

The Impact of Agricultural Trade Liberalization on National Food Security in Nigeria, 1970–2000

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DEDICATION

This work is dedicated to the Almighty God for His abundant love, benevolence, loving-kindness and mercies. Lastly to my caring parents, especially my father for his constructive criticisms and considerable courage throughout my academic life. His paternal love and guidance abide always.

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CERTIFICATION

I hereby certify that this research was carried out by ODULARU, Gbadebo Olusegun under my supervision in the Department of Agricultural Economics, University of Ibadan, Nigeria.

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Date: -----

CBN	Central Bank of Nigeria
DCs	Developed Countries
EPR	Effective Rate of Protection
ECM	Error Correction Model
FG	Federal Government
FOS	Federal Office of Statistics
GATT	General Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GSTP	Global System of Trade Preference
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IITA	International Institute of Tropical Agriculture
IMF	International Monetary Fund
OECD	Organisation for Economic Cooperation and Development
SAP	Structural Adjustment Programme
TWC	Third World Countries
UNs	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
WTC	World Trade Centre
WTO	World Trade Organisation

ABSTRACT

This study attempts to examine the impact of a trade decontrol policy on food output within the Nigerian macroeconomic context. In other words, the study relates trade liberalization to the national food security situation between 1970 and 2000, by employing descriptive statistics and error correction model (ECM) as the research methodologies.

Regional and multilateral trade agreement seem to reduce barriers to the flow of commodities across borders, thus fostering a more efficient allocation of scarce resources as well as raising gross output with positive implications for food security at various levels.

Though the trend analyses revealed considerable fluctuations, there existed great improvements during the trade decontrol era than the period of trade restriction. The production statistics for both agricultural exports and food showed substantial diversity of performance. Deregulation of the exchange rate and abolition of commodity boards were partly responsible for the significantly positive changes in the cash crop market and enhanced farmers' earnings during the trade decontrol era.

One positive development during the trade liberalization era is the emerging trend as well as remarkable improvement in the production of agricultural tradable (cocoa, cotton, groundnut, palm kernel, palm oil and rubber), although, this was at the expense food crop sub sector.

Consumer Price Indices recorded high and increasing values during liberalization than before deregulation. That is, the price situation of foods items was particularly more favourable before deregulation than thereafter. By implication, the

purchasing power of most Nigerians especially wage earners declined, thereby making them to be less food secured.

More specifically, beans appeared to be the most expensive of all the selected food items. The price of beans more than doubled that of guinea corn, maize and millet during the liberalization period under study. This made Nigerians to be more dependent on basically less nutritious but cheaper food items such as cassava meals.

The EPC analysis showed that food crops enjoyed adequate level of protection even during liberalization. The protection accorded to agriculture during liberalization resulted in a movement of resources to agriculture in general and non-food crops in particular.

Since input subsidy and tariffs are crucial ingredients in the computation of EPCs which recorded some differences between the regulated and liberalized periods, Nigerians were less food secured during the liberalisation era. The reasons adduced for this is that supportive policies and programmes were not put in place to curtail the rising food prices and generally high inflation rate during the period. In view of this, desirable and workable policies are therefore required to reform as well as improve the efficiency of market process, in order to moderate marketing costs and eliminate undue mark ups.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Historically, the path that led to the latest phase of liberalization can be traced to the end of the World War II. Most economists today acknowledge General Agreement on Tariffs and Trade (GATT) as one of the greatest contributors to the rapid global recovery (Gentle 1996). GATT and World Trade Organization (WTO) encouraged countries to remove or reduce trade barriers for five decades. The WTO was established in 1995 following the passage of Uruguay Round of trade talks in April 1994 by 116 countries (IDS trade and Investment Background Briefings 2000). As at October 2001, the numerical strength of the organization was 143 members.

The first United Nations (UN) World Food Conference in 1974 took place in Rome (IFPRI 1998). The main focus of attention was on food security at the global level. The second UN World Food Summit, also held in Rome in 1996 addressed – falling grain stocks; rising demand for food more than population growth; environmental costs of agricultural intensification and effects of global warming on output and prices. (World Food Summit, 1996).

The Second World Food Summit endorsed a broad-based programme to halve the number of hungry people in the world by the year 2015. The 11-point “Rome Declaration on world food security” that precedes the 33- page plan of action says that “a peaceful, stable and enabling, political, social and economic environment is the essential foundation which will enable states to give adequate priority to food security and poverty eradication”.

However, the post second world war era had great hopes for the world as a whole but especially for Third World Countries (TWC) which aspired to overcome

adversities, eradicate poverty and hunger, as well as improve their standards of living. (Alamgir, 1991). Unfortunately, over the years many developing countries, including Nigeria were confronted by grave and unmanageable economic woes, examples of which are low or negative annual growth rates, balance of payments problems and increasing debt burdens- that were brought about by both external and internal factors. Nigeria, formerly a net exporter of food is today heavily dependent on food imports (Falusi 1989).

Major aid donors, in particular the World Bank responded with a fundamental shift in aid policy towards structural adjustment .The distinguishing feature of this was that assistance was made conditional on a commitment to changes in economic policy. Trade liberalization appeared prominently in the conditionality attached to the structural adjustment lending.

In Nigeria, trade liberalization was initiated in 1986 and this brought about substantial cuts in tariffs as well as the adoption of imports licensing system reform (Oyejide 1986,1991). In fact the 1980s are regarded as the period of trade liberalization in Third World Countries. The benefits from trade liberalization explain why developing countries have been joining the WTO in increasing numbers. In 1999, WTO include among its members 110 developing and transition countries whose exports account for approximately 20 per cent of the world exports (Maidment 1996; Aziz 1990). The Uruguay Rounds Agreement on trade in agricultural products laid the foundation for future liberalization. In fact, rising consumer incomes are shifting demand towards high-value-added agricultural products and away from frozen, canned and processed homogeneous goods. Furthermore, advance in biotechnology and falling transportation costs enable firms to supply new markets with fresh products (IMF Finance and Development, 1999).

In the dire need to foster sustainability in food availability and accessibility, the total eradication of chronic hunger and poverty has become a matter of global challenge particularly in the face of growing global population.

1.2 Statement of the Problem

Agriculture is a veritable weapon for waging war against poverty and unemployment, both of which breed other anti-social behaviour. According to 2010th edition of the Thisday newspaper, ‘about 60 per cent of Nigerians live below poverty line; around 50 per cent of the population have no access to safe water; about 38 per cent do not have access to primary healthcare; and most Nigerians consume less than a third of the minimum required proteins and vitamins intake, because they cannot afford it.

In fact, a recent survey confirmed that about 77 per cent of farmers are classified as ‘poor’, 48 per cent are believed to live in ‘extreme poverty’ and 71 per cent of the farmers are rural dwellers who live under penurious conditions (FOS, 2001)

Since economic policies are vital in the improvement of food security status, trade liberalisation in particular aims at determining the pattern of resource allocation and fostering efficiency in the use of national resources. In Nigeria, much of these gains were felt due to poor leadership, bad governance, overburdening bureaucracy, and political/ethnic turmoil, lack of transparency and accountability, and insensitivity to human welfare.

Having realised that national food security depends on an efficient marketing/trade system, Nigeria strives towards the liberalisation and deregulation of the economy. This emphasizes an increasing reliance on market forces to direct all

economic activities, therefore attaching a much greater importance to an efficient trading system.

This study, therefore, addressed itself directly to evaluating the impact of agricultural trade liberalization on the national food security situation in Nigeria, using annual data from the period 1970 to 2000.

1.3 **Justification of the Study**

After about fifty years of economic liberalization and approximately two hundred and ten years of industrialization, the economics and politics of food remain critical to the global commerce. This continues to be a topical issue of great and urgent concern, as long as the hunger paradox exists. That is, a wasteful consumption in the developed countries, and the starvation of millions in the developing countries.

Since hunger is a fundamental violation of human right to food, of grave concern is the world's 800 million people who go hungry each day. Hunger leads to illness and early death, robbing people of their potential to work. It also cripples children's learning capacity, undermines the peace and prosperity of nations and traps citizens in a vicious cycle of poor nutrition and ill health (IMF Finance and Development 2000).

An empirical study of this kind is very important because it will enable policy makers to identify certain loopholes in the Nigerian food system and formulate desirable and workable policies to tackling the food situation of the country.

Of utmost justification is the fact that earlier studies adopted the ordinary least square due to the fact that it gives the responsiveness of the dependent variable to a unit change in the independent variables. This research attempt adopting the error correction model (ECM). This is due to the fact that this model deals with the

problems of non-stationary time series time series and spurious correlation, which are prominent among the variables.

This study is of significant importance due to the fact that recent surveys on the food problem reveal that the crises is a function of many variables among which are the Federal Government economic policies.

Finally, the basic reason for choosing this topic is because international trade and investment on one hand, and food policy issues on the other hand are two interesting and interrelated macroeconomic spheres (see the appendix). It therefore becomes intellectually stimulating as this study is empirically examined. The outcome will provide an appreciable insight into the impact of a trade decontrol policy on national food security.

1.4 **Objectives of the Study**

The main objective of this study is to analyze the impact of agricultural trade liberalization on the national food security for a three-decade period. The specific objectives are:

- To examine agricultural trade policy measures in Nigeria between 1970 and 2000;
- To study the trend and variability in selected national food security indicators before and during liberalized trade era;
- To investigate the nature of changes in protective incentives in the food sub-sector by analyzing the trends in EPC between pre-liberalisation and liberalization periods; and
- To make policy recommendations towards enhancing national food security within a liberalized macroeconomic Nigerian environment

1.5 **Plan of the Study**

This research is structured into five chapters. Chapter one attempts to present the problem statement, justify the reasons for investigating the problem, and itemise the objectives of the study.

Chapter two will review the relevant literature while the third chapter will present the research methodology.

The fourth chapter will explain how the data will be analysed. The last chapter will state the major findings of the study as well as make appropriate recommendations and logical conclusions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Trade Policies in Retrospect

Economic historians have always believed that free trade acts as an engine of growth. In addition, it contributes to the optimal allocation of resources within countries, and the transmission of growth from one part of the world to another (Uniamikogbo 1996)

Trade policies aim at achieving and maintaining a healthy balance of payments through a strategy of aggressive export promotion and regulated import policy (Ezenwe 1980). Consequently, economists have come to agree that trade liberalization would foster productive efficiency and increase consumer welfare. Thus, a key element in the conditionality given to developing countries by the World Bank is the relaxation or removal of trade barriers (Alabi 1994)

It is convenient to categorize trade policies into two: outward-oriented or inward-oriented. An outward-oriented trade policy provides incentives, which are neutral as regards production for the domestic market and exports. The essence of these policies is that no discrimination in favour of exports nor bias against import substitution. They favour tariffs over quantitative restrictions. On the other hand, inward-oriented trade policies are those in which trade and industrial incentives are biased in favour of domestic production and against foreign trade (Rajapatirana 1995).

2.2 Agricultural Trade Liberalisation and Food Security

Endogenous growth-trade theorist have argued that trade liberalization contributes positively to economic growth, and invariably to food availability and accessibility. The decade – 1980s – offers the theoretical argument in favour of the

gains from trade liberalization (Bhagwati, 1987). An empirical analysis, using United Nations Conference on Trade and Development (UNCTAD) Simulation Study, concludes that the Global System of Trade Preference (GSTP) has the objective of promoting the development of national production and mutual trade of the developing countries. However, this could generate additional trade amounting to about \$241.9 million or nearly 17 per cent more than total agricultural trade among developing countries, using 1981 as a base line (Erzan 1986)

These previous studies, have asserted that trade liberalization and macroeconomic readjustment are expected to lead to a change in production patterns and trade with implications for the availability and accessibility of food and other agricultural products (Krissoff, Sullivan and Wainio 1989; Valdes and Zietx 1986; FAO 1989; Tapsoba 1990; Norton 1991; Gaiha 1991; and Okunmadewa et al 1998)

Balassa (1986) showed that agricultural exports can react to changes in prices and exchange rates much like individual crops: a favourable price increase can increase production at the expense of non-tradable, even if aggregate output does not increase. The study runs a regression of the ratio of exports to output, against changes in real exchange rate and foreign earnings. It concludes that agricultural exports elasticities are higher than elasticities for exports of all commodities and almost as high as those for merchandise exports. The reasons adduced for these observations include: the fact that as exchange rate rises, agricultural exports rises and agricultural imports become more expensive and fall; and also that the base of net exports is considerably smaller than that of gross exports and that devaluation are often associated with fiscal austerity, causing domestic demand to fall.

Burniaux et al (1990) suggested that trade liberalization in the context of agriculture in less developed countries will have a negative impact on the food

situation in these countries in the short-run. The research further posits that a shift in investment in favour of agriculture, which is expected in the long run, would reduce the food shortfall and should serve as a sufficient reason to uphold market liberalization.

Oyejide (1991) and Binswanger (1989) noted that producers of food, and agricultural producers generally feel the direct and major impact of market and trade decontrol. While the short-run effect would be a decrease in real income, the long run effect with increasing output and effective resource allocation mechanism could lead to increasing real income. Resource rigidity, institutional bottleneck and other factors might prevent the attainment of this scenario. Thus, the dire need for policy formulation and reformulation through concerted research efforts.

The effects of trade liberalisation on food security can also be viewed from the resource allocation problem as a result of improved relative price ratios of importable, exportable and non-traded products. Amin (1996) revealed that an increase in the price of food relative to the price of agricultural exports in Cameroon as from 1979 induces more resources into the food sub sector. This arises because food activities become more rewarding. The situation may not be explicitly discernible. For instance, De Janury and Sadoulet (1993) reported that cash crop production led to enhanced food crop production due to spill-over effects in the use of modern inputs applied to the cash crop production

Oyejide (1999) stated that producers of food generally feel the direct and major impact of trade reforms, thus fostering a more-efficient allocation of scarce resources. Olayemi and Dittoh (1995) revealed that the change in physical food security indicators between pre-liberalisation and the liberalised period. It showed that agricultural production growth rates were -4.4 per cent, 3.2 per cent and - 2.7 per

cent for 1971- 75; 1976- 80; and 1981- 85 respectively, but was 6.2 per cent between 1986 and 1991.

Okunmadewa (1998), using measures such as the EPC and Producer Subsidy Equivalent (PSE), examined the impact of trade decontrol policy on food availability and accessibility between 1980 and 1995. The study reveals that agriculture's performance during deregulation was better than what obtained in the immediate pre-liberalisation era. It showed that the ratio of agricultural import to total export decreased from 17.3 per cent in the 1981-85 period to about 9 per cent in the first five years of liberalisation. Agriculture was found to have grown at an average annual growth rate of 6.4 per cent in the 1988-92 period. In addition, it revealed that agricultural terms of trade improved significantly during liberalisation and the prices of food items also increased considerably. Food security status in terms of per caput calorie and protein intake was found to increase substantially with the gap between recommended and actual daily intake decreasing.

The EPC analysis shows that food crops enjoy adequate level of protection even during liberalisation. This is evident in the protection accorded agriculture during liberalisation, which led to a movement of resources to agriculture in general and non-food crops in particular. It also attempts to isolate factors affecting agricultural protection, which shows that input subsidy, and tariffs influenced the level of protection accorded rice. However, tariff has positive relationship with EPC while input subsidy has a negative relationship with EPC. The PSE analysis showed that maize farmers were subsidized while rice producers were taxed. One limitation of this study is the non-availability of data, which makes the calculation of the Consumer Subsidy Equivalent (CSE) difficult. Furthermore, it was found that the food security

during the trade liberalisation era in Nigeria could be as a result of general rapid rise in prices (inflation).

Contrarily, a Ghanaian study showed how food imports have demoralized farmers, having produced rice, maize, soybeans, rabbits, sheep and goats, which they cannot obtain economic prices for, even in village markets. In other words, their produce cannot compete favourably with cheaper imports. In the case of Uganda, agricultural trade liberalisation had led to more land and resources being devoted to export crops and less to domestic food production. By implication, Uganda experienced a decline in the production of foodstuff and further worsening its food security situation.

Agricultural trade liberalisation has led generally to increases in prices of farm inputs, causing huge problems for farmers, who are forced to pay more for their inputs, and get lower remuneration for their outputs. Thus, in economic terms, trade liberalisation has worsened the terms of trade between agricultural outputs and inputs (Okunmadewa, 1998).

Madeley (2000) noted that trade liberalisation exacerbates the problems of gender inequality and rural poverty. An empirical study on Mexico reveals that trade liberalisation over the past two decades has resulted in the loss of about 700,000 to 800,000 jobs due to declining maize prices, therefore representing 15 per cent of the economically active population in Agriculture. Likewise in Philippines, 24 per cent tariff cut on imported sugar resulted in cheap sugar imports, therefore damaging the livelihoods of 400,000 Filipino sugar workers.

Finally, recent trends point to the intensification of strategies by the Developed Countries (DCs) to penetrate the markets in developing nations, while concurrently increasing the barriers to their domestic markets. The various manouvres

in the WTO by the DCs reveal a systematic campaign to expand the economic space for their products and capital in the form of foreign direct investment.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Area of Study

The study focuses on Nigeria, a country with approximately 120 million people (FOS, 2000). It lies between latitudes 4 and 14 North and has a total land area of about 98.321 million hectares (924,000 square kilometers). The traditional occupation of Nigerians is farming, an indication of the fact that the land can be put to agricultural use, and the favourable climatic conditions, which are devoid of natural disasters.

3.2 Sources of Data

This study used secondary data for its empirical analyses. The sources of the data include: Federal Ministry of Agriculture and Natural Resources, International Institute of Tropical Agriculture (IITA), National Centre for Economic Management and Administration (NCEMA), Nigerian Institute of Social and Economic Research (NISER), Central Bank of Nigeria (CBN), and Federal Office of Statistics (FOS). The data will be derived mainly from:

CBN Statistical Bulletin (various issues)

CBN Annual reports and Statements of Accounts (various issues)

CBN Economic and Financial Reviews (various issues) and

CBN Monthly and Half-yearly Reports (various issues)

Others are the:

FOS Annual Abstract of Statistics (various issues)

FOS Economic reports (various issues)

World Bank World Development Report (various editions)

World Bank Trend and Development Economics (various issues) and
FAO Production Year Book (various issues)

3.3 Analytical Framework

The data collected for this study was subjected to rigorous statistical analysis to establish a sound basis for the inferences to be drawn from them. Trend analysis and descriptive statistics of agricultural output, export earnings, food imports, food and cash crop production and consumer price index were undertaken. The descriptive statistics involves the use of percentages, ratios as well as graphical and tabular presentation of data. In order to achieve the third objective, EPC is computed on annual basis to give an indication of the extent to which domestic price policy protects domestic producers from the direct influence of foreign market and thus generate incentives to domestic production or consumption.

The policy indicator adopted is comparable overtime, and across commodities. This makes it possible to measure the structure of incentives for the agricultural sector, and to provide a consistent quantitative assessment of the sector. Since the policy indicator is easy to understand, it accurately reflects the structure of incentives of the underlying policy instruments. The benefit of using the EPR is because it is more useful in quantifying the effects of price and non-price policies on income transfers between producers and the rest of the economy (Valdes 1996).

A critical decision taken in this study was to remain within a partial disequilibrium framework as is traditionally done, rather than to include an adjustment for indirect effects of economy-wide policies. Since the focus of this

research is on sector-specific policies, no adjustment is made for a possible misalignment of the exchange rate, or for the effect of industrial protection. All calculations of the policy indicator are at the relevant exchange rate.

However, the analysis quantifies the extent to which changes in the real exchange rate (RER) and in border prices have influenced the evolution of domestic real prices received by farmers.

Approximately, seven commodities were included in the estimates of the trend and descriptive statistics. Every attempt was made to include the most important exportables and importables for the country. Regarding the policy indicator, maize and rice were analysed.

It is very important to consider price adjustment before calculating this indicator. In determining the adjustments, three decisive factors are taken into consideration. The first is whether the commodity is an exportable or importable. The second is the place or point of competition between the domestically produced commodities and its overseas counterparts. The third is the point in the marketing chain at which the two prices are to be compared.

For the exportable, the point of competition is normally the port. Using the central farm marketing point as the place of comparison, the costs of the marketing chain must be subtracted from the free on board (F.O.B) border price to obtain the farm level price. The net result is a border equivalent price that can be meaningfully compared to the domestic prices.

In the case of an importable, the point of competition is frequently the processor. Again using the central farm marketing point as the place of comparison, the marketing chain costs must be added to the cost of freight (C.I.F) border price until the point of competition is reached. The costs are then subtracted from the

central farming marketing point. These adjustments provide an accurate comparison between the domestic price and its efficiency benchmark.

The Effective Rate of Protection (EPR/EPC) measures how value-added in a particular activity is affected jointly by trade barriers on the product and its tradable inputs. Its advantage is that it is a better indicator of the direction of the resource allocation effect of a tariff structure. Previous works have shown that identical tariffs (or Nominal Rate of Protection <NPR>) can in fact imply different effective rates of protection, depending on how much the imported inputs are taxed and how important they are in the production process. The higher the share of purchased inputs in the cost structure, the more important is the use of the EPR.

It can assume a range of values. If within a considerable length of time the EPC is greater than one, it implies that the marketing arrangement has led to great returns to domestic producers than would have been possible in a free market system. On the other hand, an EPR of less than one implies that the producers are receiving less than the border prices of both input and output. In both cases, it is possible to enhance the efficiency of resources allocation by allowing the border price to operate, that is, a situation of EPR of unity where the producers will neither be favoured nor discriminated against. We can have an EPR of less than zero (negative values). This can arise through a negative value added in domestic prices or a negative value added in border prices. In the case of a negative EPR, due to negativity in the value added of the domestic prices, it implies that producers are incurring losses and will not stay in business except adequate subsidy is put in place by the government. Conversely, a negative EPR as a result of negative value added in border prices implies that the economy is losing foreign exchange by domestic production of the output. This arises since it is obvious that the cost of inputs exceeds the gross value of the output. In