely Blok M Square, Blok M Mall, and Plaza Blok M, all of which are less than 400 meters away from the Blok M TOD station (Asfarinal et al., 2022).

TOD emerged as a planning paradigm that emphasizes the role of transportation in urbanization amid rapid urban growth. TOD not only aims to improve accessibility and change the preference from private vehicles to public transportation, but is also considered a solution that has the potential to provide economic benefits, reduce carbon emissions, and increase government investment (EFAB, 2012).

The transit-oriented urban development approach, or TOD, has become a dominant trend in urban planning. The main focus of TOD development is on transit stations, involving mixed-use developments that include residential, retail, and offices. The general criterion limits the distance from the transit station to no more than 0.5 miles (about 400 meters) (Harahap et al., 2022). TOD is an integral part of theories that explain the relationship between the environment and TOD, as well as the exploration of the concept of sustainability in urban development. In urban development, sustainability, especially through TOD, is applied to achieve various goals. An increase in property value is one of the indicators of TOD's success. Factors such as proximity to transit and the presence of TOD in areas that have experienced early growth are closely correlated with the increase in property values. Therefore, understanding the impact of transit and TOD on property value is critical in planning for sustainable urban growth. (Rochman & Ratriningsih, 2019).

However, the retail sector also faces challenges in adapting to environmental changes caused by the implementation of TOD. Changes in retail property prices are an important issue that is influenced by various factors, including location, accessibility, demand, supply, and level of competition. Therefore, the purpose of this study is to investigate the impact of TOD implementation on retail property prices in the Blok M area, Jakarta.

This study has a novelty value in the local context of Indonesia because it focuses on the specific impact of TOD on the rental value of retail properties in Jakarta. Although the concept of TOD has been widely researched in global cities, this study adds to the knowledge of how TOD affects the retail sector in Indonesia's fast-growing metropolis. The study also compares rental prices before and after the implementation of TOD,

providing new insights into price dynamics and the economic impact of TOD in the local market.

The urgency of this research lies in the need to understand the impact of TOD implementation on retail property rental values, especially in developing cities such as Jakarta. With the increasing adoption of TOD as an urban planning strategy, it is important to evaluate how these policies affect the retail sector which is a vital component of the city's economy. This research will provide useful data for decision-makers, developers, and property owners in planning and managing areas that are integrated with public transportation systems.

The main objectives of this study are to:

1. Analyze the impact of TOD implementation on the rental value of retail properties in the Blok M area, Jakarta.
2. Identify the factors that affect changes in rental values before and after the implementation of TOD.
3. Measuring the effect of proximity to TOD stations on the rental value of retail properties.
4. Provides insight into how TOD affects consumption patterns and location attractiveness for retail businesses.

This research provides the following benefits:

1. For Decision Makers: Provide relevant information for urban planning and TOD development policies, as well as assist in formulating strategies to improve property value and transportation accessibility.
2. For Property Developers: Provide data that can be used to plan retail property projects that are integrated with TOD, as well as understand the potential economic impact of such developments.
3. For Researchers and Academics: To add insight and literature related to TOD and its impact on the retail sector, as well as provide a basis for further research in the field of urban planning and urban economics.

Method

This study is designed to understand the impact of Transit-Oriented Development (TOD) development on the rental value of retail properties in the Blok M area, Jakarta. This research method uses a qualitative approach, which focuses on collecting and analyzing descriptive data to provide an in-depth understanding of the phenomenon being studied. This method aims to dig deeper into the influence of TOD on retail property rental values through interviews with stakeholders, direct observation, and analysis of relevant documents.

Research Strategy

This study applies a qualitative descriptive design that focuses on thematic analysis to answer research questions about the impact of TOD on the rental value of retail properties. The design of this study aims to explore the changes that have occurred in the

rental value of retail properties after the implementation of TOD, especially in the Blok M area, which has become one of the main business and shopping centers in Jakarta.

This study is designed to provide a comprehensive overview of the impact of TOD in areas that have high accessibility to public transportation. The main focus is to understand the relationship between the development of transportation infrastructure and the dynamics of retail property rental prices, as well as other factors that also affect these price changes.

Research Location

The location of this research is focused on the Blok M area, Jakarta, which is one of the largest shopping centers in the city. The Block M area was chosen because it is one of the areas that has experienced TOD development, with several public transportation stations such as the MRT that have been integrated with shopping centers. Blok M is a strategic area for this research because it is located in the heart of the city, surrounded by various public facilities and commercial centers, as well as its high level of accessibility to public transportation.

Data Collection Techniques

Data is collected through several techniques designed to gain an in-depth understanding of the research topic:

In-Depth Interview: Interviews were conducted with various related parties such as retail property managers, developers, business owners, and government officials involved in the development of the Block M area. The interview questions were prepared to explore information related to changes in rental prices before and after the implementation of TOD, factors that affect price fluctuations, and challenges faced in the process of adapting to TOD.

Field Observation: Direct observation was carried out at the research site to obtain visual data and context related to infrastructure development around the Block M area. This observation also serves as validation of the data obtained from the interview.

Document Analysis: The documents used in this study include property development reports, retail rental price statistical data, zoning regulations, and urban development plans related to TOD. This document is analyzed to understand the dynamics of development in the Block M area, as well as the factors that contribute to changes in the rental value of retail properties.

Secondary Data: Retail property price data in the Blok M area is collected from various reliable sources such as government statistical reports, data from property developers, and market research reports. This secondary data is used to supplement information from interviews and observations, as well as provide a broader context related to property price dynamics in the Block M area.

Data Analysis

Data analysis was carried out using a thematic coding approach, where data obtained from interviews, observations, and document analysis were categorized based on certain themes that were relevant to the research objectives. The main themes analyzed

are the impact of TOD development on retail property rental values, price dynamics before and after the implementation of TOD, and factors that affect these price changes.

Each data obtained through interviews and observations is coded according to predetermined themes, such as "increase in rental prices," "transportation accessibility," and "changes in consumption patterns." This coding process helps in identifying common patterns that emerge from the data, as well as relating them to the research questions asked.

In addition, the analysis was also carried out with a cause-and-effect approach, where the relationship between the development of TOD and changes in the rental value of retail properties was analyzed in depth. This study tries to identify the factors that cause an increase or decrease in retail property rental prices in the Blok M area, as well as how these changes are affected by the implementation of TOD.

Research Design

This study uses a descriptive-qualitative design, which means that this research aims to describe the phenomena that occur in detail and depth without any intervention or experimentation. This design was chosen because it is suitable for answering exploratory research questions, where researchers seek to understand how the development of TOD affects the rental value of retail properties in a particular area.

This study also uses a case study approach, where Block M as an area integrated with the TOD system was chosen as the main research object. This case study allows researchers to delve into the specific phenomena that occur in the area, as well as explore the unique factors that affect the dynamics of retail property prices.

Data Validation

Data validation is carried out through triangulation techniques, namely by combining data from various sources (interviews, observations, documents) to ensure that the research findings are reliable and accurate. In addition, the researcher also validates by involving stakeholders in the process of preparing research findings, so that the results of the resulting analysis reflect the reality in the field.

Presentation of Findings

The findings of the study are presented in the form of a descriptive narrative that summarizes the results of interviews, observations, and document analysis. The researcher uses concrete examples from cases in the Block M area to illustrate how the development of TOD has an impact on the rental value of retail properties. This presentation also includes thematic analysis related to rental price dynamics before and after the implementation of TOD, as well as factors that affect these changes.

Results and Discussion
Blok M MRT Station Density
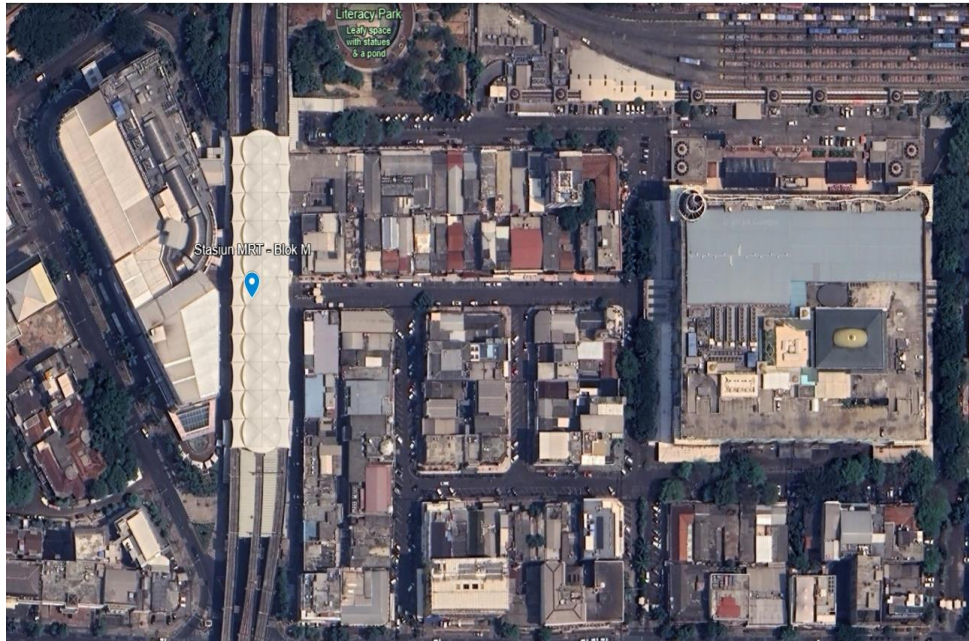
Figure 1 Motion flow

The increase in the density of MRT passengers at Blok M Station has a direct impact on the rental value of retail properties in the area. Several key factors link passenger density to the dynamics of retail property rental values: (i) Increased Foot Traffic, the more MRT passengers use Blok M Station, the higher the foot traffic around the nearest station and shopping center. This creates greater opportunities for retail property owners to attract customers, which can ultimately increase their revenue and business attractiveness. (ii) Investment Attractiveness, the increase in MRT passenger density increases the attractiveness of investment in the Blok M area. This has an impact on the increase in the rental value of retail properties due to the increasing demand for commercial space. (iii) Accessibility Efficiency, the existence of the MRT which increases the accessibility of the Blok M area for residents from various areas of Jakarta makes Blok M a more competitive shopping and business destination. Retail properties that are close to MRT stations benefit more due to ease of access for customers.

Evaluation of passenger density at Blok M MRT station, based on data on the number of daily passengers and station area that has been obtained. The average number of daily passengers at Blok M MRT Station reaches 102,041 people. This information was obtained from the official report of PT MRT Jakarta (Perseroda) (MRT, 2024). In addition, the area of the station has also been known, with a length of 175 meters and a width of 26 meters, which results in a total area of 4550 square meters (MRT, 2024).

From the data provided, it can be calculated the passenger density at the Blok M MRT Station using the formula: Passenger Density $= \dfrac{Jumlah\ Penumpang\ Harian}{Luas\ Stasiun}$

After the calculation was carried out, the passenger density at the Blok M MRT Station is estimated to be around 22.42 people per square meter. With such significant densities, a good understanding of the number of passengers and the use of stations

becomes essential in operational planning and management, including security, facilities, and passenger services.

Analysis of the Impact of TOD on Retail Property Rental Value

This study analyzes the impact of Transit-Oriented Development (TOD) development on the rental value of retail properties in the Blok M area, Jakarta, with a focus on two main shopping centers, namely Blok M Square and Blok M Plaza. The development of TOD, especially with the Blok M MRT Station, is expected to have a significant impact on the rental value and occupancy rate of retail properties in this area.

To understand the impact of TOD on the rental value of retail properties, here is a table that presents data on rental values and the number of units filled in Blok M Square and Blok M Plaza from 2015 to 2023. This data will be analyzed to see trends and changes that occur along with the development of TOD in the Block M area.

Table 1
Rental value of Blok M Square property

| Year | PRICE RANGE | | | | | INFORMATION |
	LOW	LOW MEDIUM	KEEP	MEDIUM-HIGH	TALL	
2015		V				BEFORE THE MRT
2016		V				
2017		V				
2018			V			
2019				V		INAUGURATION
2020		V				COVID-19
2021		V				
2022				V		
2023					V	AFTER COVID
THE LOWEST PRICE AT THIS RETAIL PRICE IS FROM RP 400.000 - RP 600.000						

Table 2
Rental value of Blok M Plaza

| Year | PRICE RANGE | | | | | INFORMATION |
	LOW	LOW MEDIUM	KEEP	MEDIUM-HIGH	TALL	
2015	V					BEFORE THE MRT
2016		V				
2017			V			
2018			V			
2019						INAUGURATION
2020		V				COVID-19
2021		V				

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Year						
2022				V		
2023					V	AFTER COVID

THE LOWEST PRICE AT THIS RETAIL PRICE IS FROM RP 800.000 - RP 1.350.000

Table 3
Rental value of Blok M Mall property

| Year | PRICE RANGE | | | | | INFORMATION |
	LOW	LOW MEDIUM	KEEP	MEDIUM-HIGH	TALL	
2015					V	
2016					V	BEFORE THE MRT
2017				V		
2018				V		
2019					V	INAUGURATION
2020			V			
2021			V			COVID-19
2022		V				
2023	V					AFTER COVID

THE LOWEST PRICE AT THIS RETAIL PRICE IS FROM RP 800.000 - RP 1.350.000

Blok M Square

Rental Value Trends: The rental value of retail properties in Blok M Square shows fluctuations from 2015 to 2023. In 2015, the rental price was Rp 450,000 per square meter and had stagnated until 2017. However, since 2018, the rental value has started to increase, reaching Rp 600,000 per square meter in 2023. This increase reflects the positive impact of TOD development, which increases the attractiveness of the Blok M area as a strategic business location.

Factors Affecting the Rental Value of Retail Properties in the Block M Area
BOT Transition Time

The transition period of land lease extension between PT Indonesia Prima Property Tbk. and the Jakarta government affects the dynamics of rental values and rental interest which will not increase significantly. Uncertainty regarding the future of land ownership has led investors and tenants to be more cautious in making decisions, potentially depressing the rental value of retail properties in the area.

Impact of the COVID-19 Pandemic

The COVID-19 pandemic in 2020 to mid-2022 caused global economic disruptions, including in the retail property sector. Data from those years showed a decline in rental values and occupancy rates, reflecting an abnormal situation. Therefore, this data is

considered less relevant for long-term analysis and is more appropriately seen as an anomaly.

Effect of TOD Development

TOD developments, such as the construction of the Blok M MRT Station, generally have a positive impact on the rental value of retail properties by increasing the accessibility and attractiveness of the area. However, the existence of external factors such as the BOT transition period can hinder the potential increase in rental value even though TOD has been implemented. This can be seen from the rental value data which shows fluctuations and does not always increase significantly even though it is integrated with the MRT.
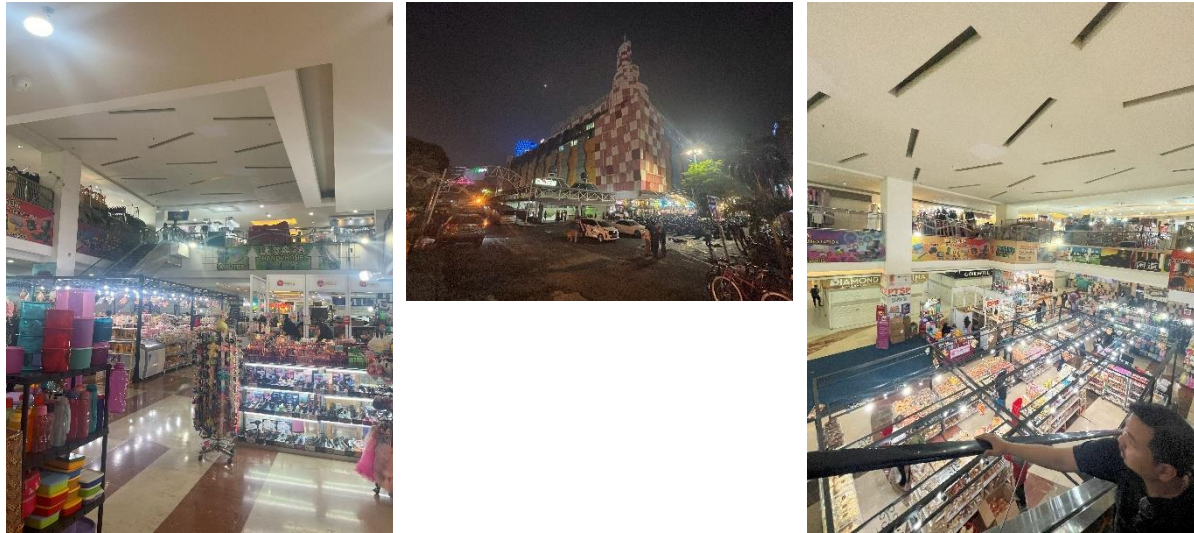
Blok M Square

Blok M Square is one of the major shopping malls in the Blok M area that has experienced fluctuations in the rental value of its properties from 2015 to 2023. In 2015, rental prices in Blok M Square were included in the "low to medium" category and stagnated until 2017. However, starting in 2018, rental prices showed a significant increase, reaching a "high" in 2023. This increase reflects the positive impact of the development of this MRT-based TOD, which has succeeded in increasing the attractiveness of this area as a strategic business location.

In addition to the increase in rental value, the occupancy rate of retail units in Blok M Square also shows a positive trend. From 71% in 2015, occupancy increased to 100% in 2023 from a total of 3,338 retail properties. This shows that the development of TOD has managed to attract more tenants, which in turn increases economic activity in the region.

To give you a visual idea, here is a plan of Block M Square showing the layout and location of the retail units inside:
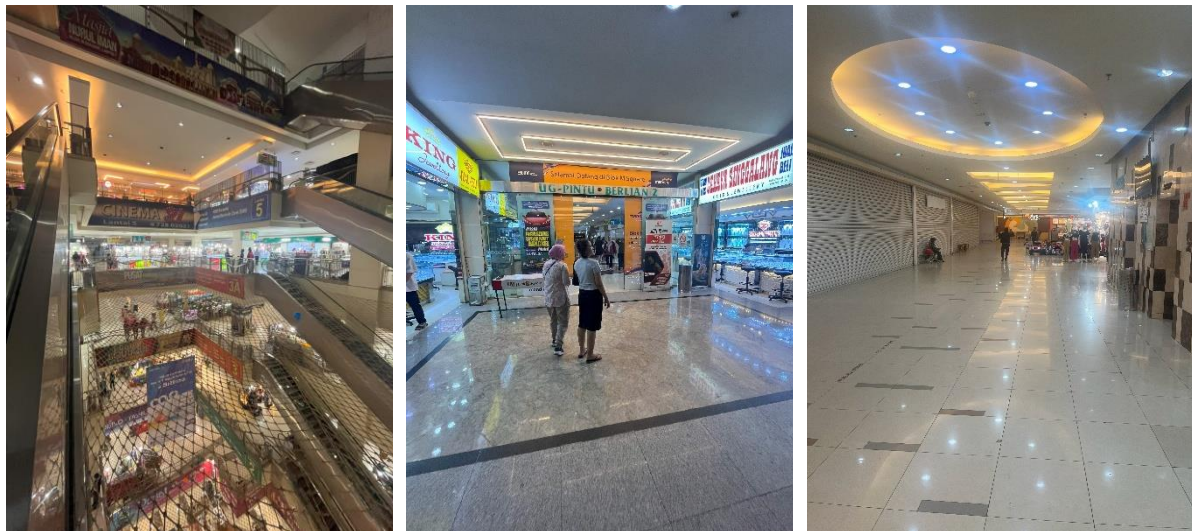
Figure 3 Block M Square

This photo helps to understand the distribution of commercial space and accessibility within the mall, which is one of the determining factors of high and low tenant interest. In addition, some of the following photos of Blok M Square provide a visualization of the actual condition of the mall, showing the atmosphere and facilities offered:

Blok M Plaza

Blok M Plaza also experienced a significant increase in rental value during the same period. In 2015, rental prices were included in the low category and then gradually increased until they reached the "high" category in 2023. This increase shows that the development of TOD has a strong positive impact on the value of retail properties in this region.

The occupancy rate in Blok M Plaza also showed a steady increase from 74% in 2015 to 100% in 2023 from a total of 200 retail properties. This indicates that Blok M Plaza has managed to attract tenants consistently, making it one of the desired locations for retail businesses.

The following overview of Blok M Plaza shows the layout of the mall, highlighting the strategic location and distribution of retail space that makes it easy for visitors to access.

Blok M Mall

In contrast to Blok M Square and Blok M Plaza, Blok M Mall experienced a significant decrease in rental value from 2015 to 2023. In 2015, rental prices in Blok M Mall were included in the "high" category in this retail, then continued to decline until they reached the "lowest" category in 2023. This decline reflects the challenges faced by Blok M Mall, such as competition with other shopping malls and changing consumer preferences. In the case of Blok M mall itself, other factors can cause prices to drop in that category, namely the expiration limit of the BOT (Build Operate Transfer) agreement which has not been extended for certainty.

The occupancy rate at Blok M Mall also showed a decrease from 60% in 2015 to only 24% in 2023. This decline indicates a lack of attraction for tenants and the need for revitalization or new strategies to increase commercial interest and activity in the mall.

The following M Mall Block Overview shows the layout of the mall, which may help identify areas that need to be upgraded or changed in strategy. The following photos of Blok M Mall provide a visualization of the condition of the mall that may require revitalization:
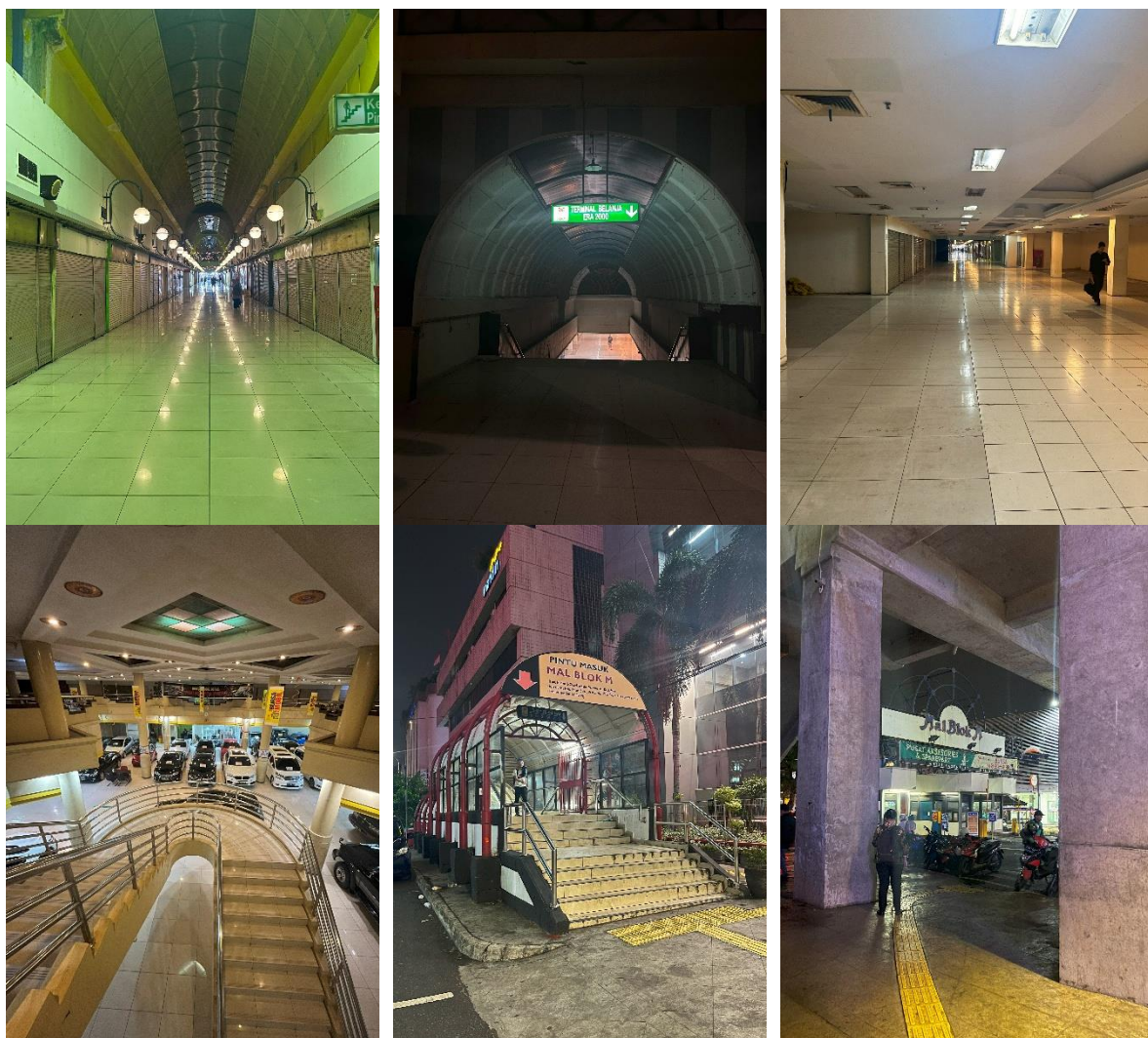
Figure 4 M Mall Block

It should be underlined that data from 2020 to mid-2022 were not included in this analysis. The main reason for the data exclusion was the significant impact of the COVID-19 pandemic that hit the world during that period. The COVID-19 pandemic has caused major disruptions to various sectors of the economy, including the retail property sector. Social restrictions, temporary closures of shopping malls, and drastic changes in consumer behavior resulted in a sharp decline in business activity. This situation creates unusual and unstable market conditions, so the rental value of the property in that period

does not reflect normal market conditions. Therefore, to ensure a more relevant and accurate analysis, the COVID data was excluded, allowing us to focus on long-term trends before and after the pandemic period. By ignoring the pandemic period, a clearer picture of the impact of TOD on the rental value of retail properties in the Blok M area can be obtained, without being distorted by market anomalies caused by the temporary global crisis.

With the development of MRT-based TOD increasing the density of the Blok M area by 102,041 people per day, it is proven that it can increase the price of retail properties in Blok M Square and Blok M Plaza, it is directly proportional to the increase in the occupancy percentage in the two retails, but for Blok M Mall, it has decreased due to other factors such as the expiration of the BOT period. This is another factor in the price and also the occupancy of the retail property of Blok M.

Conclusion

This study aims to evaluate the impact of the implementation of Transit-Oriented Development (TOD) on the dynamics of retail prices in the Jakarta Block M area. Based on the analysis of the data and the findings obtained, several key conclusions can be drawn.

The implementation of TOD in the Block M area is closely related to the increase in retail prices. This happens through increasing the accessibility of public transportation which encourages economic activity in the region. With the integrated MRT station, the area becomes more accessible to the public, which in turn increases the value of the surrounding retail properties. This increase reflects how TOD can affect the economic value of an area by improving accessibility. Environmental transformation due to TOD has led to changes in consumer behavior. People are more likely to use public transportation and visit easily accessible areas. This behavior change created a surge in economic activity and visits to areas around MRT stations, which contributed to an increase in retail prices. Consumers now prefer to shop in areas that are integrated with public transportation because of the convenience and efficiency offered.

TOD encourages changes in development patterns in the Block M area. The existence of good infrastructure not only attracts consumers but also investors who see the potential long-term benefits of investing in a rapidly growing region. The implementation of TOD has a significant positive impact on the Blok M area. TOD not only provides economic but also social and environmental benefits, creating a more orderly, efficient, and sustainable area.

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