



PUBLIC SECTOR INVESTMENT AND AGRICULTURAL DEVELOPMENT IN ABIA STATE, NIGERIA: 2000 – 2023

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ABSTRACT

This paper assessed the effects of government investment in agriculture in Abia State, Nigeria, between 2000 and 2023 and the impact of government investment on agricultural productivity, food security, and rural development. The research design used in the study was descriptive in nature and was based on second hand data accessed on government reports, budget documents and statistical publications. The data analysis was carried out by use of descriptive statistics, trend analysis and regression analysis to establish the relationship that exists between agricultural productivity and public investment. The findings revealed that the total government spending on agriculture had increased during the study period but the interest the sector had in the state budget was relatively low (varying mostly below 3), which demonstrated that the agricultural sector was continually underfunded. The portion of capital expenditure paid out on agriculture expenditure was more substantial than that of recurrent expenditure indicating the preference toward infrastructure and physical projects. There was however inadequate funding to extend services, training, and support operations of these investments and densely reduced the sustainability of the investments. The findings also showed that the variables of public investment including capital expenditure, development of infrastructure, subsidies, credit scheme and federal transfers were significant and positive to the agricultural productivity. The crop yields, output levels and labor productivity were enhanced by agricultural subsidies and credit schemes especially in the peak implementation periods. Although these were positive results, there are issues associated with this such as corruption, slowness of funds being given to projects, absence of good monitoring systems and inconsistency of policy that hampered the overall effectiveness of governmental investment in the industry. The paper is therefore concluding that though the role of public sector investment in agricultural productivity of Abia state is positive, there is a need to fund the sector more, have a better governance, and effective mechanisms of monitoring the working agricultural development programs.

Keywords: Public sector investment, Agriculture, Agricultural productivity, Budget allocation, Abia State, Nigeria.

INTRODUCTION

Government spending on the agricultural sector is important towards fostering economic growth, food security, and alleviating poverty especially in the economies in the third world such as Nigeria where agriculture is a big portion of the

livelihoods. Traditionally, agriculture was the main source of economy in Nigeria, and it has contributed to the Gross Domestic Product (GDP), maintain employment of vast percentage in the 1960s (Manyong et al., 2005). It was also a time when there was considerable social and individual

investments within the agricultural field which served as an aid towards production and development of these lands. The major change in the economic focus of Nigeria was however triggered by the discovery of crude oil in the 1970s. The government slowly transferred the focus and investments away and to the petroleum industry. This caused a massive de-investment in the agricultural sector by the public sector hence reducing their productivity and growth rate of the industry. Decrease in investment has also led to the increase in the dependence of Nigeria on the food imports. According to the recent estimates, the country is having an annual expenditure on food and agricultural imports of about 10 billion dollars to satisfy the domestic market demands (International Trade Administration, 2023). Having acknowledged the economic diversification and food security of economic development, the Nigerian government has come up with a number of policies and programs intended to rejuvenate the sector. Among these programs is Agricultural Transformation Agenda (ATA) that was initiated in 2011 in order to rebrand agriculture as a highly viable business area, less reliance on imports, and support value chains of agriculture. Some of the measures brought about by the program included fiscal incentives to the investors, elimination of restriction on investments, and tax holiday to agricultural enterprises (Federal Ministry of Agriculture and Rural Development, 2011).

Moreover, the attempts to promote the concept of public-private partnerships (PPP) to enhance the agricultural productivity and investment have been undertaken. Additionally, an example is the Nigeria Sovereign Investment Authority (NSIA) in collaboration with the private investors coming up with large agricultural projects including the Pandagric Novum Farms. These programs are to improve domestic production, generate jobs and decrease the dependency of Nigeria on the imported food (State House Press Release, 2023). Nevertheless, regardless of these efforts, the success of the public investment is highly reliant

on the adequate distribution and usage of funds. The research indicates that the agricultural productivity can be significantly enhanced by investing in such fields as irrigation systems, rural infrastructure, research and development, and modern farming technologies (Reuben & Alabi, 2015). Consequently, sustainable agricultural development and economic growth in Nigeria is impossible without strategic and well-managed and managed investment in the public sector.

Statement of the Problem

Despite the fact that agriculture has been a significant sector of the economy of Nigeria, its performance has been declining over the years. As per now, agriculture alone offers approximately 24 percent of the GDP of Nigeria and it employs more than thirty percent of the working population. Regardless of this contribution, there is still a substantial shortage in food production as the country is very dependent on food imports, estimated to be worth about 10 billion every year (Statista, 2023; International Trade Administration, 2023). This reliance produces a burden on the foreign exchange reserves and has fostered some questions regarding national food security. (Manyong et al., 2005). On the same note, agricultural capital spending represented approximately 55 percent of the total agricultural expenditure, whereas 60 percent should be taken as the appropriate amount of investment that is required to achieve good performance in the sector (Reuben and Alabi, 2015). The lack of funding has led to various structural problems in the agricultural sector, such as lack of efficient infrastructure in the rural areas, access to modern farming inputs, access to proper extension, and support in research and development. The problems have played a big role in deterring agricultural productivity and growth. Its effects are also manifested in the sluggish expansion in the agricultural productivity that is at 1 instead of 1.63 global average. This is low growth that is not keeping pace with the rising food demand in the country which has been approximated to be about 6.5 per annum. Moreover, insufficient state

investment prevents the interests of the private sector, and it reduces the possibility of agricultural growth and modernization even further (Farmonaut, 2023). Although such obstacles have been identified, but few empirical studies have been conducted on the specific influence of the investments of public sector on agricultural productivity in the state level. Specifically, there is a requirement of comprehending the effectiveness of various forms of government expenditures including capital expenditure like capital investment, and recurrent expenditure e.g. import and expenditures on agricultural development and productivity. This paper therefore aims at evaluating the level of public sector investment in agriculture in abia state. It also analyzes the amount of government expenditure, its impacts on agricultural production and the significant issues that concern efficient investment on the sector. There is also an investigation on how a state investment can trigger the involvement of the private sector and the provision of a favorable environment to make agricultural development possible. The research questions that the study addressed are the following what is the level of the public sector investment in agriculture in Abia State? what are the impacts of the public sector investment on agricultural productivity in Abia State?

what are the issues of the problem of the public sector investment in Abia State agriculture? The overall aim of the research is to evaluate how the intervention of the public sector would influence agricultural growth of Abia State. The targeted objectives include to: assess the extent of the public sector investment in agriculture in Abia State. investigate the impact of the public sector investment on agricultural productivity in Abia State and explore the issues that confront the public sector investment in agriculture in Abia State

The reason why this study is significant is that it gives information about the role of the public sector in investment in the agricultural development in Abia State. It helps to add to the

body of knowledge by investigating the level at which the government spends on agriculture, how this affects productivity and what the challenges are towards effective financing. The results will be useful to policymakers as they will bring empirical data about the effectiveness of government investments in the development of agriculture. This will help in enhancing budget allocations, building farm infrastructure and helping farmers with better policies and programs. Also government agencies dealing with the development of agriculture will be in favor of the study as it will assist in assessing the effectiveness of the currently existing initiatives and enhance the process of decision-making regarding the resources allocation. On top of this, farmers, investors, and other stakeholders in the agricultural industry will have insights on the potential of using public investment to facilitate more agricultural production and economic growth. Lastly, it will provide a valuable source of information to researchers and academics engaged in the field of agricultural economics and the investment of the government as a basis under which future research can encompass on agricultural financing and development policies.

Research Methodology

The proposed study region is the Abia State which is an area in the southeastern part of Nigeria. Abia state has potential of agricultural activities with a large percentage of the population consisting of farmers. It is a state with a boundary to Anambra state, Enugu state, Ebonyi state and Imo state. The research is based on secondary data which are acquired through the multiple sources such as the government reports, budgetary documents, statistical bulletins and reports made by the agricultural agencies. The secondary sources were widely reviewed and data was gathered. The reviews and analysis of relevant documentation and reports were performed in a coherent way to identify relevant information about the government investment programs and their effects on agricultural development in Abia State. To test the relation between the investment in the public

sector and the agricultural productivity, employment and the rural development in Abia State, the data analysis was done with regression analysis. The data are also summarized with the help of such descriptive statistical tools as the mean and the standard deviations and give hints about the trends and patterns of government expenditures and its impact.

Model Specification

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + e_i$$

Y = Dependent variable, that is, agricultural productivity, employment, or rural development.

The independent variables have the following coefficients (intercept excluded): and B_0 = Intercept term., B_1 , B_2 , B_3 : Coefficients of the independent variables, X_1 = budgetary allocations.

X_2 = Subsidies , X_3 = Development of Infrastructure, e_i Error term.

Result Trend in Total Budget vs. Agricultural Allocation (2000–2023)

Table 1: Annual Budgetary Allocation to Agriculture in Abia State (2000–2023)

Year	Total Budget (₦ Billion)	Agriculture Allocation (₦ Billion)	% Allocation
2000	17.80	0.52	2.92
2001	20.90	0.61	2.92
2002	24.50	0.78	3.18
2003	27.60	0.79	2.86
2004	30.10	0.92	3.06
2005	36.50	0.91	2.49
2006	41.70	1.26	3.02
2007	44.90	1.09	2.43
2008	51.30	1.44	2.81
2009	54.80	1.38	2.52
2010	59.60	1.57	2.63
2011	66.40	1.99	3.00
2012	69.80	1.72	2.46
2013	75.90	2.21	2.91
2014	78.50	2.53	3.22
2015	81.00	2.38	2.94
2016	84.20	2.12	2.52
2017	89.30	2.36	2.64
2018	141.00	2.39	1.69
2019	140.94	2.35	1.67
2020	102.70	1.19	1.16
2021	131.89	1.95	1.48
2022	89.00	2.48	2.79
2023	160.50	1.36	0.85

Source: Author's computation, 2023 (CBN Statistical Bulletin; Nigerian Data Portal; National Bureau of Statistics; Abia State Budget Documents)

The trend with the figure of total state budget, and allocation to the agricultural sector indicates a growing disparity with the passage of time. Although, it is true that the total annual budget in Abia State rose by a large percentage of N17.80 to N160.50 billion between the years 2000 and 2023 respectively; the amount devoted to agriculture was still very low as of 2023; it has been allocated between N0.52 and N2.48.

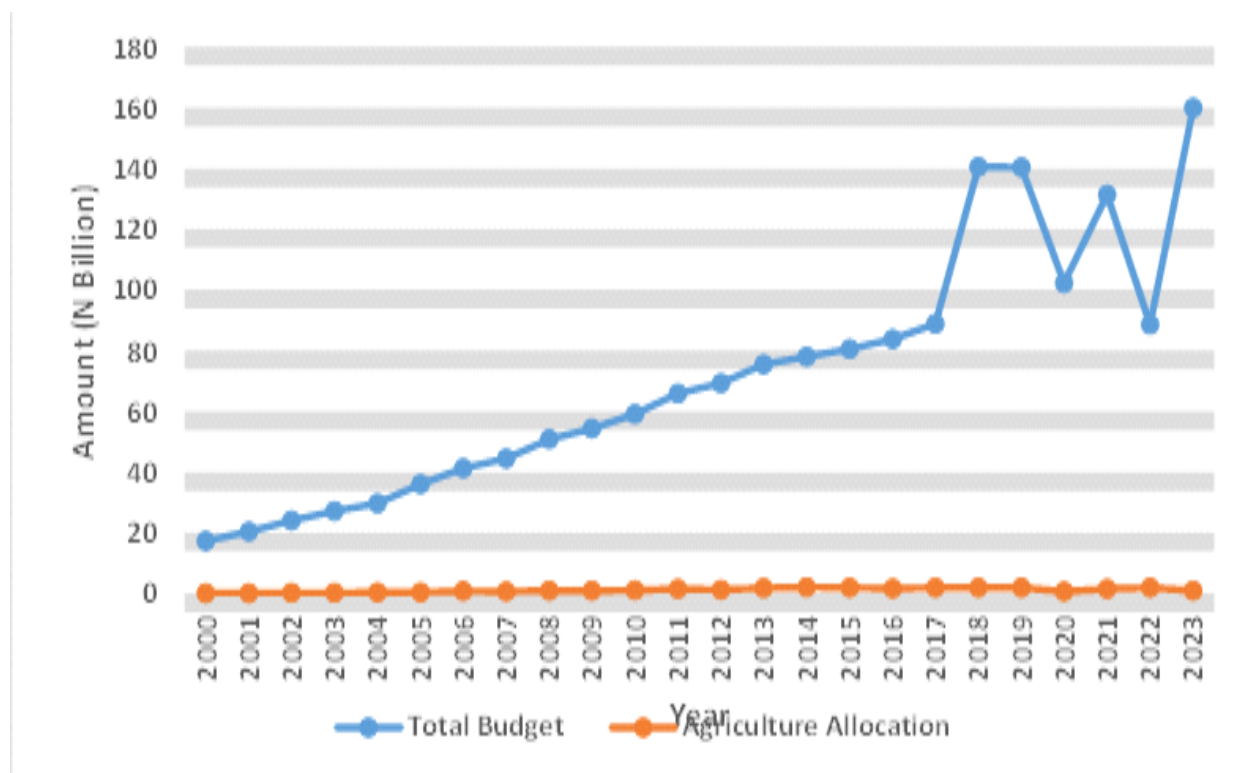


Figure 1. Total Budget vs Agriculture Allocation

The share of agriculture in the total budget hit its highest point of 3.22% in 2014 but since then it has not stopped and has fallen to less than 1% in 2023. This tendency testifies to the fact that regardless of fiscal growth, there was a decrease in the relative significance of agriculture, and in particular over the past five years of the research period.

Agricultural Composition of Total Budget.



Share of Agriculture in Total Budget

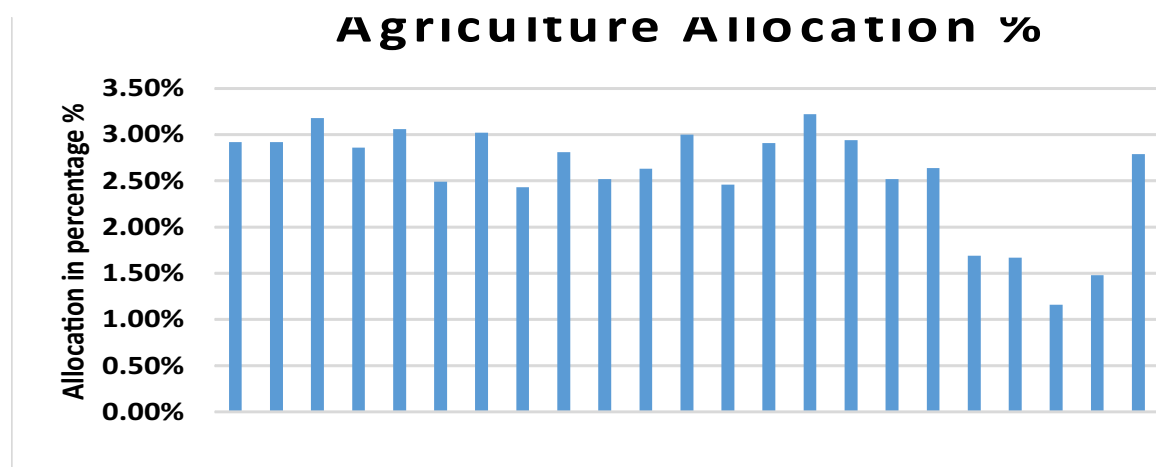


Figure 1b: Share of Agriculture in Total Budget (%)

The agricultural share peaked at **3.22% in 2014**, followed by a gradual decline to **0.85% in 2023**, indicating a shift in fiscal priorities away from agriculture in the later years of the study period.

Capital and recurrent spending analysis on the agricultural sector shows that capital expenditure remains the most dominant during the years under scrutiny. An average greater than 65 per cent of the agricultural expenditure every year was charged capital outlay.

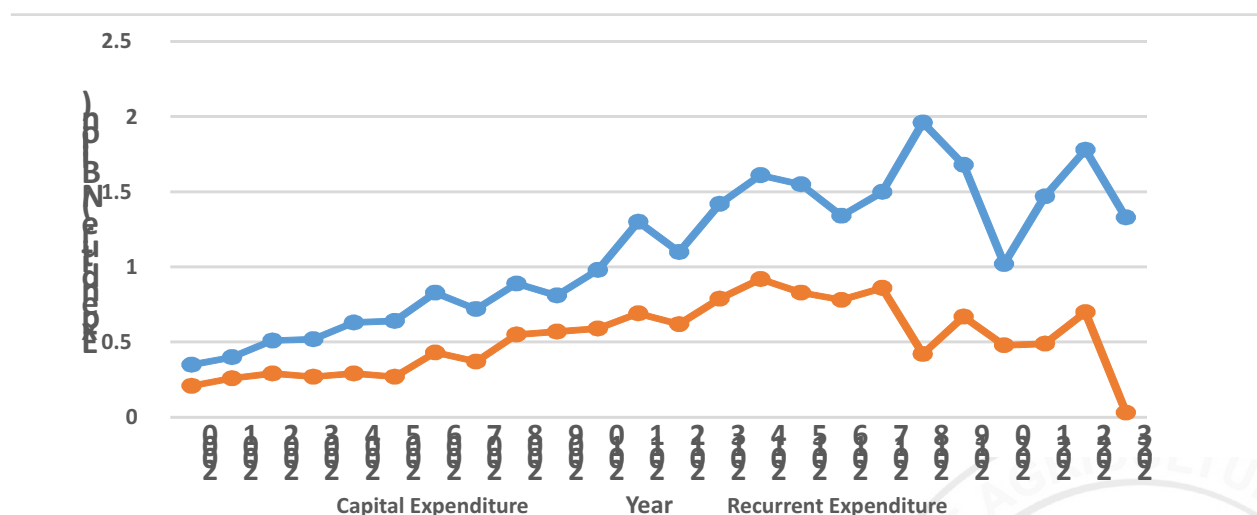


Figure 2: Capital vs Recurrent Agricultural Expenditure

There were some major hikes of capital investment in 2010, 2018, and in 2023, whereas recurrent expenditure was on a comparatively stable, low level. The lack of balance between capital and recurrent expenditures indicates the underinvestment of the extension services, training, and operation support, which can

impair the utility of capital assets.

Developments in Capital vs. Recurrent Expenditure on Agriculture.

Trends of Capital vs. Recurrent Agricultural Expenditure.

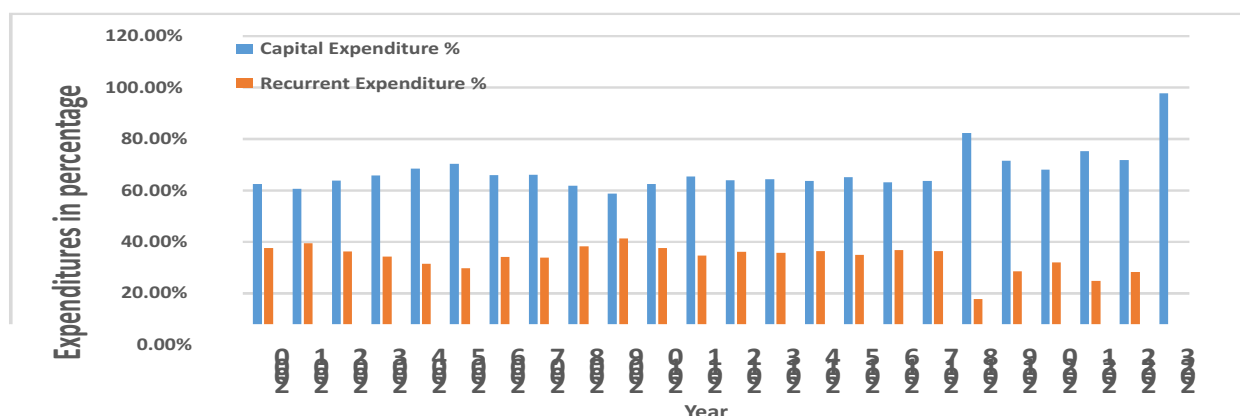


Figure 3: Capital vs. Recurrent Expenditure on Agriculture (₦ Billion)

Capital expenditure consistently dominates, accounting for over 65% of total agricultural spending. However, recurrent expenditure which is critical for extension services and maintenance—remained insufficient.

Federal Disbursements to Agriculture in Abia State (2000–2023)

Table 2: Federal Disbursements and Key Program Channels to Abia State Agricultural Sector (₦ Billion)

Year	Federal Disbursement (₦ Billion)	Key Program or Channel
2000 – 2005	1.51	FMARD Extension Support Grant, National Accelerated Food Production Initiative, Root & Tuber Expansion Program (FMA co-funding), Abia ADP Federal Support
2006 – 2012	3.01	ADP Livestock/Veterinary Support, FMARD Rice & Cassava Value Chain, FADAMA II National Component, Oil Price Crisis Impact, FADAMA III Grant Release, CBN CACS / Federal Input Scheme, GES Rollout (Fertilizer & mobile wallet)
2013- 2018	3.54	GESS + FADAMA Sustainability, Dwindling Federal Agri Allocation, Recession-Year Freeze, ADP Rehabilitation Support, FADAMA III + IFAD–VCDP Disbursement
2019 – 2023	3.03	CBN Anchor Borrowers (Linked Disbursement), COVID CBN–BOA Agro Intervention, FMARD–Abia Agro Youth Employment Grant, Federal Recovery Grant (IFAD + FMARD)

Source: Author's computation, 2023 (FMARD Budget Reports; FAAC Allocation Records; IFAD–VCDP; CBN Development Finance; FADAMA M&E Reports)

Table 2 shows a history of the federal government expenditures on the agricultural sector of Abia State since 2000, as well as the major programs or channels that were used to administer these funds. Between 2000 -2005 the disbursements were relatively low and steadily growing over the years with the years having a total disbursement of N1.51billion. These intervention efforts were heavily pegged on such programmes as: the FMARD Extension Support Grant, the National Special program on food security as well as the Root and Tuber Expansion Program, which had the effect of laying institutional capacity to enhance access to inputs amongst smallholder farmers. Federal funding to the Abia State agriculture significantly rose within 2006-2012 because of the adoption of FADAMA II and III, CBN Commercial Agriculture Credit Scheme (CACS), and Growth Enhancement Support Scheme (GESS).

In 2013-2018, the numbers decreased slightly related to the changes in politics and other economic shocks. It is important to note that 2016 registered a decline to N0.43 billion in a freeze due to recession and in 2018, outlay went up to N0.63 billion. However, the federal government reacted by introducing selective interventions including the FADAMA III and the IFAD disbursement in order to stabilize

production.

Some time in 2019 and 2020, the federal government decreased disbursement significantly due to COVID, in response, the federal government introduced COVID CBN-BOA Agro Intervention, and Anchor Borrowers to further stabilize the production. It reverted to a recovery in disbursements in 2021 to 2023. A new wave of agro-industrialization and commercialization was marked by the allocation of N0.75 billion last year 2023 deemed as the highest allocation during the period of the study which was the federal contributions made to PPP-based agricultural processing zones. The statistics show that federalisations have been important in resource gaps closure in the development of agricultural facilities in Abia State.

Federal Transfers Trend Analysis.

The amount that federal government funds Abia State agriculture has risen significantly in 2023 to N0.75 billion against N0.20 billion paid in 2000, with significant contributions being made by FADAMA, GESS, and CBN related programs. The disbursements were the highest between 2011 and 2013 when GESS and input liberalization reform was at its peak.

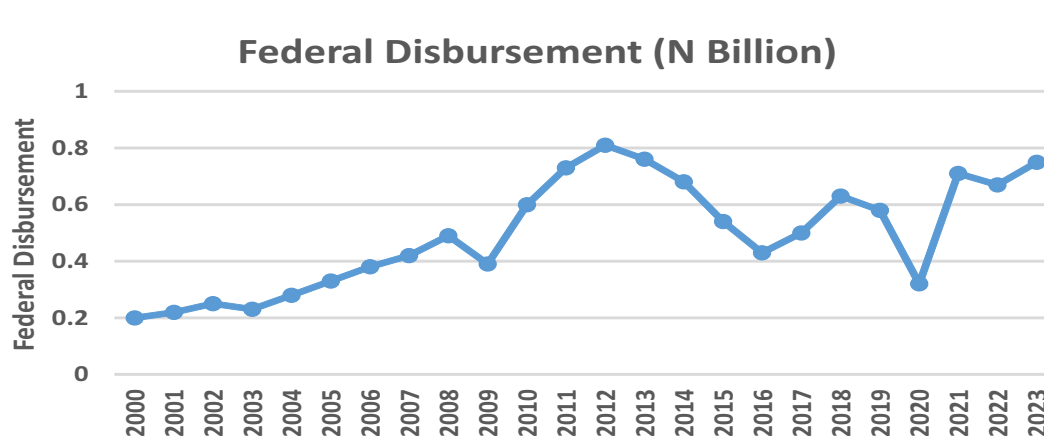
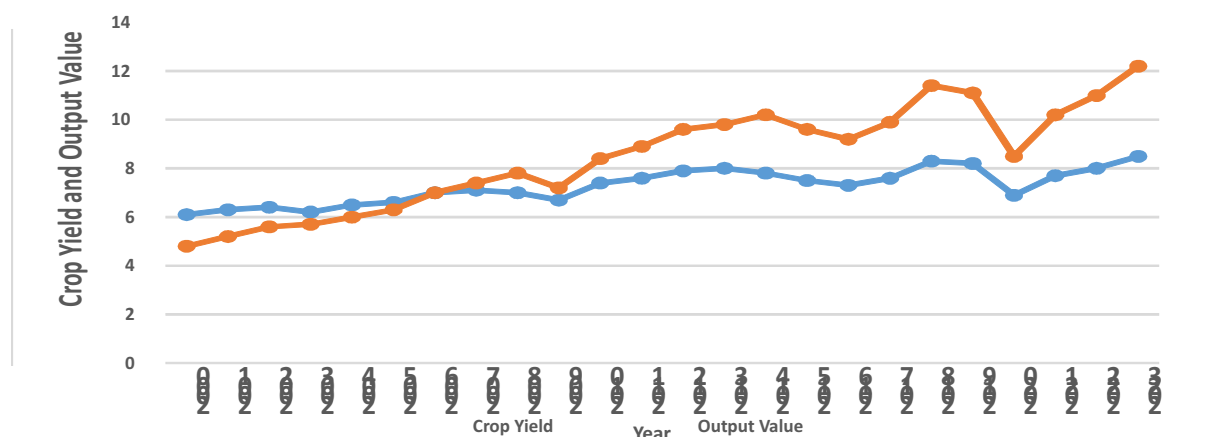


Figure 4: Federal Transfers to Agriculture in Abia State (N Billion)

The duty of transfers has been very unstable even though on an upward trend, affected by an economic crisis (2009, 2016, 2020) and political transitions. The federal support did not maintain the same level of support as they were given major injections during national programs that included FADAMA III, GESS, and CBN Anchor Borrowers Programme. It peaked in 2012 (N0.81 billion) and low points were in 2009 (soon after economic crisis), 2016, and 2020.

Major Crop Yield and Output Value



Crop yield and total output increased consistently with rising capital investment and input subsidies. Productivity dips in 2015–2016 and 2020 align with recession and COVID-19 effects.

Agricultural Labor Productivity (₦ per Worker)

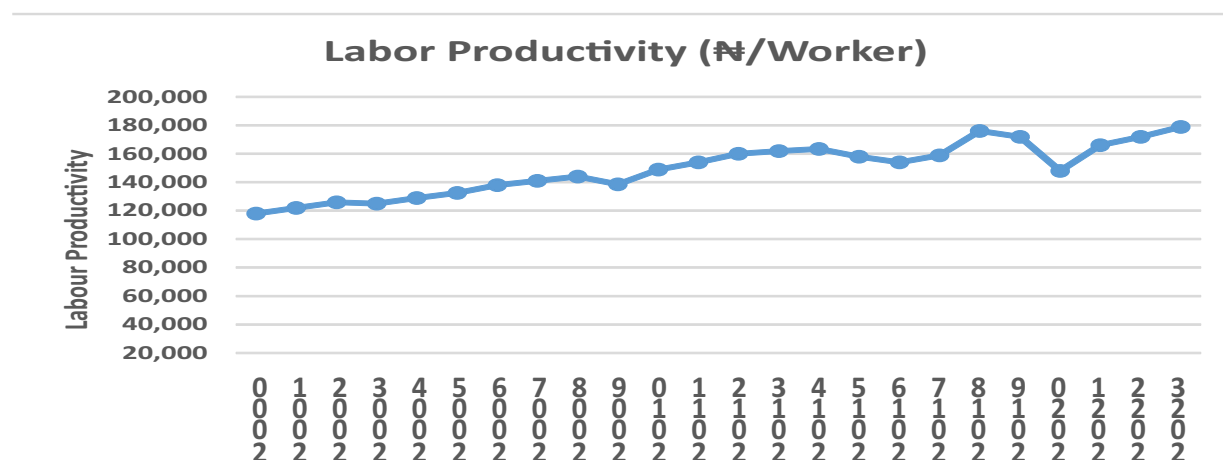


Figure 5: Agricultural Labor Productivity (₦ per Worker)

The labor productivity increased to N179,000 in the year 2023 and up to that value compared to N118,000 in the year 2000 and the issue was significantly enhanced after several years of having more access to credit and modern inputs.

Correlation between Agricultural Investment and Yield

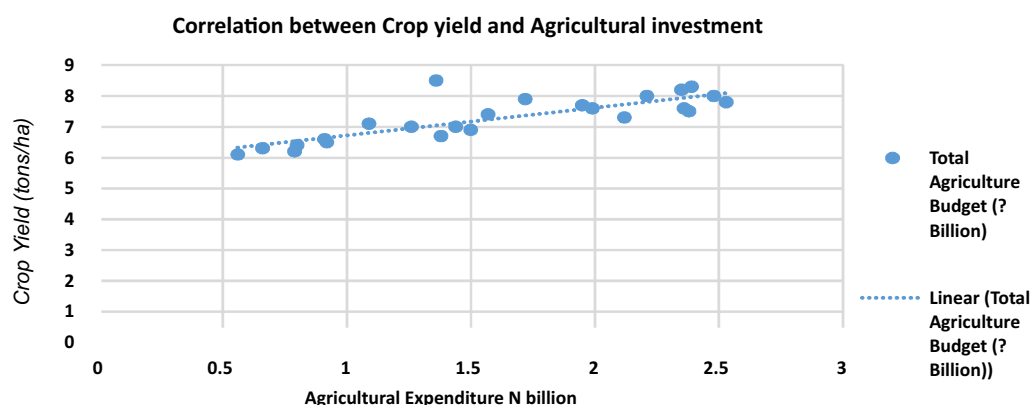


Figure 6: Correlation between Agricultural Investment and Yield

The upward slope suggests a positive association between public sector investment and crop productivity.

The positive inclination implies that there is a positive relationship between the investment in crop production by the public and the crop productivity.

Implementation Challenges

The Abia state agricultural investment in the public sector (2000-2023) had various challenges in terms of organization and operation. Some of the issues were identified to be Financial mismanagement like funds diversion, corruption in input distribution, lack of audit trail, delays in fund release and trimming down of budgets during economic depressions. The problems related to the policies and policy inconsistency, political influence, and bureaucrat block are among the measures that took considerable time to realize the project, interrupting the process of long-term planning. Lack of infrastructure especially the bad road network in the rural areas reduced market access and results in post-harvest losses. Lack of effective planning and project evaluation was also contributed by weak monitoring and evaluation systems and lack of adequate agricultural data. Also, the human resource was a limiting factor including poor

extension service delivery, shortage of staff and low participation of farmers also curtailed agricultural intervention efficacy. Outside shocks occurred also, as the COVID-19 pandemic in 2020 derailed agro-infrastructure projects because of the emergency budget redistribution and lockdown limitations. More current problems such as lack of timely implementation and ghost contractors point to the continued procurement and contract management problems. All of these problems, on the whole, suggest that there is a mix of more systemic governance problems and chaotic situations that have affected agricultural investment performance.

Discussion

In the examination, it was discovered that the agricultural expenditure experienced growth over the years in Abia State but the realisation of the sector in terms of the proportion to the overall state budget was very low, which was less than 3 percent and this shows under-prioritization. Nevertheless, there was great progress in productivity indicators in agricultural industry, which include crop yield, output value and labor productivity due to public investment. The social aspect that came out as the most steadfast contributor to productivity was infrastructure investment

forms the basis that roads, irrigation systems, and facilities that enable access to markets should be an optimal investment element to maximize the agricultural investment returns. It was also established that perennial governance issues remain a problem such as corruption, poor monitoring systems, and inconsistency of policies which inhibit the success of agricultural expenditure.

Policy Implications:

- * Allocate more money to agriculture, which is in line with the 10 percent proposal of Maputo Declaration of the African Union.
- * Enhance financial management and accountability in the agricultural programs.
- * Increase rural infrastructural investment to enhance product and market access.
- * Increase institution capacity, extension and training.

Approach 1: Enhance the federal-state interface on agricultural programs in order to maximize the effect of federal transfers.

Summary

The study examined public sector investment in agriculture in Abia State from 2000–2023 and its effects on agricultural productivity, food security, and rural development. Although total agricultural funding increased during the period, the sector consistently received less than 3% of the state budget, indicating persistent underfunding. Capital expenditure was higher than recurrent spending, reflecting a focus on infrastructure and physical projects, while limited funding for recurrent services such as extension, training, and operations reduced the sustainability of these projects. Funding releases also fluctuated yearly due to economic challenges, including recessions and the COVID-19 pandemic. Agricultural subsidies and credit programs improved productivity during peak periods (2011–2013 and 2021–2023) by helping farmers access inputs, reduce production costs, and increase participation in farming. Federal interventions

such as FADAMA, GESS, IFAD, and the Anchor Borrowers Programme also supported agricultural output and labor productivity. Although productivity indicators generally improved over time, declines occurred in 2015–2016 and 2020 due to economic shocks. Overall, public investment had a positive impact on agricultural productivity, but challenges such as corruption, weak monitoring, and policy inconsistency limited its overall effectiveness.

Conclusion

Overall, public investment in agriculture in Abia State has been **inconsistent, insufficient, and not optimally utilized**. Although spending increased in nominal terms, weak planning, poor implementation, and institutional challenges prevented the sector from fully benefiting. Sustained and well-managed investment in infrastructure, credit, and farmer support systems is essential for improving productivity, reducing poverty, and achieving food security.

Recommendations

1. Increased agricultural budget allocation to **at least 10%** in line with the **Maputo Declaration** will enhance growth in the sector.
2. Improving the **balance between capital and recurrent spending**, especially funding for extension services and research.
3. Strengthening **monitoring and evaluation systems**, including digital tracking of projects.
4. Expanding **rural infrastructure** such as roads, irrigation, and storage facilities.
5. Improving access to **subsidized agricultural credit** and integrating biometric verification in subsidy programs.
6. Enhancing coordination between **state and federal agricultural programs**.
7. Increasing **transparency and anti-corruption oversight** in agricultural projects.



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