ANALYSIS OF THE IMPACT OF PEDESTRIAN REVITALIZATION IN THE CITY OF JOMBANG TOWARDS PEDESTRIAN CONVENIENCE (CASE STUDY IN JALAN BASUKI RAHMAD, JOMBANG CITY)

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ABSTRACT

Jalan Basuki Rahmad is one of the streets with a fairly active pedestrian routine because it is donated by a shopping area which is the center of the crowd and the lane near Jombang Station. However, the situation in the area is still lacking in good management, especially in the existing pedestrian facilities that look chaotic and unorganized. Rahmat Basuki Street is one of the streets in the center of the city so it needs to be arranged in order to create comfort for pedestrian users. One of the government's policies by rebuilding the pedestrian path is to revitalize. This research intends to discuss the effect of walkability and completeness of the road on pedestrian comfort on the pedestrian path on the Basuki Rahmad road in Jombang after being revitalized. The purpose of this study was to analyze the impact of revaluation in pedestrian structuring on the Basuki Rahmad Jombang road from the influence of walkability and completeness of the road to the pedestrian comfort on the Basuki Rahmad road in Jombang city. The method used is descriptive analysis and regression analysis. The results of the study showed that walkability and completeness of the road affected pedestrian comfort by 0.639 or 63.9% and 0.188 or by 18.8%.

Keywords: *Pedistrian Pathway, Comfort Factor, Jalan Basuki Rahmad*

INTRODUCTION

Research Background

The government made a policy, one of which was to rebuild the pedestrian path by revitalizing it. With the revitalization, the pedestrian lane on the Basuki Rahmad road is expected to provide a return order on the pedestrian path to provide comfort and safety of traffic. But in reality, the structuring of pedestrian facilities has not yet become a top priority for the government to consider. So far, road construction has only been followed by construction of pedestrian facilities only if the funds are sufficient.

According to Nasution et al (2015), pedestrian characteristics can be divided into:

- a. Pedestrian is full. This pedestrian type uses the walking mode as the main mode from the origin to the destination.

- b. Pedestrian users of public transportation. This pedestrian type uses the mode of walking as a mode between from the place of origin to the place of public transportation, or on the route of moving public transport routes and public transportation stops to the final destination.
- c. Pedestrian users of private vehicles and public vehicles. This pedestrian type uses the mode of walking as a mode between from a private vehicle parking area to a public transportation place and from a public vehicle park to the final destination of the trip.
- d. Pedestrian users of private vehicles full. This type uses the walking mode as a mode between the private vehicle parking lot to the final destination.

On the Rahmad Basuki street in the city of Jombang, there is a fairly active pedestrian routine because it is aided by a shopping area which is the center of the crowd and the lane is near the station and the Jombang square. But in that area the conditions are still poorly organized, especially in the existing pedestrian facilities which are chaotic and unorganized. Rahmat Basuki Street is one of the streets in the center of the city of Jombang, so that the arrangement needs to be done in order to create comfort for pedestrian users.

Based on the background above, the problems to be examined are:

- a. What is the effect of walkability on pedestrian comfort on the pedestrian path on the Basuki Rahmad road in Jombang after being revitalized?
- b. How does the influence of the completeness of the road to pedestrian comfort on the pedestrian path on the Basuki Rahmad road in the city of Jombang after being revitalized?

Pedestrian track or pedestrian path according to Presidential Regulation No. 43 of 1993 concerning Road Infrastructure Bag. VII Article 39 includes supporting facilities, i.e. facilities provided to support traffic and road transport activities both on the road and outside the road, in the framework of safety, security, order and smoothness of traffic as well as providing convenience for road users .

But pedestrian lanes in the urban context are usually intended as a special space for pedestrians that serves as a means of achievement that can protect pedestrians from hazards coming from motorized vehicles. In Indonesia, it is better known as a sidewalk, which means a small road lane 1.5 meters to 2 meters or more extends along public roads. Facilities of a pedestrian path are needed on:

- a. In urban areas with large populations.
- b. On market streets.
- c. In areas that have high activity.
- d. In areas that have large needs and demands.
- e. In areas that have great needs,
- f. In entertainment or recreation areas.

According to Danisworo in Nikmah (2015), revitalization is an effort to revitalize and reorganize an area or city that was once vital / alive, but then suffered a setback. The revitalization process of an area includes the improvement of physical aspects, economic aspects and social aspects. Revitalization activities should be able to recognize and utilize the potential of the environment (history, meaning, uniqueness and image of the place). Revitalization is also defined as a process, method, and / or act to revive or activate various types of activity programs.

According to Southworth in Farkisch (2012), walkability is "the extent to which the built environment supports and encourages walking by providing for pedestrian comfort and safety, connecting people with varied destinations within a reasonable amount of

time and effort and offering visual interest in journeys throughout the network ". In other words, walkability is a concept that supports an environment in order to become a pedestrian-oriented area by paying attention to safety and comfort aspects, connecting paths and offering attractive visuals to add interest in travel.

Haris and Dines (1988) define road equipment and equipment collectively as elements and elements placed in a landscape in maintaining comfort, pleasure, information, circulation control and protection for road users

According to Hakim and Utomo in Anggriani (2009), comfort is everything that shows the use of space in an appropriate and harmonious way, both with the space itself and with various shapes, textures, colors, symbols and signs, sound and sound impression, intensity and color of light or smell, or other.

REASEARCH METHOD

Figure 1. Research Flow Chart

Operational Definition and Variable Measurement

The variables in this study are independent and dependent variables.

a. Independent Variable

1) Walkability

Walkability indicators in this study (Flora, 2009) consist of:

- a) Connectivity of the Basuki Rahmad road pedestrian path
- b) Access pedestrian path Basuki Rahmad road
- c) Security of the Basuki Rahmad road pedestrian lane
- d) Convenience of the Basuki Rahmad road pedestrian path

2) Completeness of the Road

Indicators of road completeness in this study are in accordance with Nasution et al. (2015) consists of:

- a) Pedestrian green belt
 - b) Pedestrian area lighting lamps
 - c) Seating availability
 - d) Fence around the pedestrian
 - e) Availability of rubbish bins
 - f) Information Board
 - g) Bus stops on the pedestrian route
 - h) Public telephone
- b. Dependent variable

3) Comfort

According to Hakim and Utomo in Anggriani (2009), comfort is defined as anything that shows good and harmonious use of space. Comfort indicators in this study consist of:

- a) Air circulation in the pedestrian path
- b) Rainfall pedestrian area
- c) Pedestrian area noise
- d) Scents and odors in the pedestrian area
- e) The shape and surface of the sidewalk
- f) Security of pedestrian areas
- g) Cleanliness of pedestrian areas
- h) The beauty of the pedestrian area

Data collection

Data collection methods used to collect data in this study using questionnaire techniques, observation, and documentation

a. Questionnaire

According to Sugiyono (2017: 142) the questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer. The questionnaire is an efficient data collection technique if the researcher knows with certainty the variables to be measured and knows what can be expected from the respondent.

b. Observation

According to Bungin (2015: 142) observation is an everyday human activity by using the eye senses as a primary aid in addition to other senses such as ears, smell, mouth and skin. Therefore, observation is the ability of a person to use his observations through the work of the sensory eye and is assisted by the other five senses.

c. Documentation

According to Sugiyono (2017: 240) Documents are records of events that have passed. Documents can be in the form of writings, drawings or monumental works of a person.

Population and Sampling

The population in this study were people who crossed the pedestrian area of the Basuki Rahmad Jombang road which had been surveyed by researchers on holidays (weeks) and operational days (Monday) for 5 hours each namely 411 on holidays and 230 on

operational days added as many as 641 people. Selected out of 641 populations in this study were 86 respondents with precision or looseness of inaccurate sampling errors (d) in this study by 10%. Sampling in this study using incidental sampling techniques. Incidental sampling is sampling based on coincidence, anyone who happens to be at the research site and meet with the researcher can be used as a sample.

RESULTS AND DISCUSSION

Validity test

Validity Test is a test of research instruments, whether it can measure what you want to measure, by correlating each indicator score with the total score of items in each variable statistically, the results of the correlation are called (r_{count}). The results of the analysis of the correlation (r_{count}) and critical value (r_{table}) are as follows:

Table 1. Validity test

Statement Items	Correlation Results (r_{count})	Critical Value (r_{table})	Information
Walkability (X1)			
X1.1	0,581	0,1775	Valid
X1.2	0,778		Valid
X1.3	0,751		Valid
X1.4	0,592		Valid
Completeness of the Road (X2)			
X2.1	0,604	0,1775	Valid
X2.2	0,692		Valid
X2.3	0,356		Valid
X2.4	0,496		Valid
X2.5	0,686		Valid
X2.6	0,535		Valid
X2.7	0,317		Valid
X2.8	0,532		Valid
Comfort (Y)			
Y1.1	0,406	0,1775	Valid
Y1.2	0,569		Valid
Y1.3	0,467		Valid
Y1.4	0,476		Valid
Y1.5	0,472	0,1775	Valid
Y1.6	0,554		Valid
Y1.7	0,508		Valid
Y1.8	0,656		Valid

Source: processed data by researchers (2020)

The critical value (r_{table}) obtained is 0.1775 by looking at the correlation table for ($df = n - 2 = 87 - 2 = 85$). From the table above the validity test results obtained r_{count} in the research instruments used all have a greater value or are above the critical value (r_{table}), so it can be concluded that the overall indicator can be said to be valid.

Reliability Test

Tabel 2. Validity Test of Services Quality and Customer Satisfaction

Variable	Cronbach's Alpha	Critical Value	Information
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	Value		
Walkability	0,609	0,6	Reliable
Completeness of the Road	0,611	0,6	Reliable
Comfort	0,608	0,6	Reliable

Source: processed data by researchers (2020)

The above table shows that the value of internal consistency reliability for the alpha coefficient of each variable in each variable is declared reliable because it is greater than 0.6. The reliability test results obtained alpha coefficients for the variable Walkability (X1) of 0.609, Completeness of the Road (X2) of 0.611, and Comfort (Y) of 0.608. So it can be concluded that the measurement items on each variable are declared reliable and can then be used in research.

Multiple Linear Regression Analysis

From the results of multiple linear regression analysis obtained the magnitude of the constants and the magnitude of the regression coefficient for each variable that can be seen in the table as follows:

Table 3. Multiple Linear Regression Analysis
Coefficients^a

		Unstandardized Coefficients	
	Model	B	Std. Error
1	(Constant)	1.239	.397
	Walkability	.464	.058
	Completeness of the Road	.220	.095

a. Dependent Variable: Comfort

Source: processed data by researchers (2020)

Based on the table above can be made a regression equation for the variable Walkability (X1), Completeness of the Road (X2), on the pedestrian convenience on Jalan Basuki Rahmad Jombang is as follows:

$$Y = 1,239 + 0,464X_1 + 0,220X_2$$

Based on the results of the equation obtained can be explained the meaning and meaning of the regression coefficients for each variable, namely as follows:

1. The constant value is 1,239. This means that the influence of independent variables, namely Walkability (X1), Road Completeness (X2), the value of the dependent variable, namely Pedestrian Comfort (Y) on Jalan Basuki Rahmad Jombang with a constant value of 1.239.
2. The value of the regression coefficient of the Walkability variable (X1) is 0.116. This means that each increase of one unit of Walkability (X1) variable will result in an increase in pedestrian comfort (Y) variable on Jalan Basuki Rahmad Jombang by 0.116 units assuming that the other variables are constant or constant.
3. The regression coefficient value of the Road Completion variable (X2) is 0.591. This means that each increase of one unit of Road Completion (X2) variable will result in an

increase in pedestrian comfort (Y) on Jalan Basuki Rahmad Jombang by 0.591 units assuming that the other variables are constant or constant.

Coefficient of Determination (R²)

Tabel 4. Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.677 ^a	.458	.445	.33334

a. Predictors: (Constant), Completeness of the Road, Walkability

Source: processed data by researchers (2020)

The analysis obtained a coefficient of determination of 0.604. significant variation that can be explained by the variable Walkability (X1), Completeness of the Road (X2) to the Comfort (Y) of pedestrians on Jalan Basuki Rahmad Jombang is 0.458 or 45.8% and other variations besides the Walkability Variable (X1), Road Completeness (X2) to Convenience (Y) of pedestrians on Jalan Basuki Rahmad Jombang is 54.2%.

T test (partial test)

T test, namely testing individually (partial) regression coefficient of research variables consisting of Walkability (X1) and Completeness of Road (X2) on the Pedestrian Comfort (Y) on Jalan Basuki Rahmad Jombang.

Tabel 5. t test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.239	.397		3.120	.002
	Walkability	.464	.058	.639	7.942	.000
	Completeness of the Road	.220	.095	.188	2.331	.022

a. Dependent Variable: Comfort

Source: processed data by researchers (2019)

From the calculation results for the Walkability (X1) variable, it turns out that H₀ is rejected and H_a is accepted because the tcount > ttable where 7.942 > 1.66342, and the significance value obtained is 0.000, this significance value is greater than the α value 0.1. Thus, partially the Walkability (X1) variable significantly influences the pedestrian comfort (Y) on Jalan Basuki Rahmad Jombang.

From the results of calculations for the Road Completeness variable (X2) it turns out that H₀ is rejected and H_a is accepted because the value of tcount > ttable where 2.333 > 1.66342, and the significance value obtained is 0.022, this significance value is smaller than the α value of 0.1. Thus, partially, the variable Road Completeness (X2) significantly influences pedestrian convenience (Y) on Jalan Basuki Rahmad Jombang.

RESULT AND DISCUSSION

There is a significant influence of Walkability on the pedestrian comfort on Jalan Basuki Rahmat Jombang because the results of the calculation of the regression analysis shows that Walkability has an effect of 0.639 on the comfort supported by t count of 7.942 smaller than t table of 1.66342 and the significance level of $0.000 > 0.1$. In other words, if Walkability is improved the pedestrian comfort will increase.

There is a significant influence on the completeness of the road to the pedestrian comfort on Jalan Basuki Rahmat Jombang is not proven true because the results of the regression analysis calculations show that the completeness of the road has an effect of 0.188 on customer satisfaction supported by t count of 2,331 smaller than t table of 1,66342 and a significance level of $0.022 > 0.1$. In other words, if the completeness of the road is improved, the comfort of pedestrians will increase.

Based on the value of R Square on the results of the simultaneous determination coefficient (R^2) test results obtained 0.458 so it can be concluded that the variable Walkability and Completeness of the Road affect the pedestrian comfort on Jalan Basuki Rahmat Jombang by 45.8% and the remaining 54.2% is influenced by other variables who were not included in this study.

CONCLUSION

From the results of the research discussed, the researcher concludes the results of the study:

- a. There is a Walkability influence on pedestrian comfort on the pedestrian path on the Basuki Rahmad road in Jombang after being revitalized. In accordance with the results of the analysis of the effect of Walkability on pedestrian comfort of 0.639 or 63.9% supported by a t count of 7.942 smaller than t table of 1.66342 and a significance level of $0.000 > 0.1$. In other words, if Walkability is improved the pedestrian comfort will increase.
- b. There is an effect of the completeness of the road to pedestrian comfort on the pedestrian path on the Basuki Rahmad road in the city of Jombang after being revitalized. In accordance with the results of the analysis of the effect of Walkability on pedestrian comfort of 0.188 or 18.8% supported by a t count of 2.333 less than t table of 1.66342 and a significance level of $0.022 > 0.1$. In other words, if the completeness of the road is improved, the comfort of pedestrians will increase.

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