A Concepts of Factor Land Value on Ahmad Yani Frontage Road, Surabaya

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Abstract. The Surabaya City has a rapid infrastructure development as proven by the increasing value of land. One of the infrastructure developments is the construction of Ahmad Yani's Frontage Road. The value of land in Frontage Ahmad Yani continues to increase due to various factors. The purpose of this study analyzes what variables affect land value by using a descriptive analysis method based on journals and previous research. The results of this study uncovered four dominant variables that influence land values, namely location, land characteristics, externalities, and accessibility.

1. Introduction

Every year, the value of land in the Surabaya city has been increasing along with the development of the urban area and infrastructure. One of the infrastructure developments which has a strategic function is the construction of Ahmad Yani's Frontage Road. The Ahmad Yani road which is one of the entrances to Surabaya has a vital role in connecting with other cities around, there is an access to and out of the highways and is also one of the access roads from the middle of the town to Juanda International Airport. The main purpose of frontage is to solve the traffic jam problem on a main road Ahmad Yani, a function of frontage is as the path of all that is separating between the fast lane and the slow lane. After operating this frontage makes the development of area begin to seem, with the construction of commercial area, hotels and apartments. Therefore Frontage Road Ahmad Yani is a project that has an impact on changes in land function and value.

The value of land around Frontage Ahmad Yani continued to increase significantly and even became the highest compared to other areas in Surabaya in 2009-2011 [1]. The increase in land value continues with various additional infrastructure support in the environs such as Apartments and Hotels. At least these conditions are inline with the theory of Grissom [2] that says the concentric pattern of urban land use is mentioned the method of concentric zones which have the highest land value in the city center and the lower the value of the land. Seeing the current development in Surabaya now, the weaknesses of this theory are too simple for the distribution of land values based solely on the distance to the city center, but physical factors can be considered the argument even it does not have full influence on the value of land. Moreover, externality factors also affect land value.
who can be in the form of supporting facilities such as education and health which will change the pattern of land use, other externalities are demand and supply, where land has economic value, that is the value or price of land which depends on supply and demand Walcott [3]. In the short term supply is very inelastic, this means that the value of land in a given area will depend on demand factors, such as population density and growth rates, employment rates and levels of community income and transportation system capacity and interest rates Eckert [4][5].

With changes in land function along Frontage road directly impacting land values and it shows the need for research on any variables that affect land value along Ahmad Yani frontage road by using empirical data in the form of research or journals related to land values to determine what variables will affects the value of land using descriptive analysis methods. This research is still in the early stages, and can be used as information to determine the variables that influence the value of land in subsequent studies.

2. Research Method
Researcher use descriptive analysis method, the analytical method which is the most basic analysis to describe the state of the data in general Sugiyono [6][7], by analyzing data originating from primary data. Based on primary data collection with variable weighting with the following table:

| No | Literatures       | Independent Variables | Weighting Value |
|----|-------------------|-----------------------|-----------------|
| 1  | Neelawela, 2010, [8] | X1= Location          | X= Location : 9/33 |
|    |                   | X2= Accessibility      | X= Accessibility : 5/33 |
|    |                   | X3= Road Class         | X= Externality : 5/33 |
| 2  | Bains, 2010, [9]   | X1= Accessibility      | X= Dimensions : 3/33 |
|    |                   | X2= Externality        | X= Land Status : 2/33 |
| 3  | Koster, 2010, [10] | X1= Location           | X= Road Class : 2/33 |
|    |                   | X2= Externality        | X= Social Aspect : 1/33 |
| 4  | Cervero, 2007, [11]| X1= Location           | X= Economical Aspect : 1/33 |
|    |                   | X2= Accessibility      |                        |
| 5  | Fatmawati, 2012 [1]| X1= Externality        |                        |
|    |                   | X2= Location           |                        |
| 6  | Yunistiawan, 2017, [12]| X1= Land Status      |                        |
|    |                   | X2= Accessibility      |                        |
|    |                   | X3= Location           |                        |
|    |                   | X4= Dimensions         |                        |
| 7  | Harum, 2017, [13]  | X1= Location           |                        |
|    |                   | X2= Accessibility      |                        |
|    |                   | X3= Dimension          |                        |
|    |                   | X4= Road Class         |                        |
| 8  | Fauza, 2010, [14]  | X1= Social Aspect      |                        |
|    |                   | X2= Economical Aspect  |                        |
|    |                   | X3= Location/Physical Aspect |            |
| 9  | Manaf, 2015, [15]  | X1= Location           |                        |
|    |                   | X2= Externality        |                        |
| 10 | Sidik, 1998, [16]  | X1= Location           |                        |
|    |                   | X2= Dimensions         |                        |
|    |                   | X3= Externality        |                        |
|    |                   | X4= Land Status        |                        |

Sources: Researcher Analysis, 2018
3. Result and Discussion

The results of the analysis found that there are four dominant variables that influence the value of land as follows:

3.1 Location (X1)

According to Grissom [2] that the location of land determines the high and low values of the land, land value around or the city center has the highest value, and this value will decrease with increasing distance from the city center known as the theory of concentric zones. Location is a critical variable that has a negative influence on the value of a property, it means that more far the location of a property from the city center, makes lower the value of the property [16].

3.2 Land Characteristics (X2)

The land has a very close relationship with its characteristics because based on the characteristics of the land, the use of the land can be determined [17]. The components of land characteristics are: 1) Area: The area of land is an area of a typical plot of land expressed in the form of square meters. 2) A form of land: The shape of the land is an essential part of valuing land, the proportion of the width of the front side is compared to the length of the back. Ideally, the shape of the land resembles a rectangle; this will make it easier to do the building construction rather than the asymmetrical shape. 3) Topography: Topography is a description of the physical land such as slope, level or not compared to the road and fertility. Land that has a relatively higher level increases the value of the land [18].

3.3 Externalities (X3)

Externalities closely relate with non-human factors that are received by the land [2]. If the externalities are positive, such as being close to the center of the economy, free of flooding, population density then the land will be of high value when compared to land that does not accept externalities, even though the size and shape of the land are the same. If the land receives negative externalities, such as being close to garbage, far from the city center/economy, flood frequently, then the land will be of low value compared to land that does not accept negative externalities. The land has economic value where the value or price of land depends on supply and demand. In the short term supply is very inelastic, this means that land prices in specific regions will depend on demand factors [3]. Also, externalities occur if one activity of economic (both production and consumption) affects the welfare of other economic and existing events occur outside the market mechanism [19].

3.4 Accessibility (X4)

The primary variable that determines the value of land is accessibility related to the location of land as an attraction [20]. Tamin in Miro defines that accessibility is how easiness for a location to be connected with other locations through the existing transportation network, by road infrastructure and transportation equipment that moves on it. Besides distance, there are several factors affect the level of accessibility [21]. These factors include: 1) Travel Time Factors. Travel time factors are very dependent on the availability of transportation infrastructure and transportation facilities that are reliable (reliable transportation system), for example, road networks that are quality and guaranteed that the fleet is ready to serve anytime. 2) Travel cost/cost factor. Travel costs play a role in determining whether or not the destination is easy to reach because the loss of unreachable trips results in people (lower middle class) being reluctant or even unwilling to travel. 3) Factors of intensity (density) of land use. The frequency of activities in a plot of land that has been filled with various types of events will influence the proximity of the distance of the various activities, and indirectly this also increases the level of ease of achieving objectives [21].
Based on descriptive analysis from previous studies conceptually the location variable shows the contribution or dominant influence compared to other variables with a comparison value of 9/33 and it means that the location variable has an influence of 27% on the value of land, the location variable is related to distance [16]. Variables of Accessibility and Externality show contributions of 15% each. Furthermore, the characteristics of the land variable accounted for 9% of the value of the land, referred to as land characteristics related to land dimensions [17].

4. Conclusion
Based on the results of the meta-analysis from previous journals, there were found four dominant variables, namely location, accessibility, externality and characteristics of the factors that influence the value of the land. For suggestion, this study just present the general description of the variables that influence land values based on weighting from the analysis of previous studies, so for further research is suggest to use instruments that allow it to be more measurable so that it can reflect better land values.

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