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PRICE STABILITY AND SHALLOT MARKET INTEGRATION IN CENTRAL JAVA

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ABSTRACT

The COVID-19 virus is causing economic shocks. If there is no balance of demand and supply, the impact will result in price instability and price integration. Shallot (Allium ascalonicum) is an essential commodity in Indonesia that will impact inflation. Central Java is the largest national producer, and the impact that will be caused will be huge for the national shallot trade. Price fluctuations and integration in Central Java will have an impact due to many farmers and marketing actors involved in the shallot trade. The study aimed to analyze the stability of shallot in Central Java and analyze vertical and horizontal market integration. The methods used are The Coefficient of Variation and VAR/VECM. The results of research on producer prices and consumer prices in the time before and during pandemics are classified as high volume. Although producer prices have decreased volatility (19.73 to 18.43), consumer prices have increased (19.64 to 21.12). On vertical integration, in the long run, only the price of producers with retail traders and large swords with retail traders experience integration. While in the short term, there is only a producer-price relationship affecting the price of retail traders in Central Java which is harmful. The horizontal integration between Jakarta Karamatjati Market, Bandung Kosambi Market, Johar Semarang Market, and Bringharjo Market Yogyakarta experienced long and short-term integration. Johar Semarang Market is influenced by all three markets and only affects Yogyakarta Beringharjo Market.

Keywords: *price, stability, market, integration, shallot*

BACKGROUND

The COVID-19 virus that attacks human health causes an economic shock. This shock is caused by people's fear and panic due to social restrictions. Economic shocks and social costs will necessarily affect the functioning of agricultural and food systems worldwide (Stephens et al., 2020). Siche (2020) stated that COVID-19 affects agriculture in two essential aspects: food supply and demand. The impact of the balance of demand and supply is not achieved, it will result in price changes and long-term will have an impact on price instability.

Shallot (*Allium ascalonicum*) is an essential commodity from the farmer's side as a producer, consumer, and government. Kustiari (2017), from 2011-2016, producer prices moved more stable compared to consumer prices. The coefficient of variation (CV) of consumer prices reached 12.6%, while the CV of producer prices was only 9.3%. In addition, the share of shallots yearly is quite large

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against inflation. Central Bureau of Statistics in October (2020) experienced inflation of 0.07%, where shallots contributed 0.02%.

On the other hand, the government needs to put more emphasis on marketing efficiency. One of these can be measured by market integration. The market is complex because it forms a hierarchy and links trades involving different commodities together (Palaskas & Harris, 1991). Market integration is an indicator of marketing efficiency, especially from the aspect of price efficiency. Market integration shows how the relationship between regions or institutions occurs in a particular commodity marketing system. It shows how far price changes that occur at the reference market level will cause changes at the level of the follower market (Asmarantaka, 2014).

Market integration analysis is fundamental. It is because (1) knowledge of market integration makes it easier to monitor price volatility, (2) it is used to improve government policies, ensuring that interventions are not duplicated, (3) it is used to forecast prices, (4) formulates the type of marketing infrastructure associated with developing agricultural markets that used as the basis for Agricultural market development (TNAU 2017). The price of shallots in Indonesia has an increasing trend. There are price fluctuations between producer and consumer prices (Figure 1). The lack of availability of shallots causes price fluctuations.

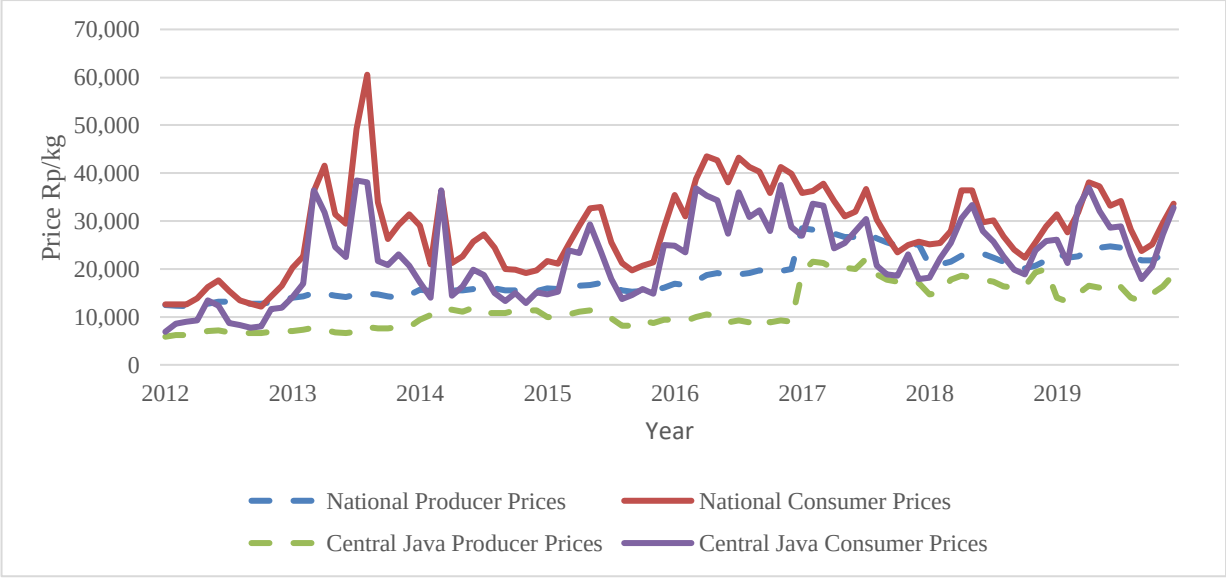

Figure 1. Development of Producer Prices and Consumer Prices of Shallots in Indonesia and Central Java in 2012-2019
Source: Ministry of Agriculture, 2012-2019

Based on data from the Central Bureau of Statistics in 2019 showed that shallot production in Indonesia reached 1.58 million tons, with Central Java being the largest producer of 481,890 tons. Shallot production in Central Java has decreased from 546,685 tons in 2016 to 445,586 tons in 2018. In contrast, in 2019, production increased to 481,890 tons. Meanwhile, national shallot production has increased every year. This also has an impact on the percentage of production to national production. The percentage of the national population has decreased from 42.08% in 2014 to 30.49% in 2019.

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In 2019 Central Java supplied shallots for local needs and other regions such as DKI Jakarta (91.90%), West Java (60.92%), and the Special Region of Yogyakarta (71.51%) (BPS 2020). Research by Rahmawati et al. (2018) show that the market for Indonesian shallot producers is more integrated into the short term than the long term. Annisa et al. (2018) show that there is short-term integration in the marketing of shallots outside Central Java province, namely Lampung Province, where the price of shallots at the farm level (Brebes) influences the price of shallots for wholesalers and retailers in Lampung. The impact that will be caused will be huge for the national shallot trade. If there is a problem in Central Java, it will have an impact because many farmers and other marketing actors are involved in the shallot trade.

Based on the background, the purpose of this study is: 1.) Analyze variations in shallot prices at the level of producers and retail traders from Central Java before the Covid-19 pandemic and during the Covid-19, 2.) Analyze the level of integration of the Central Java shallot market between the producer market with the wholesale market and the wholesale market with the retail trader market, and 3.) Analyze the level of integration of the Central Java shallot market between retail traders' markets.

RESEARCH METHODS

The study used secondary data from the Ministry of Agriculture and Bank Indonesia (BI). The data used to analyze vertical integration price stability is in the form of monthly data on shallot prices at the level of producers and retail traders in Central Java during 2017-2021. In addition, the data used for horizontal integration is the monthly price at Kramatjati Market in Jakarta, Kosambi Market in Bandung, Johar Market in Semarang, and Bringharjo Market in Yogyakarta from November 2018 - June 2021. To know the price volatility of shallots using a variation coefficient analysis. Meanwhile, the analysis used to determine market integration is VAR / VECM.

Shallot Price Stability in Central Java.

The coefficient of variation of price data promptly describes the fluctuations (inequality to average) used to determine the price stability of a commodity. The smaller the coefficient value of variation can be interpreted that prices are relatively stable or have low fluctuations (Rachman 2005 in Nuraeni et al. 2015). Mathematically formulated by:

$$CV = \frac{\text{standard deviation}}{\text{average}} \text{ x } 100\%$$

Shallot Market Integration in Central Java

Identifying market integration can be done through three stages of analysis, namely (1) stationarity test/unit root test, (2) cointegration/coherence test, and (3) causality test. Stationarity tests need to be done because this study uses time series data. To avoid "spurious regression," the data analyzed must be stationary, containing no root units. Stationarity is closely related to the formation of VAR/VECM models. The study will conduct a variable stationarity test used with the Dickey-Fuller Augmented Test (ADF).

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Cointegration tests are conducted to identify time series data relationships and long-term relationships. This study conducted the cointegration test with the Johansen model because this model is better than the Engle-Granger and Ravallion models (Enders, 2004). Suppose the test results prove a cointegration vector. In that case, the variables in the equation have a long-term relationship and can apply the Error Correction Model (ECM) for the short term.

A causality test is performed to look at the reciprocal or causal relationship between two price variables and to identify the dominant market in price formation in the other market. This reciprocal relationship was tested with the Granger Causality approach. The Estimation Correction Model (ECM) assesses the short-term relationship dynamics between prices in different markets. The study will test land-to-land correction mechanisms in the form of VECM to test short-term dynamics or the speed of adjustment to long-term balance. The equation used is

$$\Delta P_t^a = \beta_1 + \beta_2 + \delta P P_{t-1}^a + \sum_{i=1}^{l} a_1 \Delta P_{t-1}^a + \varepsilon_t$$

$$\Delta P_t^b = \beta_1 + \beta_2 + \delta P P_{t-1}^b + \sum_{i=1}^{l} a_1 \Delta P_{t-1}^b + \varepsilon_t$$

Information:

P_t^a : Price of shallots on the market a at time t
P_t^b : Price of shallots in market b at time t
t : Trend time
l : Optimum lag
Δ : Operator of first differentiation
ε : Error term
β_1 : Interception (drift)
β_2 : Next Trend

ECM can be estimated using the following equation:

$$\widehat{\Delta P_t^a} = \alpha_0 + \alpha_1 \Delta P_{t-1}^b + \alpha_2 \hat{u}_{t-1} + \varepsilon_t$$

$$\hat{u}_{t-1} = \widehat{\Delta P_t^a} - \alpha_0 - \alpha_1 \Delta P_{t-1}^b - \alpha_2$$

Information:

1. α_1 is a short-term effect
2. α_2 indicates the speed of error correction (speed adjustment). The parameter is α_2 because it describes the system's dynamics and the rate at which the variable adjusts the balance.

RESULT AND DISCUSSION

Based on the calculation of the coefficient of variation, the producer price decreased the value of the variation coefficient. In contrast, the consumer price experienced an increase in the value of the variation coefficient. It shows that consumer prices fluctuate more during pandemics (Table 1).

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Table 1. Results of Calculation of Prices of Producers and Consumers of Shallot of Central Java

Price Shallot	Indicator			
	Average (Rp)	Maximum (Rp)	Minimum (Rp)	Coefficient of variation (%)
Producers (Before the pandemic)	16,006	20,800	10,950	19.73
Consumers (Before the pandemic)	26,806	38,850	16,950	19.64
Producers (After the pandemic)	19,563	29,700	15,350	18.43
Consumers (After the pandemic)	32,366	48,850	25,650	21.12

Source: Eviews Data Processing Results

The increase in shallot production suppressed price volatility at the producer level slightly. Based on data from the Central Bureau of Statistics (2020), shallot production in Central Java increased by 22.95% or 110,600 tons. Anindita (2004) explained that fluctuations in agricultural commodity prices are caused by demand turmoil, supply turmoil, and experimentation in the price determination process. Meanwhile, the CV on rising consumer prices reflects the turmoil in demand during this pandemic. People panic buying at the beginning of the COVID-19 pandemic, so there was a demand shock. Effects on consumer behavior in the medium term during the consumer pandemic do stockpile, improvisation, and pent-up demand (Rohmah, 2020).

Vertical Integration

Vertical integration in this study aims to analyze price integration at the level of producers, wholesalers, and retail traders in Central Java. The market can be integrated if price changes in one market are responded to by price changes in other markets, both in the short and long term. The first stage in market integration analysis is the stationarity test. Based on The Dickey-Fuller Augmented Test (ADF) shows that the ADF values of all variables are higher than the critical value at the 1% confidence level. Therefore it can be concluded that all prices are stationary at the first difference.

Table 2. Stationarity Test Results HPROD, HPB, and HPE

Variable	ADF Value	Description
HPROD	-4.606256	Stationary on 1diff
HPB	-4.001292	Stationary on 1diff
HPE	-3.980743	Stationary on 1diff
Critical Value	1%	-3.584743
	5%	-2.928142

Source: Eviews Data Processing Results

The next stage is the cointegration test. The next stage is the cointegration test. Based on the results of the Johansen Cointegration Test analysis, it was found that producer prices with wholesale prices did not have long-term integration. Meanwhile, the producer price with the retailer's price and the wholesaler's price with the retailer's price, there is a long-term integration.

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Table 3. Information on Integration Relationships between Producer Markets, Wholesalers, and Long-Term Retail Traders in Central Java

Level of Market	Trace Stat	Critical value	Description
HPROD and HPB	14.50348	15.49471	Not integrated
HPROD and HPE	16.23768	15.49471	Integrated
HPB and HPE	20.57320	15.49471	Integrated

Source: Eviews Data Processing Results

This study conducted a causality test to see the market's coherence. The market can be integrated into the two-way reciprocal relationship in the market being tested.

Table 4. Granger Causality Test Results.

Variable	F-Statistik	Prob.	Description
HPROD - HPB	7.25820	0.0020*	Significant
HPB - HPROD	1.37607	0.2643	Not Significant
HPROD - HPE	5.08881	0.0107*	Significant
HPE - HPROD	1.17204	0.3201	Not Significant
HPE - HPB	1.49120	0.2287	Not Significant
HPB - HPE	0.63583	0.4296	Not Significant

Source: Eviews Data Processing Results
Description: *significant at 5%.

Producer prices do not statistically affect wholesaler prices, but wholesaler prices have a significant effect on producer prices. Therefore, there is a one-way causality. Producer prices do not affect retailer prices, while retailer prices statistically affect producer prices. Widyawati (2016), in Brebes Regency, in the value chain, wholesalers only get 50% of their supply from producers, the remaining 10% from village collectors, and 40% from sub-district collectors. Efforts to increase bargaining power at the village level are carried out by three organizations, Gapoktan, Koperasi, and BUMDes, which are directly connected to large markets in Jakarta. Thus, it is concluded that there is a unidirectional causality between the producer price variable and the retail trader price. Wholesaler-level prices do not statistically affect retail-level prices and vice versa. So there is no causality whatsoever. It shows that there is no marketing efficiency. In addition, market power occurs in wholesalers and retail traders. Farmers are only price takers, and the bargaining position of farmers is weak in determining prices because farmers do not have market power in the existing market structure (Kohls & Uhl, 2002).

The short-term estimate of producer prices negatively lags to 2 (t table = 1.67866). That is, if there is an increase in the producer price of Rp. 1,000 in the previous two months, it will lower the retail trader price by Rp. 782 in the current month. It shows that the offer affects the short-term shallots' price in Central Java. Prastowo et al. (2008) explained that the demand side of essential food commodities such as shallots tends to be stable.

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Table 5. Results of Error Correction Test Model of Manufacturer Price and Retail Trader Price

Error Correction:	D(HPROD)		D(HPE)	
Variable	**Coefisien**	**t Statistik**	**Variable**	**Coefisien**
CointEq1	-0.506205	[-2.44526]*	CointEq1	-0.506205
D(HPROD(-2))	-0.241511	[-1.37884]	D(HPROD(-2))	-0.241511
C	-64.32702	[-0.20378]	C	-64.32702

Source: Eviews Data Processing Results
Description: *affected.

Short-term relationships between wholesalers and retail traders do not occur. In contrast, the error correction of the price of prominent and retail traders has a significant effect. The ECT coefficient value indicates that price adjustments at the retail level are faster than at the wholesale level because the value of ECT at the retail level is greater than the VALUE of ECT at the level of large traders. The significant value of the ECT coefficient indicates the importance of the long-term cointegration relationship in the price formation process in each market. The ECT coefficient value. Greater indicates a faster adjustment speed (Nuraeni, 2015).

Table 6. Results of the Error Correction Test Model of wholesale prices and retail trader prices

Error Correction:	D(HPB)		D(HPE)	
Variable	**Coefisien**	**t Statistik**	**Variable**	**Coefisien**
CointEq1	0.011766	[3.68028]*	0.014022	[3.90768]*
C	45.99732	[0.07652]	122.2619	[0.18124]

Source: Eviews Data Processing Results
Description: *affected.

Horizontal Integration

Horizontal integration in this study aims to analyze the integration of market prices that are played from Central Java, namely Karamatjati Jakarta (PKJ), Bandung Kosambi Market (PKB), Johar Semarang Market (PJS), and Yogyakarta Beringharjo Market (PBY). The Dickey-Fuller Augmented Test (ADF) shows that the ADF PKJ, PKB, and PJS values are higher than the critical value at the 1% confidence level, while PBY is at the 5% confidence level. Therefore it can be concluded that all prices are stationary at the first difference.

Table 7. Stationarity Test Results PKJ, PKB, PJS, and PBY

Variable	ADF Value	Description
PKJ	-3.753311	Stationary on 1diff
PKB	-3.969973	Stationary on 1diff
PJS	-3.859836	Stationary on 1diff
PBY	-3.067074	Stationary on 1diff
Critical Value	1%	-3.592462
	5%	-2.931404

Source: Eviews Data Processing Results

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The results of Johansen cointegration testing between markets in several provinces in Java Island showed all integrated markets on a long-term basis. A trace statistical value (TS) more significant than the critical value indicates its level of cointegration. According to Hidayanto et al. (2014), the trace statistical value indicates the amount of cointegration. The greater the value of the trace statistic, the higher the level of cointegration.

Table 8. Information on Integration Relations between Kramatjati Jakarta, Kosambi Bandung, Johar Semarang, and Beringharjo Yogyakarta Markets in the Long Term.

Market	Trace Stat	Critical value	Description
PKJ and PKB	24.71662	15.49471	Integrated
PKJ and PJS	17.56977	15.49471	Integrated
PKJ and PBY	23.57679	15.49471	Integrated
PJS and PKB	17.83512	15.49471	Integrated
PBY and PKB	26.77637	15.49471	Integrated
PBY and PJS	18.92724	15.49471	Integrated

Source: Eviews Data Processing Results

The information disclosure factor becomes a crucial factor in the occurrence of this long-term integration. In the long run, the openness of a good flow of information will be transmitted perfectly. It makes traders cannot play the price of shallots. In addition, the increased production of shallots has a positive impact on integration. According to Marwa et al. (2017), if there is a supply shock, natural disasters will affect production scarcity resulting in production inequality between regions and a market surplus. The market deficit will have a destructive impact on integration. This causality analysis aims for price integration in Jakarta Karamatjati Market (PKJ), Bandung Kosambi Market (PKB), Johar Semarang Market (PJS), and Yogyakarta Beringharjo Market (PBY). This market coherence is seen from two markets that affect each other or two-way reciprocity.

Table 9. Information on integration relations between markets Kramatjati Jakarta, Kosambi Bandung, Johar Semarang, Bringharjo Yogyakarta.

Direction of Causality	F-Statistik	Prob.	Description
PKB – PKJ	0.56654	0.5722	Not Significant
PKJ – PKB	0.23539	0.7914	Not Significant
PJS – PKJ	0.11812	0.8889	Not Significant
PKJ – PJS	2.48906	0.0964	Not Significant
PBY - PKJ	0.86011	0.4312	Not Significant
PKJ – PBY	4.56225	0.0168	Significant
PJS – PKB	0.54127	0.5864	Not Significant
PKB – PJS	1.57751	0.2197	Not Significant
PBY - PKB	0.15116	0.8602	Not Significant
PKB - PBY	2.83798	0.0710	Not Significant
PBY – PJS	1.92183	0.1603	Not Significant
PJS - PBY	4.01489	0.0262	Significant

Source: Eviews Data Processing Results

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In this study, not all long-term integrated consumer markets have a causality relationship and vice versa. Beringharjo Yogyakarta Market (PBY) can affect other markets Jakarta Karamatjati Market (PKJ) and Johar Semarang Market (PJS). Other markets do not affect and are influenced by each other. The absence of causality between markets can be caused by poor distribution channels, market power, and market failures that result in the market not running well (Katrakilidis, 2008). This efficiency issue is essential because it can improve the well-being of manufacturers and encourage innovation. This inefficient market causes high price fluctuations at the consumer-level shallots.

The estimated results of the Error Correction price of Karamatjati Market Jakarta (PKJ), Kosambi Bandung Market (PKB), Johar Semarang Market (PJS), and Yogyakarta Beringharjo Market (PBY) have a short-term relationship. On the other hand, Johar Semarang Market (PJS) is influenced by all three markets and only affects Yogyakarta Beringharjo Market (PBY).

Table 10. The results of the Erorr Correction Model Kramatjati Market Jakarta (PKJ), Kosambi Bandung Market (PKB), Johar Semarang Market (PJS). and Beringharjo Market Yogyakarta (PBY)

Error Correction:		**D(PKJ)**		**D(PKB)**
Variabel	**Koefisien**	**t Statistik**	**Koefisien**	**t Statistik**
CointEq1	0.675742	[0.93319]	1.326896	[2.35466]*
D(PKJ(-2))	-0.725223	[-1.47626]	-0.846500	[-2.21420]*
D(PKB(-1))	1.032934	[1.46073]	1.207131	[2.19357]*
Error Correction:		**D(PKJ)**		**D(PJS)**
CointEq1	-0.012759	[-3.08971]*	-0.010535	[-2.88752]*
D(PKJ(-1))	0.272432	[0.95372]	0.566299	[2.24384]*
C	129.0403	[0.16957]*	230.7489	[0.34320]
Error Correction:		**D(PKJ)**		**D(PBY)**
CointEq1	-0.956112	[-2.04985]*	0.045079	[0.10831]
D(PKJ(-1))	0.936623	[2.56944]*	0.631336	[1.94089]*
Error Correction:		**D(PKB)**		**D(PJS)**
CointEq1	-0.605420	[-2.96009]*	-0.502284	[-2.16109]*
D(PKB(-1))	0.729519	[2.17927]*	1.052287	[2.76621]*
D(PJS(-2))	-0.492042	[-1.60908]	-0.722180	[-2.07825]*
Error Correction:		**D(PKB)**		**D(PBY)**
CointEq1	-1.136371	[-2.71096]*	-0.287958	[-0.59804]
D(PKB(-1))	1.154975	[3.30326]	0.978606	[2.43654]*
D(PBY(-1))	-0.801878	[-2.13456]*	-0.740908	[-1.71697]*
D(PBY(-2))	-0.613534	[-2.09743]*	-0.504358	[-1.50102]
Error Correction:		**D(PJS)**		**D(PBY)**
CointEq1	-1.338967	[-3.02019]*	-0.917368	[-2.05457]*
D(PJS(-1))	1.267708	[3.02925]*	1.360069	[3.22693]*
D(PBY(-1))	-0.970151	[-2.23087]*	-1.162280	[-2.65375]*

Source: Eviews Data Processing Results

Description:*affected t table (n=47; α=0,05 = 1.67866)

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In the short-term relationship of Kosambi Bandung Market (PKB) price, there are two significant variables, namely the price of Kramatjati Jakarta Market (PKJ) in lag two and the price of Bandung Kosambi Market (PKB) in lag 1. The existence of significant error correction parameters proves the existence of a price adjustment mechanism of Bandung Kosambi Market (PKB) from the short to long term. Positive ECT values indicate long-term and short-term adjustments to return to balance have a slow opening. According to Magfiroh et al. (2017), the ECT value indicates the speed of adjustment and short-term balance towards long-term balance. The positive and significant ECT coefficient shows that there is a mechanism for adjusting the price of shallots from the short to long term is very slow (Sholihah and Karsinah 2020).

Short-term prices of Kramatjati Market Jakarta (PKJ) and Johar Semarang Market (PJS) do not affect Jakarta Kramatjati Market (PKJ). In Johar Semarang Market (PJS), there is one significant variable, namely Pasar Kramatjati Jakarta (PKJ) in lag 1 Kramatjati Jakarta Market price adjustment (PKJ) (-0.012759) is fast compared to Johar Semarang Market (PJS) (-0.010535).

Short-term only the price of Kramatjati Jakarta Market (PKJ) itself affects Pasar Kramatjati Jakarta (PKJ) lag one plus one variable error correction. In Beringharjo Market Yogyakarta (PBY), there is one significant variable: the price of Pasar Kramatjati Jakarta (PKJ) in lag 1. The price adjustment of Kramatjati Market Jakarta (PKJ) (-0.956112) l is faster than Yogyakarta Beringharjo Market (PBY) (0.045079).

Short-term only the price of Kosambi Bandung Market (PKB) itself affects lag one plus one variable error correction. In Johar Semarang Market (PJS), there are two significant variables, namely Bandung Kosambi Market (PKB) in lag one and Johar Semarang Market (PJS) lag two plus one error correction variable. The price adjustment of Bandung Kosambi Market (PKB) (-0.605420) is faster than Johar Semarang Market (PJS) (-0.502284).

Short-term only the price of Beringharjo Yogyakarta Market (PBY) affects Bandung Kosambi Market (PKB) lag 1, lag two plus one variable error correction. While in Beringharjo Market Yogyakarta (PBY), there are two significant variables, namely the price of Bandung Kosambi Market (PKB) in lag one and Beringharjo Market Yogyakarta (PBY) lag 1.

The short-term price of Johar Semarang Market (PJS) lags one, and Pasar Beringharjo Yogyakarta (PBY) lags 1, which affects Johar Semarang Market (PJS) plus one variable error correction. In Beringharjo Market Yogyakarta (PBY), there are two significant variables, namely Johar Semarang Market (PJS) lag one and Pasar Beringharjo Yogyakarta (PBY) lag one plus one variable error correction. The price adjustment of Johar Semarang Market (PJS) (-1.338967) is faster than Yogyakarta Beringharjo Market (PBY) (-0.917368). According to Sholihah and Karsinah (2020), a negative and significant ECT coefficient shows how close the variable is to equilibrium. The smaller the ECT coefficient, the faster the price adjustment will be.

CONCLUSION AND SUGGESTION

Producer prices and consumer prices in the time before and during pandemics are classified as high volume. Although producer prices decreased in volatility during the pandemic compared to before, consumer prices increased. On the vertical integration between producer prices, large swordsmen, and retail traders in Central Java, in the long run, only producer prices with retail traders

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and large swords with retail traders experience integration. While in short-term integration, there is only a producer-price relationship affecting the price of retail traders in Java which is harmful. In the horizontal integration between Jakarta Karamatjati Market (PKJ), Bandung Kosambi Market (PKB), Johar Semarang Market (PJS), and Bringharjo Market Yogyakarta (PBY), all experienced long and short-term integration. Johar Semarang Market (PJS) is influenced by all three markets and only affects Yogyakarta Beringharjo Market (PBY).

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