

A Global Financial Crises and International Trade – The Impact on Nigerian Exports

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ABSTRACT

This work was focused on the study of impact global financial crisis on Nigeria's exports. The years considered for study (14 years) included years before and after 2008, the year the crisis exploded. The methodology used was NLS and ARMA regression as well as Johansen cointegration test. The findings were that the changes in our export revenue were not directly attributed to the consequences of the crises but to structural imbalances in our macroeconomic variables. The decision was to reject the conjectures proposed at the beginning of the research which initially supported the position that the world financial crisis had a significant effect on the Nigerian economy. In conclusion it is apparent that with the level of financial development in the Nigerian financial system which is pale in comparison to that of countries like United States and Germany, the impact of the global financial crisis was not the cause divestments of foreign portfolio from the country, fall in price of crude oil, naira depreciation but structural imbalances in trade policy or bad timing of it's implementation. Recommendations to study includes conceptualizing and resourceful implementation of long lasting policy measures to address a possible adverse effect of financial crisis on our exports include focusing on changing the growth of demand by improving the supply-side competitiveness. Ensure expenditure reducing policies to limit imports and encourage local production. Improving macroeconomic stability in the long run through diversification away from oil since a Country relying on oil earnings is prone to shock if a financial crisis of epic proportions occurs. Reduction in government spending controlling consumer demands for foreign goods by taxes and interest rates should be properly timed since the interplay of these factors can affect our trade potentials.

KEYWORDS: *Global financial crises, International trade, impact and Nigerian exports*

1.1 Introduction

Economic crises can have significant negative effects on various parts of an economy. A major area that can be affected by economic downturns is free trade. Free trade is when countries import and export goods without government intervention. Free trade benefits companies because they can sell goods around the world to any willing buyer. Economic downturns or other crises often create difficult free trade practices, including the increasing involvement of national or international governments. Okore Amah Okore and Onoh John Okey (2013) in studying the impact of capital account liberalization on Nigeria's economic growth defined balance of payments (BOP) as the record of any payment or receipt between one nation and its nationals with any other country. The current account, the capital account, and the financial account make up a country's BOP.

Together, these three accounts tell a story about the state of an economy, its economic outlook, and its strategies for achieving its desired goals.

A large volume of imports and exports, for example, may indicate an open economy that supports free trade. On the other hand, a country that shows little international activity in its capital or financial account may have an underdeveloped capital market and little foreign currency entering the country in the form of foreign direct investment.

A current account records the flow of goods and services in and out of a country, including tangible goods, service fees, tourism receipts, and money sent directly to other countries either as aid or sent to families. A financial account measures the increases or decreases in international ownership assets that a country is associated with, while the capital account measures the capital expenditures and overall income of a country. Ugwuegbe S. Ugochukwu, Okore Amah Okore and John Okey Onoh (2013) in studying the impact of Foreign Direct Investment on the Nigerian economy found out that there is positive relationship between economic growth (GDP) and FDI. The result was positive but statistically insignificant contrary to similar studies. This insignificant relationship was attributed to insufficient FDI fund invested into the Nigerian economy which has not been able to significantly impact on the economic growth. The result of our study also portrays that domestic investment was also responsible for the growth witnessed in Nigeria's economy over the period under review. Their findings were similar to that of Onoh John Okey and Ndu-Okereke Edith Obianuju (2018) who analyzed the Nigerian response to oil over-dependence and the lack of practical emphasis on diversification. Overall most research on trade point to the magnitude and direction of trade restrictions, economic cooperation (i.e) O.P.E.C and the demand/supply models applied as the major determinants towards minimizing economic crisis or escalating it.

Modigliani and Ferri (1994) mentioned that adversity and prosperity can have a multiplier effect as globalization and technology continues to play increasing roles in international trade. The central focus of causes of financial crisis is can be seen in the relationship between trade policies across exporting nations.

1.2 Statement of the problem

Economic crisis caused by instability in exchange rates, inflation rates and imbalances in the payment system has continued to work at variance from the policy intentions of the government. This has caused export yields to decline in adversity to the monetary policy objectives of the government over the years and has posed budgetary constraints. The CBN has adopted several options among many alternatives but this has not prevented the debt profile of the state from increasing as well as the lop-sided distribution of factors of economic growth. Chen (2004) held that in theory as well as empirically, a clear interpretation of the relationship between exchange rate policies and monetary policy frame works remains vague. Before the emergence of deregulated markets in the last three decades, many scholars were of the opinion that high interest rates raises expectations on assets denominated in domestic currency which induces capital inflow and discourages speculation. However in recent times revisionist views by Radelet and Sachs (1998) and Stiglitz (1999) reveals that tighter monetary policies can be counterproductive in a market based economy if complementary externalities such as fiscal measures, balance of trade and external reserves are not taking into larger consideration. In studying empirical links between monetary policy instruments and exchange rate stability there have been gaps of the absence or

insufficient inclusions of the dynamics of liquidity ratio, cash reserve ratios, money supply in previous studies and far little has gone into attempts at modeling this factors in studying the subject in post-deregulated Nigerian financial markets. But with the danger of a possible global economic crisis our export value and gross national product is in a more precarious situation given the reality our heavy reliance on oil.

1.3 Objectives of the study

The main aim of this research is to examine the impact of global financial crises on Nigeria's exports. Other specific objectives are:

1. To determine the effect of Nigeria's current account balances to GDP ratio on exports
2. To find out the effect of a country's capital and financial account balances to GDP ratio on exports

1.4 Research hypotheses

The following hypotheses will be tested in this study:

Ho₁: The current account balances to GDP ratio has significant impact on exports

Ho₂: The capital and financial account balances to GDP ratio has significant effect on exports

2.0 Literature review

According to Michael J Thomasluis Araujo (1985) in his work "Theories of export behavior: A critical analysis "because the adoption of an export strategy involves a certain degrees of risk and commitment of resources, rationality on the part of export-initiating firms has been assumed". This supports the views of Eugene Fama in his work *Efficient Market Hypothesis*. However, in contemporary times behavioural finance proponents have questioned the rationale for assuming rationality as guiding investment decision making in absolute terms. Many scholars such Joseph E. Stiglitz (2018) are of the opinion that since the financial crises was largely avoidable given the role of speculators in the mortgage market that human behavior, especially sentiments on greed beclouded rational economic fundamentals and hence calls to question economic theories supporting absolute rationality.

Below are outlined implications of economic crisis by many theorists in studying international trade and finance according to Schervish, Mark J (1987).

Fewer Expanding Markets

Many countries fail to expand into other markets during an economic crisis. Fewer expanding markets often result in lower exports by other countries. Economic markets can expand rapidly based on the amount of free trade available to the country and other economic factors. While expanding markets often lead to higher profit opportunities for exporting countries, a significant reduction in expanding markets can leave exporting countries with a glut of unsold consumer goods.

Reduced Credit

Credit is often reduced during an economic crisis. Lower credit amounts usually limit the amount of goods companies can import from other countries. Individuals may also face credit problems during an economic crisis. Lower consumer credit limits the amount of consumer purchases,

leaving companies with higher inventory levels and the need to reduce imports from international countries.

Currency Fluctuations

Currency fluctuations related to an economic crisis can have negative effects during the free trade process. Countries often import important export goods based on the currency exchange rates from one country to another. If a country's currency rises or falls during the economic crisis, this can significantly change the advantage of importing and exporting goods. An increase in the currency exchange rate may lead to more expensive goods and fewer imports in the free trade market.

Detzer et al (2014), discussed the several theoretical models that support the work on Financial Crisis Contagion and most of which dates back to 1898 from Wicksellian model to present day Behavioural Finance model. These are discussed below:

KNUT WICKSELL'S MODEL (1898) – This model provides a framework of cumulative processes, and with it one of financial crises. Wicksell belongs to the Swedish school of neoclassical economists which in many ways stepped out of the traditional neoclassical model, that later became mainstream thinking. This approach attempts to explain global financial crisis in terms of rates of returns on investments with one being the real interest rate and the other being the money interest rate. The real sphere in the end dominates economic development, the monetary sphere sooner or later has to adjust.

JOHN MAYNARD KEYNES (1936) - Keynes proposed a model of a monetary production economy. In such an approach money plays a key role and penetrates all spheres of the economy. This model held that in a capitalist economy, a market between savings and investment which is equalized by an interest rate simply does not exist.

HYMAN MINSKY MODEL (1992) – This theory is based on two key theorems: An economy has financing regime under which it is stable and financing regime under which it is unstable. A financial system can be described as robust if small changes in cash flows, capitalization rates or in payment commitments will not inhibit the ability of most units to meet their financial commitments. The opposite is true of fragile systems. Minsky's theory of investment combines investment decisions of firms with their financing decisions and the willingness of lenders to provide external funds to them. This is important to determine the level of economic activity and also to explain the gradual move of the system towards instability.

BEHAVIOURAL FINANCE MODEL (1970) – This model tries to explain people's economic decisions by combining findings of behavioural and cognitive research with traditional economics and finance. Behavioural Finance shows that investors do not act in a rational way as implied by rational expectations and the efficient market hypothesis. It tries to give a more accurate picture of human behaviour in financial markets.

Traditional Trade Theories 3.1 Mercantilism Historically, mercantilist is regarded as the first theories of international trade. The theory was dominated by cross-border trade discussions and

policies in the West between 16th and 18th centuries. The model stressed that nations should simultaneously discourage imports through tariffs and quotas and encourages exports through export subsidies and support, in addition to the collection of precious metals. Mercantilism promoters promoted export trade because its increase a country's good (wealth) and vice versa to import Schervish, Mark J (1987). The theory argued that for a country to maintain a favourable balance of trade, import substitution and the accumulation of financial wealth (mostly gold and silver) should be encouraged, and export should be promoted. According to a notable promoter of mercantilism, Thomas Mun, "the ordinary means, therefore, to increase our wealth and treasure is by foreign trade, wherein we must ever observe this rule; to sell more to strangers yearly than we consume of theirs in value" Mun (1664, P. 7). The theory assumed that the world has a fixed and limited amount of wealth; therefore, for a nation to improve its wealth, it has to either directly or indirectly take some resources from another country.

Critics of the mercantilist model argued that the theory is 'a false unity to disparate events', which to some extent, hindered growth, especially from the developing nations. For instance, David Hume's price-specie-flow doctrine (18th century) argued that a favourable balance of trade would be possible, albeit only in the short run. Smith (1776) stressed that the mercantilist system was nothing but a tremendous conspiracy by the industrialists and merchants to the detriment of consumers. He argued that the theory not give domestic consumers the opportunity to choose varieties of products that were produced in other countries. The theory was regarded as a 'zero-sum game', or a 'win-lose game' which means that any gain made by a nation might bring a corresponding loss to the other country that involved in the trade.

Ekelund and Tollison (1981) viewed 'Mercantilism as a rent-seeking society'. 3.2 Absolute Advantage Trade Theory This theory was coined by Adam Smith (1776) who is regarded as the father of modern economics, and who was the first person that advocated free trade. He defines absolute advantage as the process by which an individual or country can produce a particular product at a lower cost than another or in the other country. Therefore, a country that trade across national borders should specialize in producing goods that it has an absolute advantage over another. Smith argued "what is prudence in the conduct of every private family can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy from them with some part of the produce of our own industry employed in a way in which we have some advantage" Smith (1776, p. 357). Smith maintained that the specialization in the production of goods and services would lead to increasing the total output.

In addition, global efficiency in the utilization of available resources when a country exports a portion of goods it produces at a lower cost and imports the products that its trading partner produces at a lower cost than at home. Smith argued that as advocated by mercantilism, it was impossible for countries involved in a trade to have benefited from such transactions because the export of one country is another country's import. According to Smith, all countries would benefit if they practice the free trade and specialize in what they could produce cheaply. This implies that trade is possible when a country produces a particular commodity using less labour about the other state and vice versa. Smith argued that, in the era of the free market, even though a state's

employment might exceed the domestic consumption, it would encourage the nation to improve its productive powers. Consequently, the revenue and wealth of the country would be tremendously accelerated. Smith assumed that every country or person had an absolute advantage over another.

What if the nation has an absolute advantage in producing everything? Will the country continue to produce all the products for domestic consumption and exports? Will it be possible for both countries to trade and have mutual benefits when one country produces all the goods? Comparative advantage theory has answered these questions. Comparative Advantage Theory To address some issues that were not answered in the absolute advantage theory, the theory of comparative advantage was propounded by David Ricardo (1817). Ricardo argued that countries would mutually benefit from trade even if one has an absolute advantage over the other in producing of all the goods that they trade. Ricardo stressed that the country should specialize in producing goods that it has the highest output at the lower opportunity cost relative in comparison with the other country.

Frictions in trade finance and the drying up of trade credit during the financial crisis are suspected to have an effect on the trade collapse. Studies that focus particularly on trade finance during financial crises usually have a strong regional focus on global banking centres, or are country specific for well developed countries, see Amiti and Weinstein (2010). Bricongne et al. (2012) also examine the compositional effect of external finance on trade with French firm level data and find that the firms more dependent on external finance are more affected by the crisis. More or less all studies find strong support that vertical linkages are quantitatively important in understanding the global trade collapse.

Global production patterns can thus be expected to explain part of the massive decline in international trade this time around, because the international supply chain intensified over the last couple of decades. The sensitivity of trade towards output has increased over time and an underlying reason for this could be the growing share of certain goods, which react in a more volatile way to economic frictions than total output Engel and Wang (2011). International production sharing or vertical specialisation leaves trade reactions increasingly sensitive to changes in the costs of international trade. Furthermore empirical studies distinguish between differentiated and nondifferentiated goods and find that this distinction is crucial for understanding the extent to which price declines contributed to the decline in trade values.

Only very few studies applied the gravity approach to examine the trade collapse during 2008/2009; although the gravity approach has proved very useful in the past with explaining about 80 per cent of the variance of trade flows. An exceptional study by Berman (2012) analyzes the effect of the recent financial crisis on international trade covering the whole post-war era on a global scale and using a gravity-based approach. The fall in trade caused by financial crises is magnified by the time-to-ship goods between the origin and the destination country. The authors strongly suggest that financial crises affect trade not only through demand but also through financial frictions that are specific to international trade.

Globalisation and the internationalisation of production patterns of some traded goods, however, have not been fully addressed by this study although previous studies suggest an important role of these for international trade. A study of Eaton (2011) includes also an element of the gravity model to calculate an indicator of trade frictions between individual countries. They come to the conclusion that the bulk of the decline in trade relative to GDP may be explained by shocks in the industrial demand for goods (80%), and it is only in some countries like in China and Japan, that trade decline can be explained to a large extent by increased trade frictions. The importance of the decline in demand is also emphasized by empirical studies.

The effects of the financial crisis on international trade The years directly after World War II were remarkably tranquil and marked by the quasi-absence of banking crises. If financial crises emerged at all, they were strictly currency crises. The Bretton Woods Agreements and the gold exchange standard stabilized global economic frictions. The fixation of countries exchange rates relative to the US-dollar was abandoned in 1971. Since then banking crises were more frequent and the share of countries experiencing banking crises was rapidly increasing. The crisis in Latin America of the 1970's and 1980's, the Japanese banking crisis in the early 1990's, the European and the Asian financial crises are well visible as peaks. The impetus of the share of countries experiencing banking crises in 2008/2009 came after a period that was relatively calm compared to the last ten years. The crisis had a tremendous effect on international trade. Even though the global economy has seen financial crises before 2008/2009, international trade declined for the first time after fifty years of more or less continuously rising trade volumes. In 2009 both developed and developing and emerging countries were experiencing trade declines, but developed countries had a relatively higher share in the decline of the total global trade drop. Even though developed countries accounted for the larger share of the total trade decline in 2009, some developing and emerging countries' exports were also hit hard during the financial crisis.

Only recently, Ogbulu (2017) in his work weak – market efficiency investigated the weak form efficiency level of the Nigerian Stock Exchange (NSE) over the period 1999-2013 using different data set namely daily, weekly, monthly and quarterly. The motivation for the investigation was anchored on the need to examine the plethora of reforms and deregulation policies undertaken by the regulatory authorities in Nigeria in recent times and the visible growth in the Nigerian stock market indices can be said to have been matched by a proportionate improvement in the efficiency level of the market. Ogbulu's choice in choosing different statistical and parametric tests involved a long-run dynamic analysis which was consistent across all testing techniques. In all, he concluded that that the NSE is weak form inefficient. This was consistent with similar studies such as N'dri, K.L (2015) and Ananzeh (2014). Their collective contribution to literature asserts the increasing dominance of behavioural models in contemporary finance. The financial crisis has largely been looked on hindsight as avoidable which by implication strongly suggests human behavior tending towards irrationality.

A number of notable empirical research work have adopted some of the above theories in studying the effects of Global Financial Crisis employing mainly empirical approach to analyse these economic disturbance, which are discussed below: Stokey and Lucas (2011) in their research on impact of liquidity on Global Financial crisis contagion opined that the collapse of the Lehman

Brothers in September 2008, with its negative impacts on spending and Gross Domestic Product in United States in the fourth quarter (2008) and preceding first quarter (2009), was not a modest recession. Diamond and Dybvig (1983), developed a simple and widely used theoretical model of bank runs. It describes an economy in terms of the production and consumption of a real good, but to apply their model to actual banking practice, it is helpful to give it a monetary interpretation. In this section, we will sketch their framework, so modified by lord Keynes (1936) in his original work. Diamond and Dybvig(1983) concluded that in an economy where cash is required for transactions and banks functions include holding excess cash for its customers, pooling their risk, there could be possibility of bank run in the event of financial crisis. The views of Diamond and Dybvig were shared in the conclusion established in another remarkable work by Cass and Shell (1983). They showed that accepting the principle that people act rationally—in their own interest—is not, with any generality, sufficient to determine a unique economic outcome.

Fractional reserve banking is but one of many examples where if people somehow come to expect a particular outcome, then that outcome will occur, but if they agree on another, the other will occur. Cass and Shell (1983) used the term sunspot equilibrium to emphasize that coordination of beliefs need not make any objective sense: If enough people think the occurrence of sunspots signals a run on a particular bank, it will do so. Also, Claessens and Forbes (2004), postulated several theories supporting their views on global financial Crisis Contagion. According to the authors most policymakers and government officials prefer the broader and more inclusive definition of contagion. The broader definition captures the vulnerability of one country to events that occur in other countries—no matter why that vulnerability occurs or if those linkages exist at all times.

Therefore, for the purposes of this paper, we will focus on this broader definition of contagion. At some points, however, it is useful to differentiate between the broader definition of contagion and the narrower definition of shiftcontagion. For example, differentiating between these definitions is important when evaluating the effectiveness of interventions and financial assistance packages. More specifically, if one country is affected by a crisis in another country, but this is only a short-term effect and the two countries have few linkages through trade, finance and other channels (i.e., an example of shiftcontagion), then a short-term loan to support the country and avoid contagion is more likely to be effective. On the other hand, if the two countries are closely linked through trade or financial flows (the broader definition of contagion), then a crisis in one country would require that the other economy adjusts to this shock, and intervention would only prolong the necessary adjustment (unless other inefficiencies exist).

Dornbusch (2000) identified four agents that influence financial globalization. These are governments, financial institutions, investors, and borrowers. They maintained that these four agents can caused severe recession on any economy if not immediately addressed. The first branch, spill-over effects, is regarded as negative externalities are also known as fundamental-based contagion. These effects can happen either globally, heavily affecting many countries in the world, or regionally, affecting only neighboring countries. The big players, who are more of the larger countries, usually have a global effect. The smaller countries are the players who usually have a regional effect. These forms of co-movements would not normally constitute contagion, but if they occur during a period of crisis and their effect is adverse, they may be expressed as contagion.

Fundamental causes of contagion include macroeconomic shocks that have repercussions on an international scale and local shocks transmitted through trade links, competitive devaluations, and financial links. Financial links come from financial globalization since countries try to be more economically integrated with global financial markets. Allen and Douglas (2000), and Lagunoff and Schreft (2001) analyzed financial contagion as an outcome of linkages among financial intermediaries. The former provides a general equilibrium model to explain that a small liquidity preference shock in one region can spread by contagion throughout the economy and the possibility of contagion depends strongly on the completeness of the structure of interregional claims. The latter proposed a dynamic stochastic game-theoretic model of financial fragility, through which they explain interrelated portfolios and payment commitments forge financial linkages among agents and thus make two related types of financial crisis occur in response.

Trade links is another type of shock that has its similarities to common shocks and financial links. These types of shocks are more focused on its integration causing local impacts. Any major trading partner of a country in which a financial crisis has induced a sharp current depreciation could experience declining asset prices and large capital outflows or could become the target of a speculative attack as investors anticipate a decline in exports to the crisis country and hence a deterioration in the trade account Kaminsky (2000). Kaminsky and Reinhart documented the evidence that trade links in goods and services and exposure to a common creditor can explain earlier crises clusters, not only the debt crisis of the early 1980s and 1990s, but also the observed historical pattern of contagion. Competitive devaluation is also associated with financial contagion. Competitive devaluation, which is also known as a currency war, is when multiple countries compete against one another to gain a competitive advantage by having low exchange rates for their currency. Other contending empirical theories also do exist that tries to explain global financial crisis contagion which due to the scope of this studies will not be considered in details, these include: World-Systems Theory or World-Systems Approach, Wallerstein (2004) as applied by Germain (1997); Complex Interdependence, Regime Theory and Keohane's Institutional Theory Keohane (2002) Keohane and Nye (2000) Keohane and Nye (1977) Cohen (2008) Hegemonic Stability Theory Cohen (2008) Kindleberger (1973) Coxian Critical Theory and Historical Structures Approaches Cohen (2008) Friedman's Quantity Theory of Money Friedman (1956) Fama's Efficient Market Hypothesis Fama (1970) and Austrian School Libertarianism Ebenstein (2003).

3.0 Research methodology

The model is specified in line with the re-stated hypotheses

Ho₁: The current account balances to GDP ratio has significant impact on exports

Ho₂: The capital and financial account balances to GDP ratio has significant effect on exports

This research work is patterned after the principles of Classical Linear Regression Model (CLRM) (Brooks, 2014), Third Generation Model of financial Crisis (Krugman, 1998; Braggion et al, 2005) and Ajakaye & Fakiyesi, 2009; Jenrola & Daisi, 2012).

$$Y = \alpha + \beta xt + \mu t \text{ (Braggion et al, 2005)Eqn 1}$$

$$(Y_i)_t = \beta_0 + \beta_1 X_{it} + \mu_{it} \text{ (Loayza \& Romain, 2006).. Eqn. 2}$$

$$\text{Log EX} = \beta_0 + \beta_1 \text{CA} + \beta_2 \text{CF} + \beta_3 \text{DGFC} + \mu \dots \text{Eqn 3}$$

(Ajakaye & Fakiyesi, 2009 ; Jenrola & Daisi, 2012)

Where Log EX = Log values of Exports ; CA = Current Account balances; CF = Capital & Financial Account balances

DGFC= Dummy variable pre -and post – Global Financial Crisis (i.e. 0 for pre and 1 for post GFC)

B0 = constant intercept ; $\beta_1 - \beta_4$ = Coefficients of the explanatory variable.

The specification of the model is based on the empirical work of Ajakaye & Fakiyesi (2009) and Jenrola & Daisi (2012) because they are more relevant to our purpose and use macroeconomic variables. The regression model underlying this research work is as follows:

$$Y_t = \beta_0 + \beta_1 X_{CA} + \beta_2 X_{CF} + \beta_3 X_{DGFC} + \mu_1 \dots \text{Eqn. 4}$$

We transform above model to correct the suspicion of serial autocorrelation associated with time series data of this nature by lagging it by one period:

$$Y_{t-1} = \beta_0 + \beta_1 X_{CA-1} + \beta_2 X_{CF-1} + \beta_3 X_{DGFC-1} + \mu_{t-1} \dots \text{Eqn. 4}$$

Description Of Variables

Where Y_t = Logged Exports (Log Ex) (as represented by Braggion et al, 2005; Loayza & Romain (2006) and the Dependent variable

B0 = Constant intercept

B1 =Coefficient of Aggregate Current Account Balances

B2 = Coefficient of Aggregate Capital and Financial Account Balances

B3= Coefficient of Dummy variable for Global Financial Crisis.

The independent variables and regressors are represented by the following proxies:

XCA = Current Account balances regressed

XCF = Capital and Financial Accounts regressed

DGFC_t = Dummy variable for Global Financial Crisis

μ = Error Term for the estimations

Apriori Expectations

1. Global financial crisis, GFC (Banking/currency crisis) leads to recession. This leads to a negative significant relationship between the GDP and other explanatory variables. (Kaminsky & Reinhart, 1999; Loayza & Romain, 2005)
2. GFC leads to undue domestic credit expansion and negative economic growth.
3. GFC has negative and significant relationship with stock market capitalization (Ajakaye & Fakiyesi, T. 2009; Jenrola & Daisi, 2012)

3.1 Model Justification

The variables captured in the model are indicative of the strength of the country's macro economy through trade. Negative or low positive values would indicate a slow-down within the period, high values may indicate unsustainable growth according and the ability to absorb external shocks according to Guha Deb and Mukherjee (2008). The position adopted by many scholars shows that,

academic literature on the relationship between financial development and economic growth dates back to as early as the early twentieth century Schumpeter (1911). The issue of financial development and economic growth has been of great interest and had generated considerable amount of debate among economists for many years. The debate primarily revolved around two major questions: first whether at all there is a relationship between development of financial sector on economic growth and second: what could be the nature and direction of the causal relationship, if any i.e. does development of financial sector promote economic growth or does economic development foster financial sector development? Thus the model for this research is based on the findings and views expressed in these works. Some studies like King and Levine (1993a, b), Levine and Zervos (1998) have found positive impact of financial development on economic growth in line with the 'supply leading' hypothesis. Kletzer and Pardhan (1987), Beck (2002), also argue along similar lines but they also tried to establish that financial development is much more effective in promoting economic growth in more industrialized economies than in agricultural economies.

3.6 Techniques of Analysis

While the analysis is concerned with the study of the dependence of one variable, the dependent variable, on one or more other variables, the explanatory variables, with a view to estimating and/or predicting the population mean or average value of the former in terms of the known or fixed (in repeated sampling) values of the latter (Gujarati and Porter, 2009).

In statistics and econometrics, regression analysis is used in modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables (Onwumere, 2005).

Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables that is, the average value of the dependent variable when the independent variables are held fixed. Less commonly, the focus is on a quartile, or other location parameter of the conditional distribution of the dependent variable given the independent variables; Brooks (2002). In all cases, the estimation target is a function of the independent variables called the regression function. In the analysis, it is also of interest to characterize the variation of the dependent variable around the regression function, which can be described by a probability; Gujarati and Porter (2009).

4.1 Data Presentation

Table 4.1

Year	Total value of exports (N' billion)	Log Total value of exports (N' billion)	Current account balance as a % of GDP	Capital & financial account balance as a % of GDP
2005	7,246.53	3.86	32.84	-16.76
2006	7,324.68	3.86	25.31	-13.42

2007	8,309.76	3.92	16.84	-8.07
2008	10,387.69	4.02	14.22	-4.08
2009	8,606.32	3.93	8.33	7.51
2010	12,011.48	4.08	3.61	0.56
2011	15,236.67	4.18	3.01	-1.52
2012	15,139.33	4.18	4.76	1.92
2013	15,262.01	4.18	0.20	2.67
2014	12,960.49	4.11	0.18	2.41
2015	8,845.16	3.95	-3.19	-0.21
2016	8,835.61	3.95	0.67	0.71
2017	13,988.14	4.15	2.79	-1.07
2018	19,280.04	4.29	1.26	0.21

Source: CBN statistical bulletin

4.2 Data Analysis

Table 4.2

Least squares (NLS and ARMA)

Dependent Variable: LOG_VALUE_OF_EXPORTS

Method: Least Squares

Date: 11/05/19 Time: 10:24

Sample: 1 14

Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CURRENT_ACCOUNT_%_OF_GD				
P	-50.01581	16.86750	-2.965217	0.0118
C	210.3375	68.30196	3.079523	0.0095
R-squared	0.422869	Mean dependent var	7.916349	
Adjusted R-squared	0.374775	S.D. dependent var	10.60367	
S.E. of regression	8.384450	Akaike info criterion	7.222198	
Sum squared resid	843.5880	Schwarz criterion	7.313492	
Log likelihood	-48.55539	Hannan-Quinn criter.	7.213747	
F-statistic	8.792513	Durbin-Watson stat	0.693422	
Prob(F-statistic)	0.011806			

Table 4.3

Johansen Cointegration test

Date: 11/05/19 Time: 10:28

Sample (adjusted): 3 14
 Included observations: 12 after adjustments
 Trend assumption: Linear deterministic trend
 Series: CURRENT_ACCOUNT_BALANCE_AS_A_OF_GDP
 LOG_TOTAL_VALUE_OF_EXPORTS_N_BILLION_
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
				0.002498
None *	0.7350598739	23.528271516	15.494712875	77784054
	895638	68347	9347	4474
				0.005868
At most 1 *	0.4687050098	7.5892544993	3.8414655009	44856472
	295366	95061	40406	132

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized	Max-Eigen	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
				0.026933
None *	0.7350598739	15.939017017	14.264600153	65060889
	895638	28841	2375	875
				0.005868
At most 1 *	0.4687050098	7.5892544993	3.8414655009	44856472
	295366	95061	40406	132

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'S11*b=I):

CURRENT_ LOG_TOTAL
 ACCOUNT_ _VALUE_OF
 BALANCE_ _EXPORTS_

AS_A__OF__N__BILLIO
 GDP N_
 - -
 0.20317323797.0478911901
 668977 52869
 - -
 0.012242793211.574609481
 7310154 04047

Unrestricted Adjustment Coefficients (alpha):

D(CURRENT
 _ACCOUNT
 BALANCE -
 AS_A__OF__2.7327388267 0.3200275653
 GDP) 88423 275032
 D(LOG_TOT
 AL_VALUE_
 OF_EXPORT
 S__N__BILL 0.0281744135 0.0654054642
 ION_) 8096766 2182786

-
 12.406967240

1 Cointegrating Equation(s): Log likelihood 20741

Normalized cointegrating coefficients (standard error in parentheses)

CURRENT_ LOG_TOTAL
 ACCOUNT_ _VALUE_OF
 BALANCE_ _EXPORTS_
 AS_A__OF__N__BILLIO
 GDP N_
 34.689072540
 1 65202
 11.627481725
 32117

Adjustment coefficients (standard error in parentheses)

D(CURRENT
 _ACCOUNT
 BALANCE-
 AS_A__OF__0.5552193959
 GDP) 564649

0.1225409749
026442
D(LOG_TOT
AL_VALUE_
OF_EXPORT-
S__N__BILL 0.0057242868
ION_) 35063734
0.0069692862
89148088

Table 4.4
Least squares (NLS and ARMA)

Dependent Variable: LOG_VALUE_OF_EXPORTS

Method: Least Squares

Date: 11/05/19 Time: 10:36

Sample: 1 14

Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_FINANCIAL_ACCOUN				
T_%_GDP	25.80786	11.54470	2.235474	0.0452
C	-106.5293	46.74820	-2.278789	0.0418
R-squared	0.294007	Mean dependent var	-2.081166	
Adjusted R-squared	0.235175	S.D. dependent var	6.561832	
S.E. of regression	5.738605	Akaike info criterion	6.463873	
Sum squared resid	395.1790	Schwarz criterion	6.555167	
Log likelihood	-43.24711	Hannan-Quinn criter.	6.455422	
F-statistic	4.997342	Durbin-Watson stat	1.092875	
Prob(F-statistic)	0.045164			

Table 4.5
Johansen Cointegration test

Date: 11/05/19 Time: 10:39

Sample (adjusted): 3 14

Included observations: 12 after adjustments

Trend assumption: Linear deterministic trend

Series:

CAPITAL__FINANCIAL_ACCOUNT_BALANCE_AS_A__OF
_GDP LOG_TOTAL_VALUE_OF_EXPORTS__N__BILLION_
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.617414	19.92198	15.49471	0.0101
At most 1 *	0.503098	8.392347	3.841466	0.0038

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.617414	11.52964	14.26460	0.1296
At most 1 *	0.503098	8.392347	3.841466	0.0038

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by
 $b'S_{11}^{-1}b=I$):

CAPITAL__	
FINANCIAL	LOG_TOTAL
_ACCOUNT	_VALUE_OF
_BALANCE__	_EXPORTS_
AS_A__OF__	_N__BILLIO
GDP	N_
-0.136838	-4.241226
0.219158	-12.55937

Unrestricted Adjustment Coefficients (alpha):

D(CAPITAL_		
_FINANCIA		
L_ACCOUN		
T_BALANC		
E_AS_A__		
OF_GDP)	2.374689	-1.990691
D(LOG_TOT		
AL_VALUE_		
OF_EXPORT		
S_N_BILL		
ION_)	0.017697	0.067785

1 Cointegrating Equation(s): Log likelihood-15.76119

Normalized cointegrating coefficients (standard error in parentheses)

CAPITAL__	
FINANCIAL LOG_TOTAL	
_ACCOUNT _VALUE_OF	
_BALANCE__EXPORTS_	
AS_A__OF_N_BILLIO	
GDP	N_
1.000000	30.99460
	(20.8457)

Adjustment coefficients (standard error in parentheses)

D(CAPITAL_	
_FINANCIA	
L_ACCOUN	
T_BALANC	
E_AS_A__	
OF_GDP)	-0.324947
	(0.16314)
D(LOG_TOT	
AL_VALUE_	
OF_EXPORT	
S_N_BILL	
ION_)	-0.002422
	(0.00467)

4.3 Discussion of findings

On table 4.2 and 4.4 the findings indicate that R2 and adjusted R2 at 42.2%, 37.4%, 29.4% and 23.5% respectively. This indicates that the much of the variations in the exports were not attributable to the world financial crisis measured by current account/GDP ratio and capital and

financial account/GDP ratio. This is consistent with the work by Yakubu and Akerele (2012) who pointed at unstable macro-economic variables as the cause and not the product of the global financial crisis. Conversely, Onuoha Theresa E and Nwaiwu Johnson .N (2016) mentioned in their findings that there may be other variables other than their explanatory variables that might have an impact on the dependent variable but not represented in the equation.

The Durbin Watson statistics shows a positive serial correlation, also the difference between AIC, or Schwarz criterion is negligible, an indicator of a near perfect model convergence near zero. The smaller they are the better the fit of your model is (from a statistical perspective) as they reflect a trade-off between the lack of fit and the number of parameters in the model.

To further add robustness to the analysis, Johansen cointegration test was applied. This test permits more than one cointegrating relationship so is more generally applicable than the Engle–Granger test which is based on the Dickey–Fuller (or the augmented) test for unit roots in the residuals from a single (estimated) cointegrating relationship. It also shows how well observed outcomes in the analyses are replicated in the model. The cointegration test supports the rejection of the two hypotheses which states that;

Ho₁: The current account balances to GDP ratio has significant impact on exports

Ho₂: The capital and financial account balances to GDP ratio has significant effect on export

5.0 Conclusions

It is apparent that with the level of financial development in the Nigerian financial system which is pale in comparison to that of countries like United States and Germany, the impact of the global financial crisis was not the cause divestments of foreign portfolio from the country, fall in price of crude oil, naira depreciation but structural imbalances in trade policy or bad timing of it's implementation.

6.0 Recommendations

(i) Long lasting policy measures to address a possible adverse effect of financial crisis on our exports include focusing on changing the growth of demand by improving the supply-side competitiveness. Ensure expenditure reducing policies to limit imports and encourage local production.

(ii) Improving macroeconomic stability in the longer run would mean diversification away from oil since a Country relying on oil earnings is prone to shock if a financial crisis of epic proportions occurs.

(iii) Reduction in government spending controlling consumer demands for foreign goods by taxes and interest rates should be properly timed since the interplay of these factors can affect our trade potentials.

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