
**An Analysis Of The Factors Affecting Land Value
(A Case Study At Campus Area On Jalan Williem Iskandar Medan)**

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Abstract

A campus construction requires wide land space. It indirectly attracts people from out of town to settle around campus area for various advantageous reasons. These settlers create a variety of demands which directly and indirectly bring impacts on the increase in land demands. This causes an assumption that the land value around campus area is higher than that of outside campus area. Jalan Williem Iskandar Medan is one of the streets which area can be classified into campus areas. The objective of the study was to analyze the influence of factors such as surface area, land distance from the closest campus, land form, width and contour on the land value around campus on Jalan Williem Iskandar Medan. The study applied multiple regression analysis using questionnaire data. The samples were determined by using Unrestricted Random Sampling Method which drew the samples directly from the population. This study used 86 samples distributed in the population area covering 2 (two) locations i.e. Komplek Citra Land Bagya City and Komplek Mutiara Palace Residence. It focused on the identification of the influence of factors such as surface area, land distance from the closest campus, land form, width and contour on the land value in housing complexes particularly in Komplek Citra Land Bagya City and Komplek Mutiara Palace Residence located in the campus area on Jalan Williem Iskandar Medan. The results showed that on alpha 5%, the variables such as surface area, land distance from the closest campus, land width, form and contour had positive and significant influence on the land value. Based on these results, it could be concluded that independent variables such as surface area, land distance from the closest campus, land form, width and contour simultaneously were able to describe the changes on the dependent variables such as land value, and they had significant influence on land value.

Keywords: *Surface Area, land distance from the closest campus, land form, land width, land contour and land value*

INTRODUCTION

The definition of value according to the Indonesian valuation code (kepi) and the Indonesian valuation standard (SPI) edition-VI 2015 states that value is an opinion of the economic benefit of ownership of an asset, or the price most likely to be paid for an asset in exchange, so value is not a fact. Assets are also defined as goods and services. Value in exchange is a hypothetical price, where the hypothetical value is estimated and determined by the valuation objectives at a given time. Value to the owner is an estimate of the benefits that will be obtained by certain parties on an ownership or also known as value in use.

Determination of land value is influenced by certain factors that give a picture of the high and low value of land. It can be observed that many people compete to obtain land that has economic value. In the process, human choice is combined with the location of the land, which at the same time creates an 'economic location'. Location is an explanation associated with the spatial structure of an economic activity. This is always associated also with the geographical allocation of limited resources which in turn will affect and impact on the location of various activities either economic or social (Sirojuzilam, 2006).

The relationship between the location of a land in the context of space with the value of land is one of the interesting topics in soil research because the soil has its own uniqueness where a place with another place has different characteristics. Each land has its own uniqueness

based on its location. People who are going to buy land or house always start with a question about the location of the land or house. This question does not only occur in the purchase of land that will be used as a residence, but also if the purchase is for business activities such as shops, restaurants, hotels, factories, and others. This is related to the nature of the land that cannot be moved or moved (immobile) so it can be said that the location is the main factor determining the choice in purchasing land. Theoretically, the value of land (land value) is determined by the physical characteristics/quality of the land itself, the state of the surrounding environment, shape, size, usefulness, topography, and scenery. Land value is also influenced by the distance from/to the city center or the Central Business District (CBD), the farther from the city center or the central area, the cheaper the land price (Nurhayani 2004).

The campus environment is one of the environments or locations that are considered favorable for the existence of land. The existence of the campus can create an increase in land demand because it will affect the value of the surrounding land because the land is used to build facilities that support the existence of the campus. Fitriyanto (2011) revealed that the location factor consists of two components, namely: accessibility which is the ease of a property reached from various departments and Neighborhood (environment). In general, if the condition of a property is almost the same and is located in an adjacent location, it is almost certain that the value of the property is almost the same, based on the location factor of the land located in a campus environment and there is no influence of campus neighborhood, it can be ascertained that the value is the same or almost the same.

Williem Iskandar Medan Street is one of the areas that can be categorized as a campus environment. In this area there are several campuses, namely Tengku Amir Hamzah University, Medan State University (Unimed), Medan Area University (UMA), State Islamic University (UIN) of North Sumatra and Medan Tourism Academy. The existence of several campuses has led to several areas on Jl. Willem Iskandar Medan is very thick with campus life. Land use is widely used to provide various campus life support facilities such as boarding houses, shopping centers, shops, and various businesses that provide student needs. The existence of many campuses in this area (compared to other campus environments) causes the campus area of Jl. Williem Iskandar became interesting to study, especially on the value of his land.

RESEARCH METHODS

The purpose of this study was to analyze the influence of the factors of land area, land distance to the nearest campus, land shape, road width, and land contour in influencing the value of land in the campus area on Jalan Willem Iskandar Medan. The analysis tool used is multiple regression analysis using questionnaire data. The sampling method used in this study by sampling technique is Unrestricted Random Sample that is a sample drawn directly from the population. This study used 86 samples spread over a population area that includes 2 (two) locations, namely Citra Land Bagya City complex and Mutiara Palace Residence complex. In this study focused on the identification of the influence of factors of land area, land distance to the nearest campus, land shape, road width, and land contour to the value of land in residential complexes, especially Citra Land Bagya City complex and Mutiara Palace Residence complex, located in the campus environment on Jl. Willem Iskandar Medan.

RESULTS AND DISCUSSION

Instrument Validity Test Results

For the validity level of significance test by comparing the value of R-count with the value of r-table. For degree of freedom (df) = n-k in this case n is the number of samples and k is the number of constructs. In this case the amount of df can be calculated 30-6 or df = 24 with alpha 0.05 obtained r-table of 0.3882 (see R-table distribution value R-table significance of 5% in the book statistics), (for each item of the question can be seen in the column (total correlation) is greater than r-table and the value of R-positive, then the question item is said to be valid.

Table-1. Validity Test Results

Variable	Item Inquiry	Total Correlation	r- table	Descri.
Land Value (Y)	Question 1	0,918	0,3882	Valid
	Question 2	0,909		
	Question 3	0,939		
Land Area (X1)	Question 1	0,951	0,3882	Valid
	Question 2	0,964		
Distance to campus (X2)	Question 1	0,804	0,3882	Valid
	Question 2	0,902		
	Question 3	0,895		
Road Width (X3)	Question 1	0,933	0,3882	Valid
	Question 2	0,926		
Ground Form (X4)	Question 1	1,000	0,3882	Valid
	Question 2	0,858		
Land Contour (X5)	Question 1	1,000	0,3882	Valid
	Question 2	0,637		

Source: processed Primary Data, 2015

From the table of validity test results above can be seen that the value of pearson correlation positively correlated to the total construct variables. This is evidenced by the total construct of each variable (total correlation) has r-count greater than r-table (R-count > 0.3882) and positive value. Thus the question item is declared valid and can then be used in research.

Instrument Reliability Test Results

Reliability testing was carried out with the Cronbach's Alpha statistical test measuring instrument. A variable is said to be reliable if the value of Cronbach alpha > 0.60. Reliability testing results can be seen in Table-2, as follows:

Table-2. Reliability Test Results

Variable	Cronbac'h Alpha	Description
Land Value	0,910	Reliable
Land Area	0,904	Reliable
Distance to campus	0,829	Reliable
Road Width	0,843	Reliable
Ground Form	0,921	Reliable
Land Contour	0,769	Reliable

Source: processed Primary Data, 2015

From the description of Table-2 above it can be seen that each variable has Cronbach's Alpha > 0.60. Thus the variables (land value, land area, distance to campus, road width, land shape, and land contour) can be said to be reliable, and can then be used in research.

Results Of Multiple Linear Regression Testing

Multiple linear regression analysis is used to determine the effect of independent or independent variables on dependent or dependent variables. The results of the analysis of the influence of variables of land area, distance to campus, road width, land shape, and land contour to the value of land in housing around the campus environment of Jalan Willièm Iskandar Medan can be seen in Table-3 below:

Table-3. Results Of Multiple Linear Regression Testing

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.428	.501		-4.846	.000
	Luas Tanah	.707	.030	.750	23.689	.000
	Jarak ke Kampus	.376	.042	.285	8.969	.000
	Lebar Jalan	.276	.080	.095	3.447	.001
	Bentuk Tanah	.238	.112	.053	2.117	.037
	Kontur Tanah	.266	.117	.063	2.272	.026

a. Dependent Variable: Nilai Tanah

Source: processed Primary Data, 2015

From Table-3 above, it can be seen that the regression equation model obtained is as follows:

$$Y = -2,428 + 0,707 X_1 + 0,376 X_2 + 0,276 X_3 + 0,238 X_4 + 0,266 X_5 + u_i$$

Constant value of -2.428. That is, if there is no land area variable (X1), distance to campus variable (X2), road width variable (X3), Land shape variable (X4), and land contour variable (X5), then the land value (Y) will move down by 2.428.

From the multiple linear regression equation, it can be interpreted that all independent variables, namely land area, distance to campus, road width, land shape, and land contour have an influence on the value of land with different influence. The magnitude of the coefficient of land area in affecting the value of land is equal to 0.707; the coefficient of distance to campus in affecting the value of land is equal to 0.376; the coefficient of road width in affecting the value of land is equal to 0.276; the coefficient of soil shape in affecting the value of land is equal to 0.238; and the coefficient of land contour in affecting the value of land is equal to 0.266. The magnitude of the influence of each variable from the largest to the smallest is the land area variable, variable distance to campus, variable width of the road, variable contour of the land, and variable shape of the land.

The regression results above can also explain that each increase in land area of 1 m (one meter) will add land value of 0.707, each increase in distance to campus 1 m (one meter) will add land value of 0.376, each increase in road width of 1 m (one meter) will add land value of 0.276, land that has a flat land contour (flat) will add land value of 0.266, and land that has a proportional shape will add land value of 0.238.

Classical Assumption Test Results**Normality Test Results**

Table-4. Normality test with Kolmogorov-Smirnov

		Unstandardized Residual
N		86
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	1.20449393
Most Extreme Differences	Absolute	.073
	Positive	.065
	Negative	-.073
Kolmogorov-Smirnov Z		.680
Asymp. Sig. (2-tailed)		.744
a. Test distribution is Normal.		

Source: processed Primary Data, 2015

Based on the output in Table-4 above, it can be seen that the value of Asymp. Sig. (2-tailed) of $0.744 > 0.05$. This means that the standardized residual value is stated to spread normally.

Multicollinearity Test Results

Table-5. Multicollinearity Test Results

Independent Variable	Tolerance	VIF
Land Area	0,599	1,670
Distance to campus	0,594	1,682
Road Width	0,790	1,265
Ground Form	0,948	1,054
Land Contour	0,793	1,261

Source: processed Primary Data, 2015

From Table-5 above can be seen that the Tolerance value of all independent variables > 0.1 and VIF value is less than 5, so it can be concluded that in the regression model there is no multicollinearity and regression model is feasible to use.

Heteroscedasticity Test Results

Table-6. Glejser Test Results

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.654	.647		1.009	.323
	Luas_tanah	-.117	.077	-.321	-1.526	.140
	Jrk_kekampus	.210	.114	.376	1.846	.077
	Lebar_jalan	-.033	.072	-.096	-.454	.654
	Bentuk_tanah	-.068	.082	-.205	-.833	.413
	Kontur_tanah	.042	.076	.123	.553	.585

a. Dependent Variable: RES2

Source: processed Primary Data, 2015

Based on the glejser test output in Table-6 above, it is known that the significance value of land area variable (X1) is 0.140, land distance to campus variable (X2) is 0.077, road width variable (X3) is 0.654, land shape variable (X4) is 0.413, and land contour variable is 0.585. This proves that the five variables mentioned above have a significance value greater than 0.05, meaning that heteroskedasticity does not occur in all variables.

Hypothesis testing results (Goodness of Fit)**Test Result F-Test**

Table-7. F Test Result

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.694	5	11.739	317.284	.000 ^a
	Residual	2.960	80	.037		
	Total	61.654	85			

a. Predictors: (Constant), Kontur Tanah, Jarak ke Kampus, Bentuk Tanah, Lebar Jalan, Luas Tanah
b. Dependent Variable: Nilai Tanah

Source: processed Primary Data, 2015

From SPSS output in Table-7 above with f value of 317.284. Since F-count > F-table then Ho is rejected and H1 is accepted. The magnitude of the significance of 0.000 which means less than 0.05. Based on these results, it can be concluded that the independent variable is simultaneously able to explain changes in the dependent variable or the model is declared feasible or suitable. F test is done to draw conclusions about the significance of the influence of independent variables on the dependent variable.

Test results t – test

Table-8. T-test results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.428	.501		-4.846	.000
	Luas Tanah	.707	.030	.750	23.689	.000
	Jarak ke Kampus	.376	.042	.285	8.969	.000
	Lebar Jalan	.276	.080	.095	3.447	.001
	Bentuk Tanah	.238	.112	.053	2.117	.037
	Kontur Tanah	.266	.117	.063	2.272	.026

a. Dependent Variable: Nilai Tanah

Source: processed Primary Data, 2015

From the regression results in Table-8 above can be explained that the empirical test results of the effect of land area on land value shows the value of t-count 23.689 > t-table 1.663 (α 0.05) and the probability value (Sig.) of 0,000 which is below alpha 5%. The results of this partial test of land area variable indicate that the Ho hypothesis is rejected. This means that the land area variable has a significant effect on land value. The results of regression analysis also showed the coefficient (β) for land area variable of 0.707. This means that the magnitude of the coefficient of land area variables in affecting the value of land is equal to 0.707 or 70.7%. The results of the study can accept the hypothesis that states "the factor of land area has a great influence on the value of land".

Empirical test results of the effect of distance to campus on the value of the land showed the value of t-count 8.969 > t-table 1.663 (α 0.05) and the probability value (Sig.) of 0,000 which is below alpha 5%. The result of partial test of distance variable to campus showed that Ho hypothesis was rejected. This means that the variable distance to the campus has a significant effect on the value of land. The results of regression analysis also showed the coefficient (β) for the distance variable to the campus of 0.376. This means that the magnitude of the coefficient of the variable distance to the campus in affecting the value of land is equal

to 0.376 or 37.6%. The results of the study can accept the hypothesis that states "the distance factor of land to the nearest campus has a great influence on the value of land".

Empirical test results of the effect of road width on the value of the land showed the value of t-count $3.447 > t\text{-table } 1.663$ ($\alpha 0.05$) and the probability value (Sig.) of 0.001 which is below alpha 5%. The results of this partial test of the road width variable indicate that the H_0 hypothesis is rejected. This means that the variable width of the road has a significant effect on the value of land. The results of regression analysis also showed a coefficient (β) for the variable width of the road of 0.276. This means that the magnitude of the coefficient of the variable width of the road in affecting the value of land is equal to 0.276 or 27.6%. The results of the study can accept the hypothesis that states "road width factor has a great influence on the value of land".

Empirical test results of the influence of land forms on land value shows the value of t-count $2.117 > t\text{-table } 1.663$ ($\alpha 0.05$) and the probability value (Sig.) of 0.037 which is below alpha 5%. This means that landform variables have a significant effect on land value. The results of regression analysis also showed the coefficient (β) for landform variable of 0.238. This means that the magnitude of the coefficient of landform variables in affecting the value of land is equal to 0.238 or 23.8%. The results of the study can accept the hypothesis that states "soil form factor has a great influence on the value of land".

Empirical test results of the effect of road width on the value of the land showed the value of t-count $3.447 > t\text{-table } 1.663$ ($\alpha 0.05$) and the probability value (Sig.) of 0.001 which is below alpha 5%. The results of this partial test of the road width variable indicate that the H_0 hypothesis is rejected. This means that the variable width of the road has a significant effect on the value of land. The results of regression analysis also showed a coefficient (β) for the variable width of the road of 0.276. This means that the magnitude of the coefficient of the variable width of the road in affecting the value of land is equal to 0.276 or 27.6%. The results of the study can accept the hypothesis that states "road width factor has a great influence on the value of land".

test results of the influence of land forms on land value shows the value of t-count $2.117 > t\text{-table } 1.663$ ($\alpha 0.05$) and the probability value (Sig.) of 0.037 which is below alpha 5%. This means that landform variables have a significant effect on land value. The results of regression analysis also showed the coefficient (β) for landform variable of 0.238. This means that the magnitude of the coefficient of landform variables in affecting the value of land is equal to 0.238 or 23.8%. The results of the study can accept the hypothesis that states "soil form factor has a great influence on the value of land".

The empirical test results of the influence of soil contour to the value of the soil showed the value of t-count $2.272 > t\text{-table } 1.663$ ($\alpha 0.05$) and the probability value (Sig.) of 0.026 which is below alpha 5%. This means that the variable contour of the land has a significant effect on the value of land. The results of regression analysis also showed the coefficient (β) for land contour variable of 0.266. This means that the magnitude of the coefficient of land contour variables in affecting the value of land is equal to 0.266 or 26.6%. The results of the study can accept the hypothesis that states "land contour factors have a major influence on the value of land".

Determination Test Result (R²)

The coefficient of determination is used to measure how far the influence of independent variables (land area, land distance to the nearest campus, road width, land shape, and land contour) to the dependent variable (land value). Statistical processing results assisted SPSS program shows that the coefficient R Square test (R²) obtained at $0.952 = 95.20\%$. This means that the independent variable is able to explain the dependent variable by 95.20%, while

the remaining 4.80% is explained by other variables that are not included in this model (not studied). The results of the coefficient of determination test mean that only a small percentage of other independent variables that affect the value of land at the research site.

Table-9. Determination Test Results (R²)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.976 ^a	.952	.949	.19235

a. Predictors: (Constant), Kontur Tanah, Jarak ke Kampus, Bentuk Tanah, Lebar Jalan, Luas Tanah
b. Dependent Variable: Nilai Tanah

Source: processed Primary Data, 2015

Discussion Of Research Results

Effect Of Land Area Variable On Land Value

Land area variable has a regression coefficient of 0.707 with GIS value. equal to 0.000 and the value of t-count in the can equal to 23.689. The results of regression analysis of land area variables turned out to have a significant effect on the value of land in this research area. The results of regression analysis also showed the coefficient (β) for land area variable of 0.707. This means that the magnitude of the coefficient of land area variables in affecting the value of land is equal to 0.707 or 70.7%. The results of the study can accept the hypothesis that states "the factor of land area has a great influence on the value of land".

Previous research conducted by Nurhayani (2004) with the title of the influence of campus environment uii Terpadu to the value of land. The results showed the same results with this study, that the variable land area has a significant effect on land value. In her research, Nurhayani also examined samples in the form of soil distance to public roads, campus environment dummy, and soil condition dummy. The similarity of this study with Nurhayani's research is the reuse of land area and campus location as determining factors of value. The difference with this study is related to the location and the addition of variables.

Theoretically the more land that can be utilized the higher its value (value and size relationship is positive), but the benefits that can be obtained from each additional will decrease. The Shape of the land has to do with the possibilities of the property to be built. The Shape of the land that facilitates and supports the building to be erected will have a high value (Lusht, 1997).

Effect of variable distance to the campus of the land to the value of land

Land distance variable to campus has a regression coefficient of 0.376 with GIS value. equal to 0.000 and the value of t-count in the can equal to 8.969. The results of regression analysis of land distance variables to the campus turned out to have a significant effect on the value of land in this research area. The results of regression analysis also showed the coefficient (β) for the variable distance from the ground to the campus of 0.376. This means that the magnitude of the coefficient of the variable distance from the ground to the campus in affecting the value of the land is equal to 0.376 or 37.6%. The results of the study can accept the hypothesis that states "the distance factor of land to campus has a great influence on the value of land".

Previous research conducted by Nurhayani (2004) showed similar results with this study. Nurhayani conducted a research on the influence of uii integrated campus environment on Land Value. The independent variables used were land area, distance to public roads, dummy campus environment, and dummy soil conditions. The results showed that the most

influential variables on the value of land in the campus environment uii integrated variables are land area, distance to public roads and the location of the campus environment as a determinant of value. In this study the distance of land to campus (accessibility to the campus environment) also has a significant influence on the value of land in the campus area (environment) on Jalan Williem Iskandar Medan. An important thing that greatly affects the value of land is location. Location concerns where the property is located. The problem of location is related to accessibility which is usually measured by the ease/ distance to a particular center such as public facilities or CBD. Usually people will like a location that has low accessibility costs or is close to the center of economic activity. This causes the relationship between land value and distance is negative (Lusht, 1997).

Theoretically, a living environment is essentially a concentration of a number of residents in an area. And these concentrations of people will form a community within geographical boundaries such as cities and villages. Basically, residents who live in these concentrations will demand 3 (three) things that become their main needs, namely (Sujarto, 2005): a place to live where it can be protected from the surrounding nature (protected from rain and heat); places to do his work activities to earn a living in order to ensure the existence of his life; and places where can be met the needs of his daily life such as education, worship, and health.

Effect Of Road Width Variable On Land Value

Variable width of the road has a regression coefficient of 0.276 with the value of GIS equal to 0.001 and the value of t-count in the can equal to 3.447. The results of regression analysis of road width variables turned out to have a significant effect on the value of land in this research area. The results of regression analysis also showed a coefficient (β) for the variable width of the road of 0.276. This means that the magnitude of the coefficient of the variable width of the road in affecting the value of land is equal to 0.276 or 27.6%. The results of the study can accept the hypothesis that states "road width factor has a great influence on the value of land".

Adrian Sutawijaya (2004) conducted a study of the analysis of factors that affect the value of land as the basis for the assessment of the selling value of tax objects (NJOP) PBB in Semarang. The variables used are land value (rupiah), population density (people), land distance to the city center (km), road width (m), road condition (dummy variable), availability of transportation facilities (dummy variable), and flood-free environment (dummy variable). The results of the study by Adrian Sutawijaya showed that the width of the road has a significant effect on the value of land in the city of Semarang.

Wollcot (1987) mentioned that the value of a property such as land is influenced by factors that affect the motivation of a human activity. Factors affecting the value of land are:

1. Social factors, indicated by the characteristics of the population which includes population, number of families, education level, crime rate and others. This factor shapes the pattern of land use in a region.
2. Economic factors, shown in the relationship of demand and supply with the economic ability of a society to meet its needs. Variations in demand include the amount of labor, wage levels, income levels, and Purchasing Power, interest rates and transaction costs. Bidding variables include the amount of land available, licensing costs, taxes, and other overhead costs.

3. Government factors, government policies both in the political and legal fields will affect the value of land, such as security facilities, health, education, transportation networks, tax regulations and others.
4. Environmental factors affecting the value of land include its internal conditions, namely the location, size, topography, soil type, dimensions. External conditions / include environmental conditions around the location such as the presence of sea or ports, rivers, mountains and road transport networks, road widths that affect the ease or accessibility to land locations.

Effect Of Landform Variables On Land Value

Landform variable has a regression coefficient of 0.238 with GIS value. equal to 0.037 and the value of t-count in the can equal to 2.177. The results of regression analysis of landform variables turned out to have a significant effect on the value of land in this research area. The results of regression analysis also showed the coefficient (β) for landform variable of 0.238. This means that the magnitude of the coefficient of landform variables in affecting the value of land is equal to 0.238 or 23.8%. The results of the study can accept the hypothesis that states "soil form factor has a great influence on the value of land".

The physical form of the property has an important role in determining the value of a property, especially for vacant land and land that has the potential to be built. Rectangular land is certainly easier to build than land that has a pentagon shape or has an irregular shape. Lands that have the same area may have different values if the land forms are different. For example, one ground has an elongated shape to the back and another may have a widened shape to the front. Therefore, these factors will cause different values. According to Prawoto (2012), the regular shape of the land will make it easier to design buildings, while the irregular shape of the land will make it difficult to erect buildings, so that The Shape of the land can affect the value of the land. The valuation of a property must analyze the size and shape of the land plot, because the size and shape of the land have an impact on the type of designation. Irregular land shape (unusual) can be used/erected a residential building, but not appropriate for commercial and industrial use. (The Appraisal Institute, 2008).

Effect Of Land Contour Variables On Land Value

Land contour variable has a regression coefficient of 0.266 with GIS value. equal to 0.026 and the value of t-count in the can equal to 2.272. The results of regression analysis of land contour variables also have a significant effect on the value of land in this research area. The results of regression analysis showed the coefficient (β) for land contour variable of 0.266. This means that the magnitude of the coefficient of land contour variables in affecting the value of land is equal to 0.266 or 26.6%. The results of the study can accept the hypothesis that states "land contour factors have a major influence on the value of land".

Hidayati (2003) stated that the factors that determine the value of land can be classified into 3 factors, namely: soil characteristics, expectations of future uses and locations that refer to physical conditions. Hidayati and Harjanto describe and identify the physical influence of the site on the value of the property including the distance from the property to a particular destination, amenities/important facilities built adjacent to the site (such as city parks, clinics and campuses), and topography (soil conditions). Gwartney (1999) suggests that factors that

affect the value of land include physical attributes, one of which includes land area and land contour. From several theories about the value of land, in general the theory suggests that there is a close relationship between the condition of the soil (soil contour) seen from the physical footprint of the land itself with the value of the land.

CONCLUSION

Based on the results of research and empirical findings and supported by several theories in this study, it can be concluded several things as follows:

1. Independent variables such as land area, land distance to campus, road width, land shape, and land contour can simultaneously explain changes in the dependent variable of land value.
2. Variable land area has a great influence on the value of land around the campus environment on Jalan Williém Iskandar Medan. The magnitude of the coefficient of land area variables in influencing the value of land is equal to 0.707.
3. The variable distance of land to campus has a great influence on the value of land around the campus environment on Jalan Williém Iskandar Medan. The magnitude of the coefficient of the variable distance from the ground to the campus in affecting the value of the land is equal to 0.376.
4. The variable width of the road has a great influence on the value of land around the campus environment on Jalan Williém Iskandar Medan. The magnitude of the coefficient of the variable width of the road in affecting the value of land is equal to 0.276.
5. Landform variables have a major influence on the value of land around the campus environment on Jalan Williém Iskandar Medan. The magnitude of the coefficient of landform variables in affecting the value of land is equal to 0.238.
6. Land contour variables have a major influence on the value of land around the campus environment on Jalan Williém Iskandar Medan. The magnitude of the coefficient of land contour variables in affecting the value of land is equal to 0.266.

REFERENCES

- Appraisal Institute, (2008). *The Appraisal of Real Estate*, 13th edition, Chicago, Nort Michigan Avenue.
- Ardianto, Elvinaro, (2010). *Metodologi Penelitian untuk Public Relations: Kuantitatif dan Kualitatif*, Simbiosis Rekatama Media, Bandung.
- Barlowe, Raleigh, (1996). *Land Resource Economics*, Second Edition, Prentice Hall, Englewoods Cliffs, New York.
- Blaxter, L., Hughes, C., & Tight, M, (2001). *How to Research*, Maidenhead, Open University Press.
- Calder, A., & Greenstein, R, (2001). *University as Developer*. Mass, Lincoln Institute, Cambridge.

- Dunkerley, H.B, (1983). *Urban Land Policy: Issues and Opportunities*, Oxford University Press, Washington D.C.
- Fitriyanto, Aris, (2011). Analisis Faktor-Faktor Yang Mempengaruhi Nilai Tanah di Kecamatan Wedi Kabupaten Klaten, *Tesis S-2*, Program Studi Ekonomi dan Studi Pembangunan, Universitas Sebelas Maret, Surakarta.
- Gwartney, J. D., & Lawson, R, (1999). *Economic freedom of the world: 1998/1999 interim report*, Free Market Foundation.
- Hidayati, Wahyu dan Budi Harjanto, (2003). *Konsep Dasar Penilaian Properti*, BPFE, Yogyakarta.
- Lusht, Kenneth M, (1997). *Real Estate Valuation Principles and Applications*, Irwin, USA.
- Mappi, (2015). *Kode Etik Penilaian Indonesia dan Standar Penilaian Indonesia 2015*, Edisi VI, Gelora Karya Bharata, Jakarta.
- Nurhayani, (2004). Pengaruh Lingkungan Kampus UII Terpadu Terhadap Nilai Tanah, *Tesis S2*, Program Studi Magister Ekonomi Pembangunan Bidang Ilmu Sosial, Universitas Gadjah Mada, Yogyakarta.
- Prawoto, Agus, (2012). *Teori & Praktek Penilaian Properti*, Edisi Kedua, BPFE, Yogyakarta.
- Sirojuzilam, (2006). *Teori Lokasi*. USU Press, Medan.
- Sujarto, Djoko, (2005). *Kota Berkelanjutan*. Penerbit Alumni, Bandung.
- Sutawijaya, Adrian, (2004). Analisis Faktor-Faktor Yang Mempengaruhi Nilai Tanah Sebagai Dasar Penilaian Nilai Jual Obyek Pajak (NJOP) PBB Di Kota Semarang, *Jurnal Ekonomi Pembangunan*. Volume 9. No. 1, Fakultas Ekonomi, Universitas Terbuka.
- Wollcott, R. C, (1987). *The Appraisal of Real Estate*, Chicago, Illionis, USA, American Istitute of Real Estate Appraisers.