TRENDS AND LIMITATIONS OF SOME SELECTED MACROECONOMIC POLICIES ONTHE NIGERIAN AGRICULTURE

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Abstract

Nigeria is over-dependent on exports of petroleum products despite enormous efforts in policy design and implementation to encourage exports of transformed agricultural products. It is necessary to diversify the sources of its foreign exchange earnings. In this connection, this paper examined the trends and constraints of some selected macroeconomic policy instruments on agricultural development. Findings showed that exchange rate, wage rate, interest rate and expenditure in agriculture witnessed high instability which tends to propel high cost of production. High cost of production is exemplified by rising cost of capital in terms of interest rate on agricultural loans. This has almost permanently shut the door against farm loans. Also, expenditure on agriculture represented only a small proportion and its relative share in total expenditure did not show any discernible improvement, reflecting a declining trend in investment priority in the sector. Under this condition, high cost of production tends to make locally produced agricultural products less competitive. Policy strategy to enhance agricultural development should focus on maintaining a stable macroeconomic policy environment, providing loans at single digit interest rate, and development of rural infrastructures that will enhance market linkages, promote industrialization as a driver of economic development, revenue diversification and wealth creation.

Keywords: Macroeconomics, Policy Instrument, Trend, Constraint, Agriculture

1. INTRODUCTION

Nigeria has set an ambitious target to become one of the top 20 economies in the world by the year 2020. The Vision 2020 seeks to expand the country's GDP from US$212 to US$900 billion and achieve a GDP per capita of US$4000. The agricultural sector is strategic to meeting the ambition of this economic blueprint. According to the Report of the Vision 2020 national technical group on Agriculture and Food security (2009), Nigeria seeks to achieve a technology driven agricultural sector that is profitable, sustainable and meets the socio-economic aspirations of the nation. This sector specific vision will be delivered with the following broad aims.

Firstly, the vision aims at ensuring food security. This goal seeks to achieve a three-fold increase in domestic agriculture productivity by 2015 and six-fold increase by 2020; transform the Nigerian agricultural production system to a substantially mechanized system by 2020; expand dairy production and milk yield from the current level of less than 2000 kg to 5,000 kg per cow per lactation by 2015; achieve 20per cent farm-gate storage, 75per cent commercial storage and 5per cent strategic reserves by 2020 and achieve a fully digital, green and bio- technology driven agriculture by the year 2020. Secondly, the vision seeks to enhance generation of national and social wealth through greater exports and import substitution. To achieve this goal, the country seeks to derive over 50 per cent of the nation's foreign exchange earnings through agro-industrial exports by 2020; and reduce the percentage level of food import that worth over $3billion per annum by 50 per cent in the year 2015 and by 90per cent in the year 2020. Thirdly, the vision intends to enhance capacity building for increased industrialization and employment creation. This goal seeks to reduce

the post harvest loss of agricultural produce by an average of 50 per cent in 2015 and 90per cent in 2020. Fourthly, the vision aspires to enhance resource use efficiency. In achieving this goal the Federal Government will increase the size of irrigated land from current 10 per cent of cultivable land to 25per cent by 2020; review and further develop an agricultural land and water policy that will address the problems of soil fertility, water availability, land and environmental degradation by 2010; and increase area of land planted with diversified biomass including economic species in agro-forestry programmes from current 3per cent to 10 per cent in 2015 and to 20per cent by 2020. Fifthly, the vision intends to enhance the development and dissemination of modern technologies. This goal seeks to achieve an efficient agricultural extension delivery system which includes extension worker: farmer ratio of 1:500 by 2020; and achieve the adoption of improved varieties/species of seed and brood stock by 50 percent of the farmers by 2015 and 75per cent by 2020.

In recognition of the fundamental role of agriculture in the economy, Nigerian government had expended enormous efforts in policy design and implementation, which were directed toward provision of incentives for stakeholders in the sector to expand the supply of agricultural raw materials to meet an increasing demand of the industrial sector. The efforts were also intended to enhance non-oil export earnings. Among these policies was reduction or elimination of export restrictions or taxes, and exchange rate devaluation, which was oriented to reduce overvaluation of the real exchange rate. Commodity marketing boards were dissolved to create price incentives to farmers.

Furthermore, post-liberalization era saw the removal of mandatory sectoral allocation of credit and a regulated interest rate regime. Interest rates were generally liberalized, while a number of incentives were put in place to enhance lending to the real sector. Some of the incentives included creation of an agricultural credit guarantee scheme by the Central Bank of Nigeria (CBN), restructuring of the former Nigerian Agricultural and Cooperative Bank, now bank of agriculture, and subsequent increase in subvention allocation to the bank to meet increasing demand for agricultural credit. Apart from the dramatic structural adjustments during the second half of the eighties, the civilian administration, since 1999, had implemented some initiatives on agricultural commodities to increase production and processing of agricultural export commodities, increase their foreign exchange earning capacity and further diversify the country's export base and sources of foreign exchange earnings.

These policies and programmes have been implemented under the assumption that they would result in expanded domestic supply of agricultural commodities, increased profitability and income to farmers and expanded sources of foreign exchange earnings for the country. Nonetheless, significant growth potentials in agriculture have not been fully exploited and the economy had become over-dependent on the oil sector which provided about 95 per cent of foreign exchange earnings, as well as 65per cent of budgetary revenues (CBN 2003), indicating the various efforts at promoting investment and export diversification into agricultural sector have not yielded appreciable dividend and progress in poverty reduction in the country has been very slow. Improvement in growth in Nigeria over the last decade has not translated to reduction in poverty as indicated in Table 1.1.

In this regard, some questions may be asked; do the various macroeconomic policy instruments possess the potentials to expand agricultural exports? What are the constraints inherent in the policy instruments that may limit production and marketing of agricultural

commodities? What are the policy modifications required to unlock rigidity in macroeconomic policy environment to enhance agro-industrial development and promote diversification of sources of foreign exchange earnings in the country? These are the main issues the paper addresses. The remaining sections of the paper are organized as follows. Section two presented conceptual issue and review of literature. Section three discussed methodology. Section four presented empirical results, while section five presented policy recommendations and conclusion.

2. CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

Macroeconomic policy climate dictates the environment in which agricultural activities are carried out. The macroeconomic policies comprise fiscal, monetary, trade, and budgetary policies that govern macro-prices. These policies usually have major impact on profitability of the agricultural system and the welfare of farmers as they affect the flow of funds to the sector in terms of budgetary allocation, credit subsidies, and taxes. Some elements of macroeconomic policy constraint, such as high exchange rate, high interest rate, poor trade policy, and policy inconsistencies have been identified as causing high cost of production in Nigerian agriculture (Manyong et al 2003). This effect manifests in two forms. One is the high cost of investment and the other is the high cost of acquiring all necessary inputs required in the agricultural sector of the economy.

Macroeconomic policies affect the farmers' real income, terms of trade between rural and urban as well as the terms of trade between tradable and non-tradable (Mamingi 1997). Macroeconomic policies generally result in RER effect, which ultimately affect output price. Nominal exchange rate sets an upper bound on prices paid to farmers for exported commodities. In the same way, exchange rates together with import taxes and other restrictions set prices of inputs and agricultural imports, which compete with domestic production. Exchange rate depreciation exerts both strengthening and weakening impacts on export crop production and trade, the former through provision of price incentives, and the latter through inflationary process it sets in motion as well as the need for increased resource outlay, which may be met at higher credit costs and higher wage rate to producers and exporters (Yiheyis 1994; Kamin 1993). Exchange rate and inflation may have adverse effect on the prices of domestic inputs such as transport, electricity, and infrastructure maintenance and, to some extent, labour, which would lead to high cost of production. The high cost of production may limit investment in agriculture, which ultimately reduces the level of output.

Similarly, macroeconomic policies can affect farm profitability through control over output and input prices. They exert control on wages and interest rates, institutional arrangements such as access to credit, inputs, information and actions that affect profitability and productivity in other sectors (Jaeger 1992). Direct government policies such as price fixing for products or inputs, or the taxation of their trade affect profitability of farming directly, and may result in shifting of resources between crops or in moving resources out of agriculture into other sectors. Agricultural prices along with non-price factors determine agricultural production and supply in the forms of yield, acreage, or output. Some macroeconomic policy indicators such as wage rates, interest rates, as well as market imperfection and information affect farm profits and hence agricultural growth. High inflation, negative real interest rates, and restricted access to credit add to the harmful effects on investments in both agriculture and non-agricultural sectors. Construction of transport

infrastructure will lower transport costs, reduce input prices and raises output prices at the farm-gate, while extension services can reduce costs of information. While rural credit institutions make credit available at lower costs to farmers, research attempts to raise profits by way of technological change. In addition, government expenditure and investment in the agricultural sector can have important effects on farm profits and they are critical to long-term competitiveness and agricultural growth.

Effects of government expenditure on agriculture can be traced from two perspectives. First, is the direct effect on agricultural output. This output effect refers to the possibility of having increases in agricultural output as farmers begin to have access to improved technology and requisite infrastructure, which are financed by public funds (Olomola 1998). Second, is the effect on farm input demand. Government investment in agriculture can stimulate demand for agricultural inputs directly or indirectly. The direct effect on input demand manifests in farmers' use of inputs whose procurement internally or from external sources, forms a component of expenditure on agriculture. The effect is indirect when the demand for such inputs is affected by projects or programmes financed by the public funds. There is a link between government expenditure on agriculture and some critical inputs associated with farming in Nigeria. Expenditures on some of them are direct components of government expenditure on agriculture. For instance, expenditures on fertilizer and irrigation represent a considerable proportion of government expenditure on agriculture. Agriculture and land use can be enhanced with the availability of fertilizer and irrigation water. Government expenditure on agriculture can affect not only the supply of farm products but also the quality and quantity demanded of farm inputs. By and large, these policy measures aimed at reducing costs of production as well as increasing profits.

3. METHODOLOGY

Largely, the study was based on secondary data. Data on indicators of macroeconomic policies included macro- prices such as exchange rate, interest rate, and rural wage rate as well as government expenditure in agriculture. Data were also collected on export values and share of agricultural exports in total merchandise exports. In terms of scope, the data extended from 1970 to 2011. The sources of data included various issues of Annual Report and Statement of Accounts, and Statistical Bulletin by the Central Banks of Nigeria (CBN), Annual Abstracts of Statistics by the National Bureau of statistics (NBS) as well as World Development Reports by the World Bank. Data were analyzed using descriptive statistics such as mean, standard deviation and coefficient of variation. For clarity and understanding of results, tables have been used for presentation and discussion of results.

4. RESULTS AND DISCUSSION

The trends, potential effects and limitations of some selected macroeconomic policy instruments on agricultural growth are discussed in this section.

4.1. Interest rate

Generally, during the period 1970 to 2011, as demonstrated by Table 4.1, interest rates on loans were very high, compared to that on savings. This had led to a very high and widening spread between savings and lending rates. Instability in the trend of interest rate on loans was highest (CV=30.35) during the period 1986 to 1990. During this period, coefficient of

variation in interest rate was 30 percent. This period coincided with the period of deregulation of interest rate when the structural adjustment programme was implemented in Nigeria.

Before the implementation of Structural Adjustment Programme (SAP), monetary policy had emphasized concessionary interest on agricultural loans as a form of incentive. The strategy involved compelling banks and other forms of financial intermediaries to support agricultural activities through stipulated credit loans and interest rate ceiling, which implied implicit subsidies. For this purpose, specialized institutions were established including the rural banking scheme and the agricultural credit guarantee scheme (ACGS) that were aimed to guarantee exposure of commercial banks to high risk lending which agricultural loans have been.

Before implementation of SAP, agriculture enjoyed lowest interest rate in the economy and this varied from 6 per cent per annum to 12per cent per annum. Probably because these interest rates were the lowest in the economy, financial intermediaries were not keen to extend loans to agriculture. Even if the credits were available, agricultural producers would consider the cost of capital too high to secure the expected returns to agricultural investments. The monetary policy of the period which incorporated instruments designed to ease credit flow to agriculture, was expected to influence prices of agricultural inputs, costs of production as well as price of output. The low interest rate of agricultural loans together with other specific policies before the implementation of SAP was expected to lower the cost of production and also consumer prices.

During the 1986-90sub-period, under SAP, the concern was to stabilize the economy and to create a market- oriented financial system for effective mobilization of savings and efficient allocation of resources. To achieve these objectives, several measures were taken. The interest rates were liberalized in a bid to allow the market forces influence the inflow of savings and allocation of credit. The conditions for licensing banks were relaxed to permit easy entry into the banking sector and thereby create a competitive environment. The practice of prescribing sectoral credit allocation for about 18 economic sectors was replaced with a classification into only two sectors namely, priority sectors and all the other sectors. The priority sector, (agriculture, manufacturing and construction) was expected to receive a minimum of 50 per cent of the credit to the private sector. All the other sectors were also expected to receive a minimum of 50 per cent of credit allocated to the private sector.

Under liberalization and consolidation of the financial sector in the recent time, it was impossible to prescribe interest rates for the agricultural sector. Hence, agriculture had to compete for credit at the market determined interest rates. Agriculture, being a weak competitor, must have been greatly constrained in the liberalized credit and interest rate market. The deregulation of the banking system had led to a sharp rise in the interest rate. The lending rate rose from average of 11.60 per cent per annum during 1981-85sub-period to 24.58 per cent per annum during 2001-2005 sub-period. This would raise cost of production, which may lead to reduction in farm size and farm output.

Clearly, unstable pattern and the high level of interest rates on loans that emerged from liberalization of financial market have a tendency to discourage investment in the primary sector of the economy while encouraging tertiary sector activities. It should be noted that distributive operators who deal mainly in imported finished goods dominate the tertiary sector. They have a short turnaround time, which often does not exceed three months.

For primary sector operator, which is dominated by farmers, average turnaround time could be much higher if the other constraints to primary sector operations were taken into account. The implication of this situation is that the effective lending rate will be more affordable by traders in the tertiary sector compared to the smallholding farmers who dominate the primary agricultural sector. Moreover, the high bank lending rate would make locally produced agricultural export crops and their products less competitive in the market. Bearing in mind that the Nigerian primary sector is dominated by agriculture, which is basically the small scale subsistent type and given the low literacy rate in the rural areas as well as bureaucratic lending procedure of banks, small scale farmers would face formidable structural problems in patronizing the formal financial institutions for loans.

They would tend to seek loans from the informal financial institutions as an alternative source because they lack sufficient equity capital. They also have to contend with a longer gestation period. Farmers require huge capital investment for productivity enhancing technology, especially in the purchase and use of agrochemicals. However, the cost of capital in term of interest rate charges on agricultural loans have risen as a result of deregulation of credit market following implementation of structural adjustment programme. This has almost permanently shut the door against farm loans as the returns to farm enterprises would hardly cover the cost of capital. Currently, the bankers' committee planned to introduce a special interest rate regime on credit for small and medium enterprises (SMES), as part of its effort to expand the productive capacity of such entities. Bankers committee is comprised of chief executive of banks and top Central Bank of Nigeria (CBN) officials with the CBN Governor as chairman. The proposed plan is to enable micro enterprises to access bank credit at lower interest rates. It would help in addressing one of the constraints militating against optimal performance of small businesses and create more jobs with the attendant multiplier effects on the economy.

4.2. Exchange rate

Table 4.1 revealed the mean value and variability of exchange rates in the official markets during the period 1970 to 2011. The exchange rate declined from annual average of N0.66 to $1 during 1970-75sub-period to annual average of NO.61 to $1 during 1976-80sub-period. Thereafter, it rose to annual average of N116 to $1 over 2001-2005sub- period. When the government decided to raise the exchange rate from around N22 to $1 to N85 to $1 in 1995, in a bid to close up the gap between official exchange rate and the parallel market rate, the exchange rate rose to annual average of N96.70 to $1 during 1996-2000sub-period. The trend witnessed highest instability during 1991-95sub- period, when the coefficient of variation was 95 per cent.

Under this condition, a highly fluctuating and depreciating exchange rate may raise the cost of production which, like high bank lending rate may tend to make locally produced agricultural products less competitive, compared to imports from other producing countries. Depreciating exchange rate may crowd out marginal investment proposals on account of high investment costs in a high bank lending rate regime. High exchange rate combined with a high bank lending rate profile may create enabling environment for importation and distribution of finished products while creating a disabling environment for existing producers and thus could discourage investors in the production of agricultural products. The results in the following Table 4.2 showed the high propensity for importation of food. Dependence on imported foods has been on the increase. It showed that as growth slowed, output became

increasingly inadequate to meet rising demand for food and industrial raw materials. Consequentlythe country became food import dependent with rising import bills.

4.3. Urban and rural wage rate

Agricultural production practices in Nigeria rely mostly on manual labour, which accounts for 50- 60 per cent of total production cost, and the use of simple implements and tools. Government never legislated any agricultural wage rate but the minimum wage policy of government tended to influence agricultural wage rates. Although the twin problem of unemployment and underemployment made unskilled labour more readily available to agriculture, this situation changed with the oil boom which made urban employment much more lucrative than rural activities and thus igniting rural-urban population drift. The consequences of this were the shortages of farm labour and the attendant rapid increases in farm wage rate as shown by Table 4.3.

A large wage and salary increase was awarded to public and private sector workers in 1974. This generated an upward pressure on inflation rate and a widening gap between urban and rural wages as depicted by Table 4.3. Again in 1998, there was an increase in public sector wages in order to restore real purchasing power of workers. This again resulted in widening of the differential between the urban and the rural wage rates. Also, there was high degree of instability in urban-rural wage differential, as shown by its high coefficient of variation, which was about 100 per cent during 1996-2000 sub-period. The widening of the differential between urban and rural wage rate would aggravate the influx of labour from rural to urban areas. This would reduce the amount of labour available in the agricultural sector. This way, rural wage rate would rise, which would ultimately cause a reduction in the supply of agricultural commodities.

4.4. Government investment in agriculture

When government expenditure is directed at enhancing research and extension work, transport infrastructure, irrigation facilities, educational and health institutions, it stimulates productive activities and enhances efficiency of economic agents particularly agricultural investors. In order to fulfill the goal of government expenditure on agriculture in funding developmental programmes in the sector the budgetary expenditure on agriculture by the Federal government increased from average of N78.10million during 1970-75sub-period to average of N616.26million during 1981-85sub-period (Table 4.4). This appears to be a substantial increase, however, in real terms; this may not be the case. Both public and private agricultural investment failed to attract the desired priority. Public investment in agriculture has been falling for years. For instance, in Nigeria, government commitment to agricultural funding has been very weak over the years and the situation became more precarious after SAP.

When compared with other sectors, the share of agriculture in government spending was 2.05 per cent during the boom period [1970-1975), 4.70 per cent during the crisis period (1981-1985) and 4.03 per cent after structural adjustment (2001-2005). The low level and dwindling investment in agriculture may be attributed to lack of political influence by the smallholders. The small farmers are largely unorganized and therefore, unable to garner the necessary political support to attract public investment into the sector. Thus, in spite of the rising consciousness among policy makers to improve agricultural performance, the political variables are not within the control of the farmers, and without the political backing, the small farmers are easily squeezed out of the priority list for public investment. Thus

expenditure on agriculture represented only a small proportion and its relative share in total expenditure did not show any discernible improvement, reflecting a declining trend in investment priority in the sector.

Moreover, a tight fiscal discipline that characterized reduction in extra budgetary expenditures as well as in budgetary deficit, which occurred during the second half of the 1980s and the 1990s, might have partly influenced the budget share going to the sector. When cognizance is taken of the fact that it is capital expenditure that is actually an investment, the situation appears highly unstable. The share of agriculture in total capital expenditure decreased from annual average of 13per cent during 1981-85 sub-period to annual average of 10 per cent during 2007-2011 sub-period. Expenditure on agriculture also reflected high instability as shown by high coefficient of variation. This is one of the major problems generally associated with financing of agriculture apart from under-funding. Both instability of investment and under-funding of agricultural sector would be a constraint to the functions of government institutions involved in agricultural development.

4.5. General instability in macroeconomic policy indicators

Unstable movement in macroeconomic policy indicators would create potential for instability in credit market, exchange rate market and labour market. This would bring about instability in prices of inputs and output. With this instability in input markets, farmers and potential innovators will become more cautious in their demand for inputs. When the input markets are unstable especially on the supply side, farmers are not assured of reliable input supplies or supplies at prices they can afford. This would adversely affect both the rate of application of new inputs as well as the scale of operations. Adequate planning of farming operations and output expansion plans will be hampered. Increases in prices of inputs such as fertilizer and agrochemicals are reflection of instability and bottleneck in the input market and distribution of the inputs in the country, notwithstanding government subsidies. The bottleneck may render access by farmers and application of inputs impossible. Delay in inputs application could lead to total crop loss. Unless farmers have reasonable assurance that inputs are going to be readily available and at affordable prices, they would not grow more crop. Thus, production of agricultural commodities will be limited.

Another observation in the policy environment is the inflationary pressure the urban-rural wage rate differential will engender on farm labour markets. The farmer contemplating his scale of operations at the beginning of the season would not simply be sure of whether hired labour will be available at a price he can afford during peak farming operations such as weeding and harvesting. The urban-rural wage differential coupled with urban bias in the provision of infrastructures and the shortage of farm labour would aggravate the inflationary pressure in the rural labour market. This would lead to a rise in farm wage rates. Moreover, instability of interest rate on agricultural loans could hinder access to credit resulting into inability of farmers to finance new technology thereby limiting expansion of domestic supply of agricultural products.

4.6. Rural road condition

Rural roads constitute perhaps the most important single factor in the physical transformation of rural areas. Poor network of rural feeder roads as demonstrated by Table 4.6 would result in large farm-gate-retail price spreads, inflated farm-gate prices of farm

inputs. This would greatly distort the structure, conduct, and performance of rural markets. As a consequence, heavy post-harvest losses from ineffective evacuation of farm produce would act as major production disincentives. Poor rural transportation facilities would encourage spatial production inefficiencies, as they would hamper the emergence of specialized agricultural production patterns. The network of rural feeder roads to service and feed the national road remains in a primitive state, with only about 30.9 per cent being paved in 1997-2004(Table4.6) and only 10 per cent of total rural feeder roads remained all-season roads. As a result, transportation costs and input prices remain high on account of high time costs, and road user charges, especially vehicle operating cost.

The nature of primary roads in Nigeria would lead to poor network of rural markets and market stalls in Nigeria. Nigerian rural markets are highly-undercapitalized and inefficient. Arising from poor rural roads, transaction costs of reaching the market and the risk of transacting in rural agriculture markets are extremely high. In fact, only one third of agricultural output produced in Nigeria even reaches the market. Absence of necessary market institutions, such as market information, grades and standards, and reliable ways of connecting buyers to the sellers makes the Nigerian agro-commodities market very weak. Hence, commodity buyers and sellers typically transact in small circles, in narrow network of people they know and trust. Small farmers, who produce the bulk of our agricultural output in Nigeria, come to the market with virtually no information at all, blind and trusting that they are going to have some sort of demand for their produce, and completely at the mercy of the merchants in the only market, the nearest local market they know.

This would render the implied elasticities of supply of agricultural commodities with respect to policy variables low. Poor rural road condition would encourage oligopolistic and oligopolistic market structures and distribution of marketing margins that are often contemptuously described as exploitative. Poor rural roads would seriously constrain effectiveness of other policies such as guaranteed producer price scheme. This would not guarantee anything when middlemen, because of poor rural roads, could buy up available marketable surpluses at a discount. The consequence is that the benefits of the scheme would flow to an unintended group of beneficiaries. The middlemen tend to exploit the farmers by offering low farm gate prices while taking advantage of scarcity of commodities in the urban market place. Thus the response of farmers to favourable prices would be low because they are being shielded from receiving appropriate signals. The benefits of devaluation to export crop growers are seriously limited by poor rural roads network, which prevent the farmers from receiving the higher export prices at farm gate. Aside, the benefits of farm input supplies are often cornered by untargeted middlemen who buy up large quantities at subsidized prices only to sell to farmers in fragmented markets at farm gate prices that will be sometimes higher than they would have been had there been no subsidy, making farmers worse off than they would have been without subsidy.

Furthermore, as a result of poor nature of rural roads, extension workers would be unable to visit most farming communities, as these would remain largely inaccessible by car and quite often by motor cycle, with the result that even if the village-level extension agent is able to visit villages, however infrequently, the supervisor or the zonal extension officer would hardly visit remote villages to monitor the performance of the village-level extension worker. Moreover, formal credit institutions would be seriously constrained to penetrate the grassroots largely because of the poor state of rural infrastructures which result in

high operating costs for commercial banks. Finally, attempts at building up national networks of on-farm adaptive research trials would be frustrated by the inability to attract and retain senior experienced researchers who can put up with the inadequacies of remote and isolated stations due to poor rural roads networks.

The deplorable conditions of the roads in the country constitute a major impediment in the value chains of many agricultural commodities. The various types of roads in the country (highways, express roads, feeder roads, urban roads, rural roads] are in terrible bad shape and in need of significant repair, rehabilitation reconstruction as about 41per cent of all categories of road in Nigeria remained unpaved in 1992-1998 (Annual Abstracts of Statistics, 1999, NBS, Abuja.). In many rural areas, only footpaths are available and this makes transport of products to the market time consuming, expensive and sometimes virtually impossible. In view of the poor road conditions, perishable farm products are at risk of spoiling or at least, losing quality before they are sold in the desired market place. Access to modern farm inputs is also constrained. Thus, poor condition of roads reduces profitability of producers and limits availability of agricultural products.

4.7. Escalating cost of farm input

Generally, a major problem inhibiting investment in agriculture is the escalating cost of major farm inputs as reflected by the data in Table 4.7.1. Average prices of major farm inputs such as hoe, matchet, sprayer, tractor, and agrochemicals have been rising over the years. The rising prices of inputs are the results of poor condition of rural roads, instability in the factor markets arising from instability in macroeconomic policy instruments that is related to inflationary pressures, high interest rates, and volatile exchange rate. Interaction of these constraints would limit growth of investment in agriculture. This has a tendency to cause high factor cost to the farmers. The rising prices of fuel have compounded the rising cost of transportation of farm inputs and output thus aggravating the rising cost of production. The rising costs of farm inputs combined with dearth of investible funds would pose a serious constraint to investment in agriculture. This would lead to reduction in production and domestic supplies of agricultural products. The high interest charges on loans to agriculture have resulted in escalation of costs. In addition, most of the agrochemicals utilized by farmers are often imported as shown by Table 4.7.2. The situation not only made procurement of the imported inputs difficult but also would result in cost escalation arising from depreciated naira exchange rate.

4.8. Domestic supply of agricultural products

In spite of many laudable programmes and policies that have been implemented in the country by the government, growths in output supply of major agricultural export commodities remained unstable, low and declining for some years (Table 4.8).

There is unsteadiness and irregularity in output supply of agricultural commodities such as cocoa, rubber, cotton and palm-kernel. This has limited primary sources of raw materials for agro-industry resulting into! Shortage of agricultural raw materials and the closedown of some manufacturing factories such as textile! Industry in the country.

4.9. Share of Agriculture in Total Exports

From 1970s, relative share of the agricultural sector in foreign exchange earnings declined from average of 10.95per cent per annum in the 1970-1975 period, to 1.83 per cent per annum in 1991- 1995 period. It further declined to average of 1.19 per cent per annum in

2001-2004 sub-period (Table 4.9). Thereafter it rose marginally to 1.36 per cent in 2006-2011. Two major reasons were responsible for the decline. The first is discovery and exploitation of crude oil. Emergence of crude oil on the economic scene and its exploitation into monumental revenue earner in the 1970s brought major complications including disarticulation of domestic production structures and entrenchment of monoculturalism. The second reason is the instability and inconsistency in macroeconomic policies, which are not in harmony with agricultural policies.

4.10. Agro-Commodity Export Market

Agricultural commodity export markets are presently being controlled by very few dominant buyers that have turned Nigerian farmers into price takers as shown in the Table4.10. With the marketing structure where a single buyer is controlling 39percent to 45per cent of the export market for agricultural produce, it will be difficult to achieve meaningful export promotion if what is done in Ethiopia is not done in Nigeria by promoting trading of export commodities on a Commodity Exchange where trading activities are based on rules and regulations. Of the Top 100 non-oil exporters, only 42 of them are agro commodity exporters and of this figure, only 16 of them have one per cent and above of the market share. This may even be worse if the market share is determined commodity by commodity.

5. POLICY RECOMMENDATIONS AND CONCLUSION

5.1. Banks to provide low interest loans for SMES

One major reason for the country's dismal performance in agricultural export can be traced to its supply side constraints in terms of lack of adequate infrastructural development and access to finance by small scale enterprises. While the demand is large, the Nigerian smallholder farmers are unable to scale up their production to make them become competitive in pricing. In this regard, the bankers' committee decision in his meeting of April 2013 planned a special interest rate regime on credit for small and medium enterprises which would be implemented as part of its effort to expand the productive capacity of such entities. This time around the policy decision of the bankers committee should not be of sloganeering type, it should become operational and effective now. The special interest rate regime should be extensive enough to support the real sector, the stallholder farmers, the smallholder and medium scale processors, the retail sector of the market, the micro, medium and small scale industries. There is need to support those areas of the economy that have hitherto not benefited as much as other sectors for the reason that it would help to enhance productive capacity in agriculture and thereby generating employment and empowering a lot of people in the economy.

Cheaper lending rates to micro, medium and small scale industries would encourage them to thrive and generate employment, reduce inflation reduce, and increase productivity generally in the country. This policy strategy will bring about increased credit supply to farmers a low interest rate. Rural financial markets especially those, which confer easy access to farmers, should be strengthened. In this regard the Bank of Agriculture should be strengthened to provide scope for reduced interest rate on agricultural loans to smallholders and resource poor farmers, who are engaged in production of agricultural commodities. Bank of Agriculture should work with local credit unions to enhance fast

delivery of small loans to the farmers. The banks could be encouraged to offer long-term loans at lower interest rates to farmers. The farmers are at the mercy of middlemen unless they have access to loan without high and rising interest rates.

5.2. Develop infrastructure

Infrastructure and economic growth are mutually reinforcing and necessary for wealth creation and sustainable development. Within the Nigerian context, there is no gainsaying that the present state of infrastructure cannot guarantee the attainment of the national aspirations of being in the league of the first twenty leading economies in the world by the Year 2020 with a GDP size of $900 billion and a per capita income of $4,000 per annum as enshrined in Nigerian Vision 20:2020 (NV20: 2020). Apart from severe deficit or total absence of essential infrastructure in the rural sector of the economy, the existing system is not linked and is without clear legal, regulatory and institutional framework for coordination. Suffice to state that only a number of infrastructural plans exist in isolation at sectoral level. These include: the Power Sector Roadmap; the National Transport Master Plan; the Gas Master Plan and the Port Master Plan. The ongoing process for the development of a National Integrated Infrastructure Master Plan (NIIMP) (2012-2043) among others has the potential to accelerate Nigeria's transition to a modern manufacturing and industrialized nation integrating into the global value chains. The NIIMP which is being developed to address infrastructural challenges including inadequacy of available stock and inter-sectoral linkages should be effectively implemented. The development of the NIIMP should be well coordinated by the National Planning Commission and should provide the necessary impetus towards the realization of the NV20: 2020 Economic Transformation Blueprint and the Transformation Agenda.

Furthermore, the reform in the infrastructure sector through the development of NIIMP should among others, provide the opportunity for resource-based industrialization as raw materials and agricultural produce become easier to be evacuated to functional processing and manufacturing plants for conversion to value added products for the local and international markets. Moreover States, Local Governments, towns, villages and hamlets should ultimately become networked with effective transportation, telecommunication and energy systems (hard infrastructure). The plan should ultimately, facilitate increased productivity, wealth creation, enhance quality of life and equity under effective legal and regulatory institutions (soft infrastructure).

5.3. Effective market linkages

Market linkage is a key to increasing agricultural production, because it provides a powerful incentive for smallholder farmers to invest in productivity enhancing technologies. It is a fallacy to assume that market access is available in most cases for outlying rural areas that are remote or subject to large production variations, usually because of poor technology and infrastructures. Efforts should be intensified to develop both domestic and export market outlets by the government through provision of adequate rural infrastructures. This will also strengthen the flow of market information and thus promotes agricultural production. Effective market linkages will include the following basic elements. These are effective transportation for moving the products from where they are produced to final end users, safe and efficient storage system to ensure continuous supply of agricultural commodities in the market. It must also include efficient financing for the market to ensure prompt payment to farmers, as well as processing system that stimulates production by furnishing continuous

outlets for the farmers to produce over a long period of time. Moreover, it also requires a functioning and dynamic information system in which both the buyers and sellers are linked together. Efforts should therefore be intensified in these areas so as to extend networks of producers to local, national and international markets.

5.4. Efficient use of Agricultural Budget Share

An efficient use of investment capital and capital accumulation is required in agriculture to propel development of rural infrastructures. Improving infrastructures such as roads, electricity, water, telecommunication, irrigation, markets, health facilities and capacity building has a direct impact on employment, commercialization and diversification of agricultural industries, market linkages, and expansion as well as health and general welfare of farmers. This is required to provide adequate infrastructure like roads, bridges, water, and electricity that are lacking or in a deplorable condition in the rural areas. Similarly, this will encourage diversification of investment in agriculture. Adequate provision of rural infrastructures will facilitate processing of primary commodities into intermediate and final products, improve the market opportunities for agricultural products and promote their commercialization. It will also enhance not only competitiveness in the market but also the rate of return on investment. When the infrastructures are adequate in the rural sector, it would reverse the influx of rural labour to urban centres. In this way, it would enhance increased utilization of abundant unemployed labour. Similarly, it will facilitate movement of inputs and farm products as well as regular supply of raw materials to agro-industry.

5.5. Stable macroeconomic policies

A stable macroeconomic environment characterised by price stability should be maintained and sustained by government since price stability will facilitate farmers access to agricultural inputs.

5. 6. Organization of farmers into viable cooperative societies

Commodity Exchange will be able to promote non-oil exports particularly in the agricultural sector if government can assist in organizing farmers into viable cooperative societies for volume building and economies of scale and support the introduction of warehouse receipt financing. Achievement of improved production in the agricultural sector and export promotion will be difficult if there is no efficient local market such as a commodity exchange that can stimulate improved production because of the price discovery and improved livelihood of the Nigerian farmers that will be impacted.

In addition viable collective bargaining power of viable farmers' cooperatives will facilitate inputs supply to smallholder farmers at affordable prices in order to provide opportunities to expand their farm sizes. The farmers must procure support for inputs from cooperative association at reasonable price.

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Table 1.1: Nigeria's Poverty Profile

	2004	2010	2011
Estimated Population(Million)	126.3	163	168
Relative Poverty(%)	54.4	69	71.5
Absolute Poverty(%)	54.7	60.9	61.9
Dollar Per Day (%)	62.8	61.2	62.8

Source: Central Bank of Nigeria Annual Report 2011

Table 4.1: Variability in Interest rates, and Exchange Rates, Nigeria 1970-2011.

Variable	Interest Rate Saving:			Interest Rate Lending			Minimum Rediscount Rate			Exchange Rate		
Year	Mean (%)	Std Dev	CV (%)	Mean (%)	Std Dev	CV (%)	Mean (%)	Std Dev	CV (%)	Mean N to $	Std Dev	CV (%)
1970-75	3.17	0.41	12.89	9.33	1.21	12.98	4.5	0	0	0.66	0.04	5.45
1976-80	4.6	0.89	19.44	9.5	2.06	21.7	4.7	0.97	20.74	0.61	0.04	6.2
1981-85	8	1.5	18.75	11.6	1.07	9.22	8.4	1.67	19.92	0.73	0.11	14.46
1986-90	14.64	3.44	23.48	20.22	6.14	30.35	14.5	3.82	26.35	5.2	2.49	47.87
1991-95	14.63	1.71	11.72	22.42	5.03	22.43	17	5.29	31.13	30.7	29.28	95.4
1996-2000	6.52	2.9	44.5	22.85	2.6	11.37	14.56	1.95	13.42	96.7	26.27	27.17
2001-2005	4.91	0.69	14.03	24.58	4.67	19.01	16.35	2.4	14.69	116	4	3.45
2006-2011	2.65	0.79	29.62	20.58	2.19	10.66	8.93	2.1	23.47	137.68	15.06	10.94

Note: Std Dev = Standard Deviation, C.V.= Coefficient of Variation.

Note: Std Dev = Standard Deviation, C.V.= Coefficient of Variation.

Source: Underlying data obtained from the Central Bank of Nigeria, and National Bureau of Statistics, Abuja.

Table 4.2 Nigerian Food Import Bill: 2000-2011

Year	Value of Total Food and Animal Import (NGN billion)	Value of Total Food and Animal Import (US$ billion)
2000	113.63	1.11
2001	160.2	1.43
2002	144.3	1.19
2003	201.65	1.56
2004	178.75	1.34
2005	193.26	1.46
2006	214.49	1.67
2007	269.92	2.15
2008	311.38	2.63
2009	446.9	3
2010	693.25	4.61
2011	1077.84	7.01
Average	333.8	2.43

Source: Central Bank of Nigeria Statistical Bulletin

Table 4.3: Urban and Rural Wage Rates

Year	Monthly Urban wage			Monthly Rural Wage			Urban-Rural Wage differential		
	Mean	SD	CV	Mean	SD	CV	Mean	SD	CV
1970-75	54.83	6.01	10.97	40.9	0	0	13.93	6.01	13.38
1976-80	79.3	28.7	36.2	60.24	28.62	40.75	19.06	4.56	50.28
1981-85	155	0	0	121.44	0	0	19.38	0	0
1986-90	226.65	65.41	28.86	177.04	55.12	31.13	179.72	268.94	89.64
1991-95	1165.25	461.7	39.62	874.83	232.27	26.55	395.58	206.49	52.2
1996-2000	4524.63	2969.24	65.62	3000.63	1313.67	43.78	1683.37	1695.85	100.04
2001-2007	7500	0	0	3960	0	0	3540	0	0
2008-2012	7500	0	0	3960	0	0	3540	0	0

Notes: Mean is in Naira; SD is Standard Deviation and CV is Coefficient of Variation in % Source: Underlying data obtained from National Bureau of Statistics, Abuja, Enwere,1998.

Table4.4: Mean and Variability of Expenditure in Agriculture by the Federal Government

Year	Total Expenditure			Expend. in Agric			Share of Agric in Total			CEA	
	Mean Nm	Std. Dev Dev	CV (%)	Mean Nm	Std Dev	CV (%)	Mean Nm	Std Dev	C.V	Mean Nm	% of Total
1970-75	3063.93	2797.55	91.31	78.1	92.34	98.2	2.05	0.9	44	61.45	4.98
1976-80	14685.42	4924.86	33.54	207.66	146.87	70.7	1.37	0.55	40.12	224.12	2.92
1981-85	13882.54	3619.99	26.08	616.26	299.79	48.7	4.7	2.95	62.69	846.66	12.55
1986-90	33567.62	17448.8	51.98	1082.36	729.5	67.4	3.03	0.92	30.32	916.66	10.83
1991-95	152054.4	73795.02	48.53	2605.84	1143.5	43.9	1.77	0.32	18.01	2125.2	7.67
1996-2000	556043.94	269665.11	48.5	9837.16	3105.85	31.6	1.9	0.41	21.65	6338.22	5.04
2001-2006	1087379.57	120011.34	11.04	41930.97	24575.61	58.6	4.03	2.56	63.42	34356.03	8.93
2007-2011	3386776.37	753051.31	22.24	133921.25	31098.7	23.2	4.2	1.52	36.13	95980	10.23

Notes: Mean Nm = Mean in Million Naira; Std.Dev= Standard Deviation; CV= Coefficient of Variation; CEA= Capital Expenditure in Agriculture.

Notes: Mean Nm = Mean in Million Naira; Std.Dev= Standard Deviation; CV= Coefficient of Variation; CEA= Capital Expenditure in Agriculture.
Source: Underlying data obtained from the Central Bank of Nigeria, and National Bureau of Statistics.

Table4.6: Nature of Primary Roads in Nigeria

Year	Paved Primary Roads As % of Total Roads	Unpaved Primary Roads As % of Total Roads
1994	21.3	78.7
1995	18.8	81.2
1996	18.8	81.2
1997-2004	30.9	69.1

Source: World Development Indicators (2006), World Bank.

Table 4.7.1: Average prices of Major Farm Inputs in Nigeria.

Type of Input	1980	1985	1990	1995	1999	2007	2011
Hoe(N/Unit)		2	20	105	200	Na	400
Matchet(N/Unit	5	8	35	150	250		500
Sprayer(N/Unit	75	150	850	2200	4500	Na	7000
Tractor Hire(N/ha)	25	55	250	850	2000	Na	3000
Fuel (N/Litre)		0.2	0.44	7.39	17.8	Na	97
Fertilizer(N/25kg	2	15	50	500	1250	Na	5000
Agrochem(N/litre)	-	65	280	850	1500	2026	2500

Source: Oni, T.O.(2007): and CBN Annual Report 2011.

Table 4.7.2: Growth Rates of Imported Agrochemical in Nigeria, 1970-2005.

Variables	1970-75	1976-80	1981-85	1986-90	1991-95	1996-2000	2001-2005
Insecticide imports							
Average quantity('000Kg)	460.43	20721.96	20127.44	4146.3	3742	Na	Na
Growth Rate (%)	1050.82	22.26	-34.38	-16.08	-9.75	Na	Na
Fungicide imports							
Average quantity('000Kg)	201.97	1001.85	879.64	4024.89	972.39	Na	Na
Growth Rate (%)	217.04	1.24	694.87	393.21	-75.84	Na	Na

Source: Underlying data obtained from the Nigerian Trade Summary, National Bureau of Statistics, Nigeria.

Table 4.8: Five-year Average Growth in Domestic Supply of Major Agricultural Export Commodities (%).

Period	Cocoa	Rubber	Cotton	Palm Kernel
1986-90	11.8	25.27	25.24	36.09
1991-95	-1.6	15.7	1.62	-8.31
1996-2000	16.27	1.56	7.33	3
2001-2005	3.42	4.62	5.03	4.43
2006-2011	6.48	5.56	4.8	7.83

Source: Central Bank of Nigeria's Annual Report and Statement of Accounts, Various Years.

Table4.9: Five Year Average Value of Agricultural Commodities exports ($ million) and Percentage in Total Merchandise exports.

Period	Value of Total Exports($million)	Value of Agricultural Exports($million)	Percent of Agricultural Exports in Total Exports(%)
1970-75	3741.07	291.76	10.95
1976-80	12266.3	498.12	4.55
1981-85	11572.3	272.55	2.44
1986-90	5208.48	204.33	4.29
1991-95	11829.24	200.46	1.83
1996-2000	26106.22	261.08	0.7
2001-2005	20084.43	281.14	1.19
2006-2011	75362.69	1028.69	1.36

Source: Central Bank of Nigeria's Annual Report and Statement of Accounts, various years.

Table4.10: Agro- Commodities Exporters with 1Per cent and Above Market Share in 2010 and 2011:

Table4.10: Agro- Commodities Exporters with 1Per cent and Above Market Share in 2010 and 2011:

Exporters in 2010	2010 (US$million)	2010 (% of Total)	Exporters in 2011	2011 (US$million)	2011(% of Total)
Olam Nig. Ltd	426.354	45.74	Olam Nig. Ltd	444.021	39.15
Saro Agro Allied Ltd	87.218	9.36	Imonyame Holdings Ltd	97.779	8.62
Agro Traders Ltd	73.742	7.91	Saro Agro Allied Ltd	79.457	7.01
Rubber Estates Nig. Ltd.	37.936	4.07	Rubber Estates Nig. Ltd	72.348	6.38
Tulip Cocoa Processing Ltd	34.71	3.72	Agro Traders Ltd	56.086	4.95
Imonyame Holdings Ltd.	34.5	3.7	Atlantic Shrimpers Ltd	36.023	3.23
Atlantic Shrimpers Ltd	30.721	3.3	Tulip Cocoa Processing Ltd.	34.943	3.18
Maviga West Africa Ltd	21.509	2.31	Multi-Trex Integrated Foods Plc	28.121	3.08
Multi-Trex Integrated Foods Plc	19.101	2.05	Enhuat Industries Ltd	28.121	3.08
Enhuat Industries Ltd	18.066	1.94	Vakorede Nig. Ltd	18.377	2.19
Stanmark Cocoa Processing Company Ltd.	13.139	1.41	Stanmark Cocoa Processing Company Ltd.	15.914	1.62
RMM Global Company Ltd.	11.921	1.28	Maviga West Africa Ltd	15.914	1.4
The Okomu Oil Palm Company Ltd	11.987	1.29	Armajaro Nig. Ltd	15.249	1.34
Starlink Global & Ideal Ltd	11.185	1.2	Armajaro Nig. Ltd	13.483	1.19
			Yara Commodities Ltd	12.608	1.11

Source: Nigerian Export Promotion Council