THE IMPACT OF GLOBALIZATION ON THE INDUSTRIAL GROWTH OF NIGERIA

(1980 - 2010)

BY

OKORIE CHINEDU .N.

EC/2009/777

DEPARTMENT OF ECONOMICS,

FACULTY OF MANAGEMENT AND SOCIAL SCIENCES

CARITAS UNIVERSITY AMORJI NIKE, ENUGU.

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IN PARTIAL FULFILMENT OF THE RERQUIREMENT FOR

THE AWARD OF BACHELOR IN SCIENCE (B.Sc.) DEGREE IN

ECONOMICS

AUGUST, 2013

APPROVAL PAGE

This is to certify that this research work by Okorie Chinedu, presented to the Department of Economics, Faculty of Management and Social Sciences, Caritas University, Amorji-Nike was supervised and approved to have met the conditions necessary for the award of a Bachelor of Science (B.S.C) degree in Economics.

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DEDICATION

This research work is dedicated to the Almighty God who kept me and gave me good health throughout my stay in school. I thank Him for His grace that has taking place; I give Him all the praise because He is worthy to be praise.

ACKNOWLEDGEMENT

My profound gratitude goes to the Almighty God for His undivided protection and love towards me, the divine health He gave me throughout my stay in school and His daily direction towards my life.

Special appreciation goes to my parents Mr. and Mrs Okorie, and my entire family for their love, encouragement, motivation, support and their prayers towards me.

I thank my project supervisor Mr. Augustine C. Odo for his direction and guidance, and also for the time he devoted towards the completion of this project work. I will not also forget to thank all the Economics lecturers in the university; Mr. Ezekiel O. Uche, Mr. R.O OJIKE, Dr.C.C Umeadi, Mr. Augustine C. Odo, Chief J.C Odike, Mr. J.C. Odionye, Mr. Peter E.C Osoduiru, Prof. F.E Onah, Prof.S.V. Udabah and the head of department Barr. P.C Onwudinjo.

Also, i want to appreciate my friends, Udochukwu Nwoha, Vivian Osuagwu, and Princess Onyinyechi who contributed their ideas to this project work. I thank you all for the support and motivation.

I want to recognise the chancellor and founder very Rev Fr. Edeh, my D.V.C Fr. Remy Onyewuenyi and my V.C Engr. Lawrence Onukwube for their words of motivation.

ABSTRACT

This study is meant to investigate the impact of globalization on the Industrial Growth of Nigeria covering the range of 31years (1980-2010). It is obvious that Nigeria as a country still depends on the importation of productive inputs despite all efforts to develop her local resources. Thus, the objective of this study is to determine the impact of globalization on the industrial growth of Nigeria. The study reveals that for Nigeria to benefit from globalization her productive capacity, economic structure, political stability, macroeconomic policy and technology should be enhanced. Since we found out that trade openness has a negative impact on industrial growth. Therefore, it should be handled with caution, policies should be directed to decrease trade openness, especially where Nigeria has a comparative advantage due to the fact that we have abundant labour, we should promote labour intensive method of production and export commodities to earn foreign currency for use in other sector. In that case, the government should take agriculture seriously and also encourage local producers by giving them incentives in the form of tax rebates.

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CHAPTER ONE

1.1 BACKGROUND OF STUDY

Globalization has benefited the advanced countries at the expense of the less developed countries. To the Marxists, this is not surprising as they hold that globalization is a product of the capitalist. They argued that the capitalist system epitomizes exploitation, it involved class conflict and it is a system of unequal relation marked by an unequal exchange. It is a system where one group must benefit at the expense of the other. Thus globalization being of such a system is bound to be exploitative. Several scholars has traced the origins of globalization in modern times, others trace its history long before the European age of discovery to the new world. Some even trace the origins to the third millennium BCE. Since the beginning of the 20th century, the pace of globalization has intensified at a rapid rate, especially during the post cold war era. The term globalization has being in use since the mid-1980's and since the mid 1990's.However, the main originators of globalization can be traced to the classical economists that showed that trade can -be beneficial to their nation. Globalization developed through the Pre-capitalist era to the period of industrial revolution in England and evolved into what we are seeing today. The above quote underscores the government especially in developing countries to know the manner they pursue domestic economic policies. They should gear all the effort towards restructuring their economy to global economic changes in such a way that they will benefit from globalization.

In 2000, the international monetary fund (IMF) identified four basic aspects of globalization: trade and transactions, capital and investment movements, migration and movement of people and the dissemination of knowledge. Further, environmental challenges such as climate change, cross-boundary water and air pollution and over fishing of the ocean are linked with globalization. Globalization processes affect and are affected by business and work organization, economics, socio-cultural resources and the natural environment. The most

Drastic evidence of globalization is the increase in trade and the movement of capital stocks, bonds, currencies and other investment from the period of 1950-2001. The volume of world's export rose by 20 times and by 2001, world trade amounted to a quarter of all the goods and services produced in the world. In the early 1970's only $10 billion to $20 billion in national currencies was exchange daily, by the early part of the 21st century, more than $1.5 billion worth of yen, Euros, dollars, pounds and other currencies were traded daily to support the expanded levels of trade investment which is as a result of globalization.

1.2 STATEMENT OF THE PROBLEM

One could say that the crises in Nigeria's tertiary institution arising from corruption, mismanagement as well as the devastating effect of the defunct structural adjustment. The present socio-economic and political condition of Nigeria on ground suggests that we will have a long way to go in the global competition of the 21st century. Also the Nigeria economy is made weaker by mono-cultural dependence and unfavorable terms of trade in its export trade as well as excruciating debt burdens. This problem can really make Nigeria not to benefit from the ongoing globalization process. The challenge is for Nigeria to use their enormous resources to build a strong, consistent self sustaining economy which will be competitive in the world market.

It is therefore, questionable whether Nigeria has been able to reap the benefit of globalization due to these weaknesses.

1.3 RESEARCH QUESTIONS

1) To what extent will globalization affect our economy and relation to other countries?

1.4 OBJECTIVE OF THE STUDY

1) To determine the impact of globalization on industrial growth

1.5 HYPOTHESIS OF THE STUDY

1) Globalization has no impact on the industrial growth of Nigeria

1.6 SCOPE OF THE STUDY

The study covers the growth of the Nigerian industrial sector and it has been attested by globalization from the period of 1980-2010.

CHAPTER TWO

2.1 THEORETICAL LITERATURE REVIEW

While researchers mostly from the classical and northern countries lay emphasis on the positive aspect of globalization, those from the Marxist/Neo-Marxist and the countries of the Southern have continued to expose the negative impact of globalization. These opinions on the concept are polarized along national live and different school of thought.

According to Essein (2006 pg 11) "globalization is associated with growing internationalization of production and marketing of goods and services and increasing production and commercial activities.

This implies that globalization involves locating production activities by companies not only on their own soil but on the shores of foreign countries.

Evangelos (2001) and Gondwe (2001) state that although globalization is a powerful engine of the world economy, it's benefit have not been evenly distributed. As a result, income disparities between the rich and the poor countries have increased. Dembele (1998) put it that globalization tends to consolidate the existing international division of labour which contains Africa to a role of supplier of raw materials and commodities and consumer manufactured goods from developed countries, worse of all, globalization will considerably undermine and eliminate the role of the African State in defining, the priorities of national development.

Abubakar (2001), contended that the process of globalization which entails the expansion of capital and market forces into “uncaptured terrain” brings along with it harsh socio-economic condition for the populace in Nigeria, for instance, the adoption of the World Trade Organization (WTO) agreement greatly undermined the living standard of the people.

2.1.2 GLOBALIZATION AND ITS CONCEPTUAL USAGES

Contemporary globalization can be viewed as just the latest phase of a long-term process, and if we accept the existence of many world-systems located in different parts of our planet. Globalization does not lend itself to easy conceptualization and like other concepts in social sciences, it is not amendable to single, simple and straight definition which explains its various connotations by scholars of different persuasions as internalization, universalization, liberalization, westernalization etc.

According to Dibrin Ibrahim, globalization is not a single phenomenon but rather a syndrome of processes and activities, which embody a set of ideas and a policy framework organized around the globalization of labour and power (Ibrahim 2003:13) in similar vein, tade Aina submits that any meaningful relevant understanding of globalization must go beyond the myths and ideologies of globalization to the confrontation with the diverse but actual processes how they unfold, their relationships with themselves and other social and economic relations and dynamics such an understanding must also recognize not only the complex but varied history of the process being studied but it must reset a monolithic understanding such as their increased competitiveness and efficiency in the utilization of proactive resources and major improvements in social development.

2.1.3 EMPIRICAL LITERATURE

Some empirical literature has been carried out by some great thinkers to help simplify the researcher(s) work in the field of investigation on the impact of globalization on the industrial growth of Nigeria.

Stanley Fisher, the deputy managing director to IMF, sees globalization with many important dimensions –economic and social, political and environmental, cultural and religious which affect everyone in some way. He said this during the globalization conference held in Cameroon. He went on further elaborating that a nation can attract capital flows only through sound macroeconomic policies, better governance, legal and financial reforms, privatization, price liberalization and infrastructural development.

According to Aina (1996), globalization entails universalization whereby the object, practices or even values transcends geo-political boundaries, penetrating the sovereign nation state and impacting the orientation and value system of the people. He thus examined globalization as depicting the institutions, groups and individual, the universalization of certain practices and perhaps more significantly, the expression of the global restructuring that has occurred in recent decades in the structure of modern capitalist economic relations.

Also Bill Clinton, former President of U.S.A sees globalization as a fact and not a policy option. He says USA is a product of globalization which was achieved through the use of monetary and fiscal policies.

Greenville (1999) assures the existence of solid financial infrastructures and sound financial institutions in the financial markets. This was done to explain the reasons why East Asia economies were able to weather the episodes of financial turbulence in 1997 and 1998 despite close trade link between those economies in crisis.

Based on the findings of Borda E. and Kim (1998), there was a relatively high degree of co-integration over the periods of 1980 to 1994 and 1983 to 1998 between the United Kingdom and France. This was due to the degree of long run co-integration of real interest rates.

Kim and Vereelia (1991) models suggestion are conformed in enriched information environment where the process of the formation of beliefs by investors is descended. This implies that trade increases with the heterogeneity of investors revision of beliefs revolves around an information event.

2.1.4. LIMITATION OF THE PREVIOUS STUDY

The limitations of the previous study were based on the fact that previous researchers failed to view the importance of openness in estimating the impact of globalization on the industrial growth of the Nigerian economy. Therefore, this research work shall view degree of openness as one of the independent variables that would be used to estimate the impact of globalization on the Nigerian economy.

Also the time frame for this work, (1987-2010) is an extension on the subsequent years used by the previous researchers. Hence, the recent impact of globalization on the industrial growth of Nigeria economy shall be

seen and reviewed in this research work.

2.1.5. HISTORICAL PERSPECTIVE

Globalization operates on ”an ideological dimension filled with a range of norms, claims, beliefs and narratives about the phenomenon itself. In the 19th century Great Britain became the first global economic super-power, because of superior manufacturing technology and rail roads. In the 19th century, steamships reduced the cost of international transport cheaper. Globalization in this period was decisively shaped by nineteenth century imperialism such as in Africa and Asia. The invention of shipping containers in 1956 helped advance the globalization of commerce.

Globalization took a big step backwards during the first world war, the Great Depression and the second world war, work by politicians led to the

Bretton woods conference, an agreement by major governments to lay down the framework for international monetary policy, commerce and finance, and the founding of several international institutions intended to facilitate economic growth multiple rounds of trade opening simplified and lowered trade barriers. Initially, the General Agreement on Tariffs and Trade (GATT) led to a series of agreements to remove trade restrictions. GATT's Successor was the World Trade Organization (W.T.O), which created an institution to manage the trading system. Exports nearly doubled from 8.5% of total gross world product in 1970 to 16.2% in 2001. the approach of using global agreements to advance trade stumbled with the failure of the Doha round of trade –negotiation. Many countries then shifted to bilateral or smaller multilateral agreements, such as the 2011 South Korea –United States free Trade Agreement.

Since the 1970s aviation has become increasingly affordable to middle classes in developed countries. Open skies policies and low-cost carriers have helped to bring competition to the market. In the 1990s, the growth of low cost communication networks cut the cost of communicating between different countries. More work can be performed using a computer without regard to location. This included accounting, software development and engineering design. In late 2000s, much of the industrialized world entered into the Great Recession which may have slowed the process at least temporally.

2.1.6 BENEFITS OF GLOBALIZATION

Globalization enables greater trade and competition between different economies, leading to lower prices, greater efficiency and higher economic growth. It provides economic independence and triggers competition stimulating globalization to elevate the living standard of people in the nation that offer themselves to the world trade "we have moved from a world where the big eat the small to a world where the fast eat the slow" as observed by Klaus Chewas of the Dawob world economic forum all economic analyst must agree that the living standard of people have considerably improved through the market growth with the development in technology and their introduction in the global markets, there is not only a steady increasing demands but also it has led to greater utilization.

Another factor which is often considered as a positive outcome of globalization is the lower inflation. This is because the market rivalry stops

the business from increasing prices unless guaranteed by productivity. Technological advancement and productivity expansion are to other benefits of globalization because since 1970s growing international rivalry has triggered the industries to improve greatly.

Globalization has rapidly improved the social and economic status of women in the developing world. The explanation is based on the fact that in a competitive, globalized world the role of women becomes ever more valuable.

Also, globalization helps in breaking the regressive taboos responsible for discriminating against people on basis of gender, race or religious beliefs, it is an antidote to the intolerant fundamentalism that appears to oppress millions of the world's poorest, globalization offers hope for the world's poorest, hope that one day they may enjoy the fruits of the west's liberal tradition.

2.1.7. PROBLEMS OF GLOBALIZATION

Globalization has been seen as a phenomenon, which has always appeared under several aspects: information, cultural, economic or political. Although, considered by some analysts as a benefit phenomenon,

it has been called into question by other analysts for the disastrous effects over the poor countries. Globalization affects development thinking and actions of the developing countries. According to Tandon (1998) globalization encourages decreasing national control and increasing control over the (internal) economy (of the state) by outside players. Infact, the gospel of globalization through it's economic liberalism has been elevated to the position of the absolute truth, a sort of single theory against which there is no credible alternative.

Globalization has also disintegrated or disarticulates the industrial sector of most countries. This has been particularly evident in the areas of cost production which has become uncomfortably high in most of the developing countries (e.g. Nigeria) also in the lack of government incentives to encourage local products through high importation currency devaluation and depletion of foreign reserve. Nation – states in Africa today rarely define the rules and regulation of their economy, production, credits and exchange of globalization. They are hardly now capable of volitionally managing their political economic and socio-cultural development. Globalization has imposed heavy constraints on the internal management dynamics of most countries where the government now finds it difficult in most cases to meet the genuine demands of the governed on many issues of national urgency (e.g. the Sure 1st 2000, 50% like in the prices of petroleum and related products and the attendants crippling national strive by the Nigerian workers). The reality in Nigeria today, as it is for most

African countries is that globalization has made it immensely difficult for government to provide socio insurance one of their central functions and one that has helped many developed nations to maintain social and domestic supports.

2.1.8. EFFECT OF GLOBALIZATION ON THE WORLD ECONOMY

As globalization produced a world economy in the 18^{th}, 19^{th} and 20^{th} centuries, local economies around the world changed the way they produced and distributed raw materials. They specialize in the things they were best at, imported everything they needed to import and shared ideas and technology. Increased trade led to an ever increasing network interdependency in the countries of the world. When Britain looked to other countries to satisfy their demand for coal, those countries began to rely on the revenues they could gain by exporting coal. Those countries, in turn, could use those revenues to buy British goods or import raw materials that they need for their own industrialization. As countries traded with each other regularly and more extensively, they stopped producing the things they could import more cheaply and concentrated on producing the things they made well.

Because of globalization, most of the countries of the world no longer concentrate on local markets. There focus became on regional or even world market. It also changed the way the produced goods domestically including which goods they produced at all. Just because a country might have the resources and ability to produce on particular commodity no longer meant they would necessarily produce it, if someone else in the world could produce it more cheaply and with a higher quality, they might just concentrate on what they were better at producing

2.1.9 EFFECT OF GLOBALIZATION ON NIGERIA INDUSTRY

The enhancement of industrial development has been a major policy focus in Nigeria since the 1970s. The favourable policy stance of the Federal government toward the industrial sector might have been informed by the obvious positive relationship between industrialization and general development of the Nigerian economy. In this regard, the federal government adopted various measures to encourage investment ion the sector. The statement of fiscal and monetary policy objectives in the 19t0s and 1970s emphasized the need to protect the infant (import substitution) industries. However, these strategies appear not to have created the necessary foundation for an industrial revolution in the society.

For instance, a review of import substitution industrialization by Egwaikhide (1992) shows that Nigerian’s import substitution programmed exacerbated the foreign exchange problem, while the production techniques of the protected industries were capital –intensive, with low absorption capacity. In the 1980s the economy took a different turn, partly due to declining oil revenues, inconsistent and macroeconomic policies and intensive primitive accumulation. All austerity and stabilization measures put in place failed to reverse the declining trend (Ekpo 1995). Deepening economic problems precipated the adoption of the structural adjustment programme (SAP) from July 1986, of which trade liberalization was a major element. It was expected that a liberalized trade regime would stimulate industrial output expansion and enhance a better performance of the

economy (frased et al, 2003), however, contrary to expectations that towards SAP policies would shift production and trade towards outward orientation. The industrial sector seems not to have made any significant contribution to export earnings.

According to Madunagu (1991), Toyo (2000) and Obaseki (1999) that globalization have led to the creation of parasitic economic relationships and has systematically pushed Nigeria into economic crisis as industries operating in Nigeria cannot compete with industries in advanced countries of the world, most especially Europe and America.

2.1.10. GLOBALIZATION AND THE NIGERIAN ECONOMY

Some of the essential instruments used by the West to useless our economy are privatization, deregulation and the controversial university autonomy. These are impetus of sapping our national resources, for the manner and methodology of their implementation does not tally with the economic principles upon which Nigeria was based. This in turn has greater effect on the national savvy. For instance, privatization even Margaret Thatcher who happened to be the fore runner of the privatization a pet project she initiated in 1979, had not closely understood the concept in its absolute term. The Nigerian economy was basically agrarian. The relative share of agriculture including livestock forestry and fishing in the GDP, which was 65.6% in 1960/1961 declined sharply to about 32% per annum in the 1990s. this inspite of the fact that the sector still constitute the source of employment and livelihood for about three-quarters of the population. Up till the early 1980s Nigeria has reasonably amount of foreign reserve with insignificant record of foreign debt. Its currency, the Naira, was competing strongly with other foreign currencies by mid 1980s ; the economy started declining as foreign reserves becomes almost exhausted also foreign debt started accumulating at an alarming rate while the Naira lost its value relative to other currencies.

On the other hand, globalization has affected the Nigerian economy greatly. Despite various challenges faced by the Nigerian economy during the time when Nigeria was still agrarian economy. Many changes has occurred by the integration of globalization into our economy. Globalization has affected our language, our culture, religion and most importantly the way we dress. The Nigerian economy has experience a rapid change in it's economy. For instance, it is through the integration of globalization that our industrial sector was able to adapt to various industrial policy that has helped the economy to depend on the export of it's produce and not

depending totally on the importation of goods which affected our economy from the beginning before the advert of globalization to our economy.

CHAPTER THREE

3.1 RESEARCH METHODOLOGY

The ordinary least square (OLS) method of the classical linear regression model is the econometric technique adopted in the study, this is because of the simplicity of its computation and because it possess the Blue (best, linear, unbiased or efficient estimator) properties, it is a minimum variance unbiased or efficient estimator, they have consistency it is also sufficient and there are readily available software packages that are user friendly, example is the E-VIEW 6.0, the result of this estimates are subject to various test to ensure compliance of estimate of the rule of economic theory.

The data chosen ranges between1980-2010, there are four independent variables, thus the multiple regression analysis was used. this was to measure the accuracy and the extent to which the explanatory variables impact on the dependent variable.

3.1 FRAMEWORK OF THE MODEL

This research work follows the econometric research methodology. This method is used because it seeks to ascertain quantitatively the impact of economic variables on a given phenomenon under study, in this research work, the impact of globalization on the industrial growth of Nigeria can be ascertained by regressing industrial GDP on exchange rate, foreign direct investment, interest rate and openness that would be specified, the OLS is used for the empirical aspect of the study.

3.2 MODEL SPECIFICATION

One thing our econometric model has to do in attempting to study the relationship between variables is to state the relationship in mathematical from which the economic phenomena will be exposed empirically.

In the model specification below the researcher is to evaluate the impact of globalization on the industrial growth, industrial GDP is used as the dependent variable. The explanatory variable include exchange rate, foreign direct investment, interest rate, and openness.

The equation can be expressed as

$YIND= b_0 + b1EXCH+b_2+ FD1+ b_3 INT +b_4 OPN + ut$

Where

YIND= Industrial GDP

EXCH= Exchange rate

FDI= Foreign direct investment

INT = interest rate

OPN = Openness which reflects globalization

bo = intercept

b_1, b_2, b_3, b_4, = slope of co- efficient

ut- stochastic error term

The error term is included in the model.

3.3 METHODS OF EVALUATION OF RESULT

The techniques used for evaluation of result implies the use of economic econometric test, first order (statistical) test, and second order c-econometric test.

STATISTICAL (FIRST ORDER) TEST

The statistical test R^2 (which is the goodness of it) will be used to explain the total variation in the dependent variable caused by variations in the independent variables.

The t-test ratio is also used to test the statistical significance of each of the regression result.

ECONOMETRIC (SECOND ORDER) TEST

The econometric test includes the test for auto-correlation using the Durbin-Waston d statistics to test for the randomness of the residual in order to know if there is auto-correlation in the model, the test of multicollinearity using partial co-efficient of determination, test for heterosceadasticity based on error term etc.

DECISION RULE

Decision Rule for t-test

We reject the null hypothesis and accept the alternative one that is we accept the estimate b1 is statistically significant.

If t falls in the acceptance region, that is to say if – t 0.025 < t<+ t 0.25 (with n-1 degree of freedom). We accept the null hypothesis i.e. we

concluded that our estimate bi is not significant at the 5% level of significance.

DECISION RULE FOR F – TEST If F & > F (k – 1, n – k) reject Ho otherwise you do not reject it, where F & (k-1, n-k) is the critical F value at the & level of significance and (k-1) numerator df and (n-k) denominator df.

Alternatively, if the p value of F obtained is sufficiently low, one can reject Ho.

DECISION RULE FOR STANDARD ERROR

If s (bi) >1/2 bi we accept the null hypothesis i.e we accept that the estimate bi is not statistically significant for a two-tail test.

(b) if s (bi)< ½ bi we reject the null hypothesis. In other words we accept that our parameter estimate is significant statistically at the 5% level of significant for a two-tail test, the smaller the standard errors, the smaller are the evidence that the estimates are statistically significant.

3.4 DATA SOURCES REQUIRED

The data used in the research are all secondary data and were sourced from the Central Bank of Nigeria (CBN) statistical bulletin and annual report. The industrial GDP (1980-2010) were sourced from the CBN bulletin, openness was sourced by $\frac{(\mathrm{Im}\,port + Export)}{GDP}$ (The addition of import and export divided by the total GDP)

CHAPTER FOUR

PRESENTATION ANALYSIS AND INTERPRETATION OF RESULTS

4.1 PRESENTATION OF REGRESSION RESULTS:

The classical least regression model (CLRM) was used and the ordinary least square (OLS) method was used a techniques for running the regression. The estimate of the regression results will be subject to various tests.

The OLS result as presented by STATA 11.0 is reported in the table below (table 4.1).

Number of obs = 31

F(4, 26) = 54.21

Prob > F = 0.0000

R-squared = 0.7798

Root MSE = 1.1833

Lyind	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
opn	.0241203	.0075994	3.17	0.004	.0084995	.0397411
fdi	-3.71e-07	5.42e-06	-0.07	0.946	-.0000115	.0000108
intr	.0008069	.0284386	0.03	0.978	-.0576496	.0592633
exch	.0280007	.0108854	2.57	0.016	.0056254	.050376
_cons	10.17701	.4859827	20.94	0.000	9.178056	11.17596

4.2 INTERPRETATION OF REGRESSION RESULTS.

4.2.1 ANALYSIS OF REGRESSION COEFFICIENT:

Given that:

IND = $B_0 + B_1OPN + B_2FDI + B_3INTR + B_4 EXCH + Ui.$

IND = 10.17701 + 0.0241203OPN – 3.71FDI + 0.0008069INTR + 0.0280007EXCH + Ui.

The result shows that without the impact of other independent variables, industrial output must rise by 10.17701 units.

OPN: Coefficient of the degree of trade openness is 0.0241203, which shows that a unit change in OPN will bring about 0.0241203 unit increase in the industrial output. **FDI**: Coefficient of foreign direct investment is -3.71, which explains that a unit change in FDI will reduce the industrial output by 3.71 units. **INTR:** Coefficient of interest rate is 0.0008069, which shows that a unit change in interest rate will bring about a 0.0008069 unit increase in the industrial output. **EXCH:** Coefficient of exchange rate is 0.0280007, which shows that an increase in industrial output is as a result of a 0.0280007 unit change in the exchange rate.

4.2.2 ANALYSIS OF ECONOMIC A PRIORI EXPECTATION

This section aims at finding out if the empirical findings conform to the a priori expectation.

Table 4.2: Economic a priori expectation

Variables	**Expected sign**	**Observed sign**	**conclusion**
OPN	+	+	**Conforms**
FDI	+	-	**Does not conform**
INTR	-	+	**Does not conform**
EXCH	+	+	**Conforms**

From the table above, the degree of trade openness and exchange rate conformed to the a priori expected sign, while foreign direct investment did not conform.

4.2.3 STATISTICAL (FIRST ORDER) TEST.

a. **Goodness of fit test (R^2) :**

The R^2 for this model is 0.7798. This explains that 77.98% of the variation in the dependent variable is caused by changes in the independent variables.

b. Student "T" test:

Statement of hypothesis.

$H_{0:}$ $B_n = 0$ (statistically insignificant).

$H_{1:}$ $B_{n} \neq 0$ (statistically significant).

$\alpha = 0.05$ i.e 5% level of significance.

With n-k degrees of freedom,

Where:

n = number of observations.

k = number of parameters including the intercept.

d.f = n-k =31-5=26.

Decision rule:

Reject H_0 if $t_{cal} > t_{tab}$ at 5% level of significance otherwise accept H_0.

TABLE 4.2: t-test

Variables	t_{cal}	t_{tab}	Level of significance	Conclusion
Cons_	20.94	±2.0555	0.05	Significant
OPN	3.17	±2.0555	0.05	Significant
FDI	-0.17	±2.0555	0.05	insignificant
INTR	0.03	±2.0555	0.05	Insignificant
EXCH	2.57	±2.0555	0.05	Significant

From the table above, the degree of openness and the significant were revealed to be significant, while foreign direct investment and interest rate were insignificant.

c. **F test:**

The f-test tests for the overall significance of the model.

Statement of hypothesis:

H_0 :$\beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ (Overall model is insignificant).

H_1 :$\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$ (Overall model is significant).

$\alpha = 0.05$ at 5% level of significance with (k-1) (n-k) degrees of freedom.

k = number of parameters including the intercept.

n = number of observations.

d.f = (k-1) (n-k) = (4, 26).

Decision rule:

Reject H_0 if $F_{cal} > F_{tab}$ otherwise accept $H_{0.}$

From the regression result, F (4, 29) = 54.21.

From the F table, $F_{0.05}$ (4, 29) = 2.74.

Conclusion: since F_{cal} (54.21) > F_{tab} (2.74), we reject H_0 and conclude that the overall model is jointly significant.

4.3 ECONOMIC CRITERIA

4.3.1 ECONOMETRICS (SECOND ORDER) TESTS.

1. **Durbin Watson**:

To test the validity of the assumption of non-auto correlated disturbances, we will adopt the Durbin Watson d-statistic and will be computed with the given level of significance α=0.05. Based on this, we state the hypothesis.

H_0 : P= 0 verse H_1: P > 0. Reject H_0 at α level if $d < d_U$. that is, there is statistically significant positive auto correlation.

H_0 : P= 0 verse H_1: P < 0. Reject H_0 at α level if the estimated $(4\text{-}d) < d_U$, that is, there is statistically significant evidence of negative autocorrelation.

H_0 : P=0 verse H_1 : P ≠ 0. Reject H_0 at 2α level if $d < d_U$ or $(4\text{-}d) < d_U$, that is, there is statistically significant evident of auto correlation positive or negative.

Table 4.4: Decision rule for Durbin Watson d test

Null hypothesis (Ho)	**Decision**	**If**
No positive autocorrelation	Reject	0 < d < dl
No positive autocorrelation	No decision	dl ≤ d ≤ du
No negative correlation	Reject	4 – dl < d < 4
No negative correlation	No decision	4 – du ≤ d ≤ 4 – dl
No positive or negative autocorrelation	Do not reject	Du < d < 4 – du.

Where

d = 1.553494

d_L = lower limit = 1.22915.

d_U = upper limit = 1.65002.

Conclusion:

Since dl ≤ d ≤ du i.e. 1.22915 < 1.553494 < 1.65002, we conclude that there is no positive serial correlation and at 0.05 level of significance, the result falls in the no decision region.

2. **Normality test:**

Statement of hypothesis:

H_0 : N = 0 (error terms are normally distributed).

H_1 : N ≠ 0 (error terms are not normally distributed).

$\alpha = 0.05$

Decision rule:

If J.B stat > $x^2_{(0.05)}$ we reject the null hypothesis, and accept if otherwise.

Conclusion:

From the regression result, J.B stat (11.51) > $x^2_{(0.05)}$ (5.991), we reject the null hypothesis and conclude that the error terms are not normally distributed**.**

3. HETEROSCEDASTICITY TEST

Heteroscedasticity Test: we shall employ the White's hetroscedasticity test. See Gujarati (2004). This test is basically on the variance of the error term. The test helps to ascertain whether the variance of the error term is constant.

H_0: Homoscedasticity (ie there is no hetroscedasticity)

H_1: Heteroscedasticity at 6 degrees of freedom.

DECISION RULE

If x^2 - calculated > x^2 - tabulated, reject the null hypothesis.

X^2 - calculated = 26.65 @ 14 degrees of freedom

X^2 - tabulated = 23.685

Since, x^2 - calculated > x^2 - tabulated, we accept the H_1, which is heteroscedasticity and conclude that the conditional variance of the error term is not equal.

3. **MULTICOLINEARITY TEST**

Using the correlation matrix result

Table 4.5: Correlation matrix.

	EXCH	INTR	FDI	OPN
EXCH	1.000			
INTR	0.2684	1.000		
FDI	0.8746	0.1088	1.000	
OPN	0.7162	0.6411	0.5827	1.000

Looking at the result, only one of the variables has multicollinearity. Such variable includes FDI and EXCH, which has correlation value in excess of 0.8.

4.3.2 TEST OF HYPOTHESIS:

H_o: Import and export have no impact on industrial output in Nigeria.

Conclusion: The result from the t-test revealed that the degree of trade openness and exchange rate have significant impact on the industrial output, while foreign direct investment has an insignificant impact on industrial output. Therefore, we conclude that openness have an impact on industrial output in Nigeria (since the degree of trade openness includes trade flows). Also, exchange rate has a significant impact on the growth of Nigerian industries, while the impact foreign direct investment is insignificant.

CHAPTER FIVE

SUMMARY, POLICY RECOMMENDATION AND CONCLUSION

5.1 SUMMARY OF FINDINGS

The world is seen as a global village because of globalization. Being a double edged sword that wield the good and the bad, it is certainly too late for any country in the globe to turn back the hand of the clock in protest of globalization. Nigeria certainly cannot act in isolation considering the economic implication of protectionism. The integration of national economics should be noted as having implications for the pursuit of independent macroeconomic policies. As a result of the integration of the national economies through trade and capital flows domestic macroeconomics management would be ineffective if measures are not applied in isolation of development in other countries.

The major findings are:

- OPN: Coefficient of the degree of trade openness is 0.0241203, which shows that a unit increase in OPN will bring about 0.0241203 unit increase in the industrial output.
- **FDI**: Coefficient of Foreign Direct Investment is -3.71, which

Explains that a unit increase in FDI will reduce the industrial output by 3.71 units

- **INTR:** Coefficient of interest rate is 0.0008069, which shows that a unit increase in interest rate will bring about a 0.0008069 unit increase in the industrial output.
- **EXCH:** Coefficient of exchange rate is 0.0280007, which shows the increase in industrial output resulting from a unit increase in the exchange rate.

5.2 POLICY RECOMMENDATION

The following policies amongst others should be adopted by the government of Nigeria if it will benefit from globalization. Sound macroeconomic policies that can transform the economy to move simultaneously with her counterparts in the western world should be vigorously pursued.

I. Since we found out that trade openness has a negative impact on industrial growth. Therefore, it should be handled with caution, policies should be directed to decrease trade openness, especially where Nigeria has a comparative advantage due to the fact that we have abundant labour, we should promote labour intensive method of production and export commodities to earn foreign currency for use in other sector. In that case, the government should take agriculture seriously and also encourage local producers by giving them incentives in the form of tax rebates.

II. In order to be competitive globally the Nigeria economy must be diversified in order to promote trade information and growing market, the government should create a conducive environment for foreign direct investment to contribute to export which leads to industrialization.

III. Export should be promoted while import should be reduced drastically.

IV. Another approach to addressing the phenomena of globalization as it affects Nigeria in 21st century is for African countries to encourage regionalism, the acceleration of the process of integration will boast the resource base of African countries thereby increasing the rate of growth and development, thus Nigeria therefore needs to accelerate the consolidation of ECOWAS at economic, political and security levels.

V. The Nigeria government and policy makers should pursue efficient and effective economic management of the country's resources so as to raise the people's standard of living and overall economic development.

5.3 CONCLUSION

This work attempt to analyze the impact globalization can be beneficial or detrimental to economic growth of any country. It all depends on how the country handles it. A country should know her area of strength and weakness, While encouraging those aspects of globalization that is beneficial, the destructive aspect should be avoided.

Finally, in the case of Nigeria having established that trade openness is unfavorable toward industrial growth, we should strive toward less openness in our trade sector, and also we should strive to attain external and internal balance. By so doing the Nigerian economy will stand tall and benefit fully from globalization just like the advanced economies.

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APPENDIX

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  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   11.0   Copyright 1984-2009
  Statistics/Data Analysis            StataCorp
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Notes:
      1.  (/m# option or -set memory-) 10.00 MB allocated to data

. use "C:\data\chinedu.dta", clear

. reg  lyind  opn fdi intr exch,vce (robust)

Linear regression                                      Number of obs =      31
                                                       F(  4,    26) =   54.21
                                                       Prob > F      =  0.0000
                                                       R-squared     =  0.7798
                                                       Root MSE      =  1.1833

------------------------------------------------------------------------------
             |               Robust
       lyind |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         opn |   .0241203   .0075994     3.17   0.004     .0084995    .0397411
         fdi |  -3.71e-07   5.42e-06    -0.07   0.946    -.0000115    .0000108
        intr |   .0008069   .0284386     0.03   0.978    -.0576496    .0592633
        exch |   .0280007   .0108854     2.57   0.016     .0056254     .050376
       _cons |   10.17701   .4859827    20.94   0.000     9.178056    11.17596
------------------------------------------------------------------------------

. tset year,yearly
        time variable:  year, 1980 to 2010
                delta:  1 year

. estat dwatson

Durbin-Watson d-statistic(  5,    31) =  1.553494

. estat mitest,white
invalid subcommand mitest
r(321);

. estat imtest,white

White's test for Ho: homoskedasticity
         against Ha: unrestricted heteroskedasticity

         chi2(14)     =     26.65
         Prob > chi2  =    0.0214
```

```
Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
              Source |       chi2     df      p
---------------------+-----------------------------
  Heteroskedasticity |      26.65     14    0.0214
            Skewness |      10.53      4    0.0323
            Kurtosis |       1.82      1    0.1771
---------------------+-----------------------------
               Total |      39.01     19    0.0044
---------------------------------------------------

. predict residual,res

. sktest residual

                    Skewness/Kurtosis tests for Normality
                                                          ------- joint ------
    Variable |    Obs   Pr(Skewness)   Pr(Kurtosis)  adj chi2(2)    Prob>chi2
-------------+---------------------------------------------------------------
    residual |     31      0.0164         0.0031        11.51         0.0032

. corr exch intr fdi opn
(obs=31)

             |     exch     intr      fdi      opn
-------------+------------------------------------
        exch |   1.0000
        intr |   0.2684   1.0000
         fdi |   0.8746   0.1088   1.0000
         opn |   0.7162   0.6411   0.5827   1.0000
```

year	exch	Intr	yind	fdi	Opn
1980	0.5464	7.5	20174.7	3620.1	0.73
1981	0.61	7.75	15802.6	3757.9	0.55
1982	0.6729	10.25	144247.7	5382.8	0.57
1983	0.7241	10	13596.8	5949.5	0.61
1984	0.7649	12.5	14470.8	6418.3	0.65
1985	0.8938	9.25	18226.4	6804	0.68
1986	2.0206	10.5	16392.9	9313.6	0.45
1987	4.0179	17.5	34477.3	9993.6	0.89
1988	4.5367	16.5	41200.3	11339.2	0.88
1989	7.3916	26.8	89596.7	10899.6	39.9
1990	8.0378	25.5	15591.4	10436.1	55.9
1991	9.9095	20.01	136627.7	12243.5	63.6
1992	17.2984	29.8	274755.3	20512.7	62
1993	22.0511	18.32	282305.9	66787	53.5
1994	21.8861	21	283563.1	70714.6	40
1995	81.0228	20.18	873884.7	119391.6	72.6
1996	81.2528	19.74	1293226	122600.9	58.4
1997	81.6494	13.54	1215912	128331.8	63.3
1998	83.8072	18.29	8820340	152409.6	51.6
1999	92.3428	21.32	1179551	154188.6	62.1
2000	100.8016	17.98	2359313	157535.4	61.8
2001	111.701	18.29	1874083	162345.4	68.5
2002	126.2577	24.85	2042716	166631.6	44.9
2003	134.0378	20.71	3037706	178478	58.4
2004	132.3704	19.18	4610084	249220.6	57.7
2005	130.6016	17.95	6094892	269844.7	73.2
2006	128.2796	17.26	7488744	323881.1	54.7
2007	125.8811	16.94	8085380	369564.5	57.5
2008	92.3606	15.14	9719514	415247.8	61.3
2009	148.7316	18.36	7972490	460931.2	52.2
2010	150.298	16	157905	506614.5	65.2