

SPATIAL ANALYSIS AND LOCATION SELECTION FACTORS SHOPPING CENTER IN BEKASI CITY

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Abstract

Development of shopping centers is uneven in Bekasi City. This causes sub-districts without shopping centers to come to the center of Bekasi City to come to entertainment or recreation centers such as shopping centers. This study aims to discuss the spatial analysis of distribution patterns and factors in selecting the location of shopping centers in Bekasi City. The research method used is quantitative descriptive by using the nearest neighbor analysis for distribution patterns, and weighting analysis by calculating the average (mean) for the shopping center location selection factor.

The results showed that the distribution pattern of shopping centers in Bekasi City tends to be in groups located in the city center. Factors that determine the location of shopping centers in Bekasi City are influential factors are accessibility factors, demographic factors, consumer socio-economic factors, psychographic factors and competition factors.

Key words: Location Selection, Shopping Center, Spatial.

Preliminary

Over time, cities will develop as a result of population growth, socio-economic and cultural changes and their interactions with other cities and the surrounding area. Physically, the development of a city can be characterized by its increasingly dense population, increasingly dense buildings and areas of development especially settlements that tend to be more extensive, and increasingly complete city facilities that support the social and economic activities of the city. The dynamics of city development are basically good and natural because these developments are expressions of the people in the city. One of the economic activities triggered by trade and services, this is an important factor in creating urban development in general.

Growth is started by the primary sector (agriculture), then followed by the secondary sector (manufacturing industry), and the tertiary sector (services). In a developed economy, the service sector has a greater role (in the value of Gross Regional Domestic Product or GRDP). However, despite the available opportunities, various threats that must be faced arise due to these conditions. Basically, the city is a growth center that has facilities and facilities so that it becomes a center of attraction, which causes various kinds of businesses to be attracted to be located there. Businesses that dominate the suburbs lead to the construction of shopping centers.

One of them is Bekasi City, Bekasi City as one of the fastest growing cities must be able to increase its competitiveness so as not to lag behind other cities. One of the rapid developments is in the construction of shopping centers. The high interest of investors to invest their capital in Bekasi City.

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At present, the Bekasi City shopping center already has 13 shopping centers that make the shopping center growth in Bekasi City rapid and not directed at the distribution of locations. Many investors are looking for land to build shopping centers in the middle to upper scale without seeing what will happen in the future. Shopping center activities that develop in the city of Bekasi are located on Jalan Ahmad Yani, Jalan Kalimalang and Jalan Pekayon with the main function as trade and services on a city and even regional scale. The pattern of development activities carried out linearly along the arterial and collector roads.

Given the very importance of determining the location for the sustainability of shopping centers that are long-term, it is necessary to conduct research on "Spatial Analysis and Factors for the Selection of Shopping Center Location in Bekasi City". This study aims to identify shopping center distribution patterns and shopping center location selection factors.

Research methodology

The method used in this research is quantitative descriptive analysis. Analysis of the distribution pattern of shopping centers in Bekasi City was carried out using the nearest neighbor analysis. Weighting analysis is carried out to determine the selection factor of the location of the shopping center in Bekasi.

The analysis of the nearest neighbor / nearest neighbor analysis is used to determine the distribution pattern of shopping centers in Bekasi City, whether it follows a random, clustered or uniform pattern, which is shown from the value of T. The results of this analysis, can provide an overview of the tendency of a service center why shows trends in a certain pattern, it is associated with explaining the preferences of the shopping center manager in choosing a location.

The value of T / index of distribution of the nearest neighbor itself is obtained through the formula:

$$T = \frac{J_u}{J_h}$$

Where :

Q : Index of distribution of nearest neighbors.

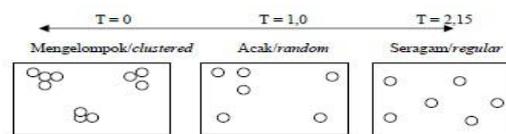
ju : Average distance measured between one point with its nearest neighbor.

jh : Average distance obtained if all points have a random pattern = $\frac{1}{2\sqrt{p}}$

P : The density of points in each km2 is the number point (N) divided by area in km2 (A), so it becomes $\frac{N}{A}$

In carrying out the analysis of the nearest neighbor, it is important to note the following important points:

- a. Determine the boundaries to be studied;
- b. Change the distribution pattern of observation units in topographic maps to patterns point distribution;
- c. Give serial numbers for each point, to facilitate analysis;
- d. Measure the closest distance to the distance in a straight line between one point and another point that is the nearest neighbor; (maximum 1 km)



- e. Calculate the size of the nearest neighbor parameter.

Source: Hagget in Bintarto and Hadisumarno (1982: 76)

Picture 1
Analysis of the nearest Neighbors

In this study the technique used is purposive sampling technique, so that all samples taken can represent the population in accordance with the research objectives. In this study are managers of shopping centers (13 shopping centers) and the community (100 respondents) who visited shopping centers in Bekasi City.

Table 1
List and Area of Bekasi City Shopping Center

No	Shopping center	Business Address	Area (m ²)
1	Grand Mall Bekasi	Kecamatan Medan Satria	33.026
2	Metropolitan Mall	Kecamatan Bekasi Selatan	85,500

3	Grand Metropolitan Mall	Kecamatan Bekasi Selatan	85,500
4	Bekasi Cyber Park	Kecamatan Bekasi Selatan	20.000
5	Mega Hypermall Bekasi	Kecamatan Bekasi Selatan	120.000
6	Bekasi Square	Kecamatan Bekasi Selatan	40.000
7	Grand Galaxy Park	Kecamatan Bekasi Selatan	31.281
8	Summarecon Mall Bekasi	Kecamatan Bekasi Utara	160.000
9	Blu Plaza Bekasi	Kecamatan Bekasi Timur	56.000
10	Bekasi Trade Center	Kecamatan Bekasi Timur	13.130
11	GP Mall	Kecamatan Bekasi Timur	33.000
12	Plaza Cibubur	Kecamatan Jati Sampurna	9.000
13.	Mall Ciputra Cibubur	Kecamatan Jati Sampurna	40.000

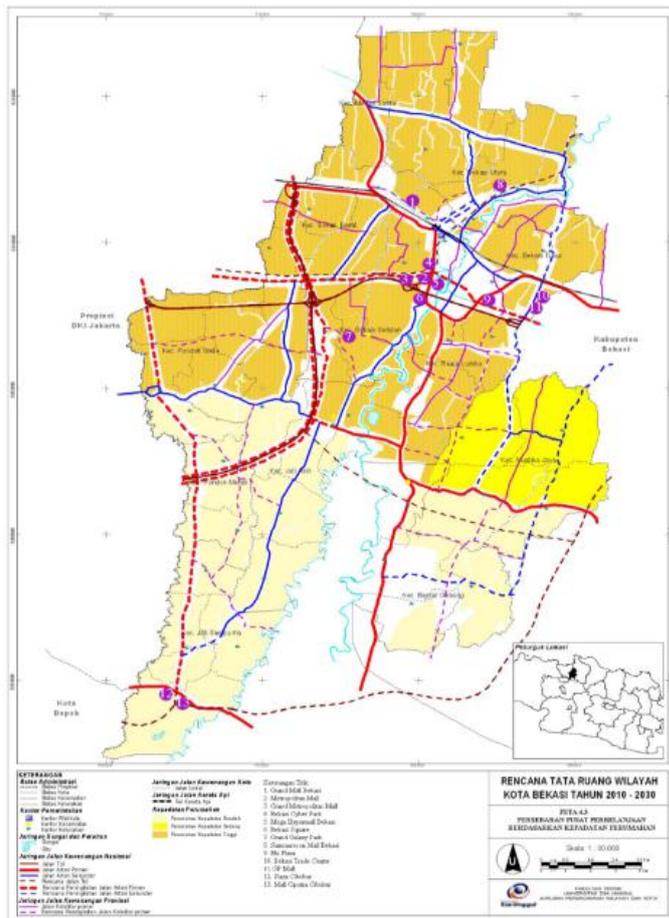
Source: Department of Industry, Trade and Cooperatives, 2016.

RESULTS AND DISCUSSION

1. Identification of Distribution Patterns of Shopping Centers in Bekasi City

The results of the calculation of the nearest neighbor analysis of the distribution pattern of shopping centers in Bekasi City tend to be clustered. This is indicated by the magnitude of T value of 0.23 km which tends to be close to 0. By comparing the results of calculations and seen from the existing conditions of the distribution of shopping centers in Bekasi City which tends to be in groups. There are 5 shopping centers that tend to be grouped namely, Metropolitan Mall, Mega Bekasi Hypermall, Bekasi Cyber Park, Bekasi Trade Center and GP Mall.

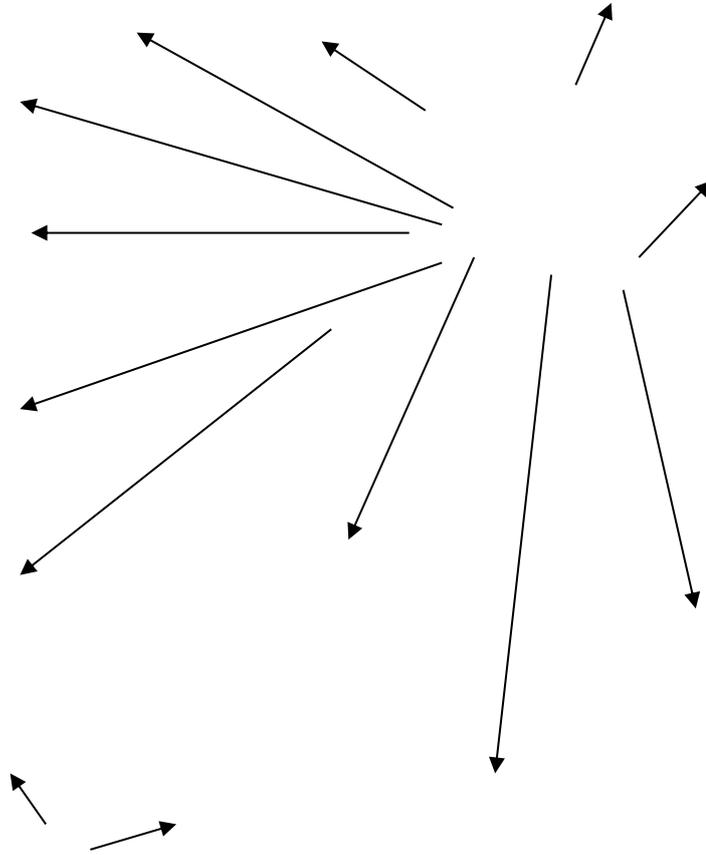
Spatial analysis is done by overlaying shopping center land with data on housing density and accessibility in Bekasi City. Housing density is divided into 3 namely, low density housing, medium density housing and high density housing. Based on high density housing, there are 5 districts namely, South Bekasi District, North Bekasi District, East Bekasi District, Pondokgede District and Rawalumbu District. Among the 5 districts there are 3 districts, namely South Bekasi, North Bekasi and East Bekasi, which have 13 shopping centers. While the other 2 districts do not have shopping center facilities, but based on location / distance of 2 districts, namely Pondokgede District and Rawalumbu District not far from the shopping center. Shopping center activities found in high density housing explain that the higher the density of housing / population the greater the shopping center gets visitors. Can be seen in the image below:



Source: Bekasi City RTRW

Figure 2
Distribution of Bekasi City Shopping Center
Based on Housing Density

Accessibility can be interpreted as ease or affordability of an object on the surface of the earth. Regarding location, one of the factors that determines whether or not a location is interesting to visit is the level of accessibility. Accessibility is the level of ease to reach another location in the vicinity. The level of accessibility is influenced by distance, condition of transportation infrastructure. If an area has accessibility that can easily be passed by various types of vehicles, there are many means of transportation, so the accessibility to that location is quite good. Can be seen in the image below:



Sumber : RTRW Kota Bekasi

Source: Bekasi City RTRW

Figure 4
Distribution of Bekasi City Shopping Center

2. Factor Analysis of Location Selection of Bekasi City Shopping Center.

A. Factor Analysis of Location Selection of Bekasi City Shopping Center Based on Manager's Perception.

Analysis of shopping center location selection factors consists of demographic factors, consumer socioeconomic factors, psychographic factors, accessibility factors, and competition factors. Factor analysis of the selection of the location of shopping centers in the city of Bekasi against managers using descriptive statistical analysis by calculating the average (mean). The results of the calculation of the weighted value calculation consists of values 1 through 4. Value 1 states strongly disagree, value 2 states disagree, value 3 states agree, and value 4 states strongly agree. in accordance with the variable questions in the selection of the location of shopping centers in Bekasi, as follows:

a. Accessibility Factor

Based on the calculation of the accessibility factor weighting is a very influential factor in the choice of shopping center location. This explains that the average value of demographic factors has the highest average value of the other factors of 3.72 out of 5 sub-variables. In addition, each respondent or manager of the shopping center on average chose to strongly agree with the accessibility factor. This explains that the level of accessibility of shopping centers must be influenced by distance, condition of transportation infrastructure, has accessibility that is easy to pass through various types of vehicles, there are many means of transportation so the accessibility to these locations is quite good. In the existing condition, Bekasi City shopping center has easy accessibility on the west side, the east side which is more prominent compared to the north side and the south side of Bekasi City. The cluster shopping center activity in Bekasi City is found in the arterial and collector road network that goes out or goes to Bekasi City.

b. Consumer Socioeconomic Factors

Based on the weighting calculation results that the consumer socioeconomic factor the second highest average value of 3.37 of 5 sub-variables, influences the selection of shopping center locations in Bekasi City because each respondent or shopping center manager chooses to agree in every question contained on consumer socioeconomic factors. This is due to socioeconomic conditions that tend to be stable (middle-upper economy). Socioeconomic variable indicators can be seen from the aspect of consumer purchasing power, which is represented by the amount of income and the amount of consumption of demand for shopping centers.

c. Psychographic Factors

Based on the calculation of psychographic factor weighting has the third highest average value of 3.31 of the 3 sub variables, also influential because each respondent or shopping center manager on average chooses to agree in every question contained in psychographic factors. This factor explains the relationship between purchasing power and psychographic indicators (life style) because high socioeconomic areas tend to have high psychographics. Whereas the low socioeconomic area tends to have low psycho-mysticism, because of their limited purchasing power along with the development of the city and the development of people who have a pattern of modern life.

d. Demographic Factors

From the calculation of demographic factor weighting has the highest average value to the emptas of 3.28 out of 4 sub-variables, it also influences the choice of shopping center locations in Bekasi City. This data shows that shopping center activities, as a trade sector (shopping centers) tend to approach the population, which in this case is close to residential areas. According to the existing conditions that the shopping center in the city of Bekasi, besides being in the center of the city, there is also a high-density housing complex that is found in the District of South Bekasi, District of North Bekasi, District of East Bekasi, District of West Bekasi, District of Rawalumbu, and District of Pondok Gede. Naturally, if the shopping center in the city of Bekasi is clustered with a high density population, because in order to be reached by the community other than that this area has a high level of accessibility.

e. Competition Factor

Based on the weighting calculation results that the competition factor has the lowest average value of 2.45 of the 3 sub-variables, it is not very influential because each respondent or manager of the shopping center on average chooses

to disagree in every question contained in the competition factor. Even though shopping centers in Bekasi City are grouped, there is no visible competition from one shopping center to another. This is because shopping centers in Bekasi City provide different daily needs or facilities. For example, from the price of each shopping center one with another has different prices or products that are different from other shopping centers.

B. Factor Analysis of the Selection of the Location of Bekasi City Shopping Center Based on Visitor Perception

a. Origin / Place of Visitor

Of the 100 respondents who gave answers, 79 respondents or 79% of buyers / visitors came from the Bekasi area. 2 respondents or 2% of buyers / visitors came from the Bogor area, 19 respondents or 19% visitors came from the Jakarta area. So it can be concluded that the coverage of shopping center services in Bekasi does not only buy / visitors in the Bekasi City shopping center come from diverse areas. This will benefit the economy of Bekasi City, the number of visitors coming from areas around Bekasi or areas close to Bekasi City.

b. Visitor Age

Of the 100 respondents who gave answers, 23 respondents or 23% of buyers had 14-20 years of age, 62 respondents or 62% of buyers had 20-30 years old, 8 respondents or 8% of buyers had 30-40 years of age and 7 respondents or 7 % of buyers aged 40 years and over. So it can be concluded that the buyers / visitors of shopping centers in Bekasi City are mostly aged 20-30 years.

c. Types of Visitor Work

Of the 100 respondents who gave answers, 6 respondents or 6% of buyers / visitors had jobs as high school, 40 respondents or 40% of buyers / visitors had jobs as tertiary institutions, 38 respondents or 38% of visitors had jobs as civil servants / entrepreneurs / entrepreneurs, while 16 respondents or 16% of visitors have jobs as employees. So it can be concluded that buyers / visitors who come for a walk or shopping at the majority of shopping centers have the type of work as a college.

d. Visitor Revenue

Of the 100 respondents who gave answers, 26 respondents or 26% of visitors had income of Rp 1,000,000 - Rp 2,000,000, 30 respondents or 30% of visitors had income of Rp 2,000,000 - Rp 3,000,000, 28 respondents or 28% of buyers / visitors have an income of Rp. 3,000,000 - Rp. 4,000,000, while 16 respondents or 16% of visitors have income > Rp. 4,000,000 and above. So it can be concluded that the buyer / visitor income level belongs to the group of people with middle income.

e. Destination Visitors Come to the Shopping Center

Of the 100 respondents who gave answers, 26 or 26% of respondents buyers / visitors came to the Bekasi shopping center just to take a walk or look around for goods sold and bought at the mall. 28 respondents or 28% of buyers / visitors come to Bekasi shopping center to shop for daily necessities. 36 respondents or 36% of buyers / visitors come to Bekasi shopping center to watch movies or eat at restaurants / cafes. While 10 respondents or 10% buyers / visitors come to Bekasi City shopping center to socialize / meet with friends.

f. Reason for Visitors to Choose the Shopping Center

Of the 100 respondents who gave answers, 36 respondents or 36% of buyers / visitors chose to come to the Bekasi shopping center that they visited because it was close to home. Most shopping centers are built close to residential settlements. 35 respondents or 35% choose to come to the Bekasi shopping center that they go to because of the less complete facilities compared to other shopping centers such as a fully equipped shopping center namely Metropolitan Mall, Grand Metropolitan Mall, Summarecon Mall Bekasi and shopping centers that are able to meet daily needs the day of visitors who come are the shopping centers that are classified as middle class and above. 19 respondents or 19% of visitors / buyers chose to come to the Bekasi Shopping Center they visited because of the low prices compared

to other malls such as Mega Bekasi Hypermall, Blue Plaza, Bekasi Cyber park, GP mall and shopping centers that are classified as lower middle class. While 10 respondents or 10% of visitors / buyers choose to come to the Bekasi shopping center that they go to because there is no other choice to come to the shopping center, it could be because there is no other place of recreation to go for a walk other than the shopping center in Bekasi City.

Conclusions and recommendations

The conclusions of this study are:

1. Distribution patterns of shopping centers in Bekasi City.

Based on the analysis of the nearest neighbor / Nearest Neighbor Analysis of the distribution of shopping centers in the city of Bekasi. The distribution pattern of shopping centers in Bekasi City tends to be clustered. Shopping center activities in Bekasi City which tend to be in groups are found in South Bekasi Subdistrict located along Jalan Ahmad Yani as an arterial road. In addition, Bekasi City shopping center activities are found in high density housing. This explains that every shopping center construction must approach the population, because the higher the density of housing the greater the level of consumer arrival. Besides being seen from the density of housing, also seen from the accessibility because it allows the movement and high interaction from consumers.

2. Factors for selecting the location of a shopping center in Bekasi City.

- a. The majority of shopping center managers agree that the shopping center location selection factors are accessibility factors, demographic factors, consumer socioeconomic factors and psychographic factors. But in the competition factor, the shopping center manager stated between agree and disagree, this is due to not much competition between shopping centers with each other because each shopping center has different facilities according to the needs of visitors / buyers of shopping centers in Bekasi.
- b. The majority of visitors from shopping centers in Bekasi City are in the Bekasi area and its surroundings, for the average age of visitors of 20-30 years, the majority of visitors work as tertiary institutions, the level of visitor income is Rp. 2,000,000 - Rp. 3,000,000, including middle or stable groups, the majority of visitors come to the shopping center are watching, eating and traveling, while the reason visitors come to the shopping center that is visited because it is close to home. According to visitors' perceptions about accessibility it is quite easy to reach from the visitor's residence.

Based on these conclusions, suggestions that can be given by researchers are as follows:

- a. business development center shopping centers located in the city center. If you want to build a shopping center in Bekasi City, give a business permit to build a shopping center in an area where there is no shopping center.
- b. This research only focuses on shopping centers in Bekasi City, does not focus on minimarkets or traditional markets and is expected to be refined in other studies.
- c. The research is expected to be a contribution for the Bekasi City government to determine policies related to the arrangement of shopping centers.

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