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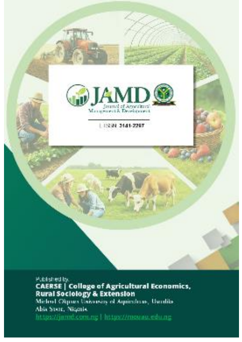

# Agribusiness SME's Investment: Effect of Investment and Output on Gross Domestic Product of Nigeria

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## ARTICLE INFO

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## ABSTRACT

The study analyzed the effect of agribusiness investment and output on Nigeria's gross domestic product (1980-2022). Specifically, the study assessed the contribution of the agribusiness sector to Nigeria's GDP, changes in agribusiness output and GDP and changes in agribusiness investment and GDP within the period under review. Secondary data from databases of reliable institutions like the CBN, FAO, World Bank, etc were employed. Data were analyzed using the OLS regression model. The result of the findings showed that the coefficient of agribusiness investment (5.540396) was significant at (1%), while that of agribusiness output was negatively signed (-2.079633) but also significant at (1%). The study concluded that agribusiness investment had a positive impact on the nation's GDP. Based on findings, the study recommended that more investments be made in agribusiness and policies that would improve the efficiency and productivity of agribusiness output be implemented.

## Introduction

Recent increases in the prices of agricultural commodities have spurred a surge of private investments into farming and agribusiness (Tyler and Dixie, 2013). The term 'agribusiness' simply refers to the breadth of businesses engaged in all aspects of agriculture, from the provision of inputs such as seeds and fertilizer, to farming, processing, marketing, distribution and retail sales. It emphasizes the notion that for agriculture to be sustainable, it needs to be viewed as a business (Nwueli, 2011). Agriculture is a vital sector in Nigeria, providing employment to a large portion of the population and contributing to the country's economy. With favourable climate conditions, fertile land and abundant water resources, Nigeria has the potential to be a major food producer in Africa. In recent years, the government has implemented policies to modernize and improve the agriculture sector, including promoting the use of technology and improving access to finance and markets. The government has also been working to increase the production of crops such as maize, rice, cassava and yam, as well as livestock such as cattle and poultry (AFSIC,2025)

In Nigeria, agribusiness entrepreneurship has garnered increasing attention due to population growth and limited alternative employment opportunities. Agriculture alone contributes about 24% to the nation's gross domestic product with agribusiness activities such as input supply, processing, marketing and retailing contributing an additional 20% (OECD and FAO, 2016). Approximately 85 million individuals are employed in the food economy with over 75% of these jobs concentrated in agriculture. Of the total employment, about 65% are based in local communities while 20% are involved in food processing, marketing and activities outside their local areas (Ikuemonisan, 2024: Osabuohien *et al.,*2018:Alola and Alola, 2019). This sector not only provides livelihood for millions, but has the potential to drive industrialization and economic diversification. Agribusiness investment in Nigeria presents significant opportunities for economic growth, food security and poverty reduction. With a growing population, vast agricultural resources and increasing demand for high quality food products, the nation offers a favourable investment climate for both domestic and international Investors (Agenpo,2023).

After decades when developing countries tried with limited success to encourage investment in their agriculture sectors, many are now faced with difficult decisions about the number, size and type of investments to accept (Tyler and Dixie, 2013). The agriculture sector in Nigeria faces several challenges including low productivity, limited access to financing in addition to large dominance by small scale farmers, who often lack the resources and knowledge to fully realize their potential. Also, the increased investments in the agribusiness sector through government policies, programs and funds to encourage agribusiness investment and output which is affected mostly among other factors by the double-digit inflation rate that stood at 29.0 percent in 1996 and have always been on the increase (Ekpo *et al,* 2013; and Onwumere *et al,* 2012*).* It became pertinent to investigate the effect of investment and output in the agribusiness sector in Nigeria on the nation's Gross Domestic Product between 1980 and 2022 with the following objectives driving the study - to assess the contribution of the agribusiness sector to GDP, assess the changes in agribusiness output and GDP and assess the changes in agribusiness and GDP within the period under review.

**Methodology**

The study was carried out in Nigeria, Nigeria is located in West Africa bordering the Gulf of Guinea between Benin Republic and Cameroon (CIA World fact, 2022). She covers an area of approximately 923,768Km2, with a diverse geography that includes tropical rain forests and semi-deserts (NBS,2020). The country has the largest economy in Africa, with a normal GDP of over ＄240 billion (IMF,2022). Agriculture is a vital sector in Nigeria's economy accounting for about 25% of the country's GDP (NBS,2020) . Nigeria has a relatively favourable investment climate with a large and growing market, abundant natural resources and a strategic location (World Bank, 2020). Secondary data collected from highly reliable sources like the Central Bank of Nigeria, Food and Agriculture Organization, World Bank, etc were used for the study. Data were analyzed using the Ordinary least Square Regression Analysis and the model is explicitly specified as follows:

$$Y = \beta o + \beta 1X1 + \beta 2X2 + \varepsilon \quad (1)$$

Where,

Y = GDP ( Gross Domestic Product)

X1 = Agribusiness Investment

X2 = Agribusiness Output

βo = Intercept or constant term

β1 = Coefficient of Agribusiness Investment

β2 = Coefficient of Agribusiness output

Ɛ = Error term (Random variation in GDP not explained by the independent variables).

## Results and Discussions

### Contribution of the Agribusiness Sector to Gross Domestic Product (GDP)

An overview of the changes in agribusiness sector and the Nigerian Economy from 1980 to 2022. The changes in agribusiness output and the GDP from (1980-2022) is presented in the Figure 1. Figure 1 is a histogram representation of the changes in agribusiness output and agribusiness investment in comparison to GDP. From the graph, there has been a constant rise in the GDP of the Nigerian economy, likewise the agribusiness output and agribusiness investment, though at a slower pace. No doubt, agribusiness output and agribusiness investment play crucial contributory roles to the growth of the economy (usually measured by GDP). However, the growth of agribusiness output and agribusiness investment have not been satisfactory enough. A recent NBS report (2023) has it that Nigeria's GDP grew by 3.46% year-on-year in real terms in the fourth quarter of 2023 which is lower than the 3.52% recorded in the fourth quarter of 2022 and higher than the 2.54% of third quarter 2023. According to the report, the performance of the GDP in the last quarter of 2023 was driven by the services sector which recorded a growth of 3.98% and contributed 56.55% to the aggregate GDP. Agriculture contributed about 20% to the aggregate GDP in 2023, lower than the contribution in 2022 (23.69%). While agribusiness output and agribusiness investment might have been a slow increase, the overall contribution to GDP is in a declining state. This calls for serious attention, especially now when there are calls to DE monopolise and diversify the economy away from oil.

This graph shows that agribusiness output and GDP trend lines are moving in the same direction. Between years 1981 and 2000, output from agribusiness remained relatively constant, while GDP was relatively constant too. From2001-2022 as seen from the agribusiness output trend line, the industry began to flourish and could be owed to the government policies being initiated during those periods, and this caused the GDP to also increase. Other sectors have contributed to the GDP growth of the economy but the oil sector gave the highest, this could be due to high dependence. However, with the introduction of some government programs and policies such as the Federal government rice initiative project, anchor borrowers, FADAMA and the likes to boost agribusiness output, agribusiness output began to rise relatively in the country. The democratic dispensation in Nigeria has caused increment in the agribusiness output owing to some policy measures most importantly on the Economic Recovery and Growth Plan of Nigeria (ERGP) which brought programs on Presidential Initiatives on Cassava, FADAMA, Agro-Processing productivity Enhancement and Livelihood Support Project (APPEALS), Anchors borrowers' program, and other World Bank and African Development Bank assisted programs to the Federal Government while the GDP continued to increase due to its contribution and the contribution of other sectors( Kilimvi, 2023).

As stated in the SMEDAN report (MSME report, 2017), the contribution of SMEs to Nigerian GDP is 47% with a total number of business formations of 96.7% and an employment rate of 84%, with more prospects preceding the sector. However, in order to sustain the growth of SMEs in Nigeria, it is imperative that they continue to receive adequate support from the government when needed (Akerejola *et al.*, 2019). The challenges, including financing, poor infrastructure and an unworkable policy framework for SME creation and growth are also eliminated (Victor *et al.*, 2019).

As shown by the 2017-2020 Economic Growth and Recovery Plan (ERGP) and the 2020 Economic Sustainability Plan (ESP), there is a great need for the nation to invest its resources in other sectors, and the agricultural and agro-industries are evidently boosting the Nigerian economy by promoting inclusive growth and Jobs. The contribution of agriculture to GDP in Nigeria has been incredible. Varrella (2021) found that between October and December 2020, agriculture accounted for 26. 95% of total GDP while the total contribution of SMEs to Nigerian GDP is 47%. This means that SMEs could have greatly stimulated the agricultural contribution of 26.95% to GDP since its overall contribution to GDP stands at 47%.

Figure 3. shows the relationship between GDP growth and investment in the agribusiness sector. The gray line represents agribusiness investment whereas the blue line represents GDP. With a very high concentration on the oil sector till date, there has been negligence to the other sectors with little investment contribution to the GDP of Nigeria. As quoted by (Mbanasor and Okorji, 1997), the level of agribusiness investment has been relatively low from 1970s. The trend has remained the same since the discovery of oil in the country. Despite chances to improve investment in agribusiness by the government with an aim to

cause a paradigm shift of concentration to other sectors more importantly, agriculture, several factors such as corruption, crude level of agriculture, and poor policy formulation and implementation have stomped the growth of agribusiness investment. This sector could boost the GDP of the economy. The trend line shows only an improvement in the Agribusiness investment from 2010-2022.

**Effect of Agribusiness Investment and Output on GDP of Nigeria**

To examine the effect of agribusiness investment and output on the GDP of Nigeria, the Ordinary Least Square (OLS) regression was employed and the estimates are presented in Table 1. The coefficient of multiple determination ($R^2$) of 0.997 indicates that the independent variables (agribusiness investment and agribusiness output) included in the model accounted for 99.7% of the total variation in GDP. The model is statistically significant at 1.0%, according to the F-test statistics value of 6056.134. Meanwhile, agribusiness output is statistically significant at 1% and is inversely related to GDP, with a negative coefficient value (-2.079633). This indicates that as GDP increases, the value of agribusiness output decreases. The negative coefficient is counter intuitive as one would expect agribusiness output to positively impact GDP. However, the result may indicate that the current structure of agribusiness output in Nigeria is not efficiently contributing to GDP growth. Possible reasons could include; inefficient production processes, limited value addition to agricultural products and weak linkages between agribusiness and other sectors of the economy.

Investment in agribusiness was statistically significant at 1% ( 5.540396). As indicative of the agribusiness sector from the analysis, it perhaps provides the best opportunities to the Small and Medium Enterprises which can stimulate the GPD of the economy for growth, alleviation of poverty and generation of more and better jobs. Kilimivi (2023) and Elliot *et al*. (2022) in their research gave findings on the performance of the agribusiness sector for the period of 2009–18 stating that the performance of this sector during this period, most especially off-farm agribusiness sector created better opportunities than other sectors, impacting on the GDP. These findings corroborate the findings from this study that there has been tremendous performance by the agribusiness output sector. The Agribusiness output showed capacity for boosting the economy while agribusiness investment is still significant. Furthermore, enforcing the potentials of agribusiness output has the capacity to create jobs and grow the economy because the agricultural sector as seen from literature is the bedrock for many other activities for primary development of the economy. Therefore, with regards to investment for the growth of overall GDP, more opportunities lie within off-farm segments when better inputs are supplied. In terms of growth opportunities, there would be need for better coordination within the sector. These trickles down to proper arrangements which can trigger job opportunities for SMEs in agriculture/agribusiness value chain. Furthermore, the possibility of growth can emanate from the exploration in agribusiness value chain where fragmentation can be limited while initiating strong connectivity in upstream primary production and downstream value-addition areas (Kilimivi, 2023).

**Conclusion and Recommendations**

Having investigated the effect of investment and output on the GDP of Nigeria between 1980 and 2022, the study concluded that agribusiness investment has a positive and significant impact on Nigeria's GDP, suggesting that investing in agribusiness can contribute to economic growth. However, agribusiness output has a negative and significant impact on Nigeria's GDP, indicating that the current structure of agribusiness output is not efficiently contributing to GDP.

To leverage the potential of agribusiness in driving growth, policy makers should increase investments in agribusiness, implement policies to improve the efficiency and productivity of agribusiness output, enhance value addition to agricultural products through processing and manufacturing, and strengthen linkages between agribusiness and other sectors of the economy.

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**Appendix**

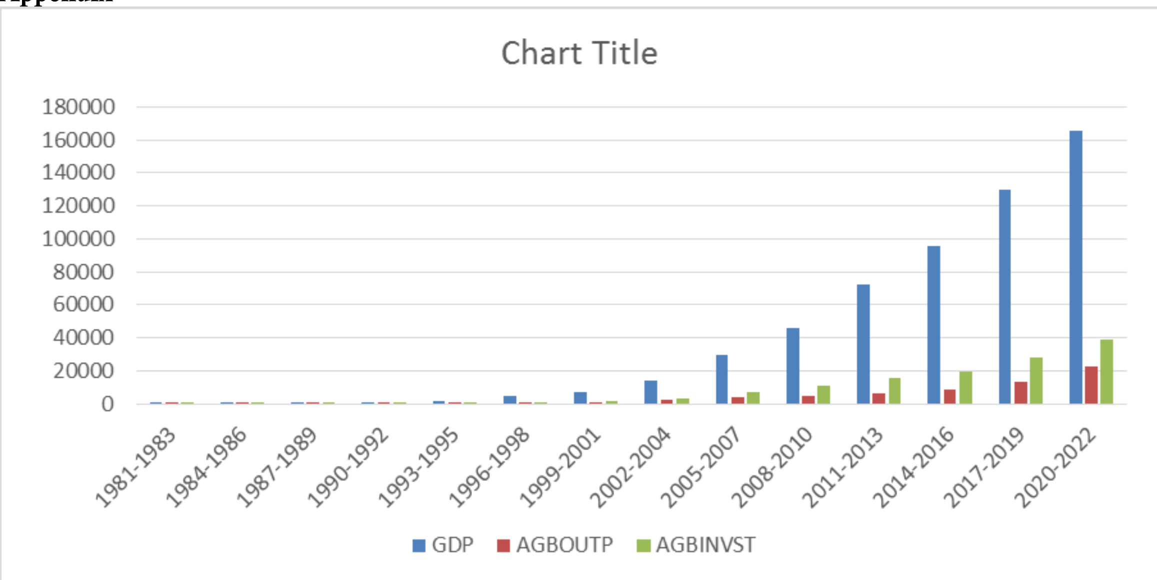


**Figure 1: Contribution of the agribusiness sector to Gross Domestic Product (GDP) Source: Author's computation from CBN statistical bulletin of various issues**

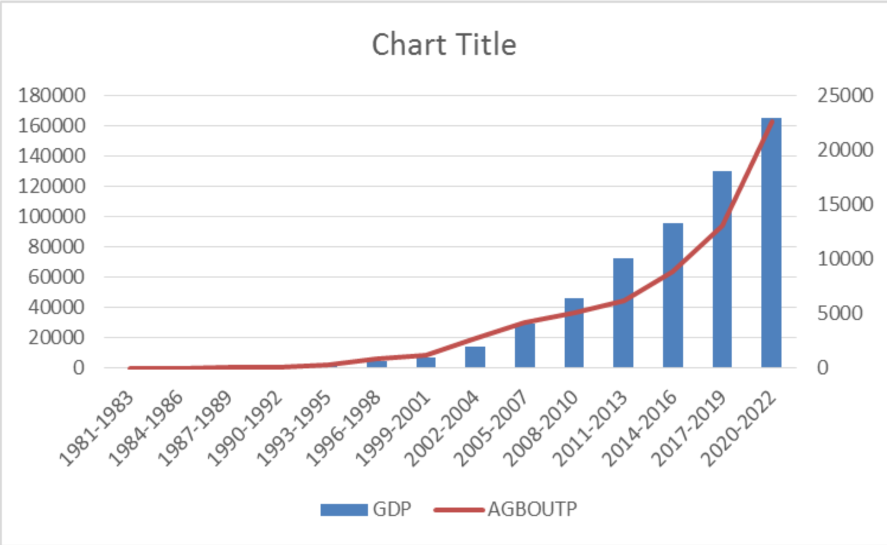


**Figure 2: Changes in Agribusiness output and GDP (1980-2022) Source: Author's computation from CBN statistical bulletin of various issues**

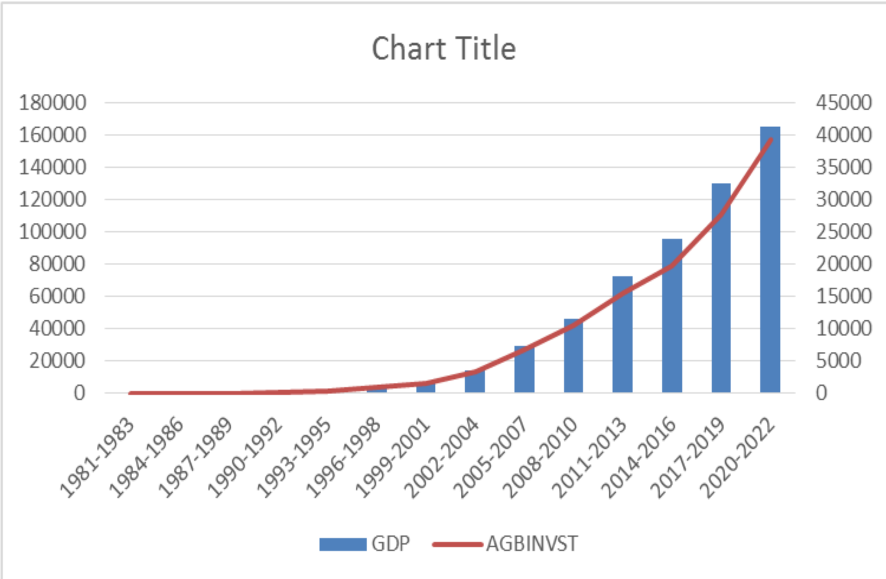


**Figure 3.: Changes in Agribusiness investment and GDP (1980-2022) Source: Author' computation from CBN statistical bulletin of various issues**

**Table 1: OLS estimates of effect of agribusiness investment and agribusiness output on GDP**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| Agribusiness investment | 5.540396 | 0.206326 | 26.85269 | 0.0000 |
| Agribusiness output | -2.079633 | 0.396901 | -5.239675 | 0.0000 |
| Constant | 428.8474 | 564.2075 | 0.760088 | 0.4519 |
| R-squared | 0.996872 | Mean dependent var | | 37550.91 |
| Adjusted R-squared | 0.996708 | S.D. dependent var | | 50434.86 |
| S.E. of regression | 2893.796 | Akaike info criterion | | 18.84888 |
| Sum squared resid | 3.18E+08 | Schwarz criterion | | 18.97426 |
| Log likelihood | -383.4021 | Hannan-Quinn criter. | | 18.89454 |
| F-statistic | 6056.134 | Durbin-Watson stat | | 1.624984 |
| Prob(F-statistic) | 0.000000 | | | |

Source: Author's Computation, 2024