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The Determinants of Consumption in Indonesia 2010 - 2018

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Abstract

Consumption is defined as the use of goods and services that directly meet human needs. Every household will not be separated from their consumption behavior in order to fulfill their primary needs in their survival. This study aims to analyze the effect of national income, interest rates, population, inflation and government spending on public consumption in Indonesia in 2010- 2018. This research usice descriptive quantitative and correlational research and the data used are secondary data. This study uses panel data type that combines teame series data and cross section data. The results showed the regression obtained that the variables of national income, population and government expenditure each have a significant influence on public consumption. US for they variable interest rates and inflation do not have a positive effect but have a significant effect on the consumption of Indonesian people. Based on the results of simultaneous regression, the variables of national income, interest rates, population, inflation and government spending together have a significant effect on consumption of the Indonesian people.

Keywords: ***National income, interest rates, population, inflation, public consumption***

Abstrak

Konsumsi diartikan sebagai penggunaan barang dan jasa yang secara langsung memenuhi kebutuhan manusia. Setiap rumah tangga tidak akan lepas dari perilaku konsumsinya untuk memenuhi kebutuhan primer dalam kelangsungan hidupnya. Penelitian ini bertujuan untuk menganalisis pengaruh pendapatan nasional, suku bunga, populasi, inflasi dan pengeluaran pemerintah terhadap konsumsi masyarakat di Indonesia tahun 2010-2018. Penelitian ini menggunakan penelitian deskriptif kuantitatif dan korelasional dengan data yang digunakan adalah data sekunder. Penelitian ini menggunakan jenis data panel yang menggabungkan data deret tim dan data penampang. Hasil penelitian menunjukkan regresi diperoleh bahwa variabel pendapatan nasional, penduduk dan pengeluaran pemerintah masing-masing mempunyai pengaruh yang signifikan terhadap konsumsi masyarakat. US untuk variabel suku bunga dan inflasi tidak berpengaruh positif tetapi berpengaruh signifikan terhadap konsumsi masyarakat Indonesia. Berdasarkan hasil regresi simultan, variabel pendapatan nasional, suku bunga, jumlah penduduk, inflasi dan pengeluaran pemerintah secara bersama-sama berpengaruh signifikan terhadap konsumsi masyarakat Indonesia.

Kata Kunci: Pendapatan nasional, suku bunga, populasi, inflasi, konsumsi publik

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INTRODUCTION

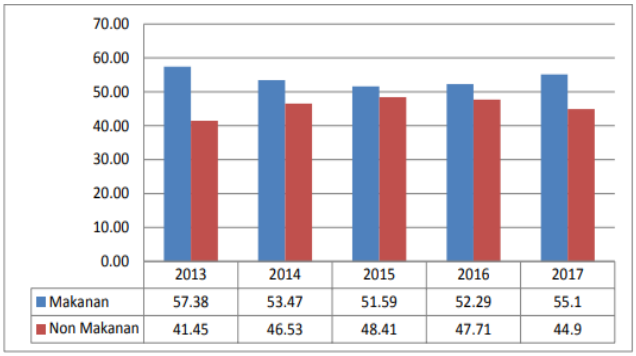
In everyday life, everyone is always related to consumption, namely to meet the need for food, clothing, entertainment or for other needs. Public expenditure for food, clothing and other necessities is called expenditure or consumption. Consumption expenditure is attached to everyone from birth to the end of his life, meaning that all his life carries out consumption activities. Therefore, consumption activities are very important in human life.

Consumption is defined as the use of goods and services that directly meet human needs. Every household will not be separated from consumption behavior in order to fulfill primary needs in their survival. Consumption expenditure between households can differ from one another.

Mankiw (2012) states that consumption is the expenditure for goods and services by households. Meanwhile, Todaro (2002) assert that consumption is generally defined as the use of goods and services that directly meet human needs. Consumption as expenditure made by households on goods and services for the end consumer or needed by a person or society with the aim of meeting needs.

The definition of consumption used in the publication of BPS (2010) is that consumption is the proportion of household expenditure allocated for food and non-food needs. The pattern of household consumption is one indicator of household / family welfare.

According to BPS (2016), the presentation of consumption information data can also reflect the standard of living of the community. The unhealthy lifestyle of the community with inadequate consumption will reduce the nutritional status of the community, which will affect the quality of human resources, which is one of the basic assets of national development.



	2013	2014	2015	2016	2017
Makanan	57.38	53.47	51.59	52.29	55.1
Non Makanan	41.45	46.53	48.41	47.71	44.9

Picture 1. Indonesian Public Household Expenditure 2013-2017 (percent)
Source : Data Processed, 2020

Picture 1 shows that the household expenditure (consumption) of the Indonesian people fluctuates every year. The proportion of expenditure on food in Indonesia is a greater percentage value compared to non-food, this is because the total expenditure per capita of the Indonesian people is still low.

There are three theories of consumption that form the basis of this research, the first. Keynesian theory about the expenditure on consumption hypothesis is a fundamental psychological law, that humans are regulated, like a rule and on an average basis, to increase consumption when their income rises, but not as much. increase in income, even smaller than the increase in income (Mankiw, 2006).

The second theory is the life cycle theory put forward by Albert Ando, Richard Brumberg and Franco Modigliani. In their model, these three figures explain that the pattern of public consumption expenditure is based on the fact that the pattern of income and consumption expenditure patterns of a person is generally influenced by the period in his life cycle.

The third is the theory of consumption according to Fisher in Miskhin (2008), a consideration that a person makes to consume based on current conditions and conditions in the future. Where these two conditions will determine the amount of how much income will be saved, and how much income will be spent or spent on consumption needs.

According to Mankiw (2003), The power of fiscal policy, to influence the economy as shown by the fiscal policy multiplier arises from the feedback between income and consumption. Consumption made by the community and the state is closely related to the income of the people and the state. So that the size of the consumption is determined by the level of income, the greater the income will always be followed by an increase in consumption. Thus, the relationship between income and consumption is positive (directly proportional), or mathematically the consumption function can be denoted C = f (Y).

The consumption function is a function that shows the relationship between consumption (C) and income (Y). If income changes, it will result in changes in consumption and savings. These changes can be determined by APC (Average Propensity to Consume), MPC (Marginal Propencity to Consume), and MPS (Marginal Propencity to Save).

This relationship between consumption and income is known as a function consumption and in general written with the following equation :

$$Y = a + b\ Yd\ (a > 0,\ 0 < b < 1) \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

According to Dumairy (1996), a person's consumption is directly proportional to his income. In macro aggregate, public consumption expenditure is directly proportional to national income. The greater the income, the greater the consumption expenditure.

An increase in interest rates will reduce the amount of public consumption, which means that every increase in the real interest rate makes people reduce their consumption to get benefits in the form of an increase in the interest rate so that they reduce their consumption in the present to get greater consumption in the future when interest rates are low.

According to Todaro (2003), positive or negative population growth for economic development depends on the ability of the economic system to absorb productively and utilize the additional workforce and the increase in the quality of education must also be balanced with equity. The existence of inflation will result the government spends more to finance various needs, such as personnel expenses, goods expenses, maintenance expenses, travel expenses and others.

The result will reduce state revenue or state revenue. In principle, not all inflation has a negative impact on the economy. Especially if there is mild inflation, namely inflation below ten percent. In fact, mild inflation can actually encourage the level of public consumption in economic growth.

From the welfare side, high inflation causes a decrease in real income (purchasing power) society, especially for workers that have a steady income, so that it has an impact on decreasing the level of public consumption and increasing the level of poverty (Pujiati, 2011). The effect of government spending and investment is

indirectly on income gap through Economic growth is significant, so it can be said that economic growth partially mediates the effect of government spending and investment on income inequality (Hair et al, 2010).

Based on the research background, the purpose of this study is to empirically examine national income, interest rates, population, inflation and government spending have an effect on the consumption of Indonesian society.

RESEARCH METHODS

The research in this thesis uses quantitative research, while the approach used is descriptive and correlational approaches. This type of approach aims to see whether two or more variables have a relationship or correlation or not. The data used in this research is secondary data. Secondary data are data obtained from the second source or secondary sources (Bungin, 2013: 128). Secondary data in this study were obtained from online publications on the website of Bank Indonesia (www.bi.go.id), and BPS (www.bps.go.id).

The data were taken from the publication manuscripts of the 2010 series and the 2014 series based on the classification of the period in this study, namely from 2010 to 2018. This study used a panel data type. Panel data is a combination of time series data and cross section data. The data used in this study are consumption data, national income data, interest rate data, population data, monthly inflation rate data, and government expenditure data taken in 33 provinces in Indonesia during the period 2010-2018.

Data Selection Model

To determine the best model of the three models, the Chow test and Hausman test were performed. Chow test is performed to test the common effect and fixed effect models. Meanwhile, the Hausman test conducted to test whether the data were analyzed using a fixed effect or random effect.

In conducting the Chow test, the data is regressed using the common effect and fixed effect models first then a hypothesis is made to be tested. The hypothesis is Ho : then the common effect model and H are used1 : then used the fixed effect model and continued the Hausman test.

Furthermore, to test the Hausman Test the data is also regressed with the random effect model, then compared between the fixed effect and random effect with the hypothesis as Ho : random effect model and H1 : fixed effect model.

RESULTS AND DISCUSSION

Panel data regression has a combination of characteristics, namely data that consists of several objects and includes time. Panel data regression can be done in three models, namely common effect, fixed effect and random effect. Each model has its advantages and disadvantages respectively. Model selection depends on the assumptions and fulfillment of statistical data processing requirements that are correct so that it can be justified statistically.

The first step that must be done is to choose a model from the three available models. Of the three models that researchers have done, the model used in this study is the fixed effect model. The estimation results with the fixed effect model from the pooling regression method, the following equation is obtained :

$$Y = 4.16849644457 + 0.225640948117 * X1 + 0.12930468667 * X2 + 0.120954147059 * X3 - 0.00249823541931 * X4 + 0.133531433386 * X5$$

Normality test

The normality test aims to test whether the dependent variable, independent or both is normally distributed or not. One way to see residual normality is to use the Jarquee-Bera (JB) method. A good regression model is data that is normally distributed. In Eviews 9 software, the normality of a data can be determined by comparing the Jarquee-Bera values. The JB test was obtained from the normality histogram.

After using Eviews 9, the results of data processing using Eviews 9 resulted in a JB value of 13.06133, with a probability of 0.001458, which means that this value is less than 0.05. Then Ho is rejected and H1 is accepted, it can be concluded that the data is not normally distributed.

Autocorrelation Test

The results of data processing in the Durbin-Watson autocorrelation test with Eviews 9 are 1.501546. This value is the calculated Durbin-Watson (DW) value that can be compared with the DU and DL values in the Durbin Watson table. Through the Durbin-Watson table, the sample value (T), the number of variables (K) and the lower limit value (dU) and the upper limit value (dL) can be analyzed.

So from the Durbin-Watson table, the value of T = 33, K = 6, which is the value of dL = 1.0607 and dU = 1.8999. On the results of the autocorrelation test Durbin-Watson obtained the value of d = 1.501546, so the value can be calculated first (4-d) = 2.498454 there is autocorrelation.

F Test Statistics

The F test is done by determining the level of significance so that the F-table is obtained, then comparing the F-statistic value with the F-table at the degree of confidence α = 5%. If the F-statistic is greater than the F-table, the null hypothesis is rejected so that there is a significant influence jointly between the independent variables on the dependent variable with the hypothesis Ho = there is no significant influence between the variables of national income, interest rates, population, inflation and expenditure government on Indonesian people's consumption and H1 = there is a significant influence between the variables of national income, interest rates, total population, inflation and government spending against 10.80114 with a probability value of 0.000000 and this value is greater than the F-table value at 5% alpha, which is 2.57. So the decision is H1 is accepted and Ho is rejected. So it can be concluded that together national income, interest rates, population, inflation and government spending have a significant effect on the consumption of Indonesian society.

Statistical t test

Table 1. t-statistical test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.417021	0.162271	8.732460	0.0000
LOG (X1)	0.191558	0.053040	3.611613	0.0004
X2	-0.015900	0.005795	-2.743993	0.0065
LOG (X3)	0.145732	0.062026	2.349532	0.0195
X4	0.001634	0.004308	0.379251	0.7048
LOG (X5)	0.095925	0.038495	2.491879	0.0133

Source: Eviews 9 processing results

The t-count value of national income is 3.611613 and which is positive, this value is greater than the t-table, namely Indonesian

consumption. Based on the results of Eviews data processing, the F-count is obtained amounting to 2.05183. Then H1 is accepted and Ho is rejected, besides that it is also seen from the probability value which is equal to 0.0004 which is smaller than 0.05, which means that income has a significant effect on the consumption of Indonesian society.

The t-count value of the interest rate is -2.743993 and which is negative, this value is smaller than the t-table, which is 2.05183. Then H1 is rejected and Ho is accepted, which means that the interest rate has a negative effect, while the probability value is 0.0065 which is smaller than 0.05, so Ho is rejected, which means that the interest rate has a significant effect on Indonesian consumption.

The t-count value of the population is 2.349532 and which is positive, this value is greater than the t-table, which is 2.05183. Then H1 is accepted and Ho is rejected, besides that it is also seen from the probability value that is equal to 0.0195 which is less than 0.05, which means that the population has a positive and significant effect on the consumption of Indonesian people.

The t-count value of inflation is 0.379251 and is positive, this value is smaller than the t-table, which is 2.05183. Then H1 is rejected and Ho is accepted, besides It can also be seen from the probability value, which is 0.7048, which is greater than 0.05, which means that inflation does not have a significant effect on the consumption of Indonesians.

The t-count value of government expenditure is 2.491879 and which is positive, this value is greater than the t-table, which is 2.05183. Then H1 is accepted and Ho is rejected, besides that it is also seen from the probability value that is equal to 0.0133 which is smaller than 0.05, which means that government spending has a positive and significant effect on the consumption of Indonesian people.

Coefficient of Determination (R2)

The coefficient of determination (Adjusted R-Square) is basically to measure how far the model's ability to explain the variation in the dependent variable. The Adjusted R-Square value which is close to one means the ability of the independent variables to provide almost all the information needed to predict the dependent variation. The coefficient of determination (R2) is a number that can explain the extent to which the dependent variable can be explained by variations in the independent variable.

Based on the results of data processing, the adjusted R2 value is 0.550591, this shows that the percentage of the influence of the independent variable on the dependent variable is 55.05%. Or it can be interpreted that the independent variables used in the model are able to explain the effect of 44.95% on the dependent variable. While the rest is influenced by variations in variables or other factors outside the regression model of this study.

The Effect of National Income on Public Consumption

Based on the panel data regression analysis, the national income variable has a significant effect on the level of public consumption and the coefficient value is 0.191558. This means that if there is an increase in national income by 1%, the consumption value of the Indonesian people will increase by 0.191558%, assuming other variables are constant. This supports hypothesis testing that national income has a positive effect on the

consumption of Indonesian people, in line with the theory of John M. Keynes in Mankiw (2006) which states that an increase in consumption occurs when income increases. The results of this study are also reinforced by research by Anis (2011) on the Analysis of Public Consumption in Indonesia for the 1980-2009 Period which shows that public income, taxes, people's disposable income, public consumption, savings, interest rates, JUB, inflation have a positive and significant effect on Indonesian consumption.

Effect of Interest Rates on Public Consumption

The results in the estimation of the interest rate variable have a significant effect on the level of consumption of the Indonesian people and the coefficient value is -0.015900. This means that if there is an increase in interest rates by 1%, the value of Indonesian people's consumption will decrease by -0.015900 rupiah, with regard to other variables are fixed. It is in accordance with the opinion of classical economists that a higher interest rate will encourage saving and inhibit consumption.

This supports the research of Febi Ramdan Darojat (2014) in his research "The Effect of National Income, Inflation, Interest Rates and Economic Growth on Public Consumption in Indonesia in 2000-2013" using a partial test (t test) which shows that interest rates have a negative correlation. and significant to public consumption in Indonesia and the results using the simultaneous test (Test F) are inflation, national income, interest rates, economic growth has a significant effect on public consumption in Indonesia.

The Effect of Total Population on Community Consumption

The coefficient value is 0.145732. This means that if there is an increase in population by 1%, the consumption value of the Indonesian people will experience an increase of 0.145732%, assuming the other variables are constant. The results of this study are also reinforced by research by Rahman (2003) in his study of the analysis of factors affecting the consumption function of people in Central Java Province. In 2000, this study used multiple linear regression analysis. The results of this study are that all independent variables, namely GRDP, population and inflation rate have a significant effect on public consumption expenditure and effect of Inflation on Public Consumption.

The coefficient value for the inflation variable is +0.001634, this inflation rate can explain the Indonesian people's consumption of 0.001634 or it can be interpreted that any increase in chaotic inflation can result in an increase in public consumption of 0.001634 rupiah, assuming other variables remain.

The results of this study reinforce previous research conducted by Ragandhi (2012) in research on the Effect of National Income, Inflation, and Deposit Interest Rates for Public Consumption in Indonesia, which shows that National Income, Inflation, and Deposit Interest Rates are not significant to public consumption in the short term.

The Effect of Government Expenditures on Public Consumption

The test results show the probability of 0.0133 is smaller than $\alpha = 5\%$ and the coefficient value is 0.095925. This means that if there is an increase in government spending by 1%, the

consumption value of the Indonesian people will increase by 0.095925%, assuming other variables are constant.

The results of this study refer to Franco Modigliani's theory which explains that the pattern of public expenditure is based on the fact that the pattern of income and expenditure of one's consumption. This result is also reinforced by Jamzani Sodik's (2007) research on Government Expenditure and Regional Economic Growth which shows that government spending and Investment has a positive and significant effect on economic growth. Inflation has a positive and significant relationship. And consumption has a positive and significant relationship.

CONCLUSION

Based on the results of research on the analysis of Indonesian people's consumption in 2010-2018, it can be concluded that national income has a significant effect on Indonesian people's consumption, 0.15% of variations in interest rates have a negative and significant effect on Indonesian consumption, the population variable has a positive and significant impact. significant to the level of consumption of the Indonesian people, the inflation variable has no positive and significant effect on the consumption of the Indonesian people.

The government expenditure variable has a significant effect on the consumption of the Indonesian people, the results of the regression simultaneously show that 44.95% of the variation in the national income variable, interest rates, the amount population, inflation and government spending together have a significant effect on the consumption of Indonesia society. While the rest can be explained by other factors in accordance with the hypothesis made at the beginning of the study.

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