

SIMULTANITY MODEL OF GROWTH ECONOMIC AND WORK FORCE BASED FINANCIAL INCLUSION NORTH SUMATERA

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Abstract: *The short-term aim of this study is to analyze the effect of the simultaneous amount of community savings, the number of MSME lending, the number of bank branches, the number of loans (working capital, expenditure, and investment), and the labor force against GDP within North Sumatera Province, and analyze the influence simultaneous amount of community savings, sign of MSME lending, number of bank branch offices, loan amount (working capital, consumption, and investment), and GRDP to the workforce in North Sumatera Province. The material in this study did quantitative material with a simultaneous regression analysis approach from 2008 to 2018. The results showed that only the number of MSME lending had a significant effect against the workforce in North Sumatera Province.*

Key Words: *Public savings, the number of MSME loan disbursements, bank branch offices, loan amount, workforce, economic growth.*

1. INTRODUCTION:

The development economics of a country will be influenced by a number of factors, both from within the country and from overseas. One of the factors that influence economic development is financial development [1]. When the finance of a developing country will have a positive impact on improving the country's economy. In terms of developing financial services, Bank Indonesia, the Ministry of Finance and the Financial Services Authority have an important role in the implementation and supervision of the regulation of the financial sector in Indonesia. Even the three institutions already have a voice related to the synergy of the role of financial services and poverty alleviation [2].

Inclusive finance is basically an effort that is arranged together which aims to eliminate the form of obstacles to the access of the community in utilizing financial services at affordable costs. Bank Indonesia has conveyed the six pillars that form the basis of implementing financial inclusion in Indonesia [3]. The six pillars include Financial Education, Public Financial Facilities, Mapping of financial information, supporting policies/regulations, intermediation & distribution facilities, and consumer protection. North Sumatera Province is included in the province which experienced a fairly good level of economic development compared to several provinces in Indonesia. It is noted that the provincial capital of North Sumatera is a major city which has an influence on the economy in Indonesia.

However, based on data submitted by Bank Indonesia [4], North Sumatera is still in the unbankable category. North Sumatera even though it is a province that has good economic resource potential but in terms of the use of banking financial services is still in the low category. This can be an indication that economic equality in North Sumatera province is not evenly distributed, and knowledge of banking services has not been absorbed in all corners of the country [5].

This study aims to analyze the effect of simultaneously the number of community savings, the number of UMKM loan disbursements, the number of bank branches, the number of loans (working capital, consumption, and investment), and the labor force against PDRB in North Sumatera Province [13], and analyze the effect community savings, the number of UMKM lending, the number of bank branches, the number of loans (working capital, consumption, and investment), and the PDRB of the workforce in North Sumatera Province during the period 2008 to 2018 [6].

2. LITERATURE REVIEW:

2.1. Economic growth

Economic growth is a process of changing the economic condition of a sustainable country towards a better state during a certain period. Economic growth according to Sukirno [7] developments, activities in the economy that cause goods and services produced in society to increase and prosperity of the community increases. So that economic growth can also be said as a process of increasing the production capacity of an economy that is realized in the form of an increase in national income. The increase in economic growth is an indication of the success of economic development [8].

2.2. Workforce

According to the Central Bureau of Statistics, the population included in the workforce is a working-age population (15 years and over) who works, or has a job but temporarily unemployed and unemployed [9]. Whereas residents who are not in the workforce are of working age population (15 years and over) who are still in school, managing the household or carrying out other activities besides personal activities [10].

2.3. Financial Inclusion

Financial inclusion is all efforts aimed at eliminating all forms of price or non-price barriers to people's access to financial services (www.bi.go.id). This financial inclusion is a national strategy to encourage economic growth through equal distribution of poverty alleviation and financial system stability [11].

In the National Strategy for Inclusive Finance (SNKI), financial inclusion is defined as, for all people to have full access and service from financial institutions in a timely, convenient, informative, and affordable manner, with full respect for their dignity and dignity [12]. Financial services are available to all segments of the community, with special attention to the poor, productive poor people, migrant workers, and residents in remote areas [13].

3. METHOD OF RESEARCH:

The rational method applied in this study is a simultaneous regression analysis. Those variables inspected were the number of community savings, the number of MSME lending, the number of bank branch offices, the number of loans (effective resources, consumption, and investment), labor force, and GRDP in North Sumatra Province 2008 to 2018. The conceptual framework in research is described as follows:

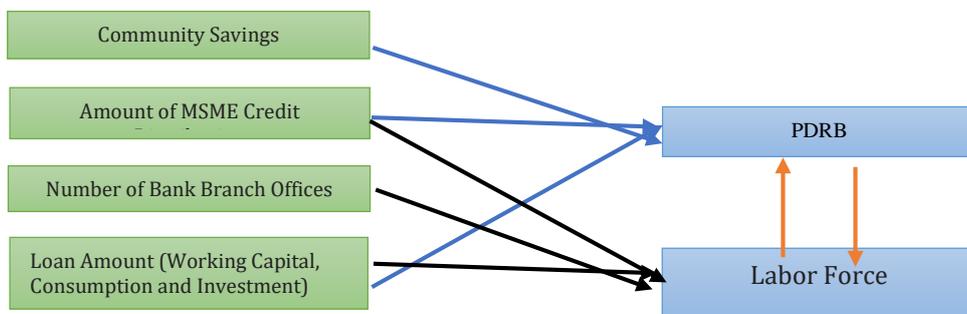


Figure 1. Research Concepts Simultaneous Regression Analysis Method

The simultaneous equation model is as follows:

$$PDRB = a_0 + a_1 \text{ Savings} + a_2 \text{ MSME Credit} + a_3 \text{ Loan} + a_4 \text{ Labor Force}$$

$$IPM = b_0 + b_1 \text{ MSME Credit} + b_2 \text{ Bank Branch Offices} + b_3 \text{ PDRB}$$

Next is identification of simultaneity which aims to find out whether the equation is under conditions identified, exactly identified, or over identified. The identification of simultaneity in the equation of this study are as follows:

Table 1. Model Identification Test

Equation	M	K - M		G - 1	Decision
$PDRB = a_0 + a_1 \text{ Savings} + a_2 \text{ MSME Credit} + a_3 \text{ Loan} + a_4 \text{ Labor Force}$	5	1	=	1	Exactly
$IPM = b_0 + b_1 \text{ Poverty} + b_2 \text{ PDRB}$	4	2	>	1	Over

From the table above, it can be seen that the first equation is identified exactly. While the second equation is identified over. Thus it can be decided to solve this simultaneous model that has been built using the 2SLS method (Two Stage Least Square).

4. ANALYSIS AND RESULT:

The results of system estimation equations with Two Stage Least Square for endogenous PDRB variables are as follows:

Tables 2. Result test of PDRB

Predetermined	Coefficient	Std. Error	t-Stat	Prob.	Other Parameter
C	2.75E+09	6.85E+09	0.401463	0.7020	R2 : 0.881175 Prob F-stat : 0.005 DW stat : 3.13
Savings	5280.671	14442.36	0.365638	0.7272	
UMKM Credit	12.93859	19.21671	0.673299	0.5258	
Loan	-1.762880	11.78153	-0.149631	0.8860	
Workforce	-556.4897	1279.694	-0.434862	0.6789	

Interpretation of the coefficient of determination:

The R-square value is 0.881175, which means that together the variable amount of community savings, the number of MSME loan disbursements, the number of loans (working capital, consumption, and investment), and the number of labor force can explain GRDP of 88.12% and the rest 11.88 % is explained by other variables not included in the estimation model.

Partial interpretation:

- The variable amount of savings has a positive effect that is not significant to GDP at a confidence level of 95%.
- The variable number of MSME lending has a positive and insignificant effect on GRDP at a 95% confidence level.
- The variable number of loans has a negative effect that is not significant to GDP at a confidence level of 95%.
- The labor force variable has a negative effect that is not significant towards GRDP at a confidence level of 95%.

Interpret simultaneously:

F-statistic probability value is $0.005 > 0.05$ then there is a significant effect simultaneously.

The results of system estimation equations with Two Stage Least Square for endogenous variables of the labor force are as follows:

Tables 3. Interprest Simulation

<i>Predetermined</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Stat</i>	<i>Prob.</i>	<i>Other Parameter</i>
C	4574891	1129110	4.051766	0.0049	R2 : 0.6463 Prob F-stat : 0.053 DW stat : 2.616
UMKM Credit	0.024632	0.010182	2.419026	0.0462	
Bank office	5957.689	6216.620	0.958349	0.3698	
GRDP	-0.001184	0.001184	-1.000120	0.3506	

Interpretation of the coefficient of determination:

The R-square value is 0.6463 which means that together the variable number of UMKM lending, the number of bank branch offices, and PDRB can explain the workforce of 64.63% and the remaining 35.37% is explained by other variables not included in the estimation model.

Partial interpretation:

- The variable number of UMKM lending has a significant positive effect on the workforce with a coefficient of 0.024632 at a 95% confidence level. The coefficient of 0.024632 means that if the number of UMKM lending increases by 1% it will increase the number of the labor force by 0.024632% (ceteris paribus).
- The variable number of bank branch offices has a positive and irrelevant effect on the workforce at a 95% confidence level.
- The PDRB variable has a negative effect that is not significant on the workforce at a 95% confidence level.

Interpret simultaneously:

The f-statistic probability value is $0.053 > 0.05$ so there is no significant effect simultaneously.

Based on the results of data analysis it is known that an amount of community savings has a positive but not significant effect on PDRB. As research conducted by Mardalena and Suhel (2015), community savings do not affect economic growth, but economic growth has an effect on people's savings. The number of MSME lending has a positive but not significant effect on PDRB. The loan amount has a negative but not significant effect on PDRB. The workforce has a negative but not significant effect on GRD.

The number of UMKM lending has a significant positive effect on the workforce. This means that the more UMKM loans channeled, the more opportunities for employment absorption in North Sumatra Province in 2008-2018. The number of bank branch offices has a positive but not significant effect on the workforce. GRDP has a non-significant negative effect on the workforce in North Sumatra Province in 2008-2018, this is in line with the research conducted by Wijaya, et al (2014). This means that the economic system in North Sumatra Province is still not productive in absorbing and utilizing the increase in labor.

So that it can be seen that only the amount of UMKM lending significantly affects the workforce. This means that the increase in the number of UMKM lending can significantly increase the number of the labor force in North Sumatra Province.

5. CONCLUSIONS:

Based on the results this study, it was found that among a variables in an amount of public savings, the number of UMKM loan disbursements, the number of loans, and the workforce, none of which had a significant effect on GRDP. while among the variables in the number of UMKM lending, the number of bank branches, and GRDP, only the number of UMKM lending has a significant effect on the workforce in Province North Sumatra. The variables in this study have

passed the Normality test with the Jarque-Bera probability value $> \alpha 0.05$. The variables in this study also passed the serial correlation test with Obs * R-square > 0.05 .

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