

ECONOMIC GLOBALIZATION AND ECONOMIC GROWTH IN THE DEVELOPING ECONOMIES: A CASE OF NIGERIAN ECONOMY

ADESOYE, A. Abolaji

Department of Economics, Olabisi Onabanjo University, Ago-Iwoye, Ogun state, Nigeria

boladesoye@yahoo.com

AJIKE, Emmanuel O. 

Department of Business Administration and Marketing, Babcock University, Ilisan Remo, Nigeria

emmaogbonna@gmail.com

MAKU, Olukayode Emmanuel

Department of Economics, Olabisi Onabanjo University, Ago-Iwoye, Ogun state, Nigeria

kaymarks73@yahoo.co.uk

Abstract

This study examines the impact of economic globalization on output growth of the Nigerian economy. Different econometrics techniques i.e. pre-estimation test, estimation techniques and diagnostic test such as Augment Dickey Fuller, Engel-Granger co-integration, Ordinary Least square, post estimation tests and Error Correction Model were carried out using the data sets within the period of 1970 and 2013. There exist a long-run relationship among exchange rate, interest rate, inflation rate, foreign direct investment (FDI), trade openness, and financial openness and real gross domestic product. The results revealed that a higher exchange rate and inflation rate, an increase in foreign direct investment, growth in trade and financial openness and a lesser interest rate enhance the growth rate of output in Nigeria. However, all the incorporated variables maintained their respective signs and significant level except FDI with a negative insignificant impact on output growth. In addition, 32.2% of the distortion in the short-run is corrected in the first year in attaining equilibrium or sustainable economic growth. The government must ensure the development and enthronelement of necessary institutions that will support both market system and democracy.

Keywords: Economic globalization, monetary policy, exchange rate, output growth, Nigeria

INTRODUCTION

Trading is an indispensable part of all international businesses, whether the company markets in one country or on a global market. Goods are produced in one country, distributed to another, and moved across borders to enter the distribution system of the target market(s). Most countries control the movement of goods crossing their borders, whether leaving (exports) or entering (imports). Some of the basic export and import documents are tariffs, quotas, etc. They are barriers to the free flow of goods between independent sovereignties and are requirements that must be met by either the exporter or the importer or both. In order to ensure good trading relationship between countries and easy movement of goods, services and human capital, trade barriers are reduced or removed which is otherwise known as the *economic globalization* (Aimiumu, 2004).

The effects of economic globalization can be seen on both economic growth and economic development within a country. Many highly globalized developing countries have not been able to profit from globalization and are still facing the same problems they have been facing for many decades. Western organizations have throughout the years increased their commitments in developing countries due to this being more profitable for them, one reason being due to the large quantity of resources found in these parts of the World.

The Nigerian non-oil sector plays a major role in the growth of the Nigerian economy. According to Adulagba (2011), the country exported 1.186 million metric tonnes of non-oil products valued at \$2.765bn in 2011. The non-oil export figure, according to Adulugba, represents an increase of 19.15 per cent over the \$2.32bn (N359.6bn) recorded in 2010, and 61.97 per cent over that of 2009 (Onuba, 2012). A number of studies have found that exports have been instrumental in Nigeria's growth performance, suggesting that export-led growth hypothesis holds in Nigeria (Ogunkola & Oyejide, 2001; and Ogunkola, 2003).

Thus, this study examines impact of economic globalization on economic growth of Nigeria. The importance of this study is that it shows the effect of excess export and openness of trade on the economic growth of Nigeria. However, there are various econometric techniques employed by past studies to establish the relationships. For instance, Okoh (2004) adopting Brahmabhatt & Dadush (1996), index of speed of integration that is, the ratio of trade to GDP, and employing cointegration analysis, concluded that openness was not significant in explaining growth in non-oil exports. This is contrary to the current belief that openness or free trade leads to expansion in export trade (Thirlwall, 1999). In the light of the above counter views, there is need to examine more closely the potency of economic globalization as a growth driver in Nigeria using error correction mechanism to examine its short-run impact.

The crucial point to be noted is that globalization needs to be explained and seen the way it is and what it means to Nigeria. What is the economic implication of globalization to Nigeria? Nigeria has no justification to uncritically join the bandwagon over the euphoria about globalization. Situating Nigeria in the globalization bandwagon requires our understanding of the genesis of the concept, its impact on African continent, or better still, critical examination of the North-South relationship, i.e. the relationship between the developed countries and less developed nations.

LITERATURE REVIEW

A key issue in economic literature today is the effect of globalization on inequality and economic growth. Stiglitz (1998) in his study, "globalization and its discontents" averred that globalization has a large potentials for the world economy and can be of huge benefit to under developed countries and even a viable plan for the development of underdeveloped economies of the world suggesting various reform of the international economic and financial institution and a fundamental transformation of the governance process of especially under developed countries as a necessary condition for a positive impact of globalization on the development process of under developed countries. The methodology used was United Nation Data Report. He found out that the reforms mentioned above are contingent on the developed economies that are satisfied with the ways and manner globalization is being conducted and have being active in sustaining it. He concluded that the artificial construction of world economy by the industrialized countries is meant to serve the purpose of economic and political dominance of the group of industrialized countries, over the countries, but they need to establish a convergence among them in order to minimize the likely effect of undermining each other.

Furthermore, Dollar and Kraay (2004) examine the effects of globalization on the poor in the developing countries. They observe that over half of the developing world that lives in globalizing economies have seen large increases in trade and significant declines in tariffs. These countries are found catching up with the rich countries while the rest of the developing world is falling farther behind. They also found out that the increase in economic growth rates leads on average to proportionate increases in incomes of the poor. The evidence from individual cases and cross-country analysis supports the view that globalization leads to faster growth and poverty reduction in poor countries.

Onyeonoru (2003) in his study, "globalization and industrial performance" aimed to verify if the globalization project was associated with a process of de-industrialization. The methodology used in carrying out his objective was Radical Organization Theory outlined by Burrell and Morgan. It was selected for its usefulness for explaining the relationship between the

economic crisis and macro socio economic element of globalization. The food, beverage and tobacco industry was selected as the case study. The findings of his research theory are that, the globalization activities in the Structural Adjustment Programme (SAP) period accounted for the depreciation in the value of the naira. The steep devaluation of the naira during SAP period introduced high rate of inflation, which adversely affects industrial operations-especially in the manufacturing sector. The conclusion of his study is that globalization programmers have been associated with a period of de-industrialization.

Onwuka and Eguavoen (2007) in their study “globalization and economic development” found out that the main driving force of globalization is technology, policy, and competition and its subordinate domestic economies to global market conditions and practices. Ihonvbere (2002) in his study, “how is globalization doing?” that globalization is a myth construed by capital at the expense of corrupt and weakened politician and government to commercialized and privatized all spheres of human activity. The methodology adopted in carrying out his study was thorough research through World Wide Web. He found out that globalization is not doing well. Ihonvbere opined that rather than improve on social, political and economic condition, globalization has increased; poverty in both rural and urban areas; real learning fell drastically; unemployment and underemployment rose sharply; hunger and famine became endemic; dependence on food aid and food import intensified; disease, including the dreaded HIV/AIDS decimated population and became a real threat to the very process of growth and development. Moreover, because of the inadequate response and realistic strategies to tackle the problems listed above, Ihonvbere concluded that globalization is not doing well.

Aluko, Akinola & Fatokun (2004) in their study “globalization and the manufacturing sector: a case study of selected textile firms in Nigeria” aimed to examine the impact of globalization on the manufacturing sector in Nigeria, and then, suggested appropriate socio-economic reform measures of that will enable the country benefit maximally from the current globalization trend in the world economy. A case study approach was applied and three textile mills were selected as case studies. Data was collected by means of pre- tested questionnaire. From the analysis above, it was observed that Association of Nigeria (MAN) Report, (1996) stated that capacity utilization for the manufacturing sector fell below 40% of installed capacities. In conclusion, it was stated that for a country to maximally enjoy the benefits and minimize the risk associated with globalization, it as to develop and strengthen its capacity to timely identify both internal and external shocks, and to initiate, design and implement appropriates policies to forestall their destabilizing efforts.

Alimi and Atanda (2011) examined the effect of globalization on economic growth in Nigeria between 1970 and 2010 amidst cyclical fluctuations in foreign investments. They

employed autoregressive model that regress trade openness, cyclical foreign investment to gross domestic products, external reserves, debt stock and exchange rate on real gross domestic product revealed that globalization has positive and significant effect on economic growth in Nigeria, while the positive of business cycle on real output growth was insignificant.

Ajayi and Atanda (2012) investigated the trade and capital flow channels of globalization on macroeconomic stability as proxy by real output growth rate in Nigeria between 1970 and 2009. The employed autoregressive model indicated that the first lag of real output growth rate has significant positive effect on real current growth rate, while the second autoregressive term is found to exert insignificant negative effect on current real output growth rate. Also, trade and capital flow dimensions were found to deteriorate the macroeconomic stability level in Nigeria. However, the existence of cointegration was later established among the series, while the short run analysis using the error correction mechanism model indicated that for any disequilibrium in the stability level in the short-run, the error correction term adjust 97.5% of this divergence to its long-run equilibrium.

RESEARCH METHODOLOGY

Model Specification and Estimation Techniques

Growth model is taken as a function of globalization. The research model will build on the study conducted by “Paolo Figini and Enrico Santerelli” at University of Bologna, Italy (2005) using a multiple regression to express growth [i.e. change in gross domestic product (GDP)] as a function of trade openness and financial openness.

$$RGDP = \alpha_0 + \beta_1 TOP + \beta_2 FOP + \mu \quad (3.1)$$

Where: RGDP→ Growth rate or change in GDP i.e. a measure of Nigeria economic growth; TOP→ Trade openness i.e. import plus export flows divided by GDP; FOP→ Financial openness i.e. inflow foreign direct investment divided gross domestic product; and μ → Error term or random variable or stochastic variable.

However, exchange rate and other macroeconomic variables such as foreign direct investment, inflation rate, and interest rate.

$$RGDP = \alpha_0 + \beta_1 TOP + \beta_2 FOP + \beta_3 FDI + \beta_4 EXR + \beta_5 INF + \beta_6 INTR + \mu \quad (3.2)$$

Where: RGDP = Growth rate or change in GDP i.e. a measure of Nigeria economic growth; TOP = Trade openness i.e. import plus export flows divided by GDP; FOP = Financial openness i.e. inflow foreign direct investment divided gross domestic product; EXR = Exchange rate; INF = Inflation rate; FDI = Foreign direct investment; INTR = Interest rate; and μ = Error term or random variable or stochastic variable.

The properties of the time series variables-real gross domestic product, capital flight, foreign direct investment, and inflation rate-considered in this paper were examined using the Augmented Dickey-Fuller (ADF) unit root tests to determine their long-run convergence and stationary levels. The test model equations are expressed as:

$$\Delta Z_t = \eta_0 + \eta_1 Z_{t-1} + \sum_{i=1}^n \pi_i \Delta Z_{t-1} + v_t \quad (3.3)$$

$$\Delta Z_t = \eta_0 + \eta_1 Z_{t-1} + \eta_2 t + \sum_{i=1}^n \pi_i \Delta Z_{t-1} + v_t \quad (3.4)$$

The time series variable is represented by Z , t and v_t as time and residual respectively. The equation (3.3) and (3.4) are the test models with intercept only, and linear trend respectively. However, to ensure strict adherence to underlying classical assumptions for the estimated autoregressive models, series of diagnostics tests employed are Variance Inflation Factor (VIF) to examine presence of multicollinearity, histogram normality test, Breusch Godfrey serial correlation LM test to determine presence of higher order serial correlation, Breusch-Pagan-Godfrey heteroskedasticity test, and Ramsey Regression Specification Error Test (RESET). Also, the error correction mechanism (ECM) is estimated for short-run analysis.

EMPIRICAL ANALYSIS AND DISCUSSIONS

Descriptive Statistics

Summary statistics of economic globalization and economic growth indicators are shown below.

Table 1: Summary Statistics

| | LNRGDP | LNEXR | LNFDI | LNFOF | INF | INTR | LNTOP |
|--------------|---------------|--------------|--------------|--------------|------------|-------------|--------------|
| Mean | 13.07803 | 2.155172 | 10.10926 | 8.973516 | 19.23581 | 18.15930 | 12.39118 |
| Median | 12.65121 | 2.293493 | 9.538017 | 9.541624 | 12.40000 | 19.49000 | 12.25973 |
| Maximum | 17.16661 | 5.059422 | 14.02629 | 14.05715 | 72.81000 | 36.09000 | 17.24261 |
| Minimum | 8.571890 | -0.604480 | 6.600958 | 4.613858 | 1.650000 | 6.000000 | 7.403724 |
| Std. Dev. | 2.791397 | 2.271220 | 2.319515 | 3.362096 | 17.35792 | 7.366955 | 3.065160 |
| Skewness | 0.059288 | 0.012195 | 0.333501 | 0.102254 | 1.541414 | 0.245818 | 0.058542 |
| Kurtosis | 1.590328 | 1.343815 | 1.611935 | 1.467172 | 4.392666 | 2.214079 | 1.569430 |
| Jarque-Bera | 3.585545 | 4.915517 | 4.249144 | 4.284566 | 20.50267 | 1.539720 | 3.691260 |
| Probability | 0.166498 | 0.085627 | 0.119484 | 0.117387 | 0.000035 | 0.463078 | 0.157926 |
| Sum | 562.3552 | 92.67239 | 434.6983 | 385.8612 | 827.1400 | 780.8500 | 532.8208 |
| Sum Sq. Dev. | 327.2596 | 216.6546 | 225.9664 | 474.7551 | 12654.49 | 2279.425 | 394.5988 |
| Observations | 44 | 44 | 44 | 44 | 44 | 44 | 44 |

The summary statistic indicated that the average value of gross domestic product growth rate (RGDP) stood at 13.08%. This implies that Nigerian economy grow at an average value of

13.08% annually between 1970 and 2013. Also, the average values of exchange rate (EXR), foreign direct investment (FDI), financial openness (FOP), inflation rate (INFL), interest rate (INTR) and trade openness (TOP) stood at 2.16%, 10.11%, 8.97%, 19.24%, 18.16% and 12.39% correspondingly.

Table 1 further indicated that the standard deviation of gross domestic product growth rate (RGDP) stood at 2.79%. It means that annual deviation of annual gross domestic product growth rate (RGDP) from its long-mean is 2.79% every year. Also, deviation of globalization and other macroeconomic indicators such as exchange rate (EXR), foreign direct investment (FDI), financial openness (FOP), inflation rate (INFL), interest rate (INTR) and trade openness (TOP) from their long-run mean are respectively 2.27, 2.32, 3.36, 17.36, 7.37 and 3.07 percent.

Unit Root Test Analysis

The stationary test results of the incorporated times series variables in the regression model expressed previous chapter is presented in Table 2 using the Augmented Dickey-Fuller (ADF) unit-root test.

Table 2: ADF Unit Root Test Results

| Series | T-ADF Statistics | Critical Value | Order of Integration |
|---------------|-----------------------|----------------------|----------------------|
| EXR | -6.108788 (0.0000) | 1% level: -4.198503 | I(1) |
| | | 5% level: -3.523623 | |
| | | 10% level: -3.192902 | |
| Δ FDI | -9.919322 (0.0000) | 1% level: -4.198503 | I(1) |
| | | 5% level: -3.523623 | |
| | | 10% level: -3.192902 | |
| Δ FOP | -9.911378 (0.0000) | 1% level: -4.198503 | I(1) |
| | | 5% level: -3.523623 | |
| | | 10% level: -3.192902 | |
| INFL | -6.460696 (0.0000) | 1% level: -4.205004 | I(1) |
| | | 5% level: -3.526609 | |
| | | 10% level: -3.194611 | |
| INTR | -7.143030 (0.0000) | 1% level: -4.205004 | I(1) |
| | | 5% level: -3.526609 | |
| | | 10% level: -3.194611 | |
| Δ RGDP | -5.273830 (0.0005) | 1% level: -4.198503 | I(1) |
| | | 5% level: -3.523623 | |
| | | 10% level: -3.192902 | |
| Δ TOP | -7.096637 (0.0000) | 1% level: -4.198503 | I(1) |
| | | 5% level: -3.523623 | |
| | | 10% level: -3.192902 | |

The test result indicated that all the time series variable i.e. exchange rate (EXR), interest rate (INTR), inflation rate (INFL), changes in real gross domestic product (RGDP), foreign direct investment (FDI), trade openness (TOP), and financial openness (FOP) were not found to reject the null hypothesis “no stationary” at level. This implies that the series, exchange rate (EXR), interest rate (INTR), inflation rate (INFL), changes in real gross domestic product (RGDP), foreign direct investment (FDI), trade openness (TOP), and financial openness (FOP) are not stationary at levels i.e. first-difference of these series are *mean reverting* and stationary. Then, the series is integrated of order one i.e. $I(1)$. Although, econometric literature has indicated that linearly combining or regressing a non-stationary series on non-stationary time series might yield spurious regression and render estimated parameters inefficient. Thus, this argument prompts the cointegration test to examine if the linear combination of our considered macroeconomic variables yields stationary residual.

Cointegration and Long-Run Estimates

The long-run relationship among economic globalization, other macroeconomic variables and economic growth in Nigeria between 1970 and 2013 was examined using the Engle-Granger cointegration technique and the test results are shown on Table 3.

Table 3: Engle-Granger Cointegration Results

| Series | ADF Test at Level | | Decision |
|--|--|-----------------------|---------------------------------|
| | T-ADF Statistics | Critical Value | |
| $ECT = u = \ln RGDP - \left(\alpha + \beta_1 \ln EXR + \beta_2 \ln INTR + \beta_3 \ln FDI + \beta_4 \ln INFL + \beta_5 \ln TOP + \beta_6 \ln FOP \right)$ | 1% level: -4.192337 5% level: -3.520787 10% level: -3.191277 | -3.534454 (0.0485) | Stationary i.e. Cointegrated |

The cointegration result presented in Table 3 indicated that the estimated residual (ECM) from the main empirical model was found to be stationary at level. This indicates that the null hypothesis “no cointegration” was rejected at 5% significance level. This implies that there exist long-run relationships among exchange rate (EXR), interest rate (INTR), inflation rate (INFL), changes in real gross domestic product (RGDP), foreign direct investment (FDI), trade openness (TOP) and financial openness (FOP) in Nigeria between 1970 and 2013. Thus, there is long-run relationship between economic globalization vis-à-vis economic growth in Nigeria.

The cointegrating equation was estimated using the ordinary least square (OLS) method and the long-run estimates were presented on Table 4.

Table 4: Estimated Regression Model

| Dependent Variable: LOG(RGDP) | | | | |
|--------------------------------------|--------------------|-------------------|--------------------|--------------|
| Method: Least Squares | | | | |
| Sample: 1970 2013 | | | | |
| Included observations: 44 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 2.664953 | 0.457353 | 5.826912 | 0.0000 |
| LOG(EXR) | 0.324578 | 0.098030 | 3.311007 | 0.0011 |
| LOG(FDI) | 0.219118 | 0.061871 | 3.541530 | 0.0005 |
| LOG(FOP) | 0.018039 | 0.087076 | 0.207166 | 0.8370 |
| INFL | 0.000400 | 0.002123 | 0.188433 | 0.8516 |
| INTR | -0.022568 | 0.008793 | -2.566587 | 0.0105 |
| LOG(TOP) | 0.807831 | 0.065869 | 12.26423 | 0.0000 |
| R-squared | | | 0.7950 | |
| Adjusted R-squared | | | 0.7673 | |
| S.E. of regression | | | 0.2131 | |
| F-statistic | | | 119.54 | |
| Prob (F-statistic) | | | 0.0000 | |
| Durbin-Watson stat | | | 0.9955 | |

The estimates of the long-run model that captures the effect of economic globalization on economic growth in Nigeria between 1970 and 2013 indicated that exchange rate (EXR), inflation rate (INFL), changes in foreign direct investment (FDI), trade openness (TOP) and financial openness (FOP) exert positive effect on real gross domestic product (RGDP) in Nigeria during the reviewed period. All the variables were found to be in tandem with the apriori expectation except for inflation rate and exchange rate. In magnitude term, an increase in inflation rate (INFL), changes in exchange rate (EXR), foreign direct investment (FDI), trade openness (TOP) and financial openness (FOP) enhances economic growth proxy by real gross domestic product (RGDP) by 0.04%, 0.33%, 0.22%, 0.02% and 0.81% correspondingly. Thus, interest rate (INTR) was found to exert negative impact on economic growth proxy by real gross domestic product (RGDP) which is in tandem with theoretical expectation. In magnitude, a percentage increase in interest rate (INTR) deteriorates economic growth proxy by real gross domestic product (RGDP) by 0.22%.

In term of partial significance of the estimated parameters for the considered variables, the t-statistics results are presented in Table 4. The result also shows that the estimated parameters for exchange rate (EXR), interest rate (INTR), trade openness (TOP) and financial openness (FOP) were found to be partially and statistically significant at 5% critical level because their *p-values* are less than 0.05. And, the other two variables' parameters i.e. inflation rate (INFL) and foreign direct investment (FDI) were statistically insignificant at 0.05 and 0.10 critical regions.

Although, the F-statistic result indicated that all the incorporated globalization and other indicators are simultaneously significant at 5% critical level. This prompts the rejection of the null hypothesis “globalization has no significant effect on economic growth in Nigeria”. While, the adjusted R-squared result reveals that 76.7% of the total variation in economic growth proxy by real gross domestic product (RGDP) is accounted by changes in exchange rate (EXR), interest rate (INTR), inflation rate (INFL), foreign direct investment (FDI), trade openness (TOP), and financial openness (FOP) during the review period. The Durbin-Watson test result reveals that there is presence of weak positive serial correlation among the residuals, because of the d-value (0.9955) is less than two. Also, the result is not spurious since coefficient of determination is not greater than Durbin-Watson value.

Error Correction Mechanism (ECM) Analysis

The short-run analysis of the relationship between globalization and economic growth in Nigeria between 1970 and 2013 was examined using error correction mechanism (ECM) model and the estimated results were shown on Table 5.

Table 5: Estimated ECM Regression Model

| Dependent Variable: DLOG(RGDP) | | | | |
|---------------------------------------|-------------|------------|-------------|--------|
| Method: Least Squares | | | | |
| Sample: 1970 2013 | | | | |
| Included observations: 43 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.096453 | 0.025510 | 3.781003 | 0.0006 |
| DLOG(EXR) | 0.316835 | 0.103146 | 3.071714 | 0.0032 |
| DLOG(FDI) | -0.011522 | 0.051292 | -0.224354 | 0.7765 |
| DLOG(FOP) | 0.032685 | 0.051802 | 0.630957 | 0.5323 |
| D(INFL) | 0.000858 | 0.001240 | 0.691857 | 0.4937 |
| D(INTR) | -0.031927 | 0.005254 | -6.042203 | 0.0000 |
| DLOG(TOP) | 0.421547 | 0.068260 | 6.175609 | 0.0000 |
| ECM(-1) | -0.312773 | 0.112096 | -2.790221 | 0.0086 |
| R-squared | 0.6344 | | | |
| Adjusted R-squared | 0.5591 | | | |
| S.E. of regression | 0.1235 | | | |
| F-statistic | 8.4264 | | | |
| Prob(F-statistic) | 0.0000 | | | |
| Durbin-Watson stat | 1.9136 | | | |

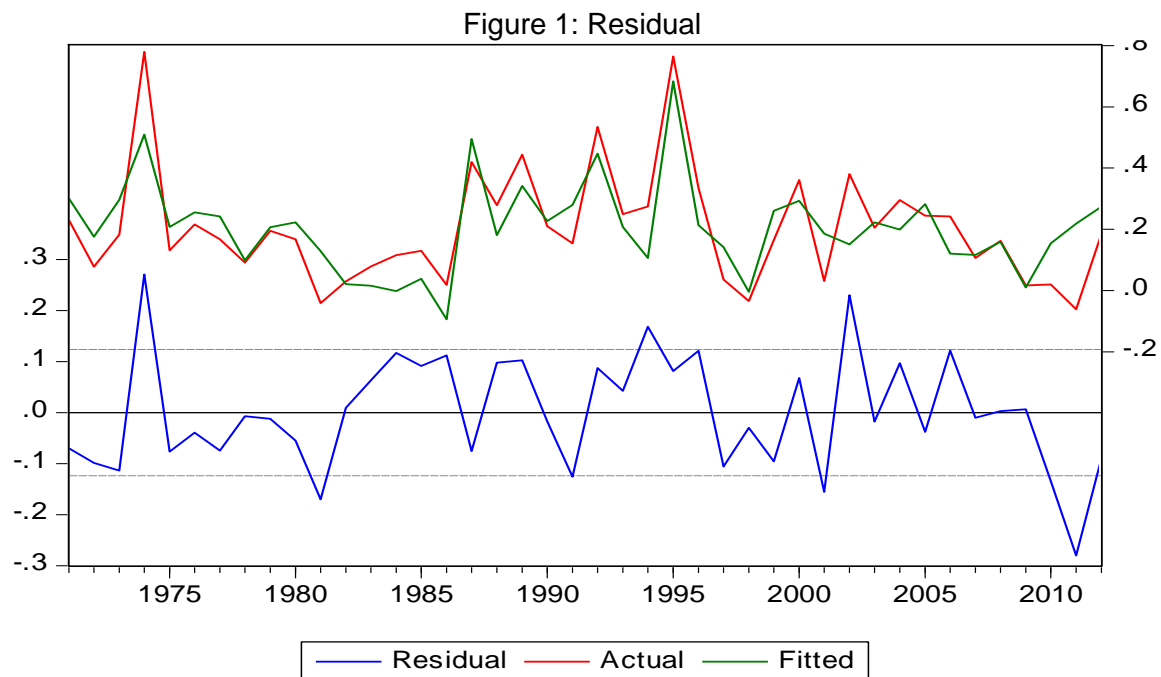
There is a clear evidence of reserve effect in the short-run compared to the long-run estimates presented on Table 5. All the variables still maintained their respective signs and statistical significant and insignificant at both 5% significant levels except for foreign direct investment

which has a negative insignificant value. A clear cut differences in the value of foreign direct investment which has a positive significant coefficient. However, the ECM reports that the model is free from autocorrelation problem since the value of Durbin-Watson is approximately two. However, the coefficient of determination with a value of 55.9% is still lower than the Durbin-Watson value, which denotes the non-spurious of the model.

Although, first-lag of the error correction term (ECT) was found statistically significant at 0.05 critical value and correctly signed with the co-efficient of -0.3218. This indicates that there is long-run relationship between the variables. Also, it further shows that 32.2% of the distortion in the short-run is corrected in the first year in attaining equilibrium or sustainable economic growth on the basis of the changes in globalization rate and its other macroeconomic indicators in Nigeria.

Higher-Order Test

The residuals from the model formulated show the variability in its error term, which is depicted in the Figure 1.

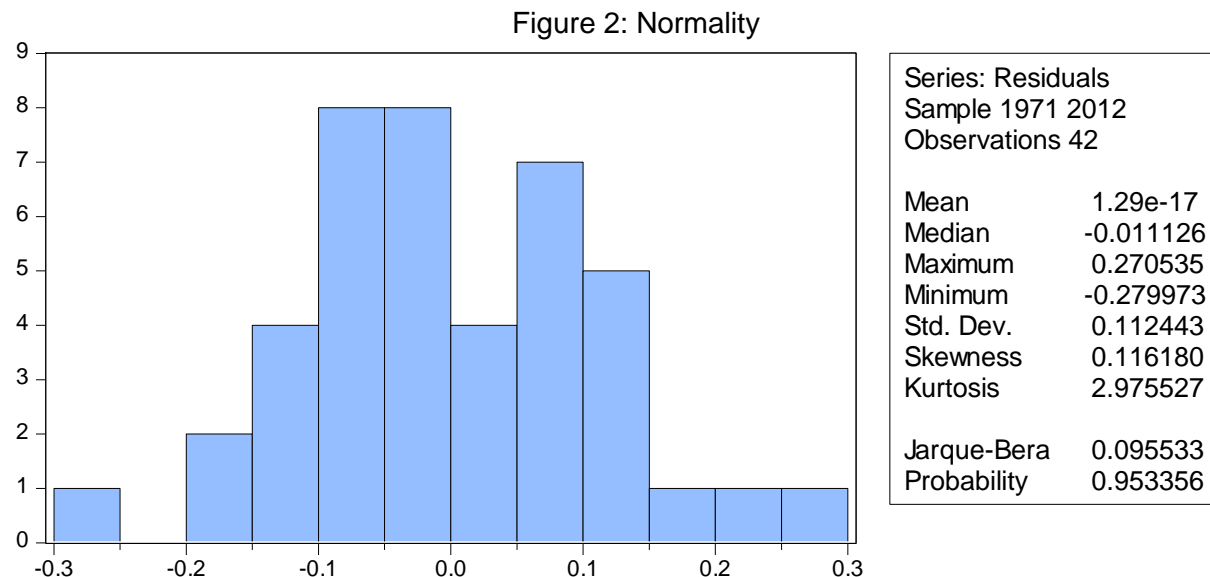


However, the Breusch-Godfrey serial correlation test result from table 6 reported that we do not reject the null hypothesis “*no serial correlation*” at 5% significance level, and likewise for the Breusch-Pagan-Godfrey heteroskedasticity test, the result indicated that we do not reject the null hypothesis “*no heteroskedasticity*” at 5% significance level.

Table 6: Serial Correlation LM Test

| | | | |
|--|----------|---------------------|--------|
| Breusch-Godfrey Serial Correlation LM Test: | | | |
| F-statistic | 0.701351 | Prob. F(2,32) | 0.5034 |
| Obs*R-squared | 1.763734 | Prob. Chi-Square(2) | 0.4140 |
| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | |
| F-statistic | 0.385541 | Prob. F(7,36) | 0.9043 |
| Obs*R-squared | 3.088633 | Prob. Chi-Square(7) | 0.8767 |

Figure 2 below reports the probability value of the Jarque-Bera statistic (0.0955) shows that the estimated residual series is normally distributed with zero mean and constant variance. This tends to improve the reliability of the estimated parameters and thus, necessitate other residual diagnostic test such as higher order serial correlation and heteroskedasticity tests.



CONCLUSION AND POLICY OPTIONS

This study examines the effect of economic globalization on the economic growth of the Nigerian economy between 1970 and 2013. The estimated regression results revealed that the exchange rate, interest rate, trade openness and financial openness have significant impact on economic growth of the Nigerian economy. This study reported that all the variables except interest rate have positive relationship with economic growth which are found to be in tandem with the apriori expectation except for inflation rate and exchange rate. Empirical result was found to be consistent with the findings of Ajayi & Atanda (2012) and Alimi & Atanda (2012) that globalization has positive and significant effect on economic growth in Nigeria.

Exchange rate tends to significantly shield the economy from external shocks and the international relative prices stabilize the growth rate of real output in Nigeria. Therefore, the study concludes that globalization and all macroeconomic variables have significantly enhanced economic growth in Nigeria. It thus negates the finding of Aluko, Akinola & Sola (2004) that globalization had strong adverse effect on capacity utilization in the manufacturing sector. Also, the finding of this study is consistent to Onyeonoru (2003) outcome that the globalization activities in the Structural Adjustment Programme (SAP) period accounted for the depreciation in the value of the naira. This reflects the steep devaluation of the naira during SAP period introduced high rate of inflation that adversely affects industrial operations especially in the manufacturing sector (the main drive to industrialization).

Past empirical outcomes reveal that over half of the developing world that lives in globalizing economies has seen large increases in trade and significant declines in tariffs (Dollar & Kraay, 2004). This study is found consistent in the sense that Nigeria as an economy is found catching up with the rich countries which is far from falling farther behind. Findings also confirm that the increase in economic growth rates leads on average to proportionate increases in incomes of the poor. Evidences from individual cases and cross-country analysis supports the view that globalization leads to faster growth and poverty reduction in poor countries. Thus, the following strategic policy options are proffered as follows:

- I. The concerned authority must ensure at microeconomic level attainment of global competitiveness by combining the use of resources (both human and raw materials) with modern technology;
- II. Also, government must ensure the development and enthronelement of the necessary institutions that will support both market system and democracy;
- III. Strategic macroeconomic policies should be instituted in order to encourage domestic private investment in home and from abroad because of its significant capacity to enhance the growth of the Nigerian economic growth; and
- IV. Also, trade flows rate should be all time kept at peak benchmark by adopting a better trade flows in order to ensure economic growth via fiscal sustainability in Nigeria.

IMPLICATIONS FOR FURTHER RESEARCH

This study reported that all the variables except interest rate have positive relationship with economic growth which is found to be in tandem with the apriori expectation except for inflation rate and exchange rate. Further study could find out the effect of interest rate on economic growth in a developing economy.

In this study, empirical result was found to be consistent with the findings of Ajayi & Atanda (2012) and Alimi & Atanda (2012) that globalization has positive and significant effect on economic growth in Nigeria. Future studies should explore a comparative effect of economic Globalization in different African Country. Researchers should go ahead and establish the effect of other environmental Globalization on economic growth in a developing country.

In another study it could be interesting to combine quantitative research with qualitative one, by organizing a triangulation.

REFERENCES

- Adulagba, D. (2011). Executive director/CEO, NEPC in Onuba, I., 2012, Non-oil Export Trade, Punch, April 16, 2012.
- Aimiwu, L. E. (2004). Globalization: the Human Resource Challenge. Management in Nigeria. Journal of Nigerian Institute of Management, 39/40(1/2), pp. 19-28.
- Ajayi, F. O and Atanda AA (2012): Globalization and Macroeconomic Stability in Nigeria: An Autoregressive Adjustment Analysis. *European Journal of Globalization and Development Research*, 3(1), 175-193.
- Alimi, O. and Atanda, A. (2011). Globalization, Business Cycle and Economic Growth in Nigeria. African Journal of Scientific Research Vol. 7, No. 1, pp. 344-357.
- Aluko, M. A. O., Akinola, G. O., & Fatokun, S. (2004). Globalization and the Manufacturing Sector: A study of selected Textile firms in Nigeria. *Journal of Social sciences*, 9(2), 119-130.
- Brahmbhatt, M. and U. Dadush (1996). Disparities in global integration. Finance and Development, September.
- Dollar, D., & Kraay, A. (2004). Trade, growth, and poverty*. *The Economic Journal*, 114(493), F22-F49.
- Figini, P. and Santarelli, E. (2002). No Global No Poverty? A Case study of Developing Countries. Prepared for the V Encuentro Internacional de Economistas sobre Globalization Y problemas del Desarrollo, La Habana (Cuba), 10-14 Febrero 2003.
- Ihonvbere, J. (2002). How is Globalization Doing?. *The Constitution*, vol.
- Ogunkola, E. O. (2003). Agriculture and the WTO: Economic interests and options for Nigeria In: Ingco, M. D., Nash, J. D., and Njinkeu D., (2003), Eds. Liberalizing Agricultural Trade: Issues and Options for Sub-Saharan Africa in the World Trade Organization (WTO), pp: 137-182.
- Ogunkola, E.O. and Oyejide, T. A. (2001). Market access for Nigeria's exports in the European union: An assessment of impact of the Lome convention and Uruguay round. *The Nigerian Journal of Economic and Social Studies*, 43(1): 15-46.
- Ogwumike, O. F. and Olukayode, O. E. (2012). Globalisation and economic growth in Nigeria: A multidimensional analysis. *Pakistan Journal of Social Sciences*, 9(2): 89-95.
- Okoh, R. N. (2004). Globalization and growth of Nigerian non-oil exports. A Paper Presented at the Centre for the Study of African Economies, African Conference, 2004, on Growth, Poverty Reduction and Human Development in Africa 21st – 22nd March, 2004, Oxford, UK.
- Onuba, I. (2012). Non-oil export trade, Punch, April 16, 2012. Online version. Available from <http://www.punchng.com/business/business-economy/nigeria-made-n428-57bn-from-non-oil-exports-in-2011-nepc/>
- Onwuka, E. C., & Eguavoen, A. (2007). Globalization and Economic Development: The Nigerian Experience. *Journal of Social Sciences*, 14(1), 45-51.

Onyeonoru, I. (2003). Globalisation and industrial performance in Nigeria. *AFRICA DEVELOPMENT-SENEGAL*-, 28(3/4), 36-66.

Santarelli, E. and Figini, P. (2002). Does Globalization Reduce Poverty? Some Empirical Evidence for the Developing Countries.

Stiglitz, J. (1998). The role of international financial institutions in the current global economy. *Address to the Chicago Council on Foreign Relations, Chicago, 27*.

Thirlwall, A. P. (1999). Growth and development. 6th Edition, London: Macmillian Press.

APPENDIX

| Year | RGDP | INF | INTR | EXR | TOP | FOP | FDI |
|------|----------|-------|-------|----------|----------|----------|----------|
| 1970 | 5281.1 | 1.75 | 8 | 0.7143 | 1642.088 | 100.8726 | 1751.908 |
| 1971 | 6650.9 | 1.65 | 10 | 0.6955 | 2372.3 | 115.5502 | 1890.573 |
| 1972 | 7187.5 | 9.41 | 10 | 0.6579 | 2424.3 | 128.5922 | 2036.636 |
| 1973 | 8630.5 | 4.61 | 10 | 0.6579 | 3503.2 | 151.2849 | 2204.467 |
| 1974 | 18823.1 | 13.53 | 10 | 0.629875 | 7532.1 | 170.4006 | 2375.903 |
| 1975 | 21475.24 | 33.93 | 9 | 0.61585 | 8647 | 196.0075 | 2547.857 |
| 1976 | 26655.78 | 21.1 | 10 | 0.626533 | 11899.6 | 234.5973 | 2791.876 |
| 1977 | 31520.34 | 21.48 | 6 | 0.646617 | 14724.4 | 284.8439 | 2975.926 |
| 1978 | 34540.1 | 13.3 | 11 | 0.60595 | 14276.1 | 127.815 | 3149.698 |
| 1979 | 41974.7 | 11.65 | 11 | 0.595742 | 18309.3 | 181.482 | 3645.943 |
| 1980 | 49632.32 | 10 | 9.5 | 0.546358 | 23282.3 | 403.6878 | 3620.1 |
| 1981 | 47619.66 | 21.42 | 10 | 0.610025 | 23862.9 | 330.8332 | 3757.9 |
| 1982 | 49069.28 | 7.18 | 11.75 | 0.672867 | 18976.9 | 289.744 | 5382.8 |
| 1983 | 53107.38 | 23.22 | 11.5 | 0.724142 | 16406.2 | 263.9023 | 5949.5 |
| 1984 | 59622.53 | 40.71 | 13 | 0.764942 | 16266.3 | 144.7 | 6418.3 |
| 1985 | 67908.55 | 4.67 | 11.75 | 0.89375 | 18783.4 | 433.9883 | 6804 |
| 1986 | 69146.99 | 5.39 | 12 | 2.020575 | 14904.2 | 390.4052 | 735.8 |
| 1987 | 105222.8 | 10.18 | 19.2 | 4.017942 | 48222.3 | 2453.163 | 2452.8 |
| 1988 | 139085.3 | 56.04 | 17.6 | 4.536733 | 52638.5 | 1717.912 | 1718.2 |
| 1989 | 216797.5 | 50.47 | 24.6 | 7.391558 | 88831.4 | 13927.54 | 13877.4 |
| 1990 | 267550 | 7.5 | 27.7 | 8.037808 | 155604 | 4725.291 | 4686 |
| 1991 | 312139.7 | 12.7 | 20.8 | 9.909492 | 211023.6 | 7059.258 | 6916.1 |
| 1992 | 532613.8 | 44.81 | 31.2 | 17.29843 | 348762.9 | 15510.48 | 14463.1 |
| 1993 | 683869.8 | 57.17 | 36.09 | 22.05106 | 384399.5 | 29666.8 | 29660.3 |
| 1994 | 899863.2 | 57.03 | 21 | 21.8861 | 368848 | 42879.68 | 22229.2 |
| 1995 | 1933212 | 72.81 | 20.79 | 21.8861 | 1705789 | 23621.05 | 75940.6 |
| 1996 | 2702719 | 29.29 | 20.86 | 21.8861 | 1872170 | 34874.61 | 111290.9 |

| | | | | | | | |
|------|----------|-------|-------|----------|----------|----------|----------|
| 1997 | 2801973 | 10.67 | 23.32 | 21.8861 | 2087379 | 33692.46 | 110452.7 |
| 1998 | 2708431 | 7.86 | 21.34 | 21.8861 | 1589275 | 23009.43 | 80749 |
| 1999 | 3194015 | 6.62 | 27.19 | 92.69335 | 2051486 | 93149.1 | 92792.5 |
| 2000 | 4582127 | 6.94 | 21.55 | 102.1052 | 2930746 | 116414 | 115952.2 |
| 2001 | 4725086 | 18.87 | 21.34 | 111.9433 | 3226134 | 133283.3 | 132433.7 |
| 2002 | 6912381 | 12.89 | 30.19 | 120.9702 | 3256873 | 226703.2 | 225224.8 |
| 2003 | 8487032 | 14.03 | 22.88 | 129.3565 | 5168122 | 259410.3 | 258388.6 |
| 2004 | 11411067 | 15.01 | 20.82 | 133.5004 | 6589827 | 250184.2 | 248224.6 |
| 2005 | 14572239 | 17.85 | 19.49 | 132.147 | 10047391 | 656492.9 | 652271.9 |
| 2006 | 18564595 | 8.4 | 18.7 | 128.6516 | 10433200 | 583408.5 | 583401.2 |
| 2007 | 20657318 | 5.4 | 18.36 | 125.8331 | 12221711 | 650235.2 | 650219.2 |
| 2008 | 24296329 | 11.5 | 21.2 | 118.5669 | 15351293 | 847162.5 | 846898.8 |
| 2009 | 24712670 | 12.4 | 23.5 | 148.9017 | 13458920 | 1046735 | 1046723 |
| 2010 | 25222106 | 12.1 | 24.43 | 152.4569 | 19041169 | 782607.4 | 768701.6 |
| 2011 | 23722106 | 11.4 | 25 | 156.4397 | 25018273 | 1113673 | 1234639 |
| 2012 | 28533986 | 12.2 | 27.2 | 157.4994 | 30787111 | 1273341 | 872516.1 |

CBN Statistics