Impact of Consumption, Credit and Capital Formation on Economic Growth in Indonesia

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Abstract : Economic growth theory has a lot of thoughts and debates in economic literature. Public opinion states that the drivers of economic growth are labor, availability of capital, and natural resources. One of the thoughts that have become a phenomenon in the theory of economic growth is the Keynesian theory which assumes that consumption, investment, and government spending can drive economic growth. Classical and Neo-Classical views that disagree with Keynesian thought oppose government interference. They think that government intervention will destroy the existing free market. The purpose of this study is to understand the effect of consumption, MSME credit, and capital expenditure on economic growth in Indonesia using the Least Square Panel (PLS) research method. We find that there is a positive influence between consumption and capital spending on Indonesia's economic growth. However, MSME credit had a negative impact on Indonesia's economic growth.

Keywords: economic growth, consumption, MSME credit, capital expenditure, Least Square Panel

JEL Classification : C0,G0,E4

1 INTRODUCTION

In macro terms, economic growth is a valuable addition to the Gross Domestic Product (GDP) so that it can be used as an indicator of economic growth (Fagoyinbo, 2013). Economic growth is an indicator of the development of economic activity in supporting the addition of goods and services produced so that it becomes a measure of the extent to which economic activity can contribute to additional income and community welfare within a certain period of time.

Adam Smith has a concept of economic growth with a focus on labor; For him, increased production could only be achieved through a good division of labor. Adam Smith also assessed that output growth is influenced by the availability of natural resources which is represented by the availability of land because the land is a fundamental factor for production activities. Like Adam Smith's concept, David Ricardo considers economic growth to be influenced by population growth and the land or nature used to increase labor. However, he also considered that the cost of capital is also an important factor because the amount of capital increases productivity and speeds up the process (Asimakopulos, 2012).

In contrast to Adam Smith and David Ricardo, Solow's thinking states that investment is not the only major determinant in driving economic growth because for Solow the variables related to economic growth are population size, savings which have a positive effect and contribute to economic growth. Technology, machinery, or capital in developing countries are considered unproductive and do not play a role in their economic growth. Another possibility that underlies this condition is the limited availability of imported raw materials, and capital is also not the main source of growth. Another reason is the assumption that government interference undermines market incentives for efficient machine use (Bodvarsson & Berg, 2013).

It is not only investment and labor that affect economic growth, according to John Maynard Keynes, in increasing economic growth through increased consumer demand and government spending. This capability will grow along with technological advances in the country concerned. Keynes has one variable that is different from other theories, namely government intervention. The concept of Keynesian intervention allows the role of the government is using the expenditure budget for various needs, one of which is capital expenditure to support domestic production (DiMaggio, 2017).

Schumpeter's thinking only views that it is an innovation that makes an important contribution to economic growth through entrepreneurs who can make changes in economic activity (Schneider, 2018). The nature of MSMEs that are capable of being in any area causes MSMEs to become one of the important elements in a country's financial system. The emergence of MSMEs is one of the efforts and solutions for a healthy economic system. This is evidenced by the resilience of MSMEs in the midst of a global crisis.

The role of MSMEs in economic growth is very interesting because when the crisis hit Indonesia in 1998 (Williams and Gurtoo, 2016), the UMKM sector continued to survive. Meanwhile, the big business sector did not survive the crisis. This occurs because large industries import raw materials, thus increasing their costs as debt increases due to the weakening exchange rate. The crisis indirectly affects the position of actors in the economic sector. It's not just a big industry that's affected. The banking sector was also affected by the capital side. Many

companies are unable to continue in business because of high-interest rates. This condition is slightly different from MSMEs which tend to survive.

The strength of MSMEs was also felt during the global financial crisis in 2008 when the country's economic conditions remained strong and enduring. In fact, in 2009, Indonesia was one of the two Asian countries with positive economic growth. In 2010, Indonesia's self-confidence increased and succeeded in increasing its ranking in the 2010-2011 Global Competitiveness Index which managed to climb 10 places from the previous year, to be precise 44. In the same year, economic growth was at the level of 8.1% and low-interest rates. at 6.5%, the credit sector increased to 19.3%. Not only that, but Indonesia also benefited from the economic crisis in the European Union because it received a movement of funds of up to the US $ 403 billion (Breuer, et al., 2018).

In 2012, MSMEs dominated business organizations in Indonesia, thus playing an important role in the country's economy. Collectively, MSMEs represent more than 99% of total businesses in Indonesia and 97% of total employment. Therefore, MSMEs are considered capable of encouraging economic growth, especially in boosting productivity and employment. Then since 2015, the performance of MSMEs has increased and has played an important role when countries integrate with other ASEAN countries. The occurrence of this new economic paradigm has led to a shift in the competition map for MSMEs in Indonesia which has a greater opportunity to compete more fiercely in the domestic market and foreign markets (Felipe, et al., 2019).

Public consumption also plays a role in driving economic growth (Park et al. 2012). In developed countries, economic growth is caused by the production of services and goods, which allow loans and investment. Meanwhile, in developing countries, the factors of production of services and goods are difficult to rely on, so that consumption and investment affect economic growth. There are several reasons why investment and consumption are important elements of the economy. First, because public consumption contributes to national income. The second reason, public consumption also plays a role in fluctuations in economic activity, where the consumption made by individuals is directly proportional to their income.

The distribution of credit and the contribution of the Indonesian people in channeling credit both in general and for MSMEs is dominated in Indonesia (Hoetoro, 2012). Geologically, Indonesia is the epicenter of the earthquake which is located off the southern coast of Indonesia because the continuation of the fracture of the earth's crust is passed from the island of Sumatra (Svanberg & Westerlund). , 2012).
Indonesia is projected to have almost half of Indonesia's total population in 2035, which is 167,325.60 thousand of the total projected population of 305,652.40 thousand. Even in 2019, Indonesia has surpassed half of Indonesia's total population, namely 151,061.8 thousand from 255,461.7 thousand (Ginting, et al., 2018).

Economic growth also occurs in the real Gross Domestic Product (GDP) per capita which has increased continuously and is followed by an increase in per capita productivity (Akram, et al, 2020). The PDRB preparation process can take two approaches, namely expenditure and business sectors (Shibasaki, et al., 2020).

The GDP growth rate describes the development of aggregate income (Widiarso, et al., 2019). The province with the highest average consumption is DKI Jakarta with a value of 2,039,157 thousand rupiahs. The total consumption in DKI Jakarta is relatively low compared to other provinces in Java, namely 258,328,565,388 thousand rupiahs, so it is far below the average. The area in DKI Jakarta Province with the highest percentage of food expenditure or consumption is the Thousand Islands with a value of 63.19%, and the remaining 36.81% for non-food by the people of the Thousand Islands. On the other hand, other areas of DKI Jakarta have a higher percentage of non-food expenditure compared to food, especially South Jakarta which has a food expenditure percentage value of only 33.4%. In comparison, 66.6% is used for non-food items. In DKI Jakarta in 2018, housing and community facilities were the highest per capita expenditure, namely 696,985 thousand people, and even increased to 726,430 in 2019 (Sambodo, 2017).

2 LITERATURE REVIEW

Economic growth is an indicator of the success of development that occurs in a country (Wilantari & Luthfi, 2017). Economic growth itself is actually a process in which real gross domestic product per capita continues to increase, followed by an increase in per capita productivity. The main target being the target is an increase in national income and real income per capita which can be achieved by providing and mobilizing production sources. The increase in economic growth and welfare is said to increase if there is also an increase in per capita output and income distribution.

Keynes's theory focuses on effective domestic demand, including spending on consumption, investment, and government, which impacts economic activity. The Keynesian equation model is also a three-sector economic system because it consists of human, corporate, and government interference. Keynes considered government intervention necessary to balance the economy. The community also plays a role as an economic actor who is a user of services and goods and is a factor producing capital and labor who need income, both in the form of interest and profit. Thus, the income that people get and

use for consumption, savings, and investment can affect the country's economic growth (Fritz & Lavinas, 2016).

The Solow theory explains how the accumulated population growth and capital growth associated with technological developments and labor interact in creating economic growth in a country (Brue & Grant, 2012). Neo-Classical growth theory explains the relationship between the three variables and analyzes how capital accumulation can affect growth. Therefore, it is necessary to determine the level of capital accumulation through supply and demand. Solow's theory analysis explains that the production, output (Y) function is a function of the capital stock (K), labor (L), and technology (A). Therefore, the amount of output will be influenced by these three variables.

The economic crises in 1997 and 1998 in Indonesia changed the country's economic activities in promoting economic growth. The reason is, during the crisis, only the UMKM sector remained. Meanwhile, the big business sector did not survive the crisis. UMKM itself is a productive economic business formed with a scale of business capital and capital that is smaller than the industry. In the early stages of industrialization, the Japanese economy was characterized by traditional industries and the large number of small companies that attracted a large workforce (Barthélémy, et al., 2020).

This form of government intervention can be through budgeting arrangements to develop key sectors that support economic growth, such as government spending on capital goods, regional transfers, and budget financing. For Keynes, consumption, and investment also play a role in supporting a country's economic balance. There are various forms of investment distribution, one of which is investment credit for MSMEs.

3 RESEARCH OBJECTIVE AND METHODOLOGY

This research was conducted with the coverage of Indonesia using all provinces, namely West Java, Banten, Jakarta, Central Java, Yogyakarta, and East Java in the 2007-2018 research period using secondary data in the form of panel data. The data used in this study come from journals, previous research, books, and publications from Bank Indonesia, the Central Statistics Agency (BPS), the Ministry of Finance, the Financial Services Authority (OJK), and other institutions or parties.

The method used in analyzing data to see the effect of public consumption, credit for MSMEs and government spending on capital expenditures and their effect on economic growth in Indonesia use the Least Square Panel (PLS) method. The PLS method itself is a derivative of OLS, but the data is in the form of panels.
In this research, several variables will be combined such as economic growth, public consumption, MSME credit, and capital expenditure. Thus, the function of the model in this study is:
g = f (C, MSME credit, Capital Expenditure)
Thus the research model becomes:
g = α + β1 C + β2 MSME credit + β3 Capital expenditure

Then the function is converted into an econometric model as follows:
git = α + β1Cit + β2 MSME credit + β3 Capital Expenditure + eit
Where,
g = Economic growth
C = Public consumption
UMKM credit = Credit for MSMEs
Capital expenditure = Government spending on capital goods
α = Intercept
βit = variable coefficient
e = Error term
i = Cross-section (Provinces in Indonesia)
t = Time series (2007-2018)
Panel data is a combination of time series and cross-section data. In panel data analysis, there are two types of data used in econometrics, namely unbalanced panels and balanced panels. The balanced panel itself is data that shows the same number of observations on each object or variable used. Meanwhile, unbalanced panel data shows the number of different observations on each object or variable used. This study uses a balanced panel data type with the 2007-2018 period in 6 provinces in Indonesia, so the number of observations used is 48.

In this study, the variable of economic growth is used as the dependent variable. Meanwhile, the independent variables consist of public consumption, MSME credit, and government spending on capital costs.

4 RESULTS AND DISCUSSION

The test estimation results from the Chow Test show that the Chi-square probability value is 0.0000. When compared with the critical value (= 5% = 0.05) the Chi-Square probability value is smaller than the alpha value so that the fixed effect model is the best model than the common effect. The following is a table of chow test results

Table 1 Chow Test Results

Effects Test	Statistic	d.f.	Probability
Cross-section F	13.627908	(5,63)	0.0000
Cross-section Chi-square	52.785161	5	0.0000

The Chow Test results show that the fixed effect model is the best. The following is a table of the Hausman test results:

Table 2 Hausman Test Results

Test Summary	Chi-Sq Statistic	Chi-Sq. d.f.	Probability
Cross-section Random	38.580060	3	0.0000

The estimation results from the Hausman test that were conducted show a probability value of 0.0000 smaller than alpha (= 5% = 0.05) so that the best model is still a fixed effect model. The estimation results obtained are the estimation results with the selected model, namely the fixed effect model.

Table 3: Estimation Results of the PLS Method with the Fixed Effect Model

Variable	*Coefficient*	*t-Statistic*	Prob.
C	3.871772	63.91716	0.0000
Consumption	1.460006	12.22079	0.0000
MSME credit	-0.003331	-4.512555	0.0000
Capital Expenditures	2.500011	1.859204	0.0677
R-squared		0.832495	
Adjusted R-squared		0.828844	
F-Statistic		65.37753	
Prob *(F-Statistic)*		0.000000	
t-tabel			1.66757

The estimation results of panel data regression with a fixed-effect model can be explained through the regression equation as follows:
Economic growth = 3.871772 + 1.460006 Consumption - 0.003331 MSME credit + 2.500011 Capital Expenditures

The constant value of 3.871772 is the value of economic growth if Consumption, MSME credit, and Capital Expenditures are constant. Consumption coefficient of 1.460006 means that if consumption increases by one unit by 1.460006, then economic growth will decrease by one unit by 1.460006 with the assumption that MSME credit and Capital Expenditures are constant. The MSME credit coefficient is -0.003331. If MSME credit increases by one unit by 0.003331, then economic growth will decrease by one unit by 0.003331 with the assumption of constant Consumption and Capital Expenditures. The Capital Expenditures coefficient value is 2.500011, which means that if the Capital Expenditures increase by one unit by 2.500011, then the economic growth will increase by one unit by 2.500011 assuming constant Consumption and MSME credit. The following are estimates of the individual effects:

Table 4 Estimation Results of Individual Effects on Fixed Effect Models

No	CROSSID	Effect
1	DKI Jakarta	0.328257
2	Indonesia Barat	-0.117096
3	Indonesia Tengah	-0.149973
4	DI Yogyakarta	-0.163467
5	Indonesia Timur	0.023449
6	Banten	-0.014170

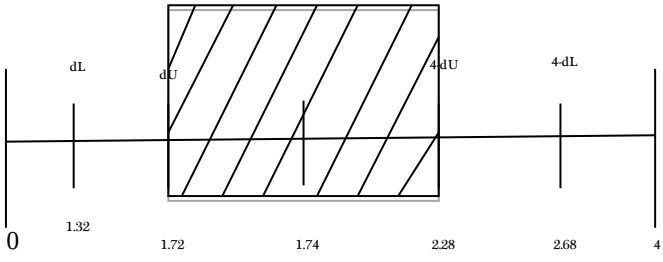
Table 4 shows two provinces with positive coefficient values, namely DKI Jakarta and East Java. This shows that changes in economic growth in the two provinces are influenced by economic activity. This also occurs due to adequate infrastructure support and population potential. On the other hand, negative values occurred in four provinces in Indonesia, namely Yogyakarta, West Java, Central Java, and Banten. The classical assumption test includes several stages consisting of heteroscedasticity, autocorrelation, and normality tests. The purpose of doing this classic assumption test is so that the research model and estimation get the best results. This test is conducted to see the estimation of assumptions from the classical linear basis of the Best Linear Un bias Estimator (BLUE). The following is a table of heteroscedasticity test results:

Table 5 Heteroscedasticity Test Results

Variable	Probability
Consumption	0.7442
MSME credit	0.6565
Capital Expenditures	0.3889

The probability that each variable has a value of more than 5 percent or 0.05 alpha is 0.74; 0.65; and 0.38, so it can be concluded that the classic assumption of heteroscedasticity is fulfilled.
The Durbin-Watson test compares the dU and dL values in the table with the Durbin-Watson values generated through the PLS regression that has been performed. The following is an image of the autocorrelation test results:

Figure 1 Autocorrelation Test Results

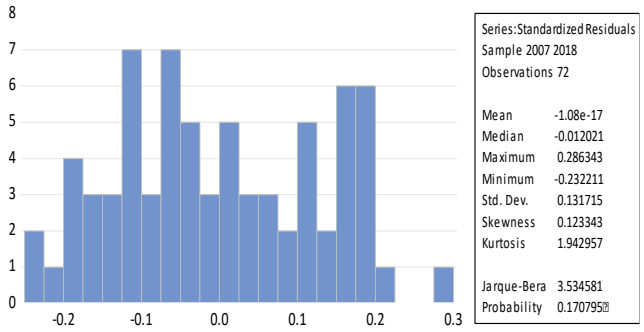


Based on the results of the Durbin-Watson test, the value is 1.74, so it is in the middle between dU and 4-dU. This shows that there is no autocorrelation in this study, and the classic assumptions of autocorrelation are fulfilled. If the Durbin-Watson value is other than between dU and 4-dU, it can be said that autocorrelation occurs in the study.

In seeing how the data is normally distributed or not, it can be seen by comparing the value of table X2 with Jarque Berra X2. Jarque Berra X2 value which is bigger

than table X2 means that the residue is not normally distributed, and vice versa. The normality test can also be seen by comparing the probability value of Jarque Berra, which if the alpha value is more than 5%, it means that the residuals are normally distributed and vice versa. The following is a picture of the normality test results:

Figure 2 Normality Test Results



It can be seen that the Jarque Bera probability value is 0.17, so it can be concluded that the residuals are normally distributed because they have exceeded the alpha value by 5%.

A way to find out whether there is a limit of 0.8 on each variable. If the test results are carried out, the results exceed 0.8 which means that there is multicollinearity in the model. Vice versa, if the test results show a value of less than 0.8, it means that there is no multicollinearity. The following is a table of multicollinearity test results:

Table 6 Multicollinearity Test Results

	Consumption	MSME credit	Capital Expenditures
Consumption	1.000000	0.232077	0.553323
MSME credit	0.232077	1.000000	0.516484
Capital Expenditures	0.553323	0.516484	1.000000

Based on the results of the multicollinearity test, it is known that all independent variables have a value of less than 0.8, it can be concluded that the classic assumption of multicollinearity is fulfilled.

In the testing phase of selecting the best model, the results show that the Fixed Effect is the best model in this study through several stages of testing. On the other hand, for the classical assumption test which is used to estimate assumptions from a classical linear basis, the Best Linear Un bias Estimator (BLUE) also shows that the data used is not problematic heteroscedastically, autocorrelation, normality, or multicollinearity.

5 Conclusion

Consumption has a positive and significant effect on Indonesia's economic growth. This is because the consumption of both food and non-food in Indonesia has increased every year, thus indirectly increasing aggregate demand and encouraging economic growth. MSME credit has a negative and significant effect on economic growth in Indonesia. This is due to the complexity of the problems or constraints faced by MSME actors so that it is difficult to develop optimally. This condition also causes the level of GRDP in Indonesia to be below the provinces outside Indonesia, even though credit distribution is dominated in Indonesia. Capital Expenditures have a positive and insignificant effect on economic growth in Indonesia. This is because government spending, especially Capital Expenditures, can encourage an increase in domestic demand thus stimulating economic growth.

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