

Analysis of Factors that Influence The Level of Formal Housing in Sub-District Area Medan Helvetia Medan City

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Abstract: Capitalization rate is the ratio of net income generated from a property to its property value. If the market value of the property and the capitalization rate are known, a reasonable rental property can be determined. So that the level of property capitalization will be very helpful in making property investment decisions, especially residential homes, because houses are the type of property most often transacted. The purpose of this study was to analyze how influence the capitalization factors such as building area factor, age of the building, rent tempo, motivation for home ownership, and house building facilities to the level of capitalization of formal housing in Medan Helvetia District, Medan City. The data were analyzed by using multiple linear regression analysis and observation data. The method used more precisely is to use the Target Population sampling technique. This study uses 40 samples in 10 formal housing in the Medan Helvetia District. The results of the study showed that alpha 5%. variable of building area, age of the building, motivation for home ownership, and house building facilities had a positive and significant effect on the house capitalization rate. Whereas the rent tempo variable has no significant effect. Based on the results of the study it can be concluded that the independent variable of building area, building age, home ownership motivation, and home building facilities, simultaneously able to explain changes in the dependent variable of the capitalization rate of the house, and has a positive effect on capitalization rates.

Keywords: Building Area, Building Age, Motivation For Home Ownership, House Building Facilities, House Capitalization Rates

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I. Introduction

Physically, a city develops in a variety of patterns through urbanization. Besides physically, the population in a city develops from time to time as a result of the attraction that results in people immigrating to stay or stay for a while. Increasing humanity immigrated to the city, demanding the availability of facilities, infrastructure, housing, health, education and other social infrastructure, so that changes in the physical, social and economic conditions of the city will occur according to the demands of the community.

Hidayati and Harjanto (2003) state that increasing population is the main factor that causes increased property demand. The increase in population in a city will result in more demand for houses, offices, shops, industries, and others.

In current conditions, investment opportunities in the form of residential property still have a favorable rate of return. These benefits can be in the form of income from rent and appreciation of the value of the house. In making investment decisions, investors are very concerned about two important things, namely the acquisition and risk that exists in the investment, where the two factors are seen in the level of capitalization. One of the problems that currently arises is that the number of housing units that have been built in housing is not selling because one of the factors is low purchasing power and problems that are considered difficult by interested parties in the housing rental market, which is a problem, due to lack of available market information. One approach used in determining property rental prices, in this case housing, is through determining the level of capitalization (Arifin, 2011).

The level of capitalization of house values in East Lombok Regency by using the ordinary least square method showing that the distance to the city center had a significant and negative direction on the level of capitalization of houses in East Lombok district, building area had a significant positive effect to the level of capitalization of house value, tempo of rent has a significant negative effect on the level of capitalization of house value, building facilities have a positive effect on the level of capitalization of house value, owner motivation has a positive effect on the rate of capitalization of houses in East Lombok Regency.

Medan City is a metropolitan city that is now growing and developing rapidly as in other metropolitan cities. The development of Medan City caused the need for land for housing construction and shopping centers. Medan Helvetia District is one of the sub-districts of a total of 21 sub-districts in Medan City.

Medan Helvetia Subdistrict is a sub-district that has a large population growth. The development in this area is very rapid, where there are many residential areas. The estimated population in 2030 is 208,592 people with a density of around 159 people / hectare area (Medan City Spatial Plan 2010-2030). Based on the field survey conducted there are 10 formal housing complexes located in Medan Helvetia District both large-scale housing and small-scale housing with different types and classes of course.

Data from the rental value and market value of housing units in each housing were obtained through interviews with housing security and through telephone interviews with homeowners. From the table above it can be seen that the level of housing capitalization in Medan Helvetia District is also different.

This study emphasizes how the level of housing capitalization and to get the weight of each independent variable to find out which factors are the most dominant in influencing the level of capitalization of formal housing in Medan Helvetia District.

This study will examine the factors that influence the level of capitalization of house values with the independent variables of house building area, age of house building, rent tempo, motivation of home ownership, and house building facilities on capitalization rates. The dependent variable is the capitalization rate, which is the ratio between operating net income and market value. This research is expected to be used as a material consideration in investment policy making in the Medan Helvetia District.

II. Theoretical Review

2.1 Capitalization Rate

The rate of return used in the income capitalization approach shows a prospective level and not the historical level, so that market perceptions of risk and changes in purchasing power are very important. The level of capitalization is the rate of return that serves as an indicator of risk in property investment. In general, the higher the capitalization rate usually reflects the less desirable property, and the lower the capitalization rate reflects that property is much in demand (Appraisal Institute, 1996: 521).

There are two methods commonly used to determine capitalization rates, namely direct capitalization and yield capitalization. The difference between the two lies in the assumptions used. Direct capitalization assumes that the income received in the coming years is the same as reflected by income in the year of valuation. While the yield capitalization includes assumptions regarding factors such as the rate of return expected by investors. The remaining economic life, tenure and anticipation of depreciation/appreciation.

Furthermore, based on the analysis of the overall capitalization rate of several properties into the study sample, a statistical analysis was conducted to determine the standard and standard deviation. In addition to statistical tests conducted to determine the average capitalization rate of house values, an analysis of the relationship between levels was carried out. capitalization and the factors that influence it.

2.2 Property Market Value

In the field of property business and valuation, the most commonly used term is market value. In general, market value is the price of a transaction that meets the following elements:

- a. Buyers and sellers want to make transactions
- b. In an open market situation
- c. The seller and the buyer have sufficient knowledge, experience and information;
- d. There is an adequate offer period;
- e. Special purchases / sales are ignored.

2.3 Investment Property Value

Property valuation is a process of determining value, whether market value, investment value, insurance value or other types of value, from a property at a certain valuation date.

IAAO (1996: 204) states that in the application of this income approach, there are several basic steps as follows.

- a. Estimating potential gross income.
- b. Reducing potential gross income with the level of vacancy.
- c. Summing up other income and potential gross income after deducting the vacancy rate to get an effective gross income estimate.
- d. Determine operating costs.
- e. Subtracting gross income is effective with operating costs to get operating income before interest and taxes.
- f. Determine the appropriate capitalization rate.
- g. Determine the capitalization procedure that is appropriate to be applied.
- h. Capitalizing on operating net income to estimate property values.

2.4 Definition of Housing

Based on Law Number 1 of 2011 concerning Housing and Settlements. Housing is a group of houses that function as a residential or residential environment equipped with environmental facilities and infrastructure. Housing is one form of housing that has a very close relationship with the community. This means that housing in a location more or less reflects the characteristics of the people living in the housing, (Ananda, 2016).

Housing Elements

- a. Natural environment: residential land and land.
- b. Social activities: human (individual), household, community (siskamling, etc.).
- c. Residential buildings.
- d. Basic physical facilities and socio-economic services:
 1. Stalls & grocery stores.
 2. Playgrounds, mosques, etc.
- e. System for basic physical infrastructure network;
 1. Road network.
 2. Drainage Channels.
 3. Sanitation.
 4. Clean water.
 5. Electricity, communication

2.5 Factors Affecting the Rate of Capitalization in Housing

a. Building area

The house or building that we have must have physical boundaries that are easily recognized as broad boundaries. The building area of a house is measured in units of square meters (m²). But it needs to be understood that all parts of the space that have a floor pavement are not of the same area. For example, the size of a 3 x 4 m² bedroom is not counted the same as a 3 x 4 m² terrace. Although both have the same area mathematically, which is 12 m².

b. Age of building

The economic life of a building is a period of time in which assets (buildings) are expected to be utilized economically according to their functions. The remaining economic life / remaining useful life of the building is the remaining economic life is the period of time calculated from the estimated value to the end of the economic life / benefit of the asset (building), namely the remaining time of asset utilization (building) according to its function.

c. Rent Tempo

Rent period is the lease period given by the homeowner which is calculated in units of years. Rental tempo is an important factor in determining the level of property capitalization. Based on the use of multiple regression analysis, leased commercial property shows that 90% of the value variability of the overall capitalization rate is the tempo and choice of rent, the keofisien beta of the tenant's share of the lease payment phase contained in the lease.

The Directorate General of State Wealth said "One of the important things in BMN leasing is the determination of rental rates. Determination of rental rates is also not an easy thing because it must be able to accommodate the objectives of the leasing, the rights and obligations of the parties involved both the Ministry / Institution as the party that rents out and prospective tenants".

d. Motivation of Home Ownership

The owner's motivation which includes investment motives and residence motives will affect the rental price and the capitalization rate of residential property. Ownership which initially for investment will maximize the income from his house by leasing, while for owners who have motivation to live in, they tend to be less interested in renting out their houses. The owner's motivation has a significant and positive effect on the capitalization rate of the house. This means that if the house is solely for investment purposes, it will increase the house capitalization rate.

e. House Building Facilities

Building facilities play a role in supporting building functions. Housing that has complete facilities affects the capitalization value. Which includes building facilities here is like the presence or absence of carport, garage, kitchen set, hot water, etc.

Population density and the economic level of urban areas result in high levels of private vehicle ownership. Until now the government has not too limited ownership of private cars so that it will support the movement to always use private vehicles. The condition of car transportation facilities that have become a basic necessity makes the existence of a garage in a residential house also a thought of consumers in choosing a home or residence. Satisfaction with home is assessed from objective attributes and subjective attributes to several factors; features of residential units, residential unit support services, public facilities, social environment, and environmental facilities.

III. Materials and Method

3.1 Type of Research

The approach used in this study is based on a survey approach. Singarimbun and Effendi (1995) state that, survey research is research that takes samples from one population and uses a questionnaire as a tool for collecting basic data and collecting data on factors related to research variables.

This type of research according to the level of exploration is quantitative descriptive. Sugiyono (2004) states that, explanatory level research is the level of explanation. This study aims to explain the position of the variables studied and the relationship between one variable with another variable while descriptive research is research conducted to determine the value of independent variables, either one or more variables without making comparisons, or relationships with other variables. The nature of this research is descriptive explanatory. Sugiyono (2004) states that, explanatory research is a study that intends to explain the position of the variables studied and the relationship between one variable and another.

3.2 Location and Time of Research

The study was conducted at Jalan Kapten Muslim, Jalan Gaperta Ujung, Jalan Asrama, and Jalan Cempaka, located in Medan Helvetia District, Province North Sumatra. Location selection is based on considerations on the roads there are housing that has many types of houses. This research is planned to take \pm 4 (four) months starting in November 2018.

3.3 Research Populations and Samples

The population in this study were all residential houses of a formal housing complex in Medan Helvetia District, Medan City.

Sampling is done by sampling the target population technique or also called the target population, is a population that has been determined according to the research problems, and the results of research from the population want to be concluded. The reason for using this technique is that the sample chosen is expected to represent the population so that it can provide acceptable results. The target population criteria sampled in this study are:

1. Residential house located in a housing complex.
2. Residential houses for sale or rent.

Based on the data obtained from the survey to the field, the total number of buildings with the type of housing used was 10 housing units.

Given the limitations of researchers, to facilitate research by not ignoring the research objectives, sample criteria and conditions in general, sampling for this study was carried out by considering the availability of data on the sale and rental of existing housing in each formal housing in Medan Helvetia District, Medan City. The amount of data available for sale and lease obtained by researchers, then the number of samples in this study were 40 (forty) samples taken from 10 (ten) planned housing in Medan Helvetia District, Medan City.

3.4 Data Analysis Method

This study uses descriptive qualitative analysis method to determine the existence of relationships between dependent variables and independent using inductive statistics correlation with multiple regression analysis. The qualitative descriptive objective in this study is to provide a systematic, factual and accurate description of certain facts.

a. Descriptive Analysis

Sugiyono (2004) explains that qualitative research methods are research methods used to examine natural objects, where researchers are key instruments, while data collection techniques are conducted by interview methods, data analysis is inductive, and the results of qualitative research emphasize meaning rather than generalization.

b. Multiple Linear Regression Analysis

The data analysis method used in this study is multiple regression analysis (Sugiyono, 2004). Therefore the research formulation in the path analysis framework only revolves around the independent variable (X_1, X_2, \dots, X_k) influencing the dependent variable Y, or how much direct, indirect, and total influence or simultaneous set of independent variables (X_1, X_2, \dots, X_k) to the dependent variable Y. Hypothesis testing using t test, F test, r squared test.

IV. Results and Discussion

4.1 Descriptive Analysis

From the observation data which amounted to 40 respondents, it can be obtained an overview of the rental prices of each respondent, where most of the 15% observation data has a rental price of Rp. 25,000,000, - / year with a total of 6 housing units, then 8% or as many as 3 housing units with a rental price of Rp. 20,000,000, - / year followed by 8% as well or as many as 3 housing units with a rental price of Rp. 40,000,000, - / year with an average rental price of Rp. 19,875,000, - / year. The minimum rental price from the house in this study is Rp. 12,000,000, - / year with a maximum rental price of Rp. 80,000,000 / year.

From the observation data which amounted to 40 respondents, it can be obtained an overview of the selling price of each respondent's house, where most of the 8% of the data has a selling price of Rp. 700,000,000, - with 3 housing units, followed by 8% or 3 housing units with a selling price of Rp. 800,000,000, - followed by 8% or 3 units of houses with a selling price of Rp. 850,000,000, - followed by 8% or 3 home units with a selling price of Rp. 900,000,000, - followed by 8% or 3 home units with a selling price of Rp. 950,000,000, - then 5% or as many as 2 housing units with a selling price of Rp. 1,000,000,000, - with an average selling price of Rp. 1,916,153,846, -. Housing in this study has a range of selling prices ranging from a minimum price of Rp. 450,000,000, - up to a maximum selling price of Rp.6,000,000,000.

From the observation data, there are 40 rental house data in the housing complex in this study, each of which can be obtained an overview of the building area, where most of the 8% of the data has a building area of 200 m² with 3 housing units, followed by 3 housing units has a building area of 209 m². The average building area of the research observation data is 162 m².

4.2 Results and Discussion

Results

The results of the study provide information that the building area has a positive influence on the level of capitalization of house value ($b_1 = 0.760$). This influence proved to be significant in predicting the capitalization rate ($p\text{-value} < 0.05$). Thus the data obtained in this study provides sufficient evidence to state that statistically the building area has a positive and significant effect on the capitalization of the value of formal housing houses in Medan Helvetia District. The first hypothesis of the study was accepted.

The results of the study provide information that the age of the building has a positive influence on the level of capitalization of house value ($b_1 = 0.455$). This influence proved to be significant in predicting the capitalization rate ($p\text{-value} < 0.05$). Thus the data obtained in this study provide sufficient evidence to state that statistically the age of buildings has a positive and significant effect on the capitalization of the value of formal housing houses in Medan Helvetia District. The second hypothesis of the study was accepted.

The results of the study provide information that the tempo of building rent has a positive influence on the level of capitalization of house value ($b_1 = 0.292$) which indicates that the longer the rental period, the greater the capitalization achieved. Unfortunately, this influence did not prove significant in predicting the capitalization rate ($p\text{-value} 0.253 > 0.05$). Thus the data obtained in this study does not provide enough evidence to state that statistically the tempo of building rent has a positive and significant effect on the capitalization of the value of formal housing houses in Medan Helvetia District. The third hypothesis of the study was rejected.

The results of the study provide information that motivation for building ownership has a positive influence on the level of capitalization of house value ($b_1 = 0.501$). This influence proved to be significant in predicting the capitalization rate ($p\text{-value} < 0.05$). Thus the data obtained in this study provide sufficient evidence to state that statistically the motivation of building ownership has a positive and significant effect on the capitalization of the value of formal housing houses in Medan Helvetia District. The motivation for home ownership for investment provides a level of capitalization of home value that is better than non-investment motivation. The fourth hypothesis of the study was accepted.

The results of the study provide information that residential garage facilities have a positive influence on the level of capitalization of house values ($b_1 = 0.382$). This influence proved to be significant in predicting the capitalization rate ($p\text{-value} < 0.05$). Thus the data obtained in this study provide sufficient evidence to state that statistically residential garage facilities have a positive and significant effect on the capitalization of the value of formal housing houses in Medan Helvetia District. Housing that has a garage facility will be able to

provide a capitalization rate of home value that is better than non-garage housing. The fifth hypothesis of the study was accepted.

Discussion

a. Effect of Building Area on House Capitalization Rates

The results of the study indicate that the building area has a positive and significant effect on the capitalization of housing values in Medan Helvetia District. These results indicate that the wider the residential building owned, the capitalization rate that can be obtained based on net income and the housing value will be higher as well. Housing with adequate area, and increasingly broad, will encourage higher capitalization and profits. Housing with a good building area will have a better selling or leasing value compared to similar housing but the area below that housing. Building area in theory is a very important factor in the consideration of consumers to rent.

b. Effect of Building Age on House Capitalization Rates

The results of the study indicate that the age of the building has a positive and significant effect on the capitalization of housing values in Medan Helvetia District. These results indicate that the longer the age of residential buildings owned, the level of capitalization that can be obtained based on net income and the value of housing will also be higher. Housing with a building age that is getting longer will provide capitalization and higher profits. This condition generally occurs due to the increase in rental prices from time to time with the value of the housing object being statistically (fixed). Thus, the longer the building age, the ratio between the rent and the acquisition value or capitalization of the value will be higher.

The results of previous research studies support the results of this study which states that building age has a positive and significant effect on the capitalization of housing values. The value of rent and housing prices from time to time continues to increase along with the increase in demand but limited availability of land and housing. In addition, other economic factors fell, encouraging the phenomenon of increasing housing rental prices. With the fixed value of housing, the phenomenon of increasing rental prices from time to time will encourage the achievement of a higher capitalization rate than the housing assets owned.

c. Effect of Tempo Rent Building on House Capitalization Rates

Rent period is the lease period given by the homeowner which is calculated in units of years. Rental tempo is an important factor in determining the level of property capitalization. The results of the study indicate that the tempo of building rental has a positive effect but this influence is not significant in the capitalization of housing values in Medan Helvetia District. Although there is a tendency that building leases that are longer will provide a better capitalization value, this effect is not significant so that it cannot be generalized at the tempo of building leases to capitalize the value of the housing.

d. Effect of Motivation For Home Ownership on House Capitalization Rates

The owner's motivation which includes investment motives and residence motives will affect the rental price and the capitalization rate of residential property. Ownership which initially for investment will maximize the income from his house by leasing, while for owners who have motivation to live in, they tend to be less interested in renting out their houses.

The results of the study indicate that investment motivation has a positive and significant influence on the capitalization of the value of housing owned. When compared with housing owners with the main motivation as a place to live, the rate of capitalization of housing values achieved tends to be higher. This difference is significant where investment motivation will provide a higher capitalization than non-investment motivation such as motivation as a place to live.

e. Effect of House Building Facilities on House Capitalization Rates

Facilities in housing are supporting functions in the use of the main fungsi of housing as a place to live. Garage is one of the main needs of some people. Car ownership in Indonesia is not restricted and many of its people are eager to own a car. The value of the garage is born from the desire to own the car. The presence of a garage is a complement whose main function is as a place to store cars. In this context, facilities such as garages will be the main attraction for tenants and will be the basis for increasing the capitalization of housing values.

The results of the study indicate that residential garage facilities have a positive and significant influence on the capitalization of the value of housing owned. When compared with housing that does not have a garage, the capitalization rate of housing values achieved tends to be higher. This difference is significant where housing garage facilities will provide higher capitalization than housing that does not have a garage.

V. Conclusion and Suggestion

5.1 Conclusion

By referring to the results and discussion carried out in this study both descriptively observation and inferential data, conclusions can be drawn as follows:

The level of capitalization of formal housing in the Medan Helvetia District area is positively and significantly influenced by the variable area of building, age of building, ownership motivation, and availability of garage facilities. The tempo of rent does not significantly affect the level of capitalization. In this case, the most dominant variable affecting the capitalization rate is the building area.

Variable building area, building age, rental tempo, ownership motivation, and garage facilities can explain 89.5% of the rate of housing capitalization that occurs.

The level of capitalization of formal housing properties in the Medan Helvetia sub-district ranges from 0.62% to 3.99% per year. The average capitalization rate achieved is 2.07% per year.

5.2 Suggestion

In an effort to increase business income, through the results of this study the following actions can be considered:

1. Building area is the most dominant variable in influencing the level of property capitalization. In this case, the more the building area is built or owned, the greater the capitalization of the property. The results of this study suggest the development and ownership of a relatively broad property. Even so, it should be noted also the target consumers and consumer purchasing power, because broad can also mean increased costs. Therefore, the area of the building needs to be considered properly.
2. The age of the building in this study indicates the longer the building's age, the greater the capitalization achieved. Therefore, it is necessary to pay attention to the age of the building, especially the economic age of the property owned.
3. Although it is not significant, a longer tempo leads to higher capitalization. Consumers sometimes choose higher tenure given the difficulty of finding a place to live and the difficulty to always move home.
4. Motivation of investment will encourage better capitalization. Therefore, for homeowners or prospective buyers of housing who want to obtain better capitalization, it is recommended that they have investment motivation
5. Garage is an important facility that is currently popular and is a consideration in the fairness of the rental price. It is important for developers and home buyers to ensure the availability of garages or land for garages as a driver of a better level of housing capitalization.

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