Factors Affecting the Value of Land on the Street of Williem Iskandar Pasar V Medan Estate Sei Tuan District, Deli Serdang Regency

F. I. Nasution1[1], D. N. Aulia[2] and H. T. Fachrudin[2]
[1]*Master of Property Management and Valuation Program, Universitas Sumatera Utara, Jl. dr. Mansur Campus USU, Medan*
[2]*Faculty of Engineering,UniversitasSumatera Utara, Jl. Almamater KampusUSU, Medan 20155*

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Abstract: The increasing growth of urban population encourages the growth of commercial areas in one area. Differences in the value of land in a particular area cause the community to need information on the value of land in a transparent and the factors that affect the difference in the value of land in one area. This study aims to identify factors that affect the value of land on the road Willem Iskandar Pasar V Medan Estate Sei Tuan Deli Serdang District. The analytical tool used in this study is multiple linear regression. The dependent variable is the land value referring to the field survey results with some adjustments, whereas the independent variables are land use type, accessibility, topography, location and distance to CBD. The results of this study indicate that the type of land use and accessibility does not affect the value of the land. This is evidenced by the significance value of these variables is not smaller than alpha (0.05). Topographical variables and distance to the CBD have a significance value smaller than the alpha of 0.039 and 0.044. While the location becomes the most influential variable to the land value that has the smallest significance value among some other variables of alpha is equal to 0.038. So from the results of the study concluded the location of a commercial function becomes the most important influence on the value of land on the street of Williem Iskandar Pasar V Medan Estate.

1 INTRODUCTION

The value of land has a definition or understanding of various - depending on context and its purpose and point of view. The value of land by definition is defined as the strength of the value of the land to be exchanged with other goods. The value of land is influenced by the type of land use, where the activity or buildings located in the area or around the area can determine the carrying capacity of the land value in the area (Rusdi, 2013).

The development of the area can not be separated from accessibility, such as the availability of public transportation, the reach of the area to the city center, the existence of roads that are suitable to use and so on. According to (Eldred, 2002) Accessibility factor is a factor that refers to the ease of reaching a place desired by the property owner, of the property they have.

In addition to land use and accessibility, land values can also be affected by topography and location in a region. Based on Setiawan's research (2006), topography is a limiting factor for the development of an area because of its nature that is not easily changed, however there are efforts made by humans to change topography such as ground mengurug to overcome the problem of topographic height. While the location is defined as a place or the selection of locations in one area to meet current or future needs.

The value of the land will also be affected by the distance to the Central Business District (CBD), the farther from downtown the lower the land price. Locations that are in the center of new growth will also increase the value of the land significantly, the greater the growth will lead to higher land value (Bintoro, 2015). Based on the above it is proposed the following hypothesis:

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H_1 : Suspected types of land use have influence significantly to the value of the land.
H_2: Suspected of accessibility have a significant effect on land values.
H_3: Suspected topography has a significant impact on land values.
H_4: Suspected locations have a significant effect on land values,
H_5: Suspected distance has a significant effect on the value of the soil

2 METHOD

The population in this study was all commercial functions that have been built on Street Williem Iskandar Pasar V Desa Medan Estate in front along Street Williem Iskandar Pasar V Medan Estate. Street of Williem Iskandar Pasar V Medan Estate is divided into three hamlets namely IV, VII, and VIII hamlets. Hamlet IV has a population of 371 Head of families . Based on the population of this study, the total population of 63 families. The determination of the number of samples in this study using the total sampling method that takes the entire study population so that the number of research samples is 63 people.

3 RESULT AND DISCUSSION

3.1 Validity Test

Test results on the 21 items of research statements can be summarized in the following table:

Table 1 : Validity Test

Variable	Q	R Calculate	Description
Land User Type (X_1)	Q1	0.436	Valid
	Q2	0.696	Valid
	Q3	0.465	Valid
	Q4	0.692	Valid
	Q5	0.562	Valid
Accessibility (X_2)	Q6	0.615	Valid
	Q7	0.689	Valid
	Q8	0.561	Valid
Topography (X_3)	Q9	0576	Valid
	Q10	0.382	Valid
	Q11	0536	Valid
	Q12	0708	Valid
Location (X_4)	Q13	0.540	Valid
	Q14	0.574	Valid
	Q15	0.612	Valid
	Q16	0.538	Valid
	Q17	0.656	Valid
	Q18	0.601	Valid
	Q19	0.43	Valid
Distance (X_5)	Q20	0.42	Valid
	Q21	0.58	Valid

A question is said to be valid if the value of R arithmetic> 0.361 (R Table). Based on the results of the validity test in Table 1, it is known that all questions are valid.

3.2 Reliability Test

The reliability test should be performed only on questions that already have or fulfill the validity test, so if it does not meet the validity test requirements then it does not need to be forwarded for reliability test (Noor, 2011: 130). Here are the results of the reliability test against the valid question items.

Table 2 : Reliability Test

Statistics	
Cronbach's Alpha	N of Items
.914	21

If the Cronbach Alpha value is greater than 0.914, the research questionnaire is reliable (Augustine and Kristaung, 2013), (Noor, 2011). It is known that the questionnaire is reliable, because the value of Alpha Cronbach 0.914 is greater than 0.8.

3.3 Classical Assumption Test

3.3.1 Test of Normality

The assumption test of normality uses Kolmogorov-Smirnov test. Based on the result of normality test with Kolmogorov-Smirnov test, the value of p-value (p) is 0.326 which is greater than significance level 0.05, then normality assumption of residuals is satisfied. If the probability value $p \geq 0.05$, then the assumption of normality is met.

If the probability is <0.05, then the assumption of normality is not met.

Table 3 : Test of Normality

One-SampleKolmogorov-Smirnov Test		
		Unstandardized Residual
N		63
Normal Parametersa , b	Mean	.0000000
	Std. Deviation	.15543980
Most Extreme Differences	Absolute	.082
	Positive	.082
	Negative	-.065
Kolmogorov-Smirnov Z		.647
Asymp. Sig. (2-tailed)		.796
a. Test distribution is Normal.		
b. Calculated from data.		

Notice that according to Table 3, the probability valuesknown p or Asymp are. Sig. (2-tailed) of 0.796. Because the probability value p, ie 0.796, is greater than the level of significance, ie 0.05. This means the assumption of normality is met.

3.3.2 Multicollinearity Test

Multicollinearity test uses variance inflation factor (VIF). The expected VIF is less than 10 indicating there is no multicollinearity symptom. Table 3 is displayed multicollinearity test uses VIF. Based on the multicollinearity test result in Table 3, VIF for each independent variable are less than 10 indicating there are no multicollinearity symptom.

Table 4 : Test Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	User Type Land (X_1)	.909	1.100
	Accessibility (X_2)	.809	1236
	Topography (X_3)	.889	1.125
	Location (X_4)	.857	1.167
	Distance (X_5)	.925	1,081

Notice that based on Table 4, it is known that the VIF value of the user type field variable is 1,100, the VIF value of the accessibility variable is 1.236, the VIF value of the topographic variable is 1,125, the VIF value of the location variable is 1.167 and the VIF value of the distance variable is 1,081. Since each VIF value is not greater than 10, there are no severe multicollinearity symptoms.

3.3.3 Heteroskedasticity

The coefficient of significance should be compared with a predetermined level of significance (5%). If the significance coefficient is greater than the specified level of significance, it can be concluded that there is no heteroscedasticity (homoscedasticity). If the significance coefficient is smaller than the specified level of significance, then it can be concluded heteroscedasticity occurs.

Table 5 **:** Heteroscedasticity Test with Glejser Test

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.100	.086		1.153	.254
	User Type Land (X_1)	-.019	.013	-.181	-1420	.161
	Accessibility (X_2)	.001	.012.	.010	.071	.944
	Topography (X_3)	.013	.012	.137	1,064	.292
	Location (X_4)	.028	.015	.251	1,914	.061
	Distance (X_5)	-.014	.009	-.201	-1593	.117

Based on Table 5, it is known that Sig value. Glejser of the type variable.user.lahan is 0.161, the value of Sig. The glejser of the accessibility variable is 0.944, the Sig value. The glejser of the topographic variable is 0.292, the Sig value. The glejser of the location variable is 0.061 and the Sig value. The glejser of the distance variable is 0.117. Given all values of Sig Glejser> 0,05, it is concluded there is no heteroskedastistas.

3.4 Multiple Linear Regression

3.4.1 Simultaneous Effect Significance Test (Test F)

Test F aims to test the effect of independent variables together or simultaneously to the dependent variable.

Table 6 : Test of Simultaneous Influence with Test F

ANOVAb

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.514	5	.103	3,913	.004[a]
Residual	1.498	57	.026		
Total	2,012	62			

a. Predictors: (Constant), Distance (X_5), Accessibility (X_2), User Land Type (X_1), Topography (X_3), Location (X_4)

b. Dependent Variable: Land Market Value (Y)

Based on Table 6, the Sig value is known. is 0.004 and the value of $F_{hitung} = 3{,}913$. Because Sig. $0.003 < 0.05$ and $F_{hitung} = 3{,}913 > F_{tabel} = 2{,}376$ (F tables presented in the annex), it was concluded that the simultaneous effect of all independent variables, namely the type of land users, accessibility, topography, location, distance statistically significant against the market value of the land.

3.4.2 Multiple Linear Regression Analysis and Partial Effect Significance Test (T test)

Table 7 presents regression coefficient value, and t statistic value for partial effect test.

Table 7 : Significance Test of Partial Influence (T test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Error	Beta		
[1] (Constant)	.038	.176		-.218	.828
User Type Land (X_1)	.003	.027	.015	.124	.902
Accessibility (X_2)	.001	.024	.004	.028	.977
Topography (X_3)	.053	.025	.256	2.113	.039
Location (X_4)	.063	.030	.262	2.120	.038
Distance (X_5)	.037	.018	.244	-2.056	.044

From the above data , it can be concluded that X_1 and X_2, Sig> alpha, while X_3 to X_5, Sig <alpha. This means that X_1 and X_2 are not affected Y, whereas X_3 to X_5 is said to have an effect on Y.
Based on Table 5.12, we get the following multiple linear regression equation.

$$Y = 0{,}038 + 0{,}003X_1 + 0{,}001X_2 + 0{,}053X_3 + 0{,}063X_4 + 0{,}037X_5 + e \quad (1)$$

a. H_1: It is known that regression coefficient value of land user type is 0,003, with significance value (Sig.) 0,902> 0,05 significance level, hence land user type have no significant effect to market value of land.
b. H_2: The value of regression coefficient of accessibility is 0.001, with significance value (Sig.) 0,977> 0,05 significance level, hence accessibility has no significant effect to market value of land.
c. H_3: The value of regression coefficient of topography is 0,053, with significance value (Sig.) 0,039 <significance level 0,05, hence topography have significant effect to market value of land.
d. H_4: The value of the regression coefficient of the location is 0.063, with a significance value (Sig.) 0.038 <0.05 significance level, then the location has a significant effect on the market value of the land.
e. H_5: Given the value of the regression coefficient of distance is 0.037, with the significance value (Sig.) 0.044 <0.05 significance level, then the distance significantly influence the market value of the land.

3.4.3 Determination Coefficient Analysis

The coefficient of determination (R^2) is a value (value of proportion), which measures how much of the ability of independent variables used in the regression equation, in explaining the variation of the dependent variable.

Table 8 : Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.505[a]	.256	.190	.1621140

a. Predictors: (Constant), Distance (X_5), Accessibility (X_2), User Land Type (X_1), Topography (X_3), Location (X_4)

b. Dependent Variable: Market Value Land (Y)

Based on Table 8, the coefficient value of determination R^2 located on the R-Square column. Unknown value determination coefficient R^2=.256.The value means all free variables, ie land user type, accessibility, topography, location, distance simultaneously affect the variable of market value of land equal to 25,6%, the rest equal to 74,4% influenced by other factors.

4 CONCLUSIONS

Based on the results of research, some answers to research questions that have been submitted to the respondent in accordance with the objectives and hypotheses proposed in this study, it can be concluded that the type of land use and accessibility does not affect the value of the land. This is evidenced by the significance value of these variables is not smaller than alpha (0.05). Topographical variables and distance to the CBD have a significance value smaller than the alpha of 0.039 and 0.044. While the location becomes the most influential variable to the value of the soil that has the smallest significance value among some other variables of alpha is equal to 0.038. So from the results of the study concluded the location of a commercial function becomes the most important influence on the value of land on the street of Williem Iskandar Pasar V Medan Estate.

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