

## EFFECT OF AGRICULTURAL TRADE OPENNESS ON THE PRODUCER PRICES OF RICE IN NIGERIA: IMPLICATIONS FOR AGRICULTURAL TRADE POLICIES

<sup>1</sup>Coker, A.A.A., <sup>2</sup>Aimola, A., <sup>2</sup>Sanni, L. and <sup>2</sup>Mathew, M.

<sup>1</sup>Department of Agricultural Economics & Extension Technology, School of Agriculture & Agricultural Technology, Federal University of Technology, Minna, P.M.B. 65, Minna, Niger State, Nigeria, <sup>2</sup>National Bureau of Statistics, Nigeria

### ABSTRACT

*Recently, economies of the world have become increasingly linked through expanded international trade with discernible effects on the developing nations, especially Africa, and in particular, Nigeria. This article therefore determined the effect of agricultural trade openness on the producer prices of rice in Nigeria. The study was based on secondary data, spanning 1993-2015. The study showed that agricultural trade openness reached all-time low in 1996 while noticeable peaks were observed in 2001, 2007 and then in 2011. In terms of the growth, the highest trade openness growth rate of 164.8 per cent was observed in 1997, followed by 140.3 per cent in 2011. The review of producer prices revealed that producer prices had been on the rise, with noticeable peaks between 2005 and 2007, 2009 and then in 2013. Evidence from this article further established long run inverse relationship between agricultural trade openness and producer prices of rice. The study recommended a follow-up on the Agricultural Transformation Agenda's initiatives of integrated rice value chain development, substitution of local for imported rice and implementation of favourable tariff, operationalisation of favourable exchange rate regime and private-sector led marketing boards, with the view to stabilizing the price of rice, ensuring quality, competitiveness and enhancing producers' returns.*

**Key words:** Agricultural Trade openness; Producer Prices; Rice; Trade Policies

### INTRODUCTION

In recent decades, economies of the world have become increasingly linked through expanded international trade, with marked effect on the developing world (Todaro and Smith, 2012). Rodrik (1997) and International Labour Organisation (2004) averred that trade openness (globalization as inferred by Todaro and Smith) play a role in macroeconomic volatility, of which, inflation and by extension, producer prices are not immune. Dawkin (1999) averred that a small increase in imports or exports, or extraordinarily favourable or inclement weather can cause dramatic changes in prices, with attendant implication (positive or negative) for the rural areas and landless consumers. Globally, and particularly in Africa, price fluctuations and volatilities have been of serious concern, attributed to numerous causes, including unpredictable environment, technology, policy innovation, uneven supply, import dependence, tradable versus non-tradable and the availability of home good and substitutes (Dawkins 1999; Abbott and Borot de Battisti, 2011). Todaro and Smith (2012) noted that even though most

developing countries, particularly in sub-Saharan Africa depend on non-mineral primary products, the markets and prices for these products are often unstable with associated degree of risks and uncertainties. Flachsbarth and Garrido (2014) also established that agricultural trade openness contributed to price increases while the Economic Commission for Latin America (ECLAC) (2008) affirmed the transmission of high international prices into domestic prices and posited that countries that are more integrated into world markets are likely to show higher world price transmission rates.

Generally, rice has been key among the numerous tradable and food security crops within Africa and in particular Nigeria, that is affected by fluctuation in the national, regional and global trade dynamics. In response to this development and coupled with the placement of rice in household food security, among other factors, immediate past and the current agricultural policies in Nigeria have focused dialogues in the agriculture sector on rice production and competitiveness, among other sectoral issues.

Gyimah-Brempong *et al.* (2016) noted that rice demand in Nigeria outpaced domestic production due to rapid population growth, increasing incomes, urbanization and a decline in relative prices of rice. However, in spite of these revelations, debate persists on the effect of agricultural market openness on rice prices. While most studies have focused on the relationship between openness and economic growth, few, such as Flachsbarth and Garrido (2014) worked on the effects of agricultural trade openness on food price transmission in Latin America, while scholars like Dawkins (1999) worked on agricultural prices and trade policies. Though, vast literature on the relationship between trade openness on income growth also exist (Squalli and Wilson, 2006), not many studies have been undertaken in Nigeria on the effect of agricultural market openness on market prices. Rather price related studies have been limited to the local domain and have focused largely on vertical dynamic analysis and market integration of single product (Oladapo and Momoh, 2007). Aside this shortfall, the study will provide evidence to support policy measures on rice, particularly those bordering on local market protection (though without prejudice to free trade) and making rice available, affordable and accessible to the generality of Nigerians. This study there foreaimed to determine the effect of agricultural trade openness on the producer price of rice in Nigeria, with focus on the post ban periods of rice. The specific objectives were to examine the trend of producer prices of rice from 1993-2015; describe the trend of agricultural trade openness from 1993-2015; determine the effect of agricultural trade openness on the producer prices of rice in Nigeria. The null hypothesis of the study is that agricultural market openness does not influence the market prices of rice in Nigeria.

## LITERATURE REVIEW

### Concepts of Trade Openness and Measurements

Todaro and Smith (2012) equated market openness with international trade, financial flow and direct foreign investments with the concept of globalisation and averred that globalisation can in many ways have a greater impact on the developing countries. In a related development, Cara (2015) defined trade openness simply as a measure of economic policies that either restrict or invite trade between countries. Meanwhile, Squalli and Wilson (2006) highlighted numerous measures of trade openness to include import trade intensity, export trade intensity, trade intensity, adjusted trade intensity, real trade intensity and the composite trade intensity. This article however noted that irrespective of how

openness is measured, the index shows the magnitude of a country's openness to the world and the income growth benefit that flows from trade.

### Trade Policies on Rice in Nigeria

Since independence, Nigeria had witnessed numerous trade policies on rice, covering the Pre-ban period (1970-1985), Ban period (1986-1995), Post-ban period (1997-2010) (Akande, 2003; Busari and Idris-Adeni, 2014) and lately, the partial Import restriction cum import substitution and tariff deployment regime (2011-Date). According to Akande (2003), the pre-ban period further was classified into two, namely the pre-crises (1971-1980) and the crises period (1981-1985). The source further revealed the latter period was characterised mainly by liberal policies on rice import. During the ban era (1997-2010), porous borders aided illegal importation, thus reducing the potency of the ban. Policy focus proceeding this era was on variation of import duty regimes, which ranged from 50%-120% to outright suspension, following the increase in cereal prices (Busari and Idris-Adeni, 2014). Following the adoption of transformation agenda in 2011, focus was on partial embargo, import substitution and implementation of varying rates of tariffs. Currently, effort is directed at rice intensification, self-sufficiency by 2018 and rice export by 2020 (Federal Republic of Nigeria, 2017). Specifically, the focus of this article will be on the post rice importation ban era.

### Empirical Theories of Commodity Price Behaviour

The theory of price volatility or fluctuation is largely and commonly routed in the Cobweb theory which established that prices might be subject to fluctuations in some markets and explained the cyclical interaction between supply and demand in the market, which necessitated that output must be determined before prices are observed. The work elucidated that prior prices determined producers' expectations about prices. Aina *et al.* (2015) established the existence commodity price behaviours, linking expectations, speculation with price movement.

### Causes and Consequences of Producer Price Fluctuation and Volatility

The Organisation for Economic Cooperation and Development (2008) affirmed that cereal and oil seed price rise was triggered by a combination of production remaining below trend, a strong growth of demand, low and declining level of stock and significant increase in investments in agricultural derivative market. Abbot and Borot de Battisti (2011) also established that import dependence, tradable versus non-tradable, the

availability of home goods and substitutes influenced the extent of price transmission. Further on price behaviour, Awoyemi (2010) posited that the price shock in rice witnessed between 1990 and 2004 in Nigeria was not unconnected to the wide variation in supply and demand for rice over time in addition to the effect of exogenous variables which were not under the control of both producers and suppliers.

#### **Agricultural Trade Openness and Prices**

Numerous works have been undertaken on agricultural trade; however, only few have focused on the relationship between trade and agricultural commodity prices. Lutz (1992) for instance, established that limiting trade barriers in industrial countries would lead to higher global prices and lower price variability, Gyimah-Brempong *et al.* (2016) also argued that the substantial import tariffs on rice were transmitted to the consumers in form of higher prices in Nigeria.

## **MATERIALS AND METHODS**

### **Study Area**

Nigeria is an African Country on the Gulf of Guinea and one of the 54 countries in Africa. It consists of about 91 million hectares of land area with a population of about 170 million. It is the most populous country in Africa, largely rural and comprising about 350 ethnic nationalities. The country measures about 1,200 km from east to west and about 1,050 km from north to south, and is bounded by Cameroon to the east, Chad to the northeast, Niger to the north, Benin to the west, and the Gulf of Guinea on the Atlantic Ocean to the south (Federal Ministry of Agriculture and Rural Development, 2015). The federation is made up of 36 States and the Federal Capital Territory, Abuja and 776 Local Government Areas. The economy is predominantly agrarian, with the agriculture sector accounting for 23.1% of the GDP (FMARD, 2015; Federal Republic of Nigeria, 2017), while employing 38% of the working population (Federal Republic of Nigeria, 2017). The agriculture sector grew by 4.88 per cent in Q3 2016 and by as much as 13 per cent in previous years, suggesting immense unrealized potential (Federal Republic of Nigeria, 2017). However, the performance of the sector in international trade over the years depicts declines and stagnation, having lost its position in the export of key commodities (FMARD, 2011). Following the shift from agriculture to crude oil and gas in the late 1960s, Nigeria's growth has continued to be driven by consumption and high oil prices. The structure of the economy is largely import dependent, consumption driven and undiversified. Bakare (2011) noted that as

agriculture export shrank from the traditional 12-15 commodities of the 1960s, Nigeria became a net importer of basic food it normally exported.

### **Sample Size and Data Collection**

The study was based on secondary data and covered data spanning 1993-2015. Data collected covered agricultural export, agricultural import, agricultural GDP, rainfall data, population of Nigeria, producers' prices of rice, rice output and acreage put to rice production.

### **Analytical Techniques**

Descriptive statistics were employed for the achievement of objectives 1 and 2 of this study. This involved the generation of mean, standard deviation, skewness and kurtosis. The Coefficient of Variation was also utilised to ascertain the level of variability of each variable. The Augmented Dickey-Fuller (ADF) unit root test was used to identify the order of integration, that is, the number of times a variable needed to be differenced to make it stationary. Co-integration model was employed to determine the long run or equilibrium relationship between variables, while the Granger causality test was employed to ascertain the short run joint and direction of causality. The Error Correction Modelling is closely bond with the concept of co-integration (Ama, 2003) and thus, was employed to reconcile the short run and long run behaviours of the economic variables in the model.

### **Model Specification**

#### **Augmented Dickey Fuller (ADF) Test**

The initial step in the use of co-integration test is the need to ensure that the data proposed for data analysis are stationary. To this end, the ADF unit root test was employed to determine the order of integration of each variable, that is, the numbers of times a variable will be differenced to make it stationary. The ADF

The model is specified as follows:

$$\Delta Y_t = \alpha + \beta_t + \gamma Y_{t-1} + \delta_p \Delta Y_{t-1} + \delta_{p-1} \Delta Y_{t-p+1} + \epsilon_t \quad (1)$$

Where;

$\Delta$  = Change Operator

$\alpha$  = Constant

$Y_t$  = Variable series (producer prices of rice, agricultural trade opening, rainfall, population, area cultivated on rice, output of rice)

$Y_{t-1}$  = Past values of variables

$t$  = time variable

$\epsilon_t$  = White noise

The null hypothesis that  $\gamma=0$  implies the existence of a unit root in  $Y_t$  or that the time series is non-stationary. The three models considered are as follows:

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + a_t + \epsilon_t \text{ (Intercept only)} \quad (2)$$

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$$\Delta Y_t = \beta_1 + \beta_2 + \partial Y_{t-1} + a_i + e_t \quad (\text{Trend and Intercept}) \quad (3)$$

$$\Delta Y_t = \partial Y_{t-1} + a_i + e_t \quad (\text{No intercept}) \quad (4)$$

### Co-integration Test

Economic theory suggests that long run relationship should exist between pair of economic or financial variables. To this end, Ljubljana (2009) noted that the framework of co-integration deals with regression with I (1) data, that is I (1) variables tend to diverge as T approaches infinity because of their unconditional variances. Numerous researchers further established that if two or more variables are cointegrated, they must obey an equilibrium relationship in the long run Ama (2003), although they may diverge substantially from that equilibrium in the short run Ljubljana (2009). According to Engle and Granger (1987), co-integration exist when a linear combination of a set of time series is stationary, if it is taken that the individual series are non-stationary. Ama (2003) explained that co-integration of two or more time series infers that long run or equilibrium relationship exist between them. The study further noted that for two variables to be cointegrated, the individual variables must be non-stationary, while there must be a linear combination of the non-stationary variables from a static regression involving levels of the variable which must be stationary. Researchers such as Lutz (1992) and Gyimah-Brempong *et al.* (2016) have established relationship between trade and prices, thus, the need for cointegration analysis. The model is specified as follows, as adapted from Ibrahim (2017):

$$Z_t = \phi + A_1 Z_{t-1} + \dots + A_p Z_{t-p} + \varepsilon_t \quad (5)$$

The VAR is rewritten as;

$$\Delta Z_t = \phi + \sum_{i=1}^n \Gamma_i \Delta Z_{t-i} + \Pi Z_{t-1} + \varepsilon_t \quad (6)$$

Where;

$\Pi = \sum_{i=1}^n A_i - 1$ ,  $\Gamma_i = \sum_{j=i+1}^p A_j$  and  $Z_t$  will be (n x 1) vectors of all the non-stationary I (1) variables in the study.  $\phi$  is a (n x 1) vector of parameter (intercept),  $\varepsilon_t$  is an K x 1 vector of innovations or random shocks.  $\Gamma$  and  $\Pi$  are (n x n) matrices of parameters, were  $\Gamma$  is (n x 1) vector of coefficients of lagged  $Z_t$  variables. The  $\Pi$  is a (nx1) is a long-run impact matrix which is product of two (n x 1) matrices.

### Specification of the Vector Error Correction Model (VECM)

Following the cointegration test, the VECM was employed to ascertain causal influence among non-stationary variables and to reveal long run and individual short run relationships between the independent variables modelled and the producer price of rice, which is the dependent variable.

$$\Delta PPR_t = \phi_1 + \sum_{i=1}^n \beta_{1i} \Delta ATO_{t-i} + \sum_{i=1}^n \beta_{2i} \Delta POP_{t-i} + \sum_{i=1}^n \beta_{3i} \Delta ACR_{t-i} + \alpha ECT_{t-1} + \mu_{1t} \quad (8)$$

$$\Delta Y_t = \beta_1 + \beta_2 + \partial Y_{t-1} + a_i + e_t \quad (7)$$

Where;

PPR - Producer prices of rice

ATO - Agricultural Trade Openness

POP - Population

ACR - Acreage cultivated on rice

OUT - Rice output

Ln RAIN - Rainfalls

ECT - Error correction term,

$\Delta$  -Difference in operator and  $\varepsilon_t$  is the error term which takes care of other variables that could have influenced producer prices of rice but not specified in the model, while n is the optimal lag length orders of the variables.

### Specification of the Granger Causality Model

$$\Delta PPR_t = \alpha + \sum_{i=1}^p \beta_{1i} \Delta ATO_{t-i} + \alpha ECT_{t-1} + \mu_{1t} \quad (8)$$

Where;

P -Lagged observations incorporated in the model

$\mu_{1t}$  -Residual error for each time series PPR and ATO are as defined earlier.

## Findings and Discussions

### Summary Statistics of Time Series Variables

The summary statistics of the time series variables used in the study are presented in Table 1. The normality test results as obtained from the Jarque-Bera statistics was significant for agricultural trade openness, population, rainfall and producer prices of rice, while area cultivated and rice output violated the assumption. However, the values of skewness ranged from -0.4 for rainfall to 0.6 each for agricultural trade opening, rice output and producer prices of rice, while kurtosis spanned from -1.2 for population to 0.8 for rainfall. George and Mallery, (2010); Trochim and Donnelly (2006); Gravetter and Wallnau, (2014) and Field (2009) have all affirmed that the values of skewness and kurtosis of between -2 and +2 are acceptable to prove normal univariate distribution. The measure of relative variability within the data however shows that the rainfall with a value of 0.1 was less dispersed while producer prices of rice was the most volatile with a value of 0.6. The mean producer price of paddy rice was ₦100.6 per kg, mean rice output was 4.2 million tonnes, population averaged 137.6 million, while the agricultural trade openness index stands at 80, 378.5, depicting the magnitude of influence of agricultural trade on domestic activities, including prices. Generally, the higher the index, the larger the influence of agricultural trade on domestic activities. Other results are as reflected in Table 1

**Table 1. Summary statistics of time series data Trend of Producer Prices of Rice in Nigeria**

Figure 1 shows the trend of producer prices of rice between 1993 and 2015. The graph reveals that producer prices have been on the rise, with noticeable peaks between 2005 and 2007, 2009 and then in 2013. Specifically, prices got to a peak in 2013, with an average price of ₦244.25/kg per annum before the crash to ₦131.4/kg in 2015. This development is not unconnected to the various rice interventions implemented under the Agricultural Transformation Agenda, bordering on rice intensification, import substitution, support for value addition, implementation of supportive fiscal policies and of course, the success of the on-going Anchor Borrowers' Programme of the Central Bank of Nigeria which boosted local production of rice. However, OECD (2008) established that the global steep price increases of major cereals in 2008 were not unconnected to the combination of output remaining below trend, coupled with the strong growth of demand. In a related development, Awoyemi (2010) affirmed that the price shock witnessed between 1990 and 2004 in Nigeria is not unconnected to the wide variation in supply and demand of rice in addition to the effect of exogenous variables. Meanwhile, producer prices of rice witnessed an average growth rate of 11.39% within the study duration, with the lowest and peak of -37.45% and 51.59% witnessed in 2015 and 1996 respectively. Specifically, appreciable growths of over 30% were witnessed in 1995, 2001, 2008 and 2013. The growth in 2008 was not unexpected given that it coincided with the global financial crisis.

**Figure 1: Trend of producer prices of rice  
Trend of Agricultural Trade Opening on Rice**

The trend of agricultural trade opening as depicted in Figure 2 shows the size of Nigeria's agricultural traded sectors in relation to total output within the study period. The graph shows that agricultural trade openness reached all-time low in 1996 while noticeable peaks were observed in 2001, 2007 and then in 2011. In terms of the growth, the highest growth rate of 164.82% was observed in 1997, followed by 140.33% in 2011. On the flip side, the least growths of -62.5%, -54.89%, -56.36% and -60.05% were observed in 1994, 1996, 2008 and 2012 respectively. The implications of these results are that agricultural trade had higher influence on domestic activities, including prices in years with higher trade opening indices, with positive effect on the country's economy. Figure 2: Trend of Agricultural trade opening in Nigeria (1993-2015) Effect of Agricultural Trade Openness on the Producer Prices of Rice Unit Root and Cointegration Tests Results

The unit root test showed that all the variables subjected to ADF tests were significant at first

difference, implying that the data used for the analysis have stable statistical properties, that is, they have constant mean and variance and thus, can support further analysis, without fear of spurious or insignificant results. Inadequate consideration of the unit roots may lead to estimates, which may look significant but in reality insignificant. The Johansen test of cointegration was employed to test for long run relationship between the independent variables in the model and the producer prices of rice which is the dependent variable. At the zero null hypothesis (Table 2.), the trace statistic is greater than the critical value, thus, the null hypothesis that there is no co-integration between the independent variables and dependent variable is rejected and was further confirmed by the value of the max statistic. However, at the second level of hypothesis testing which shows that there is one co-integrating equation, the null hypothesis was accepted, given that the trace and max statistic were lower than the critical values. This implies that there is one co-integrating equation or there is one error term, meaning that the variables are co-integrated or they have long run relationship or that they move together, confirming the existence of long run relationship between agricultural trade openness and producer prices of rice. Thus, since the variables are cointegrated, the VECM was explored.

**Table 2: Johansen test for cointegration  
Empirical results of the Vector Error  
Correction Model**

Then results of the vector error correction model as detailed in Table 3. Shows that the error term is negative and significant, thus confirming the validity of the model. This implies that there is long run causality running from the agricultural trade opening and the other independent variables to the producer prices of rice in Nigeria. Though, six models were a fall out of this analysis, out which, four were valid, only one, Table 3 was discussed, given that the interest of this study is to ascertain whether the independent variables identified, particularly agricultural trade opening caused the producer prices of rice. Arising from the results obtained, the null hypothesis of this study was rejected in favour of the alternative hypothesis which states that there is a long run relationship between agricultural trade opening and the producer price of rice. The result further indicates that as agricultural trade opening increases, producer prices of rice decreases. This is contrary to the outcome of the study by Flachsbarth and Garrido (2014) which established that agricultural trade openness contributed to increase food consumer price index. With regards to short run relationship, the results also confirms that the lag of price, agricultural trade opening,

rice output, area cultivated to rice individually caused producer price of rice in Nigeria.

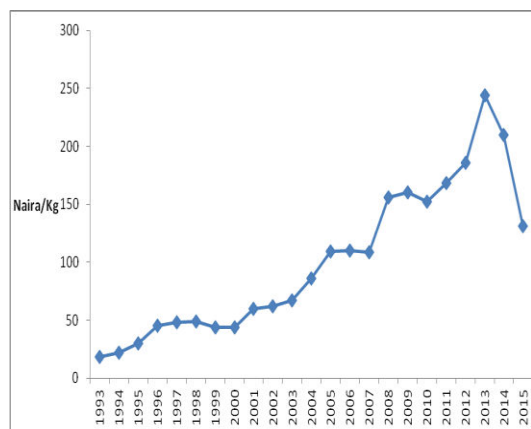
**Table 3: VECM showing long run relationship from the independent variables to producer prices Autocorrelation and Normality Tests**

To ascertain the validity of the models computed, the Lagrange multiplier and Jarque-Bera tests were run to explore the existence of autocorrelation and normality of the data set. The results obtained under both models led to the acceptance of the null hypothesis tested, which implies that there was no autocorrelation in the model tested, while the data set was normal given

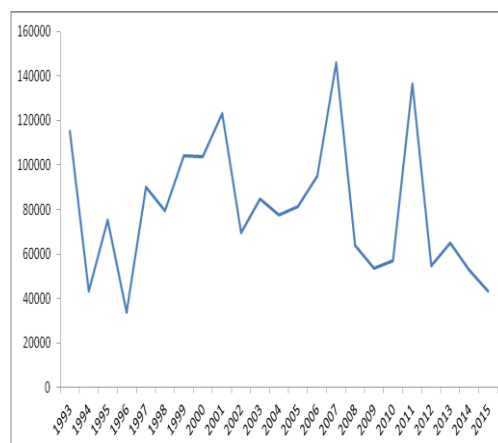
the fact that the probability values were greater than 5 percent critical values.

**Empirical results of the Granger Causality Model**

The Granger Causality test was undertaken to ascertain whether the lags of agricultural trade opening jointly influence or cause producer price of rice. The results as detailed in Table 4 show that agricultural trade openness does not granger cause the producer price of rice in Nigeria, with the direction of causality not in existence, given the non-significance of the model.



**Figure 1: Trend of producer prices of Rice (1993-2015)**



**Figure 2: Trend of Agricultural trade opening in Nigeria (1993-2015)**

**Table 1: Summary statistics of time series data**

Description	Obs.	Range	Min	Max	Mean	SDEv.	Skewness	Kurtosis	CoV	Normality Test
Agricultural Trade Openness	23.0	111,974.0	33,978.8	145,952.8	80,378.5	30,320.6	0.6	-0.3	0.4	0.4
Population (Million)	23.0	93.7	93.6	187.3	137.6	29.0	0.0	-1.2	0.2	0.7
Rice Output '000 tonnes	23.0	4,298.6	2,427.0	6,725.6	4,289.8	1,266.9	0.6	-0.9	0.3	0.0
Rice Area ' 000 Ha	23.0	55,729.2	1,127.0	56,856.2	13,783.7	20,051.2	1.3	0.1	1.5	0.0
Rainfall (Mm)	23.0	18,728.5	47,285.0	66,013.5	58,167.5	4,187.1	-0.4	0.8	0.1	0.3
Producer prices Rice (Naira/KG)	23.0	226.0	18.3	244.3	100.6	64.8	0.6	-0.6	0.6	0.2

Source: Authors' computation

**Table 2: Johansen's test for cointegration**

Maximum rank	Eigen Value	trace Statistic	5% Critical Value	max statistic	5% Critical value
0	.	120.7282	94.15	59.0604	39.37
1	0.93994	61.6678*	68.52	22.9463	33.46
2	0.66468	38.7215	47.21	22.008	27.07
3	0.64936	16.7135	29.68	12.3364	20.97
4	0.44425	4.3771	15.41	3.7642	14.07
5	0.1641	0.6129	3.76	0.6129	3.76
6	0.02876				

**Table 3:** VECM showing long run relationship from the independent variables to producer prices

D-Price	Coefficient	Standard Error	Z	P> Z
cel L <sub>1</sub>	-0.1210531	0.0303037	3.99	0.000
Price LD	0.586738	0.3043137	1.93	0.054
Trade opening LD	-0.000322	0.0001442	2.23	0.026
Population LD	-1.0157	1.438764	0.71	0.480
Output LD	0.0455891	0.0189167	2.41	0.016
Area LD	0.0019847	0.0007459	2.66	0.008
Rainfall LD	0.000248	0.001383	0.18	0.858
Constant	44.67474	14.90347	3	0.003

Source: Authors' Computation

**Table 4: Granger's Causality Wald Test**

Equation	Excluded	F	DF	Prob.>F
Lprice	lagric.trade			
	opening	0.5836	5	0.7138
	ALL	0.5836	5	0.7138
L agricultural trade opening	Lprice	1.1836	5	0.404
L agricultural trade opening	ALL	1.1836	5	0.404
Sample 1998-2015				
Loglikelihood =11.68921				
FPE = 0.0160542				
Det. (Sigma_mi = 0.0009354				
Number of obs. = 18				
AIC = 1.145644				

**Table 4: Granger Causality Wald Test CONCLUSION**

The study as shown that agricultural trade opening influenced the producer prices of rice in the long run, while rice output, area cultivated on rice and agricultural trade opening individually caused producer prices of rice in the short run. However, there was no joint causality between the lagged values of agricultural trade openness and the producer prices of rice.

### Implications for Agricultural Trade Policies in Nigeria and Recommendations

In spite of the obvious benefits of agricultural trade in expanding growth opportunities globally, the outcome of this study supports the protectionist policy to safe guard local rice producers. Thus, concerted efforts are needed in following-up the policy direction of the immediate past Agricultural Transformation Agenda, through continuation of tariff regimes supportive of local rice production, implementation of financial incentives and related assistance to local producers, ensuring market determination of exchange rate, to

avoid over valuation and its negative influence on local production. It has also become imperative to support an holisticrice promotion policy, enhance the operations of the private sector led marketing boards, with the view to shoring up quality and enhancing the competitiveness of locally produced rice; while removing barriers to market failures, through an energized and more coordinated market information system, policy support for market transparency and market infrastructure provision.

There is also the need to put in place, pragmatic agricultural trade policies that will ensure that the effect of agricultural trade as translated to the producer prices of rice, benefit the rice farmers, through removal of institutional barriers that may hinder rice producers from receiving optimum returns. More importantly, and without prejudice to agreements under the global free trade, agricultural trade policy direction should for now, be on protecting the local rice producers from negative influences of trade liberalization, while shoring up the prices of locally produced rice across Nigeria.

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