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THE EFFECT OF INTERNATIONAL TRADE ON FINANCIAL DEPTH IN NIGERIA 1986 – 2021

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Abstract

This work examined the effect of international trade on financial depth in Nigeria. The study used total trade, trade openness, foreign exchange disbursement and inflation rate as proxies for international trade while the financial depth metric was broad money to GDP. It used econometric procedures in analysing the data particularly the unit root test, Johansen coinegration test, and Error correction model. The result indicated that foreign exchange disbursement and inflation rate significantly decreased the ratio of broad money to financial depth while total trade had a negative and insignificant effect on financial depth. Also total trade and foreign exchange disbursement increased financial depth. The study concluded that international trade has enhanced financial efficiency but the financial sector performance is being hindered by inflationary trends. Among other recommendations, the government should encourage local production in order to enhance exports, granting of license and foreign exchange to more international traders and as well unify exchange rates to cushion against the inflationary effect on the financial sector of Nigeria.

Keywords:. International Trade, Financial Depth, Foreign Exchange, Inflation

Introduction

International trade is the trade between one country and others while financial depth refers to a condition of sufficient liquidity and smooth financial liquidation (Okafor, Onwumere and Chijindu, 2016). The development of international trade in Nigeria can be traced back to the colonial era when Britain was Nigeria's dominant trading partner. As at late 1950s, about 70% of Nigeria's exports were to Britain and 47% of its imports were from Britain (World Bank, 2021). However, in the 1970s, Britain's share of Nigerian exports and imports dropped

to 38% and 32% respectively with the United States taking over as Nigeria's best customer buying more than 36% of Nigeria's exports which was primarily petroleum products (World Bank, 2021). During these times, the trade transactions between Nigeria and Britain including the United States was facilitated by various financial institutions owned by these trading partners who moved their branches to the West African country. Some of these financial institutions are; African Banking Corporation, British Bank of West Africa, Barclays Bank, West Africa Currency Board, etc. It can be deduced that the development of the financial sector, particularly, the banking sub-sector was propelled by the presence of European Merchants in Nigeria.

Globally, the level of financial depth of various nations of the world is acknowledged as a potentially important mechanism for advancing international trade and long run economic growth. While intermediating between the surplus and deficit units of a nation, the efficiency and effectiveness of the financial sector depends largely on the development of the financial system. Increase in financial system, adoption of financial services and profitability of the financial sector are enhanced by a well-developed international trade mechanism resulting in efficient resource allocation through adherence to the comparative advantage theory, faster accumulation of human and physical capital exchange and rapid technological advancement (Bankola, 2022). Increase in financial depth occurs when there is development in size, efficiency, and stability of financial markets along with increased access to financial markets by foreign trade players (Guru and Yadav, 2019).

The financial sector especially the banking industry has significantly evolved over the years, from an era of free banking (1892-1951) to a period of strict regulation (1959-1986), subsequent liberalisation between 1986 to 2003, and more recently, the period of bank consolidation from 2004 to 2006 (Okafor and Nwosu, 2021). A notable effort made towards increasing financial depth in Nigeria is the National Financial Inclusion Strategy that was launched in October 2012. The Strategy aimed at reducing the percentage of adult Nigerians who are unable to access financial services and products, from 46.3% recorded in 2010 to 20% in 2020 (CBN, 2021).

It is notable that with the increasing focus on enhancing external trade flows through the diversification of the economy to non-oil trade, Nigeria's export trade reached N19.2 trillion in 2021 while import reached N22.3 trillion same year 2021. Trade openness averaged 25% over the last decade indicating positive trend for international trade transactions (CBN, 2021).

Thus, the banking sector has a lot to gain from the increasing trend of international trade transactions. For instance, the roll-out of the payment systems vision 2020 by the Central bank of Nigeria in 2007 led to a sharp increase in the number of new FinTech companies that offer mobile/electronic payments, foreign exchange transactions, etc., (ITA, 2022). These have aided international trade and helped to increase financial depth in Nigeria. It becomes pertinent at this point to carry out a critical study on the nexus between international trade and financial depth in Nigeria using econometric procedures and drawing from theoretical postulations.

Statement of the Problem

Expected increase in export accomplishment is desired as a result of a sound financial system. In view of the numerous policy measures on financial deepening in Nigeria, the country's financial sector has witnessed tremendous development with visible evidence through increased money and capital market activities, rapid expansion of banking operations and development of various financial networks of Automated Teller Machines (ATMs), Point of Sales (POS) devices, digitized/electronic fund transfer among others (Samuel-Hope, Ehimare and Osuma, 2020). However, we are interested in the reverse case scenario in this study where we intend to ascertain the developments in international trade activities and variables and how these have affected financial deepening or financial depth in Nigeria.

For the period under review, trade openness reached an all-time high of 47.2% in 1997 coming close to this high in 2005 at 43.5%. Trade openness started dropping in the wake of the global pandemic in 2020 but remained strongly on an increasing trend at 23.6% in 2021. On the other hand, loans to export and import trade combined reached an all-time high figure of N1.71 trillion in 2021 which marked a massive step in the path of trade financing in Nigeria. The problem this study identifies is that; with these trade statistics, what impact do they have on the depth of the financial sector in Nigeria? Can we really conclude that the increasing trade financing and the intensification of international trade transactions has positively or negatively affected the depth of financial sector in Nigeria? This remains to be empirically ascertained in this study.

Again, although empirical literature on Nigeria largely supports the presence of ample literature on the effect of financial deepening on the economy (Guru and Yadav, 2019; Ndebbio, 2020; Afolabi, 2022; Adeyemo and Tamunowariye, 2022; Osinsanwo, 2018, etc.),

little attention has been paid to the analysis of the relationship between international trade and financial depth in Nigeria, as well as the effect of international trade on the financial sector of Nigeria. This presents a research problem and considering the above problems identified, this study investigates the relationship between international trade and financial depth in Nigeria.

Objectives of the Study

this study mainly examined the effect of international trade on financial depth in Nigeria for the period 1986-2021, with financial depth measured with private sector credit to gross domestic product ratio. It specifically aimed to:

1. determine the effect of export trade on private sector credit to gross domestic product ratio in Nigeria;
2. ascertain the effect of import trade on private sector credit to gross domestic product ratio in Nigeria;
3. investigate the extent to which trade openness has affected private sector credit to gross domestic product ratio in Nigeria;
4. analyze the effect of bank loans for international trade transactions on private sector credit to gross domestic product ratio in Nigeria;

Research Questions

The following questions are considered relevant to the study:

1. What is the effect of export trade on private sector credit to gross domestic product ratio in Nigeria?
2. What is the effect of import trade on private sector credit to gross domestic product in Nigeria?
3. To what extent has trade openness affected private sector credit to gross domestic product in Nigeria?
4. In what ways have bank loans for international trade transactions affected private sector credit to gross domestic product in Nigeria?

Research Hypotheses

The hypotheses formulated for this study are stated in their null forms as follows:

H_{01}: There is no significant effect of export trade on private sector credit to gross domestic product in Nigeria.

H_{02}: There is no significant effect of import trade on private sector credit to gross domestic product in Nigeria.

H_{03}: Trade openness has not significantly affected private sector credit to gross domestic product in Nigeria.

H_{04}: Bank loans for international trade transactions has not significantly affected private sector credit to gross domestic product in Nigeria.

Scope of the Study

The content or unit scope of this study is on international trade and financial depth. The variable scope includes the following international trade variables export, import, trade openness and bank loans for international trade transactions while financial depth is proxied with credit to private sector ratio to GDP. The time scope is within the period 1986- 2021, reflecting the objective of the study and data set. The geographic scope is Nigeria while the analytical scope is econometric procedures

Significance of the Study

This study is significant in many ways. As contemporary research, it will benefit the following categories of persons: Financial and economic Stakeholders, Academic community, Policy makers, the Government and general public.

Literature Review

Financial Depth

According to Balago (2020), financial deepening is a combination of financial depth (size, and liquidity of market), ability of individual to access financial services and the efficiency of

the institutions to provide financial services at low cost and with sustainable revenue, and the level of activity of the capital market. Therefore, financial depth captures the financial sector relative to the economy (World Bank, 2023).

The World Bank further defined financial depth as the size of banks, other financial institutions, and financial markets in a country, taken together and compared to a measure of economic output. A proxy variable that has received much attention in the empirical literature in this regard is private credit relative to gross domestic product (GDP). More specifically, the variable is defined as domestic private credit to the real sector by deposit money banks as percentage of local currency GDP. The private credit, therefore, excludes credit issued to governments, government agencies, and public enterprises. It also excludes credit issued by central banks (World Bank, 2023).

Private credit to GDP differs widely across countries, and it correlates strongly with income level. For example, private credit to GDP is 103% in high-income countries, more than 4 times the average ratio in low-income countries (Demirgüç-Kunt and Levine, 2018). In relation to the Nigerian economy, private sector credit to GDP ratio still falls far below comparable world economies (Bankola, 2022).

Despite the fact that numerous empirical works in Nigeria focused on banks (due to data availability), measures of financial depth ideally, go beyond just banks. The recent economic crisis occasioned by the global pandemic in 2020 has highlighted issues in non-bank financial institutions (NBFIs) as major players in the financial inclusion drive of the Nigerian government. Even though the coverage of NBFIs by data is much less comprehensive than that of banks, nonetheless, they are part and parcel of the financial sector, but the particular focus of this present study is on banks.

International Trade

International trade is seen as business activities across the frontiers, that is, with the rest of the world (Hermant, 2019). It has been argued that it plays a prominent role in promoting economic growth and productivity, and development of the financial sector in general. Trade is a repeated sequence of exchanges of goods through market transactions (Ezirim, 2005). It is referred to as international trade if it involves transactions beyond the boundaries of a sovereign political authority.

Samuelson (2002) observed three differences between domestic and international trade as: first, there is room for expanded trading opportunities in international trade than domestic trade, second, international trade involves more than one sovereign nation while domestic trade is within frontiers of a nation, and third, international trade involves the use of exchange rates as it involves more than one currency while domestic involves only one currency. These differences, have important practical and economic consequences (Samuelson, 2002). The powers that lie behind external trade are that trade advances specialization, and specialization upsurges productivity. Jhingan (2012) opined that foreign trade has been and is today an economic force that has spurred commerce, advanced innovation, and development, spread social patterns, invigorate investigation and colonization, and persistently blew the fires of war.

Hermant (2019). Sun and Heshmati (2010) noted that international trade comes in three types namely: export Trade which is the sale of goods and services to foreign countries, import trade which involves the purchase of goods and services from other countries, and entrepot trade which involves the importation of goods and services for re-export to other countries like the importation of used cars in Benin Republic for re-export to Nigeria through the Seme border.

Overview of Nigerian Import Trade

Nigeria’s import is dominated by non-oil component consisting largely capital goods and raw materials. The value of non-oil import averaged ₦0.02 billion between 1986 and 1990. It grew gradually to ₦0.53 billion, ₦1,411.71 billion ₦3,792.14 billion during 1996-2000, 2001-2005 and 2006-2010, respectively because of increased demand to complement the Industrialisation drive of the government. Non-oil import maintained its upward trend averaging ₦6,751.28 billion and peaked at ₦8,613.94 billion from 2011-2014 and 2015, respectively. It however dropped to ₦7,095 billion in 2016 because of the demand management policies adopted by the CBN, high inflationary pressure and the depreciation of naira which made import more expensive. However, non-oil imports grew by more than 70% to above N20.9bn in 2021 (CBN, 2021). Top imports in Nigeria are Wheat ($1.42B), Rolled Tobacco ($1.34B), Refined Petroleum ($9.5B), Cars ($1.87B), and Special Purpose Ships ($1.01B). Imports are led by Refined Petroleum which accounts for 17.9% of the total imports of Nigeria, followed by Cars, which contribute 3.51%..

In value terms, the contribution of raw material (non-oil) export to total export remained dismal throughout the review period despite the government's effort to diversify the export base of the country. The value of non-oil export (mainly agricultural products) averaged ₦0.02 billion between 1986 and 1990 but rose to ₦0.07 billion and ₦0.08 billion during 1991-1995 and 2001-2005, respectively. It further rose to ₦0.22 billion and peaked at N0.97 billion from 2006-2010 and 2011-2014, respectively because of intensified government's effort to enhance value addition for export. However, the value of non-oil export declined to ₦0.68bn in 2016 and further decreased in 2021 below ₦0.6bn due largely to increased local demand, restrictions placed on some Nigerian agricultural goods from entering European markets due to non-compliance with international standards and high cost of production. Further analysis of the components of export indicates that the top exports of Nigeria are Refined Petroleum ($3.07B), Cocoa Beans ($561M), Crude Petroleum ($75.3B), Petroleum Gas ($10.3B), and Special Purpose Ships ($463M), according to the CBN (2021).

International Trade and Financial Depth Nexus in Nigeria

A trend analysis of key macroeconomic variables shows that the financial depth measured as the ratio of private sector credit to GDP (CP/GDP), at 7.84 per cent in 2004 increased marginally to 7.95 per cent in 2005 following the Banking system reform. From 2006, the ratio of private sector credit to GDP rose from 10.58 per cent in 2007 to 19.77 per cent at end-2008 and further to 22.79 per cent in 2009, reflecting the increased financing of economic activities attributable to the bank consolidation exercise, which led to the increase in the capital base of banks (Nwosu, Itodo and Ogbonnaya-Orji, 2021).

The gain of the bank consolidation was, however, short-lived following the impact of the 2007/2008 global financial crisis. The surge in capital funds encouraged high-risk investments by banks. Consequently, when the capital market bubble burst, the balance sheets of banks were significantly eroded to the extent that many of them relied mainly on the CBN discount window. International trade variables experienced marginal increase. Thus, the trade openness reached 40 per cent in 2008, while export exceeded import by a little over N5bn in the same period (CBN, 2021).

Following the supportive policy measures of the CBN to tackle the effect of the global financial crisis through the creation of framework for the establishment of FinTech companies, there was an observed increase in the financial depth to 22.75 per cent in 2009,

while trade growth fell slightly by 17.2 per cent (CBN, 2021). This was not surprising considering the view that, reviving international trade statistics will translate to financial sector stimulation. The 2009 banking crisis further threatened the stability of banks in the country as many of the banks that were involved in oil exports financing suffered huge losses when oil price fell, coupled with the regulatory actions requiring banks to provide for non-performing loans (NPLs) in their portfolios (Nwosu, Itodo and Ogbonnaya-Orji, 2021). The substantial increase in bank loans for international trade transactions to ₦1.71bn in 2021, the rise in trade openness same year to 23.6 per cent and the encouraging growth in both export and import trades could be attributed to increases in financial depth, and a sustained effort to diversify the economic base of the country (Afolabi, 2022).

Theoretical Review

Financial Intermediation Theory

The theory regarding financial intermediation was developed starting in the work of Gurley and Shaw (1960). The financial intermediation theory is based on the theory of information asymmetry and the agency theory. Efficient financial deepening promotes financial intermediation which is seen as the extent to which financial institutions bring deficit spending units and surplus spending units together (Ndebbio, 2020). An important question that this theory try to answer is why do investors first lend to banks who then lend to borrowers, instead of lending directly? Arguments point out to the fact that banks can effectively monitor borrowers and thus play the role of delegated monitoring.

The Trade Finance Theory

According to Auboin [2009], 90% of international trade involves trade finance. A substantial literature has recently been developed regarding this concept, defined as the set of tools used to finance world trade. The first form of trade finance is called trade credit. This corresponds to credit one firm grants another. Exporting firms also resort to intermediated trade finance, which involves a third party (i.e., a bank, an insurance company) between the importer and the exporter. The theoretical arguments suggesting that trade could also drive finance is upheld by the micro level perspective of the trade finance theory. After some micro-level considerations regarding the effect of exports on firms' financial constraints, Anne-Gaël (2019) adopted a macro-level approach and explored the extent to which international trade increases financial development.

Empirical Review

There have been several empirical works that have studied the link between financial deepening, foreign trade and economic growth in Nigeria and outside Nigeria. One of such works is that of Igwebuike, Udeh and Okonkwo (2019) who examined effect of financial deepening on the economic growth of Nigeria for the period 1981 to 2016, through two of the basic arms of the financial industry (Insurance companies and Banking Industry). They used secondary data on insurance industry premium to GDP, savings accumulated to GDP, credit to private sector as ratio of GDP; and savings accumulated to GDP. The analytical tool used was Ordinary Least Squares (OLS). It was found that insurance industry premium to GDP had positive but no significant effect while credit to private sector by commercial banks to GDP had positive and significant effect on economic growth in Nigeria. Based on the results of the study, they concluded that credit to private sector ratio to GDP had significant effect while insurance industry premium to GDP ratio had no significant effect on economic growth in Nigeria. They recommended, among others, that the insurance industry should undergo another round of recapitalization to further widen their capacity to provide cover in the economy.

Guru and Yadav (2019) examined the foremost pointers of financial development and macroeconomic variables with panel evidence from BRICS and found substantial variances concerning the selected economies. Using dynamic one-step SYS-GMM estimates, the study confirmed the presence of turnover ratio in indicators such as credit to deposit ratio, size of financial intermediaries, value of shares traded and credit to private sector which are positively significantly in determining economic growth, suggesting a complementary association between the banking sector development and stock market development indicators. They recommended that policymakers should therefore induce growth by engaging in actions to concurrent development of both the banking sector as well as stock market.

Nwosu, Itodo and Ogbonnaya-Orji (2021) investigated the nexus between financial deepening, financial system fragility and economic growth in Nigeria. Utilising quarterly data on real gross domestic product growth rate, financial deepening measured as the ratio of credit to private sector to nominal gross domestic product, non-performing loans index which was the ratio of non-performing loans to total gross loans of commercial banks; and Index of financial system fragility (Fragility) for the period 2007Q1-2018Q4. They employed a non-

linear co-integrating ARDL model. Their findings suggested the existence of a positive relationship between financial deepening and growth, but a non-linear relationship between financial system fragility and economic growth. The study recommended that the CBN should identify high-risk sectors, with the aim of encouraging banks to reduce lending to them, while working with the Securities and Exchange Commission (SEC) to provide sector-product-backed securities to enhance funding to those sectors.

Bankola (2022) examined financial deepening's impact on export accomplishment in Nigeria from 1981 to 2020. Domestic credit to private sector, money supply, foreign direct investment, rate of inflation and trade openness were the explanatory variables while export was the dependent variable. The Auto-Regressive Distributed Lag (ARDL) model and Error Correction Model (ECM) was employed using time series data. The results of the analysis showed a negative and significant effect of financial deepening on the country's export. Money supply, foreign direct investment and trade openness had positive influence, whereas inflation rate was negative on export accomplishment. The conclusion derived from the results was that financial deepening had negative and significant relationship with export accomplishment in Nigeria while the reverse was the case for money supply, foreign direct investment and trade openness; implying problems of credit allocation, financial regulation and supervision. The recommendation was that the Nigerian government through its policy originators should improve their efforts on institutional and policy reforms in order to expand export accomplishment by encouraging stable, sustainable and innovative financial deepening in a conducive economic and political environment for optimal growth performance.

Afolabi (2022) examined the impact of financial liberalization and trade openness as well as their interactive effects on the growth of the Nigerian economy using annual time-series data for the period, 1981 to 2018. Two equations were specified and estimated using the dynamic ordinary least square (DOLS) estimation technique and the granger causality test. The econometric analysis revealed that financial development, exchange rate, and interest rate spread had significant influence on real GDP in Nigeria while trade openness, as well as its interaction with financial development, did not exert any significant impact on economic growth in Nigeria. They concluded that design and implementation of a policy framework geared towards enhancing the intermediation efforts and deposit mobilization of the financial sector should be pursued and they advocated for trade performance in the country to be

improved through economic diversification to boost exports, raise the country competitiveness and increase her national output.

Methodology

Research Design

The research design employed in this research is the *ex-post facto* research design.

Model Specification

The model is a modification of the specification made in the work of Bankola (2022). The model of Bankola (2022) is specified thus:

$$EXP = \gamma_0 + \gamma_1 DCP + \gamma_2 BMS + \gamma_3 FDI + \gamma_4 INF + \gamma_5 TOP + \mu \qquad [i]$$

Where EXP = Export accomplishment; DCP = Domestic Credit to Private Sector; BMS = Broad Money (% of GDP); FDI = Foreign Direct Investment Net Inflows (% of GDP); INF = Inflation rate and TOP = Trade Openness.

However, by way of modification, we shall introduce bank loans in the model, introduce export and import trade as international trade variables while also retaining trade openness. Also, we shall replace the dependent variable with financial depth measure (CPS/GDP) and then re-specify to suit our purpose thus:

$$CPS/GDP = f(EXP, IMP, TRO, LON) \qquad [ii]$$

Where:

CPS/GDP = Ratio of credit to private sector to gross domestic product

EXP = Export trade in Nigeria

IMP = Import trade in Nigeria

TRO = Trade openness (ratio of total trade to GDP)

LON = Bank loans for international trade transactions

The functional equation [ii] was expressed in a linear econometric form thus:

$$CPS/GDP_t = \beta_0 + \beta_1 EXP_t + \beta_2 IMP_t + \beta_3 TRO_t + \beta_4 LON_t + \varepsilon_t \quad [iii]$$

Where:

β_0 is intercept of the model

$\beta_1 - \beta_4$ = Unknown coefficients of the model to be estimated

ε_t = Stochastic error term, and other variables are as previously defined.

Sources of Data

This study used secondary data that were sourced from the Central Bank of Nigeria Statistical Bulletin (2021) edition and the National Bureau of Statistics 2021 updated financial sector statistics.

Methods of Data Analysis

The data used in the estimation are time series and annual in nature and the following tests were conducted in this study; Augmented Dickey-Fuller (ADF) unit root test Johansen co-integration, autocorrelation and the error correction model (ECM) technique.

Data Analysis and Interpretation

Data Analysis

Unit Root Test Result

		ADF Test statistics			
Variable		**At Level**	**1st Difference**	**Decision**	**Order of Integration**
Ln CPS/GDP		-1.027110	-5.014142*	Stationary at 1st difference	I(1)
Ln EXP		-1.186060	-4.566102*	Stationary at 1st difference	I(1)
Ln IMP		-1.368667	-7.865552*	Stationary at 1st difference	I(1)
Ln TRO		-0.741922	-8.527088*	Stationary at 1st difference	I(1)
Ln LON		-0.903738	-5.124297*	Stationary at 1st difference	I(1)
Critical Values	1%	*-3.639407*	*-3.639407*		
	5%	*-2.951125*	*-2.951125*		
	10%	*-2.614300*	*-2.614300*		

Source: Researchers' Computation using E-Views 9.0

The unit root test above reveals that credit to private sector ratio to GDP (CPS/GDP), export trade (EXP), import trade (IMP), trade openness (TRO) and bank loans (LON) are all stationary at first difference and are said to be integrated of order one, I(1). This implies that the data have statistical properties that do not vary over time and so can be used for forecasting purposes. Based on this result, we test for the existence of a long-run relationship or cointegration amongst the variables.

Johansen Cointegration Test Result

Trace Statistic					**Max-Eigen Statistic**		
Hypothesized No of CE (S)	**Eigen-Value**	**Trace statistics**	**5% Critical Value**	**Prob.**	**Max-Eigen statistics**	**5% Critical value**	**Prob.**
None *	0.592410	83.11178	69.81889	0.0030	30.51474	23.87687	0.0196
At most 1 *	0.489985	52.59704	47.85613	0.0168	22.89268	20.58434	0.0181
At most 2	0.296601	29.70436	29.79707	0.0512	11.96224	19.13162	0.5514
At most 3	0.255394	17.74212	18.49471	0.2226	10.02659	14.26460	0.2102
At most 4	0.203021	7.715525	9.841466	0.5055	7.715525	8.841466	0.5055

Note: **Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
**Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

Source: Researchers' Computation using E-view 9

Both statistics show that at least one cointegrating equation existed at 5% level. The criteria for decision here is that there must be at least one cointegrating equation to reject the null hypothesis of no cointegration. Therefore, the Trace test indicated 2 cointegrating equations while the Max-eigen statistics showed 2 cointegrating equations. This surpasses the decision criteria and so we reject the null hypothesis and conclude that there is long run relationship between international trade and financial depth in Nigeria.

Short Run Model Estimates

Result of the short run estimates

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	3.995672	0.732860	5.452164	0.0000
EXP	0.061142	0.118622	0.515439	0.6104
IMP	-0.153896	0.137225	-1.121493	0.2720

TRO	-0.380954	0.158964	-2.396479	0.0237
LON	0.240469	0.059728	4.026052	0.0004
ECM(-1)	-0.052774	0.015872	-3.324975	0.0026

R-squared	0.870240	Mean dependent var	2.413466
Adjusted R-squared	0.846211	Durbin-Watson stat	1.556783
F-statistic	36.21536		
Prob(F-statistic)	0.000000		

Source: Researchers' Computation using E-view 9

The summary of the short run estimates showed the short run relationship between international trade variables and financial depth in Nigeria as well as the long run speed of adjustment. Bothe export and loans showed a positive coefficient of 0.06114 and 0.240469 which indicated a positive relationship between the two variables and financial depth in Nigeria. In other words, a unit change in export will result to 0.06114 and 0.240489 unit increase respectively in financial depth in Nigeria.

Conversely, import and trade openness recorded negative coefficients of -0.15389 and -0.380954 thereby exerting an inverse or negative relationship with financial depth in Nigeria for the period under review. What this implies is that for every unit change in imports and trade openness, financial depth decreases by 0.15396 and 0.380954 units respectively.

Export and import recorded probabilities of 0.6106 and 0.2720 which were respectively below the 5% significance level. This implies that the two variables have no significant impact on financial depth hence the null hypotheses are accepted. On the other hand, trade openness and loans showed probabilities of 0.0237 and 0.0004 lower than the 5% significance benchmark thereby revealing a significant correlation with financial depth in Nigeria. This indicates enough credence to reject the null hypotheses relating to the two variables.

The cointegrating equation is rightly signed with negative coefficient value of -0.52774 and significant probability of 0.0004 and this revealed the speed of adjustment of the model to long run equilibrium estimated at 5.28%. This implies that holding the international trade variables at a steady or constant state, financial depth will experience long run equilibrium at an annual rate of 5.28%.

The Durbin Watson statistic value of 1.5568 tends towards 2 than to 1 and therefore suggests that there is no autocorrelation in the model.

The Adjusted R-squared value of 0.8462 indicates that about 84.62 per cent of the variations in financial depth are being accounted for by the international trade variables.

The F-statistic value of 36.215 with p-value of 0.0000 is very significant and showed that the international trade variables jointly influence financial depth in Nigeria.

4.6 Data Interpretation

The data were tested for stationarity since they are time series in nature. The result showed that they were stationary at first difference or integrated of order 1 i.e. I(1) thereby giving the possibility of co-integration amongst the variables. The first difference stationarity of the data means that the statistical properties of the data were found to be constant and did not vary with time. The Johansen cointegration test used both the Trace Statistic and Max-Eigen Statistic to ascertain whether a long run relationship existed amongst the variables. The result showed that a significant long run relationship exist between international trade and financial depth in Nigeria. Thus, we proceeded with the Error Correction Model (ECM) estimates.

The result of the short run model showed that the coefficient of export was positive which meant that exports exerted 0.06114 unit effect on financial depth in Nigeria. This implied that a unit change in export resulted to 0.06114 unit increase in financial depth in Nigeria. We discovered that this positive effect of export conforms to our economic a-priori expectation. That is to say that Nigeria's export trade has led to increase in the depth of the financial sector owing to the pivotal role the sector plays in facilitating exchange of monetary values for goods and services exported. This agrees with the position of Do and Levchenko (2019) who stated that in countries with large financially intensive sectors like export production, financial systems are more developed. Also, the FinTech revolution has helped to expand Nigeria's export trade thus leading to positive trend of financial depth occasioned by increase in export trade (Ahonkhai, 2020). However, the increase in financial depth was not significant for the period which calls for more concerted efforts to make Nigeria a producing nation capable of exporting large percentage of goods to other countries of the world.

Conversely, import had negative coefficient of -0.15389 which indicated an inverse or negative relationship between imports and financial depth in Nigeria for the period under review. What this implied was that for every unit change in imports, financial depth decreased by 0.15396 unit. This did not meet out economic a-priori expectation. The dampening effect of financial depth and macroeconomic variables was also confirmed in the

work of Ogbuagu and Ewubare (2020). The implication is that import trade in Nigeria has not helped financial depth as it still exerts negative trend on financial depth but the negative effect was not significant.

Trade openness had negative effect on financial depth decreasing it significantly by 0.38095 units. This implies that Nigeria's ratio of trade to GDP has not been favorable to financial depth over the years. This was the similar finding of Bankola (2022) who confirmed that financial deepening had negative and significant relationship with export accomplishment in Nigeria. Also, Afolabi (2022) found that the interaction of trade openness with financial development, did not exert any significant impact on economic growth in Nigeria.

There was positive and significant effect of bank loans to international traders which meant that as bank loans increased, financial depth increases as well to the tune of 0.24047 units. This agreed with our economic a-priori expectation and goes a long way to prove the sustenance of the banking sector in enhancing financial depth through trade financing.

The intercept of the model shows that holding the international trade variables constant at zero, there will be 3.99567 units increase in financial depth which is attributable to the stochastic effects. Thus, holding the international trade variables at a steady state of increase of 5.28 per cent annually, financial depth will experience long run equilibrium movement. The international trade variables jointly affect financial depth and accounted for up to 84.62 per cent of the variations in financial depth in Nigeria

Summary, Conclusion and Recommendations

Summary of Findings

Summarily, the findings revealed that:

- Export trade exerted positive and insignificant impact on financial depth in Nigeria for the period reviewed;
- There was a negative and insignificant effect of import trade on financial depth in Nigeria.
- Trade openness negatively and significantly affected financial depth in Nigeria for the period reviewed;

❖ Bank loans for international trade transactions had positive and significant effect on financial depth in Nigeria.

Conclusion

Given these findings, we can simply conclude that international trade is one major driver of financial depth in Nigeria

Recommendations

The following recommendations should be considered:

1. Nigeria should intensify efforts towards a productive economy so as to increase the country's export trade which will in turn enhance the role of the financial sector in their trade financing functions.
2. Import trade should be channeled towards technological and innovative products in order to deepen financial services and increase the technical know-how of Nigeria through increase in financial depth.
3. Government should strive to enhance trade openness through the removal of certain restrictions on trade financing.
4. The increase effect of bank loans on financial depth should be sustained by way of licensing more banks to make trade effective and seamless.

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