

Industrialization and Trade Globalization: What Hope for Nigeria?

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Abstract

Industrialization is said to be a hallmark for modern economic growth and development but the Nigerian industrial sector has suffered from decades of low productivity and currently in state of coma. This study therefore examines the impact of globalization on the Nigerian industrial sector. We adopted the index of industrial production as performance indicator of the Nigerian industrial sector and external debt, foreign direct investment, nominal exchange rate, and degree of openness as proxy variables for globalization while gross fixed capital formation was used as a measure of domestic investment. Annual data from the Central Bank of Nigeria (CBN) covering 1970-2008 was utilized. We applied the unit root test for the stationarity of the data. Apart from the gross fixed capital formation that was stationary at levels $I(0)$ the other variables were stationary at first difference $I(1)$. Johansen's co-integration test revealed four (4) co-integrating equations, indicating the existence of a long-run relationship between the variables. The ordinary least square statistical technique was adopted for the estimation of our model. The results showed that gross fixed capital formation and degree of openness negates our a priori expectations. The Nigerian industrial sector has a weak base and cannot compete favorably with her foreign counterparts. Also, domestic investment is weak and unreliable. Nigeria should encourage the production of non-primary export commodities and formulate policies that would attract foreign direct investment. External debt should be sourced for productive projects only and also as means of maintaining stable exchange rate.

Keywords: Industrialization, Trade Globalization, Nigeria

Introduction

The enhancement of industrial development has been a major policy focus in Nigeria since the 1970s. The favorable policy stance of the Federal government toward the industrial sector might have been informed by the obviously positive relationship between industrialization and general development of the Nigerian economy. In this regard, the federal government adopted

various measures to encourage investment in the sector. The statement of fiscal and monetary policy objectives in the 1960s and 1970s emphasized the need to protect the infant (import substitution) industries. However, by the second half of the 1970s, the statement of policy objectives was extended to include the stimulation of indigenous investors in the manufacturing sector, including even those in small - and medium – scale manufacturing businesses. 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 Nigeria’s import substitution programmed exacerbated the foreign exchange problem, while the production techniques of the protected industries were capital – intensive, with low labor absorption capacity.

In the 1980s, the economy took a different turn, partly due to declining oil revenues, inconsistent and ad hoc 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 precipitated 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 (Prasad et al., 2003). However, contrary to expectations that 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 (1999); Toyo (2000) and Obaseki (1999) that globalization have led to the creation of parasitic economic relationships and has systematically pushed Nigeria into economic crises as industries operating in Nigeria cannot compete with industries in advanced countries of the world, most especially Europe and America. That the process of globalization which entails the expansion of capital and market forces into “uncultured terrain” brings along with it harsh socio-economic condition for the populace. An appraisal of this programmed shows that it was a failure since it could not yield the expected results (Ikpeze, 1994) if this is true, it is important for us to examine how Nigerian industrial sector have been fairing under globalization. It is also important for us to ascertain whether globalization should be accepted with both hands or not. What should Nigeria’s industrialization and trade policies be in the face of globalization? The rest of this paper is divided into theoretical framework and literature, methodology and data, analysis and estimation, and conclusion and recommendation.

Theoretical Framework and Literature

The theoretical underpin of this paper is the Product Life Cycle Theory. This theory suggests that trade patterns are influenced whereby a new product is introduced. It states that many manufactured products will be produced first in the countries in which they were researched and developed. These countries are typically industrialized. Over the product life cycle, production will tend to become capital intensive and will shift to foreign locations. The product life cycle theory assumes the following dimensions: (1) the introduction stage which has to do with innovation, production and sales in the original country. (2) Stage 2 is referred to as the growth stage which is characterized by increase in export by the innovating country, more competition, increase in capital intensity and some foreign production. (3) the maturity stage is

the third stage which has to do with decline in exports from the innovating country, more product standardization, more capital intensity and increased competitiveness of price, and (4) stage 4 is the decline stage which is characterized by concentration of production in LDCs and innovating country becoming net importer.

Hirschman (1958) argued that the pattern of industrial development depends on the country's form of backward and forward linkage effects the industries established in the country are expected to produce. Kuznets (1957) posited that in the process of industrialization, the share of the agricultural sector in national product declines, national income increases, while the share of the industrial sector increases with the national income. Huffman (1958) also argued that in the process of industrial development, the consumer goods industry usually develops faster.

Chenery (1960) further posited a steady pattern of industrial sector development. According to him, as industrial sector development proceeds changes are usually experienced in economic structures. A rise in the relative importance of the manufacturing sector changes in the production techniques and sources of supply for industrial commodities.

Britain, one of the forerunners in the industrialization process followed the pattern of capital accumulation in the seventeenth century which enabled industrialists to take advantage of the mechanical inventions of the late 15th century and this was one of the reasons that enabled England to gain an early start in industrial revolution before others. British woolen industry was regarded by the state as a prime national asset. Regulations were made to encourage it. These regulations include: farmers were forbidden to export wool; Heavy duties were imposed to foreign fibers; the use of cotton was checked; colonists were not allowed to make woolen materials for export; textile workers were not allowed to emigrate; and diplomacy was applied to open up new markets and also ward-off high tariffs.

It is interesting to know that, in the 12th and 13th centuries Britain was handicapped in the competition with its then contemporaries; France, Holland, Spain, Belgium, etc, she still arrive as an industrialized state before these other ones. One of the greatest impetuses to this was the Tudor Philosophy of unicentricism. It is no small measure prepared English for swifter industrial take-off and advancement.

As at the dawn of the 18th century, Britain was ready for industrial take-off. All factors highlighted above paved the way for industrial capitalism. Thus the stage was set and in the 18th century the action began, England became the first country to be industrialized (Tamuno, 2007). Nevertheless, the path followed by France to industrial development was a bit different from that of Britain. Rather than over reliance on machine technology and industrial capitalism (mercantilism), France engaged in commercialization of agriculture, construction of railways and road network, modernization of her economy, etc. Here it must be noted that France did not experience a "take-off" what happened in France was gradual and steady growth that began in the eighteenth century in other words, there was qualitative break-through over a period towards industry (Tamuno, 2007).

Adenikinju and Olofin (2000) examined the quantitative effects of the role of economic policy in the growth performance of the manufacturing sector in Africa. The study used panel data for seventeen countries over the period 1976 to 1993. Their econometric results suggest that level of human capital; proxied by primary and secondary school enrolment rates; have a positive impact on growth in manufacturing. The competitiveness index, that is the unit of labor cost, has a negative impact on the growth performance of the manufacturing sector in African countries, though the improvement in terms of trade was found to have a beneficial impact on manufactures. The trade liberalization policy, proxied by index of openness, has an insignificant effect on the growth in the manufacturing. On the other hand, some studies find little empirical evidence to support a link between trade liberalization and industrial growth (Lucas, 1988; UNIDO, 1995; and Young, 1991). For instance, in Adenikinju and Chete (1995), it is shown that in the Nigerian manufacturing sector, import liberalization has had a negative impact on total factor productivity growth. The reason for this was adduced to the fact that domestic manufactures are unable to compete with better quality and often imported products. Several authors have also pointed to the example of Korea and Japan where some form of protection allowed for rapid transformation of the industrial sector (Pack and Westphal, 1986). Oyelabi (1971) estimated and tested factors substitutions in Nigeria's manufacturing sector and found that the elasticity of substitution in Nigeria's manufacturing industries varies from industry to industry Osakwe (1976) fitted a Cobb-Douglas production function to time series observation of ten industries in the manufacturing sector of Nigeria and found that labor productivity exceeds that of capital by more than double, with the coefficient of capital being negatively signed and statistically insignificant.

Odama and Kazi (1982) estimated production functions exhibiting constant elasticity of substitution to the manufacturing industry in Nigeria based on an industrial survey for the years 1962-1975 and found that labor and capital are both economic and politically significant and that the level of substitution in the Nigerian manufacturing industries is very low.

Globalization has also come to play a major role in recent patterns of industrialization of countries in recent years. In Nigeria, a major aspect of globalization is commercialization and privatization of industrial concerns which literarily translates to the "transfer of government owned shareholdings in the disguised enterprises to private shareholders, corporate individuals and corporate bodies (FRN, 1988). In essence the government has a restricted role to play which is simply that of maintenance of law and order. Other policy of 1989 widely accredited as a replacement of the amended indigenization policy of 1977 to specifically encourage foreign investments and allow indigenous businesses to benefit from the National economic reconstruction Fund. However, a review of some studies on globalization here is important.

Evangelos (2001) and Gondwe (2001) state that although, globalization is a powerful engine of world prosperity, but its benefits have not been evenly distributed. Income disparities between rich and poor countries have increased. The persistence of abject poverty and other problems, including those posed by the volatility of international capital flows, have been a matter of serious concern. He also stressed that in sub-Saharan Africa, the income gap relative to the

advanced economies has widened and per capita incomes in a number of countries have actually dropped, in absolute terms. There has also been an erosion of sub-Saharan Africa's share of world trade, even for its traditional commodity exports, while foreign direct investment in the region has generally remained at very low levels.

Dembele (1998) put it that globalization tends to consolidate the existing international division of labor which confines Africa to a role of supplier of raw materials and commodities and consumer of 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. The ability of African governments to regulate their economies will be further eroded by the rules of the World Trade Organization (WTO), which in the name of "fair competition" and "open market", will strip the state of most of its prerogatives in the economic field.

Ayagi (1990) argued that globalization led to the creation of parasitic economic relationships and has systematically pushed Nigeria into economic crisis. This dependency culture created and entrenched has thus made Nigeria a country, which does not produce but only consumes. "So Nigeria imported everything and anything that anybody cares to advertise". With globalization, Nigeria kept importing everything at the expense of her own domestic industries. The rule of the game was scrambling and grabbing; everybody was trying to grab what he or she could afford. Foreign companies and interests sponsored and fully partook in the free-for-all scramble for Nigeria's windfall financial resources.

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 and exacerbated the deterioration/decay in the strategic sectors of the economy. The deterioration in terms of infrastructures diminishes the possibility of enhancing capacity utilization.

It is also argued that the so-called agents of development (the World Bank, IMF, and their allied institutions) have proven to be agents of underdevelopment. These agents of the globalization project pretend to advocate for development of the world economies, but in real sense, development, in conception and actualization is endogenous since it is "what society considers it to be and it is a process generated by and sustained by the energy of society, and its willingness to learn creatively from its own history and other's history" (NES, 2000).

Fu-chen Lo et al. (2000) stressed that the logic of globalization driven growth has privileged some regions and cities over others. The developed world and some developing and newly industrialized economies, according to them, have benefited while many developing countries have been marginalized. The reasons for this include the following:

1. Globalization has worked by amplifying the effect of pre-existing inequalities in the distribution of assets, especially human capital, and of access to infrastructure and other productive resources.
2. In countries where inequalities were high, globalization tended to make inequality worse.
3. Globalization has tended to increase inequalities across countries.
4. For globalization to be pro-poor it needs to be combined with policies which create a more equal access to productive assets and resources, particularly for vulnerable groups facing the increased competition which comes with globalization unfortunately this is not so life in real situation.
5. The speed and sequencing of external and domestic liberalization must be tailored to the particular circumstances of individual countries, based on their institutional capacity to transform the economy.

Akinbobola (2001) stresses that globalization of the Nigerian economy may foster a re-orientation of the domestic economy and re-direct the course of industrialization and technology development. According to him, it has the potential of transforming the domestic bourgeoisie from consumption culture to production culture by encouraging joint ventures. Several of the multinationals that invest in the economy seldom engage in manufacturing. Those that are into manufacturing engage in consumable household goods. They neither engage in the manufacture of semi-processed goods or industrial goods. Some of them engage in importation and distribution. This shows that the technology is located elsewhere and the consumption is taking place in Nigeria. This means that the chance of industrialization is sold out for merchandise convenience. The limited application of modern technology has been identified as one of the major factors responsible for limited industrial performance in Nigeria. He went further to stress that since globalization engages in the redistribution of resources, he hopes that the economy of Nigeria would be exposed to receiving good share of the resources that could bring life into the economy.

Dicken (1992) in his own argument about the importance of globalization points out that, while the growth of trade and financial flows is linking the nations of the world, one of the dominating forces of the global integration is the rapid increase in inflows of foreign direct investment (FDI). According to him, the major channel of FDI is the transnational corporation (TNC). He also notes that "technology is without doubt, one of the most important contributory factors underlying the internationalization and globalization of economic activity.

Lo (1994) stressed that the world economy is facilitated by new information technologies, in which ideas, capital and people move rapidly and in large numbers. According to him, the new waves of technologies have created new growth markets in both developed and developing countries as outdated products and production processes decline in demand. Information technologies play a key role in increasing global integration and spending economic transactions.

Ohmae (1990) stresses that increase in trade finance and investments have the effect of creating a “borderless” global economy. This “borderless” economy, according to him, has become a distinctive feature of the new global economic system and it symbolizes the inter-penetration of transnational economic activity among national economies.

Phillips (1999) states, that the increasingly close international integration of markets in goods, services, finance, among other things, is a reality. But regrettably, according to him, Nigeria, as constituted today, does not stand a chance to derive significant net benefit from globalization. He says further that globalization is driven by the spread of liberalization, the push of rapid technological changes, the increasing speed of transportation and the rapid expansion of communication. So far, as he rightly puts it, Nigeria has been largely “allergic” to all these arrowheads of progress. But unfortunately, according to him, the world will not wait for Nigeria. He finally submits that some of the factors to push forward are true and complete democratization, a growing economy with strong and stable financial system, and a sound and solid productive sector, among others.

Within the Nigerian context, there has been a considerable amount of discussion on the inter-relationship between trade policy reforms, economic performance and industrial growth. In recent times, however, there appears to be a dearth of empirical studies on the impact of trade globalization on industrial growth performance in Nigeria. Besides, a striking similarity of existing empirical studies suffers from the problem of spurious estimates. Thus, the interpretation of such results has been considered inadequate for economic analysis and forecasts. Against this background, the main aim of this study is to provide an empirical insight on the effects of trade globalization on the industrial sector in Nigeria, using an error correction mechanism (ECM) technique on annual data spanning between 1970 and 2008.

Methodology and Data

We used degree of openness (DOP), foreign direct investment (FDI), external debt (DF) nominal exchange rate (NER) and gross capital formation (GCF) as proxy variables for globalization. Outputs of the industrial sector are used as the performance indicator in the Nigerian industrial sector (PIS).

The data for the study is obtained from central bank of Nigeria statistical bulletin of 2009. The data is analyzed using descriptive statistics to show the trend and flows of the variables. Ordinary least square statistical technique is adopted because it is simple and gives us the best linear unbiased estimates. Co-integration and error correction techniques are also used to estimate the model. This is because most economic time series data that exhibit strong trends are non stationary (Gujirati,2004). Correct and appropriate specifications of time series models require that we determine whether the time series are stationary or non stationary. Therefore we used Augumented Dickey-Fuller statistics to establish the existence of unit root or not.

Model Specification

The openness model which captures the impact of globalization on the overall performance of the Nigerian industrial sector and which provides for industrial integration could be represented as follows:

$$PIS = f(DOP, FDI, DF, NER, GCF) \dots \dots \dots (1)$$

The OLS linear regression equation based on the above functional relation is:

$$PIS = b_0 + b_1 DOP + b_2 FDI + b_3 DF + b_4 NER + b_5 GCF + \mu \dots \dots \dots (2)$$

A priori expectations of signs of parameters as contained in section 4.2 are:

$$b_1 > 0, b_2 > 0, b_3 < 0, b_4 < 0, b_5 > 0$$

Where;

- PIS* = Performance of the Nigerian industrial sector measured using total industrial output as a ratio of GDP
- DOP* = Index of openness (total trade/GDP)
- FDI* = Foreign direct investment as ratio of GDP
- DF* = Debt flows as ratio of GDP
- NER* = Nominal exchange rate
- GCF* = Gross capital formation as ratio of GDP
- μ = error term

The unit root and the Error Correction Model (ECM) are generally presented as follows.

Unit Root Model

$$\Delta Y_t = \alpha Y_{t-1} + \sum_{i=1}^m B \Delta Y_{t-1} + \delta + Y_t + \varepsilon_t \text{ (For levels)}$$

$$\Delta \Delta Y_t = \alpha \Delta Y_{t-1} + \sum_{i=1}^m B \Delta \Delta Y_{t-1} + \delta + Y_t + \varepsilon_t \text{ (For first difference)}$$

Where;

ΔY is the first difference of the series, m is the number of lags and t is the time.

Error Correction Model

The error correction model for two variables X and Y is stated generally as:

$$\Delta Y_t = \alpha_0 + \alpha_1 \Delta X_t + \alpha_2 U_{t-1} + \varepsilon_t$$

Where; α_2 is the degree of adjustment

Data Analysis and Estimation of Results

The annual growth of the industrial sector averaged 4.01 for the period 1971-2008 recording its highest figure of 33.09 per cent in 1979 and the lowest of -21.57 in 1983.

Foreign Direct Investment (FDI) flow grew at a very low annual average of -2.28 per cent between 1971 and 1980, in fact most part of this period had negative growth, and further reduced to -29.65 per cent for the period 1981-1985 here again the years that recorded negative growth dominated the period. Following the adoption of SAP in 1986, which substantially opened the economy to the outside world and introduced more deregulatory measures, FDI flow grew at a very high annual average of 156.71 per cent for the period 1986-1998 but reduced drastically to 98.22 per cent for the period 1999-2008. In the overall FDI flow to Nigeria growth stood at 38.77 per cent on the average annually for the period 1971-2008. The highest annual growth of 707.67 per cent was recorded in 1989 and -319.26 per cent as the lowest in 1980.

External Debt (EXD): Nigeria's external debt stood at 37.20 per cent annual average for the period 1971-1980. It grew to an alarming rate of 75.99 per cent between 1981-1985 but reduced to 39.48 between 1986 and 1998 following the introduction of SAP in 1986 this amount further reduced to 25.82 per cent for the period 1999-2008. In the overall however, the growth of external debt averaged 40.09 per cent for the period 1971-2008 and recorded its highest growth of 307.16 per cent in 1999 and -83.25 per cent as the lowest in 2006.

Trade Openness: For the period 1971-1980 trade openness grew at an annual average of 4.59 per cent and reduced to -9.16 per cent for the period 1981-1985 and then had an upsurge to 13.48 per cent and further increased dramatically to about 1028.93 per cent for the period 1999-2008. However the overall increase in trade openness stood at 275.39 per cent annual average for the period 1971-2008. The maximum increase of 10220.74 per cent was recorded in 2008 while 1999 recorded the least openness growth of -43.9 per cent.

Exchange Rate: The Nigeria's exchange rate growth which stood at an annual average of -2.58 per cent for the period 1971-1980, it increased to 10.41 per cent for the period 1981-1985 and further increased to 33.35 per cent for the period 1986-1998 this increasing trend continued to an annual average of 40.55 per cent for the period 1999-2008. The rate at which the naira is exchanged for the US dollar has been on the increase from 1971 and has an annual average of 22.77 per cent for the period 1971-2008. The rate of annual increase peaked at 323.53 per cent recorded in 1999 and had the least growth of -8.28 per cent in 1980.

Gross capital formation: Gross capital formation in Nigeria as a share of GDP has fallen from its high level of about 137% in 1970 to a very low level of 0.74% in 2008 however the percentage change in domestic investment has not taken the same toll. For instance the annual average growth of the gross capital formation stood at 6.76% between 1971 and 1980 and reduced to -10.96% between 1981 and 1985 but increased again to a relatively high level of 33.13%

between 1986 and 1998 and has reduced to 20.33% between 1999 and 2008 with the annual average of 17.02% for the period 1971-2008 recording its highest growth of 97.89% in 2008 and recording its lowest annual growth of -89.65% in 2004.

The short run regression results as presented, $PIS = 89.10 - 0.10DOP + 1.96FDI + 0.16NER + 0.02DF - 0.47GCF$ with adjusted R- square of 0.83 with Durbin-Watson statistic of 0.94 shows the presence of serial correlation and spurious regression results therefore to solve this problem we adopted the unit root test. The unit root test shows that only GCF is stationary at levels while other variables became stationary at first deference I(1). The Johansen Co-integration results show four co-integrating equations indicating the existence of long-run relationship among the variables. The error correction regression results show that external debt, gross capital formation, nominal exchange rate and degree of openness have negative impact on the Nigerian industrial sector except foreign direct investment with values of -0.01, -0.05, -0.03, -0.02 and 0.24, respectively. The parameters are statistically insignificant. The variables explain only 21 percent of total variation of the Nigerian industrial sector judging with the values of the adjusted R – square. There exists no serial correlation since the value of Durbin-Watson statistic is 1.88. See appendix.

Conclusion and Recommendation

The paper examined the impact of globalization on the Nigerian industrial sector. We adopted the index of industrial production as performance indicator of the Nigerian industrial sector and external debt, foreign direct investment, nominal exchange rate, and degree of openness as proxy variables for globalization while gross fixed capital formation was used as a measure of domestic investment. Annual data from the Central Bank of Nigeria (CBN) covering 1970-2008 was utilized. We applied the unit root test for the stationarity of the data. Apart from the gross capital formation that was stationary at levels I (0) the other variables were stationary at first difference (1). Johansen's co-integration test revealed four (4) co-integrating equations, indicating the existence of a long-run relationship between the variables. The ordinary least square statistical technique was adopted for the estimation of our model. The results showed that gross capital formation and degree of openness negates our a priori expectations. The Nigerian industrial sector has a weak base and cannot compete favorably with her foreign counterparts. Also, domestic investment is weak and unreliable. Nigeria should encourage the production of non-primary export commodities and formulate policies that would attract foreign direct investment. External debt should be sourced for productive projects only and also as means of maintaining stable exchange rate.

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APPENDIX

REGRESSION RESULTS

Dependent Variable: INQ

Method: Least Squares

Date: 11/07/10 Time: 09:02

Sample: 1970 2008

Included observations: 39

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	89.09976	2.852991	31.23029	0.0000
XTDR	0.014551	0.015089	0.964348	0.3419
FDIR	1.958102	0.998171	1.961690	0.0583
GCFR	-0.467764	0.052902	-8.842113	0.0000
NER	0.156796	0.041182	3.807395	0.0006
DOP	-0.101186	0.169770	-0.596020	0.5552
R-squared	0.850198	Mean dependent var	89.41282	
Adjusted R-squared	0.827500	S.D. dependent var	23.50612	
S.E. of regression	9.762814	Akaike info criterion	7.535677	
Sum squared resid	3145.314	Schwarz criterion	7.791609	
Log likelihood	-140.9457	F-statistic	37.45805	
Durbin-Watson stat	0.939950	Prob(F-statistic)	0.000000	

Source: Authors Computation

ADF Unit Root Test Result

Variable	ADF statistics	5% Critical Values	Lag	Order of Integration
PIS	-4.527172	- 2.9446	1	I(1)
DOP	- 6.445861	- 2.9446	1	I(1)
FDI	- 6.480366	- 2.9446	1	I(1)
NER	- 3.191066	- 2.9446	1	I(1)
DF	- 6.605834	- 2.9446	1	I(1)
GCF	3.709149	-2.9422	1	I(0)
ECM	- 3.581406	- 2.9422	1	I(0)

Source: Authors Computation

Johansen Co-integration Test Result

Variable	Eigenvalue	Likelihood Ratio	5% Critical Value	Decision
PIS	0.740039	125.1991	94.15	Reject
DOP	0.525350	76.69907	68.52	Reject
FDI	0.427082	49.87266	47.21	Reject
NER	0.370220	29.82020	29.68	Reject
EXD	0.272577	13.17437	15.41	Accept
GCF	0.046588	1.717485	3.76	Accept

Source: Authors Computation

ERROR CORRECTION MODEL

Dependent Variable: D(INQ)

Method: Least Squares

Date: 11/13/10 Time: 08:03

Sample(adjusted): 1971 2008

Included observations: 38 after adjusting endpoints

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	2.262015	1.176863	1.922072	0.0638
D(XTDR)	-0.009255	0.011902	-0.777602	0.4427
D(FDIR)	0.235080	0.591266	0.397588	0.6937
D(GCFR)	-0.053106	0.108887	-0.487719	0.6292
D(NER)	-0.031555	0.091216	-0.345943	0.7317
D(DOP)	-0.018334	0.126956	-0.144412	0.8861
ECM(-1)	-0.345296	0.118565	-2.912307	0.0066
R-squared	0.337925	Mean dependent var	2.268421	
Adjusted R-squared	0.209781	S.D. dependent var	7.228738	
S.E. of regression	6.425932	Akaike info criterion	6.723382	
Sum squared resid	1280.071	Schwarz criterion	7.025043	
Log likelihood	-120.7443	F-statistic	2.637081	
Durbin-Watson stat	1.875398	Prob(F-statistic)	0.034911	

Source: Authors Computation