



The administration of FADAMA and agricultural sector performance in Nigeria

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ABSTRACT

Agriculture was the mainstay of the Nigerian economy before the discovery of oil in commercial quantity in the late 1960s to early 1970s. The sector provides employment opportunity for a larger portion of the nation's population. So also is the provision of raw materials for most industries and provision of food for the nation. With the discovery of oil in the country, the sector has been witnessing decline in terms of performance. This has prompted the government in the early 1990s to establish fadama among many other measures aim at alleviating the problem facing agriculture. This study therefore examines the impact of fadama administration on the performance of agricultural sector in Nigeria. The study adopted qualitative analysis by comparing agricultural sector's performance pre and post fadama establishment. The findings show mixed fortune in the performance of the sector. Whereas the total agricultural production has been on the increase, it has not been enough to meet the domestic consumption as the nation still import some agricultural products especially food items. Also the contribution of the sector to GDP is declining much as labour mobility from the sector to more lucrative sector is becoming rampant. The study therefore concludes that more funding be allocated to fadama in particular and the entire sector in general so as to address the problems detected by the findings.

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Introduction

The performance of any given sector or industry depends on a lot of factors. Some of these factors are controllable and some uncontrollable. These factors could be so germane that they sometimes threaten the very existence of such sector or industry. The performance of agricultural sector in Nigeria like most other economies equally depends on some these factors. The factors which are mostly institutional factors and are in some occasion policy induced factors. The nexus between these types of factors is that one is a product of the other. In Nigeria today, most agricultural institutions are borne out the attempt to implement a particular agricultural policy. Cocoa Research Institute of Nigeria (CRIN) in Oyo State was established as a result of the desire of the Nigerian government to boost the production of cocoa and maintain her status as one of the leading exporters of the commodity in the world. Similarly, Rubber Research Institute of Nigeria in Edo State was established for the similar reason of being a major producer/exporter of rubber in the world. The establishment of the Nigerian Agricultural and Cooperative Bank in 1977 before it metamorphosed into Nigerian Agriculture Rural and Cooperative Development Bank in 2002 is one of the many institutions established to enhance the performance of agricultural sector in Nigeria.

One of these numerous initiatives of FGN¹ is the establishment of the FADAMA project. Fadama is an hausa word, which means low-lying flood-prone lands found in the plains of rivers. Fadama areas are composed of deposited

sediments and contain exploitable aquifers (water tables). It involves preparation of low-lying areas and flood plains for crops, agroforestry and livestock production (Nwadukwe 2000). The FADAMA project was conceived and established for the sole purpose of the country becoming self-sufficient in the production of food in the country. The National Fadama Facility (NFF) was established under the NFD² loan No. 3541 UNI to assist Fadama development in the states that met the pre-determined eligibility criteria (Ajayi and Nwalieji, 2010). The NFD² was approved for funding on March 26, 1992 for a loan of US \$ 67.5 million. It was to build on the achievements of some of the Northern ADP³s in developing small-scale irrigation through extraction of shallow ground water, using low cost petrol-driven pumps.

The Fadama Project has been implemented in all the 36 States of the federation plus the FCT. Target groups include: (a) the rural poor engaged in economic activities (farmers, pastoralists, fishermen, nomads, traders, processors, hunters and gatherers as well as other economic interest groups); (b) relatively disadvantaged groups (women including widows) such as the handicapped, the sick including people living with HIV/AIDS, and the youth; and (c) service providers, including government agencies, private operators and professional/semi professional associations operating in the project areas. This is expected to have reached approximately 2.2 million direct

¹ Federal government of Nigeria.

² National Fadama Development Project

³ Agricultural Development Programmes

beneficiary households, or about 16 million household members. (FMAWR, 2009).

That Fadama is a success story in Nigeria is to understate the achievement of the project. From relatively improved production of basic food items in the country to the provision of jobs to many unemployed as well as improvement in the income of rural farmers, the project has recorded some degree of results vis-a-vis the expected result. As a matter of fact, it was based on the achievement of Fadama I that made the FGN to embark on Fadama II and now the introduction of Fadama III.

Statement of Problem

As stated at the previous sub-section, Fadama is one of the many initiatives of successive governments in Nigeria. From Operation Feed the Nation of Obasanjo between 1976 and 1979 to Green Revolution Shagari regime in the 80s to many other initiatives of the government in promoting the development of agriculture in Nigeria, not much could be said in terms of the result if juxtaposed with the efforts. Even the introduction of Fadama I-III from the 1990s till date has not seriously addressed the problems facing agricultural developments in Nigeria. The country, which had been a major exporter of notable food crops especially grains in the 1960s through the early 1970s is now a major importer of food. In this period, Nigeria was the world's second largest producer of cocoa, largest exporter of palm kernel and largest producer and exporter of palm oil. Nigeria was also a leading exporter of other major commodities such as cotton, groundnut, rubber and hides and skins (Alkali, 1997). In sum, Nigerian economy could reasonably be described as an agricultural economy because agriculture served as the engine of growth of the overall economy (Ogen, 2003). Presently, agriculture and other sectors have been relegated to the background.

Agricultural output has been increasing in nominal term, its contribution to gross domestic product has been dwindling. On the aggregate, total agricultural output was 31,441.3 metric tonnes within the periods of 1970-1974. The output fell to 26,287.5 metric between 1980 and 1984, only for it to increase and peaked at 135,973.6 metric tonnes between 2000 and 2010. Although the bulk of this aggregate output are mainly from the food crops of yam, cassava, maize and sorghum, the extent of the agricultural import of food has been very alarming. Reports from Food and Agricultural Organisation (2011), show that Nigeria is a huge net importer of agricultural products, with imports of approximately \$3.7 billion and exports of only about \$600 million in 2007. Nigeria is predominantly a bulk/intermediate commodity market and major imports are wheat, rice and sugar. The United States is a leading exporter of agricultural products to Nigeria (\$725 million in 2007 compared to less than \$500 million in 2006), the bulk of this export to Nigeria is wheat.

Agricultural export has equally not been encouraging. The country is a major exporter of raw agricultural commodities with limited value addition to the product before exporting them. The volume of agricultural export between 1970 and 1974 was 924 metric tonnes. The figure declined to an all time low value at 186 metric tonnes between 1980 and 1984. Despite the fact it is rising since then, it has never reached the 1970-1974. In terms of value of agricultural export, it has witnessed tremendous growth as it increased from 241.22 million naira between 1970 and 1974 to 38,588.1 million naira between 2005 and 2009. This growth in the value of export will however be eroded if exchange rate is brought into consideration to reflect the real value of the

agricultural export. Of the share of agricultural export in total export, the contribution has not been significant as the highest was 14.96% in the period between 1970 and 1974. Since then, it has been falling as it fell to as low as 0.8% between 2000 and 2004.

The basic questions then are; of many initiatives of the government in seeing to the self-sufficiency of the nation in food production, what are the roles of Fadama? How is Fadama operating? What are the organisational structures of Fadama? Has the structure and conduct of Fadama anything to do with the performance of agricultural sector in the country? What are the impediments to the performance of Fadama and how can these impediments be overcome? These and many other questions form the basis of this research work.

Objective of the Study

The broad objective of the study is to examine the impact of the administration of Fadama on the performance of agricultural sector in Nigeria.

Specifically, the study will

1. Examine the administrative structure of Fadama in Nigeria.
2. Analyse the impact of the administrative structure on the performance of agricultural sector in Nigeria.

Nigerian Agricultural Structure and Performance

Nigeria ranks twenty fifth worldwide and first in Africa in farm output (Wikipedia). In terms of employment, agriculture is by far the most important sector of Nigeria's economy, engaging about 70% of the labor force. It is broadly divided into three major categories of Crop Production, Animal Husbandry (Livestock) and Fishery.

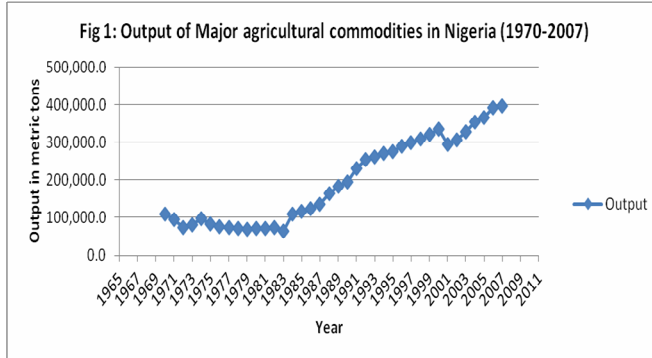
Crop Production

Agricultural holdings are generally small and scattered; farming is often of the subsistence variety, characterized by simple tools and shifting cultivation. These small farms produce about 80% of the total food. About 30.7 million hectares⁴ (76 million acres), or 33% of Nigeria's land area, are under cultivation. Nigeria's diverse climate, from the tropical areas of the coast to the arid zone of the north, make it possible to produce virtually all agricultural products that can be grown in the tropical and semitropical areas of the world. The economic benefits of large-scale agriculture are recognized, and the government favors the formation of cooperative societies and settlements to encourage industrial agriculture. Large-scale agriculture, however, is not common. Despite an abundant water supply, a favorable climate, and wide areas of arable land, productivity is restricted owing to low soil fertility in many areas and inefficient methods of cultivation.

The agricultural products of Nigeria can be divided into two main groups: food crops, produced for home consumption, and export products. Prior to the civil war, the country was self-sufficient in food, but imports of food increased substantially after 1973. Bread, made primarily from US wheat, replaced domestic crops as the cheapest staple food for much of the urban population. The most important food crops are yams and manioc (cassava) in the south and sorghum (Guinea corn) and millet in the north. In 1999, production of yams was 25.1 million tons (67% of world production); manioc, 33.1 million tons (highest in the world and 20% of global production); cocoyams (taro), 3.3 million tons; and sweet potatoes, 1,560,000 tons. The 1999

⁴ An hectare is a unit of area equal to 10,000square mile or 2.471 acres, while an acre is a unit of area equal to 4,046.86square mile.

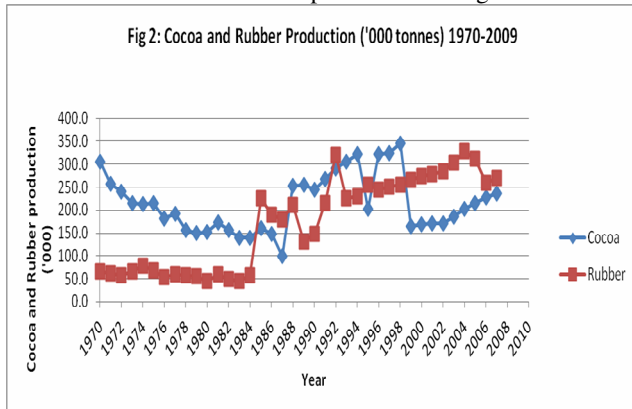
production estimates for major crops were as follows (in thousands of tons): sorghum, 8,443; millet, 5,457; corn, 5,777; rice, 3,399; peanuts, 2,783; palm oil, 842; sugar cane, 675; palm kernel, 565; soybeans, 405; and cotton lint, 57. Many fruits and vegetables are also grown by Nigerian farmers. The figure below shows the crop production index in Nigeria from 1960 to 2009.



Source: Based on the figures from CBN Statistical Bulletin 2008

The figure above shows the trend of the output of major agricultural products in Nigeria. It comprises of the figures for both food crops, produced for home consumption, and export products. Agricultural production has been increasing steadily from 1970 till 2008 in nominal value. Its contribution to GDP has not been significant. More so the despite the increase in production, the country is still battling with agricultural importation especially rice importation.

All these years under consideration, cocoa is the leading agricultural product in Nigeria, it is the leading non-oil foreign exchange earner. Growth in the sector has been slow since the abolition of the Nigerian Cocoa Board. The dominance of smallholders in the cocoa sector and the lack of farm labor due to urbanization hold back production. Nigeria has the potential to produce over 300,000 tons of cocoa beans per year, but production only amounted to 145,000 tons in 1989. Rubber is the second-largest non-oil foreign exchange earner. Despite favourable prices, production of the commodity has witnessed serious fluctuation over the years. The figure below shows the trend of both cocoa and rubber production in Nigeria since 1970.



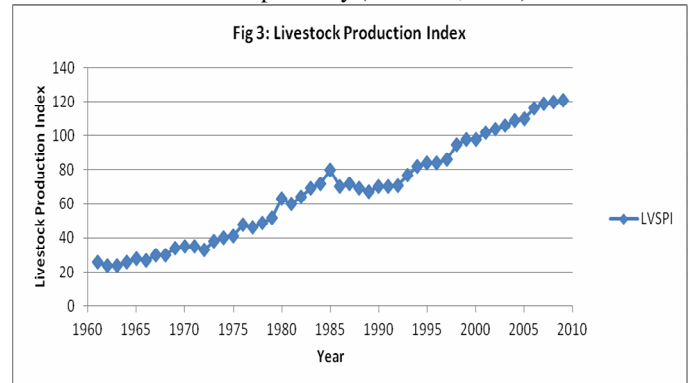
Source: Based on figures from CBN Statistical Bulletin, 2009.

From the figure, the production of rubber in the 70s was very low. From 1970 to 1984, the production per 1000 of tones was less than 100. It was in 1985 that the dramatic change in rubber production was witnessed as the output increased from 58,000 tonnes in 1984 to 226,000 in 1985. The output hit all high figure in 1992, when it was 320,000 tonnes before it fell again to 225,000 tonnes in 1993. The fluctuating pattern in the

production is attributable to low yield, aging trees and lack of proper equipment.

Livestock

Accurate statistical data on the Nigerian livestock population are very scarce and are as varied as the human population figures (Ikhatua,2010). Various figures have been given by different sources and at different times. However, the estimated domestic ruminant population in Nigeria has been put at 13.9 million cattle, forming 60% of the livestock population, 34.5 million goats, 22.0 million sheep (both accounting for 35.2% of the total population of the world's small ruminants) equine and camels account for 3.6% and 0.6% of the livestock population respectively (RIMS, 1992). The cattle herds belong to the *Bos indicus* and dominated mainly by the zebu breeds such as the Bunaji (White Fulani), Sokoto Gudaji (Bokoloji) and the N'Dama. The Bunaji and Sokoto Gudali form about 51% and 12% respectively of the Nigerian cattle population. Nigeria is the largest livestock producer in the Sub-Saharan Africa. Ethiopia and the Sudan have the largest livestock population in the African continent respectively (Lamorde, 1998)



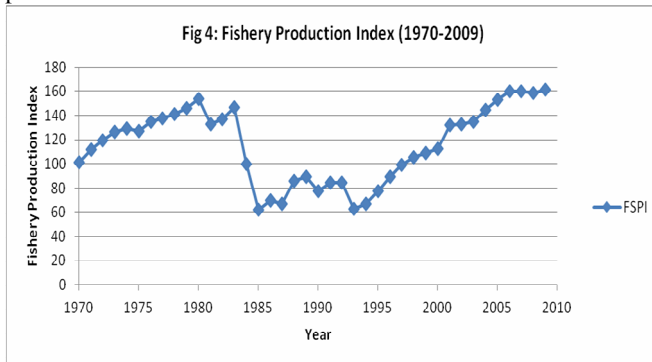
Source: Based on figures from WDI 2010

Fishery

Just like the data on livestock in Nigeria, data on Nigerian fishery is very meager. Efforts in gathering data on the Nigeria's artisanal sector did not become prominent until the 1990s. The reason is partly because the country is known to be a major importer and not an exporter of fish. Fish production is wholly produced and consumed in Nigeria. The shortage in terms of consumption is augmented by way of importation. Some fish (mainly artisanal pelagics) is smoked for distribution to villages with limited cold-storage infrastructure. Smoking occurs in small and home-based enterprises along the coast and around Lake Chad, and is done principally by women. Nigeria has a high rate of domestic seafood consumption—almost all fish production is consumed in country. Shrimp is the only large export; about half of total production is exported. (FAO). However as Osalor (2011) puts it, because of its extensive coastline and tropical climate, Nigeria has the potential to develop a diversified ecology for a range of commercially viable varieties of fish. The economic appeal behind fishing is tremendous, considering the secondary and tertiary enterprises it can generate.

The diagram above shows the same pattern in terms of production trend of other agricultural products in Nigeria. From a low production index of 101.6 in 1970, the fishery production index rose steadily to 153.4% in 1979. The production index fell from 1980 and the same height of 1979 production was not achieved again until 2005. The reason for this poor performance of the sector is connected in part to the source of supply, which

is nature and partly due the reduction in tariff from 25% to 5% in 2001. This has made importation viable as against local production.



Source: Based on Figures from CBN Statistical Bulletin 2009

The summary of the trend in agricultural production from 1970 to 2009 is therefore presented in the table below:

The summary of the table above can be seen from the growth rate of the aggregate production index in the last four decades. Between 1970s and 1980s, the sector witnessed a growth rate of 16.7%, while it witnessed a tremendous growth rate of 95.7% between 1980s and 1990s. The achievement of 1980s and 1990s could not however be sustained, as the period between 1990s and 2000s witnessed a declining increase in the aggregate production index in Nigeria. It must be mentioned however that the bulk of the growth rate is attributable to the performance of crops production, staples production and other crops. Although livestock, fishery and forestry have contributed to the growth rate of the overall production, their contributions have been very insignificant.

Nigeria's Agricultural Sector's Performance

The country's agricultural sector's performance can be viewed from many angles. Some of these angles include the sector's contribution to the GDP, the sector's contribution to total export (especially non oil export) and by extension, the sector's contribution to external reserves. The sector is equally reputable for its contribution to employment generation, its contribution to food security as well as provision of raw materials for the manufacturing industries.. The summary of the performance of agricultural sector is given in the table below.

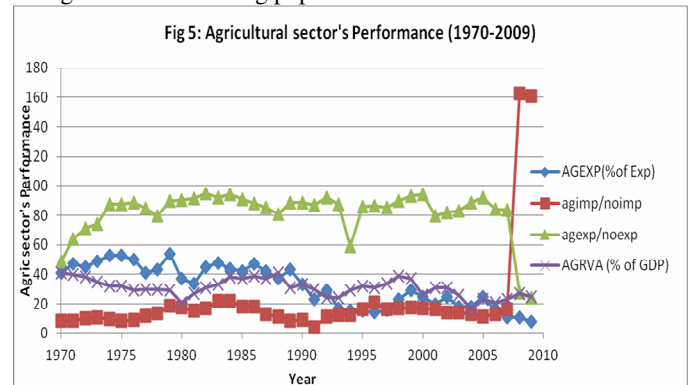
Agriculture's contribution to total output has been steady for the past four decades. Between 1970s and 1980s, no significant improvement was witnessed in terms of the sector's contribution to GDP. While it was 33.6% in the 70s, it was 33.5% in the 80s. The extent of the sector's contribution to the GDP is limited by the attention given to it by the Nigerian authority. This is because, attention has been shifted greatly from agriculture sector to oil sector since the late 60s. This neglect, of course has impacted negatively on the contribution of the sector to GDP over the years as reflected in the subsequent decades that follows the 80s. By the 1990s, the sector's contribution had fallen to 31.3% and in the last decade of 2000s, it has seriously gone down to 25%.

The sector's contribution to non-oil GDP is a bit higher. The reason for this obvious. The bulk of what constitutes non-oil GDP is aggregate of the revenue from agriculture and solid mineral resources. While agriculture had been the mainstay of the Nigerian economy, solid mineral exploitation is just gaining attention. As a matter of fact, attention to solid minerals resources became apparent form 2003, when the government started canvassing for economy diversification and

overdependence on oil sector. With a 48.6% contribution in the 70s, the contribution increased to 52.4% in the 80s and by the 2000s, it has risen to 55.9%.

The trend in the contribution of agriculture's export to total export follows similar pattern as that of the sector's contribution to GDP. From 47.6% in the 70s, it fell to 41.9% in the 80s. The manifestation of this is in the country's export profile in the oil sector. From the 70s, the major component of the nation's export has been crude oil. This has seriously hampered the contribution of other sector to export. The resultant effect is more dwindling in the fortune of the agriculture sector's contribution to export in the 90s and the 2000s as the contribution fell to 21.5% and 17.3% respectively.

On the import side, agriculture's component of total import has been fluctuating. It was 10.6% in the 70s, and it increased to 15.21% in the 80s. This fell again to 10.80% in the 90s and rose to 11.76% in the 2000s. The trend can be explained by economic development in the country. As a result of the diversification of the economy from agriculture in the early 70s, it was expected that most of the importation that would be done will be more of importation of heavy machinery and equipment needed to carry out the refinery processes that would follow the discovery of oil. The rise in agriculture import in the 80s however is not unconnected with the rising importation of food items. The indication of this is that whereas, the nation is enjoying economic boom in terms of revenue from oil sector, the neglect of agriculture is telling on the inability of the nation to provide enough for the increasing population.



Source: Based on Figures from CBN Statistical Bulletin (Various Editions)

Review of literature

Literature on Fadama project in terms of historical development, its contribution to food production and the general impact on the entire economy are abound. Ajayi and Nwaleji (2010) tried to examine the impact of Anambra State Fadama Project Phase -1 on the socio-economic life of rural farmers. The study employs the use of primary data. Data for the study were collected from 160 vegetable growers, through the use of a set of structured interview schedule. Percentage, mean scores, factor analysis, t-test, and chi-square statistics were used in the data analysis. The result of the study indicated that telfaria and okra production were most preferred to other vegetables during dry and wet seasons, respectively, mainly due to their high income generating capacity, high market demand, high yielding capacity and usefulness and readily availability to the family.

The project made some appreciable socio-economic impact on the growers and the socio-economic aspirations of the Project Farmers (PFs) shifted from personal to farm improvement for Fadama vegetable production. The major constraints to the full

implementation of the project objectives in the area included post-harvest, logistics and poor Fadama incentive problems. It was therefore, recommended that there should be timely and adequate provisions of Fadama inputs and infrastructure; and that low cost but improved technologies for storage, transportation, processing and marketing of Fadama vegetable produce should be introduced by the National Fadama Development Project (NFDP) management.

In the study conducted by Adebisi-Adelani et al (2011), the study examines constraints militating against Fadama vegetable production in Oyo State, Nigeria. It has also examined involvement of male and female in the production activities. A multi-stage sampling technique was adopted to sample and administer questionnaires to 73 respondents in the study area. Data were collected and analyzed using descriptive and inferential statistics. The unavailability of credit sources, high cost of inputs (52.1%), irregular fuel supply (24.7%), frequent pump break down (24.7%), irregularities in water pump operation (16.7%) and maintenance of the pump (9.6%) were constraints against capital use in the study area. The major constraints against labour use were the inability to hire labour. The result of the T- test analysis showed that almost all the activities considered in the study are male dominated. Activities such as land clearing (67%), Bedding (66%), planting (54%), watering (46%) and digging of well (69%) were male dominated. The study recommended among others that there should be provision of credit facilities and initial take off capital for both male and female for the production of vegetable during the dry season. This will enable them to benefit from the high profit usually realized in vegetable production during the period.

A similar study conducted by Kudi et al (2008) examines the impact of National Fadama Development Project II on the socio-economic status of the farmers and equally assesses the extent to which participation in the programme has enhanced the level of production efficiency. The study relied on primary data collected using structured questionnaire and personal interviews. The analytical tools used include descriptive statistics and stochastic frontier production function, which incorporates technical inefficiency model using the maximum likelihood estimation (MLE). The MLE estimates of the parameters of the stochastic frontier production function reveals that the elasticities of output with respect to farm size (0.3246) and family labour (0.003) were significant at 5% level while, hired labour (0.6382) and fertilizer (0.0994) were significant at 1% level. This implies that for a 10% increase in the use of these variable inputs will increase output by 3.2, 0.033, 6.38 and 0.1% for land area, family labour, hired labour and fertilizer respectively. The sum of the elasticity of the estimated parameters was 1.0529, implying a constant return to scale in the enterprise. The study revealed that the levels of technical efficiency ranged from 47.38% to 99.54% with a mean of 91.77%. The mean (91.77%) level of technical efficiency indicates a high level of technical efficiency on an average farm unit. The study also revealed that these efficiencies are positively and significantly correlated with years of irrigation farming, number of visits by extension agents, level of education household size and ownership of water pump. This can be achieved through policy interventions that contribute to better access to inputs (improved seeds, agrochemical), irrigation water pump, fertilizer and farmer-specific efficiency factors. Age of the farmers was the factor that affects the level of efficiency under fadama crop production.

In their own contribution to study of Fadama in Nigeria, Nwachukwu et al (2008) investigated the impact of the Second National Fadama Development Project on the farmer's household in Nigeria. The study concluded that as at mid-term, beneficiaries have increased their income by about 25%. So far, an estimated 2.3 million Fadama households have benefited from the expansion in incomes and wealth (asset) derived from the previously unavailable services provided by the project. The project had created about 126, 000 permanent jobs and an additional savings of more than \$40.8 million have been realized by the majority of the participating states.

The attitude of farmers towards the implementation of Second National Fadama Development Project (NFDP-II) at the local level in Nigeria was the major concern of Agwu and Abah (2009). The study enumerates the major function of fadama II as focusing on government – farmer partnerships in the funding of agricultural enterprises with the aim of achieving sustainable and stable funding for agricultural development. Samples drawn for the study was made up of male and female Fadama beneficiaries selected through multistage sampling from the fadama resource users groups (FRUGs) in Lokoja and Idah LGAs of Kogi State. The findings indicated that the majority (51.5%) of the respondents were in their productive years. The results show that the majority of the farmers had favourable attitude towards cost – sharing of the fadama II programme. However, the level of farmers' participation in the planning, implementation and monitoring activities were very low except in the areas of financial management, maintenance of fadama investments and proffering conflict mitigation measures. The findings further indicates that late disbursement of funds from the African Development Bank (ADB), difficulty in collecting money from some farmers/high cost of administration, insufficient credit availability and the tendency of highly placed individuals/politicians to hijack the programme by registering personal resource user groups (FRUGs)/fadama community associations (FCAs) were problems militating against the effective implementation of the project. The study concludes that there is great need to specifically target vulnerable sub-groups such as widows, the elderly, castes and marginal fadama users through an inclusive participatory planning process to avoid situations of elite capture and conflicts in the on-going Fadama III project.

Collaborating the findings above is the study of Dan-Azumi (2010) which surveys and analyses the sustainability of *fadama* farming systems in semi-arid northern Nigeria.

The findings reveal a delicate interaction and negotiation across the formal and informal boundaries where traditional agricultural practices, based on an understanding of the particular physical reality and exploitation of natural synergies, are combined with inputs typical of conventional agriculture. The conclusion of the study reveals that African agriculture stands poised at a crossroads: whether to abandon tradition in favour of entirely 'modern' methods and export markets as often advocated in certain circles or to depend on time-tested indigenous knowledge systems and grassroots-defined development vision which combines popular livelihoods with respect for nature's systems.

Impact of FADAMA administration on Agricultural Sector

To examine the impact of Fadama on agriculture performance in Nigeria, an inter-temporal comparison of the sector's related variables have been adopted.

Table 1: Nigeria's Agricultural Production Index (%) (1970-2009)

Year	Crops	Staples	Other Crops	Livestock	Fishery	Forestry	Aggregate
1970-1979	110.38	118.51	90.08	77.05	127.46	92.79	94.29
1980-1989	113.12	113.03	110.84	99.6	104.33	105.48	110.04
1990-1999	250.20	275.47	159.45	170.19	85.69	114.54	215.39
2000-2009	546.24	596.25	281.01	274.07	141.29	146.93	275.57

Source: CBN Statistical Bulletin 2009

Table 2 Agriculture's contribution to Economic Development (1970-2009)

Indicators / Years	1970-1979	1980-1989	1990-1999	2000-2009
Agriculture (%) of GDP	33.6	33.5	31.3	25
Agriculture (%) of Non-Oil GDP	48.6	52.4	54.0	55.9
Agricultural Export (%) of Export	47.6	41.9	21.5	17.7
Agricultural Export (%) of Non Oil Export	77.8	89.7	86.3	71.3
Agricultural Import (%) of Import	10.6	15.21	10.8	11.76
Agricultural Import (%) of Non Oil Import	10.9	16.29	13.80	43.82

Source: CBN Statistical Bulletin (Various Issues)

Table 2: Agricultural sector performance pre and post Fadama periods

	Pre-Fadama Periods		Post-Fadama Periods	
	1970-1979	1980-1989	1990-1999	2000-2010
Agricultural Output ⁵	7655500	12067432.2	20682940	24045203.85
Agricultural Output (Value) (1millionUS\$)	19789.99	23489.65	45114.06	64053.03
Agricultural Export (Quantity) (Tonnes)	619470.7	343595.8	525294	677754.1
Agricultural Export (Value)	484970.6	349754.6	358617.2	712292.1
Agricultural Import (Value) (1000US\$)	721229	1394019.3	975612.3	3420376.75
Percentage of Agric in GDP	33.6	33.5	31.3	25
Percentage of Agric population in Total Population	NA ⁶	48.90188	38.51764	28.14825

Table 3: Growth rate in Agricultural Sector Performance

	Pre-Fadama Periods		Post-Fadama Periods	
	1970-1979	1980-1989	1990-1999	2000-2010
Agricultural Output ⁷	-32.3	57.6	71.3	16.3
Agricultural Output (Value) (1millionUS\$)	11.9	18.7	92.1	42.0
Agricultural Export (Quantity) (Tonnes)	-52.8	-44.5	52.9	29.0
Agricultural Export (Value)	38.3	-27.9	2.5	98.6
Agricultural Import (Value) (1000US\$)	715.3	93.3	-30.0	250.6
Percentage of Agric in GDP	-	-0.3	-6.6	-20.1
Percentage of Agric population in Total Population	-	-	-21.2	-26.9

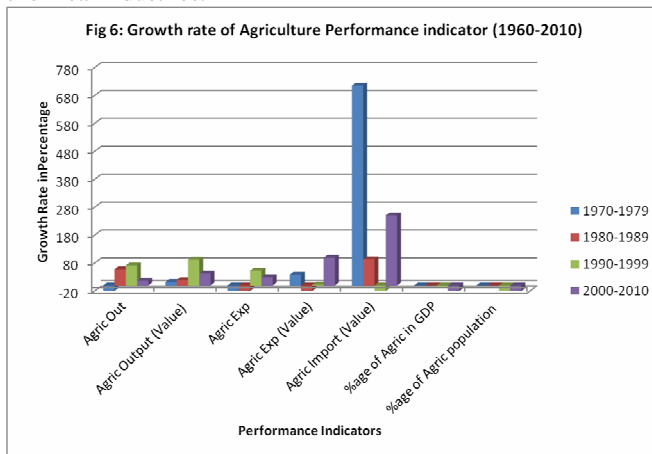
Source: Based on Table 2

⁷ Cereals in tonnes

This is done with a view of examining the pre-fadama performance vis-a-vis post fadama performance on agricultural sector. Table 2 below gives the insight of the impact of Fadama administration in Nigeria:

Tables 3 and 4 above shows that there was a tremendous increase in agricultural production during the fadama periods as compared with pre-fadama period. The average cereals production in the period of fadama I shows an increase of 71.3% over the previous decade's production. Same thing goes with the values of total production. With the of percentage of agricultural production in GDP which declined during the fadama periods and the total agricultural population, agricultural sector performance had been on steady increase during the fadama periods.

A possible explanation for the decline in the performance of the above variables is the rise in petrol-chemical industries and the oil sector in general. Since the discovery oil in commercial quantity in the early 1970s, the gap created by the activities in the oil sector has been difficult by any other sector to fill. This may have accounted for the decline in the percentage of agriculture in GDP and the labour mobility from the agricultural sector to the other sector especially manufacturing and petrol-chemical industries.



Source : Based on table 3

Conclusion and Policy Recommendation

This study examines the impact of administration of fadama on the performance of agricultural sector in Nigeria. The study highlighted the importance of agricultural sector in terms of provision of employment, provision of raw materials for industries as well provision of food for the teeming population. However the study observed that despite the importance of this sector, there has been steady decline in the performance of the sector since attention is being focussed on the oil sector. The reason why government established fadama among many other policies put in place to enhance the performance of agricultural sector. The findings from the study revealed that while the volume and value of total agricultural production has been on the increase, the sector's contribution to GDP has been declining. Also the rate of absorption of unemployed into the sector has been declining as more people prefer to work in the manufacturing industry or the petrol-chemical industry.

The study therefore recommends that government should allocation more funds for the upliftment of the sector especially as it relates to production of food crops and livestock so as to guarantee food security for the citizenry.

References

- Adebisi-Adelani, O., F.B. Olajide-Taiwo, I.B. Adeoye and L.O. Olajide-Taiwo (2011) "Analysis of Production Constraints Facing Fadama Vegetable Farmers in Oyo State, Nigeria" *World Journal of Agricultural Sciences* 7 (2): 189-192,
- Agwu, A.E., and H. O. Abah (2009) "Attitude of Farmers Towards Cost-Sharing in the Second National Fadama Development Project (NFDP-II): The Case of Kogi State of Nigeria" *Journal of Agricultural Extension* Vol. 13 (2).
- Ajayi, A. R. And A. H. Nwalieji (2010) "Impact of the Anambra State Fadama Project Phase-1 on the Socio-economic life of the Rural Farmers" *Journal of Hum Ecology*, vol.29 No 2.
- Alkali, R.A. (1997) *The World Bank and Nigeria: Cornucopia or Pandora Box? Kaduna: Baraka Press.*
- Dan-Azumi, J. (2010) "Agricultural Sustainability of fadama Farming Systems in Northern Nigeria: the case of Karshi and Badeggi" *International Journal of Agricultural Sustainability*, Volume 8, Issue 4,
- Ekpe-Aji, S. (2009) "A Review Of Nigeria Agricultural Policy In The Fourth And Fifth Democratic Era 1999 -2007"
- FMAWR (2009) "Third National Fadama Development Project (FADAMA III), Project Implementation Manual, Volume 1.
- Ikhatua, U.J. (2010) "The Nigerian Livestock Industry- The Sleeping Giant" 56th Inaugural Lecture of the University of Benin
- Kudi, T. M., I. Usman, J.G. Akpoko and A. L. Banta (2008) "Analysis of the Impact of National Fadama Development Project II (NFDP II) in Alleviating Poverty Among Farmers in Giwa Local Government Area of Kaduna State, Nigeria" *Ozean Journal of Applied Sciences* 1(1)
- Lamorde, A.G. (1998): Scenario building for the Nigerian Livestock Industry in the 21st century. A Paper presented at the Silver Anniversary Conference of the Nigerian Society for Animal Production-Gateway Hotel, Abeokuta, Nigeria. March 21-26.
- Manyong, V.M., A. Ikpi, J.K. Olayemi, S.A. Yusuf, B.T. Omonona, V. Okoruwa, and F.S. Idachaba. (2005). *Agriculture in Nigeria: Identifying Opportunities for Increased Commercialization and Investment*. IITA, Ibadan, Nigeria.
- Nwachukwu, I. N.; A.M., Nnanna; C. I. Ezech, J. A. Mbanasor,;C.O. Onyenweaku, and C. E.Kamalu, (2008) "Evaluation of Second National Fadama Development Project in Nigeria: A Rapid Policy AppraisalMPRA Paper No. 12914.
- Nwadukwe P.O (2000) "Fadama Programme in Anambra State: Concepts, Principles and Practices" *Paper Presented at the Fadama Sensitization Workshop organized by the ASADEP*, Awka, Nigeria, 14
- Ogen, O. (2003) "Patterns of Economic Growth and Development in Nigeria since 1960" in S.O. Arifalo and Gboyega Ajayi (eds.) (2003) *Essays in Nigerian Contemporary History*. Lagos: First Academic Publishers.