Trade Balances and Economic Progress in Nigeria: Analysis of the Oil and Non-Oil Sub-Sectors

Onyemaechi Joseph Onwe, Ph. D
School of Management Sciences
National Open University of Nigeria
14/16 Ahmadu Bello Way
Victoria Island Lagos, Nigeria

1. Introduction

The feature of Nigeria's external sector has remained basically the same since independence. The external sector is characterized by the dominance of a single export commodity, the crude oil. Between 1960 and 1970, the economy was dominated by agricultural commodity exports. Such commodities included cocoa, groundnut, cotton and palm produce. Beginning from the mid-1970s however, crude oil became the major export commodity and major source of foreign reserves in Nigeria. Export of crude oil constitutes over 90 percent of the Nigerian total exports. The major question concerns the extent to which export of crude oil has contributed to development, growth, and progress of the Nigerian economy. Another issue of economic concern is on the Nigerian shift emphasis from the non-oil sub-sector to that of the oil sub-sector. The later issue has been debated upon by development economists.

Economists have observed that the performance of the non-oil export sector leaves little or nothing to be desired. This explains why in recent times, the major policy concern of the Federal government focused on expansion of non-oil exports in a bid to diversify Nigeria's export base. This diversification became necessary for some important reasons. First is that the volatility of the international oil market, with the attendant volatility of government revenues give credence to arguments for the diversification of exports. Secondly, the fact that crude oil is an exhaustible asset makes it unreliable for sustainable development of the Nigerian economy.

To guide against continuous reliance on the oil sub-sector, the federal government had embraced some incentive schemes aimed at encouraging non-oil exports. The schemes include, among others:

1. Refinancing, rediscounting, and foreign input facilities where the CBN and NEXIM Bank were required to provide liquidity to banks in support of their export finance business directed at export promotions and development.

2. Current retention facility whereby the CBN and Commercial/merchant banks enable exporters to hold export proceeds in foreign currency in the banks.

3. Tax relief on export earnings whereby federal board of inland revenue encourages banks to finance export by reducing their tax burden.

4. Export credit guarantee and insurance scheme. Here, the CBN/NEXIM assists banks to bear the risks in export business and thereby facilitate export financing and encourage non-oil exports.

5. Duty drawback scheme, where custom duty paid by exporters on imported inputs used for export production are reimbursed to them.

6. Export expansion grant to encourage companies to engage in export business rather than domestic business.

7. Export price adjustment. This is a form of export subsidy designed to compensate exporters of products whose foreign prices become relatively unattractive, due to factors beyond their control.

8. Subsidy scheme for use of local raw materials in export production.

9. Export development fund to assist exporters in paying the cost of participation in trade fairs, foreign market research, and the like.

10. Abolition of export licensing.

11. Supplementary allowance in favour of pioneer companies exporting their export products.

12. Accelerated depreciation and capital allowance to industrial organizations for export of their products.

13. Manufacturing bond scheme, where the ministry of commerce and Tourism assists potential exporters of manufactured products to import raw materials duty free for the production of export goods.

14. Export liberalization measures that promote export trade.

15. Export processing zone to facilitate and enhance exports.

Such schemes were expected to have dampened over dependence on the oil sub-sector for foreign-exchange earnings in Nigeria, which appeared to have made economic progress gloomy. Worst still, recent trends indicate declining role of oil exports in economic growth. It is a general observation that the future of crude oil as a source of foreign earning in Nigeria is nothing to write home about. It has been observed that Nigeria's oil and gas potentials are not too great by the standards of measure on per capita basis. The crude oil reserve is one of the smallest within the Organisation of Petroleum Exporting Countries (OPEC). Saudi Arabia with crude oil reserves of 260 billion barrels had a population of 14.5 million as of 1996. Within the same period, Iraq, with a population of 17.8 million reports a level of 100 billion barrels. Nigeria with an estimated population of 100 million as at the census period of 1996 had reserves estimated at 21 billion barrels. Similar pattern has been observed in gas, where Iraq dominates the world reserve base with a relatively small population. Nigeria's gas reserves were put at 164 trillion standard cubic feet with a large and ever growing population. As economic progress is centred on people, measured as income per capita, it appears clear that Nigeria's economic development potential from petroleum is limited.

An absolute neglect of the non-oil sub-sector has resulted in its low levels of contribution to economic progress in Nigeria. Available data indicates continuous trade deficits in the sub-sector over the decades. This is an unhealthy economic situation in the face of over dependence on limited oil reserves, as well as current global trend in alternative sources of energy. This paper addresses the issue of how the Nigerian policy makers can encourage economic progress through emphasis on non-oil exports and positive trade balances especially in the non-oil sub-sector. Our approach starts with the existing trend in non-oil exports, followed by the economic consequences of the trend in relation to major economic indicators, including real growth in Gross Domestic Product (GDP), inflation, and employment. The paper is organised as follows: section two reviews the related literature, as well as the structure of oil and non-oil exports in Nigeria; in section three, present the methodology; section four concentrates on the relevant empirical model; section five presents the empirical results and discussions; and, in section six the paper concludes with some implementable recommendations.

2. Literature Review and Structure of the Nigerian Oil and Non-Oil Exports

It is theoretically out of balance to discuss economic development or progress without defining it. Economists look at economic development as a process associated with steady increases in output of goods and services, followed by improvements in the quality and variety of the available goods and services, growth in per capita income, and improvement in the distribution of wealth among the citizenry. Recent scholars, including Misra and Puri (2003) who defined economic development to imply growth accompanied with progressive changes in certain critical variables that determine the well-being of the people, including employment and income. According to Misra and Puri (2003), there are qualitative dimensions in the development process which may be missing in the development and growth of an economy, expressed in terms of an increase in income per capita. Mahbub (1971) notes that solutions to the problem of development must be seen as a selective attack on the worst forms of poverty. Development goals must therefore, be set in terms of progressive reduction and eventual elimination of malnutrition, disease, illiteracy, squalor, unemployment, and inequalities.

Parallel to discussions on economic development is that of growth. An in-depth analysis of economic growth is normally associated with the neoclassical growth model. This model argues that economic growth is functionally determined by growth of factor inputs, generally defined within a growth accounting framework in which Cobb-Douglas, constant returns production function is assumed, so that if capital and labour grow at a certain rate, and there is absence of technological change, then output will grow at the same rate. Here, we view output in the Cobb-Douglas model in terms of national income or real Gross Domestic Product (GDP). Relaxing the assumptions of constant returns and absence of technological change, Kaldor (1970) proposes a growth model that assumes increasing returns to the manufacturing sector and the possibility that new investments encourage new technology. Kaldor's model is an export-led growth model because it considers exports as the main component of aggregate demand.

The model also emphasises the role of external demand in the domestic growth. Romer (1994) also made some important contributions to the Cobb-Douglas growth model. Romer incorporated technology change as well as increasing returns in his endogenous economic growth model. It has been argued that the export-led model developed by Kaldor (1970) appears to be in sharp conflict with the strategies proposed by the neoclassical growth model. Kaldor's model has been considered an exceptional model as it contains an external growth restriction in terms of balance of payments performance. As an extension to the Kaldor's model, Thirlwall (1997) developed a growth model with balance of payments restrictions and demand-led in nature. Thilrwall's model can be summarised as follows.

The balance-of-payments equilibrium condition is specified by:

$$P_dX = P_fM, \quad (1)$$

where P_d and P_f represent export and import prices, respectively and expressed in terms of domestic currency. M and X represent the quantities of imports and exports, respectively. Thirlwall (1997) introduces the following as the standard import and export demand functions:

$$M = (P_f/P_d)^gY^h \quad (2)$$ and,

$$X = (P_d/P_f)^vY^{*w}, \quad (3)$$

where Y and Y* represent domestic and foreign incomes, respectively. The superscripts g and v represent the price elasticities of imports and exports, respectively.

It follows that, according to Thirlwall (1997), the balance-of-payments equilibrium condition should be presented as:

$$P_d\{(P_d/P_f)^vY^{*w}\} = P_f\{(P_f/P_d)^gY^h\} \quad (4)$$

Taking natural logarithms and differentiating this equilibrium condition, Thirwall obtains:

$$v(p_d - p_f) + wy^* = g(p_f - p_d) + hy \quad (5)$$

The expression at the left-hand side of equation (5) represents the rate of growth of exports, and that of the right-hand side represents the rate of growth of imports. With the necessary algebraic operations, we solve for y in equation (5) to obtain the Thirlwall's balance-of-payments equilibrium growth rate as:

$$y_b = [(1 + v + g)(p_d - p_f) + wy^*]/h \quad (6)$$

Further discussions on growth models with balance-of-payments arguments were those of Krugman and Baldwin (1987), Rose and Yellen (1989), Rose (1999), and Bahararumshah (2001) who developed a single-base model that is based on three approaches: the elasticity approach, the absorption approach, and the monetary approach.

The elasticity approach assumes that devaluation improves trade balance by changing the relative prices between domestic and foreign goods. In the absorption approach, a change in exchange rate can only affect the trade balance if it can induce an increase in income. The monetary approach asserts that exchange rate changes have only temporary effects, so that there should be no long-run equilibrium relationship between the trade balance and exchange rates. The monetary approach also assumes that an increase in income improves the trade balance, assuming that the Keynesian hypothesis of $0 < MPC < 1$ holds.

Growth models with balance-of-payments argument assume that the demand for imported goods depends on the relative price of imports and domestic real income, so that,

$$M^d_{ij} = M^d_{ij}(RP_{mi}, Y_i) \quad (7)$$

where M^d_{ij} = ith country's domestic demand for the jth foreign country goods

RP_{mi} = relative price of imported goods

Y_i = domestic real income.

The model also assumes that domestic country's supply of export goods equals foreign countries' demand for imports, and vice versa. Thus,

$X^s_{ij} = M^d_{ji}$ (8)

and,

$X^s_{ji} = M^d_{ij}$ (9)

According studies by Haynes and Stone (1982), Bahmani-Oskooee (1991), Brada, Kutan and Zhou (1997), and Shirvani and Willbrattee (1997), the domestic balance of trade of country i trading with country j (TB_{ij}) can be expressed as a ratio of exports to imports, that is, (X_i/M_i). This ratio has been used severally in empirical studies on the trade balance-exchange rate relationship. Such studies include, among others: Onafowora (2003), Bahmani-Oskooee and Brooks (1999), and Ramakrishnan (1999). These studies were of the opinion that the export-import ratio is not sensitive to the unit of measurement and can be interpreted as nominal or real relative trade balance (Bahmani-Oskooee, 1991).

With these basic backgrounds, we examine the structure of the Nigerian oil and non-oil exports, with a view to establishing the practical trends in the oil and non-oil sub-sectors' balance of trade in Nigeria. We are basically interested in the post-independence Nigeria.

In the 1960's, Nigeria's export trade was largely dominated by Agricultural products constitute the bulk of Nigeria's non-oil exports. Their share in total value of non-oil exports is as high as 70 per cent. The agricultural products include cocoa, groundnut, palm produce, rubber (natural), cotton and yarn, fish and shrimps. Other components of the non-oil exports include manufactured products and solid minerals, such as processed agricultural products, textiles, tin metal, beer, cocoa butter, plastic products, processed timber, tyres, natural spring water, soap, tin ore, columbite, hides, skin and cattle, detergent and fabricated iron rods.

Table 1 shows that over 66% of total exports on the average were accounted for by these commodities. The same pattern continued into the early 1970s. As a matter of fact, cocoa was the dominant export product at that time contributing about 15% of total exports in 1970.

However, oil's dominance of the country's export basket began in 1973/74 and was greatly magnified during the 1980s. The crux of the problem was that while oil export was growing, non-oil exports were declining making the dominance much more rapid and pervasive. Teal (1983), for example, estimates that the output of export crops grew at an average annual rate of 4.7% in 1950– 1957 and 7.4% in 1960–1965, then declined by 17.3% in 1970–1975. The transformation of Nigeria from a net exporter of agricultural produce to a large-scale importer of the same commodities was particularly marked during the period 1973–1982 (Oyejide, 1986). Nominal non-oil export earnings fell from N363.5 million in 1973 to N203.2 million in 1982. The decline was even more dramatic in real terms. Oil exports in contrast rose phenomenally, from about N2 billion to about N8 billion in nominal terms during the same period.

Table 1: Strucure of Nigeria's exports 1960 – 1990

Year	Total Exports (N'million)	Non-Oil Exports (N'million)	Non-Oil as % of Total Exports (%)	Growth Rate of Total Exports (%)
1960-67	434.65	287.50*	66.15	23.90
1970-75	2,877.70	356.20	12.38	57.22
1976-80	9,049.08	560.00	6.19	-
1981-85	9,508.20	318.38	3.35	-43.15
1986-90	47,666.24	2,335.10	4.90	633.43

***Source**: Analysis of Data from the Central Bank of Nigeria*

*Consists mostly of agricultural produce.

Efforts to reverse these trends (which began in 1986) seem to have yielded very few results, as oil continues to dominate the country's exports (Tables 1 & 2). Non-oil exports share of Nigeria's total exports have remained under 5% for most years since the introduction of structural adjustment programme (SAP) (see table 1(b)

Table 1(b): Contributions of Non-oil Export to Total Export (1970-1998). (Percentages)

Non-Oil Merchandise	**1970 – 1985 Average**	**1986 – 1998 Average**	**1994**	**1995**	**1996**	**1997**	**1998**
Cocoa	4.00	1.80	0.90	0.70	0.60	0.60	0.60
Groundnut	0.40	0.00	0.00	0.00	0.00	0.00	0.00
Palm Produce	0.50	0.10	0.10	0.00	0.00	1.00	0.10
Rubber (Natural)	0.40	0.40	0.30	0.50	0.40	0.10	0.00
Tin Metal	0.40	0.00	0.00	0.00	0.00	0.00	0.00
Cotton and Yam	0.50	0.10	0.10	0.10	0.10	0.30	0.50
Fish and Shrimps	0.50	0.10	0.20	0.20	0.10	0.10	0.30
Manufactures: Processed Agric Products	1.94 1.54	0.75 0.44	0.06 0.02	0.74 0.17	0.40 0.24	0.70 0.36	1.30 1.58
Textiles	0.00	0.12	0.01	0.17	0.10	0.16	0.04
Other Manufactures	0.40	0.19	0.03	0.40	.06	0.16	0.08
Total non-oil export as % of Total Exports	7.00	4.00	2.60	2.40	1.80	2.30	4.50

Source: *Central Bank of Nigeria (2000)*

The only noticeable improvements are that the decline of the non-oil sub-sector seems to have been arrested and that a number of non-traditional exports seem to have emerged in Nigeria's export basket including horticultural products, garments, textiles, furniture components and other manufactures (Table A1).

It has been noted that the non-oil commodities market experienced an export boom between 1960 and 1970. Their fortunes declined in the early 1980s when the international primary commodity markets collapsed with the associated deterioration in the terms of trade. This observation was as a result of the policies adopted during the structural adjustment programme. Non-oil exports increased during the structural adjustment periods owing mainly to increase in the Naira price of the export commodities.

Okoh (2004) observes that this was short-lived as international demand for Nigeria's non-oil exports remained weak.

The value of non-oil exports has been on the decline ever since. For instance, the share of agricultural products in total exports declined from 84% in 1960 to 1.80% in 1995 (CBN, 2000, Ogunkola and Oyejide, 2001). Thus, contrary to the expectation of increase in non-oil exports, there was an overall decline in the export of these commodities. Manufactures decreased from 13.10 percent in 1960 (CBN, 2000) to 0.66 percent in 1995 and remained the same in 2002 (WTO, 2003). The values of exports, as well as the percentage shares of the major export commodity groups in total merchandise exports are shown in Table A2.

Another characteristic of Nigeria's export trade is the continued reliance on developed countries as markets. Table A2 shows that the export promotion policy stance, which also emphasizes the diversification of markets, appears not to be yielding desired results because exports to Organization of Economic Cooperation and Development (OECD) countries still dominate. What appears to be happening is a shift from exporting to European Community to exporting to USA and Japan. The West African sub-region (Economic Community of West African States) only minimally increased its shares of Nigeria's exports, while other regions including other near (African) markets import a smaller proportion of Nigeria's exports than before. This market concentration has been blamed, in part, for the countries misfortunes, as recessions in developed countries are usually fully transmitted to Nigeria.

Statistics indicate that the Nigerian non-oil exports have not had significant improvements in the world trade. As shown in table A3, Nigeria has been faced with continuous balance-of-payments deficits in its non-oil foreign trade balances since the 1980s and beyond the structural adjustment periods.

3. Methodology

The methodology of this study embraces the use of time-series data obtained from the National Bureau of Statistics and the Central Bank of Nigeria (CBN) statistical Bulletins. The available time series data will be used in our analysis of simple econometric relationships of the identified variables in the determination of the impact of trade balances on Nigeria's economic progress. The empirical model will be developed using the theoretical framework of our literature review.

4. The Model

Applying the Keynesian approach to economic progress, we adopt the Thirlwall's (1997) model, where the long-run income growth is constrained by balance-of-payments. In our model, the long-run income growth is specified as a function of trade balances in th oil and non-oil sub-sector of the Nigerian economy, bearing in mind the non-stationary nature of the Nigerian time-series data. Using Thirlwall's standard import and export demand functions, the net contributions of oil and non-oil trade balances to national income are specified as follows:

$$M_o = (P_{do}/P_{fo})Y_o \quad (1)$$

$$X_o = (P_{fo}/P_{do})Y_o \quad (2)$$

and,

$$M_{no} = (P_{dno}/P_{fno})Y_{no} \quad (3)$$

$$X_{no} = (P_{fno}/P_{dno})Y_{no} \quad (4)$$

where M_o and X_o represent oil imports and exports, respectively;

M_{no} and X_{no} are non-oil imports and exports, respectively;

P_{do} and P_{fo} represent oil export and import prices expressed in domestic currency;

P_{dno} and P_{fno} are non-oil export and import prices also expressed in domestic currency;

Y_o denotes quantity of oil imports; and,

Y_{no} denotes quantity of non-oil imports

The trade balances for the oil and non-oil sub-sectors are formulated thus:

$$TB_o = (P_{do}/P_{fo} - P_{fo}/P_{do})Y_o \quad (5)$$

$$TB_{no} = (P_{dno}/P_{fno} - P_{fno}/P_{dno})Y_{no} \quad (6)$$

Equations (5) and (6) imply that trade balances are determined not only by quantities of exports and imports, but also by the ratio of import to export prices or export-import price ratios.

Combining equations (5) and (6), we get an expression for the growth impact of oil and non-oil balance of trade on national domestic income, at any given period, t as:

$$Y^dt = (P_{do}/P_{fo} - P_{fo}/P_{do})Y_o + (P_{dno}/P_{fno} - P_{fno}/P_{dno})Y_{no} \quad (7)$$

Partially differentiating equation (7) with respect to Y_o and Y_{no}, we get:

$$\frac{\partial Y^dt}{\partial Y_o} = (P_{do}/P_{fo} - P_{fo}/P_{do}) \gtrless 0 \quad (8)$$

and,

$$\frac{\partial Y^dt}{\partial Y_{no}} = (P_{dno}/P_{fno} - P_{fno}/P_{dno}) \gtrless 0 \quad (9)$$

Equations (8) and (9) reveal that oil and non-oil trade would have a positive effect on economic progress if and only if the ratio of export prices to import prices exceeds the ratio of import prices to export prices.

Put differently, it appears developing economies will benefit from trade only when export prices exceed import prices in domestic currencies.

Equation (7) suggests the following econometric model:

$$Y^dt = Y^dt(TB_o, TB_{no}) \quad (10)$$

where Y^dt represents real Gross Domestic Product (GDP), a proxy for economic progress;

TB_o = oil sub-sector trade balance;

TB_{no} = non-oil sub-sector trade balance.

By the specifications in equations (8) and (9), we will not be able to identify some a priori assumptions on signs of the explanatory variables, TB_o and TB_{no}.

The resulting econometric equation to be estimated is of the form:

$$Y^dt = \beta_o + \beta_1 TB_o + \beta_2 TB_{no} + \mu \quad (11)$$

An observed non-stationary nature of the Nigerian time-series data suggests a log-linear function of the form:

$$LnY^dt = \beta_o + \beta_1 LnTB_o + \beta_2 LnTB_{no} + \mu \quad (12)$$

The log-linear function in equation (12) will be estimated by the linear regression method. The estimated parameters, β_1 and β_2 would be interpreted as growth elasticities of oil and non-oil trade balances, respectively.

5. Empirical Results and Discussions

Our parameter estimates are as follows:

$$LnY^dt = \underset{(0.395)}{9.68} + \underset{(0.113)}{0.2LnTB_o} - \underset{(0.120)}{0.03LnTB_{no}} \quad (13)$$

$R^2 = 0.77$; $F = 34.186$

Equation (13) summarises the results of estimates of the relationship between oil, non-oil trade balances and economic progress in Nigeria. A detailed presentation of the regression output is contained in table A5. The equation reveals a positive impact for trade balances in the oil sub-sector, but a negative impact for trade balances in the non-oil sub-sector. The elasticity coefficients indicate relatively low responses of economic progress to variations in trade balances. By implication, it may be the case that Nigeria is yet to make advances in its foreign trade activities. We also observe from equation (13) that our model is strong enough, as about 77 percent of variations in the Nigerian economic progress can be explained by variations in trade balances. The model also appears to be highly significant and reliable.

6. Conclusion and Recommendations

One of the very serious observations of this paper is the fact that non-oil exports (export of cocoa, groundnut, palm produce, rubber, cotton, textiles, processed agricultural products, and the like) have not had significant improvements in the Nigerian trade balances. The non-oil sub-sector has continuously faced balance-of-payments deficits notwithstanding federal government's efforts to embrace incentives aimed at encouraging non-oil exports. This observation would suggest alternative implementable strategies for shifting emphasis from oil to non-oil exports. In addition, looking at the time-series data on non-oil exports in Nigeria, one would conclude that existing incentive schemes for non-oil exports have failed woefully. The country's continuous dependence the oil sub-sector for its foreign-exchange earnings needs some serious review and considerations. And given the likelihood of alternative sources of energy worldwide, and the depletable nature of oil reserves, the future of Nigeria's foreign trade appears highly discouraging.

The literature also reveals that devaluation can only improve trade balances by changing the relative prices between domestic and foreign goods. A major question would be to what extent have currency devaluation policies in Nigeria changed the relative prices between its export and import goods? This is an issue that needs to be resolved. In the absence of such resolution, one would be tempted to suggest a re-thinking in the currency devaluation policies in Nigeria, given the fact that Nigeria appears to be basically characterized by a single export commodity, the crude oil.

Our regression analysis confirms the existence of negative contributions of non-oil trade balances to economic progress in Nigeria. This further suggests alternative non-oil development strategies.

The analytical results suggest the following policy recommendations: First, is a complete overhaul of the operational machinery in the Nigerian non-oil sub-sector. We may begin by inquiring about by the effectiveness of previous incentives aimed at encouraging investments in the non-oil subsector. It may be the case that the observed poor performance of this subsector is due to low rate of policy implementation. In addition, the observed continuous deficit in non-oil trade balances is an indication of uncontrolled excessive import of foreign goods, notwithstanding the country's currency devaluation policies. This also signals low global demand for made-in-Nigeria goods. It follows that an aggressive campaign on demand for made-in-Nigeria goods is a welcome strategy.

Secondly, the federal, state and local governments in Nigeria need to re-emphasise industrialization and capital accumulation at the grassroots. Such emphasis had worked effectively well in South Korea, Japan and other Asian countries.

Finally, there is a serious need for researchers to develop simple and communicable trade balance models for the non-oil subsectors in Nigeria and other developing countries in the West-African sub-region.

References

Baharumshah, A. Z. (2001). The Effect of Exchange Rate on Bilateral Trade Balance: New Evidence from Malaysia and Thailand, Asian *Economic Journal.* 15: 291-311.

Bahmani-Oskooee, M. (1991). Is There a Long-Run Relation Between the Trade Balance and the Real Effective Exchange Rate of LDCs?, *Economic Letters*. 36: 403-407.

Bahmani-Oskooee, M. and T. J. Brooks (1999). Bilateral J -Curve Between U.S. and her Trading Partners, *Weltwirtschaftliches Archiv*. 135: 156-165.

Brada, J. C., A.M. Kutan and S. Zhou (1997). The Exchange Rate and the Balance of Trade: The Turkish Experience, *Journal of Development Studies*. 33: 675-692.

Central Bank of Nigeria (2000) *The Structure of the Nigerian Economy and Implications of Development* (Lagos: Ream Communications Ltd)

Haynes, S.E., and J.A. Stone (1982). Impact of the Terms of Trade on the U.S. Trade Balance: A Reexamination, *The Review of Economics and Statistic*s. 64: 702-706.

Kaldor, N. (1970) "The Case for Regional Policies," *Scottish Journal of Political Economy*.

Krugman, P.R. and R.E. Baldwin (1987). The Persistence of the U.S. Trade Deficit, *Brookings Papers on Economic Activit*y. 1: 1-43.

Mahbub, H. (1971) "Employment and Income Distribution in the 1970s: A New Perspective," *Pakistan Economic and Social Review*, June – December.

Misra, S. K. and Puri, V. K. (2003), *Growth and Development* (Mumbi: Himalaya Publishing House).

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*, vol. 43, no. 1.

Okoh, R. N. (2004), Global Integration and the Growth of the Nigeria's Non-Oil Exports. A Paper at African Conference on Growth, Poverty and Human Development in Africa, Organised by Centre for Study of African Economies (CSAE), Department of Economics, University of Oxford, Oxford, UK, March.

Onafowora, O. (2003). Exchange rate and Trade Balance in East Asia: Is There a J−curve? *Economics Bulletin.* 5: 1−13.

Oyejide, T. A. (1986) "The Effects of Trade and Exchange Rate Policies on Agriculture in Nigeria," Research Report 55, International Food Policy Research Institute, Washington, DC

Ramakrishnan Uma andGupta-Kapoor, Anju (1999). Is There a J -Curve? A New Estimation for Japan, *International Economic Journal*. 13: 71-79.

Romer, P. M. (1994) "The Origins of Endogenous Growth," *Journal of Economic Perspectives*, vol. 8, no. 1.

Rose, Andrew (1999). One Money, One Market: The Effect of Common Currencies on Trade, *NBER Working Paper 7432*, National Bureau of Economic Research.

Rose, A. K. (1991). The Role of Exchange Rates in a Popular Model of International Trade: Does the 'Marshall-

Lerner' Condition Hold?, *Journal of International Economics*. 30: 301-316.
Rose, A.K. and J.L. Yellen (1989). Is There a J-curve? *Journal of Monetary Economics*. 24: 53- 68.
Shirvani, H. and B. Wilbratte (1997). The Relationship between the Real Exchange Rate and the Trade Balance: an Empirical Reassessment, International *Economics Journal*. 11: 30-50.
Teal, F (1983) "The Supply of Agricultural Output in Nigeria" *Journal of Development Studies*, vol. 19, January.
Thirlwall, A. P. (1997) "Reflections on the Concept of Balance-of-Payments-Constrained Growth," *Journal of Post Keynesian Economics*, vol. 19, no. 13, Spring.
World Trade Organisation (WTO), 2003, International Statistics, http://www.wto.org/english/res_e/its2003_e/its03_longterm_e.htm, Geneva, Switzerland, Table iv09.

Appendix (A)

Table A1: Nigeria 's non - oil exports (US$)/NO.(%)

	1987		1988		1989		1990	
Export Item	% of Total Non-oil Exports	% of Total Exports	% Total Non-oil Exports	% Total Exports	% Total Non-oil Exports	% Total Exports	% Total Non-oil Export	% Totl Export
Non-Allied Prod-Ucts	468.8 (96.88)	(6.13)	423.4 (87.53)	(6.16)	252.4 (80.74)	(3.21)	202 (76.26)	(0.96)
Miner-Als	3.30 (0.68)	(0.04)	9.30 (1.92)	(0.14)	15 (0.48)	(0.02)	4.00 (1.51)	(0.11)
Manuf-Actured Goods	92 (1.90)	(0.12)	10.30 (2.13)	(0.15)	23.20 (7.42)	(0.30)	56.0 (21.14)	(1.57)
Other Exports	2.6 (0.54)	(0.03)	40.70 (0.84)	(0.58)	35.60 (11.39)	(0.45)	2.90 (1.10)	(0.08)
Miscell-Anous	1.90 (0.40)	(0.03)	38.70 (8.00)	(0.56)	34.40 (11.01)	(0.44)	2.00 (0.76)	(0.10)
Total Non-oil Exports	**483.90**		**483.70**		**312.60**		**264.90**	
Total Exports	**7647.50**		**6870.70**		**6865.80**		**3667.40**	

Source: Trade and Exchange Department Central Bank of Nigeria.

Table A2: Exports from Nigeria by country/region of destination: 1980 - 1989
(%)

Period	EEC	USA	Japan	ECOWAS	Others	Total
1980	50.40	33.20	NE	1.70	14.70	100.00
1981	50.50	29.30	1.50	4.40	14.30	100.00
1982	41.80	43.80	0.10	2.40	20.90	100.00
1983	59.00	21.60	0.10	2.80	16.50	100.00
1984	62.70	13.30	0.10	4.50	19.40	100.00
1985	66.20	18.10	0.10	3.50	12.10	100.00
1986	47.80	35.00	0.10	3.90	13.20	100.00
1987	41.90	47.00	0.10	6.20	4.80	100.00
1988	36.30	49.80	0.20	7.00	6.70	100.00
1989	38.50	51.10	2.70	7.00	0.70	100.00
Average	49.50	33.30	0.60	4.30	12.31	100.00

Sources: Federal Office of Statistics (FOS), Economic and Social Statistics, Digest of Statistics, and Nigerian Trade Summary

TableA3: Nigerian Foreign Trade Balances, 1980 – 2010
(N'million)

Year	Import		Export		Balance of trade	
	Non-Oil	Oil	Non-Oil	Oil	Non-Oil	Oil
1980	8,868.20	227.40	554.40	13,632.30	-8313.80	13,404.90
1981	12,719.80	119.80	342.80	10,680.50	-12377.00	10,560.70
1982	10,545.00	225.50	203.20	8,003.20	-10341.80	7,777.70
1983	8,732.10	171.60	301.30	7,201.20	-8430.80	7,029.60
1984	6,895.10	282.40	247.40	8,840.60	-6648.50	8,558.20
1985	7,010.80	51.80	497.10	11,223.70	-6513.70	11,171.90
1986	5,069.70	913.90	552.10	8,368.50	-4517.60	7,454.60
1987	14,691.60	3,170.10	2,152.00	28,208.60	-12539.60	25,038.50
1988	17,642.60	3,803.10	2,757.40	28,435.40	-14885.20	24,632.30
1989	26,188.80	4,671.60	2,954.40	55,016.80	-23234.20	50,345.20
1990	39,644.80	6,073.10	3,259.60	106,626.50	-36,385.20	100,553.40
1991	79424.90	7,772.20	4,677.30	116,858.10	-74,747.60	109,085.90
1992	125,974.20	19,561.50	3,973.30	201,383.90	-122,000.9	181,822.40
1993	124,771.10	41,136.10	4,991.30	213,778.80	-119,779.8	172,642.70
1994	120,439.20	42,349.60	5,349.00	200,710.20	-115,090.2	158,360.60
1995	599,301.80	155,825.90	23,096.10	927,565.30	-576,205.7	771,739.40
1996	400,447.90	162,178.70	23,327.50	1,286,215.90	-377,120.4	1,124,037.20
1997	678,814.10	166,902.50	29,163.30	1,212,499.40	-649,650.8	1,045,596.90
1998	681,564.50	175,854.20	34,070.20	717,786.50	-627,494.3	541,932.30
1999	650,736.00	211,661.80	19,500.00	1,169,476.90	-631,236.0	957,815.10
2000	486,963.30	220,817.70	24,805.00	1,920,900.40	-462,158.3	1,700,082.70
2001	1,121,073.50	237,106.80	28,008.60	1,839,945.30	-1,093,064.9	1,602,838.40
2002	1,150,985.30	361,710	94,731.80	1,649,445.80	-1,056,253.5	1,287,735.80
2003	1,681,313.00	398,922.30	94,776.40	2,993,110.00	-1,586,536.5	2,594,187.60
2004	1,668,930.60	318,114.70	113,309.40	4,489,472.20	-1,555,621.2	4,171,357.50
2005	2,003,557.40	797,298.90	105,955.90	7,140,578.90	-1,897,601.5	6,343,280.00
2006	2,479,680.90	932,455.70	133594.90	7,191,085.60	-2,346,086.0	6,258,590.00
2007	3,561,965.70	819,964.24	169,709.70	7,950,438.00	-3,392,256.1	7,130,474.10
2008	5,001,370.20	920,079.52	94,316.70	9,680,194.20	-4,907,053.5	8,760,114.70
2009	4,038,990.20	1,063, 544.20	289,152.60	8,067,233.00	-3,749,837.6	7,003,688.80
2010	5,931,795.20	2,073,579.00	396,377.20	10,639,417.40	-5,535,418.0	8,565,838.30

Sources: Compiled from CBN Statistical Bulletins, 2000, 2008, and 2010

Table A4: Correlations of Real GDP and Trade Balances

		LnY^dt	$LnTB_o$	$LnTB_{no}$
LnY^dt	Pearson Corr.	1	0.889**	-0.870**
	Sig. (2-tailed)		0.000	0.000
	N	21	21	21
$LnTB_o$	Pearson Corr.	0.889**	1	-0.970**
	Sig. (2-tailed)	0.000		0.000
	N	21	21	21
$LnTB_{no}$	Person Corr.	0.870**	-0.970**	1
	Sig. (2-tailed)	0.000	0.000	
	N	21	21	21

** Correlation is significant at the 0.01 level (2-tailed)
Source: SPSS Output

Table A5: Regression Results

(a) Model Summary

R	R^2	Adjusted R^2	Std Error of the Estimate
0.890	0.792	0.768	0.1874

Source: SPSS Output

(b) ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.400	2	1.200	34.186	0.000[b]
Residual	0.632	18	0.035		
Total	3.032	20			

a. Dependent Variable: LnY^dt
b. Predictors: (Constant), $LnTB_{no}$, $LnTB_o$
Source: SPSS Output

(c) Coefficients

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std Error	Beta	t	Sig.
(Constant)	9.678	0.395		24.494	0.000
$LnTB_o$	0.196	0.113	0.768	1.739	0.099
$LnTB_{no}$		0.120	-0.125	-0.282	0.781

Source: SPSS Output