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Measurement of the Attractiveness of Public Open Spaces to Visitors at Lifestyle Centers

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ABSTRACT

This study aims to measure the attractiveness of public open spaces to visitors in Lifestyle Centers using a modified Urban Mobility Index (I-MUS). The background of this research is based on the importance of mobility in the tourism sector, where transportation mobility plays a role in facilitating tourist access to various destinations. The research method uses a quantitative approach by adapting the I-MUS framework consisting of 6 domains, 16 sub-domains, and 46 variables. Data was collected through a closed questionnaire method involving experts from the Ministry of Transportation, local governments, and academics. The results of the analysis using the Content Validity Index (CVI) showed that of the initial 32 variables, 6 variables were declared invalid. The final results show that the attractiveness of public open spaces in the Lifestyle Center is influenced by 26 main variables divided into 5 domains. This research makes a significant contribution to the development of tourism in Indonesia by providing measurement tools that can be used to monitor and improve tourism mobility in various destinations.

Introduction

In the last decade, the retail industry has undergone a significant transformation, driven by drastic changes in consumer behavior (Pramadyanto, 2022). The era of digitalization and the popularity of e-commerce have changed consumer behavior for shopping, prompting developers to find new methods of attracting customers (Riswanto et al., 2024). Amid competition with online shopping, the importance of a unique and satisfying shopping experience is becoming more and more apparent. This brings us to the concept of 'retailtainment', where retail not only focuses on transactions but also provides an engaging and interactive experience. These trends play an important role in understanding how retail can survive and thrive in the modern environment (Nugraha, 2024).

The COVID-19 pandemic has also introduced new dynamics in the interaction between retail and public spaces. Changes in people's behavior today tend to lead to work or study from anywhere, known as WFA (work from anywhere). This trend has had a

significant impact, especially on commercial properties in the food and beverage sector, such as cafes, which now need to provide co-working spaces commonly called co-working spaces, and make the interior of the space comfortable for working and studying. The need for more spacious and safe open spaces has become more urgent in response to social restrictions and concerns about public health (Nadlifah, 2022). This change encourages retail industry players and urban planners to revise the design and function of open spaces. With restrictions on enclosed spaces, public open spaces are now an important element in retail complexes. This is not only a gathering place for the community, but also an extension of the retail experience that enriches daily life.

In addition, the trend of sustainable development and the addition of green spaces in urban areas opens up new opportunities in integrating retail with public open spaces. Policies that support the creation of green spaces and pedestrian areas not only contribute to a healthier environment but also create a more attractive atmosphere for visitors (Sudipa et al., 2023). Observing changes in visitor behavior, the application of the 'breathable space' concept can be a consideration in attracting visitors, especially as the FnB industry continues to innovate in terms of architecture. This provides an opportunity for developers to innovate in attracting visitors and interacting with the public as consumers. In addition, developers can also take advantage of open spaces to create unique and memorable shopping experiences (Joga, 2017).

Throughout history, one of the main functions and attractions of cities has been their ability to facilitate encounters between people. Urban spaces, with their central role as meeting places, have become a focal point in people's lives (Saputra et al., 2023). In the context of an ever-changing society, urban life in its new forms has absorbed and redefined the function of this traditional meeting. Advances in technology and social media, for example, have added a new dimension to social interaction, changing the way we interact within urban spaces (Fajriah & Ningsih, 2024).

Technological developments have also had a significant impact on the relationship between retail and open space. The use of increasingly sophisticated technology such as experiential and virtual reality in retail provides a new experience for consumers (Bob et al., 2021). This has not only changed the way people shop but also how they interact with the physical spaces around them (Pramiarsih, 2024). This technology opens up new possibilities in combining the digital world with the physical experience, increasing the appeal of retail and public open spaces. Retail that focuses on creating a pleasant shopping experience can leave a positive impression on visitors. An aspect that can leave an experience in shopping is the atmosphere of the space. By taking advantage of the digital era, retail complexes can be more innovative in providing an experience that combines physical aspects, giving a deeper impression to visitors (Bob et al., 2021).

The purpose of this study is to determine the influence and impact of the relationship of public open space on the attractiveness of retail property in the form of LSC. This study aims to analyze the influence of the design and quality of public open spaces on their attractiveness to visitors. The main underlying question is how elements

such as accessibility, space connectivity, recreational facilities, and outdoor aesthetics affect visitor perception and behavior.

Method

The research design used is a cross-sectional survey. Survey research allows the collection of data from a large sample at a given time, thus providing a representative picture of visitor perceptions and behaviors in One Satrio and The Breeze. This study also uses a descriptive and causal survey design. A descriptive survey was used to describe the characteristics of respondents and their perception of the integration of retail and public open spaces. Causal surveys are used to test the relationship between independent variables and dependent variables.

Research Object

In the process of determining the research object, the selection was carried out with special criteria, namely retail buildings that are directly integrated with open space. Some of the determinant specifications that are used as the object of research are (a) separate building designs; (b) spacious parking lots; (c) there is a garden or open pour; (c) there is a high-end store; and (d) the existence of entertainment (Nooney, P. A, 2003). Judging from some of these specifications, there are 2 selected research objects, namely One Satrio and The Breeze Mall. Furthermore, the two OSMs will be referred to as Location 1 and Location 2.

Location 1 or One Satrio is a retail complex located in Mega Kuningan. The complex stands out for its application to the concept of public open space. Mega Kuningan, the location where One Satrio is located, is a business district developed with an integrated concept and is located in Setiabudi District, South Jakarta. The area is known for its urban design that emphasizes a combination of commercial functions and public spaces, making it an interesting example for the study of the interaction between retail and open space in the context of modern urbanism.

Data Collection Aspects

To achieve accurate research results, research is carried out by paying attention to the variables that determine what data is needed. By measuring these variables, researchers can assess how various aspects of the integration of retail and public open spaces affect attraction for visitors. The selection of the right variables is crucial, as it not only ensures the relevance and focus of the research but also helps in gaining deeper insights into the factors that influence visitor behavior and preferences. In addition, a careful analytical approach to manipulating data will make it possible to identify patterns and trends that may not be immediately apparent, providing broader insights for the development of effective strategies in urban planning. This approach also helps in assessing the effectiveness of current design interventions and providing recommendations for future improvements.

Data Processing and Analysis

This research is causal-comparative. The research is aimed at finding a cause-and-effect relationship so that there are variables that affect and are influenced. The variables

studied are focused on the existence of public and retail open spaces that are integrated into visitor attractions. In conducting data processing related to research examining the impact of retail integration and public open spaces on visitor attraction, the following steps were adopted to complement the exploratory analysis.

The results of field observations in the form of mapping and observations about the research objects obtained are then analyzed quantitatively and qualitatively from the analysis units of both space and actors so that the form and character of the outdoor space and what activities are carried out in a retail complex that adheres to the concept of public open space. First, the process begins with the collection of data involving information about the location, characteristics of retail and open spaces, demographic data of visitors, as well as additional information such as the results of surveys or interviews with related parties. Once the data is collected, the next step is data cleanup, which includes the elimination of incomplete or irrelevant data and the correction of data entry errors.

Validity and Reliability Test

To ensure that the questionnaire used is valid and reliable, the following validity and reliability tests are carried out:

1. Validity Test: The validity of the construct is tested using Exploratory Factor Analysis (EFA). EFAs help identify the underlying structure of factors and ensure that the items in the questionnaire measure the construct in question. Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) Measure were used to test the suitability of the data for factor analysis.
2. Reliability Test: The reliability of the questionnaire was tested using Cronbach's Alpha. A Cronbach's Alpha score above 0.7 is considered to indicate good internal consistency, which means that the items in the questionnaire have a strong correlation and produce consistent results. The average, as a central measure of tendencies, will be used to determine the average value of visitors, the duration of the visit, or the level of satisfaction. This will give you an overview of the data obtained. The median will be used to identify the midpoint of the dataset, helping to understand the distribution of data when there are outliers that can affect the average value. Modus will be applied to determine the greatest frequency of certain variables, such as the type of retail that is most visited or the activities that are most often done in open spaces.

Cryptic Analysis

Descriptive analysis was used to provide an overview of the characteristics of the respondents and the distribution of questionnaire answers. Descriptive statistics include frequency, percentage, mean, and standard deviation. This analysis is important to understand the demographic profile of respondents and the context of the research.

Multiple Linear Regression Analysis

Multiple linear regression analysis was used to test the influence of independent variables (visitor satisfaction, frequency, and duration of visits) on dependent variables (estimated property values). This analysis helps determine how much influence each independent variable has on the dependent variable. This technique was chosen because

it allows researchers to identify and measure the relationship between multiple independent variables and one dependent variable.

Test F

The F test is used to test the significance of the regression model as a whole. This test determines whether there is a significant relationship between independent variables and dependent variables in the regression model. If the calculated F value is greater than the F of the table and the p-value < 0.05, then the regression model is considered significant and H0 is rejected.

Proxy calculation

To calculate the value of a property based on the rental price of a retail store, the rental income per square meter formula is used, as follows:

$$\text{Pendapatan per m}^2 = \frac{\text{Harga Sewa Tahunan}}{\text{Luas Toko (m}^2\text{)}}$$

After calculating rental income per square meter, property price estimation is done by multiplying rental income per square meter by the total area of the retail area.

Results and Discussion

The effect of interest in open spaces on visitors

In choosing the scope of a retail business, developers consider several variables that contribute to determining whether it will be successful or not. To measure the success of the attraction of an outdoor shopping mall, 2 variables are taken, namely attraction as variable X and LSC as variable Y.

Descriptive Analysis

1. Gender

Table 1. Gender

Gender							
		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Woman	20	66.7	66.7	66.7	1,33	0,480
	Man	10	33.3	33.3	100.0		
	Total	30	100.0	100.0			

Based on the results of the data processing, it can be concluded that in the study on open space in the outdoor shopping mall One Satrio, the gender distribution of the respondents showed the dominance of women. Of the total 30 respondents, 20 of them were women, representing 66.7% of the overall sample. Meanwhile, the other 10 respondents were male, who made up 33.3% of the total sample. The average gender value of the respondents was 1.33 with a standard deviation of 0.480, which indicates that the majority of respondents are women. The dominance of women in this study may indicate that women are more interested in or visit the outdoor shopping mall One Satrio more often.

1. Age

Table 2. Age

Age							
		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	Std. Deviation
Valid	<18 year	6	20.0	20.0	20.0	2,06	0,827
	18 - 30 year	19	63.3	63.3	83.3		
	31 - 38- year	2	6.7	6.7	90.0		
	>38 year	3	10.0	10.0	100.0		
	Total	30	100.0	100.0			

Based on the results of the above data processing, it can be concluded that in the study on open space in outdoor shopping malls (One Satrio), the age distribution of respondents showed the dominance of the young age group. Of the total 30 respondents, the majority were in the age range of 18 to 30 years, namely 19 respondents or 63.3% of the total sample. A total of 6 respondents (20.0%) were under 18 years old, while 2 respondents (6.7%) were between 31 and 38 years old, and 3 respondents (10.0%) were over 38 years old. The average age of the respondents was 2.06 with a standard deviation of 0.827, which indicates that the majority of respondents are in the younger age range. The dominance of the young age group in this study may indicate that the outdoor shopping mall One Satrio is more popular among young people. Although the dominance of young age was significant, there was also the presence of respondents from younger age groups (< 18 years) and older (> 38 years), although the number was relatively small.

Validity Test

Table 3

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	135.688
	df	21
	Sig.	.000

Based on the CFA validity test above, the Kaiser-Meyer-Olkin (KMO) value for the sample adequacy measure is 0.753, which indicates that it has passed the minimum value of 0.5. With a KMO value of 0.753, this indicates that the sufficiency of the sample is in the "Adequate" category. This means that the data is sufficient for factor analysis, and the results are likely to be quite good.

Table 4

Communalities

	Initial	Extraction
Outdoor Shopping Mall 1	1.000	.850
Outdoor Shopping Mall 2	1.000	.682
Outdoor Shopping Mall 3	1.000	.807
Outdoor Shopping Mall 4	1.000	.522
Data Tarik 1	1.000	.712
Daya Tarik 2	1.000	.901
Daya Tarik 3	1.000	.947

Extraction Method: Principal Component Analysis.

Based on the table above, the communality values for the tested items show that most of the communality values are above 0.5, which according to Hair (2009) is considered adequate for factor analysis because it shows that more than 50% of the variance of items can be explained by the extracted factors.

Reliability Test

a. Outdoor Shopping Mall (X)

Table 5

Reliability Statistics

Cronbach's Alpha	N of Items
.861	4

Based on the table above, shows that the value *of Cronbach's Alpha* in the outdoor shopping mall variable is 0.861. Therefore, the statements in this study in the questionnaire can be said to be reliable or consistent because they have a *Cronbach's Alpha* value of > 0.70.

b. Attraction (Y)

Table 6

Reliability Statistics

Cronbach's Alpha	N of Items
.871	3

Based on the table above, shows that the value *of Cronbach's Alpha* in the attraction variable is 0.871. Therefore, the statements in this study in the questionnaire can be said to be reliable or consistent because they have a *Cronbach's Alpha* value of > 0.70.

Uji F

Table 7. Uji F

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.004	1	39.004	13.936	.001[b]
	Residual	78.363	28	2.799		
	Total	117.367	29			

a. Dependent Variable: Daya Tarik
b. Predictors: (Constant), Outdoor Shopping Mall

Based on the table above, it can be seen that the value of fcal is 13.936 with a significance level of 0.001. This shows that the value of sig. < 0.05 is 0.001 < 0.05 and fcalculate > ftable with ftable of 4.18 which is 13.936 > 4.18. Thus, it can be concluded that there is an influence of the integration of retail and public open space on property value and visitor attraction.

1. Simple Linear Regression

Table 8

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.792	2.016		5.352	.000
	Outdoor Shopping Mall	.562	.151	.576	3.733	.001

a. Dependent Variable: Daya Tarik

$$Y = \alpha + \beta X + \epsilon$$
$$Y = 10{,}792 + 0{,}562X + \epsilon$$

From the multiple regression equation model described above, it can be interpreted as follows:

2. Konstanta (a)

The constant value of 10.792 states that if the outdoor shopping mall variable is equal to 0, then the value of the attraction variable is 10.792.

3. Regression Coefficient Outdoor Shopping Mall

Based on the regression equation, shows that the value of the regression coefficient for the outdoor shopping mall variable is 0.562. This shows that the outdoor shopping mall variable has a positive influence on risk perception which means that for every increase in one unit of outdoor shopping mall variable, the dependent variable namely attractiveness will also increase by 0.562 if the other variables are considered fixed or constant.

Descriptive Analysis

1. Gender

Table 9

Gender							
		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Woman	17	56.7	56.7	56.7	1,43	0,504
	Man	13	43.3	43.3	100.0		
	Total	30	100.0	100.0			

Based on the results of the data processing, it can be concluded that in the study on open space in the outdoor shopping mall The Breeze BSD City, the gender distribution of respondents showed female dominance. Of the total 30 respondents, 17 of them (56.7%) were women, while the other 13 respondents (43.3%) were men. The average gender of the respondents was 1.43 with a standard deviation of 0.504, which indicates slightly more female respondents compared to males. The dominance of female respondents may indicate that The Breeze BSD City outdoor shopping mall is more attractive to women. However, a significant number of male respondents indicated that The Breeze BSD City attracted visitors of both genders.

2. Age

Table 10

Age							
		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	Std. Deviation
Valid	< 18 tahun	2	6.7	6.7	6.7	2,20	0,664
	18 - 30 tahun	22	73.3	73.3	80.0		
	31 - 38 tahun	4	13.3	13.3	93.3		
	>38 tahun	2	6.7	6.7	100.0		
	Total	30	100.0	100.0			

Based on the results of the data processing, it can be concluded that in the study on open space in the outdoor shopping mall The Breeze BSD City, the age distribution of respondents shows the dominance of the young age group. Of the total 30 respondents, the majority were in the age range of 18 to 30 years, namely 22 respondents or 73.3% of the total sample. A total of 4 respondents (13.3%) were between 31 and 38 years old, while the age group < 18 years and > 38 years each consisted of 2 respondents (6.7%). The average age of respondents was 2.20 with a standard deviation of 0.664, which indicates the predominance of young age in this sample. The dominance of the age group of 18 to 30 years may indicate that The Breeze BSD City outdoor shopping mall is more attractive to young people. This age group is likely to have more leisure time, a high attraction to recreational activities, and a tendency to visit new and modern places. Although the dominance of young age is significant, there are also respondents from the older age group, namely 31 to 38 years old, as well as those under 18 years old and over 38 years old. This indicates that The Breeze BSD City attracts visitors from different age groups, albeit with different proportions.

Validity Test

Table 11

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.889
Bartlett's Test of Sphericity	Approx. Chi-Square	164.743
	df	21
	Sig.	.000

Based on the CFA validity test above, the Kaiser-Meyer-Olkin (KMO) value for the sample adequacy measure is 0.889, which indicates that it has passed the minimum value of 0.5. With a KMO value of 0.889, this indicates that the sample adequacy is in the "Good" category. This means that the data is sufficient for factor analysis, and the results are likely to be quite good.

Table 12

Communalities

	Initial	Extraction
Outdoor Shopping Mall 1	1.000	.757
Outdoor Shopping Mall 2	1.000	.811

Outdoor Shopping Mall 3	1.000	.707
Outdoor Shopping Mall 4	1.000	.712
Data Tarik 1	1.000	.822
Daya Tarik 2	1.000	.644
Daya Tarik 3	1.000	.694

Extraction Method: Principal Component Analysis.

In the table above, the communality values for the tested items show that most of the communality values are above 0.5, which according to Hair (2009) is considered adequate for factor analysis because it shows that more than 50% of the variance of items can be explained by the extracted factors.

Reliability Test

a. Outdoor Shopping Mall (X)

Table 13

Reliability Statistics

Cronbach's Alpha	N of Items
.916	4

Based on the table above, shows that the value *of Cronbach's Alpha* in the outdoor shopping mall variable is 0.916. Therefore, the statements in this study in the questionnaire can be said to be reliable or consistent because they have a *Cronbach's Alpha* value of > 0.70.

b. Attraction (Y)

Table 14

Reliability Statistics

Cronbach's Alpha	N of Items
.884	3

Based on the table above, shows that the value *of Cronbach's Alpha* in the outdoor shopping mall variable is 0.884. Therefore, the statements in this study in the questionnaire can be said to be reliable or consistent because they have a *Cronbach's Alpha* value of > 0.70.

Simple Linear Regression

Table 15

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.207	1.297		2.473	.020
	Outdoor Shopping Mall	.556	.074	.818	7.535	.000

a. Dependent Variable: Attraction

$$Y = \alpha + \beta X + \epsilon$$
$$Y = 3{,}207 + 0{,}556X + \epsilon$$

From the multiple regression equation model described above, it can be interpreted as follows:

1. Konstanta (a)

The constant value of 3.207 states that if the outdoor shopping mall variable is equal to 0, then the value of the attraction variable is 3.207.

2. Regression Coefficient Outdoor Shopping Mall

Based on the regression equation, shows that the value of the regression coefficient for the outdoor shopping mall variable is 0.556. This shows that the outdoor shopping mall variable has a positive influence on risk perception which means that with every increase in one unit of the outdoor shopping mall variable, the dependent variable namely attractiveness will also increase by 0.556 if the other variables are considered fixed or constant.

The Effect of Open Space on Property Value

To determine the influence of open space on property value, calculations can be carried out using rental price and income data from retail stores, this analysis will identify the extent to which open space can increase property value. Rental price data is taken from the Colliers Q1 2024 report regarding the retail market report. Here the data is taken based on data from the city of Jakarta.

Rental price data taken from Colliers for Q1 2024 and various property market sources, retail store rental prices are used as a proxy to estimate property values, assuming that higher rental values reflect higher property values.

Based on Colliers' report for Q1 2024, the following is data on retail store rental prices around One Satrio and The Breeze:

1. One Satrio

Average rental price of retail store: IDR 450,000,000 per year for a unit of 210 m2.

2. The Breeze

Average rental price for retail stores: IDR 300,000,000 per year for a unit of 200 m2.

Proxy Calculation of Property Value Based on Retail Store Rental Price

1. One Satrio

From the retail store rental price data, rental income per square meter can be calculated as follows:

$$\text{Pendapatan per m}^2 = \frac{\text{Rp } 450.000.000}{210 \text{ m}^2} = Rp2.142.857 perm^2 pertahun$$

The estimated property value obtained assuming the total area of the retail area is 5,000 m2.

$$\text{Nilai Properti} = \text{Pendapatan per m}^2 \times \text{Luas Total} = Rp2.142.857 \times 5.000 \text{ m}^2 = R$$

2. The Breeze, BSD

From the retail store rental price data, rental income per square meter can be calculated as follows:

$$\text{Pendapatan per m}^2 = \frac{\text{Rp } 300.000.000}{200 \text{ m}^2} = Rp1.500.000 perm^2 pertahun$$

The estimated property value obtained assuming the total area of the retail area is 7,000 m2.

$$\text{Nilai Properti} = \text{Pendapatan per m}^2 \times \text{Luas Total} = Rp1.500.000 \times 7.000 \text{ m}^2 = R$$

The integration between retail and public open spaces increases the value of the property significantly. Properties with good public open spaces have a higher value because they attract more visitors who spend more time in the location. The results of the proxy calculation show that the value of properties in One Satrio and The Breeze can be estimated by using retail store rental price data as an indicator.

Conclusion

This study has examined the influence of the integration between open and retail spaces on property value and visitor attraction with case studies in One Satrio, Kuningan, and The Breeze, BSD. The results of data analysis on retail store rental prices, as well as observations and interviews, show that good integration between public and retail open spaces significantly increases property value. Properties with well-designed open spaces have higher rental values compared to properties without such facilities. For example, the value of property in One Satrio is estimated to reach IDR 10.714 billion per year, while in The Breeze it reaches IDR 10.500 billion per year.

In addition to increasing property value, comfortable and attractive public open spaces are also proven to be able to increase visitor attraction. Visitors tend to spend more time in locations that offer quality open-air facilities, as well as making repeat visits,

which not only increases the number of visitors but also increases their satisfaction. Visitor satisfaction is influenced by various elements of open space, such as attractive design, adequate facilities, and good accessibility. The results of interviews and observations show that visitors highly appreciate the existence of parks, comfortable seating, and children's play areas, which create a more welcoming and attractive environment. This study also emphasizes the existence of a symbiotic relationship between retail and public open spaces. A good integration between the two creates conditions where a well-designed public open space attracts more visitors to the retail area, while a diverse retail presence enhances the comfort and utility of the open space. This integration has proven to have a positive influence on property value and visitor appeal. Properties that have well-designed open spaces not only have a higher value but also attract more visitors, thus increasing the demand and value of the property.

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