

**Analysis of Credit for Residential Property  
in Special Region of Yogyakarta**

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## **Analysis of Credit for Residential Property in Special Region of Yogyakarta**

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### **ABSTRACT**

*The increasing population in the Special Region of Yogyakarta made the demand in the need for housing increased. Credit facilities are used to finance the purchased of housing easily. This study aims to analyze the factors that affect the housing loan, especially in Special Region of Yogyakarta. These factors are population density, interest rate, and construction price indices. This study used secondary data from the Central Bureau of Statistics D.I.Y and Bank Indonesia D.I.Y. Data analysis used multiple regression analysis. Based on the results of the study, it was indicated that the credit for housing in D.I.Y was significantly influenced by population density and construction price indices. Population density had a positive effect on the property credit in the housing sector, while the construction price indices negatively affected the property loan in the housing sector in Special Region of Yogyakarta. Meanwhile, the interest rate had no significant effect on the property loan in housing sector in Special Region of Yogyakarta.*

**Keywords:** *credit property, population density, interest rate, construction price indices.*

## **Analisis Kredit Perumahan di Daerah Istimewa Yogyakarta**

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### **ABSTRAK**

Seiring dengan bertambahnya jumlah penduduk di Daerah Istimewa Yogyakarta membuat permintaan dalam memenuhi kebutuhan akan tempat tinggal meningkat. Fasilitas kredit diberikan untuk membiayai pembelian rumah dengan mudah.. Penelitian ini bertujuan untuk menganalisa faktor-faktor yang mempengaruhi kredit properti khususnya dalam sektor perumahan di Daerah Istimewa Yogyakarta. Faktor-faktor tersebut adalah kepadatan penduduk, suku bunga, dan indeks harga konstruksi. Penelitian ini menggunakan data sekunder dari Badan Pusat Statistik D.I.Y dan Bank Indonesia D.I.Y. Analisis data yang digunakan yaitu analisis regresi berganda. Berdasarkan hasil dari penelitian menunjukkan bahwa kredit untuk sektor perumahan di D.I.Y dipengaruhi secara signifikan oleh kepadatan penduduk dan indeks harga konstruksi. Kepadatan penduduk memberi pengaruh yang positif terhadap kredit properti pada sektor perumahan, sedangkan indeks harga konstruksi memberi pengaruh negatif terhadap kredit properti pada sektor perumahan di D.I.Y. Sementara itu, Suku Bunga tidak berpengaruh signifikan terhadap kredit properti pada sektor perumahan di D.I.Y.

***Kata kunci:*** *kredit properti, kepadatan penduduk, suku bunga, indeks harga konstruksi.*

## **INTRODUCTION**

Yogyakarta as a Special Province is one of the provinces in Indonesia which is keen to boost its economic growth. Special Region of Yogyakarta is known as a city of culture, which relies economically on sectors such as manufacturing, trade, hotels, restaurants, transportation, telecommunications, finance, and corporate services. In that case, those efforts are done to make sure all sectors can reach the balance of the economic structure. Since then, the existing economic system was viewed to improve the welfare of a nation through economic development and the growth of national income.

Yogyakarta's government is continuously working to improve the quality of the population, especially in terms of welfare because it can be one of indicators used to monitor the success of the development of good population welfare. To improve the welfare of the community, Yogyakarta requires a form of physical infrastructure construction to support economic growth rate. Its rapid population growth and the need for residential facilities and amenities that the higher the economic activity, the higher the need of the residential facilities. Therefore, the fulfillment of a residence with a variety of classes, buildings, factories, offices, roads, bridges, ports embodies the people's welfare.

According to the Central Bureau of Statistics of Special Region of Yogyakarta, population growth in Special Region of Yogyakarta from year to year is increasing. The population at the 2000 was 3,120,478 people, but according to the latest official estimation at 2015 has risen to 3,679,176 people. The data inferred that population growth has increased significantly in the last sixteen years. Because population growth is increasing in Special Region of Yogyakarta, the need for housing will be higher. The increase in demand for housing and the scarcity of land for development is revolving landed residential properties in major urban areas. For households and businesses, residential properties have also become an attractive form of investment. Houses are investment assets that grow in value over time and are, therefore, a means of saving and wealth accumulation. To fulfill the housing needs, it is usually necessary for people for having credit for property from bank in order to achieve home ownership.

## **THEORETICAL FRAMEWORK**

### **The Relationship Between Population Density with Credit for Property**

Every person needs a place to stay as a shelter, then any increase of population both naturally and non – natural (due to urbanization) would increase the demand for housing (Awang, 1997). Population has a very important role in economic development, on the other hand the existence of the population growth directly involved in the business in the field of house construction. Increasing in population it would affect the amount of house construction and it would lead increase the demand for housing (Dengah, 2014).

### **The Relationship Between Interest Rate with Credit for Property**

In the residential property market, demand for housing is also affected by government policy and financial institutions such as banking. Characteristics of the property market ie requires substantial funds, it caused consumers to rely on ease funding. The ease funding can be in the form of loan credit facilities, decreased levels lending rates, and the term of loan repayment. If the ease can be obtained by the consumers, the demand for housing would increase. Otherwise, if the terms of getting a loan is very tight or the interest rate is high then would decrease the demand for housing (Awang, 1997).

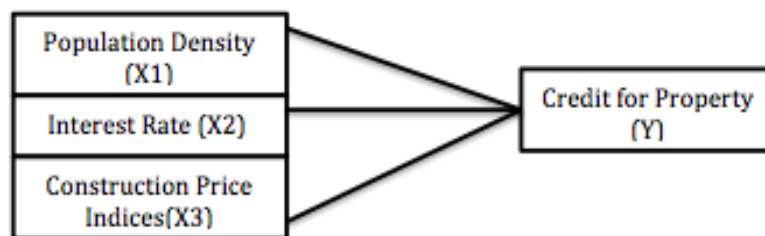
### **The Relationship Between Construction Price Indices with Credit for Property**

Increase in property prices in particular housing is also influenced by the total construction cost incurred by developers as the determinant of house prices from the supply side. The construction cost includes the wage of construction labor and the price of construction materials. The higher the development required by developers in build a house would drive the increase in the price of property assets, especially housing in the property market. (Rochmawati, 2017).

In short, increasing construction cost would decrease people's purchasing power. This happens because wage increases are not as fast as price increases, so increasing construction price indices would reduce the real wage of people who earn a fixed income. In conclusion, increasing construction price indices would affect the purchase of credit for housing.

### **CONCEPTUAL FRAMEWORK**

The framework of this research can be explained through the following picture:



*Figure 1. Framework for Research*

A hypothesis is a temporary assumption of a problem and that needs to be tested for truth. Hypothesis in this research are:

1. population density has positive and significant impact on credit for property of Special Region of Yogyakarta,
2. interest rate has a negative and significant impact on credit for property of Special Region of Yogyakarta, and
3. construction price indices has a negative and significant impact on credit for property of Special Region of Yogyakarta.

### **Research Method**

This research used quantitative method by way of generating numerical data or data that can be transformed into useable statistics. The type of data in this research was secondary data, the data obtained directly from the source, such as a quote from the books, scientific journals, as well as data sources published by several agencies which have relevance to the theme of research.

### **Data Collection Methods**

The definition of concepts and variables used in this study as follows:

- a. Credit property sector is measured in Million of rupiah (Rp).
- b. Interest rate is the annual interest rate as a percentage of the cost amount of money lent to be paid by the borrower to the lender. The interest rate that is used in market interest rates or nominal namely interest rates approved by the borrower and the lender is measured in percent (%).
- c. Construction Price Indices (CPI) is derived from the *supply side* of the industry (i.e. from construction firms, sub-contractors, materials supply firms, etc.) CPI measured in percent (%).
- d. Population density is the ratio of the population with the area. Population density shows the average number of inhabitants per km<sup>2</sup>

### **Research Variables**

This research contained independent variable and dependent variable. Dependent variable in this research was credit for property of Special Region of Yogyakarta and the independent variables are population density, interest rate, and construction price indices

### **Data Analysis Technique**

The secondary data that have been collected from various sources were proceed by using some statistical program packages, such as Microsoft Excel 2013 and EViews 9.0 program. In processing data activities, the researcher used Microsoft Excel 2013 to create tables and analysis. Meanwhile, multiple regression log model were processed by using EViews 9.0 program.

## Data Analysis and Discussion

The purpose of this research is to know how population density, interest rate, and construction price index toward credit for property in Special Region of Yogyakarta. Sequentially specifically on each the variables.

This study were used the analysis tool, i.e multiple regression log model. This model was used to analyze the effect of population density, interest rate, and construction price indices toward credit for property in Special Region of Yogyakarta. This study used annual data (time series) from 2000 to 2015 obtained from various sources, i.e Central Bureau of Statistics (BPS) and Bank of Indonesia (BI) in Special Region of Yogyakarta.

Table 1. Multiple Regression

Dependent Variable: LOG\_CREDIT\_FOR\_PROPERTY  
 Method: Least Squares  
 Date: 02/14/18 Time: 15:03  
 Sample: 2000 2015  
 Included observations: 16  
 HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-123.6477	23.09160	-5.354660	0.0002
LOG_POPDENSITY	18.93972	3.215034	5.890984	0.0001
INTEREST_RATE	-0.077952	0.054292	-1.435807	0.1766
CPI	-0.002944	0.000956	-3.079660	0.0095
R-squared	0.979258	Mean dependent var		6.933250
Adjusted R-squared	0.974073	S.D. dependent var		1.219932
S.E. of regression	0.196433	Akaike info criterion		-0.204669
Sum squared resid	0.463033	Schwarz criterion		-0.011521
Log likelihood	5.637348	Hannan-Quinn criter.		-0.194778
F-statistic	188.8460	Durbin-Watson stat		0.819390
Prob(F-statistic)	0.000000	Wald F-statistic		251.6666
Prob(Wald F-statistic)	0.000000			

(Source: Processed by Eviews 9.0)

The results were formulated in the equation below.

$$\text{Log Credit for Property} = -123.6477 + 18.93972 \text{ Log PopDensity} - 0.077952 \text{ Interest rate} - 0.002944 \text{ CPI.}$$

## Discussion

### a. The Influence of Population Density on Credit for Property.

The results showed, the population density had positive and significant impact on credit for property. This was indicated by the value of t-statistic which

was 5.890984 which was bigger than the value of the t-table (0,05:df12) was 1,782. The coefficient value of population density was 18.93972, it means that an increase in 1 % of population density would increase 18.9 % of credit for property. In other words, population density and credit on property in Special Region of Yogyakarta had significant and positive relationship. The growing number of human population in Special Region of Yogyakarta which was not accompanied by the expansion of land made people take credit for the property.

**b. The Influence of Interest Rate on Credit for Property**

Interest rate had no impact to credit for property in Special Region of Yogyakarta with the value of probability was 0.1766 greater than 5%. It means increasing or decreasing interest rates did not affect credit for Property in Special Region of Yogyakarta. From the regression results that interest rate has negative effect to credit for property. It means, when interest rates increase the demand of credit for property would go down. This result is supported by previous research conducted by Budi (2009) who researched about analysis of simple housing demand in Semarang which indicated that interest rate had no significant effect on demand for housing loans. The growing number of population which the majority from outside Yogyakarta are from rich family, when they buying a house they are not considered about interest rate.

**c. The Influence of Construction Price Indices on Credit for Property.**

The results showed, the construction price indices had a negative and significant impact on credit for property. This was indicated by the value of t-statistic which was -3.079660 which was less than the value of the t-table (0,05:df12) which was -1,782. The multiple regression estimation time series model obtained the coefficient of construction price indices was -0.002944. It means, increasing 1% of construction price indices would decrease 0.29% of credit for property. Construction price indices had a negative effect on the credit for property. It was appropriate in accordance with the hypothesis. This was due to rising construction prices which would make the price of housing increase. Thereby, lowering people's purchasing power, would had an affect to the investment desire for businesses and household because low purchasing power would lower the rate of return for businesses and household. Therefore, businesses and household were reluctant to invest especially in the property sector.

**CONCLUSION**

Based on the empirical results and discussion, it can be summed up as follows:

1. Factors that significantly influenced credit for property of Special Region of Yogyakarta in 2000-2015 are population density and construction price indices. Interest rates had no significant influence towards credit for property. Population density had positive impact toward credit for property in Special



Region of Yogyakarta's, while interest rate and construction price indices gave negative impact to credit for property of Special Region of Yogyakarta in 2000-2015.

2. Increasing in population density would have an effect on the increasing in the number in credit for property specifically in residential house of Special Region of Yogyakarta in 2000- 2015.
3. Interest rate had no significant towards credit for property of Special Region of Yogyakarta in 2000-2015.
4. Increasing in construction price indices would decrease the credit for property of Special Region of Yogyakarta in 2000-2015.

## **RECOMMENDATION**

Based on the conclusions of the study results, some recommendations were given as follows:

1. A mild construction price index could make more people actively invest in property sector. Therefore, it was expected that construction price indices (CPI) was cultivated in order to achieve the minimum CPI, because high CPI would make the economy sluggish. Furthermore, investment especially in property sector would decline. To manage construction costs, appropriate cost control procedures must be implemented. When controlling costs, earlier in the cost process could be checked and approved against the budget it was easier to control the cost.
2. In an effort to keep credit for property sector in stable condition, which is interest rate do not be too high because the high interest rate will incriminate the investors who borrow funds from the bank. In order investment for property sector was one of the capital intensive sectors. Therefore, it is expected that the interest rate is applicable low in order to encourage businesses to invest in the property sector.
3. In line with the increased population growth, the demand for housing also increased. This is a great opportunity to boost investment in property sector for developers or entrepreneurs by setting up housing to cater to the rapid growing communities.

## **Weaknesses of Research**

This study has a weaknesses due to the limitations on the author. The weaknesses is the variables used in this study do not represent all factors that influence the credit for residential property in Special Region of Yogyakarta.

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