

## TRADE OPENNESS, FINANCIAL OPENNESS AND FINANCIAL DEVELOPMENT: EVIDENCE FROM SUB-SAHARAN AFRICAN COUNTRIES

DAMOLA A. ODEWALE

FINANCE AND BANKING DEPARTMENT, FACULTY OF MANAGEMENT SCIENCES,  
UNIVERSITY OF PORT HARCOURT, CHOBA, PORT HARCOURT, NIGERIA

&

EMEKA J. OKEREKE PhD.

FINANCE AND BANKING DEPARTMENT, FACULTY OF MANAGEMENT SCIENCES,  
UNIVERSITY OF PORT HARCOURT, CHOBA, PORT HARCOURT, NIGERIA

### **Abstract**

*This study seeks to empirically appraise the association between trade openness, financial openness, and financial development in some sub-saharan African countries over the time period of 2000 to 2017, utilizing proxies such as Total Export ratio to Gross Domestic Product, ratio of Broad Money Supply to Gross Domestic Product, and Private Sector Credit to Gross Domestic Product to achieve the objectives of the study, the panel data analysis technique, unit root test and other diagnostic tests were employed. Empirical results show that there exists some form of relationship among the selected variables. The major interference of this research is that selected trade openness activities underperformed in influencing the macroeconomic performance as captured by in sub-saharan African countries within the reviewed period, showing a prevalence of uncurtail parallel market activities and the significant level of dependency. The study recommends that diversification is needed in the economy as there still exist a level of dependency on( the crude-oil like the case of Nigeria)so as to cushion the shocks associated with such in the world market, and export sectors must be revitalized to reposition the sub-saharan African countries strength in export activities.*

*Key Words: Broad Money Supply, Private Sector Credit, Total Export, and Gross Domestic Product.*

### **Introduction**

Despite reforms, Sub-Saharan Africa Countries (SSAC) continues to lag behind other regions in terms of financial development. At least by one measure (private sector credit-to-GDP ratio). Sub-Saharan Africa Countries are barely catching up to levels attained in the early 1980s. In fact, the financial sectors of most countries in SSA still remain among the shallowest in the world and, within SSAC, they are shallower. (Ehigiamusoe and Lean,2017).

A number of factors have been proposed to explain this relative backwardness. Ho, & lyke (2018) show that differences in institutional quality can to a large extent explain cross-country differences in financial development in the region. David and Moheput (2014) stress the role of informality, lack of scale in national financial systems, weak governance, and political and economic instability in explaining the lack of financial development in SSAC. Asghar and Zakir (2014) argue that the sparse population density of many

SSA countries appears to be the main reason underlying the relative underdevelopment of their financial systems.

Over the past four decades, financial sector development in SSAC has been uneven and suffered reversals at certain times. There was relatively rapid financial deepening during the greater part of the 1970s, a time of relatively high economic growth. During the vast majority of the 1980s, the "lost decade", there was moderately high financial development, and even reversal of the gains from the 1970s, especially during the early 1990s. This trend was reversed from the latter period through the 2000s. Indeed, there has been acceleration in financial development especially from 2006. (Ibrahim,2016).

Globalization on the other hand has reshaped the economic outline of the world in twentieth century. The world economic and financial linkages have become stronger across global economies due to economic integration. In economic literature, the link between trade

openness, financial openness and financial sector development has for quite some time involved fascination for conversation. The received literature on the subject featured various channels through which trade openness and financial openness is thought to influence financial sector development. To make reference to two or three, a liberal exchange system with more prominent challenge and better asset designation improves the effectiveness and better resource allocation improves the efficiency. Similarly, greater integration of world markets permits the economies to overcome size limits and take advantage from economies of scale. Literature also highlights that import of intermediate and capital goods support the process of growth by increasing the productive ability of the economy.

This investigation targets exploring the reasons that could explain these trends in Sub-Saharan African Countries. In a research by Yilmaz and others (2003), they put forward a hypothesis that trade openness and financial openness are a necessary condition for genuine financial development. They argued that developing "institutions" without greater integration into the rest of the world, is inadequate to foster financial development due to political economic considerations. Their argument is based on the observation that a country's dominant economic incumbents see financial sector development as a threat and would act against it. Only if borders are open to both trade and capital flows are countries likely to see the opposition to financial development most muted and development flourish, because more firms are able to benefit from the opening.

### **Statement of Problem**

Openness, financial openness and financial sector development have assumed greater significance for a country's economic performance in recent times, particularly in the wake of the recent global financial meltdown with wide-ranging financial impacts and arrangement reactions. There was already a comprehensive critique of the economic policies advocated by the International Monetary Fund (IMF) and other international financial institutions as they 'often resulted in stagnating

growth, crises, and recessions for client countries. Thus, the complex issue of trade and financial sector opening and/or deepening becomes even more important than before.

Indeed, many theoretical and empirical studies have devoted considerable attention to the association between economic performance and trade liberalization as well as to the connections between financial market improvement and financial development. However, the issue of direct linkages between trade openness, financial openness and financial sector development has not received commensurate attention in the literature. At the very outset, it may be emphasized that financial sector development is akin to financial deepening in any economy. Financial deepening refers to increased provision of credit or liquidity in the economy. Increased liquidity could have both domestic and external sources and the external sources of deepening therefore are tantamount to financial liberalization.

Lack of literature notwithstanding, the logic of a direct connection between trade openness, financial openness and financial development/deepening in an economy is genuinely self-evident. While trade liberalization requires concomitant financial sector reforms and integration with the global markets to expand trade flows, financial integration with global markets could also cause trade flows through improving item intensity due to increased availability of cheaper and secured financial capital.

This study asserts that *ceteris paribus* trade and financial openness and financial development are complementary and econometrically tests the direct linkages between the terms. The problem statement raised by this paper is whether the development of the financial system in an economy directly affected by trade openness and does trade openness and financial openness stimulate financial sector development? This question will be answered in the course of this study.

From another perspective, overtime economists have developed two diverse hypotheses about growth effectiveness of financial system. In the first place, "demand-lead hypothesis" created by Robinson (1952), claims that finance do not apply a

causal effect on economic growth. He contended that, economic growth is for the most part followed by the money related advancement essentially because of demand for financial services. According to this view, financial services do not cause growth in the economy. The improvements in economy rise because of the demand for financial services which results in emergence of more financial organizations and financial services and products in the market. Later on, Patrick, (1966) extended the idea with bifurcation of stages. Patrick argued that at the initial stages of development, an economy makes use of the supply-lead finance, but as the economy develops, the demand-lead finance dominates. The second strand of literature discusses the "finance-led hypothesis", which was empirically tested by McKinnon (1973), Shaw (1973) and Pagano (1993) among others. This hypothesis states that financial sector development cause growth in real sector and thus contributes to the economic growth.

These restricting speculations provides avenue to investigate the role of financial sector development on trade openness, which thusly influences financial development. A significant body of literature proposes a strong and positive connection between trade liberalization, financial development and economic growth. It is generally accepted that liberalized trade and financial policies lessens the inefficiencies in the creation procedure which thus boosts economic growth. These studies accompanied the conclusion that nations having increasingly open policies for trade and financial sector, grow faster. Openness is expected to have positive impacts on economic growth (Jin, 2000; Fry, 1997) in Adesoji and Sotubo 2013).

### **Aim and Objectives of the Study**

The aim of this study is to investigate the nature, magnitude and direction of relationship between trade openness, financial openness and financial development in selected sub-Saharan Africa countries. The objectives are to:

1. Examine the nature of relationship between total trade and ratio of broad money supply to gross domestic product in selected sub-saharan African countries.

2. Determine the nature of relationship between total trade and private sector credit to GDP in selected sub-saharan African countries.
3. Investigate the nature of relationship between ratio of broad money supply to gross domestic product and private sector credit to GDP in selected sub-saharan African countries.
4. To determine the influence of changes in total trade and ratio of broad money supply to gross domestic product on private sector credit to GDP.

### **Research Questions**

1. What is the nature of relationship between total trade and ratio of broad money supply to gross domestic product in selected sub-saharan African countries?
2. What is the nature of relationship between total trade and private sector credit to GDP in selected sub-saharan African countries?
3. What is the nature of relationship between ratio of broad money supply to gross domestic product and private sector credit to GDP in selected sub-saharan African countries?
4. What is the influence of changes in total trade and ratio of broad money supply to gross domestic product on private sector credit to GDP in sub-saharan African Countries?

### **Significance and Scope of the Study**

The findings of this study will be useful to rating agencies in their effort to fashion out dynamic and reliable policy strategy for rating investment activities. The outcome of this work will be of immense importance to researchers as it will help them resolve the controversy as to whether the interaction between trade openness and financial openness have any impact on Nigerian financial development of sub-saharan African countries or not.

The content of this study will encompass the activities of total trade which is the ratio of total export and import to gross domestic product in some sub-saharan African countries, also the ratio of

broad money supply to gross domestic product and liquid liabilities of this sub-saharan African countries.

## **Review of Related Literatures**

### **Conceptual Issues**

#### **Openness and Financial Development—An Overview of the Literature**

Mechanisms Linking Openness and Financial Development Perhaps the most direct channel through which openness would affect financial development is through increases in the size of markets and demand for financial services. In this context, increased trade openness generates demand for new financial products, including instruments for trade finance and for hedging of risks (Svaleryd and Vlachos, 2002) in Elie (2015). In addition, capital account openness may expand liquidity and decrease the expense of capital, thus encouraging financial development. Levine (2001) in Ersoy (2015) gives some proof that abolishing restrictions on international portfolio flows tends to increase stock market liquidity.

#### **The Link between the Financial Development and the Institutional Development**

The connection between the financial openness and the financial development is not liberated from vagueness. Indeed, in order to benefit from the capital account liberalization, the financial systems have to be fortified by a created legitimate and institutional system. In particular, the economies where the legal and judicial system don't guarantee the property rights, or don't look after efficiently the enforcement of financial contracts, suffer in general from a lack of incentives to lending activities and the settlement of financial transactions. Lenders and borrowers' legal rights, the credibility and straightforwardness of laws sorting out the financial sector are the fundamental factors that oversee the financial sector in an economy, and give or not incentives to turn to the financial system.

### **Theoretical Postulations**

The theoretical basis for this study is provided by these theories.

#### **The Theories of Export/International Trade**

##### **A) Mercantilism Theory**

This theory was developed in the sixteenth century as one of the earliest efforts to develop an export and International trade theory. The theory expressed that a nation's wealth was determined by the amount of its gold and silver possessions. In its simplest sense, mercantilists accepted that a country should increase its holdings of gold and silver by advancing exports and discouraging imports. In other words, if people in other countries buy more from you, that is exports, than they sell to you (imports), then they have to pay you the difference in gold and silver. (Adesoji and Sotubo, 2013). The goal of every nation was to exchange an overflow or a circumstance of exports greater than the value of estimation of imports, and to avoid a trade deficit, or a situation where the value of imports is greater than the value of exports.

##### **B) The Theory of Absolute Advantage**

In 1776, Adam Smith questioned the leading mercantile theory of the time in the wealth of Nations and also in his research titled "an inquiry into the nature and causes of wealth of nations". (London: Strahan and T. Cadell, 1776) in Usman (2009). Adam Smith offered a new trade theory called absolute advantage, which focused on the ability of a country to produce a good more efficiently than another nation. Smith reasoned that trade between countries shouldn't be regulated or restricted by government policy or intervention. He stated that trade should flow naturally according to market forces.

##### **C) The Theory of Comparative Advantage**

Comparative advantage occurs when a country cannot produce a product more efficiently than the other country; however, it can produce that product better and more efficiently than it does other goods. The challenge to the absolute advantage theory is that some countries may be better at producing both goods and, therefore, have an advantage in many areas. Comparative advantage focuses on the relative productivity differences, whereas absolute advantage looks at the absolute productivity. A person or country will specialize in doing what they do relatively better. In reality, the world economy is more complex and consists of more than two countries and products. Barriers to

trade may exist, and goods must be transported, stored, and distributed.

#### **D) Heckscher-Ohlin Theory (Factor Proportions Theory)**

This theory states that countries would produce and export goods that requires resources or factors that were in great supply and, therefore, cheaper production factors. In contrast, countries would import goods that require resources that were in short supply, but higher demand. The theory is based on the country's production factors which include land, labour and capital which provide the funds for investment in plants and equipment. (Adesoji and Sotubo, 2013). It is determined that the cost of any factor or resources was a factor of supply and demand. For example, China and India are home to cheap, large pools of labour. Hence, these countries have become the optimal locations for labour-incentive industries like textiles and garments.

#### **Theories of Foreign Investment**

##### **A) Production Cycle Theory of Vernon**

Production cycle theory developed by Vernon in 1966 was used to explain certain types of foreign direct investment made by U.S. companies in Western Europe after the Second World War in the manufacturing industry.

Vernon believes that there are four stages of production cycle: innovation, growth, maturity and decline. According to Vernon, in the first stage the U.S. transnational companies create new innovative products for local consumption and export the surplus in order to serve also the foreign markets.

##### **B) The Theory of Exchange Rates on Imperfect Capital Markets**

This is another theory which tried to explain Foreign Direct Investment. Initially the foreign exchange risk has been analyzed from the perspective of international trade. Itagaki (1981) and Cushman (1985) in Akangbe (1999) analyzed the influence of uncertainty as a factor of Foreign Direct Investment. In the only empirical analysis made so far, Cushman shows that real exchange rate increase stimulated Foreign Direct Investment made

by USD, while a foreign currency appreciation has reduced American Foreign Direct Investment.

#### **Empirical Review**

Olayungbo and Ahmod (2019) studied Remittances, trade openness, financial development and economic growth in sub-Saharan African countries: evidence from a PMA- ARDL approach over the period 2000 and 2015. The study used both pooled mean Group and mean group/ARDL estimations with panel unit root and cointegration tests. The study was proxied by Gross Domestic Product per labour, personal remittances, foreign direct investment, Broad Money supply, that is, bank deposits and other deposits including notes and coin, trade openness, inflation and population growth. The data was sourced from (World Development Indicator) WDI 2017. After establishing cointegration, remittance and financial development were found to have positive effects on economic growth both in the short and in the long-run. The interactive term showed that financial development acted as a substitute in the remittance's growth relationship. Finally, unidirectional causal relationship was found to exist from GDP to remittances and from financial development to GDP. However, no causality existed between remittances and financial development in the sub-Saharan African countries. It was recommended that improved financial services, financial instruments and the payments system are necessary for economic growth in SSA countries both in the short run and long-run. The focus in the SSA should be towards improving the financial sector performance through the formulation and implementation of sound financial reforms to deepen the financial sectors. There should be diversification of the banking services and increased financial inclusion such as the use of mobile banking, internet banking, automated teller Machines (ATM) and rural banking that will integrate more remittance-recipient households in SSA from the informal financial sectors into the formal financial system for inclusive growth.

Muhammad, Loganathan, Dalia, Abbas and Asan (2019) Studied the effect of financial development- trade openness nexus on Nigeria's

dynamic economic growth. Annual frequency data 1980 to 2016 from World Development Indicators (World Bank 2018) was used. The study attempts to investigate the short and long- run cointegration with the causal nexus between financial developments, trade and output growth in Nigeria. The financial instability index was generated using the residual based analysis to account for the effect of financial instability on growth. The study used Autoregressive distributed lag (ARDL) model to examine the cointegration effects. The study also used non-Granger causality analysis to determine the direction causality between the variables. It was found out that financial instability retards growth significantly while financial liberalization indicates positive impact, but insignificant effect on growth. It was concluded in the study that there is a long- run nexus between financial development and economic growth in Nigeria. It was recommended that proactive measures need to be established to sustain economic growth in the country through enhancing productivity level, encouraging savings culture and economizing resources to promote capital accumulation.

Abderrazak, Badreddine and Elovalidi (2018) carried out a study in Trade and financial openness and Economic Growth in Morocco: Theoretical Debate. The Proxies/Measures include credit to private sector, liquid liabilities to GDP and Real Gross domestic product (GDP). Short run and long run impact of trade openness and financial openness were checked on Economic growth proxied by Real Gross Domestic Product and the year of study span across 1980 to 2017. Using Johannes cointegration test. It was found out the trade openness and financial openness has both long run relationship and short run relationship with economic growth. The policy recommendation was that Government/Policy Makers should foster the development of trade openness and financial openness.

Eligiamusoe and Lean (2018) carried out a study on tripartite Analysis of Financial development, trade openness and economic Growth. Evidence from Ghana, Nigeria and South Africa for the period 1980- 2014. Data were sourced from the World Bank's development indicators. The

proxies are real GDP per capita growth rates; credit to private sector as a ratio of GDP, trade Openness as ratio GDP are all in natural logarithm. The study reveals a long- run causal relationship between financial development, trade openness and economic growth thereby supporting finance and trade led growth hypotheses for Ghana, Nigeria and South Africa. Long run causality from financial development and economic growth to trade openness is found for Ghana. The study shows that financial development and trade openness can be deployed to accelerated growth, while growth and financial development can be used to promote trade openness. Also trade openness spurs financial development. It was established that a tripartite relationship exists between the three variables. Hence interdependence between financial development, trade openness and economic growth is found and it is recommended that government policies should focus more on the development of the financial sector and on the trade openness to enhance economic growth.

Yakabu and Akanegbu (2018) empirically examined the impact of trade openness on economic growth in Nigeria for the period 1981 to 2017. The measures include real GDP at time  $t$ , degree of openness at time  $t$ , foreign exchange rate at time  $t$ , per capita income at time  $t$ . The ordinary least square technique to examine the impact of trade openness of GDP. Series data were extracted from World Bank data 2017. The results show that all variables listed above were positive and statistically significant at first difference, the study found that the variables are cointegrated and unidirectional causality was found from RGDP to degree of Openness. The study therefore recommends that policy makers should adopt policies on trade liberation such as reduction of non-tariff barriers, reducing tariffs, reducing or eliminating quotas that inalienable the ecosystem grow at spectacular rates.

Ho and lyke 2018 examined short and Long- term impact of trade Openness on financial development in sub- Saharan Africa. A board of 43 sub- Saharan African countries over period 1996 to 2014 was studied. The study was provided by private sector credit extension as a percentage of

GDP, Liquid liabilities to GDP, deposit Money banks assets to GDP (%), and Gross Domestic development growth rate. It was found out that trade openness enhances financial development in the long- term. The effect of openness is not clear but appears to negative in the short run. The study suggests a non- linear relationship between financial development and trade openness. The policy recommendation is to encourage more studies that seek to address the issue of model uncertainty as to the connection to the relationship between financial development and openness will certainly enrich our understanding.

Yilmaz, Fatma and Isil (2017) empirically investigated the interaction between openness and financial development in central and eastern European countries during 1996-2014 period employing conintegration tests of Westerlund and Edgerton (2017) and causality test of Dumitrescu and Hurlin (2012). The proxies were. Domestic credit to private sector (% of GDP) sum of export and imports (% of GDP, Financial openness index. The findings revealed that trade openness affected financial sector development positively in the long term, there was also one-way causality from financial openness to financial sector development. It was suggested that institutional and regulatory quality is necessary for positive interaction between openness and development of financial sector.

Alex, Gift and Pierre (2017) investigated spatial externalities, openness, and financial development in Southern African Development Community (SADC). The study specifically tests whether financially less developed economies in SADC benefit from their linkages with and proximity to South Africa, a financially developed economy. The variables used include Domestic credit, Liquid liabilities, Bank credit to private sectors, Broad Money, Growth in Real Gross Domestic product per capita, Real interest rate, trade openness and financial openness from 1985 to 2014. Generalized Moments (GMM) and dynamic fixed effect estimation were employed in the analysis. The results established that financial development in the SADC is not immune to spatial externalities. Results also indicate that monetary measures are more sensitive to geography than credit. Implicitly, the

spatial variables has a strong complementary effect in the money market and a relatively inconsistent complimentary effect in the credit market. The study also established that the current level of trade and financial openness in SADC is not sufficient to encourage financial development in other subsectors of the financial sector, beyond money. It was therefore recommended that SADC countries further need to extensively develop their financial sectors in order to counter the elements of crowding out of domestic credit by credit from South Africa.

Ayinde and Yinusa (2016) empirically investigated the relationship between financial development and inclusive growth in Nigeria from 1980-2013. The variables include trade openness, credit to the private sector and broad money ( $M_2$ ) as ratio of GDP respectively. The data were gotten from the World Development Indicator (WDI). The study found out that either a low level or significant level of openness on trade and capital venture are alluring for inclusive growth in Nigeria, the result also reveal outcome additionally uncover that government involvement in the operations of the Nigerian economy and financial openness are sensitive to the pattern of financial development. It was recommended that the contribution of government in guaranteeing fitting degree of financial widening through the central bank operations creates a positive effect on growth.

Iheanachuo (2016) examined the impact of financial development on Economic Growth in Nigeria using an ARDL Analysis. The period of the study ranges from 1981 to 2011 using annual data covering the period. The results show that the connection between financial development and economic growth in Nigeria is not significantly different from what has been watched by and large in oil-dependent economies. Also, the connection between financial intermediary improvement and economic growth in Nigeria is found to be inconsequential pessimistic in the long- run and essentially adverse in the short run. The variables include real GDP per capita, domestic bank credit to the private sector divided by GDP, liquid liabilities to GDP, Deposit Money Bank assets to GDP and bank deposits to GDP. It was recommended that the

government should look into diversifying the economy to a more productive sector.

Nwinee and Olulu- Briggs (2016) investigated trade openness, financial development and the Nigerian Economy. The variables under study include growth rate of the gross domestic product, total trade (Exports + Imports) to the Gross Domestic Product, Real effective exchange rate to the GDP (REER), foreign direct investment (FDI) to the GDP and private sector credit to the GDP. Yearly time series data for the period 1981 to 2013 from the central Bank of Nigeria statistical bulletin was used to estimate long and short run relationship as well as causal effects. The unit root test result showed that the variables were stationary at level. The Johansen co- integration gave evidence of four co-integrating equations which explains that along-run equilibrium relationship exists among the variables. The vector Error correction model and Granger causality tests were likewise done. The impulse response and variance decomposition test indicate both positive and negative shocks. It was stated that the overall results obtained are in line with apriori expectations. It was recommended that there should be flexibility in loan policies and interest rates by financial institutions to encourage lending to the real sector. There ought to likewise be more reforms in our foreign policies in order to attract more foreign direct investments, more regulations in the financial sector to forestall bankruptcy and corruption and the practice of all- inclusive democratic principles.

### Gap in Literature

From the foregoing, most studies carried out over the years concentrated on either trade openness and financial development or financial openness and financial development, with little or no attempt at capturing trade openness, financial openness and financial development in one study. Also, the attempts made by some researchers in a similar work didn't focus on sub-saharan African Countries, but narrowed down to a specific country. This study is a more robust attempt at investigating the connectivity between the components of trade openness, financial openness and financial development in some selected sub-saharan

countries. Also, the analytical tools/models used by most of the understudied researchers are basically ordinary least square and granger causality tests. This investigation endeavors to present new models/tools including panel data tools in carrying out the study so as to capture the transmission mechanism among the correlates.

### Research Methodology

The data used for this study are time series and cross-sectional data collected over a successive point in time. Therefore, the research design appropriate for the study, considering the research problem, the questions and the hypotheses to be tested is ex post -facto research design. This is in tandem with earlier work done in this area of study (Imoughele & Ismaila, 2015). The population of this study includes the trade openness, financial openness and financial development activities. The population of the study dataset is selected six sub-saharan African nations.

The sample of the study was arrived at through purposive sampling technique. Thus, the sample of the study covers the period of seventeen years from 2000 to 2017. The sample covers six sub-saharan African nations. The countries under consideration are: Nigeria, Kenya, Gambia, Ghana, Mali, and Senegal. The data was collected from the world development indicators and the statistical bulletin of the Central Bank of Nigeria. As such, the data used for the analysis in the study was extracted from secondary source.

### Model Specification

Our selected data would be analyzed using the method of panel data technique. The justification for this technique is due to the nature of our data. As proposed by Zellner (1962) this has found wide application in finance where requirement is to closely related variables over time. Any data set with dual element of a time series and cross-sectional characteristic is analyzed by the use of panel data analytical technique. A panel dataset is generally specified as follows:

$$y_{it} = \alpha + \beta x_{it} + u_{it} \dots \dots \dots \text{eqn(3.1)}$$



$$TOT_{it}=f(BMS_{it},PSC_{it})\dots\dots\dots$$

$$\dots\dots\dots\text{eqn (3.2)}$$

Econometrically the nexus is further modelled as follows

$$LOGTOT_{it} = \beta_0 + \beta_1 LOGBMS_{it} + \beta_2 LOGPSC_{it} + u_{it}\dots\dots\dots\text{eqn(3.3)}$$

**Where,**

TOT = Total Trade

BMS = Broad Money Supply

PSC = Private Sector Credit

$u_{it}$  = disturbance term

## Presentation and Description of Results

### Discussion of Findings

Broad money supply ratio, and total trade, none has a significant effect on private sector credit. This goes against previous studies by Alafa and Njogho (2014) in which they discovered a positive relationship amongst these variables. The reason for the researcher negative output could largely be attributed to the poor state of import in some of the countries studied as some of the countries has been handicapped by its export dependency. Although this position was upheld by Akangbe(1999) who confirmed a negative relationship amongst employed variables.

However, for the direction of their relationships, we can see that while  $\beta_2$  has a negative sign for all models, the sign of  $\beta_1$  is mixed. This indicates that PSC is negatively related to both TOT while its relationship with BMS depends on which of the three models is a plausible description of the relationships being studied.

Panel B shows that the proportion of the variance of PSC that is due to the joint influence of BMS, and TOT is relatively high for the fixed effects model but very low and even negative for pooled regression and random effects models. This could be an indication of how poorly the capital inflows and outflows have performed towards raising economic growth and performance among the countries understudied. All these suggest that the fixed effects model provides much better estimates of the relationship between broad money supply and total trade variables and private sector credit.

In all the countries sampled (in the sub-saharan African region) have positive fixed effects, except Gambia whose unobserved coefficient is negative. This implies that for most of the selected countries, the unobserved factors such as foreign direct investment activities, inter-trade activities etc. have positive and highly significant effects on private sector credit.

### Serial Correlation Test Results

The results on pooled, fixed and random effect tests shows that the p value for Roa F statistic is larger than 5 percent. This denotes that in the null hypothesis, that there is no serial correlation and cannot be rejected. No serial correlation for the VEC specification for PSC, TOT, and BMS which is in tandem with the classical laws.

### Conclusions and Recommendations

In conclusion, it's been observed that several economists and financial experts have defended trade liberalization towards its presupposed influence and relationship with financial development following the endogenous model performance model exhibit in previous chapters which validates the fact that developing nations especially Nigeria is laddered with the potentials of meeting up with the technological advancements. Although other factors and parameters are required in breaking forward, which includes human and physical capital levels, unrestricted infrastructures that are found wanting in a country like Nigeria for example, and as such is likely to have no influence in the short run, there is severe potential in trade liberalization and financial openness influencing financial development in the nation which should be adequately capitalized upon by the economy towards a higher level of development.

In view of the discovered behaviours and relationships among employed variables the study proffers the following recommendations: For the countries studied to have significant contribution of trade and financial liberalization of their economic output, sustained policy aimed at the following should be adhered to:

- Significant sectors of each country's economy must be revitalized in order to

reposition the country's strength in such. For example, non-oil export sector must be revitalized in Nigeria in order to reposition Nigeria's strength in non-oil exports.

- Drastic measures must be taken to address the destructive influence of the foreign exchange parallel market.
- Diversification is needed in each country's economy as there still exist a level of dependency on the crude oil (like the case of Nigeria) so as to cushion the shocks associated with crude oil prices (like the case of Nigeria) in the world market.
- Infrastructural development needs to be accelerated especially power and road networks in order to reduce cost of production which consequently, will make sub-saharan African countries exports relatively price competitive in the international financial market.
- There should be further increase and concentration on building the social, human and physical infrastructure so as to maintain a competitive edge in the global market and boost each country's globalization index which would go a long way in increasing the foreign inflows of investment and capital.
- There should be an incentive towards the reduction of business production cost, via the creation and management of infrastructure. Diversification is needed in the economy of each of the sub-saharan country's economy as there still exists a level of dependency on one product or the other( crude oil in the case of Nigeria) so as to cushion the shocks associated with the such products in the world market and which would serve as a trigger to exportation.
- The government and financial institutions should maintain a steady set of policy to minimize the level of shocks which exhibited in the trends especially in the area of financial integration, as this could stimulate investment into nation's economy based on stability.

- The government should move towards influencing the international Chambers of Commerce and the European Union in creating an avenue for non-reciprocal exportation to heighten the growth level of the sub-saharan African country's economy and alleviate its poverty status.

### **Contributions to Knowledge**

From the empirical findings, this study has contributed to the identification of an erratic long run influence of the employed trade openness and financial openness variables with a heightened emphasis on the least utilized globalization index on financial development and performance. The study succeeded in capturing precisely the openness period and evaluating its influence on financial development unlike other studies that failed to examine the relevant frame. This study has succeeded in seeing the lack of associations of trade openness and financial performance within the sub-saharan African countries using the relevant time frame parameter which usually goes unnoticed in other studies. The findings of this study also attempt to establish and provide a template for the evaluation of dynamic influence of export activities on the nation's financial development. The study also provides the template for policy makers to formulate appropriate policy framework on trade activities and financial openness activities and the impact of both on financial development and performance of sub-saharan African countries.

### **References**

- Abaderrazak, E.K., Badreedine, C. & Eloualidi, M.N. (2018). Trade and Financial Openness and Economic Growth in Morocco: Theoretical Debate. *Journal of Economics and Finance*, 9 (4), 01-09.
- Adedoyin, Nwarji, I.I., Abiola, A. & Ahem V. (2016). Economic Growth, Financial development, and trade Openness in Nigeria: An application of the ARDL bound Testing approach. *Cogent Economics and Finance* (2016), 4: 1258810, 1-15.
- Adesoji, A.A & Sotubo, O.P (2013). Non-oil exports in the economic growth of Nigeria: A study

- of agricultural and mineral resources; *Journal of Educational and Social Research*, 3(2), 403-418.
- Akangbe, P.U. (1999). Trade Liberalization and economic growth in Nigeria. *Journal of Economics and sustainable development*, 6(3), 112-119.
- Alafa, S. & Njogho, P.L. (2014). Financial Openness and Economic development in Nigeria. Evidences from Past and Present Financial Openness activities. *Journal of Economics and Statistics*, 1(7), 33-46.
- Alex, B., Gift, M. & Pierre, L.R (2017). Spatial Externalities, Openness and Financial Development in the South African Development Community (SADC). *African Review of Economics and Finance*, 9 (1), 245-271.
- Altaee, H. H.A., Saban, M.S., & Ezat, S.E. (2014). Financial development, Trade openness, and Economic Growth of Sultanate of Oman. *Journal of Economics and Sustainable development*, 5 (23), 64-75.
- Asghar, N. Zakir, H. (2014). Financial development, trade openness and Economic Growth in developing countries; Recent evidence from panel data. *Pakistan Economic and Social Review*; 52 (2), 99- 126.
- Ayinde, T.O., & Yinusa, O.G. (2016). Financial development, and inclusive growth in Nigeria: A threshold analysis: *Economic* 12, (4), 326-346.
- Chengsi, Z. (2015). Trade Openness, financial Openness and financial development in China. *Journal of International Money and Finance*; 59 (3) 287- 309.
- David, A.C., Mlachila, M. & Moheput A. (2014). Does Openness matter for financial development in Africa? *International Monetary Fund Working paper* WP/14/94, 1-37.
- Dickson, O.O.& Eshenake , S.J. (2013). Financial Openness and Economic Growth in Nigeria: Vector Error Correction Approach, An International Multidisciplinary Journal Ethiopia, 7 (4), 79-12.
- Ehigiamusoe, K U., & Lean, H.H., (2018). Tripartite analysis of Financial development, trade Openness and economic growth: evidence from Ghana, Nigeria and South Africa. *University Saints Malaysia*, 12 (2), 189-206.
- Elie, N. (2015). Financial Development and Economic Growth in Sub-Saharan Africa. A dynamic Panel Data analysis. *European Journal of Sustainable Development*, 4 (2), 369-388.
- Elie, P. (2015) Financial Openness, trade analysis and Economic Growth in sub- Saharan African. A VAR Analysis. *European Journal of Sustainable development*, 6 (3), 52-71.
- Ersoy, I. (2015). The impact of Financial Openness on Financial development, Growth and Volatility in Turkey: *Economic research-Ekonomiska Istrazivanja* 24(3), 33-44.
- Ho, S.Y. & lyke, B. N. (2018). Short and Long-term Impact of Trade Openness on Financial Development in sub- Saharan Africa. *Munich personal RePEc Archive* 17:33 Utc1, 2-28.
- Ibrahim S.S & Nurudeen, T. (2016). The linkages between trade openness, Financial Openness and economic Growth in Nigeria. *Sokoto Journal of the Social Sciences*, 6 (2), 383-394.
- Iheanachuo, P.O. (2016). Financial development and economic growth in Nigeria. *International Journal of Academic Research in Accounting, Finance, and Management Sciences*, 5(1), 190- 198.
- Imoughele, L.E & Ismaila, M.(2015). The impact of exchange rate on Nigeria non-oil exports. *International Journal of Academic Research in Accounting, Finance, and Management Sciences*, 5(1), 190- 198.
- Muhammad, R.D., Loganathan, N., Dalia S., Abbas, M., &Asan, A.G.H., (2018). The effects of

- Financial development- trade openness nexus on Nigeria's dynamic economic growth, Economics and sociology. *Journal of Accounting and Economics*, 11 (4), 128-141.
- Nwinee, B.F., & Olulu-Briggs, O.V. (2016). Trade Openness, Financial development and the Nigerian Economy. *American International Journal of Contemporary Research*, 6(3), 170-183.
- Nwinee, B.F. (1999) International Financial. Fresbany Publishers, Bori, Nigeria.
- Olayungbo D.O. & Ahmod, Q. (2019) Remittances, Trade Openness, Financial Openness and Economic Growth in Sub-Saharan African Countries: Evidence from a pooled mean Group PMG-ARDL approach. *Financial Innovation*. Springer open (2019) 5:9.
- Oyejide, T.A. (2017). Managing Nigerian economy in and out of recession; Public lecture series, (13), 26-38.
- Paul Roner & Paul Ormerod (1980). "An empirical analysis of cross-national economic growth: *Journal of Monetary Economics*, 1(23-26).
- Paus, E. Rehinhardt, N. & Robinson, M. (2003). Trade liberalization and productivity growth in Latin America manufacturing,(1970-1988). *Policy Reform*, 6(1),1-15.
- Pham, T.H.H. (2010) Financial Development, Financial Openness and trade Openness: New evidence. EMR, University of Rouen, France, F- 76186.
- Raheem, I. & Busari, A. (2013). Non-oil export and economic growth in Nigeria: Does methodology matter? *Journal of Asian Development Study*, 2(2), 230-275.
- Ricardo, D. (1817). An inquiry into the nature and causes of wealth of nations. New York: Random House 1937.
- Riti, J.S & Gubak, H.D (2016). Growth of non-oil sectors; A key to diversification and economic performance in Nigeria. *Public Policy and Administration Research*, 6(3), 64-75.
- Samson, O.O & Udejaja, E.A. (2010) Financial Sector development and economic Growth: Empirical evidence from Nigeria. *Economic and Financial Review*, 48 (3), 91-123.
- Sbia, R. & Alrousan, S. (2016). Does financial development matters? Economic Research Note.
- Usman, O.A. (2008). Non-oil export determinant and economic growth in Nigeria. *European Journal of Business and Management*, 3(3), 236-257.
- Usman, O.A. & Salami, A.O. (2016). The contribution of Nigerian export import bank (NEXIM) towards export (non-oil) growth in Nigeria, (1990-2005). *International Business Management Journal*, 2(3), 85-90.
- Usman, O.A. (2009). Non-oil export determinant and economic growth in Nigeria (1988-2008). *European Journal of Business and Management*, 3(3), 236-257.
- Victoria, B. (2007). Exporting services exports. Tinwo Press: Ibadan. Wikipedia, (2017). Online dictionary.
- Yakubu, M.M. & Akanegbu, B.N, (2018). Trade Openness and economic growth: Evidence from Nigeria. *European Journal of Business, Economies and Accounting*, 6 (4), 30-44.
- Yilmaz, B.,Fatma, A., Isil, E. (2017). Openness and financial development in central and eastern European countries. *Studies in business and Economies*, 12 (3)5-16.
- Zahid, M. et al (2011). Exploring non-oil price, exchange rate nexus for Nigeria, FIW working paper, 71.

### Appendix

#### Serial Correlation Test Results

##### Serial Correlation Test on VEC Specification using PSC, TOT, and BMS, (Pooled effect test).

Lag	LRE* stat	Df	Prob.	Rao F-stat	Df	Prob.
1	10.09979	16	0.8614	0.609635	(16, 58.7)	0.8634

**Source: Author's Computation**

##### Serial Correlation Test on VEC Specification using PSC, TOT, and BMS, (Fixed effect test).

Lag	LRE* stat	Df	Prob.	Rao F-stat	Df	Prob.
1	10.07743	16	0.8531	0.613411	(16, 58.7)	0.8432

**Source: Author's Computation**

##### Serial Correlation Test on VEC Specification using PSC, TOT, and BMS, (Random effect test).

Lag	LRE* stat	Df	Prob.	Rao F-stat	Df	Prob.
1	10.08690	16	0.8224	0.602241	(16, 58.7)	0.8616

**Source: Author's Computation**

Pooled Effects Results

Dependent Variable: PSC\_TO\_GDP

Method: Panel Least Squares

Date: 02/02/20 Time: 08:57

Sample: 2000 2017

Periods included: 18

Cross-sections included: 6

Total panel (unbalanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.586613	0.263341	6.064072	0.0000
BMS_TO_GDP	0.700676	1.031850	0.781411	0.4545
TOT_TO_GDP	-0.895412	0.941138	-0.958854	0.3454
R-squared	0.094468	Mean dependent var	2.033122	
Adjusted R-squared	0.041554	S.D. dependent var	0.912653	
S.E. of regression	0.911184	Akaike info criterion	2.759205	
Sum squared resid	39.09187	Schwarz criterion	2.834221	
Log likelihood	-65.6233	Hannan-Quinn criter.	2.773216	
F-statistic	1.712208	Durbin-Watson stat	1.49435	
Prob(F-statistic)	0.171261			

**Source: Author's Computation****Fixed Effects Results**

Dependent Variable: PSC\_TO\_GDP

Method: Panel Least Squares

Date: 02/02/20 Time: 08:17

Sample: 2000 2017

Periods included: 18

Cross-sections included: 6

Total panel (unbalanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.133218	0.246996	7.246432	0.0000
BMS_TO_GDP	-0.471772	1.019080	-0.472312	0.6307
TOT_TO_GDP	-0.032244	0.873318	-0.042417	0.9167

**Effects Specification**

Cross-section fixed (dummy variables)

R-squared	0.353212	Mean dependent var	2.012222
Adjusted R-squared	0.233321	S.D. dependent var	0.934367
S.E. of regression	0.813311	Akaike info criterion	2.521892
Sum squared resid	27.90074	Schwarz criterion	2.931243
Log likelihood			
D	-56.933768	Hannan-Quinn criter.	2.715884
F-statistic	2.967102	Durbin-Watson stat	1.410764
Prob(F-statistic)	0.021832		

**Source: Author's Computation**

Cross-section random effects test equation:

Dependent Variable: PSC\_TO\_GDP

Method: Panel Least Squares

Date: 02/02/20 Time: 08:59

Sample: 2000 2017

Periods included: 18

Cross-sections included: 6

Total panel (unbalanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.117718	0.244226	6.246118	0.0000
BMS_TO_GDP	-0.474855	1.009980	-0.470162	0.6707
TOT_TO_GDP	-0.036834	0.876228	-0.042037	0.9313

**Effects Specification**

## Cross-section fixed (dummy variables)

---

R-squared	0.496513	Mean dependent var	2.005505
Adjusted R-squared	0.464030	S.D. dependent var	0.922463
S.E. of regression	0.843747	Akaike info criterion	2.887932
Sum squared resid	27.165475	Schwarz criterion	2.924343
Log likelihood	-56.28530	Hannan-Quinn criter.	2.718204
F-statistic	2.925679	Durbin-Watson stat	1.484536
Prob(F-statistic)	0.014332		

---

**Source: Author's Computation**