

Impact of Inflation, Consumer Price Index (CPI) in Transportation Group on Indonesia's Economic Growth

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Abstract:- This study will discuss the transportation sub-group because the transportation sub- group is now the talk of the government's policy regarding changes in the price of fuel oil (BBM) and has an impact on the economy. The purpose of this research is to find out whether the impact of inflation and the consumer price index (CPI) on the transportation group has an effect on economic growth in Indonesia. The method used in this research is descriptive quantitative using Eviews 10 and testing is done with Augmented Dickey-Fuller Stationarity Test (ADF), Panel Data Analysis, and Classical Assumption Test, namely: Normality Test, Autocorrelation Test, Heteroscedasticity Test and Multicollinearity Test.

The results of research on the impact of inflation on the transportation group stated that it had an insignificant positive effect on economic growth in Indonesia. Meanwhile, the consumer price index (CPI) in the transportation group has a significant positive effect on economic growth in Indonesia. So if inflation and the consumer price index (CPI) increase, then economic growth will also increase. The increase in inflation and the consumer price index (CPI) was influenced by the increase in subsidized fuel prices due to the government's price policy. The government must be able to prepare and distribute funds for fuel subsidies to help the affected communities, especially for the lower middle class households. And fuel subsidy funds must also be allocated to other sectors in order to provide direct benefits to the community, for example electricity subsidies, transportation costs subsidies, and others.

Keywords:- Inflation, Consumer Price Index (CPI), Economic Growth, Transportation Group.

I. INTRODUCTION

Economic development is a process that is carried out continuously which results in changes in the economy towards the better in various sectors where the final result is an increase in per capita income. (Hong Cesilia: 2019). A developed country because of economic growth. Economic growth is a process of increasing national income or production in a country from year to year. so that the economy of a country is stable, it can be stated that the country is developed, on the contrary if the economic condition of a country is slumped, and vice versa that the country cannot be said to be a developed country.

Economic growth is a collection of various activities in the economic sector. There are several forms of economic resources determined by economic growth determined by population growth, trade, savings, investment, the proportion of production factors, and so on (Yulianti & Khairuna, 2020:146). Progress in a country is determined by the conditions of economic growth, this can be explained through the variable Consumer Price Index.

Consumer Price Index Consumer Price Index (CPI) is an index number that describes changes in the prices of goods and services consumed by the general public in a certain period with a predetermined time period. In addition, the consumer price index (CPI) is very important for the public because it is able to know the level of prices being traded because the CPI not only provides information for goods or services but also food, energy and housing. calculate the index of these prices, especially in the share which is the maximum expenditure of consumers in buying goods in that year, as for the calculation of the CPI (Heriyanto and Chen 2014).

According to BPS data (2014) CPI is an index that calculates the average price change in a period from a collection of prices for goods and services consumed by residents/households within a certain period of time. These types of goods and services are grouped into 11 groups, namely 1) foodstuffs; prepared foods, beverages, cigarettes and tobacco; 2) clothing, and footwear; 3) housing, water, electricity, gas, household fuel; clothing; 4) fixtures, equipment, routine household maintenance; 5) health; 6) transportation; 7) Information, communication and financial services; 8) recreation, sports, and culture; 9) education; 10) food and drink providers; 11) personal care and other services.

The function of the index number is as a guide to see economic conditions in general (Saputra, Setiawan, & Mahatma, 2012) therefore the Consumer Price Index (CPI) is often used to measure the inflation rate of a country and also as a consideration for adjustments to salaries, wages, money pensions, and other contracts (Lesnussa, Patty, Mahu, & Matdoan, 2018). CPI can also be said as one of the economic indicators that can be used to make a simple analysis of a glimpse of economic development in an area in a certain period (Juniaryono, 2013). The Consumer Price Index (CPI) is the rate of inflation caused by increasing pressure on demand for goods and services (aggregate demand) in the economy, several factors that can cause

permanent inflation is the interaction between public expectations of inflation.

Inflation can be interpreted as an increase in the price of goods or services that are general and continuous (Masril 2017). Meanwhile, according to (Adwin S. Atmadja 1999) that inflation is an increase in demand for goods or services while the supply of goods and services has decreased in the market, therefore it is necessary for economic actors to balance market conditions so that inflation does not occur. The explanation above states that the occurrence of inflation is the occurrence of an increase in prices at a certain time naturally or played by business actors for personal gain.

The explanation of inflation is an event of an increase in the general prices of goods and services continuously (Nopirin, 2009) so that it can be explained in three aspects, namely: 1) There is a "tendency" to increase prices, which means a lower price level. actually occurs at a certain time down or up compared to before, but still shows an increasing trend. 2) the price increase is "sustained", which means that it does not happen at one time, namely due to the increase in the price of fuel oil in the middle of the year, for example. 3) Includes the notion of "general level of prices", which means that the price level increases not only for one or a few commodities.

Indonesia has a central statistical agency that functions to analyze the calculation of inflation every month where the prices of goods and services are used as a basis for calculation by comparing the prices of goods or services on the side of price changes with the prices of goods or services in the previous period seen in the consumptive pattern of the community (Heldi , 2009). Meanwhile, Bank Indonesia requires that it be able to set monetary policy correctly and in a balanced manner. Determination of the value of Inflation really takes into account macroeconomic conditions, so that estimates related to macro variables are close to reality. Given that macroeconomic conditions and disturbances in monetary stability have an impact on various economic aspects (Maharani Desak Putu Putri et al, 2017).

The research of Munir Muh. Misbakhul et al, 2021 explains that the consumer price index and inflation have no significant effect on gross domestic product which is economic growth, while simultaneously the consumer price index and inflation have a significant effect on gross domestic product. This means that from 2009 to 2019, inflation and the consumer price index were still well controlled. Research conducted by Hock (2013) and Humyra (2014) states that in principle not all inflation has a negative impact on the economy. Especially if there is mild inflation, it can actually encourage economic growth. This inflation is able to encourage entrepreneurs to increase their production. Therefore, inflation affects the economic growth of a country. Research conducted by Maharani

Desak Putu Putri et al. 2017 states the influence of the Consumer Price Index on Economic Growth based on the previous analysis, the results show that the Consumer Price Index has a positive and significant effect on Economic Growth. can be interpreted theoretically that Economic Growth will increase if the Consumer Price Index increases.

This research will focus on the transportation sub-group which is a means of transportation to move people or goods from one place to another. Because the transportation sub-group is now the subject of discussion on government policies regarding changes in the price of fuel oil (BBM) and has an impact on the economy, one of which is the increase in prices of basic commodities and transportation costs. If this situation occurs continuously, it can make inflation higher while the consumer price index (CPI) increases too, it will affect changes in goods and services that will be consumed by the public. This can affect the state of the Indonesian economy. The Consumer Price Index can also be used to measure a country's inflation rate.

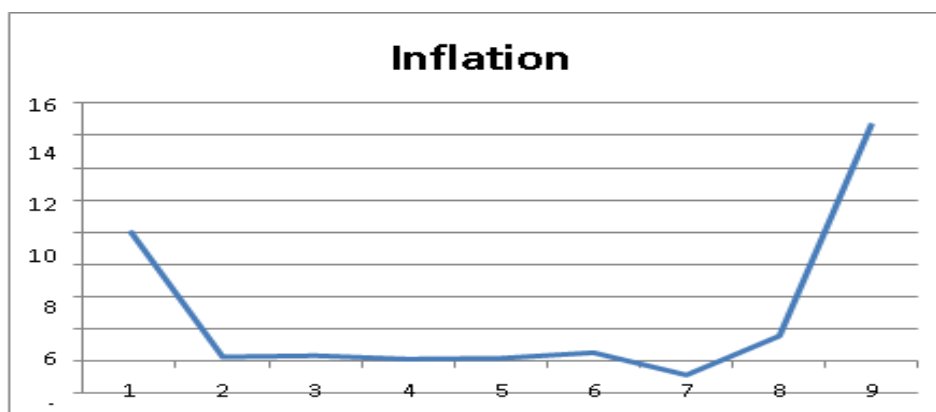
With the existence of several studies and changes in fuel prices that cause inflation and the consumer price index (CPI) to increase so that they affect economic growth, the researcher is interested in writing whether the impact of inflation and the consumer price index (CPI) in the transportation group on economic growth in Indonesia. The purpose of this research is to find out whether the impact of inflation and the consumer price index (CPI) on the transportation group has an effect on economic growth in Indonesia.

II. METHODS

The data used in this study is secondary data that can be accessed through the website of the Indonesian Central Statistics Agency (bps.ac.id). This study analyzes the effect of inflation, consumer price index on Indonesia's economic growth (Stage case group and sub-group of Fuel, Electricity, Water). The independent variable in this study is inflation, the consumer price index and the dependent variable is economic growth. The method used in this research is descriptive quantitative using EvIEWS 10 and testing is done with Augmented Dickey-Fuller Stationarity Test (ADF), Panel Data Analysis, and Classical Assumption Test, namely: Normality Test, Autocorrelation Test, Heteroscedasticity Test and Multicollinearity Test.

III. RESULT

This study uses secondary data, the data obtained from the Central Bureau of Statistics of Indonesia. The data obtained are Inflation in the Transportation group and sub-group Consumer Price Index (CPI) in the Transportation and Economic Growth group and sub-group can be explained in the following graph;.

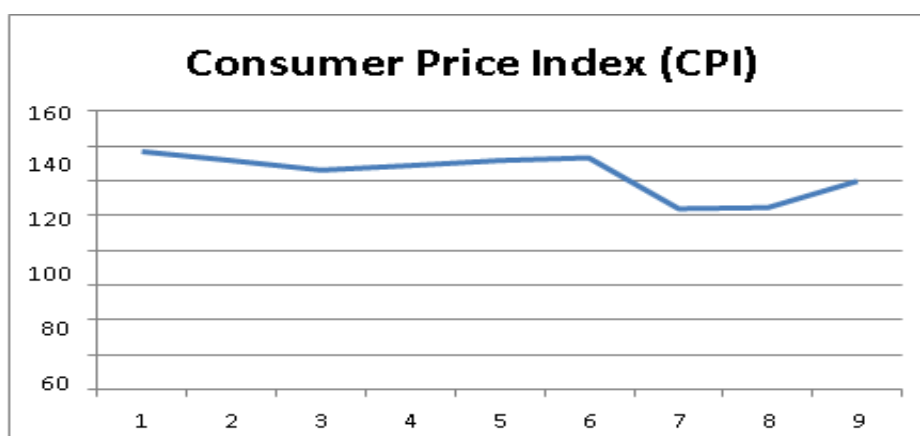


Graph 1: Inflation

Source: bps.go.id

In the graph above it is explained that Inflation in the Transportation group and sub- group fluctuates every year in 2014 with a value of 8.08 and continues to decline until

2021 with a value of 1.58, while in 2022, the inflation rate will increase by 14.74 in Transportation groups and sub-groups in Indonesia.

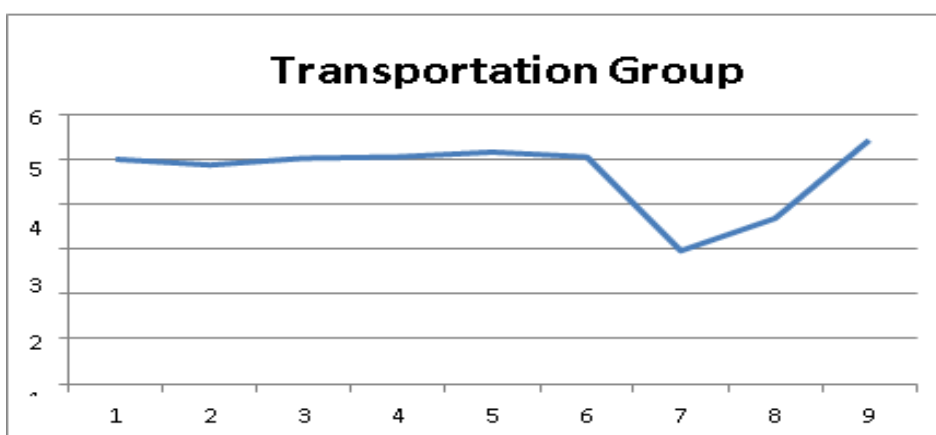


Graph 2: Consumer Price Index (CPI)

Source: bps.go.id

The graph above describes the Consumer Price Index (CPI) in the Transportation group and sub-group. In 2014 with a value of 136.92, it continued to decline until 2021

with a value of 104.64 while in 2022 it increased by 120.06 in the transportation group and sub- transportation in Indonesia.



Graph 3: Transportation Group

Source: bps.go.id

Dependent Variable: Economic Growth				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.137232	1.468422	-1.455462	0.1958
Inflation	0.053660	0.027673	1.939077	0.1006
Consumer Price Index (CPI)	0.053891	0.011807	4.564167	0.0038
R-squared	0.813055	Mean dependent var		4.703333
Adjusted R-squared	0.750740	S.D. dependent var		0.813373
S.E. of regression	0.406084	Akaike info criterion		1.296690
Sum squared resid	0.989427	Schwarz criterion		1.362431
Log likelihood	-2.835104	Hannan-Quinn criter.		1.154820
F-statistic	13.04747	Durbin-Watson stat		1.135614
Prob(F-statistic)	0.006533			

Table 1: Dependent Variable: Economic Growth

The graph above explains that economic growth in Indonesia has fluctuated where in 2014 it increased by a value of 5.01 then in 2015 it decreased by a value of 4.88 then in 2016 to 2019 it experienced a significant increase, while in 2020 and 2021 it experienced a significant increase. decline in population growth in Indonesia. In 2022 the rate of economic growth has stabilized again with a value of 5.44 in Indonesia.

The following is the result of an analysis using Eviews 10 regarding the impact of inflation, the consumer price index in the transportation group on economic growth in Indonesia, namely:

A. Augmented Dickey-Fuller Stationarity Test (ADF)

This is a test conducted on time series data to determine whether the time series data is stationary or cannot be explained in the following table.

Intermediate ADF test results UNTITLED				
Series	Prob.	Lag	Max Lag	Obs
Consumer Price Index (CPI)	0.4099	0	1	8
Inflation	0.5750	0	1	8
Economic Growth	0.1676	1	1	7

Table 2: Intermediate ADF test results UNTITLED

Source: Results of 2022

In the explanation of the table above, it can be seen that the data is said to be stationary if it is less than 5% while the data above is between the Consumer Price Index (CPI), Inflation, and Economic Growth greater than 0.05 which means the data is not stationary. This can be explained in the graph above which states that the data is not stationary.

B. Panel Data Regression Analysis

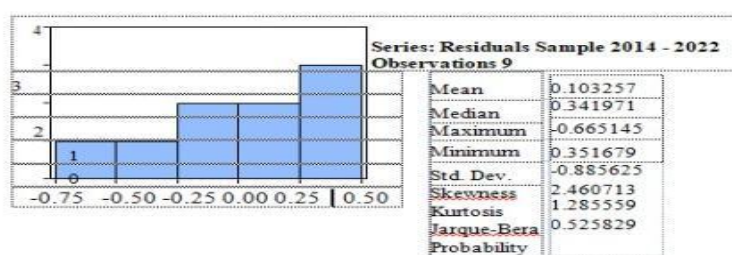
In the table above, it can be concluded that inflation has no significant effect on economic growth, it can be seen in the table above that the inflation rate is $0.10 > 0.05$, if inflation increases by 1%, economic growth will increase by 0.053 while the consumer price index (CPI) also has a significant effect on economic growth with a CPI value of $0.00 < 0.05$. If the Consumer Price Index (CPI) increases by 1%, economic growth will increase by

0.053. The result of Adjusted R-squared means that the influence of inflation and the consumer price index on economic growth is 75%, while 25% is influenced by other factors. It can be concluded that overall inflation and the consumer price index (CPI) in the transportation group and sub-group have a significant effect on economic growth in Indonesia with a value of $0.00 < 0.05$.

C. Classic assumption test

a) Normality Test

The normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution (Ghozali, 2018:161). The normality test on the Econometric views 10 (Eviews 10) program uses the Jarque-Bera test method. Jarque Bera is a statistical test to determine whether the data is normally distributed.



Graph 4: Residuals Sample 2014-2022

Source: Results of 2022

If the value of Jarque-Bera (J-B) < 2 tables and probability > 0.05 (greater than 5%), then the data can be said to be normally distributed. Jarque-fall probability 0.52 > 0.05 with the intention that the regression model meets the assumption of normality which means that it is normally distributed.

b) Autocorrelation Test

According to Ghazali (2018:111) The autocorrelation test aims to test whether in the linear regression model there is a correlation

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.957230	Prob. F(2,4)	0.4574
Obs*R-squared	2.913222	Prob. ChiSquare(2)	0.2330
Source: Results of 2022			

Table 3: Breusch-Godfrey Serial Correlation LM Test

If the value of DW lies between the upper bound (du) and (4 - du), then the autocorrelation coefficient is equal to zero, meaning that there is no autocorrelation. On R-squared 0.23 > 0.05, it means passing the autocorrelation test.

c) Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residual of one observation to another observation (Ghozali, 2018: 120). Heteroscedasticity test can be explained in the following table

Heteroskedasticity Test: White			
F-statistic	141.8687	Prob. F(5,3)	0.0009
Obs*R-squared	8.962097	Prob. Chi-Square(5)	0.1106
Scaled explained SS	2.909122	Prob. Chi-Square(5)	0.7140

Table 4: Heteroskedasticity Test: White

Source: Results of 2022

On R-squared Prob. Chi-Square(5) 0.11 > 0.05 It means that H^0 is rejected, which means that there is no heteroscedasticity problem.

d) Multicollinearity Test

The multicollinearity test aims to test whether there is a correlation between the independent variables in the regression model (Ghozali, 2018:107).

	IHK	Inflasi
Consumer Price Index (CPI)	1.000000	0.076339
Inflation	0.076339	1.000000

Table 5: Correlation

Source: Results of 2022

If the correlation value is $0.07 < 0.90$ then H^0 is accepted, so there is no multicollinearity problem.

IV. DISCUSSION

Based on the panel data regression analysis conducted previously, it can be seen that the impact of inflation has a positive and insignificant effect on economic growth in the transportation group with an inflation value of $0.10 > 0.05$, if inflation increases by 1%, economic growth will increase by 0.05. So the higher inflation, the impact on increasing economic growth in the transportation group.

Research conducted by Hock (2013) and Humyra (2014) states that in principle not all inflation has a negative impact on the economy. Especially if there is mild inflation, it can actually encourage economic growth. This inflation is able to encourage entrepreneurs to increase their production. Therefore, inflation affects the economic growth of a country.

While the panel data regression analysis was carried out previously so that it can be seen that the impact of the Consumer Price Index (CPI) has a positive and significant effect on economic growth on electricity, water, and household fuel groups with a CPI value of 0.00.

< 0.05 If the Consumer Price Index (CPI) increases by 1%, then economic growth will increase by 0.031. So the higher the consumer price index (CPI) the economic growth will also increase in the electricity, water, and household fuel groups.

Research was also conducted by Maharani Desak Putu Putri et al. 2017 states the influence of the Consumer Price Index on Economic Growth based on the previous analysis, the results show that the Consumer Price Index has a positive and significant effect on Economic Growth. The regression coefficient value of the Consumer Price Index is 0.229 with a significance level of 0.004. This shows that the Consumer Price Index has a positive and significant relationship to Economic Growth or can be interpreted theoretically that Economic Growth will increase if the Consumer Price Index increases.

According to BPS data (2014) CPI is an index that calculates the average price change in a period from a collection of prices for goods and services consumed by residents/households within a certain period of time. These types of goods and services are grouped into 11 groups, namely 1) foodstuffs; prepared foods, beverages, cigarettes and tobacco; 2) clothing, and footwear; 3) housing, water, electricity, gas, household fuel; clothing; 4) fixtures, equipment, routine household maintenance; 5) health; 6) transportation; 7) information, communication and financial services; 8) recreation, sports, and culture; 9) education; 10) food and drink providers; 11) personal care and other services. In this study, we will discuss inflation and the consumer price index in the transportation group in Indonesia.

In Indonesia, rising inflation can be explained as inflation which is dominantly influenced by groups and sub-groups of foodstuffs, such as harvests, natural disturbances, or factors of developments in domestic food commodity prices as well as developments in international food commodity prices. Meanwhile, inflation of the price component regulated by the government can be explained, namely inflation which is dominantly influenced by the Government's price policy, such as the policy of subsidized fuel prices. In this government policy, by increasing the price of subsidized fuel, it will have an impact on various economic groups such as the transportation sector.

The government must be able to prepare and distribute funds for fuel subsidies to help the affected communities, especially for the lower middle class households. And fuel subsidy funds must also be allocated to other sectors in order to provide direct benefits to the community, for example agricultural price subsidies, electricity subsidies, transportation cost subsidies, and others.

V. CONCLUSION

The results of research on the impact of inflation on the transportation group stated that it had an insignificant positive effect on economic growth in Indonesia. Meanwhile, the consumer price index (CPI) in the transportation group has a significant positive effect on economic growth in Indonesia. So if inflation and the consumer price index (CPI) increase, then economic growth will also increase. The increase in inflation and the consumer price index (CPI) was influenced by the increase in subsidized fuel prices due to the government's price policy. The government must be able to prepare and distribute funds for fuel subsidies to help the affected communities, especially for the lower middle class households. And fuel subsidy funds must also be allocated to other sectors in order to provide direct benefits to the community, such as electricity subsidies, transportation costs subsidies, and others.

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