



The Factors Affecting Land Prices In Housing Location In Sidoarjo Regency

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ABSTRACT

The need for residential location is one of the basic needs of the community and the attractiveness of the residential location is a unique feature where this feature is not made by the respective occupants, but by external factors from the residential environment in the area. This study aims to analyze the factors that are considered as the basis that affect the price of land. This research uses quantitative approach with associative research method. Linear analysis with quadratic method. Ordinary Least Square (OLS). From the analysis of this research model obtained log-linear F-accounting 70,162 while the value of F-table (0,05; 5,48) is 2,45. because $F\text{-count} > F\text{-table}$, H_0 means rejected and explanatory variables include Distance to city center, Distance to main road, Distance to toll gate, Road width, and security simultaneously can be explained significantly at land sale price.

Keywords : residential location, respective occupants, land prices,

INTRODUCTION

The need for residential location is one of the basic needs of many people, in addition to the need for food and clothing. Real Estate Enterprises increasingly wriggle with the Minister of Home Affairs letter No. 648/1062 / SJ on the Acceleration of Housing Development so that the developers of both large and middle scale are all vying to get a location permit to build settlements. Sidoarjo is a Regency in East Java which is in the development of settlement including the most prominent in East Java Province. Settlement and residential development must adhere to the General Plan of Urban Spatial Planning (RUTK) in order to form a city that is neat, comfortable so as to create peace for its residents. Due to the rapid increase of population will result in the narrowness of settlement land and if this is left will have an impact on the ecology of the Regency (Barid, Wajdi, Ummah, & Etikasari, 2017).

The Development of settlement in accordance with the spatial city in Sidoarjo directed in the east and west. The development of this region is done on the grounds that in the area can still be developed, because the availability of large land and



simultaneously the area is intended as a buffer reservoir of people who work in downtown. In both areas has been built various types of houses, designs and locations offered by the developers of the settlement, so it will add to the impact of many alternative choices for consumers. On the other hand an increasingly critical consumer attitude, requires developers to be more professional in providing services to consumers.

The attractiveness of residential locations is a unique characteristic because these characteristics are not at all formed by individual residents, but are caused by external factors from the settlement environment in the area. Therefore, the price of land is strongly influenced location other than the quality of the environment and residential facilities it has. Where the current reality, the distance of a location to the center of the city is not a factor affecting the price of land, because the location of residential land even though it is located far from downtown or central business area, the price of land is sometimes relatively higher than the price of land close to the city center or business area. This is possible because the mileage is felt shorter due to increasingly easy transportation. In addition, due to the external factors of a good residential environment, so the environmental quality becomes better. The above symptoms are caused by transportation infrastructure (accessibility), residential infrastructure, and public facilities (city) around the site, Based on this it is necessary to examine the external factors of settlement which affect the price of land and how its influence.

Literature Review

The value of the soil is a measure of the ability of the land to produce something that directly gives an economic advantage, while the price of land is nominal for the applicable extent. Both problems have a functional relationship, ie the price of land is determined by changes in the value of the land. For example, a plot of good soil produces good crops, but because of inadequate transportation to the market leads to small economic benefits, the price of the land is low. If one day the transport route becomes smooth, the land will give a big economic benefit, so the value of the land will increase and eventually the value of the land will rise (Eckert *et.al*, 1990; Noor M, Abd Rahman, 1997)



According to Eldred (1987: 20-25), there are four factors that determine good value: (1) demand, (2) utility, (3) scarcity, and (4) transsferability.

Demand is indicating the availability and financial ability to obtain certain goods, demand analysis is the analysis of needs, wants and willingness and ability to pay consumers because demand is an individual desire and purchasing power where someone will only buy if you have feelings of need and able to pay.

Utility is the ability that can arouse the desire to have it, utility concerns regulations that restrict the use of property, the type of rights and property restrictions, the location of the environmental state of the property, the size, shape and capacity of the land, and what buildings can be built on the ground. Everyone has a desire to own the land because of its usefulness for shelter, agriculture, commercial business, and so forth.

Scarcity indicates a lack of quantity or supply of goods. This concept refers to the relative supply of property encountered by potential buyers or tenants. When the buyer faces a number of choices, the value tends to be low. Conversely, the more rare a property while the other remains, its value will rise.

Transferability means ownership and use can be transferred. This concept refers to marketing (marketing), negotiation and real estate transactions are relatively less open. One reason the transfer process becomes so important to the value of a property is that buyers and sellers find it difficult to come face-to-face. Market participants do not have complete information while the buyer is less aware of all sales strategies and the seller does not know exactly what the buyer wants.

Based on the four determinants of value, so here the researcher only discusses the issues concerning the net utility, which is the difference between the utility with disutility over ownership and utilization of the land, hereinafter referred to as productivity (Damayanti, A., & Alfian, S, 1998). There are five factors that determine the productivity of land use, namely physical characteristics, legal characteristics, psychological characteristics, locational characteristics, and environmental characteristics.

Based on the description of the theory formulated a model of estimate of land prices as an abstraction of reality developed based on theoretical framework of reality developed based on theoretical and empirical framework. Where the variables suspected to affect the price of land in this study are external factors of residential



environments, namely: accessibility to the city center, residential environment conditions, and the availability of public transportation routes.

Accessibility to the city center is determined by the distance variables to the city center (square) and the toll gate, the environmental conditions of the settlements are represented by variable width of the residential road while the availability of public transportation routes is determined by the distance of the main road-the path through which the public transport.

From these variables can be formed a model that can be prepared to solve the problem of this research is:

The land price = f (DCC, DTR, WRR, DPR,RS)

Information:

DCC = Distance to city center or city hall (km)

DTR = Distance to Toll Road Entrance (km)

WRR = Width of Residential Road (m)

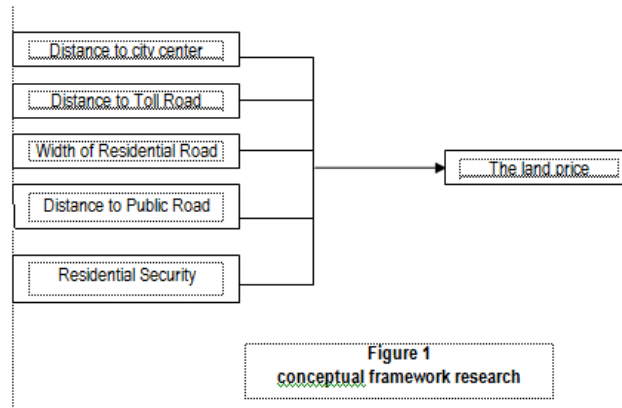
DPR = Distance to Public Road (km)

RS = Residential Security

Conceptual Framework And Hypotheses Research

Conceptual Framework

Based on the background of the problem and literature review it can be formulated conceptual framework as follows:



Research Hypothesis

Basing on the background of problems and literature review then can be submitted research hypothesis as follows:

There is a negative and significant influence between, distance to downtown, distance to toll gate, distance to public road to land price and positive influence between road width, and settlement security system to land price.

RESEARCH METHODS

This research uses quantitative approach with associative research method. The study population is the residential environment built by developers in Kecomactan Sidoarjo region. In this study, the sample used is population sampling, where the entire population of the existing BTN partner developers in Sidoarjo Regency is taken as a sample member. The analytical tool used to determine the effect of external factors on land prices is the least squares method (Ordinary Least Square / OLS) (Hadi, S., 2004). Economic Apriori Test This criterion concerns the issue of signs and intensity of



economic relationships studied. The economic theories have determined the mark and the magnitude of the coefficient so as to make a benchmark. Commonly used criteria are regression coefficient and standard deviation deviation. The regression coefficients are used to measure the degree of economic relationships studied, whereas standard deviations are used to measure the dissemination of the true value (Winarno, H. W., 2011)

To test the symptoms of multicollinearity among independent variables can be identified by looking at the VIF value of independent variables, if the VIF value is more than 8 then there are symptoms of multicollinearity between independent variables. Heterokedastisitas test in this study using Durbin Watson to detect heterokedastisitas, Durbin Watson) that is between 1-4, it can be concluded there are no symptoms of heterokedastisitas on the observed data. While Kolmogorov Smirnov test is conducted to determine whether the distribution is normal or not, can be seen or not from probability value compared with α value, if probability value $> \alpha$, it means the data is normal. (Santoso, S., 2014).

The linear test means that the contribution of the free variables together must have equal weight in affecting the dependent variable. To detect can be by looking at the value of R2 and R2 are adjusted. In general the better the model used between R2 and adjusted R2 the smaller the difference (Nugroho, B. A., 2005).

Research Results And Discussion

From result of regression analysis of log-linear model resulted then got result of formulation of regression test as follows:

$$\text{The land price} = 5,214 - 0,131 \text{ DCC} - 0,126 \text{ DTR} + 0,661 \text{ WRR} - 0,185 \text{ DPR} + 0,187 \text{ RS}$$

$$R^2 : 0,8796$$

$$\text{Adjusted } R^2 : 0,8674$$

$$F_{\text{-hitung}} : 70,1620$$



DW_{-hitung} : 2,176

Furthermore, to know whether or not the multiple regression model using cross section data, it is necessary to test. In this case the test is done by using 3 criteria, the first criterion is a priori economy, the second criterion is classic assumption test and the third is a priori ekonometri.

1. A Priori Economy Test

- a. Test direction (sign). Looking at the results of regression and the sign of the hypothesized regression coefficient, then obtained the comparison as follows:

Table 1
Test direction (sign)

Explanatory Variables	The hypothesized sign	Estimated results
Distance to city center	-	-
Distance to Toll Road	-	-
Width of Residential Road	+	+
Distance to Public Road	-	-
Residential Security	+	+

2. Classic assumption test

a. Heteroskedastik test

After the test using Durbin Watson value, then got the result that for the influence between the independent variables to the dependent variables contained in this study amounted to 2.176 which means the relationship between



each independent variable with the residual value is not significant, and things this means that there is no heteroskedastik for the observed variables.

b. Normality Test

Referring to the result of the plot analysis in this study which shows the linear pattern and its distribution follow the direction of the diagonal line, it can be said that the regression equation in this research is linear.

c. Linearity test

Linearity test means that the contribution of independent variables together has the same weight in affecting the dependent variable. To detect can be by looking at the value of R² and adjusted R² in the model used seen between R² and adjusted R² the smaller difference indicating the model used is good (Supranto, 1995: 113).

d. Multikolinearity test

Based on the results of calculations in this study obtained VIF value of each independent variable that is below the value of 8 and thus can be interpreted there are no symptoms of multicollinearity on the observed independent variables.

e. Statistik Test

From the selected model, there will be a statistical discussion which includes t-test, F test and coefficient of determination.

- a. T-test, this test is conducted to determine whether independent variables individually have a significant effect on the independent variables. The t-test is done by comparing t-count values and t-table values. With degrees of freedom (df) = $n - k = 54 - 6 = 48$ and $\alpha = 0.05$, obtained t-table = 2,021 smaller than t count 3.071.
- b. Test F is performed to test statistically whether the whole variable is statistically free whether the overall independent variable consisting of Distance to city center, Distance to main road, Distance to toll gate, Road width, and Security simultaneously or whole give a real influence to variable of land price. From the results of this research model analysis in the form of log-linear obtained F-count value of 70.162 while the value of F-table (0,05;



5,48) is equal to 2,45. because $F\text{-count} > F\text{-table}$ means H_0 to be rejected and explanatory variables include Distance to city center, Distance to main road, Distance to toll gate, Road width, and Security simultaneously can explain significantly on variable land prices.

- c. Test the coefficient of determination (R^2). This coefficient shows how much percentage of variation of independent variable or explanatory variable can be explained the dependent variable. Based on the regression analysis obtained R^2 of 0.879 which means that about 87.9% variation of land price variable can be explained by the variation of independent variables ie Distance to city center, Distance to main road, Distance to toll gate, Road Width, and Security.

Conclusions And Recomendations

Simpulan

The hypothesis of this study was answered through the results of calculations with descriptive statistics showing that the variables under consideration of the selection of residential location is the distance variable from the city center (square) people are more interested in the residential location that has a distance of 2.1 - 4.3. km to 58.3%. Similarly, the distance to the toll gate people prefer a residence located at a distance of 3.4 to 5.7 km which covered 50.0% of the housing environment, people prefer a residential neighborhood with a width of the road between 6-7 m of 47.2 %, while the security system for residential settlements guarded by security guards for 24 hours is found in 63.9% of people who want it. While the formulation of the second problem is answered through the F test results where $F\text{-count} > F\text{-table}$ meaning variable explanation cover Distance to city center, Distance to main road, Distance to toll gate, Road Width, and Security can simultaneously explain the change significantly. in variable land prices. Regression analysis obtained R^2 equal to 0,879 which mean that about 87,9% variation of variable of land price can be explained by variation of independent variable that is Distance to city center, Distance to main road, Distance to toll gate, width of Road of residential, and Security of residential.



Recomendations

1. In development planning, the city government should pay attention to the improvement of the transportation system, either through road construction or public transportation procurement. This transportation system can reach to residential neighborhoods in all parts of Sidoarjo region evenly, where the transportation system is easy to reach other public facilities, such as: schools, hospitals, and other public services, making it easier in doing all activities.
2. Related to the determination of the Value of Objects of Tax Objects (NJOP) of the United Nations, especially for the Sidoarjo sub-district shows that the factors worth considering in the estimate of residential land prices are variable distance to toll gate, road width, distance to main road and settlement security

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