# EFFECTS OF TRADE LIBERALISATION POLICY ON NIGERIAN AGRICULTURAL EXPORTS

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## ABSTRACT

*This paper examines the effects of trade liberalization on Agricultural exports in Nigeria. It was observed that the policy had tremendous effects on the level and value of exports in agricultural sub-sector. A regression analysis relating the total value of agricultural produce and the aggregated domestic prices, and other relevant parameters of four selected export commodities indicated that these four commodities (cocoa, palm kernel, palm oil and groundnut) accounted for between 65 and 87 percent of the variability in income from the foreign sector of Nigeria agricultural commodity trade between 1990 and 1998. High value of co-efficient of elasticity further confirmed that export trade in these four commodities would dominate the Nigerian agricultural export trade for years to come. To measure gross earnings from agricultural export trade, therefore, it becomes necessary for policy makers to formulate policies that will eventually enhance investment in cocoa, groundnut and palm produce as this will lead to increased output and values of these crops in this country if well implemented.*

**Key words: trade liberalization, policy, agricultural exports**

## INTRODUCTION

Economic theory states that the world is plagued with a relative scarcity of resources needed for the production of goods and services to satisfy

human wants. External trade, which arises from differences in comparative advantages leads to International Specialization and increased division of labour. External trade affects economic development in that it leads to an increase in income, in the level of investment and in the state of technical knowledge in the country. This leads to increased productivity and competitiveness, which further enhances trade and income level. For developing countries like Nigeria, a more open international trading system means greater opportunities to earn foreign exchange through exports, since the availability of foreign exchange is vital for the purchase of the imported capital goods and raw materials necessary for rapid growth.

The domination of the export trade of developing countries by primary products and the associated retardation of growth of these traditional exports have been attributed to three distinct factors:

a. The shift of the pattern of demand, to goods with a relatively low import content of primary commodities;
b. Technological change which has led to the development of synthetic substitutes for raw materials;
c. The pursuance of protectionist policies by the developed countries retarding the growth of import for primary commodities and industrial goods. Nigerian exports can be divided into two: non-oil exports – mainly agricultural products such as cocoa, cotton, groundnut, rubber and palm oil, and crude oil exports. Available statistics indicate that agricultural exports contributed over 75 percent of the total annual merchandise exports between 1950 and 1969 (Ekpo and Egwaikhide, 1994). Since 1970, the share of non-oil exports has been progressively declining. Between 1970 and 1982, the share of the agricultural sector in

national output, declined by 55 per cent and the real agricultural exports declined at an annual average rate of about 30 percent between the same period (Oyejide, 1985).

The concentration on crude oil exports created a serious Dutch Disease in Nigerian economy with hitherto dynamic agricultural export sub-sector suffering neglected. The share of non-oil exports fell from about 40 percent in 1970 to less than 5 percent in 1985. (Oyejide, 1985). This improved marginally to about 8 percent in 1991 because of the diversification drive and the removal of price and distributional controls on agricultural exports such as the Marketing Boards. These measures not only stimulated domestic production of traditional export commodities but also increased exports of manufactured and semi-manufactured goods to 40 percent of non-oil Nigerian exports (World Bank, 1994).

An important characteristic of Nigeria's external trade is the geographical concentration of the destination of exports and the origin of imports. A substantial proportion of the export trade is concentrated in a few countries – U.S.A., Britain, Canada, France, the Netherlands, Germany, Japan and Switzerland. For instance, in 1970, 73.8 percent of export went to Europe, the U.S.A. and Canada absorbed 13.9 percent, while Japan got only 0.8 percent.

By 1992, the concentration had shifted to the U.S.A. and Canada with 51.5 percent of Nigeria's exports, while only 37.6 percent went to Europe. Japan got a marginal fraction of 0.2 percent. Furthermore, Nigerian trade and price policies did not help to offset the deteriorating position of agricultural tradable. Agricultural trade protection was highly inconsistent and erratic, designed in response to erratic foreign

exchange availability, rather than a systematic policy of protection. Trade was controlled mostly through quantitative restrictions, via import licensing. This erratic "protection" in fact worsened farmers' insecurity, as domestic prices fluctuated widely. Level of agricultural tariff protection was lower (thus uncompetitive) than those for manufactures. The destabilizing effects of export concentration on Nigeria's export earnings may be unpalatable as the distress in the economy of the trade partners can easily disrupt the nation's economy.

Nigeria's trade policy structure has been very erratic. The major trade policy instruments have been exchange rate management, tariffs, quantitative restrictions and import licensing. In fact, exchange rate policy is very important in export promotion because its uncertainty can have a depressing effect on export (Caballero and Corbo, 1990). In effect, an export promoting country needs to maintain a stable and predictable exchange rate to promote exports. An exports promotion strategy is a trade strategy, which encourages production for exports and in which there is no bias of inventories towards production of import substitutes (Obadan, 1994). Since export is one of the main factors determining the amount of foreign exchange inflow, the Federal Government of Nigeria has tried to promote it. Furthermore, the government believes that the sustainable path to economic growth lies in export expansion. Also, export incentives/disincentives as well as domestic indirect taxes have also been applied, although on a limited scale and are relatively less important on the policy matrix.

Moreover, the collapse of crude-oil prices in the late 1970s led to a vigorous export drive especially for non-oil export, so as to reduce over-dependence on crude-oil earnings.

The export drive gained momentum in 1986, following the adoption of the Structural Adjustment Programme (SAP). An Export (Incentives and Miscellaneous Provision) Decree was enacted in 1986. It contained, among other measures, various incentives schemes which are being administered by the Nigerian Export Promotion Council (NEPC) and the Nigerian Export – Import Bank (NEXIM). The NEPC Decree No.41 of 1988 was strengthened by the Export (Incentives and Miscellaneous Provisions) Amendment Decree No. 65 of 1992, which provided a firmer foundation for better operation of the council.

Agricultural price policy programme has been a major instrument of government intervention of the operation of agricultural markets in this country. The principal aim of the policy is to ensure surplus in food, industrial raw-materials, labour for industry, tax revenues and export that earn foreign exchange. Agriculture is a major sub-sector in Nigeria hence government uses it to contribute to the main objective of increasing the income of peasant producers of agricultural produce.

The Marketing Boards up to 1970s in Nigeria generally handled the marketing of agricultural produce. These Boards were statutory bodies set up by Nigerian government to safeguard the interests of export trade. The principal aims of the marketing boards were to ensure stability of export producers' prices and income and the overall national economy. From the gains made by the marketing boards on the world markets through the sale of primary produce they were able to maintain stability of producers process by paying them guaranteed prices. The areas of production were also developed and research activities in the areas of primary produce were encouraged and financed. But due to some irregularities noticed in the operations of these Boards they were abolished and replaced with seven National Commodity Boards with

effect from April 1, 1977. These new Boards were the Cocoa Board, the Groundnut Board, the Cotton Board, the Palm Produce Board, the Rubber Board, the Grains Board and the Root Crops Board.

These Boards had the monopoly of both local and export sales of the produce they handled. They made profits and built up huge reserves, which were then used to finance the operations of the Commodity Board as well as government development projects. These commodity Boards, again, were abolished in 1986 following some allegations of inefficiency and mistrust in their operations. This, thus, gave way to a free enterprise economy whereby individual marketers were allowed to market their produce wherever they chose. That is, the price of agricultural produce in the country was left to be determined in the open market by the interaction of demand and supply variations throughout the year. This is trade liberalization. No doubt, the introduction of the trade liberalization policy has some effects on macro-economic variables such as the national average production level of these agricultural produce and their average export level.

The major objective of this paper is to study the effect of the Nigerian trade liberalisation policy on agricultural export crops: cotton, groundnut, palm kernels and palm oil. The specific objectives are to analyse the average producer prices of these crops, their percentage of world prices, the yearly percentage in produces prices, the production and export level of these crops before and during the trade liberalisation policy in Nigeria.

## METHODOLOGY

In this study, the researchers showed the price regime of four selected agricultural produce: cocoa, palm oil, palm kernels and groundnuts, over

the period of twenty five years 11948 – 1967 (pre-trade liberalisation policy era (Table1). The actual producer prices received during the period was also indicated (Table2). The world prices of these produce for trade liberalisation policy era (1990-1998) was also indicated. The effects of trade liberalisation policy on Nigerian agricultural exports was captured by assessing the contribution of the four (4) agricultural exports (mentioned above) to all export earnings from the agricultural produce commodities.

This was done by regressing the value of all export earnings from agricultural produce on the aggregated domestic prices and other relevant parameters of the four export commodities. The relationship was fixed into five (5) different functions: linear, polynomial, semi-log and double-log. The model used for the analysis is

$Y = F(xi, e_t)$ ..... (1)

Written explicitly we have:

$Y = \beta o + \beta_1 x_1 + \beta_2 x_2 + \ldots\ldots + \beta_5 x_5 + e_t$ ..... (2)

Where,

$Y$ = aggregated value of the 4 agricultural export produce: Cocoa, palm oil, groundnut and palm kernels (1990-1998)

$X_1$ = aggregated domestic price of the 4 agricultural export produce: Cocoa, palm oil, groundnut and palm kernels (1990-1998)

$X_2$ = Interest rate on Agricultural loan advances (₦)

$X_3$ = Exchange rate (₦)

$X_4$ = FOB Export price (aggregate) of the 4 agricultural produce over years per tonne

$X_5$ = Average daily wage rate of farm labour (₦)

$\beta o$ = Intercept of the equation

$\beta_1$ .....$\beta_5$ = gradients of the equation on the respective independent variables

**RESULTS AND DISCUSSION**

The result of the data analysis showed that producer prices were substantially below the world market prices for most of the period. In order to see the marked changes from year to year Table 3 was constructed to show the percentage change in price from one year to another. This Table clearly showed that the Marketing Boards, as it were, adopted no consistent pricing policy during the twenty-year period. Apart from the fact that the producers received very low percentages of world prices, these low percentages fluctuated with the fluctuations in the world commodity market. Rather than stabilize producer prices, the Marketing Boards destabilized the prices paid to commodity producers during the twenty-year period. Producers, would therefore, have been better of if they had faced the world market prices as rubber producers eventually did.

The all-commodities world price index, computed in Naira terms showed that the aggregate index also rose by 22.3 percent to 1,525 (1985=100) in 1994. The Naira prices of the studied commodities similarly recorded increases ranging from 28.6 percent for Cocoa to39.2 percent for palm oil (Table 4). Producer prices of Nigeria's major agricultural commodities also continued the upward trend observed in 1997. All the four commodities monitored recorded increases over their respective price levels in 1997. For instance, the average producer price of cocoa rose by 42.8 percent and that of palm oil and palm kernel rose by 78.7 and 39.6 percent respectively (Table 5). The improved

demand for Nigeria's agricultural produce in the world commodity markets translated into higher producer prices in the domestic market.

The result of regression analysis showed that cocoa, groundnut, palm kernels and palm oil accounted for between 65 and 87 percent of the average change in the total value of agricultural produce between 1990 and 1998. In other words, the four commodities – accounted for about 65 to 87 percent of the variability in income from the foreign sector of the Nigeria agricultural commodity trade between 1990-1998. A t-test showed that the linear, double-log, exponential, and semi-log functions regression coefficients are statistically significant at the 0.1 percent level. The elasticity co-efficient of these functions are 1.589, 1.591, 1.781 and 1.386 respectively. The elasticity coefficient is interpreted to mean that an increase of 1 percent in the total value of agricultural produce was associated with about 1.60 percent increase in the aggregate domestic price of cocoa, groundnut, palm kernel and palm oil. Other relevant parameters such as interest rate, exchange rate, export price (FOB) and average daily wage rate were seen to possess less effects on the total value of the Nigerian export produce.

This highly elastic situation is a quantitative manifestation of the observation that the export of trade in cocoa, groundnut, palm kernels and palm oil will continue to dominate the agricultural export in Nigeria within the next few decades.

## CONCLUSION

With the trade liberalization policy the erstwhile Marketing and Commodity Boards were brushed off the mid-stream of the marketing of agricultural export commodities in this country. This policy had tremendous effects on the level and value of exports in agricultural sub-

sector. The primary producers of these export crops also had their income levels relatively improved. A regression analysis relating the total value of agricultural produce and the aggregated domestic prices, and other relevant parameters of four selected export commodities indicated that these four commodities (cocoa, palm kernel, palm oil and groundnut) accounted for between 65 and 87 percent of the variability in income from the foreign sector of Nigeria agricultural commodity trade between 1990 and 1998. This finding further confirms earlier position maintained by Olatubosun and Olayide (1998) that Cocoa, palm oil, palm kernel and groundnuts accounted for a chunk of the variability in income from the foreign sector of the Nigerian economy. High value of co-efficient of elasticity further confirmed that export trade in these four commodities would dominate the Nigerian agricultural export trade for years to come. To measure gross earnings from agricultural export trade, therefore, it becomes necessary for policy makers to formulate policies that will eventually enhance investment in cocoa, groundnut and palm produce as this will lead to increased output and values of these crops in this country if well implemented.

**Table 1. Nigeria: Producer Prices as Percentage of World Prices**

| Year | Cocoa | Palm Oil | Palm Kernels | Groundnut |
|---|---|---|---|---|
| 1948 | 32 | - | | - |
| 49 | 98.4 | 55.8 | 100.0 | 39.6 |
| 50 | 50.0 | 59.7 | 38.2 | 32.3 |
| 51 | 46.9 | 59.1 | 40.0 | 22.8 |
| 52 | 68.5 | 72.6 | 65.5 | 45.7 |
| Mean 48-52 | 49.2 | 61.8 | 60.9 | 35.1 |
| | | | | |
| 53 | 70.8 | 93.5 | 53.1 | 43.3 |
| 54 | 43.3 | 71.4 | 64.1 | 45.5 |
| 55 | 67.5 | 52.4 | 59.6 | 50.0 |
| 56 | 96.2 | 46.2 | 58.4 | 46.1 |
| 57 | 72.1 | 46.7 | 60.7 | 54.0 |
| Mean 53-57 | 70.0 | 62.0 | 59.2 | 47.8 |
| | | | | |
| 58 | 48.0 | 51.8 | 53.5 | 50.7 |
| 59 | 55.1 | 55.8 | 42.8 | 41.0 |
| 60 | 76.9 | 53.1 | 49.1 | 63.3 |
| 61 | 95.2 | 53.8 | 64.6 | 79.7 |
| 62 | 59.5 | 46.1 | 56.5 | 76.8 |
| | | | | |
| Mean 58-62 | 65.9 | 52.1 | 53.3 | 62.3 |
| 63 | 62.5 | 46.7 | 50.0 | 72.7 |
| 64 | 62.5 | 45.0 | 52.8 | 67.7 |
| 65 | 100. | 39.6 | 44.8 | 63.6 |
| 66 | 47.7 | 46.8 | 49.1 | 68.3 |
| 67 | 48.9 | 43.9 | 54.1 | 67.8 |
| | | | | |
| Mean 63-67 | 64.3 | 44.4 | 50.2 | 67.8 |

Source: Compiled from i) Government of Nigeria; ii) Gill and Duffus Limited

Table 2. Prices paid to Commodity Producers in Nigeria (N/Ton)

| Year | Cocoa | Palm Oil | Palm Kernels | Groundnut |
|---|---|---|---|---|
| 1948 | 77.00 | 32.00 | 21.00 | 16.00 |
| 49 | 120.00 | 43.00 | 26.00 | 19.00 |
| 50 | 100.00 | 43.00 | 26.00 | 21.00 |
| 51 | 120.00 | 61.00 | 32.00 | 21.00 |
| 52 | 170.00 | 61.00 | 36.00 | 36.00 |
| Mean 48-52 | 117.40 | 46.80 | 28.20 | 22.60 |
| 53 | 170.00 | 58.00 | 34.00 | 36.00 |
| 54 | 170.00 | 50.00 | 34.00 | 36.00 |
| 55 | 200.00 | 43.00 | 31.00 | 37.00 |
| 56 | 200.00 | 43.00 | 31.00 | 36.00 |
| 57 | 150.00 | 43.00 | 31.00 | 33.00 |
| Mean 53-57 | 178.00 | 47.40 | 32.20 | 37.60 |
| 58 | 150.00 | 43.00 | 30.00 | 33.00 |
| 59 | 150.00 | 43.00 | 30.00 | 30.00 |
| 60 | 160.00 | 43.00 | 30.00 | 45.00 |
| 61 | 112.00 | 43.00 | 31.00 | 47.00 |
| 62 | 100.00 | 35.00 | 26.00 | 43.00 |
| Mean 58-62 | 134.00 | 41.40 | 29.40 | 39.60 |
| 63 | 105.00 | 35.00 | 26.00 | 40.00 |
| 64 | 110.00 | 36.00 | 28.00 | 40.00 |
| 65 | 120.00 | 36.00 | 28.00 | 42.00 |
| 66 | 65.00 | 36.00 | 28.00 | 43.00 |
| 67 | 90.00 | 36.00 | 28.00 | 42.00 |
| Mean 63-67 | 98.00 | 35.00 | 27.60 | 41.40 |
| Mean 58-67 | 116.20 | 38.00 | 28.50 | 40.50 |
| Mean 48-67 | 131.95 | 42.85 | 29.35 | 35.30 |

Source: Government of Nigeria

Table 3: Nigeria Year to year Percentage Change in Producer Prices

| Year | Cocoa | Palm Oil | Palm Kernels | Groundnut |
|---|---|---|---|---|
| 1948-49 | +55.8 | +34.1 | +28.6 | +18.8 |
| 1949-50 | -16.7 | 0.0 | 0.0 | +10.5 |
| 1951-51 | +20.0 | +23.1 | 23.1 | 0.0 |
| 1951-52 | +41.7 | +10.9 | +12.5 | +71.4 |
| 1952-53 | 0.0 | - 4.9 | -5.6 | 0.0 |
| 1953-54 | 0.0 | -13.8 | 0.0 | 0.0 |
| 1954-55 | +17.6 | -14.0 | -8.8 | +2.8 |
| 1955-56 | 0.0 | 0.0 | 0.0 | -2.7 |
| 1956-57 | -25.0 | 0.0 | 0.0 | -8.3 |
| 1957-58 | 0.0 | 0.0 | -3.2 | 0.0 |
| 1958-59 | 0.0 | 0.0 | 0.0 | -9.1 |
| 1959-60 | + 6.7 | 0.0 | 0.0 | +50.0 |
| 1960-61 | 30.0 | 0.0 | +3.3 | +4.4 |
| 1961-62 | -10.7 | -18.6 | -16.1 | -8.5 |
| 1962-63 | +5.0 | 0.0 | 0.0 | -7.0 |
| 1963-64 | +4.8 | +2.9 | +7.7 | 0.0 |
| 1964-65 | +9.1 | 0.0 | 0.0 | +5.0 |
| 1965-66 | -45.8 | 0.0 | 0.0 | +2.4 |
| 1966-67 | +38.5 | 0.0 | 0.0 | -2.3 |

Source: Compiled from Table 2.

**Table 4: Indices of Average World Prices (C.I.F) In Naira Of Selected Nigerian Agricultural Exports (1985=100)**

Average % Change over preceding year Growth Rate

| Commodity | 1990-1995 | 1996 (1) | 1997 (2) | 1998 (3) | Between (1 & 2) | Btw (2 & 3) | 1990-199 |
|---|---|---|---|---|---|---|---|
| Cocoa | 5541 | 1671 | 1822 | 2310 | 9.1 | 26.8 | 28.6 |
| Groundnut | 12509 | 5770 | 7841 | 9140 | 35.9 | 16.6 | 34.2 |
| Palm Kernels | 27.32 | 1513 | 1710 | 1830 | 13.0 | 7.0 | 25.4 |
| Palm Oil | 104 | 4311 | 5818 | 6300 | 35.0 | 8.3 | 39.2 |

Source: Computed from Data Collated from Central Bank of Nigeria Annual Statistical Bulletin (Various Editions).

**Table 5: Average Prices of Selected Nigerian Agricultural Exports (N/Tonne)**

Average % Change over preceding year Growth Rate

| Commodity | 1990-1995 | 1996 (1) | 1997 (2) | 1998 (3) | Between (1 & 2) | Btw (2 & 3) | 1990-19 |
|---|---|---|---|---|---|---|---|
| Cocoa | 190576 | 89635 | 95178 | 103111 | 6.5 | 8.3 | 42.8 |
| Groundnut | 57715 | 12674 | 9235 | 8902 | -27.1 | -3.6 | 13.9 |
| Palm Kernels | 51565 | 18803 | 19111 | 21405 | 1.6 | 12.0 | 39.6 |
| Palm Oil | 232842 | 103314 | 125716 | 132100 | 21.7 | 5.1 | 17.7 |

Source: Computed from Data Collated from Central Bank of Nigeria Annual Statistical Bulletin (Various Editions).

**Table 6: Regression Result of the Relationship between total value of agricultural produce and the value of cocoa, ground-nut, palm kernel and palm oil.**

| Eqn | $R^2$ | Const | $X_i$ | $X_2$ | $X_3$ | $X_4$ | $X_5$ | T-Ratio |
|---|---|---|---|---|---|---|---|---|
| Linear: | 0.6763 | 94.140 | 2.848 | 7.5383 | 52.4187 | 0.01062 | -7.2262 | 6.132 |
| Polynomial | 0.8721 | 29.672 | 0.240 | 0.3142 | 4.4432 | 0.4773 | 2.164 | 0.065 |
| Double Log | 0.8102 | -2.109 | 1.59 | 0.4991 | 0.1778 | 1.7792 | 0.7221 | 8.765 |
| Exponential | 0.8120 | 3.226 | 0.020 | 5.2242 | 4.005 | 4.005 | 1.8844 | 8.816 |
| Semi -log | 0.538 | 828.314 | 221.314 | 8.7114 | 1.6675 | 1.9258 | 2.3342 | 5.638 |

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