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THE IMPACT OF FOOD COMMODITY PRICES ON INFLATION IN BEKASI

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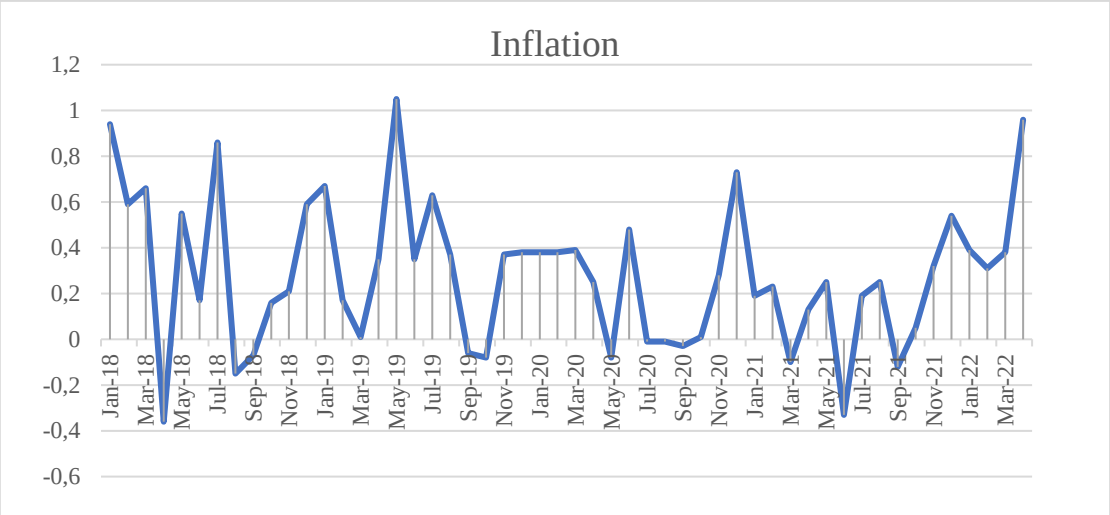
Abstract
This research aims to examine the influence of price fluctuations on volatile food commodities such as rice, chilies, and meat in Bekasi. This research is quantitative study with the use of secondary data taken from Strategic Food Price Information Center in Bekasi in the form of commodity food prices from all markets. The data taken are meat, chilies, and rice price data in all markets in Bekasi City in the 2018-2022 period. The data analysis method used in this study is Vector Autoregression (VAR) analysis. Based on the results obtained that in the short term there are several variables that affect inflation in Bekasi City inflation two months earlier, inflation five months earlier, inflation eight months earlier, rice prices one month earlier, rice prices three months earlier, rice prices four months earlier, rice prices seven months earlier, cayenne pepper prices 2 months earlier, cayenne pepper prices 5 months earlier, the price of cayenne pepper 8 months in advance, the price of beef 1 month in advance, the price of beef 3 months in advance, the price of beef 4 months in advance and the price of beef 6 months in advance. Meanwhile, long-term price inflation is also influenced by the price of rice, meat, and chilies.

Keywords: *Chillie Price, Inflation, Rice Price, Meat Price, Vector Autoregression (VAR) Analysis*

1. INTRODUCTION

Inflation is also one of the economic indicators used it to gauge the health of a nation's economy (Simanungkalit, 2020). The inflation rate is reflected in the increase in the price of goods as a whole. Inflation control and economic stabilization are still challenges in several regions in Indonesia, including Bekasi City. Inflation due to price fluctuations or due to price fluctuations that often occur in food commodities in agriculture, fisheries and animal husbandry is called volatile food inflation.

Bank Indonesia defines volatile food as inflation which is mainly influenced by shocks in the food industry such as harvests, natural disturbances, or factors of changes in domestic food commodity prices and changes in international food commodity prices (Iskandar & Subekan, 2017). Fluctuations in food prices contributed significantly to the inflation rate.



Source: Central Bureau of Statistics (processed)

Figure 1. Bekasi City's Inflation Rate

From Figure 1, it can be seen that the monthly inflation rate in Bekasi City has fluctuated. Where in April 2018 there was a significant decline and was the period with the lowest inflation rate during the period from January 2018 to March 2022, which was -0.36 percent. Afterwards, in May 2018 there was a fairly large increase of up to 0.55 percent. Although it decreased in June by 0.17 percent, in July it again experienced an even higher increase than May, which was 0.86 percent. Furthermore, until the beginning of 2019, the inflation rate in Bekasi City had a value below 0.86 percent. In March 2019, the inflation rate decreased to 0.01 percent. Then it continued to increase for 2 months, namely in April 2019 it rose to 0.35 percent and increased again in May 2019 to 1.05 percent.

Changes in food commodity prices have the greatest impact on Indonesia's inflation rate, and as the country's population grows, so will the demand for food (Yuliati & Hutajulu, 2020). However, there are times when food supply falls short of demand. This can lead to a rise in food prices, which can in turn fuel inflation. On the basis of the preceding description, the researcher wishes to examine the impact of commodity price fluctuations on Bekasi City's inflation rate.

In this regard, according to research conducted by Rahmanta & Maryunianta (2020) entitled "*Pengaruh Harga Komoditi Pangan Terhadap Inflasi Di Kota Medan*" reveal that in the short term there are a number of variables that affect inflation, including the price of rice one month earlier, the cost of rice two months earlier, the price of red chili one month earlier, the price of red chili two months earlier, the price of cayenne pepper one Red chili is the only factor that impacts inflation over the long term. The findings of the FEVD analyzation of the most influential goods in explaining the uniqueness of inflation in Medan City are the prices of red chili, shallots, rice, cayenne pepper, and garlic, from most influential to least influential.

In their study entitled "*Pengaruh Harga Komoditas Pangan Hewani Asal Ternak Terhadap Inflasi Di Provinsi D.I. Yogyakarta*," Apriyadi & Hutajulu (2020) found that beef commodity prices were stable from 2017 to 2019. However, the price of chicken meat and eggs fluctuates and tends to rise. Beef, chicken, and chicken eggs price shocks did not significantly affect the inflation rate. Chicken meat and chicken eggs are the most

influential animal food commodities from livestock in describing the diversity of inflation. In contrast, beef ranks last in terms of explaining the diversity of inflation.

The research by Kusmutiarani et al. (2018), entitled "*Dampak Fluktuasi Harga Tiga Komoditas Volatile Food Terhadap Inflasi di Kota Pangkalpinang*," indicates that rice and shallots have a beneficial impact on inflation in Pangkalpinang City in the short run. There are two commodities that have a favorable influence on inflation in Pangkalpinang City over the long term: rice and chicken meat. IRF (Impulse Response Function) analysis demonstrates that the response of the Pangkalpinang Consumer Price Index (CPI) to shocks in rice commodity prices and shallot commodity prices reached equilibrium in the long term, whereas broiler chicken prices did not reach equilibrium in either the long or short term.

According to Rahmanta et al. (2020), in their research entitled "*Pengaruh Fluktuasi Harga Komoditas Pangan Terhadasi Inflasi di Provinsi Sumatera Utara*", discover that in the short term, the previous month's inflation has a positive effect on the current month's inflation; in the short and long terms, rice prices have a positive effect on current month's inflation; and in In the long term, the price of purebred chicken has a positive effect on current month's inflation; in the long and short terms, the price of red chili has a positive effect on current month's inflation; in the long term, the price of cooking oil has a positive effect on current month's inflation; in the long term, the price of egg prices purebred chicken has a positive effect on current month's inflation; and in the short and long terms, corn prices do not have a positive effect

IRF analysis was conducted by Setiawan & Hadianto (2014) entitled "*Fluktuasi Harga Komoditas Pangan Dan Dampaknya Terhadap Inflasi Di Provinsi Banten*" shows that price shocks for corn, rice, purebred chicken, chicken eggs and curly red chili by one standard deviation will have an impact on increasing inflation in Banten Province. The FEVD analysis reveals that corn, curly red chilies, rice, shallots, pure beef, purebred chicken, and eggs are among the food commodity prices that help to explain the range of inflation in Banten Province, from the highest to the lowest.

Based on the foreground and previous studies, the goal of this study is to examine the development of food commodity prices in Bekasi City and the inflation response to fluctuations in food commodity price shocks in Bekasi City.

2. LITERATURE REVIEW

2.1. Inflation

Inflation is one of the economic indicators used to measure the economic stability of a region (Mahendra, 2017). Inflation is an increase in commodity prices in aggregate and continuously. According to this definition, if the increase in the price of a good or service only occurs in one or two commodities, this condition cannot be called inflation, nor can it be called inflation if it only occurs within a certain period of time. The Consumer Price Index (CPI) is one indicator of inflation, with changes in the CPI indicating price changes for goods and services (Kasmara, 2019).

One way to calculate inflation can be seen from the Consumer Price Index (CPI). Changes in CPI show changes in the price of goods or services. The goods and services calculated in the CPI are 744 goods and services that are included in the household goods

category based on the results of the 2007 Cost of Living Survey (hereinafter referred to as SBH).

2.2. Food

According to Law 18 of 2012, food is defined as all biologically derived agricultural, plantation, forestry, fishery, livestock, aquatic, and water products that are intended for human consumption including food additives, food raw materials, and other substances used in the preparation, processing, or manufacture of food or beverages (Asroni, 2014).

Based on the source, food ingredients are divided into two, namely plant foods and animal foods (Apriyadi & Hutajulu, 2020). Vegetable foods are intended as food ingredients derived from plant products and their derivatives, such as rice, tempeh, and fruits. Meanwhile, animal sourced food is intended as food ingredients derived from animals and their derivatives, such as fish, meat and eggs. These basic goods greatly affect people's food needs and changes in prices for these basic goods often cause inflationary fluctuations.

3. RESEARCH METHODS

This study is quantitative study with the use of secondary data for its data sources. The Strategic Food Price Information Center in Bekasi, Indonesia, provides secondary data in the form of commodity food prices from all markets. The data taken are beef price data in all markets in Bekasi City in the 2018-2022 period, cayenne pepper price data in all markets in Bekasi City in 2018-2022 and rice price data in all markets in Bekasi City in the 2018-2022 period. This variable was chosen as the sample because the variable is a basic commodity which is a commodity for daily needs. The data used spans from January 2018 to April 2022 in monthly format. This study also makes use of the Central Statistics Agency's monthly Consumer Price Index (CPI) data for Bekasi City (hereinafter referred to as BPS).

3.1. Data analysis method

1) Descriptive Analysis

   This analysis is an analytical technique that provides information about the data held. Descriptive analysis is a simple form of analysis to describe a data with presentation using tables and graphs to facilitate interpretation.

2) Vector Autoregression (VAR)

   The data analysis method used in this study is Vector Autoregression (VAR) analysis. The Vector Autoregression (VAR) method is one of the models used to analyze the interdependence relationship between economic variables that can be estimated without focusing on exogenous problems. In this methodology, all variables are treated as endogenous. The VAR model employs time series data as input. The VAR model is constructed with an approach that minimizes theory in order to effectively capture economic phenomena. Accroding to Setiawan & Hadianto (2014) state that the VAR general equation model is adopted from the equation modelas follows :

$$IHK_t = A_0 + A_1 IHK_{t-p} + A_2 HDS_{t-p} + A_3 HB_{t-p} + A_4 HCR_{t-p} + et_1$$
$$HDS_t = B_0 + B_1 HDS_{t-p} + B_2 IHK_{t-p} + B_3 HB_{t-p} + B_4 HCR_{t-p} + et_2$$
$$HB_t = C_0 + C_1 HB_{t-p} + C_2 IHK_{t-p} + C_3 HDS_{t-p} + C_4 HCR_{t-p} + et_3$$
$$HCR_t = D_0 + D_1 HCR_{t-p} + D_2 IHK_{t-p} + D_3 HDS_{t-p} + D_4 HB_{t-p} + et_4$$

Information:

IHK_t	= Inflation Growth Rate at the present time
IHK_{t-p}	= Inflation Growth Rate in the past
HDS_t	= Beef price at this time
HDS_{t-p}	= Beef Price in the past
HB_t	= Price of Rice at the present time
HB_{t-p}	= Chicken Meat Price in the past
HCR_t	= The price of Cayenne Pepper at the present time
HCR_{t-p}	= Price of Cayenne Pepper at the previous time
$A0 \ldots .0$	= Constant or intercept
$A1 \ldots .4$	= Coefficient
$et1 \ldots .4$	= Error term

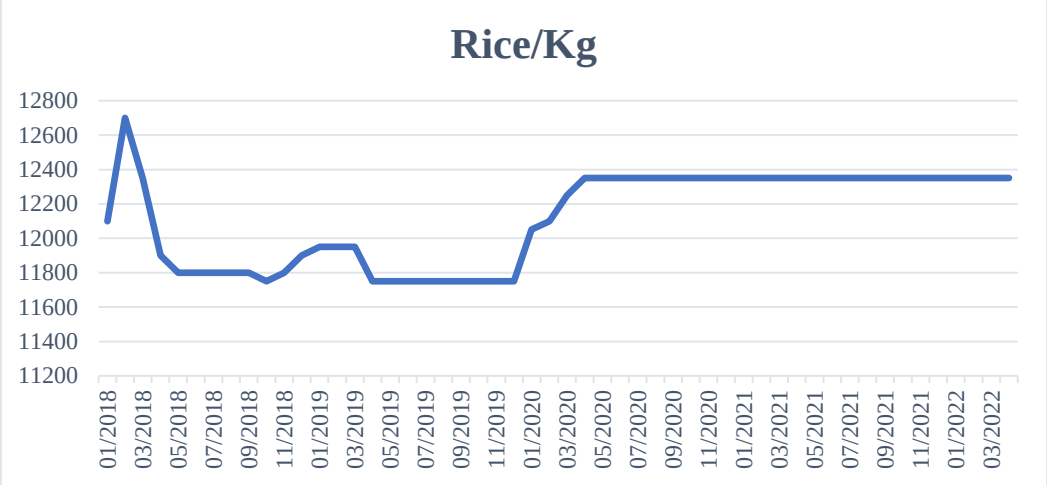
The specification of the VAR model comprises the selection of variables and the determination of the lag for every endogenous variable. There are several stages in the analysis utilizing VAR, including the stationarity test, where data that is not stationary or has a unit root and is entered into statistical processing will result in spurious regression. The Augmented Dickey – Fuller (ADF) test is utilized to examine the presence or absence of a unit root in the data. The optimal lag is necessary to capture the effect of each variable on other variables in the VAR system.

In addition, the stability test of the VAR model was conducted to determine the polynomial function's roots. If the absolute value is less than one, then the VAR model is stable and the Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) can be considered valid. The cointegration test then determines whether or not the non-stationary variables are cointegrated. When the trace statistic is greater than the critical value, the equation is cointegrated. The Johansen Cointegration Test method can be used to conduct a cointegration test.

After determining the number of cointegrated equations, the following steps are Vector Error Correction Model (VECM) analysis, Impulse Response Function (IRF) analysis, where the analysis tracks the response of endogenous variables in the VAR system to shocks or changes in error variables, and Forecast Error Variance Decomposition (FEVD) analysis, where the FEVD analysis in the VECM model attempts to predict the percentage contribution of variance for each variable due to changes in error variables.

4. RESULTS AND DISCUSSION

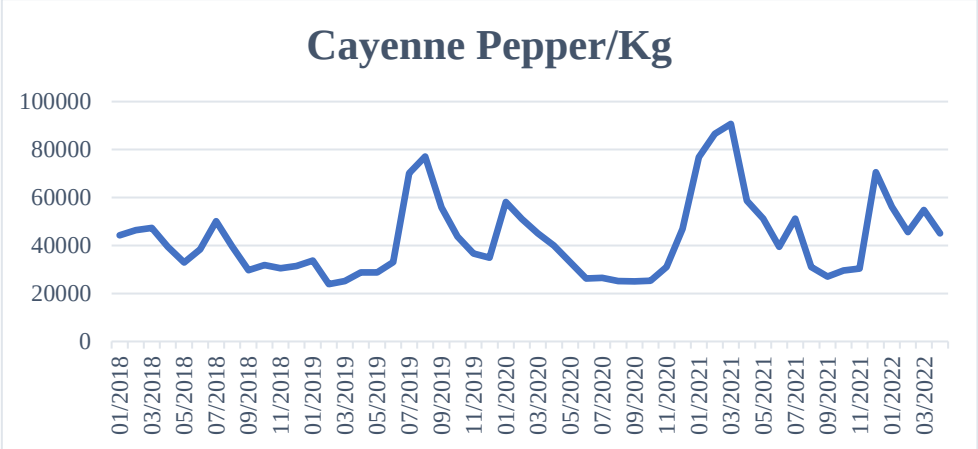
4.1. Descriptive Analysis



Source: Hargapangan.id (processed)

Figure 2. Rice Prices

The price of rice shown in Figure 2, it can be seen that the movement of rice prices in all markets in Bekasi City has a fairly stable trend. The highest rice price was seen in the February 2018 period, where the price of rice in all markets in Bekasi City was around Rp12.700/Kg. Then in April 2018 the price of rice decreased to Rp11.900/Kg. after that starting from the period May 2018 - September 2018 the price of rice in all markets in Bekasi City was stable at Rp11.800/Kg. until the period of December 2019 the price of rice did not experience large fluctuations, only around the number below Rp12.000/Kg. Then in the period April 2020 - April 2022, rice prices in all markets in Bekasi City tend to be stable.



Source: Hargapangan.id (processed)

Figure 3. Price of Cayenne Pepper

The price of cayenne pepper as shown in Figure 3 in all markets in Bekasi City, during the period used in this study seemed to fluctuate. Where in each period there is a

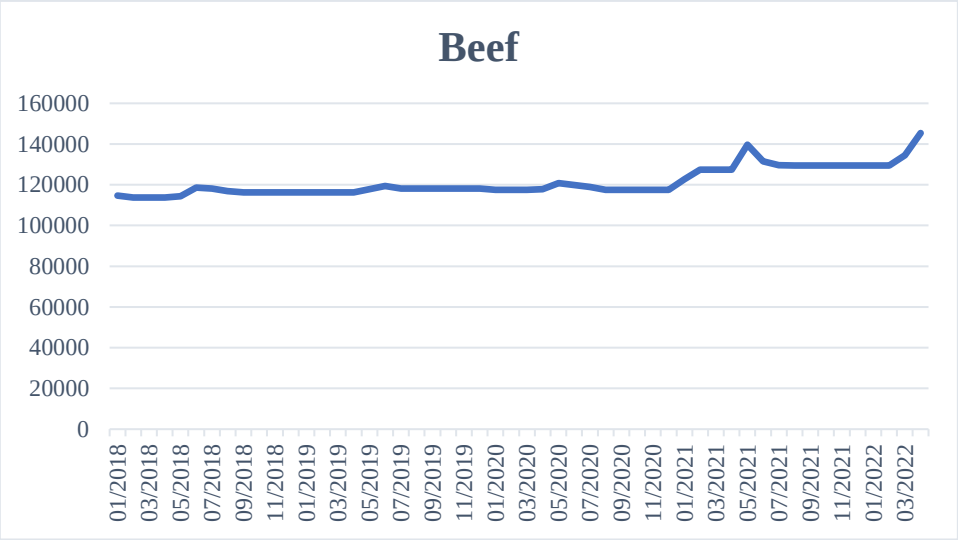
significant up - down movement. At the beginning of the research period, namely in the March 2018 period, the price of cayenne pepper was Rp47.000/Kg which is the second highest price for the 2018 period. After that, the price of cayenne pepper decreased in the period April 2018 – June 2018. The peak price increase for cayenne pepper in the 2018 period, namely in the July 2018 period, reached a price of Rp50.100/Kg. In the next period until the end of 2018 the price of cayenne pepper was in the range of Rp30.000/Kg.

The highest price spike for cayenne pepper in the 2019 period occurred in the July 2019 period and the August 2019 period, namely in July 2019 the price touched up to Rp70.100/Kg and in August 2019 had a price that touched up to Rp77.100/Kg. The amount of the price is certainly very high and burdensome for the community as consumers. Because cayenne pepper is one of the basic needs that is often used to make cooking spices. This very high price spike will burden the restaurant or restaurant business sector which uses cayenne pepper as a staple ingredient of large quantities of cooking spices. But in the next period, namely in September 2019, the price of cayenne pepper decreased to Rp55.850/Kg. Although the price has decreased, the price is still relatively high. In the next period, the price of cayenne pepper still experienced significant fluctuations in price movements.

In the 2020 period, the price of cayenne pepper is also still relatively high in several periods. At the beginning of the year, the price of cayenne pepper has touched the price of Rp58.100/Kg. From the January 2020 period to the April 2020 period, the price of cayenne pepper in all markets in Bekasi City is still above Rp40.000/Kg. In the period May 2020 to November 2020, the price of cayenne pepper has decreased in the price range of Rp30.000/Kg. Even in the September 2020 period, the price of cayenne pepper was at a low price of Rp25.000/Kg.

In the period of 2021, chili prices in all markets in Bekasi City experienced a very extreme price spike. This can be seen at the beginning of the year, namely January 2021, the price of cayenne pepper reaches Rp76.900/Kg. This value even matched the price in the 2019 period in August. And in February 2021 the price of cayenne pepper again experienced a price increase, namely to Rp86.550/Kg. The peak of the spike in the price of cayenne pepper in 2021 occurred in March. This price spike is very high, namely Rp90.700/Kg. Of course, the price spike can be said to be a very extreme thing. Where for 1 kg of cayenne pepper in all markets in the city of Bekasi, the price is Rp90.700. For people who use cayenne pepper as food, however the price is very burdensome, and for restaurants that use cayenne pepper as a food seasoning in large quantities, it will make them think about increasing prices or reducing the use of cayenne pepper in their food. Fluctuations still occur in the 2021 period, until at the end of 2021 the price of cayenne pepper again experienced a high increase. Where in November 2021 the price of cayenne pepper is around Rp. 30.450/Kg increased to Rp70.600/Kg.

In the period of 2022, the price of cayenne pepper can be said to move stably. But the prices are still fairly high. In January 2022 cayenne pepper has a price of Rp56.200/Kg. Then in February 2022 the price of cayenne pepper decreased to Rp45.600/Kg. In March 2022, the price of cayenne pepper again experienced a price increase, which rose again to Rp54.750/Kg. Then in April 2022 the price of cayenne pepper fell again, which was Rp45.100/Kg.



Source: Hargapangan.id (processed)

Figure 4. Beef Prices

Beef commodity prices in all markets in Bekasi City when viewed from Figure 4 above, the price of beef in the Bekasi City market does not fluctuate significantly. Seen from the initial period in the data used in this study, the price of beef is quite stable with being in the range of Rp114.700/Kg. Until May 2018 beef prices did not experience significant changes. Changes occurred in June 2018, which experienced a price increase to Rp118.550/Kg. For two months the price of beef remained at the price range of Rp118.000/Kg. In August 2018, the price of beef decreased to Rp116.950. After that, the price of beef in September 2018 to April 2019 experienced a price stability of Rp116.250/Kg.

Furthermore, in the 2019 period, beef prices in all markets in Bekasi City also did not fluctuate significantly. This can be seen in May 2019 the price of beef has a value of Rp117.850/Kg. Then in June 2019, the price of beef increased to Rp119.540/Kg. Even in the following month, namely July until the end of the year, namely December 2019, the price of beef moved stably at Rp118.150/Kg.

For the 2020 period, the price of beef in Bekasi City had touched the price range of Rp120.900/Kg. Although at the beginning of 2020 the price of beef decreased when compared to the price of the previous month, namely from Rp118.150/Kg to Rp117.550/Kg. The price lasted from January 2020 to March 2020. Then in the May 2020 period, the price of beef increased, reaching Rp120.900/Kg. This price is the highest price of beef during 2020. After the price increase, the price of beef has decreased and the price movement can be fairly stable.

The 2021 period is a period where the price of beef in Bekasi City experiences a price increase to above Rp120.000/Kg. In early 2021, the price of beef was already at Rp122.750/Kg. Then it will increase again in the period from February 2021 to April 2021 by Rp127.500/Kg. The price of beef again experienced a price increase, namely in May 2021. The price of beef rose to Rp139.650/Kg. After that, the price of beef decreased slowly every month. Until the period August 2021 to December 2021 beef prices moved stably at Rp129.400/Kg.

In the 2022 period, the price of beef increased at the end of the period in this study, namely in March 2022 and April 2022. In March 2022 the price of beef was in the price

range of Rp134.500/Kg. Meanwhile, in April 2022 the price of beef experienced a price spike to reach Rp145.400/Kg. This price is the highest beef price in the period used in this study.

4.2. Vector Autoregression (VAR)

The Vector Autoregression (VAR) model was used to analyze the impact of food commodity price fluctuations on inflation in Bekasi City. Test for data stationarity, determination of optimal lag, stability test of the VAR model, and cointegration test are the phases of VAR analysis.

4.2.1. Stationary Test

The initial stage of VAR analysis is the stationary test of the data. Stationary test data is needed because if the data is not stationary, it will cause a false regression. The criteria used are Augmented Dickey-Fuller (ADF), with a significance level of 5%. If the statistical ADF value is less than the 5% significance level, then the data is stationary and vice versa. The following are the results of the stationary test on each variable:

Table 1. Data Stationarity Test Result

Variable	Level			First Difference		
	Prob	Significance Level	Information	Prob	Significance Level	Information
LnB	0.4832	5%	Insignificant	0.0000	5%	Significant
LnCR	0.0576	5%	Significant	0.0000	5%	Significant
LnDS	0.9797	5%	Insignificant	0.0000	5%	Significant
LnIHK	0.6184	5%	Insignificant	0.0000	5%	Significant

Source: Eviews 9.0

The results of the test for data stationarity using the ADF criteria indicate that at the level level, LnCR is the only variable with a probability value less than or equal to the significance level of 5% or 0.05. This indicates that the LnCR is stationary at the level level, whereas the other variables are not; thus, a first difference process is required. The results of the ADF test at the first difference level indicate that the probability values of all variables analyzed are less than the 5% significance threshold. This indicates that all variables are stationary at the initial level of difference.

4.2.2. Optimum Lag Determination

Once the data stationary test has been completed, the optimal lag must be determined. Based on the calculation results presented in Table 2, the optimal lag suggested by all criteria is the first lag; thus, the optimal lag selected for this study is the first lag.

Table 2. Optimum Lag Result

lag	LogL	LR	FPE	AIC	SC	HQ
0	280,1991	NA	1.18e-10	-11.50830	-11,35236	-11,44937
1	414,1437	239,9840*	8.69e-13*	-16,42265*	-15,64299*	-16,12802*
2	427.5317	21.75551	9.84e-13	-16,31382	-14,91042	-15,78347
3	438,9314	16.62458	1.24e-12	-16,12214	-14.09501	-15,35608
4	447.9714	11.67663	1.78e-12	-15,83214	-13,18127	-14,83037

*recommended optimal lag

Source: Eviews 9.0

4.2.3. Model Stability Test

The VAR model's stability was evaluated by examining the polynomial function's roots. If all of the polynomial function's roots have absolute values less than 1, then the VAR model is deemed stable. Valid Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) estimates will be generated by a stable VAR model.

Table 3. Model Stability Test Result

Root	Modulus
0.993311	0.993311
0.888956	0.888956
0.680614	0.680614
0.631332	0.631332

Source: Eviews 9.0

The results of the VAR model stability test which can be seen in Table 3 show that the VAR model used in this study is stable at its optimal lag, namely the 1st lag.

4.2.4. Cointegration Test

The results of a cointegration test to determine the existence of information regarding the long-term relationship between variables. If cointegration exists, the subsequent analysis employs VECM. In the absence of cointegration, however, the analysis continues using VAR. The cointegration test employed in this study is the Johansen Cointegration Test. Cointegration is declared to exist in a model when the trace statistic value exceeds the critical value (Rahmanta et al., 2020).

Table 4. Johansen Cointegration Test Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None *	0.866214	123,1249	54.07904	0.0000
At most 1	0.294208	22.54920	35,19275	0.5585
At most 2	0.059805	5,127427	20.26184	0.9786
At most 3	0.040056	2.044005	9.164546	0.7689

Source: Eviews 9.0

The results of Table 4 indicate that, at the 5% significance level, one equation has a trace statistic value that is greater than the critical value. This demonstrates that the equation is cointegrated; therefore, the VECM model is used to continue the analysis.

4.3. Vector Error Correction Model (VECM) Estimation

VECM illustrates the short- and long-term effects of price fluctuations of each food commodity on inflation in Bekasi City. Significant testing on the estimation results is conducted by comparing the t-count > t-table value; if the t-count > t-table value, the effect is considered significant; if the t-count t-table value, the effect is considered insignificant. Where the t-count value employed is the absolute value relative to the t-table value.

Table 5. VECM Estimation Results

Variable	Coefficient	T-Stats	T-Table (5%)	Interpretation
Short-term				
CointEq1	-0.000229	-0.00237	1,677	Insignificant
D(LNIHK(-1))	-0.011885	-0.06773	1,677	Insignificant
D(LNCR(-1))	0.006358	0.28809	1,677	Insignificant
D(LNDS(-1))	0.014206	0.04954	1,677	Insignificant
D(LNB(-1))	0.010820	0.01850	1,677	Insignificant
Long-term				
LNIHK(-1)	1.0000000	-	-	-
LNCR(-1)	0.016223	1.43073	1,677	Insignificant
LNDS(-1)	-0.284856	-3.21337	1,677	Significant
LNB(-1)	5.093988	27.8521	1,677	Significant
C	-49,50331	-	-	-

Source: Eviews 9.0

The existence of a short-term to long-term adjustment mechanism is indicated by the alleged negative error correction parameter (CoeintEq1). If the parameter value is negative with an absolute value less than one and significant, then the error correction model is declared valid and stable. The interpretation of the error correction value of -0,000229 is that there is a 0.000229% per month adjustment from short to long term inflation in Bekasi City.

According to Table 5's findings, there are no variables that influence inflation in the current period by 5% in the short term. While there are variables that affect inflation over the long term, rice prices (LnB) and beef prices are the most significant (LnDS). These variables are deemed to have a significant impact on inflation because their respective t-statistic values exceed the t-table threshold of 1,677.

4.4. Impulse Response Function (IRF) Analysis

The Impulse Response Function (IRF) is utilized to determine the impact of the shock (Shock) of a new variable's standard deviation on the current and future values of the observed model.

Table 6. IRF Results

Period	LnIHK	LnCR	LnDS	LnB
1	0.040004	0.000000	0.000000	0.000000
12	0.039091	0.001952	0.000208	-7,12E-05
13	0.039090	0.001952	0.000208	-7.13E-05
36	0.039091	0.001952	0.000208	-7,12E-05
37	-0.064157	0.307101	-0.022704	-0.011926
52	-0.064157	0.307101	-0.022704	-0.011926

Source: Eviews 9.0

Based on Table 6, the results of the IRF for the short term indicate that for every one standard deviation of inflation shock, inflation will increase by 0,039091 percentage points. The price of cayenne pepper provides a significant response to inflation according to the IRF (LnCR). Every one standard deviation there is a shock to the price difference of cayenne pepper, to which inflation will respond until it rises 0,001952%, which means that a 1% increase in the price difference of red chili will result in an inflation rate increase of 0,001952%.

Inflation will increase by 0,039091% for every one standard deviation of inflation shock that occurs over the medium term. The price of cayenne pepper provides a significant response to inflation according to the IRF. Every one standard deviation there is a shock to the price difference of cayenne pepper, to which inflation will respond until it rises 0,001952%, which means that a 1% increase in the price difference of cayenne pepper will result in an inflation rate increase of 0,001952%.

Long-term, every one standard deviation of inflation shock will cause inflation to increase by up to 0,064157 percentage points. The price of cayenne pepper provides a significant response to inflation according to the IRF. Every one standard deviation there is a shock to the price difference of cayenne pepper, to which inflation will respond until it reaches 0,307101. This means that a 1% increase in the price difference of cayenne pepper will result in an inflation rate increase of 0,307101.

4.5. Forecast Error Variance Decomposition (FEVD) Analysis

Table 7. Analysis of Forecast Error Variance Decomposition Result

Period	SE	LnIHK	LnCR	LnDS	LnB
1	0.040004	100,0000	0.000000	0.000000	0.000000
12	0.135872	99.77401	0.222728	0.003012	0.000245
13	0.141397	99.77202	0.224727	0.002998	0.000252
36	0.235006	99.75672	0.240092	0.002886	0.000302
37	0.238243	99.75648	0.240328	0.002885	0.000303
52	0.282380	99.75405	0.242773	0.002867	0.000311

Source: Eviews 9.0

Based on Table 7, the results of the FEVD analysis of the most influential commodities in explaining the diversity of inflation in Bekasi City are the prices of cayenne pepper, beef, and rice, in decreasing order of influence.

With a percentage of 0,242773 percent, cayenne pepper ranks first in explaining the differences of inflation in Bekasi. It is believed that the high public demand for chili is due to the fact that there are no commodities or food ingredients that can fulfill the

requirements of cayenne pepper. Therefore, the cayenne pepper consumption value in Bekasi City is relatively high. Therefore, the price increase of cayenne pepper in Bekasi City will result in a wide range of inflationary effects.

Beef and rice rank second and third, respectively, in explaining the diversity of inflation in Bekasi City, with percentages of 0,003012 and 0,0000311 respectively. Beef is one of the community's preferred commodities. In the meantime, rice is the primary staple food for the general populace, including those in Bekasi City. Nonetheless, the percentage used to explain the variation of inflation is not excessively high. Although the population of Bekasi City continues to rise, it is suspected that beef and rice consumption have not increased significantly. The decrease in per capita consumption of rice was caused by a shift in people's tastes as their incomes increased, causing them to consume more bread and other foods.

The finding is in accordance with Rahmanta & Maryunianta (2020), from the FEVD analysis of the most dominant commodities in explaining the diversity of inflation in the city of Medan are the price of red chili, the price of shallots, the price of rice, the price of cayenne pepper, and the price of garlic, from the largest to the smallest.

5. CONCLUSION

5.1. Conclusion

There are no factors that can be attributed to a short-term change in the rate of inflation in Bekasi City. These conclusions are supported by the results of scarce analyses, which revealed the absence of statistically significant factors. While rice prices (LnB) and beef prices (LnB) have a long-term impact on inflation, there are also other variables that affect inflation (LnDS). Because t-statistics is greater than t-table, this variable has a substantial impact on inflation. The results of the FEVD analysis of the most influential commodities in clarifying the diversity of inflation in Bekasi City are the prices of cayenne pepper, beef, and rice, from most influential to least influential.

5.2. Suggestion

Suggestions for further research using different models and variables to analyze the effect of food prices on inflation, such as: garlic prices, red chili prices, chicken meat prices using the Policy Accounting Matrix (PAM) model, and other models.

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