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FOOD POLICY IN NIGERIA: AN ANALYSIS OF THE ISSUES AND PROBLEMS OF ACHIEVING FOOD SECURITY IN A DEVELOPING ECONOMY*

BY
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Abstract

The focus of the paper is on the effectiveness of food policy in Nigeria in the last two decades. Government, in pursuit of its stated food policy objectives adopted a wide range of policy instruments and measures since the early 1970s. The impact of such measures has not been commensurate with the huge expenditures allocated for their prosecution. However, based on the widespread impact and awareness generated among farmers, the ADPs represented a fairly successful tool of mobilizing the smallholders. The input supply and subsidy programme and the various agricultural credit schemes were not as successful as the ADPs owing to insufficient planning and lack of their orientation to the needs of the smallholders. The overall low impact of food policy could be attributed to endogenous problems such as the weakness in food policy design and execution and exogenous problems rooted in the absence of sufficient linkages between food and other economic policies. To correct this situation, the paper recommends that more concerted and programme-oriented efforts be made to support the smallholders, while necessary adjustments should be made to restructure those institutions involved in policy implementation. In conclusion, four factors that are critical for the attainment of food security in Nigeria are identified. These are the full commitment to exploiting the local resource base rather than over dependence on the outside world for innovations, efficient management of resources at all levels, timely changes in policies and political will to reorientate all institutions charged with policy design and execution.

Introduction

The food problem facing most countries of the Third World has for long remained a topical issue both at the domestic and international levels. At the international level in particular, more activities have been embarked upon by governments and international agencies to ameliorate the deteriorating food situation in these countries. The focus given to food problems is predicated on the fundamental role of food and nutrition in the physical well–being of the individual and economic development in general. A nation that enjoys adequate food and nutrition usually has a virile, healthy and productive population, derives enormous resources from the associated activites for its economic growth and development and is generally economically and politically less–dependent on other countries.

There is no doubt that Nigeria is one of the Less–Developed Countries (LDCs) that have experienced food problems in the last two decades, although opinions may differ as to the magnitude of these food problems. However, the nature of Nigeria's food problems has never been in doubt. It is probably true that serious food problems emerged in Nigeria during the mid–1960s. At the national level, the main food problems are food production instability and widespread malnutrition among population and income groups due largely to inadequate food supplies, poverty and uneven distribution of income. On the economic front, inadequate food supply has resulted in reduced export earnings, larger food imports, smaller revenue to government, shortage of raw materials for processing industries and increased inflationary pressures. Food problems have posed more serious concern at the regional level. Generally, the North and Middle Belt regions of the country account for the bulk of food production and being less densely populated derive higher per capita calorie and nutrients than the South which produces less food but generates higher demand for food due to population concentration and higher per capita incomes. But, owing to the poor performance of the food marketing system, the internal foods trade process has not adequately checked regional food problems.

Notwithstanding the lack of comprehensive food data in the country, the nature of these problems is fairly well–articulated by various authors. What has been of concern to many observers is the increasing magnitude of these food problems even as government efforts increased to reduce them. Thus, the central issue is the effectiveness of food policy and this is the focus of this paper. Specifically, the paper will outline the various food policy measures adopted by government since 1970, evaluate the impact of such policy measures and examine desirable policy adjustments that will help in attaining food security for the country. The paper is organised into four main sections. Section I contains a review of some food policy concepts which will help in understanding some technicalities of food policy analysis. Section II is an outline of Nigeria's food objectives, instruments and measures since 1970, while Section III deals with an evaluation of the impact of these measures. Section IV discusses some of the policy implications of the analysis, while in the conclusion we examine the prospects for achieving food security in Nigeria in the next decade or so.

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The central theme of this paper falls in the subject area of food policy analysis which has been defined as the "process of research and thinking designed to discover the complementarities and trade–offs among food policy objectives and to identify government initiatives in the project, programme and policy arenas that can best achieve these objectives. . ."[1].

Over the last ten years, an enormous literature has developed within this subject area. While many concepts have correspondingly emerged, several of them are still applied loosely. In this section we review a few of these concepts as a guide for a better understanding of this paper and similar literature.

Perhaps the starting point is to define what food itself is. **Food** generally refers to the final products which consumers eat or drink to satisfy human nutritional requirements. Often, there is a distinction between food and commodities. Commodities are primary sources of food at the farm gate. They become food only after they have been transported, packaged or process or made available for sale to consumers. In general usage, the difference between food and commodities is very thin. The next concept is the **food economy** which is generally applied synonymously with the food system, food chain or food sector[2]. The food economy may be defined as the set of activities which culminate in food being made available to consumers. Such activities help to determine the types of food, their quantities and nature, as well as those who are to derive immediate benefits from the food offered for sale.

The **food problem** is perhaps one of the most important concepts in food policy analysis as it relates to the food status of a particular country. Traditionally, the food problem described a food situation which deviated from the norm with regard to meeting basic nutrient requirements from food intake. This norm was associated with the concept of food adequacy which in general can be interpreted to mean a food situation in which minimum nutritional requirements are met from food intake. Thus, food situations which result in undernutrition, overnutrition or malnutrition indicate the presence of food problems[3]. Also, in the classical setting, the food problem was seen simply as the result of the race between population growth and food production. But this particular viewpoint can be linked with the earlier definition since a fast growing population relative to domestic food production will normally result in reduced per capita food consumption which could result in malnutrition. Beyond this however, a high population growth increases food problems becuase of the spatial distribution and density of the population. However, the whole of the traditional concept of the food problem defined above is no longer adequate because it places too much emphasis on food supply or production to the neglect of the food demand aspect. This conceptual inadequacy has become glaringly obvious because of the current world food situation which is globally adequate at the same time that most of the developing countries experience persistent or periodical food problems. In fact, within countries, food may be adequate on the aggregate while many groups within their populations lack adequate nutrition because of lack of purchasing power arising from general poverty, unemployment, uneven distribution of income and rising food prices. Thus, the current conception of the food problem not only implies inadequate food supplies, but also embraces food demand problems that reduce access to adequate nutrition.

The extent of a food problem becomes more meaningful when it can be quantitatively assessed. This is usually done through indirect and direct methods[4]. The indirect methods of evaluation give only indications of the nutritional status of the population since they do not measure actual food intake. They depend on inferences from food production data, food balance sheets, food gaps, income and educational levels, and vital and health statistics. The direct methods of evaluation attempt to measure actual food intake through dietary and food expenditure surveys, as well as through the effects of food intake using medical methods. Conceptually, both the direct and indirect methods cannot give definitive evaluation of food problems and in practice have shortcomings particularly because of the lack of the requisite data in most developing countries with food problems.

Owing largely to the inadequacy of the traditional concept of the food problem, the current approach is to plan towards the attainment of **food security** which is generally defined as access by the population of a country to enough food for an active and healthy life at all times of the year[5]. Thus, the concept of food security implies the availability of the food as well as the ability of the population to acquire it.

The concept of **food policy** has developed over–time with the change in the food problem concept itself. The traditional objective of food policy was to increase food supplies primarily through the agricultural sector. Currently, this primary objective is accepted, but in addition, it is now agreed that this primary objective can be better achieved when the linkages between agriculture on the one hand and the national and international economies on the other are well recognised. Specifically, food policy has become an integrated approach to issues that concern basically the food economy which is influenced not only by developments in the food economy, but also by certain developments in the rest of the economy and the international economic system as a whole. Conceived in this way, food policy affects and is affected by the monetary, fiscal, trade, employment, rural development and socio–economic policies of the government[6].

The associated concepts of food policy objective, food policy instrument and food policy measure also require brief definitions. The **food policy objective** is simply the statement of the aim or purpose for which a food policy is being adopted. Basic objectives of food policy commonly stated by government include: growth in food production, generation of employment, a decent standard of living for food producers and security against famine and food crisis in general. The **food policy instrument** is the means or tool used to attain a stated food policy objective. Food policy instruments may be quantitative, structural or reformative in nature, depending on the degree of changes they are meant to induce in the food economy. A **food policy measure** is the physical investment or action designed within the frame of the policy instruments to attain the desired food policy objective

A concept that defines the overall stance of government food policy is the **food strategy.** Food policy, like any other type of economic policy, is part of a systematic long–term national socio–economic plan for ensuring rapid growth and development, reduction of poverty and improving the living standards of the population. There are various approaches in designing and implementing food policies to attain these goals. The food strategy deals with the issue of the most efficient way for an optimum achievement of food policy objectives within the known resource constraints. Among the goals of a food strategy are the promotion of overall economic growth and structural transformation and the improved welfare of the rural population who produce the bulk of food requirements.

SECTION II: NIGERIAN FOOD POLICY: OBJECTIVES, INSTRUMENTS AND MEASURES

1. Food Policy Objectives and Instruments

A glance through the National Development Plan documents since 1970 shows that government designed the following food policy objectives[8]:

(i) ensuring adequate food supplies for the country's growing population;
(ii) providing increased incomes for farmers;
(iii) creating rural employment opportunities;
(iv) contributing to foreign exchange earnings; and
(v) encouraging the adoption of appropriate technologies in food production and distribution.

These were broad policy goals which could have supplementary objectives such as the achievement of stability in food supplies, ensuring efficient storage, maintaining food price stability and ensuring fair economic returns to those engaged in ancilliary food activities. The food policy objectives were not only stated in broad terms, but were also accompanied with quantitative targets in terms of desirable per capita levels of nutrient supply and the corresponding food production targets that would ensure the attainment of the nutrient supply targets. The food policy targets for the 1970–74, 1975–80 and 1981–85 plan periods are shown in Table 1.

Among the most important policy instruments adopted to achieve the above objectives since the early 1970s include:

(i) reduction of tax burden;
(ii) price support;
(iii) provision of credit;
(iv) increased efforts in research and extension;
(v) manpower development;
(vi) rural development;
(vii) irrigation development; and
(viii) land reform.

Up to the mid – 1970s, the first six policy instruments were favoured, particularly as reflected in attempts to remove unfair taxes and train more manpower for policy execution. The choice of policy instruments during this period was greatly influenced by the felt need to reform the marketing board system and improve the execution of agricultural development programmes. Between 1975 and 1985, the use of price subsidies, credit, irrigation development, rural transformation and land reform became prominent policy instruments. The expanding package of policy instruments was dictated largely by the deteriorating food situation and greater financial capacity created by larger oil revenues.

Food Policy Measures

A wide range of measures were designed by government using the above policy instruments for the attainment of the objectives stated earlier. These policy measures can be outlined under seven groups:

(i) integrated rural development;
(ii) promotion of modern farming methods;
(iii) land and water resource development;
(iv) input supply and distribution;
(v) price incentive schemes;
(vi) institutional reforms; and
(vii) other measures

Each of these is reviewed below[9].

The integrated rural development programme has been important in terms of the number of farmers covered. The Agricultural Development Projects (ADPs) and National Accelerated Food Production Programme (NAFPP), both of which embraced mainly agricultural components, were the two main schemes under this programme. The ADPs were launched in the early 1970s as enclave projects in Funtua, Gusau and Gombe. By 1985 every state in the country was implementing an ADP and the second generation ADPs which were launched since 1981 were state–wide instead of serving a few local government areas like the enclave projects. The ADPs were expected to incresase farmers' productivity and incomes through the supply of farm inputs at the village level, the provision of facilities that will support the use of such inputs and provision of technical and management training to agricultural officials. The NAFPP like the ADPs was an attempt to shift from an all–purpose general extension for rural development to a specific development strategy aimed at providing extension, inputs and other supporting services in a package to farmers at the village level. But while the planning and implementation of the ADPs involved active participation by the World Bank, the NAFPP had a substantial local input. However, by 1985, the NAFPP which was being implemented by all the states had become dormant due to funding problems and perhaps due to the concentration on the implementation of the ADPs.

The government sought to encourage the use of modern farming methods and practices by setting up government–run farms and providing a package of incentives to private and foreign entrepreneurs to make similar investments. Government direct participation in food production went beyond the cash crops of the 1960s to include enterprises producing staple food crops and fish from the start of the Third Plan. Both the Federal and State Governments established agencies engaged in the production of basic food items which was normally dominated by the small holder subsector. The encouragement of private and foreign individual and companies to engage in modern farming was backed up by several incentives such as greater access to land, fiscal incentives to reduce production costs and

approval for foreign companies to own majority equity holdings in local farming enterprises.

Irrigation development and related activities for improving crop yields and encouragement of continuous production became an important part of food policy from the beginning of the Third Plan period. The importance attached to this approach prompted the setting up of implementing agencies at the state and Federal levels. The most important of such agencies were the River Basin Development Authorities (RBDs) set up to perform wide-ranging functions such as comprehensive development of water resources for multi-purpose use, control of floods and erosion, construction and maintenance of dams, etc.[10] From inception, the Authorities got the bulk of Federal Government capital allocations to the agricultural sector. The number of RBDAs increased from 10 in 1976 to 11 in 1977, and 18 in 1984. But in 1986 the number was reduced to 11, while their activities were limited mainly to the development of water resources.

An important aspect of government efforts to improve agricultural productivity from the early 1970s was the integrated approach adopted for the procurement and distribution of purchased agricultural inputs such as agro-chemicals, improved seeds and agricultural machinery and equipment.[11] The procurement and distribution of fertilizers dominated the input supply programme. From the early 1970s, the Federal Government began to coordinate the individual efforts of the state governments which previously performed that function. It established a Fertilizer Procurement and Distribution Unit in the Federal Ministry of Agriculture to undertake central importation, port clearance and transportation to state depots as a means of rationalising such imports, reducing overall costs and removing some observed malpractices. Efforts were also made to develop local production capacity through the establishment of the fertilizer plants at Kaduna and Onne near Port Harcourt. Similarly, arrangements were made for the massive production of improved seeds for distribution to farmers. A national seed multiplication system was established in 1977. Under the system, several agencies were set up at both national and state levels to formulate policies, coordinate operational activities, organise the continuous supply and distribution of foundation seeds and evaluate the system on a continuous basis. With respect to agricultural machinery and equipment, the main measures included liberal importation and low tariffs, the institution of tractor hiring units at state levels, the development of local production capacity and the development of intermediate agricultural technology through new designs and adaptation of existing technologies

An important measure for enhancing food and agricultural production in Nigeria has been the use of price incentives which have been given in respect of output and purchased inputs. The output price incentives emanated from the reforms to the marketing board system and the introduction of guaranteed minimum prices. Under the former, obnoxious agricultural taxes were eliminated, while farm prices were favourably enhanced by doing away with the practice of surplus accumulation. Under the latter, floor prices that could cushion farmers during periods of excessive supply and reduce wastage were fixed and expected to be enforced through the operations of the Nigerian Grains Board. The input price incentives consisted of subsidies given by government to farmers through the purchase of inputs at discounted prices. Such price subsidies have been granted for the purchase of inputs like fertilizers, other agro-chemicals and machinery and equipment,as well as for the use of land and credit facilities. The rates of subsidy have varied between 20 and 75 per cent at various times. The basic objective of the subsidies was to stimulate the widespread utilization of modern inputs as a means of increasing food and agricultural production in the country.

The next group of measures consisted of institutional reforms aimed at providing more and better services to farmers. Some of these reforms were in the areas of agricultural research and extension, manpower development and training, land use, agricultural credit, marketing and cooperatives. While steps were taken to revamp the agricultural research system to increase its output and efficiency, the extension service was made stronger to be an effective link between the research system and the farmers. The aim of the manpower development and training programme was to minimise the manpower constraints on planning and execution of government programme. The main thrust was to introduce quantitative and qualitative adjustments to training in different types of educational institutions. The reform of the land use system through the Land Use Act aimed at encouraging greater utilization of land resources by inducing larger capital and managerial resource investments which would enhance agricultural modernisation. Agricultural credit institutions were reorganised with the aim of providing more credit to farmers through formal sources and ensuring that financial institutions were accessible to farmers in their immediate environments. The main actions here were to increase the role of the Central Bank in credit policy administration and the strengthening of other institutional sources of agricultural credit. Actions were also taken to improve the efficiency of the food marketing system by providing more facilities, as well as to increase the role of agricultural cooperatives which are usually better placed to provide basic services to farmers.

Finally, there was a group of measures that cannot be accurately placed under any of the above types. First, there were the "crash" measures like Operation Feed the Nation and Green Revolution Programme. These schemes mostly employed multiple instruments within a programme to arrest short term food crisis and to lay the foundation for long-term food self-sufficiency. There has also been the programme of the Directorate of Food, Roads and Rural Infrastructure aimed at developing a national net-work of rural and feeder roads in support of other policy measures for food self-sufficiency. Thirdly, there were a few measures aimed specifically at enhancing food consumption, such as the trade policies which induced higher food imports, price control to reduce food prices and voluntary measures of population control.

SECTION III: IMPACT AND PROBLEMS OF FOOD POLICY MEASURES

In this section, we undertake an assessment of the impact of the various food policy measures outlined above, examine the performance of some individual policy measures and attempt an explanation for the results achieved.

1. OVERALL IMPACT

One major test of the impact of the food policy measures outlined in Section II is a comparison of their achievements with the policy targets indicated in Table 1. This comparison is done in Table 2 which indicates the achievements in respect of energy and nutrient supply and growth in food production in relation to the set targets. During the Second Plan period (1970–1974), achievements in respect of calorie and protein supplies per head were below targets by 23.1 and 13.5 per cent respectively. This was partly due to the large shortfall in the rate of increase of food production (0.6%), compared with the target of 8.5 per cent[12]. During the Third Plan period (1975–1980), achievement ratios (actuals as proportions of targets) for calorie and protein supplies per head were 68.7 and 78.3 per cent respectively. There was an actual decline of 4.3 per cent in total food production as against the target increase of 4.8 per cent. During the Fourth Plan period (1981–1985), results achieved were again below targets, though they were slightly better than in the previous Plan period. Achievement ratios for calorie and protein supplies per head were 71.6 and 87.7 per cent, while total food production increased at an annual rate of 2.1 per cent compared with the target increase of 3.9 per cent. It should also be observed that some of the results were below the targets in spite of the fact that food supplies were boosted by food imports which grew rapidly from the Second through the Fourth Plan periods. The massive increase in food imports during the periods reviewed above was as much an indicator of the deteriorating food situation in Nigeria as the declining trends in the volumes and values of food exports, the inadequate supplies of agricultural raw materials to local processing industries and greater inflationary pressures ascribed mainly to rising food prices.

2. CASE STUDIES OF FOOD POLICY MEASURES

A better understanding of the problems underlying the low impact of the food policy measures in general is possible by deeper analysis of the execution of some of them. We now examine three schemes — the ADPs, Input subsidy and Agricultural credit — in the belief that most of the issues about food policy planning and execution will be highlighted in the execution of these schemes.

(a) Agricultural Development Projects

On the basis of the objectives of establishing the ADPs, two indicators may be useful in evaluating their achievements. These are the impact on incremental production and crop yields which are considered with respect to the Funtua, Gusau and Gombe ADPs, the first three and so far the most suitable for evaluation purposes[13]. The three ADPs catered for about 215,000 farming families cultivating roughly 869,000 hectares within a total project are of 17,750 km^2.

In Table 3 is indicated the total and incremental production for each crop grown in each project area during the implementation period. In Funtua ADP, total net incremental production for cowpea and millet was negative, but was positive for groundnut, sorghum and maize. The total incremental production for the five crops grown was 62.3 per cent. In Gusau and Gombe ADPs, the total incremental production was 38.7 and 32.6 per cent respectively. The incremental production targets set for many crops in the three project areas were not attained. On the whole, however, the incremental production records for the three projects were satisfactory when compared with typical returns in other areas not covered by the project.

The effects of the projects on crop yields are illustrated in Table 4. In many cases, the yields for each crop were on the increase during the project implementation. Also, the increasing yields attained during the period tended to outpace average yields for the same crops in Nigeria before the projects were launched. This is shown by the national crop yields shown in the Table. Average yields for each crop in all the ADPs during the implementation period are also indicated. With the exception of maize, these average yields were much higher than what obtained in the whole country before the launching of the projects. For example, the ADP average yields for cowpea, groundnut, sorghum and millet were 49.8, 58.0, 42.5 and 101.0 per cent higher than the respective average national yields shown in the last but one row.

The positive impact of the ADPs can be attributed to several reasons. The first was the changed environment of productive activities made possible by the systematic supply and delivery of essential inputs such as physical infrastructures (roads, earth dams, farm service centres and seed multiplication farms), agro–chemicals (fertilizers and insecticides), improved seeds and farm implements (oxploughs and sprayers). Secondly, efforts were made to create and execute specific needs of farmers with reference to research and extension which helped to improve farm practices, like land preparation, planting, cropping patterns and the correct application of agro–chemicals. Finally, pre–project planning was rigorous, while project implementation was adequately monitored and evaluated. This programmed approach assisted in reducing cost much below the actual costs in other schemes being operated by the government. Despite these achievements, the ADPs had their shortcomings. Some of the criticisms which have been highlighted by several observers appeared to be technical in nature and could not be linked to the direct performance of the projects[14].

(b) Input Subsidy Scheme

Owing to the various price discounts given by government on some purchased inputs, total subsidy spending grew rapidly during the 1977–1984 period as shown in Table 5. The total value of input subsidy by the Federal and state Governments moved from an average of only ₦29 million in 1977/78 to ₦130.5 million in 1979/80 and ₦244.9 million in 1981/82 before declining to ₦126.6 million in 1983/84 due to the cutback in oil revenue. The subsidy scheme accounted for only 7 per cent of total government spending on agriculture in 1977/78, but moved to 30 per cent between 1979 and 1981. In fact the lower proportion of 17 per cent attained between 1982 and 1984 was still high by any standard.

However, what is important is to what extent the scheme achieved its main objective of boosting the utilization of relevant inputs. Table 6 shows the supply and utilization of

fertilizers during the peak period 1977–1984. Backed up by adequate imports and rising domestic production, the consumption of crude fertilizers increased from an average level of 103,000 tonnes a year before 1977 to about 520,000 tonnes a year between 1977 and 1984. Correspondingly, the plant nutrient intake from crude fertilizers increased substantially, averaging an annual rate of 30.2 per cent betweeen 1977 and 1984. Despite the rapid growth in fertilizer consumption, the utilization rate during this period was about a third of the recommended intake. The bulk of fertilizer consumption during this period was also accounted for by the northern parts of the country where the ADPs and RBDAs which took the bulk of it had taken off effectively. Other considerations might also lead to the conclusion that the impact of fertilizer distribtuion programme was not as significant as may be suggested by the available data. While overall supplies were constrained by inadequate foreign exchange, logistical problems further impeded their timely delivery to farmers who very often obtained their supplies when they no longer needed them. Inadequate supplies frequently resulted in rationing and all the attendant evils of black marketeering. In most cases, the preconditions, such as the existence of relevant research fundings, credit facilities and extension services for effective use of fertilizers, were not present.

The above pattern was exhibited by the improved seed and agricultural machinery and equipment schemes. While the supply of improved seeds increased significantly, it could only meet 20 – 30 per cent of requirements. Thus, while the subsidy element on improved seeds was emphasised, effective planning had not been undertaken to increase local production capacity and ensure efficient distribution. There was a rapid increase in the importation of agricultural machinery and equipment due largely to lower import costs. But the subsidy element for the use of such inputs did not produce any wide impact due to technical problems such as the lack of regular repair and maintenance of the machines. A good number of the machines were consequently left unutilised in government depots.

(c) Agricultural Credit

Government effort towards inducing a greater flow of credit for agricultural production was probably the most publicised of its food policy measures and there are some visible signs of achievements of its actions. The most notable development with respect to agricultural credit delivery to farmers in the last decade was the significant growth in the number of formal institutions providing credit for all types of agricultural production in the country. From a position where there were only a few institutional agencies supplying limited credit facilities to farmers in the early 1970s, there was a rapid growth in the late 1970s and early 1980s in the number and branch network of these agencies which include the Central Bank, Commercial and Merchant Banks, state agricultural credit agencies, cooperatives, ADPs, RBDAs, Tree Crop Development Units and Livestock Project Development Units. The consequence of the rapid growth in the number of agricultural credit institutions was that by 1985, there was hardly any local government area in the country not being served by one kind of agricultural credit agency or the other. Another effect of rapid institutional growth was that the proportion of total agricultural credit accounted for by institutional agencies must have exceeded by far the earlier estimate of 32.3 per cent[15].

In terms of actual flows of credit from the system, we illustrate with data in Table 7 which indicate the annual flows (new loans) of credit from each source between 1978 and 1984. In 1978, a total of ₦83.2 million was given as credit to the agricultural sector. In 1982, that level was more than tripled when a total of ₦248.3 million was loaned to farmers and in 1984, a peak of ₦299.8 million was attained. The sharp upward movement in the total amount of credit to farmers was largely accounted for by the commercial banks. Total agricultural credit granted by the commercial banks increased from only ₦36.0 million in 1978 to ₦113.2 million in 1981 and ₦238.3 million in 1984. The other major source of agricultural credit was the Nigerian Agricultural and Cooperative Bank whose credit to farmers witnessed large fluctuations. Its total agricultural credit moved from ₦44.6 million in 1978 to a peak of ₦71.1 million in 1981, after which there was a sharp decline to an average of only ₦23.3 million in 1983/84. Total agricultural credit given by state agencies, RBDAs, ADPs and merchant banks generally followed the same trends as in NACB credit. There is no doubt that the deteriorating position of government revenue after 1981 was the main factor responsible for these trends in the case of the government–sponsored agencies and projects since their credit base was largely dependent on government grants and loans. A corresponding feature of institutional agricultural credit during the review period was the rapid growth in the share of credit by commercial banks and the decline in the shares of other sources. As shown in Table 7, commercial bank share of total agricultural credit increased from an average of 52.9 per cent between 1978 and 1979 to 76.1 per cent between 1983 and 1984. Consequently, the combined share of other sources declined from an average of 47.1 per cent in 1978/79 to 23.9 per cent in 1983/84.

Table 8 provides further analysis of total agricultural credit by source in terms of activities financed, type of borrower and size of loans. What is most obvious in these aspects is the fact that the bulk of credit given to agriculture between 1978 and 1984 went to medium and large–scale farmers, thereby neglecting the small farmers who constitute the bulk of the farming population. With respect to activities benefiting from credit supply, the evidence shows that the three most important credit institutions gave the highest proportions of their loans to food crop production which one may claim is dominated by small farmers. However, this conclusion can only be tentative. The proportion of credit extended to poultry, livestock, mixed farming, fisheries and others by each of the sources was relatively high, especially for commercial and merchant banks, and these activities are generally dominated by medium and large–scale farmers. This fact seems buttressed when we examine the credit given by type of borrower. The groups most likely to contain small farmers are 'individuals' and cooperatives. Only the State Agencies and ADPs gave the bulk of their credit to these categories, while credit by commercial and merchant banks and even NACB to these groups was relatively small. Perhaps the NACB could have provided more credit to small farmers through its on–lending programme. Most of its credit went to the State Agencies which on–lent farmers' groups. However,, it is evident that the bulk of agricultural credit by commercial and merchant banks went to companies and large state enterprises. These trends are

better illustrated by the distribution of agricultural loans by size. Both State Agencies and ADPs gave about 65 – 92 per cent of their credit to small farmers who normally get credit below N5,000 per farmer. In contrast, the commercial and merchant banks and NACB gave very small proportions of their credit to small farmers, while extending over 90 per cent to medium and large-scale farmers. This is quite revealing when it is recalled that these three institutions accounted for about 95 per cent of total annual agricultural credit during the period covered.

Generally, most of the problems associated with providing agricultural credit in the 1960s and 1970s continued to persist and even assumed a more complex posture in the 1980s. At the centre of the problems is the fact that most small farmers have been denied credit. This situation may be explained by the inappropriateness of the various institutions involved in the supply of agricultural credit to small farmers. The commercial and merchant banks that account for the bulk of agricultural credit are the least suitable in this respect. The small farmer who is typically uneducated can neither keep accurate records of his farm operations nor acquire the collaterals for securing the loans. Even if many farmers qualify for loans in these terms,it is impossible for commercial banks to cater for the credit needs of farmers scattered all over the country. This problem also affects the government credit agencies, both at the state and national levels. Cooperatives that should play an important role in bridging the gap between small farmers and banks are not adequately developed and only a small proportion of farmers belong to cooperatives that are viable enough to secure loans for their members. These factors explain why the bulk of agricultural credit was taken up by medium and large-scale farmers. It is interesting to note that in schemes such as ADPs where credit was given along with other inputs, credit delivery and utilisation were largely successful. Another major problem of the agricultural credit programme was the low repayment record for agricultural loans. Many farmers had genuine problems of repayment, but most simply defaulted because loans had been badly utilised or diverted to other purposes. Loan repayment problem was exacerbated by the attitude of borrowers to loans given by government agencies, the general belief being that debts would ultimately be written-off. Even though the commercial and merchant banks continued to grant the bulk of loans outside the guarantee system operated by government, there was still that erroneous belief that the loans were coming from the government. In a situation where agencies were short of loanable funds, the serious repayment problem tended to detract from the revolving nature of such loans and thereby reduced the potential impact of the credit schemes.

The institutions providing credit to agriculture experienced several operational problems such as the shortage of skilled manpower. The response of banks to staff training and development for operating the agricultural credit schemes was extremely slow. In most cases, schemes had been introduced before the manpower implications for the banks were considered. As a result, many loan applications were delayed and when loans were finally granted they might be at a wrong period, a situation that encouraged default. The manpower shortage was particularly serious for rural areas as loan applications were freqently despatched to bank headquarters for processing. In most cases, the banks adopted bureaucratic processing procedures which led to loans being given out of season. Finally, the interest rate structure for agricultural loans posed serious problems for the operation of the various loan schemes. Government tended to favour low interest rates on agricultural loans. From what has been said earlier, the implicit interest rate subsidy turned out to be earned by the medium and large-scale farmers who took the bulk of the loans. Other problems have arisen from this policy action. First, it could constrain the ability of lending agencies to provide credit for a large number of farmers becuase of the small margin of interest rates over deposit interest rates which could hardly cover all lending costs and for a long time lending agencies were known to reject deposits whose interest earnings were higher than the permissible lending rates. On top of the high loan default, the non-deposit taking credit agencies could hardly survive under these circumstances. Also, because of the gap between lending rates for agricultural loans and other rates, many borrowers often contrived to obtain loans which were either diverted to other purposes or even used to replenish loanable funds in the informal system where lending rates were usually excessively high.

3. Sources of Problems

Most of the food policy measures adopted in Nigeria in the last two decades have not been as effective as anticipated. The three case studies undertaken above give an insight into why this has been so. We can discuss that issue by examining the broad problems involved and these may be termed the macro food policy problems which may be either endogenous or exogenous to the food economy.

The endogeonous problems arise from the weak base upon which food policy is designed and executed. The weak base took its roots from the poor planning approach, ineffective institutions,manpower bottlenecks and inadequate coordination. In spite of the increasing magnitude of Nigeria food problems, the development of the food economy was never systematically planned through the choice of appropriate policy instruments and measures, the institution of an evaluation system and the mode of implementation especially with regard to the role of the public sector. The adhoc nature of food policy could be seen in many of the measures adopted. A sad aspect of policy implementation was the ineffectiveness of the institutions involved. Most of them could not reach the small farmers who were supposed to be the focus of many policies. This shortcoming was particularly noticeable in the input delivery system. Most projects also faced constraints of manpower for planning, execution and monitoring. Such manpower problems were due to bad planning, poor funding of manpower development programmes and inadequate conditions of service for specialist personnel in the public sector. The lack of coordination in government policy both at the planning and execution stages was a major source of poor results of food policy. Both the Federal and State Governments tended to act independently in the area of food policy. Most Federal Government programmes appeared to suffer because of this since most relevant institutions were rather remote from the local environments.

The exogenous problems arose from the lack of adequate linkages between food and other economic policies. For example, the linkage between government macroeconomic policies and the food system was not adequately taken into

account in policy design and implementation. The adverse consequences of such oversight were at the centre of the economic crisis of recent years and which has necessitated the introduction of the Structural Adjustment Programme. The relevant elements for food policy included the distortions in public sector investments which were unfavourable to agriculture,the liberal food import policies, the administrative manipulation of the exchange rate which resulted in the overvaluation of the naira accompanied by depressed farm prices, incomes and output

SECTION IV: POLICY IMPLICATIONS

The ultimate goal of national food policy ought to be the attainment of food security in Nigeria in the next decade or so. As defined earlier, food security implies an ability on the part of Nigeria to meet the food needs of her population within the framework of her national development aspirations. This section is devoted to a discussion of desirable adjustments in those food policies which have so far proved ineffective. Three major aspects articulated are food planning approach, policy implementation and the population problem. The consideration of these issues is subsumed within a well-defined national development strategy which truly believes in the structural change of the economy by a systematic development of local resources under a stable and relevant macro-economic policy framework.

1. Food Policy Planning

Three aspects of foods policy planning need to be made more relevant to the foals of an efficient food system and these are the incorporation of the basic elements of planning, adoption of a development strategy and the mode of structural transformation.

With regard to the relevant elements of food policy planning the starting point is the recognition that an effective food policy should be anchored to a clear understanding of the national economic environment and the international economic system. It has also to be recognised that food policy should be formulated within the ambit of agricultural policy such that the food and non-food sector objectives are made consistent with each other. Next, the formulation of food policy objectives and the design of relevant instruments and measures must be done with due regard to national economic aspirations and the available resources. The need to develop the mainstream of food producers such as will produce the greatest overall impact at minimum cost is the most important consideration at this stage. In particular, the differentiated resource base of Nigeria will need to be taken into account in resource allocation so as to tap the enormous potentials of the various regions. Finally, there is need to monitor and evaluate the food policy implementation process so that adjustments can be made when necessary. Before this can be done effectively, performance criteria must have been designed at the planning stage. Such performance criteria will then form the basis of evaluation and policy review which may sometimes involve going through the policy cycle again.

In formulating Nigeria's food policy in the context of her overall development strategy, there is no option but to focus actions on the transformation of the majority smallholders who may be defined as those small farmers who cultivate less than five hectares of land or are engaged in the artisanal fishery or rudimentary animal production systems. It is not too much to state why this group of farmers should be favoured in development efforts. First, since they account for at least 95 per cent of total food production, improvement in their productivity is likely to make a bigger and broad-based impact. Second, such a strategy is a more viable way of reducing poverty in the rural areas where the bulk of the population live. It is the most efficient way to generate more employment opportunities, reduce income inequality and enhance rural industrialisation. Third, the strategy is relatively more cost-effective with regard to raising productivity and may thus economise on the use of scarce capital and foreign exchange. In this situation there is room to phase out development programmes as dictated by available resources. It should be noted, however, that policy focus on the smallholders is not inconsistent with assisting the modern holdings. The operators of these holdings do in fact consciously avail themselves of supportive measures announced by the government. The unfortunate aspect of past government policy was the tendency to force modernization from above while neglecting the smallholders. If this is corrected through adopting the relevant approaches, modern holdings can continue to derive benefits from the array of available incentive package. There is a need to monitor the operations of these modern holdings through farm management surveys and these may assist in designing appropriate incentives within the food policy framework.

The third aspect of food policy planning is to determine the nature of the structural transformation from peasant to modern holdings which is the ultimate goal of food security. This discussion must answer such questions as: what type of rural developmental approach should be adopted? What should be the nature of the rural instituions that will give efficient services to farmers? What type of technological package is needed to effect the transformation process? While detailed answers cannot be provided in this limited discussion, an attempt will be made to outline some of the basic principles involved. The advantage of an integrated rural development approach is clear and the current issue is the extent of integration in rural development policy. The ideal model of integrated rural development is generally accepted to be one which incorporates both agricultural and non-agricultural components. However, it is practically difficult to design such rural programmes given the existing schedule of functions by various government departments. In general, it may be better to have rural development programmes that are basically agriculture-oriented but include as many non-agricultural components as possible. Other components may be designed as separate programme which can be co-ordinated with the basic programme. It is feasible for the ADPs which are the most viable rural development schemes at the moment to be organised in this way. It is not difficult to conjecture what types of rural institutions should serve such rural development programmes such that farmers will be given efficient services. Such services like marketing, storage, processing and credit should be organised as part of the rural development programmes and where they cannot be so organised efficiently, farmers' cooperatives can be used to organise them within the rural programme. Similarly, the technical package in that setting has to shift away from the present approach. Agricultural resarch as the bedrock of technological change should be

made more relevant to the needs of the smallholders. The current view is that the adoption of a farming systems research approach is the ideal and aims at promoting appropriate technologies within the variable environments of the farmers particularly with regard to cropping systems, high degree of risk, subsistence in production and the varied resource structure. One way of achieving this aim is to conduct on–farm research which will provide a direct contact between a multi–disciplinary research team and the farmers in their environments as opposed to over reliance on research in experiment stations. Under a farming systems research approach, the agricultural extension system works in close collaboration with the research team to disseminate research results on a wide scale. In addition, research will also focus on the development of mechanical innovations from local resources in contrast to a tractor–based technological development.

2. Food Policy Implementation

Three major aspects of food policy need to be quickly reviewed to improve food policy implementation. These include a streamlining of the roles of the public and private sectors, organisational changes and manpower development and training.

There should be an appropriate division of roles between the public and private sectors and this may be dependent on the ideological setting. The current thrust of economic policy favours free enterprise and market forces in the direction of economic activities. Under such circumstances, government should allow the private sector to implement those aspects of food policy measures which the private sector can generally perform more efficiently. It is needless to state that the government should allow the private sector to implement those aspects of food policy measures which the private sector can generally perform more efficiently. It is needless to state that the government reserves the right to control the activities of the private sector when necessary. Another type of division of role is that which should exist among the various tiers of government in the public sector. From the finding in Section III, it is desirable that the Federal Government should be less involved in policy implementation, but more concerned with policy formulation and evaluation. On the other hand, the states and local authorities which are closer to the farmers should be more concerned with policy implementation. In line with this suggestion, the states and local authorities should have more resources to implement their programmes.These could be provided directly by changing the revenue allocation formula, or by the Federal Government applying a matching grant formula for allocating resources to states and local authorities for the implementation of priority programmes. Finally, a new organisational structure of ministries of Agriculture at both the Federal and state levels is called for. This will make for integrated planning and policy coordination. It is better to have, at each level of government, specialist departments instead of the existing sub–sectoral structures. Such specialist departments will monitor special areas of agricultural development such as research, extension, input supplies and rural development, while the regional offices of such departments will execute policies formulated at the head offices as well as give continuous feedback useful for periodical review of policies.

To reduce the manpower problem in agricultural development, there is need to have a special department for manpower development and training in each agricultural ministry in the country. This department will continously assess the adequacy of agricultural manpower for the efficient implementation of planned projects and the administration of all agricultural services. This assessment will be done in close association with all institutions that perform some roles in agricultural manpower development. This approach is a bit different from the current over–centralisation of manpower development efforts of the country.

3. The Population Problem

Proposals for attaining food security will be incomplete without a word on the population issue. One must admit that is is not easy to propose any new population policy that will be generally acceptable because of the complexity of the problem. There is no doubt that Nigeria has a population problem, accentuated by the slow pace of development, which has produced adverse effects on the food situation through especially the population size, high growth rate and distribution by age, sex and region. Policy recommendation in that regard is made difficult not only because of the social and cultural dimensions, but also because of the imprecise knowledge of the Nigerian population characteristics. However, given that the population problems tends to decrease as economic development takes place, a viable population policy in the Nigerian setting should be anchored on the rapid development of the rural areas which will improve living standards, enhance income redistribution, curb migration to cities and create more economic opportunites for women. In addition, improved health care services should be organised as a way of reducing the high mortality rate which had in the past induced people to have larger families.

Conclusion

There is clear evidence that Nigeria has always had a food problem measurable in both quantitative and qualitative terms. The food problem has worsened since the end of the civil war in 1970. Efforts made by the government to ameliorate the food situation have also increased tremendously since 1970. The seeming inverse relationship between these efforts and the food situation was the point of departure for this paper. The ineffectiveness of food policy measures in broad terms can be attributed to the absence of a viable food strategy, ineffective and inappropriate institutions charged with policy implementation, lack of co-ordination in government policies and conflicts between food policy and macroeconomic policies, especially in the areas of fiscal, monetary and macro price measures. Policy adjustments are therefore needed in these areas. It is recommended that such adjustments should include among others, renewed efforts to mobilise the smallholders who produce the bulk of national food requirements and changes in organisational structure as a means of improving food policy implementation.

Taking an overview of food policy in the last twenty years, it seems that the prospects for achieving food security in Nigeria in the next ten years or so will depend on four critical factors. The first factor is the commitment to exploit fully the resource base of the economy. The resource base

for Nigeria agricultural development is both diversified and potentially strong which is unique feature in sub–saharan African. Unfortunately, there has not been that full comitment to exploit these resources probably because of the over–dependence on the outside world for innovations. This approach must be changed. Secondly, the achievement of food security will depend on efficient management of our resources at the levels of private enterpreneurship, the public service and the political leadership. Resource management will improve if there is greater commitment to the achievement of stated goals and objectives than at present. Thirdly, there will be need to effect policy changes as soon as they are found to be desirable. The welcome development in recent years is the adoption of the Structural Adjustment Programme which has introduced many policy changes that are bound to produce positive effects on food and agricutural production in the long–run. It is instructive to note that some of these policy changes have been suggested many years before they were finally adopted. In a dynamic situation, policies must be adjusted to changing circumstances, although too many frequent changes are not to be encouraged. Finally, there must be a political will to restructure all the institutions involved in food policy implementation. The best of policies will fail to achieve their aims if the institutions to implement them are not effective. Steps recently taken to reorganise the public service are therefore in the right direction.

Table 1

FOOD POLICY TARGETS FOR 1970-74, 1975-80 AND 1981-85

	1970-1974	1975-1980	1981-1985
Nutrient Supply:			
Calorie	2,420	2,200	2,073
Protein	65	60-65	49.7
Food Production Increase:			
Cereals	9.0	4.5	4.3
Grains	7.5	3.5	3.3
Roots and Tubers	6.0	3.2	3.0
Oilseeds and nuts	7.5	4.5	4.7
Vegetables and Fruits	11.6	3.5	3.4
Vegetable Oils	9.5	4.0	4.0
Sugar	25.0	21.6	21.9
Beverages	3.0	3.0	3.0
Livestock	9.0	5.5	3.0
Total	8.5	4.8	3.9

[1] Calorie in kcals and protein in grams per capita per day and food production targets in per cent per annum.

Sources: Third and Fourth National Development Plans

Table 2

FOOD POLICY TARGETS AND ACHIEVEMENTS

	Targets			Achievements		
	1970-74	1975-80	1981-85	1970-74	1975-80	19
Nutrient Supply per head:						
Calorie (kcals)	2,420	2,200	2,073	1,861	1,512	
Protein (gms)	65	60-65	49.7	56.2	47	
Food Production Increase (%)						
Cereals	9.0	4.5	4.3	7.6	-3.8	
Grain Legumes	7.5	3.5	3.3	11.5	-12.0	
Roots and Tubers	6.0	3.2	3.0	-6.6	-0.8	
Oilseeds and Nuts	7.5	4.5	4.7	-7.0	1.0	
Vegetables and Fruits	11.6	3.5	3.4	2.0	3.7	
Vegetable Oils	9.5	4.0	4.0	-17.9	16.8	
Sugar	25.0	21.6	21.9	-0.5	20.1	
Beverages	3.0	3.0	3.0	4.8	6.9	
Livestock	9.0	5.5	3.0	3.1	2.0	
Total	8.5	4.8	3.9	0.6	-4.3	

Sources: Table 1 and the indicated Development Plan documents.

Table 3

FOOD CROP PRODUCTION IN FUNTUA, GUSAU AND GOMBE ADPs, 1976-1980
('000 Tonnes)

	Cowpea	Groundnut	Sorghum	Millet	Mazie
Funtua					
1976/77	5.24	11.92	124.70	47.25	6.91
1977-78	1.97	19.33	144.03	47.58	8.80
1978/79	1.56	33.34	137.81	37.67	12.64
1979/80	2.88	19.88	149.57	48.65	44.4
P	-9.31	36.79	57.31	-7.85	45.11
Gusau					
1976/77	14.32	26.46	101.48	98.58	0.58
1977/78	11.46	31.68	88.23	102.91	0.36
1978/79	24.41	33.11	90.37	109.78	0.97
1979/80	28.81	47.05	119.84	123.42	0.18
P	21.72	32.46	-5.95	45.37	-0.23
Gombe					
1977/78	2.66	9.10	110.74	48.30	7.77
1978/79	3.60	10.94	122.54	58.68	7.85
1979/80	12.73	6.36	116.18	49.14	17.32
1980/81	7.75	3.72	81.32	35.57	60.27
P	16.10	-6.37	-12.18	-1.52	62.12

Note: P = Total incremental production or the sum of changes over the project year one production. For Funtua and Gusau, project year one is 1976/77 and for Gombe, it is 1977/78.

Source: Agricultural Development Project Completion Reports issued by the Federal Department of Rural Development of the Federal Ministy of Agriculture and Rural Development.

Table 4

FOOD CROP YIELDS IN FUNTUA, GUSAU AND GOMBE ADPs, 1976-1980
(kg/ha)

	Cowpea	Groundnut	Sorghum	Millet	Maize
Funtua					
1976/77	183	827	930	712	680
1977/78	253	563	968	752	490
1978/79	184	833	841	841	1,162
1979/80	277	680	1,031	914	1.084
Average	224	726	943	805	854
Gusau					
1976/77	390	1,355	1,684	2,427	484
1977/78	402	1,566	1,486	2,147	528
1978/79	601	1,585	1,509	2,561	1,014
1979/80	678	1,990	1,865	2,914	692
Average	518	1,624	1,636	2,512	680
Gombe					
1976/77					
1977/78	461	778	1,055	1,251	845
1978/79	325	430	929	1,137	1,006
1979/80	429	544	835	1,608	1,543
Average	405	584	940	1,332	1,131
Nigeria					
1972	166	665	606	641	572
1973	204	423	601	711	1,015
1974	374	1,066	1,013	965	912
1975	277	323	1,070	767	1,404
Average	255	619	823	771	975
ADP Average	382	978	1,173	1,550	888

Source: As for Table 3 and also Federal Office of Statistics Rural Surveys

Table 5

ESTIMATED COST OF INPUT SUBSIDY PROGRAMME
(₦' million)

	1977	1978	1979	1980	1981	1982	1983	1984
Fertilisers	14.0	20.0	104.2	97.8	215.2	135.3	102.2	50.0
Bush Clearing	3.0	6.0	10.0	15.0	29.5	48.3	25.0	20.0
Tractor Hiring Services	1.0	2.0	2.0	3.0	6.0	6.0	4.0	4.0
Equipment Sale	-	-	3.0	4.0	7.5	5.0	3.0	3.0
Pesticides	5.0	5.0	10.0	10.0	13.5	21.2	20.0	20.0
Improved Seeds	1.0	1.0	1.0	1.0	1.0	1.3	1.0	1.0
TOTAL	24.0	34.0	130.2	130.8	272.7	217.1	155.2	98.0
Total as % of Capital Expediture on Agriculture	5.7	8.1	30.9	31.1	29.6	23.5	16.8	10.6

Source: Estimates from several publications such as Feldman & Idachaba, Eds., 1984

Table 6

FERTILISER SUPPLY AND UTILISATION
('000 Tonnes)

	Imports	Domestic Production	Distribution to Users	Plant Nutrient Use
1977	305	11	186	79
1978	235	28	188	74
1979	394	37	388	129
1980	532	33	446	140
1981	1,016	49	1,044	325
1982	521	45	640	221
1983	508	60	506	167
1984	745	50	760	266

[1] Consumption of nitrogen phosphate and potash
Source: Nigeria, Federal Ministry of Agriculture, Fertiliser Procurement and Distribution Division.

Table 7

INSTITUTIONAL AGRICULTURAL CREDIT BY SOURCE
(₦' million)

	Commercial Banks	Merchant Banks	NACB	State Agencies	RBDAs	ADPs	Total
Value							
1978	36.0	2.6	44.6	—	—	—	83.2
1979	50.5	0.7	29.7	—	—	—	80.9
1980	105.9	9.2	28.8	17.7	—	—	161.6
1981	113.2	10.6	71.1	12.9	—	—	207.8
1982	122.4	23.2	63.4	23.4	15.1	0.8	248.3
1983	133.8	21.2.	22.5	3.3	2.7	0.9	184.4
1984	238.3	21.0	24.0	9.1	5.2	2.2	299.8
Percentage Shares							
1978	43.3	3.1	53.6	—	—	—	100
1979	62.4	0.9	36.7	—	—	—	100
1980	65.5	5.7	17.8	11.0	—	—	100
1981	54.5	5.1	34.2	6.2	—	—	100
1982	49.3	9.4	25.5	9.4	6.1	0.3	100
1983	72.6	11.5	12.2	1.8	1.4	0.5	100
1984	79.5	7.0	8.0	3.1	1.7	0.7	100

Source: Central Bank of Nigeria, *The Report of the National Agricultural Credit Study*, 1986

Table 8

AGRICULTURAL CREDIT BY ACTIVITY, BORROWER AND SIZE
1978-84 (per cent)

	Commercial Banks	Merchant Banks	NACB	State Agencies	ADPs
Activity	**100**	**100**	**100**		
Food crops	27.3	29.2	55.0	n.a.	n.a.
Tree Crops	17.9	0.5	5.1	n.a.	n.a.
Poultry	20.7	23.5	7.7	n.a.	n.a.
Livestock	6.7	10.5	4.6	n.a.	n.a.
Mixed Farming	8.7	7.3	4.4	n.a.	n.a.
Fisheries	4.8	9.6	0.1	n.a.	n.a.
Others	12.9	19.4	23.1	n.a.	n.a.
Borrower	**100**	**100**	**100**	**100**	**100**
Individuals	18.1	0.6	7.2	91.9	86.1
Co-operatives	3.0	—	3.9	7.5	8.3
Companies	36.1	90.4	29.8	—	4.3
State Agencies	30.4	3.4	59.1	—	0.2
Others	12.4	5.6	—	0.6	1.1
Loan Size	**100**	**100**	**100**	**100**	**100**
₦1–₦ 5,000	1.7	0.1	1.7	65.4	92.3
5,001– 10,000	1.4	0.1	—	5.2	2.7
10,001– 50,000	9.3	—	0.6	29.1	—
50,001–100,000	7.4	0.1	1.1	0.1	—
100,001–200,000	9.6	1.6	9.4	0.2	—
200,001–500,000	15.5	13.0	9.2	—	—
500,001–₦1million	10.3	29.3	16.5	—	—
Over ₦1million	44.8	55.8	61.5	—	—

n.a. = not available.
Source: Central Bank of Nigeria, *Report of National Agricultural Credit Study*, 1986.

NOTES AND REFERENCES

1. See Timmer C. Peter, Falcon. Walter P. and Pearson, Scott R. 1983, *Food Policy Analysis*, Baltimore and London: The Johns Hopkins University Press, for the World Bank, p.9

2. O.E.C.D. 1981. *Food Policy*. Paris, pp.9-10.

3. Undernutrition describes a condition of inadequate amounts of food intake which result in inadequate supply of energy or poor utilisation of the food nutrients. Over-nutrition results from eating too much food or consuming one or more of the nutrients to the detriment of the body. Malnutrition describes a situation of nutrient imbalance due to the consumption of too much or too little of one or more nutrients. Under- and over-nutrition are symptoms of malnutrition.

4. Further details of these can be obtained from Ojo, Micheal O. 1987. *Food Policy in Developing Countries: Nigeria's Experience*. Mimeograph, chapter 3.

5. See The World Bank (IBRD), 1986. *Poverty and Hunger, Issues and Options for Food Security in Developing Countries*. Washington D.C. pp.1-27.

6. See O.E.C.D., 1981. *Ibid.*, pp. 14-17

7. For a better articulation of these concepts, see Fox, Karl A. Sengupta, Jath K. and Thorbecke, Eric K. 1973. *The Theory of Quantitative Economic Policy with Applications to Economic Growth Stablization and Planning*. Amsterdam: North Holland Publishing Company.

8. This is a summary from the relevant parts of the documents, viz, *Second National Development Plan*, 1970-1974, pp.107-112: *Third National Development Plan*, 1975-1980, vol.1, p.67; and *Fourth National Development Plan*. 1981-1985, vol.1, pp.78-79.

9. A more detailed review of the aims and scopes of these measures is contained in Ojo, Michael O. 1987. *Ibid.*, chapter 9

10. The law setting up the River Basin Development Authorities was promulgated under Decree No. 25 of 1976 and Decree No. 31 of 1977. The first ammendment to the Decree came in 1979 when Decree No. 87 was passed. Then in October 1981, Amendment Act No. 7 was passed to supersede all previous laws on the subject. The primary functions of the RBDAs are contained in these laws.

11. Two studies which have articulated the nature and impact of the input supply, distribution and subsidies are:
    (a) Idachaba, F.S., 1981. *Farm Input Subsidies for the Green Revolution in Nigeria: Lessons from Experience*. University of Ibadan, and
    (b) Okorie, Aja., 1984. "Recent Experiences in Farm Input supply and Distribution in Nigeria". in Feldman, David J.P. and Idachaba, F.S. eds., 1984. *Crop Marketing and Input Distribution in Nigeria*. Federal Agricultural Coordinating Unit (FACU), Ibadan.

12. The methodology of computing the per capita food nutrient supply and energy is explained by Ojo (1987, *Ibid.*, chapter 3 and Appendix 1). It may be observed that the population is an important parameter in this computation and its projected growth of 2.5 - 3 per cent per annum was also a contributory factor to the results achieved.

13. Much as it is convenient to use these first generation ADPs as the models, it should be noted that they were carefully planned, implemented and adequately funded. This cannot be totally said of later ADPS. However, the impact of the first three ADPS would indicate the type of results that can be obtained with careful planning and implementation of similar programmes.

14. See, for instance, the studies by Idachaba, F.S., 1980. *Concepts and Strategies of Integrated Rural Development: Lessons from Nigeria*. University of Ibadan, and Okorie, Aja. 1986. "Agricultural Development Projects Approach to Rural Development: The Nigerian Experience." in Okorie, Aja and Ijere, M.O., eds., 1986. *The Nigerian Agricultural Outlook with Special Reference to Budgets*. Nigeria Association of Agricultural Economists.

15. Ilori, C.O. 1972 *Agricultural Credit Problems in Nigeria: A Case Study*: Rome: FAO.