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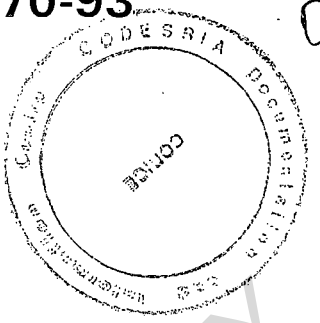
An econometric estimate of the non-oil export demand and supply functions for Nigeria 1970-93

OCTOBER, 1995

AN ECONOMETRIC ESTIMATE OF THE NON-OIL EXPORT DEMAND AND SUPPLY FUNCTIONS FOR NIGERIA 1970-93



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OCTOBER, 1995

CERTIFICATION

I certify that this work was carried out by Orimaye, Sunday Olumide in the Department of Economics, University of Ibadan, Ibadan, Nigeria under my supervision.

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DEDICATION

This project work is dedicated to all that have passed from death unto life all over the world.

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ABSTRACT

This work was inspired by the failure of Nigeria's tradeable non-oil exports to respond to the various promotional measures adopted by the government in the effort to diversify the economy. We believe that there is need to properly understand the operation of the external sector. Hence, this study attempts an investigation of the behavior of Nigeria's aggregate non-oil exports.

We used two models. One, a contemporaneous equilibrium model and the other makes allowance for three years lag in relative prices.

We found out that relative price of non-oil exports, income of trading partners, and domestic demand are weak determinants of Nigeria's non-oil exports. We adduced reasons for this result based on the conditions in the Nigerian economic environment and those of the trading partners.

The study cautions on relying on the market forces for the development of non-oil exports, advised an improvement in product quality, and stressed the need to secure new markets among the less developed countries.

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CHAPTER ONE

1.1 INTRODUCTION

The Nigerian Economy has a dynamic and enterprising population, and an enormous natural resource potential. But the level of investment has not been able to take advantage of these.

The important sources that can generate the resources needed for investment are: revenue from crude oil sale, more loans, revenue from non-oil exports, foreign direct investment and foreign aid.

Though foreign aid ought to be allocated based on need considerations, donors do not strictly adhere to this when formulating foreign aid policies; economic, political or strategic interest dominate concerns for equity in aid disbursement decisions. This explains why the flow of development assistance to Nigeria has dwindled overtime.

Similarly, there is no significant receipt of foreign direct investment in Nigeria despite government incentives. This may largely be due to the political instability in the country. In addition, Nigeria's access to the international capital market is very narrow; the external debt of ₦600 billion (as at 1993) is over 75 percent of its GDP of ₦822 billion (of same period), and 270 percent of the export earnings. Nigeria needs a track record of performance to enjoy new facilities and, or debt forgiveness.

Consequently, export trade expansion is a sine qua non for growth. Unfortunately, crude oil revenue, an unreliable source accounts for more than 90 percent (97 percent in 1990) of the foreign exchange earnings for the past two decades (CBN, 1994) and over 80 percent of total government revenue (World Bank, 1993). It is unreliable because instability in the world oil market causes its price to fluctuate. This causes instability in government revenues and hinders

the execution of development projects according to plans.

The above apart, oil is a wasting asset; it is exhaustible. Continuous and increased production will make the present reserve fall drastically, moreso if such daily production is not supported by corresponding reserve build-up.

Even if Nigeria's oil reserve can last long into the future, continuing high demand for crude oil can not be guaranteed. Cheaper alternative sources of energy and energy - efficient products are being developed, and more break-through in technology is expected. In addition, some countries that used to import petroleum heavily have become producers, meeting their domestic demand and exporting. Moreover, Nigeria being a member of the Orgnisation of Petroleum Exporting Countries, OPEC is not free to produce more than its quota even if market conditions dictate so.

Hence, there is a grave danger for Nigeria to rely on crude oil exports for foreign exchange supply. The urgent need to diversify the productive base of the Nigerian economy points to the desirability of promoting and expanding tradeable non-oil export. This need has long been identified in the literature (Okigbo, 1983 Obadan, 1986 etc). In fact, it was one of the cardinal objectives of the Federal Government in the 1962 budget. Even at this period, the structure of exports was relatively diversified in terms of agricultural commodities.

The danger of relying heavily on the oil sector became first manifest during the 1978 oil glut. By early 1980s, world oil market collapsed with devastating consequences for the Nigerian economy. By 1981, oil production has declined from 2.3 million barrels per day in 1980 to merely 600,000 barrels per day.

The problem was so bad that for two weeks in 1982, no single barrel of oil was lifted from Nigeria. The country's reserve holdings dropped from ₦5.8 billion by mid - 1981 to about ₦1.2

billion by the first quarter of 1982 and further down to ₦900 million in 1983 (Essien, 1987). To date, the Nigerian economy has not recovered from the resultant disequilibria in both domestic and external sectors.

1.2 STATEMENT OF THE PROBLEM

In the attempt to diversify the production base of the Nigerian economy, various past administrations had introduced measures and established specialized institutions e.g. the Nigerian Export Promotion Council. However, the most recent and comprehensive is the first-best and second-best export promotion policies of the Babangida administration of 1986.

Despite the fact that Nigeria's non-oil export products are now cheaper for foreign buyers and the amount being received in the local currency by exporters for unit of export is now higher than before, the problem is that available statistical data shows a mere marginal increase in non-oil exports' contribution to total exports between 1987 and 1993. Its percentage contribution increased from 5.8 percent in 1986 to 8.8 percent in 1988 but declined to 1.9 percent in 1992 (CBN, 1994).

This seems to justify Ajilima and Agba's fears in 1986 that SFEM has slim prospect of stimulating Nigeria's non-oil exports. In fact, it is widely believed that SAP has failed to alter Nigeria's export structure (Kwanashie et al, 1993; World Bank, 1993).

The question therefore is germane; why has the supply of and foreign demand for Nigeria's non-oil exports failed to respond significantly to the incentives provided ? What are the major determinants of Nigeria's non-oil exports within the study period ? And what are the implications of these for the Nigerian export policy ?

1.3 JUSTIFICATION FOR THE STUDY

The reason for conducting an econometric research on the performance of Nigeria's non-oil exports rests on the need to base export diversification on precise economic determinants.

Even though elasticities of demand and supply of exports is a major factor that affect diversification prospects (Lyakurwa, 1991), and the provision of empirical information on the behavior of the relevant trade parameters and elasticities will help in making optimum use of available trading opportunities, Nigeria's policy makers have been designing policies without knowing their exact magnitudes. It is not surprising therefore that the policies have not had the desired impact.

This study locates the present sources of the constraints to the non-oil export expansion through an empirical investigation of the behavior of the demand and supply functions. In addition, the study shows a picture of the structure of relationships that determine non-oil export performance, and the intertemporal variations in the elasticities for Nigeria between 1970 and 1993. Studies in the area of exports in Nigeria is yet to assemble systematically and comprehensively the relevant trade parameters.

This study extends the frontiers of knowledge existing in the area of non-oil export trade management in general, and the demand and supply issues in particular. Structural so-efficient like: estimates of relative price elasticity of demand, and supply, world income elasticity demand, and the net absorption elasticity of supply were obtained from the equations of our mode 1.

As the product of our research are these set of numerical estimates rather than broad qualitative conclusions, our results are an invaluable analytical tool for both researchers and trade policy formulators. The estimates will help them make reliable economic forecasts and arrive at right decisions.

1.4 PURPOSE OF THE STUDY

The broad objectives of this study is to empirically analyse Nigeria's non-oil export behavior for the years 1970-93 for better export policy formulation and implementation. This was achieved by pursuing the specific objectives below which are derived from the research problem. They include the following:

i. An empirical estimation to test whether the demand and supply of Nigeria's non-oil tradeable is price elastic or inelastic, and whether price is a significant variable or not in explaining the variation in non-oil export demand and supply.

ii. An empirical estimation of the income elasticity of foreign demand for Nigeria's major trading partners to see the relationship between growth in their economy and their consumption of Nigeria's non oil tradeables.

iii. An empirical estimation of the net absorption elasticity of supply to know the relationship between non-oil exports and the demand in the domestic market.

iv. An examination of Nigeria's export trade structure and trend.

v. A survey of the export diversification and export promotion policies of the Federal Government of Nigeria and

vi. Based on (i) - (v) above; generate some inference for policy and action.

1.5 RESEARCH HYPOTHESES

In order to achieve the objectives set above, the following hypotheses are formulated:

(i) The magnitude and sign of the relative price elasticity of demand are less than one and negative respectively.

(ii) The size and sign of the supply elasticities are less than one and positive respectively

iii) The income elasticity of demand is positive

(iv) The net absorption elasticity of supply is negative and,

(v) All the parameters are statistically significant at five percent level.

1.6 SCOPE OF THE STUDY

The study is limited to the estimation of the tradeable non-oil export demand and supply functions for Nigeria because it is its development that will make Nigeria's hope of export diversification to be fulfilled.

Hence, the study does not cover the entire exports, that is it excludes oil exports. This is because as a member of OPEC, Nigeria is subject to the allotted production quota and the price fixed. Consequently, Nigeria can't respond to market situations as conditions dictate.

We have used data of Nigeria's major non-oil export items such as cocoa, rubber, palm producer etc. Manufacturers made quite insignificant contribution to total exports within the period. Infact it contributed less than one percent for about fifteen years. Solid minerals on the other hand paled into insignificance along with some other products.

Finally, the study cover a period of twenty four years; from 1970 to 1993. This enabled us to capture the periods of export diversification and export promotion policies of the Federal Government.

1.7 REVIEW OF LITERATURE

The literature in the area of international trade is quite rich. A considerable body of knowledge also exists on the role of exports in economic growth. Several scholars have shown evidence that export expansion can lead to economic growth and that indeed it can be a development strategy. This brought the export-led growth concept. Among the studies are: Emery, (1967), Caves, (1968), Balassa (1978), Fajana (1979), Feder (1986), Oyejide (1986) and Ekpo and Egwaikhidie (1994). But others like Odusola and Akinlo (1995) submitted that the

relationship is bi-directional.

However, Ghosh (1992) doubts the ability of the world market to continue absorbing the export-led strategies of developing countries especially under the conditions of the late 1980s. But Panoutsopoulos (1992) believe that export pessimism is unwarranted. The idea that the problem is not the foreign market environment but structural is supported by Wilson (1984) and Prasad (1992).

The controversy on trade as an engine of growth seems no longer interesting, at least from policy perspective. Despite various disadvantages of unequal trade relationships usually enumerated (Todaro, 1977), the hard facts of economic life make it imperative that nations must trade if only for their economic survival.

While earlier studies on the developing countries took a general look at their export promotion policies, Telgeiro et al (1973) examined the diversification effort of Columbia through the alteration of the incentive structure. They submitted that exchange rate policies are better than export subsidies. This agree with the result obtained later by Ifzal (1987) for India, but differs from that of Jung and Lee (1986).

The research for sensible, reliable and realistic estimates of elasticities has made the literature to be rich in scholarly work on export trade behavior and performance. Previous studies include Da Costa (1965), Ifzal (1987) and Prasad (1992) for India, Zilberfarb (1980) for Isreal, Wilson (1984) for Egypt, Tarafas and Szabo (1985), and Halphern and Szekely (1992) for Hungary, Sakiguchi (1990 for China, Jung and Lee (1986) for South Korea, and Telgeiro (1973) for Columbia. Among studies that cover many countries are Goldstein and Khan (1978) and Khan (1974).

Studies on export trade have focused attention on methodological, informative and forecasting facets. The firstinvolves controversy as to how the 'true' demand and supply relation and its elasticities can be obtained. Some claim that ordinary least square (OLS) regression of exports on price and other variables will give a dependable estimate of the relevant parameters, while others like Bergstrom (1955) believe that a system of structural equations is more in keeping with reality than OLS. However, Olayide (1970) says that under simplifying assumptions, a single equation OLS method could be used with satisfactory results.

For the second group, estimates of elasticities of a long or short run nature were made with the aim of understanding the nature of international trade and policy implications. They covered such topics as propensity to export, the role of price mechanism in foreign trade the concept of foreign trademultiplier, balance of trade problem, trade restrictions such as tariffs, quotas, exchange depreciation and devaluation. Among them are Harberger (1957), Goldstein and Khan (1978) and Houthakker and Magee (1969).

The third group of studies is oriented to short-range forecasting. They try to know with measure of accuracy in advance, the magnitude of exports for use in planning for economic policy.

The contribution of Goldstein and Khan (1978) suggest that estimates of demand-price elasticities for aggregate exports can be substantially different when export supply relationships are explicitly taken into account. Earlier studies had been concentration on import and export demand while assuming a perfectly elastic export supply.

From the evidence in the literature, the major determinants of export demand are: exchange rate, Tarafas and Szabo (1985); income of trading partners, Da Costa, (1965); relative export prices, Houthakker and Magee (1969) and time trend.

In the case of export supply studies agree that relative profitability between selling in the international and home markets is a strong factor determining exports. Other factors identified include domestic demand pressure, Ball, Eaton and Steuer, (1966), Ahmed (1976); domestic productive capacity, Khan and Golstein (1978); Output and capital-output ratio Ifzal (1987) as shift variable; and time trend.

The literature on the analysis of the supply and demand issues relating to Nigeria's non-oil exports is quite rich. However, most studies on this are qualitative in nature. This include: Ajilima and Agba (1986), Fajana (1989), Obadan (1989), Jerome and Adenikinju (1995) and Iniodu (1995). Among the few econometric studies of Nigeria's export trade is Olayide and Olatunbosun (1982), Umo (1981), Obadan (1993)[a] and Kwanashie et al (1993).

Olayide and Olatunbosun (1982) analysed export demand for 13 different commodities, mainly agricultural products. They used average price of export as the price variable. Their result using linear functions show that exports of the commodities were not too sensitive to price, competitors' suppliers, export taxes and fluctuations in industries activity. The major short coming of their work which covers 1948-64 was that they did not obtain the aggregate demand elasticities.

While the work of Obadan (1993)[a] was on Nigeria, that of Umo (1981) covered 12 African countries including Nigeria. Umo used single equation models incorporating relative price of exports, foreign real income deflated by domestic price level and domestic capacity to export proxied by the real GDP to obtain export supply elasticities.

His result show that the relative price and income parameters are well behaved for all countries proving that high export prices and world income tend to encourage exports. The estimate of the price elasticity of supply ranges between 0.5 and 1 which is extremely weak.

However, Umo's work spanning 1963-1977 was not on Nigeria's non-oil exports.

Obadan (1993)[a]'s is work for the period 1970-90 investigated the impact of SAP on the export supply of natural rubber. He used linear equation method of OLS. This result show that free marketing of rubber through the abolition of the commodity board has a positive effect on rubber export supply. Hence, he concludes that SAP policies have impact. But Obadan did not show whether the response was up to the target.

The above conclusion of Obadan (1993)[a] contrast that of Kwanashie et al (1993) in their study of the response of Nigeria's non-oil exports to trade liberalization, Kwanashie et al showed that the policy failed as the non-oil exports failed to hit the targets for them. Consequently, they suggested a re-examination of the entire policy process.

Therefore, it could be observed that attempt has not been made to obtain estimates of the elasticities of aggregate non-oil export for Nigeria. It is this gap that exist in the literature that this work has attempted to fill

1.8 ORGANIZATION OF THE STUDY

The remaining part of the work is divided into four chapters. Chapter two which follows, examines Nigeria's export trade in terms of the structure and trend, the direction of trade, and a survey of efforts to encourage exports during the study period, 1970-1993. This chapter provides the background to the study.

In chapter three, we explained the framework within which the result of our work can be understood and the method we adopted for the research. The focus of chapter four is the presentation and analysis of the result. Chapter five finally summarizes and concludes the discussion. The work ends by suggesting areas of further research on the topic.

CHAPTER TWO

NIGERIA'S NON-OIL EXPORT TRADE

2.1 STRUCTURE AND TREND OF NIGERIA'S EXPORTS

Nigeria's exports can be broadly classified into oil and non-oil. The oil export consist of crude petroleum and composite products derivable from it such as gas and diesel. The non-oil exports can be categorized into agricultural, manufactured and semi-manufactured commodities, and solid minerals.

The fortune of Nigeria's exports has been fluctuating overtime. From ₦885.5m in 1970, it increased to ₦14,186.7m in 1980 only to decline to ₦8,920.5m in 1986. However, since 1986 to date it has been increasing, from ₦30,360.6m in 1987 to ₦109,886.1 in 1990 and ₦218,801. Min 1993. Table 1 shows the complete picture between 1970 and 1994.

The dramatic increase between 1987 and 1994 is not as a result of rapid improvement in export volumes. Rather it is because of the depreciation of the Naira; Infact the Dollar value of exports declined from $613 m in 1988 to $244m in 1994. The fluctuations in the export values also is due to the fluctuations in the prices of the primary commodities in the world market because Nigeria is a producer of mainly primary products.

In 1960, all the non-oil exports accounted for 97.3 percent share of total exports while crude petroleum share was mere 2.7 percent. But from table one non-oil exports has continued to decline over the years. From 42.4 percent of the total export in 1970, its share fell to 16.9 percent in 1973.

TABLE 1

STRUCTURE OF NIGERIA'S EXPORTS

1960 - 94 (₦M)

YEAR (1)	OIL (2)	NON-OIL (3)	TOTAL (4)	(2) as % of (4)	(3) as % of (4)
1960	8.8	321.2	330.0	2.7	97.3
1970	510.1	375.4	885.5	57.6	42.3
1971	953.0	340.4	1,293.4	73.7	26.3
1972	1,176.0	258.0	1,434.2	82.0	18.0
1973	1,893.5	384.9	2,278.4	83.1	16.9
1974	5,365.7	429.1	5,794.8	92.6	7.4
1975	4,563.7	362.4	4,926.1	92.6	7.4
1976	6,321.6	429.5	6,751.1	93.6	6.4
1977	7,072.8	557.8	7,630.6	92.7	7.3
1978	5,653.6	662.8	6,316.4	89.5	10.5
1979	10,166.8	670.0	10,836.8	93.8	6.2
1980	13,632.3	554.4	14,186.7	96.1	3.9
1981	10,533.5	342.8	10,876.3	96.8	3.2
1982	8,583.8	120.9	8,704.7	98.6	1.4
1983	7,201.2	435.4	7,636.6	94.3	5.7
1984	8,840.6	247.4	9,088.0	96.8	3.2
1985	10,890.6	324.2	11,214.8	97.7	2.9
1986	8,368.4	552.1	8,920.5	93.8	5.2
1987	28,208.6	2,152.0	30,360.6	92.9	7.1
1988	28,435.4	3,854.4	33,138.1	91.2	8.8
1989	55.016.8	2,954.4	57,971.2	94.9	5.1

YEAR (1)	OIL (2)	NON-OIL (3)	TOTAL (4)	(2) as % of (4)	(3) as % of (4)
1990	106,626.5	3,259.6	109,886.1	97.0	3.0
1991	116,856.5	4,677.2	121,533.7	96.2	3.8
1992	201,383.9	4,227.8	205,611.7	97.9	2.1
1993	213,778.8	5,022.3	218,801.1	97.7	2.3
1994	200,936.1	5,349.0	206,825.1	97.4	2.6

SOURCE: Central Bank of Nigeria,
(a) Annual Report, Various Issues
(b) Statistical Bulletin, 1994

Also, the table reveals that apart from 1978, the contribution of non-oil export has consistently been less than 10 percent since 1974. On the other hand, oil export which started in 1958 has risen steadily from 57.6 percent in 1970 to 83.1 percent in 1973 and has generally remained above 90 percent since that year to date. In addition, oil revenues as a proportion of Federal Government Revenues increased from 30 percent in 1970 to 52.5 percent in 1971, and 87 percent in 1975 (CBN, V).

2.1.0 STRUCTURE AND TREND OF NIGERIA'S NON-OIL EXPORTS

2.1.1 AGRICULTURAL EXPORTS

The major agricultural commodities being produced by Nigeria are: cocoa, palm kernel, palm oil, groundnut, Natural rubber and timber. Up till the end of the colonial era, the Nigerian economy was predominantly agricultural. This arose due to the need to meet the colonial objectives of metropolitan industrialization through the production and exports of primary products.

The Nigerian export structure then was largely diversified in terms of primary products. In 1960, eleven major commodities were on the export list of which the ones above were the

most important. During the 1960s, the agricultural sector dictated to a large extent the pace of growth and development of the Nigerian economy (Ojo, 1989). The sub-sector made substantial contributions to GDP, rural incomes, development capital, foreign exchange earnings and the pace of industrialization.

TABLE 2

COMPONENTS OF NIGERIA'S AGRICULTURAL EXPORT SUPPLY

1970 - 1994 ('000 TONNES)

YEAR	PALM OIL	COCOA	G/NUT OIL	COTTON	G/NUT	HIDES & SKIN	PALM KERNEL	NATURAL RUBBER	COFFEE	TIMBER
1970	7.69	195.7	28.6	90.0	292.3	4.7	185.3	61.7	3.7	221.5
1971	20.2	271.7	22.3	41.3	137.5	3.8	241.1	51.3	4.2	207.1
1972	1.9	271.7	1.0	39.7	106.2	4.3	212.2	41.2	2.5	231.9
1973	20.2	213.8	8.3	110.8	198.7	5.4	137.6	49.4	0.3	25.6
1974	1.9	197.9	-	22.7	28.3	6.4	181.0	62.3	1.1	136.9
1975	N	174.4	-	N	-	2.9	171.4	60.9	6.0	105.3
1976	N	218.9	-	-	1.6	2.1	272.0	34.0	3.2	28.7
1977	10.7	193.1	13.0	-	-	2.5	238.6	34.1	0.7	170.0
1978	3.3	191.7	3.2	-	-	1.1	56.8	30.9	-	N
1979	-	217.8	2.6	-	-	0.7	50.9	34.2	-	N
1980	-	157.1	2.4	-	-	0.6	49.6	31.0	-	N
1981	-	125.0	-	-	-	-	92.6	24.4	-	N
1982	-	231.0	-	-	-	-	113.5	18.9	-	N
1983	-	154.4	-	-	0.9	-	59.6	27.6	-	N
1984	-	158.7	-	-	0.5	-	30.5	32.0	-	N
1985	-	166.1	-	-	3.0	-	57.3	29.5	-	-

YEAR	PALM OIL	COCOA	G/NUT OIL	COTTON	G/NUT	HIDES & SKIN	PALM KERNEL	NATURAL RUBBER	COFFEE	TIMBER
1986	-	148.4	-	-	-	-	61.3	33.0	-	-
1987	-	201.5	-	-	-	-	92.4	38.6	-	-
1988	-	303.9	-	-	-	--	110.4	67.4	0.3	-
1989	-	131.3	-	-	-	-	115.1	103.0	0.1	-
1990	-	138.5	-	-	-	-	62.0	105.8	3.0	-
1991	-	147.7	-	-	-	--	24.6	108.6	1.6	-
1992	-	180.4	-	-	-		78.0	96.2	1.3	-
1993	-	200.7	-	-	-	-	106.7	98.2	1.2	-

SOURCE: Central Bank of Nigeria: Annual Report, Various issues,

Unfortunately, the positive role of the export crop sub-sector in the post independence period was not sustained in the 1970s and 1980s. The agricultural products drastically decline in their relative share of total exports. It contributed 57.7 percent in 1968, 24.5 percent in 1970, 12.67 percent in 1973, 4.6 percent in 1979 and a paltry 2.5 percent in 1986.

The expansion of the oil sector and the concentration on crude oil exports created a serious 'Dutch diseases' in the economy which relegated the contribution of the agricultural sector to the background. The oil industry turned domestic relative prices against agricultural products and in favour of Urban-based activities. Another contributory factor is that the government failed to embark on restrictive import policy during the oil boom years (Ajilima and Agba, 1986).

The situation now is that the dominance of Nigeria in the total world export of commodities like palm produce and cocoa has been lost. Similarly, the domestic production of some of these products is no longer sufficient to meet internal requirements while some have disappeared completely from the export list.

From table 3, the export of palm oil became negligible in 1973, picked up a bit in 1975 but dried up completely in 1979. There were no export of raw cotton from 1974 to 1976. This resumed in 1977 but later declined and dried up in 1980. There were no export of groundnut in 1975, in 1976 a very small quantity was exported but its exports has dried up completely since 1978. A similar fate befel the derived products - groundnut oil and groundnut cake. Timber has gradually faded out of the export scene as a major item; in 1974, its exports was ₦11.2m but by 1978 it had dwindled to ₦1.1m. The table is the same for others like the exports of hides and skin, and coffee.

Obadan (1993)[b] broadly attributed this decline in the exports of traditional agricultural commodities to high cost and scarcity of farm inputs, production input supply and marketing constraints, pervasive role of domestic (consumer and industrial) demand, defective agricultural policy, low producer prices of the defunct commodity boards relative to the prices of foodstuff, and unfavorable movements in the world market prices.

Nevertheless, as table 3 show, non-traditional items are surfacing on the exports list. The most dominant of this is Fish and shrimps; it yielded a revenue of ₦83.1m in 1989. This increased to ₦308.1m in 1991 and further to ₦312.0m in 1994. This is an indication of the impact of the Structural Adjustment Policies initiated in 1986.

TABLE 3

NEW PRODUCTS ON NIGERIA'S EXPORT LIST (₦ M) YEAR

PRODUCT	1989	1990	1991	1992	1993	1994
Pineapples	3.6	4.8	4.4	N	N	81.0
Cashew Nuts	N	15.4	32.0	N	N	312.0
Fish and Shrimps	83.1	149.1	308.1	212.7	134.5	14.0
Gum Arabic	16.4	13.4	32.3	25.9	57.4	4.1
Nigerian Shea Nuts	N	N	60.9	N	N	47.6
Spices (Ginger, Vanilla)	2.4	5.7	12.4	4.6	12.4	-
Soap and Detergents	3.4	0.7	3.7	62.3	27.4	-
Wood Products	15.6	N	97.0	127.7	134.7	-
Chemicals	7.0	8.7	13.0	12.2	82.3	-
Processes skin	101.1	65.0	118.2	-	-	-
Urea/Ammonia	-	246.3	426.6	-	-	-

(N) - Negligible
(-) - Not available

SOURCE: Central Bank of Nigeria: Annual Reports, Various Issues.

2.1.2 MANUFACTURES

Traditionally, exports of Nigerian manufactures used to consist of cocoa butter, cocoa powder, cocoa cake, palm kernel expeller, palm kernel oils, chemicals and palm kernel pallets. However, items like textiles, motor vehicle/machinery, soap/detergent, beer/beverages,

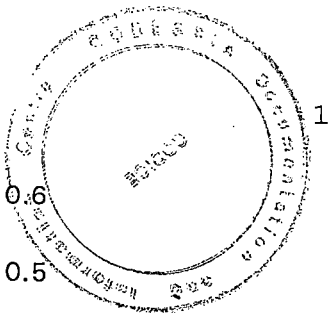
urea/ammonia, processed skin etc are now being exported.

Manufactures have not made any impact on Nigeria's export list. Its contribution to total exports declined from 7.4 in 1970 to 1.1 percent in 1975 and 1977. It has consistently remained below 1 percent of total exports since then.

Table 4

Export of Manufactures, 1970-93 (₦ M)

YEAR	VALUE	% OF TOTAL EXPORTS
1970	65.8	7.4
1971	45.2	5.5
1972	37.3	2.5
1973	63.9	2.8
1974	67.0	1.2
1975	53.8	1.1
1976	58.9	0.9
1977	84.1	1.1
1978	48.8	0.7
1979	42.6	0.4
1980	42.6	0.3
1981	43.5	0.4
1982	114.5	0.3



1983	42.0	0.6
1984	14.3	0.5
1985	42.5	0.7
1986	52.9	0.6
1987	149.8	0.5
1988	187.0	0.6
1989	316.7	0.6
1990	558.8	0.5
1991	791.8	0.7
1992	728.1	0.3
1993	706.9	0.4

SOURCE: Central Bank of Nigeria, Annual Reports, Various Issues.

Many reasons has been given to explain the dismal performance of manufactured exports even in the face of adjustment measures. Among them are:

(a) The protectionist policies between the 1960s and 1980s resulted in overvaluation of domestic currency. This, i) discouraged production and export of Nigeria's traditional products, ii) made it impossible for industrial manufacturers to break into foreign markets, iii) produced a price advantage in favour of imports. This made the demand for imported goods and activities on processing imported materials increase.

(b) Capability for export developed by the industrial manufacturers was dislocated by manpower composition caused by the 1974 indigenisation programme. Many firms folded

up in the face of manpower problems they faced.

(c) The import substitution industrialization that was adopted in 1961 made the structure of manufacturing industries inward-looking.

(d) Later efforts to promote exports were focused on primary products which has been suffering serious reversals in the world market.

(e) The import substitution industrialisation strategy made the firms to be dependent on foreign inputs. Hence, with the devaluation of the Naira, and substantial increase in import prices, firms are unable to import the needed raw materials and machinery.

(f) Finally, Nigeria has little or nothing to export. The manufactures are not competitive (in price, quality and durability) in the world market.

However, as noted by Jerome and Adenikinju (1995), official trade figures tend to underestimate actual trade since a substantial volume of unrecorded trade and smuggling takes place between Nigeria and neighboring countries. As manufactured goods produced in Nigeria are found all over the West African Coast, the performance of the manufacturing sector may be better than what the official figures suggest.

2.1.3 MINING

Before the oil boom of the 1970s, solid minerals mainly in the form of Tin metal, columbite, Lead, zinc, etc. played a fairly significant role in generating foreign exchange for the country. But the value has been declining overtime. From ₦33.8m in 1970, ₦20.4m in 1975 to ₦10.8 in 1979.

The oil boom led to the neglect of the mining industry as in the case of agricultural export production. Consequently, the industry experienced declines in production and export volumes, such that only tin metals perhaps is still being exported, and this is in very insignificant quantity and value.

Therefore, our discussion of the structure and trend of Nigeria's exports has revealed that the major items on the non-oil export product list are cocoa beans, palm kernel and natural rubber.

These products have consistently been on the export list and together they account for more than 70 percent of Nigeria's non-oil exports on the average during the study period.

Consequently, like Olayide and Olatunbosun (1970), we shall exclude young industries, and declining industries that no longer serve any external market. In their own study which was for Nigeria between 1948 and 1964, 13 commodities, mainly agricultural products accounted for over 70 percent of the country's exports then.

2.2 EXPORT PROMOTION POLICIES

2.2.1 EXPORT DIVERSIFICATION

Within the period 1970 and 1985, the period before adjustment policy measures, the Nigerian government had shown concern for its dependence on crude oil revenue. This concern was revealed even in the 1962 budget statement of the Federal Government. Government aimed at diversifying exports, develop new market and strengthen its position in the existing markets.

However, this diversification policy was never taken seriously; it was merely a statement of intention. As there was no commitment, not much was done to encourage production for exports then. In actual fact, the bias of policy that time was for import substitution industrialization. Firms were encouraged to produce focusing their attention on the domestic market.

Hence, it was not until 1976 that the government saw the need to establish the Nigerian Exports Promotion Council (NEPC) and this took two years to be operational. The responsibility of the NEPC includes:

i. Suggesting measures that will advance Nigeria's export trade.

ii. Stimulating the growth of non-traditional exports

iii. Making available promotional services like trade information, export incentives etc to encourage export trade.

Government started giving serious thought to the idea of export diversification because of the glut in the world oil market in the late 1970s and early 1980s. It was at this period that

a package of incentives were approved by the military government. But as this was not legislated, they remained unoperational till the end of the civilian administration.

2.2.2 EXPORT PROMOTION

This was not a carefully planned strategy for economic development but one born out of exigency. Government embark on this because of the reversal of Nigeria's economic fortunes. The aim is to boost foreign exchange earnings from the sale of non-oil export goods and it was introduced within the framework of the 1986 Structural Adjustment Programme (SAP). The enabling Decree is the Export (Incentives and Miscellaneous Provision) Decree No 18 of July 1986.

Export promotion involve firs-best and second-best policy measures. The former are to liberalise trade; it removes already existing anti-export biases in the economy like the protection of firms, control of domestic transactions and exchange rates. The latter involve putting in place incentives and export subsidies.

The first-best policy measures of the Federal Government includes:

i. Abolition of import and export licensing systems.

ii. Switching from qualitative restrictions to tariffs

iii. Reduction in the list of banned items from 74 to 16

iv. Abolition of commodity marketing boards

v. Adoption of a comprehensive tariff structure in 1988 which would last for seven years, and

vi. Removal of controls on exchange rate. These and other measures significantly reduced the high level of protection in the Nigerian economy prior to 1986.

The second-best (export incentive) measures are many; they are listed in appendix 1. They include:

(a) Refund of excise duty paid on export manufactures

(b) Retention of 100 percent export proceed by non-oil exporters in foreign currency domiciliary account.

(c) Tax-free interest earned on export loans

(d) Higher capital tax depreciation allowance for manufactured exports

(e) Simplification of export procedures and documentation

(f) Performance cash grant to exporters based on their annual performance

(g) Rediscounting of short-term bills of exchange in respect of scheduled export items by the Central Bank of Nigeria from the banks

(h) Refund of import duty paid on raw materials used for production of export products

(i) Financial aid to exporting companies to cover 30-40 percent in respect of their export promotion activities e.g cost of participating in trade fairs and foreign market research.

(j) Cash inducement to encourage firms to engage in export business rather than domestic business.

(k) Protection of banks against credit risks on export finance, and shielding local exporters against possibilities of default by overseas buyers through Export Credit Guarantee and Insurance Scheme.

(1) Establishment of export processing zone in Calabar etc. (Obadan, 1993)[b]

The policies above show indication of seriousness on the part of the Nigerian government to promote non-oil exports. While a good number of the incentives have been implemented in various degrees, the machinery for the implementation of some others is yet to be completed. This include:

(a) The Export Price Adjustment Scheme which is to compensate exporters of products whose foreign prices are relatively attractive.

(b) And the subsidy scheme to encourage exporters to use local raw materials in export production.

As we mentioned earlier, available statistics show that the non-oil sector has not responded significantly to the various incentives and measures. Obadan, 1993 quotes the CBN Governor as attributing the failure to poor implementation.

2.3 DIRECTION OF NIGERIA'S NON-OIL EXPORT TRADE

The destination of Nigeria's non-oil export is mainly to Western Europe. Available data for the period 1970-83 shows that United Kingdom dominated the scene throughout. It handled minimum of 22 percent (1974) and maximum of 33 percent (1972) of the value of all non-oil exports from Nigeria. On the average, Britain demanded for 29.05 percent of Nigeria's non-oil exports.

Until the 1970s, Nigeria's exports were directed mainly to markets in the United Kingdom and Western Europe also. But Nigeria has been able to diversify the market a little. However, the countries next in importance to Britain is Netherlands with an average of 15.6 percent, West Germany with an average of 12.8 percent. America comes fourth with an average of 11.4 percent. France's share was 5.6 percent.

In terms of fluctuations, trade with Great Britain and Netherlands fluctuated very wildly whereas that of America fluctuated mildly. Trade with Western Germany within the period was somewhat on the increasing trend.

Within the period, Nigeria experienced low trade with Eastern Europe, Asia and Africa with average of 9.2 percent 2.52 percent and 3.9 percent respectively. The bulk of the Nigerian non-oil export to Africa was to the West African sub-region, an average of 3.4 percent. Nevertheless as mentioned earlier, significant illegal trading activities take place between Nigeria and the neighboring countries.

From table 5, the major importers of Nigeria's non-oil tradeable are Great Britain, Netherlands, Western Germany, America, and France. Together, they demand for about 75 percent of Nigeria's non-oil exports between 1970 and 1983. It is for this reason that we have aggregated their real GDP to obtain the average of the real GDP of Nigeria's trading partners for the export demand function.

TABLE 5

DIRECTION OF NIGERIA'S NON-OIL TRAD 1970 - 1983 (%)

YEARS	UNITED KINGDOM	NETHERLANDS	WEST GERMANY	U.S.A	FRANCE	EASTERN EUROPE	WEST AFRICA	ASIA	AFRICA
1970	28.2	16.8	6.7	8.9	8.5	8.4	-	-	-
1971	30.6	14.6	8.2	11.2	3.9	13.2	3.1	4.2	3.4
1972	33.4	15.4	7.9	7.5	3.3	9.9	5.3	3.7	5.7
1973	30.6	13.6	7.3	10.3	6.2	8.5	4.1	4.6	5.4
1974	22.7	9.1	9.2	9.1	1.8	23.8	3.8	3.7	4.7
1975	28.4	10.2	7.6	12.4	0.9	21.8	3.5	5.8	3.8
1976	29.8	18.4	10.8	17.4	2.0	16.5	2.5	1.8	5.7
1977	29.0	18.5	16.6	14.0	3.1	5.1	3.1	2.5	3.1
1978	28.0	15.0	17.4	11.9	9.3	4.2	3.5	0.6	3.5
1979	27.8	13.7	17.6	12.2	9.6	4.1	3.7	0.9	3.7
1980	28.8	17.6	17.0	12.7	7.3	3.8	3.4	1.5	3.4
1981	28.8	17.6	17.0	12.7	7.3	3.8	3.4	1.5	3.4
1982	30.3	18.6	18.0	10.4	7.8	3.0	2.5	1.0	2.5
1983	30.3	18.6	18.0	10.4	7.8	3.0	2.5	1.0	2.5

SOURCES: CBN - Annual Reports, various Issues

CHAPTER THREE

THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

3.1 THEORETICAL FRAMEWORK

In the classical theories of trade, the major determinant of the quantity of the commodity traded is the relative price of that commodity. The supply of and the demand for export are thus functions which are defined in terms of price-quantity relationships.

The prices are usually expressed as the price of exports in terms of that of the domestic price. If the relative princess prices rise, a country tends to supply more exports while a fall in the terms will discourage export supply. In the literature, the price of exports is both a determinant of supply as well as the demand for exports. The export price is usually expressed as a ratio of the price of the same exports from other countries (the competitors).

The level of income of importing countries have also been identified as having important influences on the export market. Hourtakker and Magee (1969) and Goldstein and Khan (1978) showed that there exists a direct relationship between export demand and the level of income. However, the latter point out that the influence of income is greater the more the share of the market a country's exports have. This suggest that it is possible for increase in trading partners' income level not to lead to increase in the demand for exports.

Apart from the price and income, the demand for Nigeria's exports is affected by a host of other variables. These include competitors' supply into the world market, the rate or level of inventory in the importing countries; the index of industrial production in the purchasing countries; the taste pattern of buyers; the role of substitutes or synthetics, and barriers to trade (national and artificial).

On the other hand, the determinants of export supply include the relative prices between export and domestic markets; domestic demand; degree of protectionism; foreign exchange rate and its availability to exporters and producers; exports incentives; cost and availability of inputs etc.

In this study, we have investigated the extent to which demand for Nigeria's non-oil exports is influenced by the relative price and the level of income of the major trading partners. Also, we have obtained evidence on the degree of responsiveness of Nigeria's non-oil export supply to the relative profitability of selling in the domestic and foreign markets, and the level of domestic demand.

Elasticities and flexibilities are useful in measuring the rate of growth of exports. Generally, elasticity measures the responsiveness of a dependent variable to changes in the independent variable. In line with the received theory, price elasticity of Nigeria's non-oil export supply measures the rate at which supply by exporters buyers is the price elasticity of demand.

The magnitude and sign of the elasticities have economic significance. For the response of export supply and demand to price changes, when the co-efficient is less than one, greater than one and equal to one, the response is less than proportionate, more than proportionate and proportionate respectively.

Instances that extremes like zero elasticity and infinity occurs describes situations that quantity do not respond at all, and when the volume can change even with prices being constant respectively. The negative (positive) sign associated with demand (supply) elasticity co-efficient is because of the indirect (direct) relationship between price and quantity.

The world income elasticity of demand could be positive or negative. This shows direct or indirect relationship between world income and demand for Nigeria's non-oil exports. A positive

coefficient will indicate that as their economic grow, Nigeria's trading partners import more non-oil items from Nigeria. A positive result for net absorption elasticity of supply show that exports can be expanded without hindrance from production for the domestic market whereas the reverse show that the pull of domestic demand limits the availability of the exportable for the world market.

3.2 METHODOLOGY

In order to achieve the objectives of this study, an empirical analysis of the demand and supply issues of Nigeria's non-oil export has been conducted using econometric method. This has helped us to gain an insight into the key objective of the study which is to determine the intertemporal variation in non-oil export elasticities for Nigeria.

As a general framework, the Prasad (1992) model specified for India and recommended for developing countries like Nigeria has been adopted for our analysis. Taking note of Nigeria's peculiarity, we have made modification to make the model suitable for our study.

3.2.1 CHOICE OF FUNCTIONAL FORM

Elasticities of demand and supply can be obtained directly from the estimation of logarithmic functions. Though this is a direct way of obtaining elasticities which is the core of this study, yet, the equations may take other forms apart from geometrical form dictated by logarithmic function. For instance, it may be linear, curvilinear, semi-log, double-log or any other form. However, only one form is examined in this study and this is the double-logarithmic function. We choose this due to theoretical considerations, and its computational simplicity.

3.2.2 ASSUMPTIONS FOR THE MODEL

The following assumptions are made to enhance the formulation and analysis of the model.

(i) There exists production and utility functions for Nigeria's non-oil exports; these functions

are well behaved and the two economic agents, Nigeria and the rest of the world, are optimisers of their trading goals. With this, we can then postulate that the market equations were derived from the relationships in the production and consumption activities.

(ii) The variables with which the models are defined are the most important variables, other influences are absorbed by the stochastic term. Also, the numerical values of these variables are not distorted.

iii) The relationships are correctly identified and the specified model is suitable from the analysis of the Nigerian situation.

(iv) There exists price differentials for the Nigerian non-oil exports. Domestic prices differ from the world prices. This necessitates the use of relative prices for the equations.

(v) Trading countries are on their demand or supply frontiers. This obviates the possibility of a disequilibrium behavious.

(iv) Export prices (domestic and world), income and domestic demand are exogenously determined.

3.2.3 SPECIFICATION OF THE MODEL

Prasad (1992), expressed the world demand for a particular export commodity composition in log-linear form as: $\log^{XW} = \alpha_1 + \alpha_2 \log[UV/UV^*] + \alpha_3^{LOG} WGDP + U_{ii\,(i)}$

Where: XW is the world demand for a specific commodity basket, UV, the unit value of total world export of that commodity basket in US $; UV^*, the unit values of total world exports in US $ and WGDP, world GDP net of services.

α_2 and α_3 are the price and income elasticities with the expected sign

$\alpha_2 < 0$; $\alpha_3 > 0$.

We have specified the foreign demand for Nigeria's non-oil exports as:

XD = f(relative price of the chosen non-oil export basket and the real GDP of the major importers of Nigeria's non-oil items) and the supply, XS = f(the relative profitability between export and domestic markets, and absorption relative to the output of the selected agricultural products).

In formal terms, these could be written as:

$XD = a_0(PX/P_D)^{a}_{1} (Y)^{a}_{2}$ .....(2)

$XS = b_0 (PX/P_D)b_1 (DCN/AGDP)b_2$ .....(3)

Assuming a linear relationship, the general form of the above is

$XD = a_0 + a1\ Px/P_D + a_2\ Y + u_{2i}$ .....(4)

$XS = b_0 + b_1\ Px/P_D + b_2\ DCN/AGDP + u_{3i}$ .....(5)

This could be re-written as:

$XD = a_0 + a_1\ P^* + a_2Y + U_{2i}$ ..... (4^1)

$XS = b_0 + b_1\ P^* + b_2^D + U_{3i}$ .....(5^1)

Because the double logarithmic form guarantees better result, and that the a_is and b_is are elasticities being the coefficients of the parameters we estimated,the equations of our model is:

$\log XD = a_0 + \log p^* + a_2 \log Y + U_i$ .....(6)

$\log XS = b_0 + b_1 \log p^* + b_2 \log D^* + U_i$ .....(7)

Where XD is the foreign demand for Nigeria's non-oil exports; P_x the weighted average world price of the commodity baskets; P_D, the weighted average of Nigeria's price; and Y, the real GDP of major countries importing Nigeria's non-oil exports deflated by their domestic price level. We expect that:

$a_0 > 0$, $a_1 < 0$ and $a_2 > 0$

The supply function has been specified as a function of relative price index, p^*; and domestic demand as a proportion of the total output, D^*. The U_is are the error terms/stochastic factors. They are assumed to have zero mean and constant variance. We expect that:

$b_0 >< 0$; $b_1 > 0$ and $b_2 < 0$.

The model does not include exchange rate and subsides as separate explanatory variables. Their impact is however recognized through their effect on the relative price, unit profits received by exporters, the GDP etc.

Given equations (6) and (7) along with the identity XD = XS .(8), equilibrium is defined for the system. The demand and supply equations are exactly identified and the reduced form of the model is:

$\log Q = \pi 10 + \pi 11 \log Y + \pi 12 \log D^* + V_1$

$\log P_t^* = \pi_{20} + \pi_{21} \log {}_{+n22} \log D + V_2$

The estimates of the structural parameters were obtained by solving the model defined by equations (6), (7) and (8) simultaneously.

3.4.2 THE VARIABLES

The aggregated quantities of cocoa beans, palm kernel and natural rubber exports expressed in million tonnes were used as dependent variable in line with the practice in literature. Studies that cover the entire exports convert the export of crude oil from its unit, barrels to metric tonnes using the factor, one metric tonne to 7.3 barrels.

The independent variables used include the real GDP of Great Britain, United States, Netherlands, France and West Germany, major buyers of Nigeria's non-oil exports. The figures for the individual countries were deflated by their domestic price level and converted to US $ using IMF conversion factors. Further we multiplied the result by their average share in Nigeria's

non-oil export trade.

Other variables include the weighted average of the international and Nigerian prices of the selected products, and their domestic demand. We obtained the latter by dividing the difference between the estimated output of the selected products and the volume of their export by the estimated output. Increase in the proportion of domestic demand relative to the output would most likely decrease the availability of exportable for the world market or probably spill into imports, or both.

As the export products relate to perennial crops with long gestational periods, we lagged prices for three-periods and compared the result with the model of spontaneous adjustment. It is not possible to vary non-oil export volume immediately in response to price changes. We chose three periods because of the availability of improved varieties of the selected crops. Similarly, the demand by importers is not usually based on current price consideration alone. We used the unit values of the products instead of the commodity boards' prices. This is because it depicts the market situation more. The boards mostly make profit on their purchases from the producers. We obtained the unit values by dividing the value of the export item with its volume.

3.2.5. METHODS OF ESTIMATION

The estimation technique we have used is simultaneous regression method of Two-stage Least Square (TSLS). The coefficient of the estimated equations were computer-generated.

The work relies on the expected signs of the coefficients which were set based on theoretical principles. This is important more so when the coefficient of determination, R^2, for any of the equations does not measure the degree of explanatory efficiency of variables in that equation alone. Because of the simultaneous interaction among the equations in the model, variables in an equation also influence variation in other equations within the system.

Therefore, in the interpretation of the result, attention is paid more to the signs and significance of individual coefficients. We sought recourse in the Nigerian economic environment for the interpretation of the result.

3.2.6 MEANINGS OF STATISTICAL TESTS USED

The empirical estimation results has been analyzed based on the following statistics: F-statistic and T-statistic.

The F-statistic enables us to test the overall significance of the estimated regression. The higher the value of the F-statistic, the greater the overall significance of the estimated regression. If the F-calculated is greater than the F-tabulated, the F-statistic shows that there is a high degree of association between the dependent variables and the independent variable.

The T-statistic on the other hand, enables us to examine the contribution of each independent variable to the dependent variables according to the absolute values of their T-statistic. If the t-calculated is greater than the t value in the tables (considering the degrees of freedom and the level of significance), then the variable is significant in the explanation of the dependent variable. Explanatory variables with low t-statistic values can be eliminated from the regression without substantially decreasing the value of the R^2 or increasing the standard error of the regression.

3.3 DATA SOURCES, PROBLEM AND USES

Time series data has been used in this study. They were obtained from the following secondary sources;

(a) Central Bank of Nigeria (CBN)

(i) Economic and Financial indicators;

(ii) Annual Reports, various years;

iii) Statistical Bulletin, 1994

(b) International Monetary Fund (IMF): International Financial Statistics

(c) United Nations Organization (UNO): Statistical Yearbook, various issues.

The different sets of data used for this work are:

Q Volume of Nigeria's non-oil exports, obtained from (aii) above.

PX Average world price of the selected non-oil export items calculated from figures in (b) above

P^D Domestic price (average) of the selected non-oil export items calculated from figures in (aii) above.

CPI The consumer price indicess of Nigeria and her major trading partners obtained from (c) above.

AGDP Total of the estimated output of the selected products obtained from (aiii) above

TGDP weighted average GDP of Nigeria's major trading partners also obtained from (c) above.

The currency conversion factors were obtained from (c) above.

In addition to the above, data on: the structure of Nigeria's exports (₦ M) 1970-93 and the contributions of Nigeria's major non-oil export product ('000 tonnes) were obtained from (aii) above.

Some of these data have been shown in the tables while the others are in the Appendix. Because of the simultaneous existence of both official and parallel exchange markets at different times within the study period, conversions were made using the official rates where necessary.

Similarly, all the currencies have been converted to dollars to overcome the effect of the Naira depreciation which could give false trend. This is moreso that Nigeria is interested mainly in the foreign exchange values of its non-oil exports. This is what will determine its import purchasing power.

Lyakurwa (1991) has identified the dearth of data, variations in transport costs, re-exports, time lags, diversion on route, over-invoicing of imports and under - invoicing of exports to be among problems affecting the quality of trade statistics in sub-Saharan Africa. This study suffered from the non-availability of the data on the volume of world non-oil exports. Even the data that are available are suspect including those of the international organisatgions.

Divergences and inconsistencies occur in the data series. Also, there are basic differences in the procedure for data-generation and reporting by the organizations. The effect of this is that the data could be unreliable estimates thus having effect on the validity of our findings.

CHAPTER FOUR

EMPIRICAL ANALYSIS

4.1 THE REGRESSION RESULT

Two models of log-linear and distributed lag forms are analyzed here. The first is a contemporaneous equilibrium model in which both demand and supply are at spontaneous equilibrium. The second model makes allowance for non-oil export lag of three years. The results of the one year and two years lag are not significantly different from that of the three years lag, so we left them out of the analysis.

Model 1

The result of the estimated equations are presented as follows. The t-values are in parenthesis.

(1) $\log QD = 47.52 + 25.23 \log P^{*} - 23.43 \log Y$

(0.22) (0.18) (0.18)

F-statistic, 0.02

(2) $\log QS = 2.35 + 1.19 \log P^{*} - 0.63 \log D^{*}$

(1.08) (2.30) (4.32)

F-statistic, 9.85

The demand side captured by the relationship in equation (1) give results of co-efficients that are all against the economic a priori expectation. The coefficient of the relative price is positive. This suggest a positive relationship between the demand for Nigeria's non-oil export and the variables. Also, the negative sign of the income of the trading partners indicate that as their income increases overtime, they demand for less of Nigeria's non-oil products.

In addition, none of the estimated parameters are significantly different from zero at the usual five percent level of significance. The calculated t-values are less than the table value, 2.08. The F-statistic, 0.02 is also less than the table value, 2.08. The F-statistic, 0.02 is also less than the table value 3.47. This shows that the variables are unimportant determinants of the demand for Nigerian non-oil exports as there exists a low degree of association between the explanatory variables and non-oil exports demand.

The non-oil export supply relationship in equation (2) have the expected signs and as such make economic sense. Also, the estimated parameters of the explanatory variables are statistically significant. The calculated t-values are greater than the tables value, 20.8. This suggest that they are important determinants of Nigeria's non-oil export supply. The F-test show that there exist a high degree of association between the dependent and explanatory variables. The reported F-statistic, 9.85 is greater than the table value. 3.47.

We have not reported the coefficient of determination, R^2. This is because its efficiency in a simultaneous equation framework is not defined; it is not bounded (0,1) but (-infinity, 1). Hence, small values are not an indication of "poor fit" and high R^2 can not be relied upon (as mentioned in the last chapter) because of the interaction effects between the dependent and independent variables and between the equations in the system. See also, Goldstein and Khan (1978, p. 278). Similarly, we left out Durbin Watson statistic because of the difficulty involved in its interpretation in simultaneous equation model. See also Prasad (1992, p 327)

The results of model 11 is:

(3) $\log QD = 27.56 - 9.16 \log P^*_{-3} + 3.11 \log Y$

(0.77) (0.68) (0.60)

F-statistic, 0.23

(4) log QS = -36.74 + 10.23 log P^{*}_{-3} - 1.75 log D^{*}

(0.38) (0.46) (0.56)

F-statistic, 0.20

The t-values are also in parenthesis.

The demand and supply relationships in equations (3) and (4) respectively are valid on the basis of economic theory; all the explanatory variables have the expected signs. But none of the estimated coefficients is significantly different from zero at even 10 percent level. Their t-values are less than the table values, 1.743. The meaning of this is that the three years lagged relative price, income of Nigeria's trading partners and domestic demand are not important determinants of the demand and supply of Nigeria's non-oil exports. The estimated relationships have low degree of association with their explanatory variables. The calculated F-values for demand (0.23) and supply (0.20) functions are less than the table value, 3.55.

4.2 IMPLICATIONS OF THE RESULT

The coefficients of the explanatory variables in equation (1) - (4) are the elasticities with respect to their dependent variables. Such elasticities are the price and income elasticisite of demand, the price elasticity of supply and the net absorption elasticity of supply.

The coefficient of the price elasticity of demand in the two models are relatively elastic; (25.23 in model 1 and 9.16 in model 11) but they are insignificant. The magnitude of the elasticity coefficients indicate the at the demand for Nigeria's non-oil exports is very responsive to changes in price. This does not fit into the prebisch-Singer hypothesis of low price elasticity of demand for primary products.

The implication of this result for export price management could have been that Nigeria can get higher earnings by lowering the price of its non-oil products. But price is not an important

determinant. This our result support the assumption in the literature that world demand for the exports of developing countries are determined by non-market forces, hence insensitive to price changes. See Chenery and Strout (1966) and Miazels (1968). Nigeria is a price taker in the primary commodity markets, and she supplies an insignificant proportion of world non-oil exports. Hence, Nigeria can not influences, the world price.

Eventhough we do not regard the demand-price relationship in Model 1 as a credible result, yet it could be because prices of the exports of other competing countries do not really exist in primary product exports. However, our work is mainly concerned with the theoretical estimation of the coefficients.

In model 1, the income elasticity of demand coefficient (-23.4), suggest that Nigeria's non-oil products are inferior whereas that of model 11 (3.1) indicate that they are not necessities. Also, model 1 result suggest a positive high degree of response of foreign demand for the non-oil exports to variations in the economic progress of the trading partners. This negates the belief of trade pessimists like Ragnar Nurske that trade for the periphery countries like Nigeria is not an engine of growth because of low income elasticity of demand for primary produce.

Model 11's estimate implies that as the economy of the trading partners expand, they tend to demand for more of Nigeria's non-oil exports whereas model 1 suggest the opposite. A negative income elasticity could be because of

(a) Increasing substitutions of synthetics;

(b) technological progress that has made possible economies in the use of raw materials;

(c) the fact that increases in the level of income of the major trading partners, all developed countries means an expansion of the tertiary sector which absorbs little or no raw materials; and

(d) more patronage of Nigeria's competitors.

The price elasticity of supply shows the capability of the economy to cater for the export are relatively elastic; 1.2 and 10.33 for 1 and 11 respectively. This implies that Nigerian exporters are quite responsive to price changes and that the Marshall-Lerner condition for successful devaluation would be easily satisfied. Also it supports the position of the export pessimists that the problem of export growth is not domestic. While Model 1 indicate that relative price is a significant determinant of export supply, Model 11 indicate otherwise.

The net absorption elasticity has the expected sign in the two models. This implies that domestic demand for non-oil products in Nigeria inhibits the availability of the products for exports. Model 1 suggests that it is a significant determinant of non-oil export supply for Nigeria whereas mode 11 suggest otherwise. Model 1's result dispels export pessimism and supports the structualists' view that hinderance to rapid export growth of developing countries is due mainly to domestic factors. The presence of the pull of domestic demand in the models can be attributed to the emergence of firms making use of the non-oil products in their operations. It makes the responsiveness of non-oil export to price stimuli less important.

The intercept of the supply relationships in the two models also have economic implication; like in the model 11 the estimated intercept in model 1 is not significantly different from zero. This means that their regression lines pass through the origin. The economic interpretation of this is that at very low prices Nigeria will still be willing to supply non-oil products to the world market. This may be because of the country's dire need of foreign exchange; or the fact that the domestic market can't fully absorb the output.

It is clear from our result which of the models is superior. On a priori theoretical grounds, model 11 has advantage as it allows time lag to occur and its estimated parameters have the

expected signs. On the other hand, the supply elasticity of model 1 seems more credible; the one in model 11 appear dubious.

In addition, all the variables in the supply relationship for model 1 are important determinants while none in model 11 is significant. If the intercept of the demand relationship in model 1 had been significantly different from zero, and in fact greater than zero, we could have assumed that the demand for Nigeria's non-oil exports is perfectly elastic. This could have captured the primary market situation though the model does not allow for adjustment lag. The positive slope of both the demand and supply function means that the equilibrium condition is not satisfied. Hence, we believe that the result obtained with model 11 is better; it staistified the equilibrium condition imposed.

Therefore, it means that other factors apart from relative price lag income of Nigeria's trading partners and domestic demand significantly determine the demand and supply of Nigeria's non-oil exports.

In the case of the supply relationship, conditions that affect production such as the production cost, activities of the abolished commodity marketing boards, changes in weather, and government policies etc can be advanced. Also, we can invoke the alternative theories of trade such as availability and vent-for-surplus theories combined with the foregn exchange requirement to explain it.

On the vent-for-surplus thesis, Nigeria exports non-oil products that are not demanded in large quantities at home. Hence, (as mentioned earlier) no matter the market conditions, we must sell the products. This is aggravated because of the perishable nature of the products and the foreign exchange constraint that the country has to tackle; Nigeria traditionally exports primary

products. More may have to be supplied at low prices to meet the foreign exchange needs of the country.

The foreign demand for Nigeria's non-oil exports may be explained by factors that influence industrial production activities in the importing countries. This include the levels of technology, interest rate and the existing non-tariff barriers low interest rate for instance, could lead to business expansion and increased demand for foreign inputs ceteris paribus.

Similarly, it may be explained by the peculiar nature of Nigeria business and businessmen and the products in question. This could include dealy in product delivery, poor communication facilities, fraudulent practices, poor quality of products etc.

Therefore, relative price, income of Nigeria's trading partners, and domestic demand are not important determinants of Nigeria's of Nigeria's non-oil export demand and supply. This is because of the nature of the products, marketing arrangement of the products domestically and internationally; the stage of development and the structure of the Nigerian economy, and that of the trading partners.

CHAPTER FIVE

SUMMARY, RECOMMENDATION AND CONCLUSION

5.1 SUMMARY OF THE STUDY'S FINDINGS

In the background to this study, we found out that:

(a) the share of non-oil in total exports has been declining since 1960 due to the fluctuations in the prices and the development of the oil sector.

(b) the major non-oil items for Nigeria in the study period are cocoa, rubber and palm kernel.

(c) items like palm oil, cotton, ground nut, hides and skin, coffee, timber etc have disappeared from the export list.

(d) non-traditional items like fish and shrimps, soap and detergents, chemicals, cashew nut, urea/Ammonia etc are now on the export list.

(e) manufactures has not made any significant impact rather its contribution has been declining. Same for the mining sector.

(f) as far as 1962, the Nigerian government has been concerned, and had been making effort to diversify exports and export markets.

(g) government introduced various first-best and second best export promotional measures. The former to remove anti-export biases existing in the economy while the latter was to give incentives to promote exports.

(h) the non-oil sector has not responded significantly to the policy measures

(i) Nigeria trade more with Western Europe and America and less with Africa.

In the main work, we found out that:

(1) there exists an inverse relationship between foreign demand for Nigeria's non-oil exports and the relative price (lag 3); But the latter is not an important determinant.

(11) there exists a positive relationship between foreign demand for Nigeria's non-oil exports and the income of Nigeria's trading partners, but the latter is not a significant factor

111) the supply of Nigeria's non-oil exports responds positively to relative price changes

IV) domestic demand constrain non-oil export supply in Nigeria

(V) all the explanatory variables are not significant determinants of Nigeria's non-oil export demand and supply.

5.2 POLICY IMPLICATIONS AND RECOMMENDATIONS

Among many others, the implications of the findings of our study is that:

(i) current efforts of government to stimulate non-oil export development through devaluation can only achieve very minimal result. This is because of the reliance on prices in the transmission mechanism. The real constraints to non-oil export demand and supply are non-price in nature.

(ii) government policies banning the export of non-oil products to satisfy domestic demand are ill-advised; domestic demand does not significantly constrain export supply.

iii) government emphasis on non-traditional exports such as manufactures is a step in the right direction. This will remove the bias against primary exports and strengthen Nigeria's industrialization prospects.

Due to these and other policy implications of our study's findings, we are making these recommendations in order to boosts the effort at promoting Nigeria's non-oil exports, and thus diversifying the productive base of the Nigerian economy.

Firstly, since the demand facing Nigeria's non-oil exports is relatively responsive to price changes and the income performance of the trading partners, Nigeria should make deliberate efforts to create economic environment that is conducive to domestic industrialization. This will enhance the processing of the primary products thus increasing their price elasticity coefficient and significance. Also, with more firms established locally, the economy will depend less on the foreign buyers of the primary products.

Secondly, there should be more aggressive marketing campaigns to get new markets. This should be directed toward particular non-oil products (or countries). This will reduce the current dependence on European and American markets.

Also, we recommend that under the circumstance government should stop the devaluation of the Naira. Steps should also be taken to ameliorate the negative impact of the policy on domestic products.

We also recommend an output expansion strategy as an important element of foreign trade policy. This will help meet domestic demand and increase the level of employment. We recommend policy measures that relate to production needs and problem of producers e.g supply of credit, raw materials and inputs and the high cost of production that erodes their profitability.

In addition, producers for exports should be encouraged to produce products of better grades and quality. This will increase their competitiveness in the markets.

Finally, the Nigerian government should take decisive steps to arrest fraudulent practices to improve the image of Nigerian businessmen. This will include foreigners to trade with them.

5.3 CONCLUSION

This work has attempted an analysis of the behavior of Nigeria's aggregate non-oil exports. Our models have adhered strictly to the conceptual basis of the pure theory of international trade,

it consists of only real explanatory variables. This however, limits the operational utility of the coefficients estimated as the magnitudes can seldom, if at all, be treated as policy variables. Nevertheless, it can give direction on what to do. The models were designed for simultaneous estimation to reduce the bias resulting from the two-way relation between quantities and relative prices.

The basic conclusion of the study is that relative prices, income of trading partners and domestic demand do not play important role in the determination of Nigeria's non-oil exports.

5.4 LIMITATIONS OF THE ANALYSIS

Although the regression analysis has produced some interesting results, they need to be treated with caution. The results were the best obtainable with the data available.

5.5 SUGGESTIONS FOR FURTHER STUDIES

We suggest that more studies be carried out on the factors that influence the demand and (most importantly) supply of the Nigeria's non-oil exports. This is to be able to isolate the very important ones.

Also, we suggest that the studies investigate the effects of abolishing the commodity marketing boards under the Structural Adjustment Programme. The studies could also introduce nominal variables that will correlate highly with the explanatory variables. This will enhance the usefulness of such results for policy action.

REFERENCES

Ahmed, J. (1976) "Domestic Demand and Ability to Export in Developing countries: Some Preliminary Results". World Development, vol. iv No. 8

Ajilima, I and Agba, V.I. (1986) "The Second-Tier Foreign Exchange Market as a catalyst for Non-oil Exports" Nigerian Journal of Economic and Social Studies, vol. 28 No. 1.

Balassa, B (1978) "Export and Economic Growth: Further Evidence" Journal of Development Economics, vol. 5 No. 2.

Ball, R.J., Eaton, J.R and Stewer, M.D. (1966) "The Relationship between United Kingdom Export performance in manufactures and the Internal Pressure of Demand," "Economic Journal, No 76. Sept.

Bergstrom, A.R. (1955) "An Econometric Study of Supply and Demand: New Zealand's Exports" Econometrica, vol. 23 No. 3.

Caves, R. (1970) "Export - Led Growth: The Post-war Industrial setting"; in Introduction to Trade and Growth, (ed). by Eltis, W.: Scott, M and Wolfe, J.N. (Oxford University Press, London).

Central Bank of Nigeria (CBN)
- Annual Reports, various issues
- Economic and Financial Indicators
- Statistical Bulletin, 1994

Da Costa, G.C. (1965) "Elasticities of Demand for Indian Exports: An Empirical Investigation" Indian Economic Journal, vol. 13.

Ekpo, A.H. and Egwaikhidie F.O. (1994) "Export and Economic Growth in Nigeria: A Reconsideration of the Evidence" Journal of Economic Management vol. 1. No.1

Emery, R.F. (1967) "The Relation of Export and Economic Growth" KYKLOS. vol. XX No. 2,

Essien, Effiong (1980)" Nigeria Under Structural Adjustment" (Ibadan: Fountain Publications).

Fajana, O. (1989) "Trade and Growth: The Nigerian Experience" World Development. vol. 18 No. 2 (1986) "Government Policies and Appropriate Strategies for increasing Non-oil Exports in Nigeria" In" production in the Nigerian Economy: The Performance of Non-oil Exports: proceedings of the one-day seminar organized by the Nigerian Economic society.

Feder, G. (1986) "On Exports and Economic Growth" Journal of Development Economics, vl. 2 No 12

Federal Government of Nigeria, FGN (1962) Mobilisation Budget Speech by Okotie -Eboh Festus, Federal Minister of Finance in: "The six budget speech made by the Hon. Minister of Finance, Chief Festus Sam Okotie-Eboh during the period 1958-1963". Federal Ministry of Finance, Lagos.

Ghosh, J. (1992) " Can World Markets continue to Absorb Export - Led Strategies of of Development countries ? The Export Pessimist Case". In: The Dangers of Export Pessimism: Developing countries anmd Industrial Markets (ed) by Helen Hughes, International Centre for Economics Growth (ICS Press, San Francisco, California) ch. 6.

Goldstein, M. and Khan, M.S. (1978) "The supply and Demand for exports: A simultaneous approach" Review of Economics and Statistics vol. 60 No. 2

Halphern, L and Szekely, I.P. (1992) "Export Supply and Import Demand in Hungary (An Econometric Analysis for 1968-89)" Discussion paper on no 620 Centre for Economic Policy Research, London.

Harberger, A.C. (1957) "Some Evidence on International Price Mechanism" Journal of Political Economy vol LXV.

Houthakker, H.S and Magee, S.P. (1969) "Income and Price Elasticities in World Trade", Review of Economics Statistics, vol 51 No. 2.

Ifzal, A. (1987) "India's Manufactured Exports: An Analysis of Supply Factors" The Developing Economies, vol. 25 No. 2.

Iniodu, P.U. (1995) "Diversifying Nigeria's Non-oil Export Base for Sustainable Development" Annual Conference Proceedings, Nigerian Economic Society.

International Monetary Fund (various years). International Financial Statistics. Washington D.C.

Jerome, A and Adenikinju, F.A. (1995) "Trade Policies and the Promotion of Manufactured Exports in Nigeria" Annual Conference Proceedings, Nigerian Economic Society.

Jung, W.S and Lee, G. (1986) "The Effectiveness of Export Promotion Policies: The case of Korea" Weltwictchaftiches Archiv vol. 22

Khan, M.S. (1974) "Import and Export Demand in Developing Countries" IMF Staff Papers vol. XXI No. 3

Koutsouyiannis, A. (1981) "A Theory of Econometrics" (The Macmillian Press Ltd: London and Basingstoke).

Kwanashie, M et al (1993) "Exchange Rate and Trade liberalization and Non-oil Exports in Nigeria: An Empirical investigation"; SSCN/NISER Report.

Lyakurwa, W.M. (1991) "Trade Policy and Promotion in Sub-Saharan Africa"; African Economic Research Consortium Special Paper No. 12 AERC: Nairobi

McKinnon, R.I. (1964) Foreign Exchange Constraints in Economic Development and Efficient Aid Allocation" The Economic Journal, vol. 74, June.

Obadan, M.I. (1986) "Diversification of the Nigerian Economy" Heineman Education Publishers

--- (1989) "Constraints and problems of Non-oil sector in Nigeria"; Journal of Business Studies vol. 1 No 1

--- (1993a) "An Econometric Analysis of the Impact of SAP on Nigeria's Natural Rubber Export Supply" NCEMA Monograph Series No. 4

--- (1993b) "Export Promotion as a Development Strategy" NCEMA/FRIEDREICH EBERT Foundation National Seminar on Export Promotion in Nigeria, April 28th.

Odusola, F.A. and Akinlo, E.A (1995) "Trade, Growth and Causality in Nigeria". Annual Conference Proceedings, Nigerian Economic society, June.

Okigbo, P. (1983) "Planning the Nigerian Economy for less Dependence on oil" (Ibadan, NISER).

Olayide, S.O. (1968) "Some Estimates of Supply and Demand Elasticity in Nigeria's Foreign Trade " Journal of Business and Social Studies vol. 1 No. 1

Olayide, S.O and Olatund bosun, D (1970) "An Econometric Analysis of Nigeria's Export Demand" Indian Journal of Agricultural Economics vol XXV No. 1

Olayide, S.O., Olatunbosun, D and Essang, S.M. (1982) "Nigeria's Foreign Trade and Economic Growth, 1948-1968", (Ibadan, NISEER).

Oyejide, T.A. (1986) "Sector Proportion and Growth in the Development of the Nigerian Economy", paper presented at the International Economics Association Annual Conference, New Delhi, India, December.

Oyjide, T.A. and Obadan, M.I. (1993) "Applied Economics and Economic Policy", (Ibadan, Ibadan University Press).

Panoutsopoulos, V. (1992) "The Growth of Exports from Developing countries: Export Pessimism and Reality" In: The Dangers of Export Pessimism Developing Countries and Industrial Markets op cit.

Prasad, A. (1992) "A Re-specification of Export Demand and Supply Functions for India" In: The Dangers of Exports Pessimism - Developing Countries and Industrial Markets. op cit.

Sekiguchi, S. (1990) "Foreign Trade in Chinese Economy: Prices and Price Responsiveness", The Developing Economies, vol. XXVII No. 4.

Tarafas, I and Szabo, J. (1985) "Hungary's Exchange Rate Policy in the 1980"s, Acta Oeconomica vol. 35.

Telgeiro, J.D. and Elsor, R.A. (1973) "The Export Promotion System and the Growth of Minor Exports in Columbia" IMF Staff Papers, vol. XX No. 2, July.

Tadaro, M.P. (1990) " Economic Development in the Third World" Fourth Edition (Longman, New York and London).

Umo, Joe (1981) "Import Demand and Export Supply Elasticity for African countries: A comparative Analysis", The Journal of Business and Social Studies New Series vol. 5 No. 1.

United Nations Organization, (various years) "Statistical Yearbook" (New York)

World Bank (1993a) "Nigeria, SAP: Policies, Implementation and Impact: West Africa Department, Country Operations Division Report No 12366 - UNI.

_____ (1993b) Commodity Trade and Price Trends: 1989-91 Edition.

Wilson J.A. (1984) "Egypt's Export Diversification: Benefits and constraints",The Developing Economies, vol. 22. No. 1, March.

Zilberfarb, Ben-Zion (1980) " Domestic Demand Pressure, Relative Prices and the Export supply Equation - More Empirical Evidence," Economica, 47 November.

No.	Incentive Scheme	Objective	Operating Agency	Status of the Implementation
(a)	Refinancing and Rediscounting Facility (RRF)	To provide liquidity to banks in support of their export finance to exporters	CBN before 1/1/91 now NEXIM	Took off in 1987 RRF advances to banks in 1987 = N53.6 " " " 1988 = N552.5m " " " 1989 = N713.5m " " " 1990 = N1,371.2m
(b)	Foreign Input Facility (FIF)	To assist exporters to import foreign raw materials and capital required to produce export items.	CBN before 1/1/91 Now NEXIM	Took off on May 30 1989 with signing of ADB/ESL Agreement 1st Tranche $76.8 m disbursed on 20/10/89 2nd Tranche $79.4m disbursed on 26/7/90 3rd Tranche $85.4m disbursed on 25/2/91
	Currency Retention Scheme	To enable exporters retain their export proceeds in banks of their choice.	CBN and the banks.	Took off in 1986
	Tax Relief on Interests earned by banks on export credit	To encourage banks to finance exports by reducing their taxable income	Banks and the Federal Board of Inland Revenue	Became effective in September, 1986
	Export Credit Guarantee and Insurance Scheme	To bear the risks in export business and thereby encourage exports.	CBN before 1/1/91 now NEXIM	Export Credit Guarantee and Insurance Corporation (NEXIM) established by Decree 15 of 1988. Board of Directors inaugurated No. 1990 NEXIM took off 1/1/1991.
	Duty Draw Back Scheme	To re-imburse customs duty paid by exporters on imported inputs used for export production and thereby reduce their costs.	Custom Dept. Standard Orgn. of Nigeria NEPC Banks CBN NEXIM	Started since 1988 Refunds approved/paid in 1988 = NO. 645m " " 1989 = N1.421m " " 1990 = N2.799m " up to Feb. 1991 = N1.931m
	Export Expansion Grant	To encourage companies to engage in export business rather than domestic business.	NEPC	This involves annual awards for outstanding export performers.
	Export Price Adjustment Scheme	To compensate exporters of products whose foreign prices are relatively unattractive.	NEPC	Machinery for implementation is yet to be completed.
	Subsidy Scheme for use of local raw materials in export production.	To encourage exporters to use local raw materials in export production.	NEPC	Machinery for implementation is yet to be completed.
9.	Export Development Fund	To assist exporters in partly paying the costs of participation in trade fairs and foreign market research.	NEPC	This is an old scheme which is continuing its assistance to exporters in assigned areas.
10.	Abolition of export licencing.	To remove administrative obstacles from the export sector as much as possible.	Fed. Min. of Trade	Has been administratively affected. Appropriate law is yet to yet to be amended to give legal effect to the policy.
11.	Supplementary Allowance in favour of pioneer companies.	To extend supplementary incentives to pioneer companies that export their products.	NEPC FBIR and Exporters	The pioneer scheme is under review and therefore this supplementary relief will be activated after the review.
12.	Accelerated depreciation and capital allowance.	To extend supplementary incentives to industrial organizations in the export sector which are enjoying accelerated depreciation and capital allowances.	FBIR and Exporters	Took effect in 1986.

Abbreviations: CBN = Central Bank of Nigeria; NEPC = Nigerian Export Promotion Council;

FBIR = Federal Board of Inland Revenue; NEXIM = Nigerian Export-Import Bank.

```
. regress Qty RelPrice DomDd2 (Income DomDd2)
(obs=24)
                                                                    (2SLS)
  Source |       SS       df       MS                  Number of obs =      24
---------+------------------------------               F(  2,    21) =   10.01
   Model |  129073.416     2  64536.7079               Prob > F      =  0.0009
Residual |  175496.713    21  8356.98631               R-square      =  0.4238
---------+------------------------------               Adj R-square  =  0.3689
   Total |  304570.128    23  13242.1795               Root MSE      =  91.417

Variable | Coefficient   Std. Error       t     Prob > |t|         Mean
---------+---------------------------------------------------------------
     Qty |                                                      343.4875
---------+---------------------------------------------------------------
RelPrice |    1.905143     .9189671     2.073     0.051        135.1667
  DomDd2 |   -4.839644     1.14909     -4.212     0.000          51.125
   _cons |    333.4025     92.16278     3.618     0.002               1
---------+---------------------------------------------------------------

. regress Qty RelPrice Income (Income DomDd2)
(obs=24)
                                                                    (2SLS)
  Source |       SS       df       MS                  Number of obs =      24
---------+------------------------------               F(  2,    21) =    0.01
   Model |   201947873     2  -100973936               Prob > F      =  0.9914
Residual |   202252443    21  9631068.70               R-square      =       .
---------+------------------------------               Adj R-square  =       .
   Total |  304570.128    23  13242.1795               Root MSE      =  3103.4

Variable | Coefficient   Std. Error       t     Prob > |t|         Mean
---------+---------------------------------------------------------------
     Qty |                                                      343.4875
---------+---------------------------------------------------------------
RelPrice |    62.58482     512.4808     0.122     0.904        135.1667
  Income |   -9.509592     76.65052    -0.124     0.902        1116.792
   _cons |    2504.338     16650.44     0.150     0.882               1
---------+---------------------------------------------------------------

. regress lnQ lnP lnDd2 (lnY lnDd2)
(obs=24)
                                                                    (2SLS)
  Source |       SS       df       MS                  Number of obs =      24
---------+------------------------------               F(  2,    21) =    9.85
   Model |  1.07297509     2  .536487546               Prob > F      =  0.0010
Residual |  1.92045875    21  .091450417               R-square      =  0.3584
---------+------------------------------               Adj R-square  =  0.2973
   Total |  2.99343384    23  .130149297               Root MSE      =  .30241

Variable | Coefficient   Std. Error       t     Prob > |t|         Mean
---------+---------------------------------------------------------------
     lnQ |                                                      5.780265
---------+---------------------------------------------------------------
     lnP |    1.196327     .5195711     2.303     0.032        4.847916
   lnDd2 |   -.6265837     .1450974    -4.318     0.000        3.784922
```

```
. regress lnQ lnP lnY (lnY lnDd2)
(obs=24)

                                                              (2SLS)
      Source |       SS       df       MS              Number of obs =        24
-------------+------------------------------           F(  2,    21) =      0.02
       Model |  1057.3786       2  528.689299           Prob > F      =    0.9823
    Residual |  1060.37203      21  50.4939062           R-square      =         .
-------------+------------------------------           Adj R-square  =         .
       Total |  2.99343384      23  .130149297           Root MSE      =    7.1059

------------------------------------------------------------------------------
    Variable |      Coefficient   Std. Error      t    Prob > |t|        Mean
-------------+----------------------------------------------------------------
         lnQ |                                                       5.780265
-------------+----------------------------------------------------------------
         lnP |      25.23331      139.6368     0.181    0.858      4.847916
         lnY |      20.43187      127.5012     0.104    0.856      7.001775
       _cons |      47.51602      221.1583     0.215    0.832             1
------------------------------------------------------------------------------
```

```
. regress lnQ lnPlag3 lnY (lnY lnDd2)
(obs=21)

                                                              (2SLS)
      Source |       SS       df       MS              Number of obs =        21
-------------+------------------------------           F(  2,    18) =      0.23
       Model |  56.5574288      2  28.2787144           Prob > F      =    0.7967
    Residual |  58.9126542     18  3.27292523           R-square      =         .
-------------+------------------------------           Adj R-square  =         .
       Total |  2.3552254      20  .11776127           Root MSE      =    1.8091

------------------------------------------------------------------------------
    Variable |      Coefficient   Std. Error      t    Prob > |t|        Mean
-------------+----------------------------------------------------------------
         lnQ |                                                       5.720113
-------------+----------------------------------------------------------------
     lnPlag3 |     -9.160632      13.50294    -0.678    0.506      4.772012
         lnY |      3.10984       5.170884    0.601    0.555      7.034916
       _cons |      27.55729       35.8247    0.769    0.452             1
------------------------------------------------------------------------------
```

```
. regress lnQ lnPlag3 lnDd2 (lnY lnDd2)
(obs=21)

                                                              (2SLS)
      Source |       SS       df       MS              Number of obs =        21
-------------+------------------------------           F(  2,    18) =      0.20
       Model |  -64.6194092     2  -32.3097046           Prob > F      =    0.8185
    Residual |  66.9746346     18  3.72081303           R-square      =         .
-------------+------------------------------           Adj R-square  =         .
       Total |  2.3552254      20  .11776127           Root MSE      =    1.9289

------------------------------------------------------------------------------
    Variable |      Coefficient   Std. Error      t    Prob > |t|        Mean
-------------+----------------------------------------------------------------
         lnQ |                                                       5.720113
-------------+----------------------------------------------------------------
     lnPlag3 |      10.33035      22.61843     0.457    0.653      4.772012
       lnDd2 |      1.745242      3.094093    -0.564    0.580      3.917721
       _cons |      36.73905      96.37894     0.381    0.708             1
------------------------------------------------------------------------------
```