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IMPACT OF COVID-19 PANDEMIC ON FOOD PRICES IN NIGERIA

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ABSTRACT

This study examined impact of COVID-19 pandemic on food prices in Nigeria with a view to assess long-run dynamics between COVID-19 pandemic and food prices. Variables used were Food Price index (FPI), the number of confirmed cases of COVID-19, the number of confirmed deaths related to COVID-19 illnesses, exchange rate, broad money supply, and agricultural output for the period 2020:M2 to 2021:M12. An Autoregressive distributed Lag (ARDL) Model, and an ARDL Bound test were used. Findings revealed existence of long-run relationships between food prices and COVID-19 pandemic in Nigeria. Analysis of short-run estimates showed a negative relationship between COVID-19 pandemic and food prices in the current period, while a one-year lagged value of food prices was positively related to COVID-19 pandemic. Long-run dynamics revealed a positive relationship between food prices and COVID-19 pandemic in Nigeria. COVID-19 pandemic is negatively related to food prices in Nigeria. Continuous vaccination of the populace, implementation of price control mechanisms during national emergencies, and investment in agricultural infrastructures are crucial for food price stability in Nigeria.

1. Introduction

The COVID-19 pandemic and the resulting lockdowns were 'ingredients' for a global economic depression. The Corona virus disease had been confirmed in more than 200 countries and territories (worldometers ,2022). As of March 2022, the virus has infected nearly 459

million people globally, with six million deaths (Elflein, 2022). Global output fell by -3.20 percent (World Bank, 2020). The immediate implication of the pandemic on global economy was rising unemployment rates, declining oil prices, and interruptions in the demand and supply of agricultural products (Baquedano & Countryman, 2021).

Nigeria reported the first verified case of COVID-19 in Lagos towards the end of February 2020, after which it spread throughout Lagos, Ogun State, the Federal Capital Territory (FCT) area of Abuja and other states in the federation (Andam *et.al.,* 2020). The rapid rise in COVID-19 infections compelled the Nigerian government to implement control and intervention measures in a frantic attempt to stop the virus from spreading further (Akter, 2020). One of such measures which proved effective in truncating the spread of the virus was the imposition of lockdowns. However, a major consequence of the lockdowns was household income shocks (Kansiime, *et. al.*, 2021), and disruptions in the supply and demand chains of food (Devereux et al., 2020) by obstructing the movement of goods and services and producing labour shortages in the economy (Cappelli & Cini, 2020).

High food prices have become an increasingly important global socioeconomic issue over the past four years (Eldukhery, Elamin, Kherallah & Abur, 2010). The recent report by the Food and Agriculture Organisation (FAO, 2022) estimates that Global Food Price index rose by 3.9 percent in February 2022 (140.7 points) from the January 2022 (135.7 points) value, and by 20.7 percent from what obtains in February 2021 (116.6 points).

COVID-19 can affect food prices either directly or indirectly (Agyei, et al., 2021). The direct effect of COVID-19 pertains to changes in the consumption patterns of households, rising cost of raw materials arising from boarder closures and COVID-19 restrictions, the disruption of food systems and the consequent lowering of 'agro-output' through scarcity of labour required to facilitate the production and distribution of food value-chain due to illnesses (Clapp & Moseley, 2020; Agyei *et. al*., & 2021), devaluation of the local currency, and volatility in exchange rate and in crude oil prices (Agyei, et.al., 2021). On the other hand, the indirect effect relates to the spillover effects of lockdowns on household income (Kansiime, 2021). However, the cause of food price inflation in Nigeria goes beyond the aforementioned; climate change (Ezihe,

Agbugba & Idang, 2017; Hasegawa, *et.at.*, 2018), terrorism in the rural areas (Okoli, Obi & Chinedu, 2020), and lack of storage facilities (Amjath-Babu, Krupnik, Thilsted & McDonald, 2020) have been shown to have negative implications on food prices.

To extend knowledge on the dynamics of food prices, this study investigates the impact of the novel Corona virus pandemic on food prices in Nigeria. This study contributes to the extant literature in four ways. First, the study employs monthly data on COVID-19 and food price index in Nigeria. Second, the study considers the impact of COVID-19 on food price, and the dimensional implications of agricultural output, exchange rate and money supply on food prices in Nigeria. Third, the empirical methodology through a Principal Component Analysis addresses endogeneity issues in the endogenous variables, which can cause results to be biased if they are not taken into consideration. Fourth, the study assesses the long-run effect of COVID-19 on food prices in Nigeria.

The remainder of the paper is structured out as follows. Section two contains a review of related literature, section three presents a description of the data and empirical models, section four contains the results and discussion, and section five presents the conclusions and policy recommendations.

2. Literature Review

Several empirical studies have been conducted on the impact of Covid-19 pandemic on food prices. Akter (2020) examine the impact of lockdowns restrictions related to COVID-19 pandemic on food prices. Secondary data on food price index (HICP), Stay-at-Home restriction index (SHRI), and COVID-19 response tracker (OxCGRT) for January to May 2020 were analysed using a Difference-in-Difference (DID) regression model. The result reveal that that severity of stay-at-home restrictions positively impacted on overall food prices. However, data used for the study in terms of the *T* was too short for good policy recommendations.

Another study by Kansiime, *et. al.*, (2021) assess the effect of (COVID-19) pandemic on household income and food security in Kenya and Uganda. The study analysed primary data from 442 respondents obtained through a survey. Descriptive analysis and regression models were employed to analyse the data. The results indicate that COVID-19 pandemic decreased household income and increased the

number of people who are food insecure in both countries.

Wahidah & Antriyandarti (2021) examine the influence of reduced Carbon Dioxide (CO2) emissions on climate change and the effect of COVID-19 pandemic on inflation and food inflation in Indonesia. Through the Ordinary Least Squares (OLS) technique, they analysed secondary time series data on inflation rate, food inflation rate, number of COVID-19 cases, number of death cases due to COVID-19, number of recovered cases from COVID-19 and temperature. Final result suggests that the number of COVID-19 cases impacted negatively on inflation and food inflation, although only its relationship with inflation was significant. Whereas, the number of recovered cases exerts a positive impact on inflation and food inflation. Also, climate change was found to be negatively related to food inflation. However, the model use in the study may run into overparameterization due to large number of variables involved.

Similarly, Baquedano & Countryman (2021) investigate the impact of COVID-19 pandemic on gross domestic product, food prices and food security. Using observed data from September 2020 on changes in unemployment, trade, oil prices, production and COVID-19, the potential effects of COVID-19 was simulated through a General Equilibrium Model (GEM). They found that COVID-19 lockdowns negatively affected global GDP by 7.2 percent, and also led to a decrease in grain prices by 9 percent thereby increasing the numbers of food-insecure people by about 27.8 percent in 2020.

Agyei, *et.al.*, (2021) investigate the impact of COVID-19 outbreak on prices of household foods in sub-Saharan Africa (SSA). They used a panel approach to study secondary time series data on food prices and new reported cases of COVID-19 disease to proxy COVID-19. The GMM method of estimation was used to analyse the data. Findings indicate a positive relationship between the outbreak of COVID-19 and food prices in the countries studied. The study however failed to consider the number of deaths related to COVID-19 which may also significantly impact on population and therefore aggregate demand.

In supporting the literature, Bairagi, Mishra & Mottaleb (2022) examine the impact of COVID-19 on food prices in India. The study used data on perishable and non-perishable food commodities obtained via a survey conducted by the World Bank. Fixed Effects (FE) technique was used to estimate the data. Empirical findings show that while food

inflation was positively linked to commodities such as rice and wheat during the pandemic, the price of onions declined during the same period. The study concludes that panic buying may be responsible to the price hike of food commodities during the pandemic. However, the study only considered a small sample of three essential food. More research is required on the impact if COVID-19 pandemic on the prices of other food commodities.

3. Methodology

Sources of Data

This study takes a holistic approach to food prices. The dependent variable is the food price index in Nigeria. The independent variable is COVID-19 and it is proxied by the number of COVID-19 cases and number of COVID-19 related deaths in Nigeria (Yu, Liu, Wang & Feil, 2020). The other control variables being examined are exchange rate, agricultural output and broad money supply (Nwosa, 2021; Jayasinghe, (2021).

Data was sourced from Food and Agriculture Organization, (https://www.fao.org/worldfoodsituation/foodpricesindex/en/), National Bureau of Statistics (https://www.nigerianstat.gov.ng/), Central Bank Statistical Bulletin, 2020 (https://www.cbn.gov.ng/documents/statbulletin.asp), and Nigeria Centre for Disease Control database (https://covid19.ncdc.gov.ng/)

Model specification.

To determine the relationship between food prices and COVID-19 pandemic in Nigerian, we adapt the model by Norazman, Khalid & Ghani (2018). The functional form of the model is specified in the equation 1:

$$FPI_t = \beta_0 + \beta_1 CVC_t + \beta_2 CVD_t + \beta_3 AGP_t + \beta_4 EXR_t + \beta_5 MMS_t + \mu_t \quad 1$$

Where:

$FPI_t =$ Food price index in time *t*;

$CVC_t =$ Number of COVID-19 cases in time *t*;

$CVD_t =$ Number of deaths related to COVID-19 in time *t*;

$AGP_t =$ Agricultural output in time *t*;

$EXR_t =$ Exchange rate in time *t*;

μ_t = Stochastic Error term

β_0 = Constant; and

$\beta_1 \ldots . \beta_5$ = Coefficients of the independent variables.

However, by adopting the principal component analysis, the model can be explicitly expressed in a way that groups number of COVID-19 cases (CVC) and number of COVID-19 related deaths (CVD) into one component (COV) as seen below:

$$FPI_t = \beta_0 + \beta_1 COV_t + \beta_2 AGP_t + \beta_3 EXR_t + \beta_4 MMS_t + \mu_t \quad 2$$

Apriori Expectation: We expect $\beta_1 > 0, \beta_2 < 0, \beta_3 > 0 \; and \; \beta_4 > 0$

The functional form of equation (2) is specified in its logarithm form in the ARDL model:

$$\Delta \log FPI_t = \beta_0 + \beta_1 logFPI_{t-1} + \beta_2 logCOV_{t-1} + \beta_3 logAGP_{t-1} + \beta_4 logEXR_{t-1} + \beta_5 logMMS_{t-1} + \sum_{i=1}^{m} a_2 \Delta logCOV_{t-1} + \sum_{i=1}^{m} a_3 \Delta logAGP_{t-1} + \sum_{i=1}^{m} a_4 \Delta logEXR_{t-1} + \sum_{i=1}^{m} a_5 \Delta logMMS_{t-1} + \varepsilon_t$$

Where:

log = log is the log form of the variables

Δ = first difference operator; and

$a_1 - a_4$ = short-run dynamic parameters of the regressors.

The error correction mechanism of the short-run relationship is as indicated:

$$\Delta logFPI_t = \beta_0 + \sum_{i=1}^{m} a_1 \Delta logFPI_{t-1} + \sum_{i=1}^{m} a_2 \Delta logCOV_{t-1} + \sum_{i=1}^{m} a_3 \Delta logAGP_{t-1} + \sum_{i=1}^{m} a_4 \Delta logEXR_{t-1} + \sum_{i=1}^{m} a_5 \Delta logMMS_{t-1} + \varepsilon_t$$

4. Empirical results and discussions

Trend of Estimated Variables

Figure 1 provides a trend analysis of the variables measured in this study. With the exception of the food price index, other variables (number of COVID-19 cases and number of COVID-19 related deaths) show significant changes in value over the months. The number of COVID-19 infection cases in Nigeria oscillated over the months with July, 2020 being the highest infection month (17,457 cases) in 2020. By October, 2020, the number of reported COVID-19 cases declined to 32. The month with the highest reported cases of COVID-19 during the period under study was January 2021 (43, 635 cases) as the number of COVID cases rose steadily in the preceding months. This was due to total removal of movement restrictions by the government in other to allow economic activities to flow at the end of the year. The number of COVID-19 cases also spiked in August 2021, wherein 18,523 cases of COVID-19 infections were published by the NCDC.

The number if death related to COVID-19 followed the same pattern with the number of reported cases of COVID-19. The highest number of deaths recorded in 2020 was in June (303 deaths). This sharply declined to 32 deaths by November of the same year. However, with infection rate spiraling up from 30 cases in November 2020 to 43,635 cases in January, 2021, the number of reported deaths also rose steadily to 321 in February 2021, and 320 deaths in August 2021, although a reduction in death cases to about 36 deaths was reported between March and July 2021.

In terms of food price index which measures the monthly variations in the prices of a basket of food commodities, there was a continuous and steady increase in the index of food prices from 346 points in February 2020 to 447 points in June 2021. After which the index maintained a steady state of 445 points. This reason for the rising food price index was a decline in economic activities, in 2020 due to economic recession resulting from COVID-19 pandemic, exchange rate devaluation, and the resulting inflation in Nigeria.

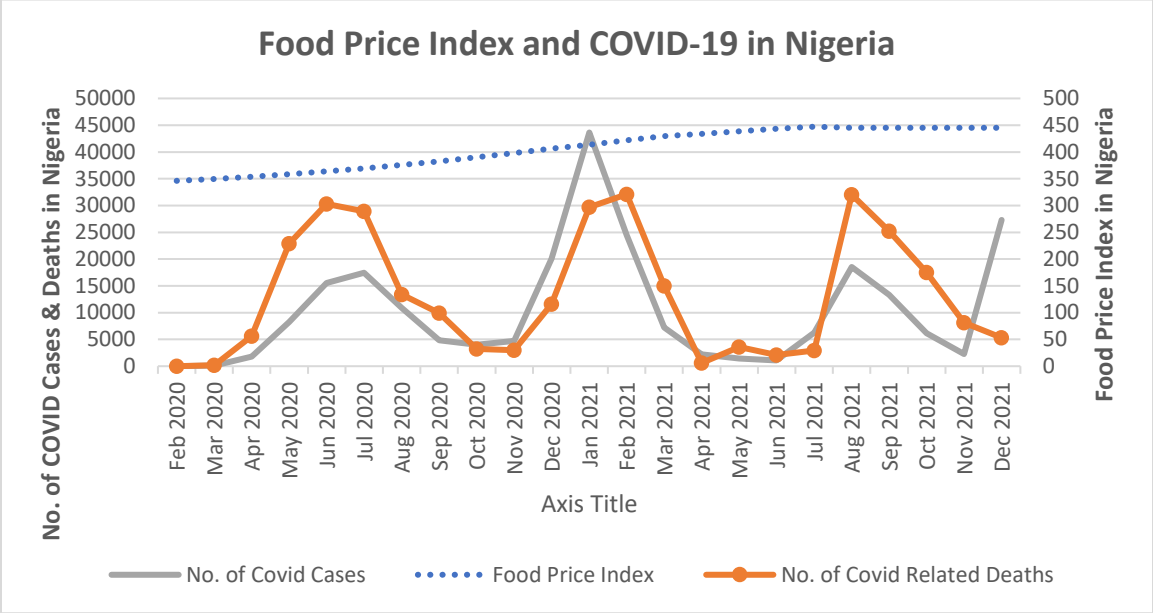

Figure 1. **Food Price Index and COVID-19 in Nigeria**

Summary Statistics and Correlation Matrix

The descriptive statistics as shown in Table 4.1 reveals the summary statistics of the variables used in this study. On average, the food price index in Nigeria between February 2020 and December, 2021 was 406.52 points. The average monthly number of COVID-19 infec,tion cases was 10,500 people for a population of about 200 million, and death per month resulting from COVID infections averaged 131 people. The average monthly exchange rate was ₦361.17, ₦ 1.9t for average monthly value of agricultural output, and ₦ 36.9t for average monthly broad money supply into the economy. The difference between the minimum and maximum values in terms of COVID-19 cases and deaths related to COVID-19 is wide, which implies that COVID-19 infections increased significantly during the months under studied. The results of skewness, kurtosis, and Jacque-Bera reveal that each variable's sample size is normally distributed.

Table 2 Descriptive Statistics

	FPI	CVC	CVD	EXR	AGP	MMS

Mean	406.52	10,500.57	131.83	361.17	9,900,000,000,000.00	36,900,000,000,000.00
Median	414.00	6,290.00	99.00	359.00	10,600,000,000,000.00	37,700,000,000,000.00
Maximum	447.00	43,635.00	321.00	381.00	12,000,000,000,000.00	43,800,000,000,000.00
Minimum	346.00	1.00	1.00	307.00	7,440,000,000,000.00	29,700,000,000,000.00
Std. Dev.	36.85	10,812.73	116.11	17.02	1,680,000,000,000.00	3,830,000,000,000.00
Skewness	-0.33	1.44	0.50	-1.47	-0.01	-0.15
Kurtosis	1.55	4.85	1.70	6.12	1.38	2.14
Jarque-Bera	2.44	11.25	2.56	17.61	2.53	0.80
Probability	0.30	0.00	0.28	0.00	0.28	0.67
Observations	23.00	23.00	23.00	23.00	23.00	23.00

Source: Author's Computations with E-Views 10, 2022

The correlation matrix in Table 3 shows that none of the independent variables are highly correlated with the dependent variable. A positive relationship exists between the dependent variable Food Price Index (FPI) and the independent variables COVID-19 (COV), Agricultural Output (AGP), Exchange rate (EXR) and Money Supply (MMS).

Table 3 Correlation Matrix

	FPI	COV	AGP	EXR	MMS
FPI	1				

COV	0.135519	1			
AGP	0.532441	0.213336	1		
EXR	0.205505	0.286573	0.538792	1	
MMS	0.564992	0.216283	0.646305	0.300954	1

Source: Author's Computations with E-Views 10, 2022

Unit root test

Unit root tests are critical for determining whether or not time series data is stationary. This is required to avoid "spurious" regression results that make reliable forecasting difficult. The time-series characteristics of the data used for this study were therefore tested using the Augmented Dickey-Fuller (ADF) tests. Table 4 shows the ADF unit root tests results with constant and trend. The result reveals a mixture of stationarity among the variables. i.e., integrated of orders I(0) and I(1).

Table 4: Augmented Dickey-Fuller Unit Root Test

Variables	Level	1st Difference	Order of Int.
FPI	-4.205**	-	I(0)
	(0.020)		
COV	-4.784***	-	I(0)
	(0.005)		
AGP	-1.960	-4.452**	I(1)
	(0.590)	(0.010)	
EXR*	-4.715***	-	I(0)
	(0.006)		
MMS	-2.757	-4.079**	I(1)
	(0.226)	(0.005)	

Source: Author's Computations with E-Views 10, (2022)

T-stat at 1%=-4.572, 5%= 3.691 and 10%= -3.287

Note: (*) denotes Significant at 10%; (**) Significant at 5%; (***) Significant at 1%.

Autoregressive Distributed Lag Estimation

The ARDL bounds test for the establishment of a long-run relationship was performed since the variables were integrated of orders I(0) and I(1). The results are provided in Table 5. The result of the bounds test in Table 4 shows that the estimated F-Stat is 49.6 and this is above the upper critical bound at the different levels of significance. This establishes that long-run cointegrating relationships exists among the variables. We therefore proceed to estimate the ARDL model.

Table 5 ARDL Bounds Test

F-Stat Value=49.615	K=4	
Significance	I(0) Bound	I(1) Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: Author's Computations with E-Views 10, 2022

Table 6 shows the ARDL estimation of short-run coefficients. COVID-19 impacted negatively on food prices, although the result was not significant. A one percent increase in COVID-19 pandemic reduces food price index by -0.00 percent points. This implies that there is no significant reduction in food prices in the current period as a result of COVID-19 pandemic. This may have been as a result of government intervention in the economy through palliatives, and credit facility stimulus package (CBN, 2020) to mitigating the adverse effects of COVID-19 pandemic on both the households and Micro, Small and Medium Enterprises (MSME) in Nigeria. Also, there exists a positive relationship between COVID-19 pandemic (one year lagged value) and food prices. Specifically, a one percent increase in COVID-19 pandemic significantly increases food price index by 0.011 percent points. This implies that while the rate of infection and death from COVID-19 pandemic on food prices was negative and insignificant in the current period, they impacted positively and significantly on food prices in the past period. This finding is in line with *apriori* and corroborates the findings of Zidouemba, Kinda & Ouedraogo (2020) & Kansiime, *et al.*, 2021).

Agricultural output impacted negatively on food prices in the current year and the previous year. A one percent increase in agricultural output reduces food price index in the current

and previous year by 0.02 percent points and 0.04 percent points respectively. This finding is significant with $\rho < 0.05$. This is in line with apriori and the findings of Pawlak & Kołodziejczak, (2020). The exchange rate also showed a positive relationship with food prices. A one percent increase in exchange significantly increases food price index by 0.156 percent points ($\rho < 0.05$) and 0.24 percent points ($\rho < 0.01$) in the current and past periods respectively. The finding is in conformity with *apriori* and in accord with the findings of Ikuemonisan, Ajibefun & Mafimisebi (2018).

There exists a significant positive relationship between money supply and food prices. Specifically, a one percent increase in money supply increases food price index by 0.171 percent points ($\rho < 0.05$) This finding is in line with *apriori* and supports the findings of Khan, Yousaf, Mohammad, Khan & Thao (2019). However, a negative relationship exists between one year lagged value of money supply and food prices, although the result was not significant.

The error correction term of -0.091 which is statistically significant at one percent suggests that about 9% annual adjustment toward long-run equilibrium. This indicates that the speed of adjustment flutters slowly towards equilibrium. As a result, disequilibrium in food inflation as a result of shocks from previous periods will converge back to long-run equilibrium. As a result, disequilibrium in food inflation caused by past period imbalances will converge to equilibrium in the long-run.

The Durbin-Watson of 2.2 implies an absence of serial correlation in the result. The R^2 of 0.65 suggests that about 65% of the variations in the dependent variable food price can be accounted for by the independent variables. Lastly, the F-stat ($\rho < 0.05$) shows the overall significance of the model.

Table 6: ARDL Short-Run Model

Variable	Coefficient	Std. Error	T-Stat	Prob.*
FPI(-1)	1.091	0.049	22.115	0.000
COV	-0.000	0.003	-0.115	0.911
COV(-1)	0.011	0.003	3.204	0.011
AGP	-0.024	0.007	-3.487	0.007
AGP(-1)	-0.044	0.009	-4.820	0.001

AGP(-2)	0.018	0.007	2.518	0.033
EXR	0.155	0.055	2.799	0.021
EXR(-1)	0.124	0.031	4.022	0.003
MMS	0.171	0.069	2.491	0.034
MMS(-1)	-0.046	0.092	-0.499	0.630
MMS(-2)	-0.193	0.071	-2.696	0.025
C	0.606	0.526	1.152	0.279
CointEq(-1)*	-0.091	0.004	21.519	0.000
R-squared	0.650	Mean dependent var		2.614
Adjusted R-squared	0.589	S.D. dependent var		0.036
S.E. of regression	8.001	Akaike info criterion		10.811
Sum squared resid	17.000	Schwarz criterion		10.214
Log likelihood	125.519	Hannan-Quinn criter.		10.682
F-statistic	2714.460	Durbin-Watson stat		2.244
Prob(F-statistic)	0.000			

Source: Author's Computations with E-Views 10, (2022)

ARDL Long-Run Estimates

From the long-run estimates result in Table 7 there exists a positive relationship between COVID-19 pandemic and food prices. Specifically, a one percent increase in COVID-19 pandemic increases food price index significantly by 0.116 percent points. The result is in line with *apriori*. This finding supports the findings of Musa *et al.,* (2020).

Agriculture output positively impacts on food prices. A one percent increase in agricultural output increase food price index by 0.54 percent points, although this result was not significant. The implication of this finding is that, increases in agriculture output will significantly affect food prices in the long run. This may be as a result of lack of sustainable agricultural storage facilities for farmers to store harvested produce, the subsequent economic loss of value from perishable goods, and the absence of

technology to transform such produce to high-value consumer goods or intermediate raw materials to be used in further production processes which may be worthy of export (Kumar & Kalita, 2017).

There exists a negative relationship between exchange rate and food prices. A one percent increase in exchange rate will reduce food price index by 3.05 percent points. This follows the findings of Erokhin & Gao (2020). However, the result was not significant. Also, money supply positively impacted on food prices. Specifically, a one percent increase in money supply increases food price index by 0.73 percent points. This result is significant at one percent, which implies that continuous money supply drives-up food prices in Nigeria. This is in accord with the findings of Khan, Yousaf, Mohammad, Khan &Thao (2019).

Table 7: ARDL Long-Run Estimates

Variable	Coefficient	Std. Error	T-Stat	Prob.
COV	0.116009	0.05178	2.24041	0.052
AGP	0.549691	0.327784	1.676992	0.128
EXR	-3.053816	1.669356	-1.82934	0.101
MMS	0.735876	0.209003	3.520879	0.007
C	-6.642843	2.903457	-2.28791	0.048

Source: Author's Computations with E-Views 10, 2022

Diagnostic and Stability Analysis

As shown in Table 8, the Breusch-Godfrey Serial Correlation LM test was carried out for serial correlation; Ramsey Reset test for model specification, and heteroskedasticity test. The results show that the null hypothesis of the diagnostic is to be accepted against the alternate. The Breusch-Godfrey Serial Correlation LM Test has an Obs R-squared value of 7.245 with a p-value > 0.05 show that the model is not auto-correlated. The Ramsey Reset *T*-Stat (1.121) with a p-value > 0.05 indicate that model is well specified. Likewise, the Obs R-squared value of the Breusch-Pagan-Godfrey Heteroskedasticity Test (12.665) with with a p-value also > 0.05 shows that the

heteroscedasticity problem does not exist in the model.

Table 8: Diagnostic Tests

Test	*T*-Stat.	*P*-Value
Breusch-Godfrey Serial Correlation LM Test	7.245	0.222
Ramsey Reset Test	1.121	0.295
Breusch-Pagan-Godfrey Heteroskedasticity Test	12.665	0.378

Source: Author's Computations with E-Views 10, 2022.

The CUSUM and CUSUM of squares are represented in Figures 4.2. and 4.3 respectively shows that the blue line lies between the 5% P-value boundary thereby implying relatively stable models.

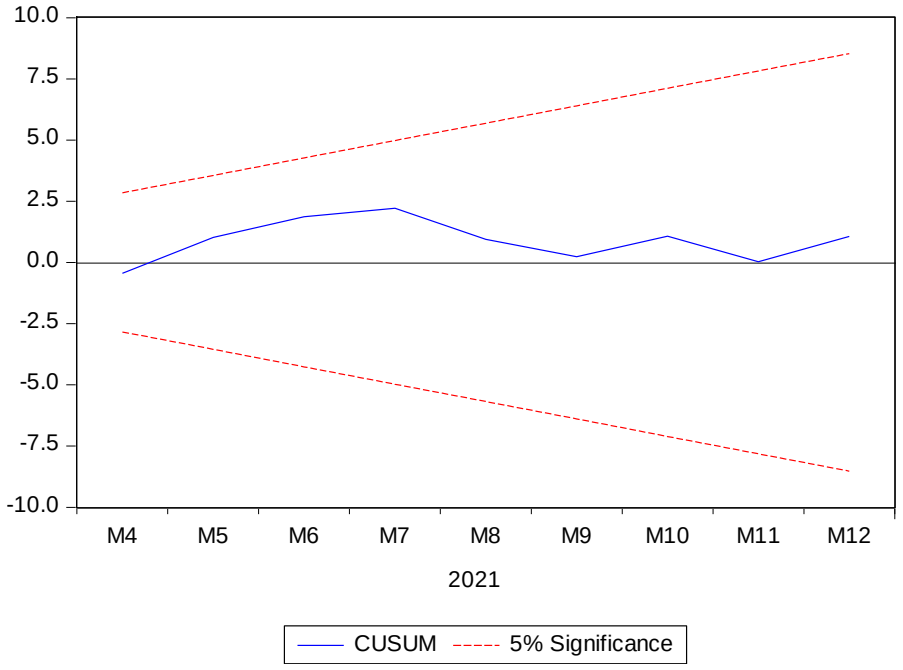

Figure 2. Cumulative sum test (CUSUM) for parameter stability.

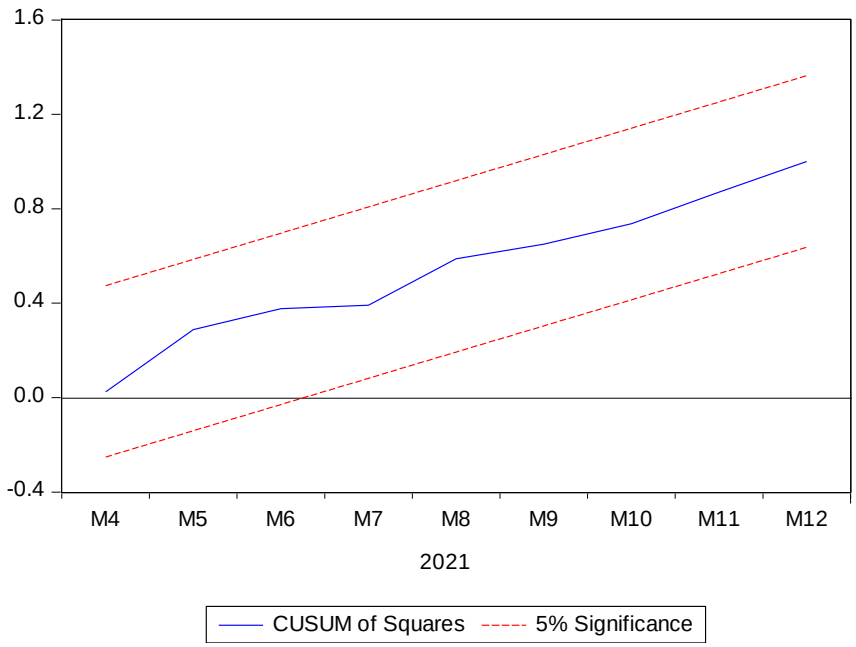

Figure 3. Cumulative sum of squares (CUSUMSQ) for parameter stability.

5. Conclusion and recommendations

The aim of this research is to examine the impact of COVID-19 pandemic on food prices in Nigeria. To accomplish this objective, the food price index (FPI) was used to proxy food prices, a principal component analysis was used to structure the number of COVID-19 cases (CVC) and number of COVID-19 related deaths (CVD) thereby generating a proxy (COV) for COVID-19. The control variables were agricultural output (AGR), exchange rate (EXR) and broad money supply (MMS). Monthly time series data for two years (M2, 2020 to M12, 2021) was sourced from the Food and Agriculture Organization (FAO), National Bureau of Statistics (NBS), Central Bank Statistical Bulletin (CBN), and the Nigeria Centre for Disease Control (NCDC) database. The Augmented Dickey-Fuller unit root test was carried out to test the stationarity of the variables and results show that the variables are integrated of orders I(0) and I(1). This justified the use of the ARDL estimation technique in this study. The Bounds cointegration test showed the existence of a long-run relationship among the variables.

Short-run ARDL regression result implied that one year lagged value of COVID-19 pandemic

significantly led to food inflation in Nigeria, while the result for the current period was negative and insignificant.

In terms of long-run estimates, the effect of CIVID-19 pandemic on food prices was significantly positive. Agricultural output influenced food prices but not significantly, while exchange rate impacted negatively, albeit insignificantly. However, the effect of money supply on food prices was positive and significant.

Following the findings, A special commodity price control board should be created by the government to control food prices during national emergencies like pandemics to prevent soaring food prices during the period.

Given that the COVID-19 pandemic is still active, efforts must be made by the government towards increased vaccination of the populace against COVID-19 to further reduce transmission, infection and prevent resurgence of COVID-19 pandemic which may consequently disrupt economic activities through the reimposition of lockdowns in Nigeria.

The Central Bank must continually regulate money supply in the economy to prevent excessive money supply which may in the future reflect as higher food and commodity prices.

The government should invest in agricultural infrastructures such as silos and food storage facilities, to improve the food supply chain and stabilize food prices.

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