Trade, financial openness and inflation in Nigeria (1981-2021)

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Abstract

This study examined trade, financial openness and inflation in Nigeria over the period of 1981 to 2021. The study specifically analyzed the trend of trade openness and inflation in Nigeria and examined the effect of trade openness on inflation in Nigeria. This investigation is imperative because in Nigeria the price level of goods and services has become very high because of the direct and indirect price effects of expensive imports of finished goods and intermediate inputs. The over-reliance on imports raised the domestic price level thereby forcing the domestic producers to increase their prices in the face of increase spending on expensive import.

In an attempt to achieve the broad objective, employed an econometric model to capture the effect of trade and financial openness on inflation where inflation was the dependent variable while trade openness, capital flow and exchange rate were the explanatory variables. Time series data over the period of 1981 to 2021 sourced from Central Bank of Nigeria (CBN) Statistical Bulletin and National Bureau of Statistics (NBS) was utilized. Several diagnostic tests which include Jarque-Bera test for normality and test for multicorrelation were conducted check the time series properties. The study employed the in the analysis. The result of the model was facilitated using the Econometric View (E-View).

The result obtained from the analysis using the ordinary least square regression are presented in Table 5 show that there is statistical evidence that trade openness (β=392.5148, t= 2.36446 and P<0.05) has a significant positive effect on inflation while capital flow (β=-230.4463, t=-2.44742 and P<0.05) showed a significant negative effect on inflation in Nigeria. The result also indicates that exchange rate (β=-0.006921, t=-3.35202 and P<0.05) does not have any effect on inflation in Nigeria. The study concluded that while trade has a positive significant effect on inflation while financial openness exerts a significant negative effect on inflation. The study recommended the is a need for government to review her foreign trade policies in such a way that the importation of both finished and intermediate goods and service from the rest of the world can be significantly reduce by boosting local production.

1. Introduction

Inflation is an important issue for the policy-makers as it creates uncertain situation in the economy that may adversely affect economic growth. A sustained or continuous rise in the general price level is termed inflation (Lotfalipour, Montazeri & Sedighi, 2013). Inflation may occur due to some demand and supply side factors. Inflation can occur due to supply shocks of different food items and worldwide oil. prices (Munir & Kiani, 2011) Fiscal and foreign trade policies and even foreign policies of governments and socio-economic structures of society are among such important factors (Sepehrivand & Azizt, 2016). Thus, a more open economy will face larger number of adverse shocks coming from the outside (Lotfalipour, Montazeri & Sedighi, 2013).

For many development theorists, trade is a key variable in the development process of a country. It is believed that increased trade enhances export earnings, promotes industrialization, and encourages diversification of the economy (Ndulo & Mudenda, 2004). Endogenous growth theory postulated that trade openness provides access to imported inputs embodying new technology, raises the returns on innovations of domestic producers

by increasing the effective size of the market they face, and facilitates a country's specialization in research intensive production (Zombe, Daka, Phiri, Kaonga, Chibwe & Seshamani, 2017). Greater openness to trade intensifies market competition and reduces the pricing power of firms, thereby dampening inflation. Stronger market competition also influences policy incentives and makes monetary policy more prudent and less inflationary (Neiss, 2001). According to new growth theory, openness reduces inflation through its positive influence on output, mainly through increased efficiency, better allocation of resources, improved capacity utilization, and increased foreign investment (Jin, 2000).

International transactions constitute a substantial fraction of Nigeria's aggregate output. The Nigerian economy in recent years has been characterized by trends towards increased liberalization, greater openness to world trade, higher degree of financial integration, and greater financial development (Ada, Oyeronke, Odunayo, Okoruwa & Obi-Egbedi, 2014). The current status of capital account liberalization in Nigeria has followed a systematic reduction of restrictions on capital flows into the economy (Shuaib, Okutimiren, Odunlami & Ajagbe, 2016). The increased liberalization and openness have motivated high rate of increases in cross-border capital and direct investment flows (Udegbunam, 2002). The increased liberalization and openness have motivated high rate of increases in cross-border capital and direct investment flows (Udegbunam, 2002).

The low rate of economic growth and development experienced in these countries have from 1980's to date been described as tragic. For the Nigerian economy, the country has experienced decades of slow economic development due to her unimpressed growth in per capita income and infrastructural deficits despite opening up her financial system and capital account (World Bank, 2012). The country's macroeconomic indicators especially inflation has also been fluctuating since 1980. Since 2001, inflation rate in Nigeria has always been in two-digit domain, with an average of about 12.50%-22.17% within some years between 1986 and 2011 (Akpan, 2013).

Previous studies analysing the effects of trade openness on inflation focused on the effect of either trade or economic openness on inflation and have therefore ignored the fact that changes trade and the resulting changes in financial openness may have a twin effect on inflation. Despite the importance of the relationship between trade openness and inflation in literature, studies on this subject have remained scanty and evidence to confirm or refute Romer's (1993) hypothesis is still inconclusive. Moreover, the majority of studies had done so far have been at multi-country level rather than country specific. Such multi-country studies do not allow for country specific dynamics of the relationship among economic variables. It is against this background that this study was motivated to examine trade, financial openness and inflation in Nigeria.

The broad objective of this study is to investigate the relationship between trade, financial openness and inflation in Nigeria. The specific objectives are to:

a. Analyse the trend of trade, financial openness and inflation in Nigeria.
b. Evaluate the effect of trade on inflation in Nigeria.

c. Evaluate the effect financial openness on inflation in Nigeria.

This study examines the effect of trade and financial openness on inflation. Understanding this effect is of crucial importance for the optimal design and conduct of monetary policy, the topic has attracted significant interest not only among academics but also policy makers. This study is important in the sense that it considers the region/countries which have not been studied under this relationship until now and this link will be better understood by group of developing countries because they have high inflation as compared to developed economies. The contribution of this paper is two-fold. First, the study provides new insights into the determinants of inflation and, in particular, it explains the relationship between openness and the frequency of changes in price level observed in the data. Second, it sheds new light on the effects of trade openness on the Phillips Curve and the inflation-output trade-off. This study is expected to assist policy makers such as the central bank and fiscal authorities in decision making with regard to devising policies in combating inflation in Nigeria. In addition to this, the study will pave the way for other researchers to advance their study on the topic.

2. Literature Review

Generally, trade is the exchange of goods and services for economic considerations or benefit. International trade is the exchange of capital, goods and services across international borders or territories. International trade allows for the exchange of goods and services and enhances healthy relations among countries irrespective of their level of economic development (Azeez, Dada & Aluko, 2014). It is also refer to as foreign trade, external trade or inter-regional trade. It consists of imports, exports and entrepot. Andy (2001) defined international trade to consist of transaction that are devised and carried out across national borders to satisfy the objectives of individuals and operations. International trade uses a variety of currencies, the most important of which are held as foreign reserve by governments and central banks. Trade generally entails the exchange of goods and services for economic considerations or benefit. Foreign trade allows a country or nation to expand her markets for both goods and services that otherwise may not have been available to her citizens (Adewuyi, 2000).

The concept of financial liberalization and financial openness are interchangeably adopted in finance literature. Adam (2011) opines that financial openness and liberalization are regarded as among growth ingredients in developing countries. Tekin (2012) argues that financial liberalization that took place in developing countries in the late 1970s up to the early 1990s was part of government plans to allow domestic markets play essential roles in the economic development process. Adu et al. (2013) adds that financial openness is a measure directed at dismantling regulatory control over the institutional structures, instruments and activities of agents in different segments of the financial sector.

Tekin (2012) mentions three widely accepted interrelated benefits of financial openness such as more opportunities for risk sharing and risk diversification, better allocation of capital among investment opportunities, and potential for higher growth. Doucouliagos and Paldam (2009) describe that financial openness or integration should offer additional opportunities to share risk and to smooth consumption inter-temporally. This is an important element of financial integration. Biwott (2013) concludes that efficient flows of capital across borders

within the region have the capacity to mitigate the effects of any asymmetric macroeconomic shocks. Another implication of greater financial integration, which is partially linked to the issue of capital allocation described above, is additional economic growth. One channel through which financial integration acts upon economic growth is greater financial development. Financial integration should increase flows of funds for investment opportunities in some regions. This should be the case whenever financial integration facilitates the access to investment opportunities in these regions, provided they are more productive relative to foreign ones. With additional funds flowing in, further financial development of these regions appears plausible (Reinhart & Rogoff, 2003).

Brue (2008) define inflation as an increase in price as general, where inflation decreases purchasing power from a currency. Mishkin (2008) also view inflation as the rate at which the general level of prices for goods and services is rising, and, subsequently, purchasing power is falling. Jhingan (2005) refers to inflation as a persistent and appreciable rise in the general level of prices. It is a rise in the average level of price for all goods and services. McConnel and Brue (2008) define inflation as an increase in price as general, where inflation decreases purchasing power from a currency. Morris and Morris, (1999) define inflation as the pervasive and sustained rise in the aggregate level of prices for goods and services measured. Most economic scholars are of the view that inflation is strictly a monetary phenomenon. These scholars argue that inflation occurs when the rate of growth of the money supply is higher than the growth rate of the economy (Akcay, Alper & Ozmucur, 1996, Chimobi & Igwe, 2010). This is the conventional monetarist linkage from the creation of base money to inflation when Central Banks issue money at a rate that exceeds the demand for cash balances at the existing price level and the increased demand in the goods market pushes up the price level as the public tries to get rid of its excess cash holdings (Bakare, Adesanya & Bolaarinwa, 2014).

According to the 'Monetarist School', fiscal deficit is the basic factor of inflation as it influences the money supply. They argue that "by decreasing the growth rate of money, the fiscal deficit of the government reduces and the inflation rate could be reduced". On this issue, Friedman specifies "Inflation is always and everywhere a monetary phenomenon" (Friedman 1963). Iyoha (1973) is of the view that the degree to which domestic changes in demand are absorbed by movements in level of imports, rather than influencing the local prices, will be positively linked to the degree of trade openness in an economy. This hypothesis is established on basis of monetary theory of the balance of payments (Kirkpatrick & Nixson 1977).

Modern quantity theorists led by Friedman hold that "inflation is always and everywhere a monetary phenomenon". The higher the growth rate of the nominal money supply, the higher the rate of inflation. When the money supply increases, people spend more in relation to the available to the available supply of goods and services. This bids prices up. Modern quantity theorists neither assume full employment as a nominal situation nor a stable velocity of money. Still they regard inflation as the result of excessive increase in the money supply.

The Keynesian opposed the monetarist's view of direct and proportional relationship between the quantity of money and prices. According to this school, the relationship between changes

in the quantity of money and prices is non-proportional and indirect, through the rate of interest. In other words, the Keynesians see a link between the real and the monetary sectors of the economy, an economic phenomenon that describes equilibrium in the goods and money markets (IS-LM). Equally important about the relationship between the quantity of money and prices both under unemployment and full employment situations. Accordingly, so as long as there is unemployment, output and employment will change in the same proportion as the quantity of money, but there will be no change in prices.

Munir, Hasan and Muhammad (2015) empirically tests for the existence of a significant relationship between inflation and trade openness for selected Asian economies using panel data for the period of 1976 to 2010. The basic objective of this study is to examine Romer's hypothesis for five South Asian and three South East Asian economies with real agriculture value added, nominal exchange rate, real gross domestic product per capita growth, money and quasi money, real interest rate and trade openness as explanatory variables and inflation rate as a dependent variable. For this purpose, we have applied a general-to-specific modelling approach and selected a general model from many competing models by encompassing principle. The fixed effects and random effects estimation of the specific model shows that there is no relationship between inflation and trade openness, which rejects the existence of Romer's hypothesis for selected Asian economies.

Kurihara (2013) examines whether international trade openness is related with inflation or not in Asian countries. The relationship in the world has been discussed including economic growth for a long time from both theoretical and empirical ones; however, there has not been any consensus about this problem. It is necessary to analyze this relationship to achieve sound economic growth. Panel data in Asia and OECD countries are used to examine the relationship between international trade openness and inflation empirically in both areas. The results show that the relationship exists both in Asia and in OECD countries; however, it exists strongly in Asian recent period.

Afzal, Malik, Butt and Fatima (2015) study validates the Romer (1993) hypothesis, i.e. the existence of the inverse connection between inflation and openness in Pakistan for the period of 1970-71 to 2008-09. A more robust inverse linkage between inflation and openness is noted in the short-run as compared to the long-run. Bidirectional causality running between inflation and openness is also found. The positive linkage between real GDP and inflation is observed that seems to be in line with the truth of Phillips curve and Okun's law.

Shuaib, Okutimiren, Odunlami and Ajagbe (2016) analyzed the effect of financial openness on economic growth in Nigeria. The research time frame ranges from the period of Pre-Structural Adjustment Programme, Structural Adjustment Programme and Post-Structural Adjustment Programme. The empirical Econometric model employed for analysing the effect of Financial Openness and Capital Flows on Economic Growth in Nigeria was formulated based on the adopted and modified model of Doucouliagos and Paldam (2009), and Ekanayake and Chatrna (2010). The Ordinary Least Square (OLS) method was used to estimate the model that regress real Gross Domestic Product (GDP) on Capital Flows as a ratio of Gross Domestic

Product, Trade Openness, Inflation Rate and Financial Openness in Nigeria during the reviewed period. The results revealed that Trade Openness (TOPEN) and Inflation Rate (INF) is significant factors jointly influencing the growth rate of Nigeria economy. Amongst others, this study recommends that national monetary authority should effectively regulate and monitor the liquidity level in the financial sector via money in circulation and credit disbursed to the private sector in order to foster real sustainable growth.

Ada, Oyeronke, Odunayo, Okoruwa and Obi-Egbedi (2014) study therefore used the VECM approach to investigate the effect of trade openness on the inflation of the Nigerian economy using annual data from 1970 to 2010. A multivariate cointegration test developed by Johansen was used to determine the existence of a long-run relationship among the variables. The results indicate two cointegrating equations at 5% level of significance and one cointegrating equation at 1% level. With the existence of at least one cointegrating vector, the VEC model was applied, which indicates a negative relationship between inflation and trade openness (-1.58) for the Nigerian economy, while the coefficient of the Error Correction Term (-0.91) of the model was significant and negative, which imply that the system corrects its previous period disequilibrium at a speed of approximately 91 percent annually. The results of the Impulse-Response Function (IRF) indicate that the response of inflation to openness shock was significant and positive for only two periods, but negative after the second period and all through the rest of the periods, thereby validating the negative relationship between inflation and trade openness in Nigerian economy.

3. Methodology

This study used ex-post facto research design. This is because the design is a quasi-experimental study used to examine how an independent variable, present prior to the study in the participants, affects a dependent variable. This study examined how trade, financial openness and associated variables affect the inflation in Nigeria based on quantitative analysis of data. This study is anchored on elasticities approach which applies the Marshallian analysis of elasticities of supply and demand for individual commodities to the analysis of exports and imports as a whole as specified in Robinson (1950). Robinson was mainly concerned with the conditions under which devaluation of a currency would lead to an improvement in the balance of trade.

In this context, it is generally assumed that exports depend on the price of exports, and imports depend on the price of imports. These relations are then translated into elasticities, by differentiating the above equation with respect to the exchange rate. In effect, the exchange rate clears balance of payments. A criterion for a change of the balance of trade in the desired direction can be established, assuming that export and import prices adjust to equate the demand for and supply of exports and imports. The effect of devaluation on the trade balance depends on four elasticities: the foreign elasticity of demand for exports, and the home elasticity of supply, the foreign elasticity of supply of imports, and the home elasticity of demand for imports (Ardalan, 2005).

In an attempt to analyze the dynamic effect of trade openness on inflation in Nigeria as set out in objective two of the study, this study adopt the model used in the study conducted by Ada, Oyeronke, Odunayo, Okoruwa and Obi-Egbedi (2014) on the effect of trade openness on the inflation of the Nigerian economy where inflation based on Consumer Price Index was the dependent variable while trade openness, real gross domestic product, budget deficit as ratio of fiscal deficit, money supply and exchange rate are the explanatory variables. This study adapted this model by making inflation the dependent variable while trade openness, capital flow and exchange rate are the explanatory variables in line with the objective of the study and to achieve simplicity. The model formulated for this study in a fictional relationship is stated as follows:

INF = F(TOP, CFL, EXR)

Where: INF is inflation; TOP is trade openness measured by [exports+ imports/(GDP)]; CFL is real capital flow; and EXR is exchange rate.

The transformation of the functional relationship gives

$INF = \beta_0 + \beta_1 TOP + \beta_2 CFL + \beta_3 EXR + e$

Given the nature of the models it is imperative that the data which permit the estimation of the stochastic equations can be collected. The data series covered the periods between 1980 and 2021. The data were obtained from the publication of central Bank of Nigeria, (CBN Annual Report), Statistical Bulletin, National Account and Bureau of Statistics. The secondary data used for the study shall be estimated by the ordinary least square multiple regression analytical method.

The Fully Modified Ordinary Least Squares (FMOLS) approach is employed in this study in the estimation. The choice of OLS as the estimation technique was based on the fact that the method modifies least squares to account for serial correlation effects and for the endogeneity in the repressors that result from the existence of a cointegrating relationship. The resulting FMOLS regressions are shown to have some interesting properties. For example, when there is some cointegration in the system, FMOLS estimation has a limit theory that is normal for all of the stationary coefficients and mixed normal for all of the nonstationary coefficients. Thus, there are no unit root limit distributions even in the case of the unit root coefficient sub-matrix. The study also adopts the following methods of evaluation for analysis and the estimates. The estimated model of this study is evaluated using based on a priori criterion, statistical test, Jarque-Bera test for normality, the test for multicorrelation and trend analysis using the line graph.

4. Results

The result of the Jarque-Bera test of normality for the descriptive evaluation of the data and establish the nature of the distribution of the data is presented in table 1.

Table 1: Descriptive Statistics

	INFL	TO	CFL	EXR
Mean	19.29500	0.137636	30294002	17.19722
Median	12.21000	0.089900	22060982	16.55000
Maximum	72.73000	0.456100	69023930	38.00000

Minimum	3.230000	0.001000	13779255	8.600000
Std. Dev.	17.34644	0.147362	17253201	5.776775
Skewness	1.606168	0.725824	0.985031	1.702739
Kurtosis	4.567145	2.101734	2.591488	7.083473
Jarque-Bera	19.16256	4.371250	6.072038	42.40805
Probability	0.000069	0.112407	0.048026	0.000000
Sum	694.6200	4.954900	1.09E+09	619.1000
Sum Sq. Dev.	10531.46	0.760049	1.04E+16	1167.990
Observations	36	36	36	36

Source: Authors' computation, 2024

The result of the descriptive analysis shows that all the variables are positively skewed since their means are greater than their medians. Except for trade openness TO and capital flows, inflation INFL and exchange rate are highly symmetrical since their skewness coefficients are greater than one. That is they are positively skewed. The positive values of the kurtosis of all the variables established the fact that these variables are leptokurtic in nature. The values of the Jarque-Bera statistics show that except for trade openness, all other variables are normally distributed since their p-values are statistically significant at 5% level of significance. Hence, the result shows that while inflation, capital flow and exchange rate were normally distributed, trade openness is not.

The result of the multicollinearity tests using correlation matrix to detect whether the variables are multicorrelated is presented as follows:

Table 2: Correlation Analysis Matrix

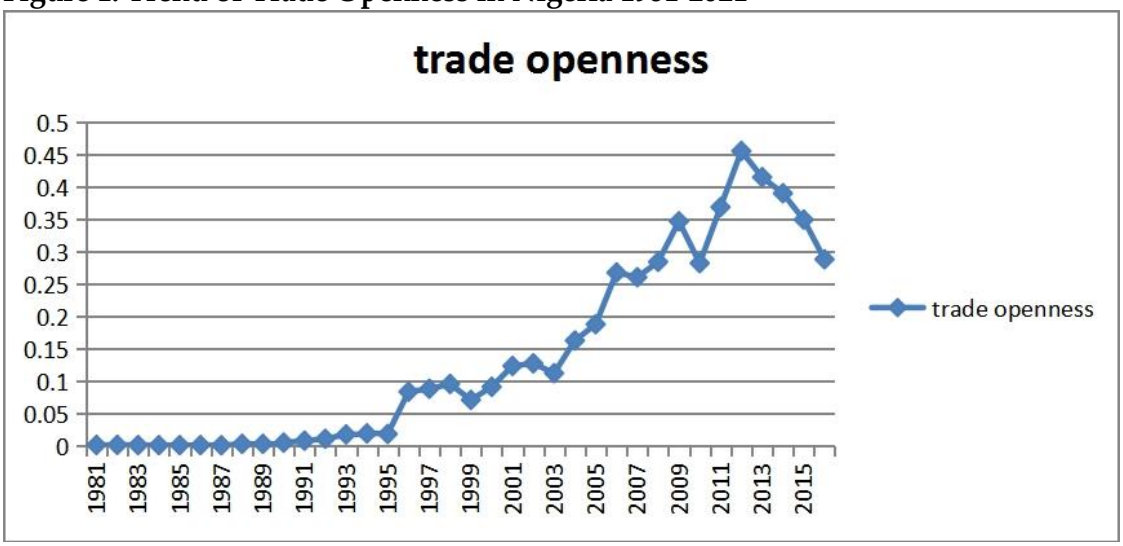
	INFL	**TO**	**CFL**	**EXR**
INFL	1			
TO	-0.353736	1		
CFL	-0.342190	0.948137	1	
EXR	-0.307315	0.590602	0.573059	1

Source: Authors' computation, 2024

The test of the correlation among variables of estimates helps to detect whether the variables have the problem of multicollinearity which occurs when there is very strong association among the variables. The results of the correlation analysis of the set of variables in the model are presented in Table 2. The table shows that the correlation coefficients for the relationship among the variables indicate the absence of very strong association which indicates the absence of multicollinearity problem among the variables. The result also shows that the association between trade openness and inflation; capital flow and inflation; and inflation and exchange rate were negative.

The trend of trade openness and inflation in Nigeria as stated in the first objective is presented using the line graph as follows:

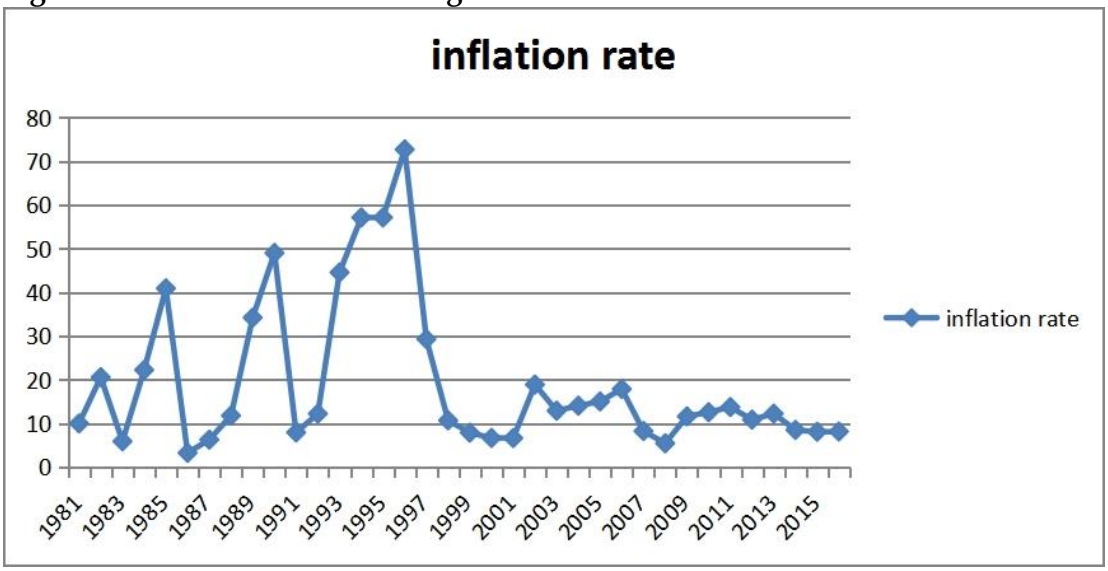
Figure 1: Trend of Trade Openness in Nigeria 1981-2021



Source: Authors' computation, 2024

The trend of trade openness shown in figure 1 shows that trade openness between over the entire has increase significantly. However, the pattern of the increase has varied significantly upward and downward. The increase in the trend of trade openness in Nigeria indicates increasing removal of trade barriers and its upward and downward variation can be attributed to government retaliative use of trade protectionists' policies.

Figure 1: Trend of Inflation in Nigeria 1981-2021



Source: Authors' computation, 2024

The trend of inflation as shown that in figure 1 shows that inflation rate in Nigeria has fluctuated upward and downward significantly over the entire period. Hence, the trend of trade openness and inflation in Nigeria has fluctuated significantly over the entire period.

The Ordinary Least Square Regression was used to empirically analyse the effect of trade and financial openness on inflation as stated in the objective raised in the study. The result of the estimation of the model is stated in table 5 as follows:

Table 5: Ordinary Least Square Regression Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TO	6.743256	71.12308	9.094811	0.0051
CFL	-2.53E-07	1.39E-06	-10.182462	0.0064
EXR	-0.104262	0.113499	-0.918616	0.3654
C	26.91389	4.343568	6.196263	0.0000
R-squared	0.757007	Mean dependent var		19.72143
Adjusted R-squared	0.675427	S.D. dependent var		17.44263
S.E. of regression	16.77191	Akaike info criterion		8.584499
Sum squared resid	8720.208	Schwarz criterion		8.762253
Log likelihood	-146.2287	Hannan-Quinn criter.		8.645859
F-statistic	11.24574	Durbin-Watson stat		1.748991
Prob(F-statistic)	0.00137			

Source: Author, 2024

The estimates of the ordinary least square regression are presented in Table 5 show that there is statistical evidence that trade openness (β=392.5148, t= 2.36446 and P<0.05) has a significant positive effect on inflation while capital flow (β=-230.4463, t=-2.44742 and P<0.05) showed a significant negative effect on inflation in Nigeria. The result also indicates that exchange rate (β=-0.006921, t=-3.35202 and P<0.05) does not have any effect on inflation in Nigeria. Hence, it is evident that while trade openness has a positive significant effect on inflation while financial openness have a significant negative effect on inflation.

5. Discussion, Conclusion and Recommendations

The result obtained from the analysis using the ordinary least square regression are presented in Table 5 show that there is statistical evidence that trade openness (β=392.5148, t= 2.36446 and P<0.05) has a significant positive effect on inflation while capital flow (β=-230.4463, t=-2.44742 and P<0.05) showed a significant negative effect on inflation in Nigeria. The result also indicates that exchange rate (β=-0.006921, t=-3.35202 and P<0.05) does not have any effect on inflation in Nigeria.

By and large the result of this study established that while trade openness has a positive significant effect on inflation while financial openness have a significant negative effect on inflation. This result corroborated the findings in the study conducted by Lotfalipour, Montazeri and Sedighi (2013) on the mechanism of trade openness and inflation rate using unbalanced static panel data method of estimation for Middle East and North African countries in the period of 1990- 2010. The panel cointegration test shows that countries with more open degree of international trade are exposed to higher rate of inflation. The result is also in line with the findings of Yutaka (2013) on whether international trade openness is related with inflation or not in Asian countries. The results show that the relationship exists

both in Asia and in OECD countries; however, it exists strongly in Asian recent period. However, the result was in contrast to the findings of Kalsoom and Zareen (2013) on the relationship between inflation and openness from 1970-71 to 2008-09. The result shows that the correlation between GDP and M_2 is moderate relationship and the correlation between M_2 and OT week relationship between variables. The correlation between OT and GDP is .007 which also shows the week relationship between variables. INF is dependent variable and OT (openness to Trade) M2 and GDP are the independent variables in the model.

The study concluded that while trade has a positive significant effect on inflation while financial openness exerts a significant negative effect on inflation. The implication of this result is that, the increasing trend of openness in Nigeria contributes the prevailing high level of inflation and this suggests the phenomenon of imported inflation in Nigeria. In addition, there is evident that the direction of growth lessens the burden of inflation in Nigeria. Following the empirical findings, the following recommendations are made for effective policy formulations.

Inflation should be controlled by non-monetary and non-fiscal measures e.g. increase in volume of production, rationing policy, sound managerial and financial system, etc**.** Since Nigeria is so vulnerable to external oil shocks which are resulted from more open degree of international trade which directly affect the domestic prices, there is need to put in place policy framework that will reduce dependence on oil and substituting other alternative sources of energy such as renewable ones and also accomplishing technical development. There is a need for government to review her foreign trade policies in such a way that the importation of both finished and intermediate goods and service from the rest of the world can be significantly reduce by boosting local production.

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APPENDIXES

Relevant Data

YEAR	INFL	TO	CFL	EXR
1981	20.56	0.0016	15.2	0.6100
1982	5.88	0.0013	119.7	0.6729
1983	22.22	0.0012	25.7	0.7241
1984	40.91	0.0012	65.4	0.7649
1985	3.23	0.0013	-2.4	0.8938
1986	6.25	0.001	280.8	2.0206
1987	11.77	0.0032	204.3	4.0179
1988	34.21	0.0032	133.1	4.5367
1989	49.02	0.0051	195.2	7.3916
1990	7.90	0.0081	326.6	8.0378
1991	12.20	0.011	1094.2	9.9095
1992	44.57	0.0178	25.6	17.2984
1993	57.14	0.0193	761.1	22.0511
1994	57.15	0.0185	1650.3	21.8861
1995	72.73	0.0838	2132.6	21.8861
1996	29.29	0.0884	575.0	21.8861
1997	10.67	0.0958	292.0	21.8861
1998	7.86	0.0712	8653.8	21.8860
1999	6.64	0.0914	771.9	92.3428
2000	6.62	0.1237	407.9	100.8016
2001	18.87	0.1277	452.0	111.7010
2002	12.88	0.1125	1117.2	126.2577
2003	14.03	0.163	1930.8	134.0378
2004	15.00	0.1882	6649.4	132.3704
2005	17.86	0.2681	8644.2	132.1470
2006	8.22	0.2609	4,007,515.24	128.6516
2007	5.41	0.2847	4,403,765.83	125.8331
2008	11.58	0.3473	6,041,843.54	118.5669
2009	12.54	0.2826	8,111,380.86	148.8802
2010	13.72	0.3694	9,088,816.56	150.2980
2011	10.84	0.4561	10,958,862.18	153.8616
2012	12.22	0.4156	11,917,373.56	157.4994
2013	8.48	0.3907	12,786,712.78	157.3112
2014	8.06	0.3499	14,706,375.05	158.5526
2015	8.12	0.2886	19,023,929. 94	193.2792
2016	13.72	0.3694	9,088,816.56	201.3112
2017				
2018				
2019				

2020				
2021				

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