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Analysis of the Effect of Interest Rates and Income per Capita on Consumption Credit at Government Commercial Banks in North Sumatra

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ABSTRACT

This research titled is analysis of the effect of interest rates and income per capita on consumption credit at Government Commercial Banks in North Sumatra. This research uses annual data during 1992 until 2006 which employ econometric model and using statistical analyze tools, named ordinary least of square (OLS). The purpose of this research is to know how big the effect of interest rates and income per capita on consumption credit at Government Commercial Banks in North Sumatra. The variable used are interest rates, income per capita, and consumption credit. The result from estimation of two variables shows that variables significant to consumption credit at Government Commercial Banks in North Sumatra. Determinan coficient value equal to 0.90 describe that independent variable together give an effect to dependent variable equal 90% and 10% describe by other variable which not include in to the model or caused by disturbance error.

Keywords: Interest Rates, Income per Capita, Consumption Credit

INTRODUCTION

The Indonesian government basically carries out development aimed at realizing a just and prosperous society as stipulated in Pancasila and the 1945 Constitution. One of the determinants of development success is the source of development financing. The government can use funds originating from within and outside the country as a source of funds for financing this development. The government has outlined that the implementation of development carried out is pursued by self-financing without neglecting the role of assistance from abroad. Efforts to fulfill development financing funds originating from within the country are obtained from various alternatives, including tax levies, foreign exchange from exports of goods/services, and public savings.

Banking financial institutions have a very important role in the development carried out by the government. Banking has activities that bring together parties who need funds (borrowers) and parties who have excess funds (savers). Through credit activities, banks strive to meet the needs of the community for the smooth running of their business to obtain funds in accordance with the required amount as well as various options for repayment periods and payment systems. Meanwhile, with the deposit of funds, banks are trying to offer liquidation, security of funds, and to increase various choices of forms of deposit funds and systems of remuneration.

With the existence of banking financial institutions can improve the ability of individuals, households and companies, in optimizing themselves by utilizing financial resources. For the government, financial institutions are a means of implementing economic and monetary policy. Because the existence of public financial institutions can more easily respond to every economic policy implemented by the government, so that these policies can improve welfare, increase efficiency and increase economic activity.

Banking is the largest financial institution in Indonesia, which has an important and strategic position in economic life and in the development efforts undertaken by the government. This can be proven by the functions of banks, among others, providing mechanisms and means of payment that are more efficient in economic activity, creating money, collecting funds and distributing them to the public and offering other financial services.

Bank financial institutions are financial institutions that provide the most complete financial services. In addition to collecting funds from the public at large in the form of savings (savings, current accounts, time deposits), financial efforts are carried out as well as channeling funds or providing loans (credit) to the public. Then other bank businesses provide financial services that support and facilitate activities to provide loans by raising funds. In other words, banks operate as intermediaries in mobilizing funds from people who have purchasing power in the form of credit. This is in accordance with Law No. 7 of 1992 concerning banking as amended by the Law of the Republic of Indonesia No. 10 of 1998.

1.Bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit or other agencies in order to improve the standard of living of the community at large.

2.A public bank is a bank that carries out its business activities conventionally and or based on sharia principles which in its activities provides services in payment traffic.

Where is the meaning of credit in Law no. 10 of 1998 concerning banking is the provision of money or equivalent claims, based on a loan agreement or agreement between the bank and another party which requires the borrower to pay off its debt after a certain period of time with the amount of interest, compensation or profit sharing.

There are several reasons for banks to extend credit. According to Dahlan (1995) the reasons or conditions that drive this are:

1.The nature of a bank's business which functions as an intermediary institution between surplus and deficit units.

2.Lending provides a definite spread so that the amount of income can be estimated.

3.Looking at its position in the field of monetary policy implementation, banking is the business sector most regulated by the government so that banks in several countries have limited activities.

4.The main source of funds for banks comes from public funds so that in capital they must channel it back to the public in the form of credit.

Credit is a term that is familiar to Indonesian society. The word credit is not only known to urban communities, but also to rural communities. Employees, housewives, and even people today, carry out many consumption activities through credit activities. This indicates that credit activities are integrated with the patterns and lifestyles of the community, both urban and rural. In carrying out its functions, banks take various efforts in attracting customers, including providing satisfactory service to the public (excellent service), providing stimulation in the form of attractive interest, increasing the use of sophisticated technology and offering a variety of products that are of interest to the public.

The consequence of banks as profit-motivated intermediation institutions is that they distribute funds in the form of loans (credit) in order to achieve targeted profits. Because for banks, credit is an asset that can generate income. Bank profits are earned in the form of interest received as remuneration and credit administration fees charged to customers. This profit is important for the survival of the bank and also for expanding the bank business.

According to Kasmir (2002) interest can be interpreted as remuneration provided by banks based on conventional principles to customers who buy or sell their products. Interest can also be interpreted as the price that must be paid to customers (who have savings) and must be paid by customers to the bank (customers who receive loans).

Sunariyah (2004) describes the functions of the interest rate in a country's economy, namely:

1.As an attraction for savers, both individuals, institutions or institutions that have more funds to invest.

2.The interest rate can be used as a means of control for the government over direct funds or investment in economic sectors.

3.The interest rate can be used as a monetary tool in controlling the supply and demand for money in circulation in an economy.

4.The government can manipulate the interest rate to control production, as a result the interest rate can be used to control the inflation rate.

Credit management really needs attention because credit is an important and very strategic expense product. The main objective of credit management is for banks to improve their health and performance by increasing the quantity and quality of credit. Credit strength is assessed by the amount and growth rate of loans extended. Credit quality can be simply and succinctly measured by the number and portion of non-performing loans.

Lending must be assessed based on objective criteria. Credit assessment is oriented towards credit risk, the amount of which depends on the ability to pay and the willingness to pay. To determine the ability and willingness to pay, the bank must analyze the customer based on the character, capacity, capital owned by the prospective debtor, the guarantees given, and the economic conditions that are being undertaken. If credit has been received, the amount of payment or interest rate (loan pricing) is determined based on consideration of credit risk and the rate of return.

The loan or credit channeled consists of several types, depending on what the community wants or needs, one of which is consumption credit. Consumption credit is credit that is used for personal consumption. In this credit for consumers there are no additional goods and services produced, because they are for use or use by someone or a business entity. For example, home ownership loans (KPR), personal car loans, household furniture loans and other consumption loans (Kasmir, 2002).

With this consumption credit, it can improve the standard of living and welfare of the community. The public can take advantage of financial resources, which in turn will increase their productivity and purchasing power by using consumption credit. In 2006, the amount of credit extended by banks in North Sumatra was 42.119 billion rupiah, namely from state commercial banks of 51.05%, national private banks 39.89% from rural banks 0.70%, and foreign and joint venture banks. 8.35%. Consumer credit in North Sumatra, especially to government commercial banks, has always increased from year to year. This can be seen from the year 2002, consumption credit continued to increase until 2006, reaching 4,408,674 trillion rupiah.

Banking credit is strongly influenced by several factors, including interest rates and per capita income. In theory, if there is an increase in credit interest rates, the amount of credit demanded by the public will decrease or decrease. And if there is an increase in the level of income per capita, the credit channeled will increase. From this description, it can be concluded that the role of banking in advancing the economy of a country is very large. So big is the role of the banking world that there is an opinion that banking is the life to move the wheels of a country's economy. This assumption is not an exaggeration because the bank's function as a financial institution is vital.

Per capita income is the average income of the population, therefore to obtain per capita income in a year, what must be done is to divide the national income for that year by the population in the same year. Thus, the amount of national income will determine the amount of income per capita. Per capita income is always used to determine the rate of economic development of a country.

National income and income per capita itself will increase if the productivity per capita increases. To increase per capita production means that there must be changes in the economy, for example changes in the economic structure, production techniques, production structures and a static society developing into a dynamic society.

According to Hasibuan (1987) economic and non-economic factors that affect productivity:

1.Amount and quality of production factors. The greater the number the better the quality of capital, labor, nature, skills by a country, the greater the productivity will be.

2.Allocation of sources. This means the balances of the ways of using the factors of production among various economic factors in society and the combination of these factors.

3.Fair income distribution. This means that a fair distribution of income will encourage morale and if morale increases, productivity will automatically increase.

4.Aspects of society. Economic activities always take place in a society, therefore handling cannot be separated and must take into account the style of life, culture, politics and social values of society. The growth of people's way of thinking is a precondition for creating a healthy and dynamic economic development.

In a country's economy, credit is a very important banking product. This is because credit is a banking product in channeling funds and improving people's lives and is the main source of bank income. Thus, credit is an effort to advance the economy and equitable development, because this study discusses consumption credit and how much influence the interest rate and income per capita have on consumption.

RESEARCH METHODS

This research was conducted at Government Commercial Banks in North Sumatra in the period 1992-2006 (data sample for 15 years) obtained from the annual reports issued by Bank Indonesia (BI) and the Central Statistics Agency (BPS). The data used is secondary data, which is in the form of numerical data (quantitative).

In analyzing the magnitude of the influence of the independent variable on the dependent variable, this study uses an econometric analysis tool, namely regressing the existing variables with ordinary least square (OLS) in the computer software program Eviews 4.1. Classical assumption test is performed before testing the hypothesis on the obtained regression equation model. The data used were analyzed quantitatively using statistical analysis, namely multiple linear regression equations.

The equation model is as follows:

$Y = f\,(X_{1,}\ X_{2,})$..............................(I)

With the following model specifications:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \mu$…............(II)

Where:

Y=Consumption Credit (Million Rupiah)

α=Intercept/Constant

X_1=Interest Rates (%)

X_2=Income per Capita (Rupiah)

β_1,β_2=koefisien

μ=Term of Error

RESULTS AND DISCUSSION

To analyze the effect of interest rates and income per capita on consumption credit at Government Commercial Banks in North Sumatra, multiple linear regression analysis is used, where the dependent variable is the amount of consumption credit at Commercial Banks in North Sumatra, while the independent variable (independent variable) is the credit interest rate and income per capita. To explain this, the following table presents the results of the regression analysis of the effect of the independent variables on the following dependent variable.

Table 1. Regression Results

Dependent Variable: Y				
Method: Least Squares				
Date: 06/10/08 Time: 22:34				
Sample: 1992 2006				
Included observations: 15				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	196452.7	467681.8	0.420056	0.6819
X_1	-42181.27	20063.61	-2.102377	0.0573
X_2	0.405128	0.046164	8.775891	0.0000

R-squared	0.901718	Mean dependent var	1254083.
Adjusted R-squared	0.885338	S.D. dependent var	1320592.
S.E. of regression	447176.8	Akaike info criterion	29.03615
Sum squared resid	2.40E+12	Schwarz criterion	29.17776
Log likelihood	-214.7711	F-statistic	55.04876
Durbin-Watson stat	1.077477	Prob(F-statistic)	0.000001

Source: Regression Results (Eviews 4.1)

Based on the table above, the results of the estimation model equation are as follows:

$Y=196452.7–42181.27X_1+0.405128X_2+\mu$

Model Interpretation

Judging from the results of the regression, the interpretation is:

1.Interest rates for consumption credit have a negative effect on the amount of consumption credit at Government Commercial Banks in North Sumatra and the coefficient is -42181.27, meaning that if interest rates increase by 1%, the amount of consumption credit at Government Commercial Banks will decrease by Rp42181.27 million, ceteris paribus.

2.Income per capita has a positive effect on the amount of consumption credit at Government Commercial Banks in North Sumatra and the coefficient is 0.405128, meaning that if income per capita increases by 1%, then the amount of consumer credit at Government Commercial Banks in North Sumatra will increase by Rp0.405128 million, ceteris paribus.

Test of Goodness of Fit

Analysis of R-Square

The coefficient of determination (r-square) of the model is 0.90 or 90%. This shows that independent variables such as X_1 (interest rates) and X_2 (income per capita) are able to provide an explanation for the variable amount of consumption credit by 90%, while the remaining 10% is explained by other variables not included in the estimation model.

t-Statistical Test (Partial Test)

Based on the available data, we will test the population regression coefficient β. If the result is equal to zero, it means that the independent variable does not have a significant effect on the dependent variable or if the result is not equal to zero, it means that the independent variable has a significant effect on the dependent variable.

Interest Rates (X_1)

From the regression analysis, it is known that t-count=-2.102377; α=1%; df=n-k-1, where n=15; k=2, df=15–2-1=12, then t-table=3.055. From the results of the regression estimation above, it shows that the credit interest rate is not significant at α=1% with t-count>t-table (-2.102377>-3.055) meaning that H_0 is accepted. This shows that the interest rate (X_1) has no significant effect on the amount of consumption credit at the 99% confidence level.

Income per Capita (X_2)

From the results of the regression analysis, it is known that t-count=8.775891; α=1%; df=n-k-1, where n=15; k=2; df=15-3-1=12, then t-table=3.055. The regression estimation results show that per capita income has no significant effect on α=1% with t-count> t-table (8.775891>3.055) meaning that H_1 is accepted. This shows that the variable income per capita (X_2) has a significant effect on the amount of deposits at the 99% confidence level.

F-Statistical Test (Overall Test)

From the regression analysis, it is known that F-count=55.04876; α=1%, df_1=k-1=2-1=1; df_2=n-k=15-2=13, then F-table=9.07 Based on the results of these calculations, it can be seen that F-count>F-table (55.04876>9.07), thus H_a is accepted, meaning that the interest rate and income variables collectively per capita has a significant effect on the amount of consumer credit at a 99% confidence level.

Classical Assumption Deviations Test

Multicollinearity Test

That is, there is a strong correlation between the independent variables in an estimation model. In this study, there was no multicollinearity. This can be seen from each coefficient according to the hypothesis, R^2 which is not too high, and there is no sign change (Nachrowi, 2002).

From the analysis model:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \mu$.................... (1)

Testing was carried out between each dependent variable as follows:

$X_1 = \alpha + \beta_2 X_2 + \mu$ .... (2)

Obtained R^2 is 0.496487

$X_2 = \alpha + \beta_1 X_1 + \mu$ .... (3)

Obtained R^2 is 0,496487

From the regression results between the dependent variable, it can be seen that the coefficient of determination or R^2 of each equation (2) and (3) is still smaller than the coefficient of determination of the regression results between the dependent variable (Y) and the independent variable, which is 0.89. This means that there is no multicollinearity among the independent variables.

Autocorrelation Test

The D-W test is used to determine whether the model used has autocorrelation between the observed variables.

The steps are as follows:

• α = 1 %, k = 2, n = 15, so;

dl = 0.70 4 – dl = 3.30

du = 1.25 4 – du = 2.75

• Testing statistics: D-W = 1.077477

Judging from the table durbin-watson is worth dl = 0.70; du = 1.25; (4-dl) = 3.30; (4-du) = 2.75 and D-W = 1.077477, then the position is at dl < dw < du, so the result 0.70 < 1.077477 < 2.75.

Conclusion:

dl < D-W < du, so the result 0.70 < 1.077477 < 1.25, thus there is no conclusion.

CONCLUSION AND SUGGESTION

Conclusion

1. Interest rates (X_1), has a negative effect on consumption credit at Government Commercial Banks in North Sumatra. The coefficient of the X_1 variable is -42181.27, which means that every 1% increase in the interest rates will reduce the consumption credit at Government Commercial Banks in North Sumatra by Rp42181.27 million. The results of this estimate are in line with the existing hypothesis, namely that there is a negative effect between interest rates and consumption credit at Government Commercial Banks in North Sumatra.
2. Income per capita (X_2) has a positive effect on consumption credit at Government Commercial Banks in North Sumatra. The coefficient of variable X_2 is 0.405128, which means that every 1% increase in per capita income will increase the consumption credit at Government Commercial Banks in North Sumatra by Rp0.405128 million. The estimation results are in line with the existing hypothesis, namely that there is a positive influence between income per capita and consumption credit at Government Commercial Banks in North Sumatra.
3. Based on the t-count test for the interest rates (X_1) above, it can be seen that t-count>t-table (data processed for -2.102377>-3.055), meaning that H_o is

accepted. Thus, it can be concluded that the interest rates has no significant (insignificant) effect on the total consumption credit at Government Commercial Banks in North Sumatra at a confidence level of 99% (α=1%).

4. Based on the t-statistical test for total income per capita (X_2) above, it can be seen that t-count>t-table (the result of data processing for 8.775891>3.055), means that H_a is accepted. Thus, it can be concluded that income per capita has a significant (significant) effect on the total consumption credit at Government Commercial Banks in North Sumatra at a confidence level of 99% (α = 1%).
5. 5.Based on the F-statistical test above, it can be seen that F-count>F-table (the result of processed data for 55.04876>9.07), meaning that H_o is rejected. Thus, it can be concluded that together the interest rates and income per capita have a significant (significant) effect on the total consumption credit at Government Commercial Banks in North Sumatra at a 99% confidence level (α=1%).
6. From the regression results that have been processed, the coefficient of determination r-square is obtained of 0.901718. This illustrates that the independent variables simultaneously influence the dependent variable by 90% while the remaining 10% is explained by other variables that are not included in the model estimation or caused by a disturbance error.

Suggestion

1. For the banking sector, banks must pay more attention to implementation, management, improvement and adjustment as well as expanding the network of the number of offices in carrying out their intermediation function, moreover providing competitive loan interest rates so as to stimulate people from all walks of life to make credit, especially in consumption credit.
2. The Regional Government of North Sumatra to further increase the GRDP because the greater the GRDP, the more prosperous the community will be and the consumption credit channeled by banks will also be even greater. Because consumption credit will become a big problem if people's income is no longer able to support the ability to repay credit.

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