Impact of Fish Production on the Gross Domestic Product in Nigeria.

Abstract

This study analyzes the impact of fish production on the gross domestic product (GDP) in Nigerian by using time series data ranging from 1981-2021. The study adopted ordinary least square techniques for the regression analysis. Aside the two main variables of this study which is fish production and GDP, some control variables was also used (Labour productivity and gross fixed capital formation) to control GDP. The result shows that fish production and GFCF has positive and significant impact on economic growth in Nigeria while labour productivity has negative impact on the Nigeria economic growth. This means that labour productivity does not contribute to economic growth in Nigeria. Hence, the study recommends that the Nigerian government should encourage fish production in order to bring more inflow of funds which will help to trigger economic growth. This could be achieved by reducing the contamination of the seas and oceans for a better output of aqua products in Nigeria.

Keywords: Fish production, Gross domestic product, Nigerian economy

1.0 INTRODUCTION

In reality, sustained growth in an economy requires the continuous improvement in total factor productivity (TFP), and for a developing country, this requires public expenditures for infrastructure, rural development and human capital developments (Tiffin & Irz 2016). Such improvements allow private agents to obtain higher levels of income, and this makes possible higher levels of private sector consumption and investments. For Lewis (1954), for a growing economy (like Nigeria) to move from a situation where it is saving and investing 4 or 5 percent of its national income or less, to a state where voluntary saving is running at about 12 to 15 percent" the economy needs an engine of growth. Such an initial engine of growth can come from a variety of sources, such as the development of export agriculture, industry, tourism, and so on (Sarris, 2001). Considering the fact that Nigeria is not yet industrially equipped, fishery production under agricultural sector could be a good place to start from in the quest for economic growth. As at 2020, Nigeria has 75 percent of its land suitable for agriculture, but only 40 percent are being used (World Bank, 2020).

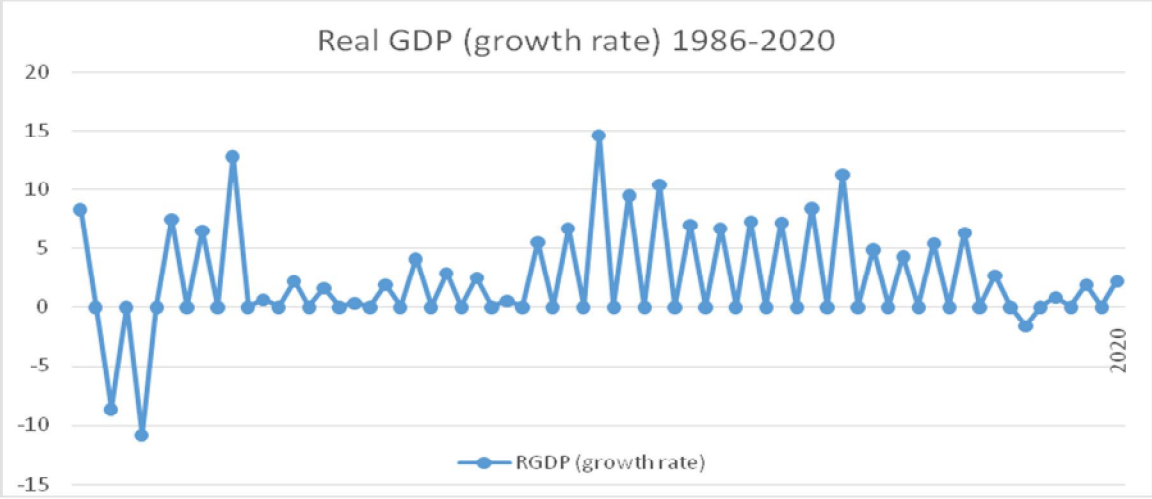
Fish production, which is synonymous with aquaculture, involves growing fish artificially in tanks, earthen ponds, and ocean enclosures, usually for food (Stickney, 2009). Fish farming or aquaculture used interchangeably refers to a system commonly characterized by the intensity of

feed use, which divides the system into: integrated, extensive, semi-intensive or intensive system (Edward, 2004). Extensive aquaculture relies on natural food such as plankton without human intervention. Semi-intensive systems supplement natural food with organic or inorganic fertilizers and low-cost supplementary feed. Intensive systems depend on relatively high-cost feed such as small wild fish or formulated pelleted feed, while integrated system is the combination of fish production and other animal or crop farming (Edward, 2004). Although classification is based on feed, increasing intensification of feed is supported with other inputs such as fingerlings (seed), labour, capital and management. Semi-intensive systems have favourable characteristics for poor households as they rely largely on natural food which can be increased by using on-farm by- products like manure and crop residues, produce is affordable for poor consumers, and intensification can be achieved using relatively cheap inorganic fertilizers (Edward 2004). Aquaculture systems are also defined by commercial orientation. Edward (2004) divided the systems into: Subsistence (family level); artisanal (producing for the market on a small-scale); specialized (where various stages of the production cycle are undertaken by different farmers); and industrial. Ridler and Hishamunda (2001) classified aquaculture as commercial when the goal is to maximize profit, undertaken by the private sector without direct financial assistance from donor or government sources. Operations aiming to minimize risk and maximize family utility are classified as non-commercial, even if output is sold.

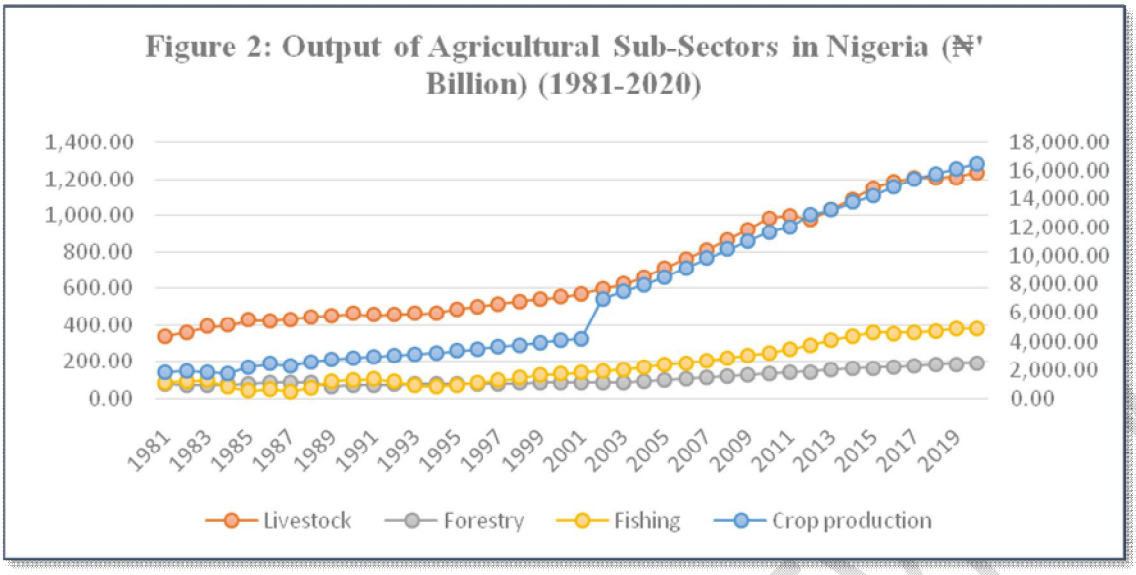
Fish production has attracted considerable interest as a vehicle for economic growth and food insecurity, and a variety of pathways via which the poor might gain from the growth of aquaculture have been identified. Kassam (2017) elaborated on typology of aquaculture's potential to impact on poverty; drawing on the work of De Janvry and Sadoulet (2002) on direct and indirect agriculture – poverty linkages. The main potential benefits stem from improved food supply, increased income, and increased employment. Benefits may be accessed directly by a fish producer or indirectly through employment in aquaculture value chains, or through increased availability of low-cost fish in local markets (Edward, 1999). Ahmed and Lorica (2002) emphasize "income linkages", "employment linkages" and "consumption linkages" as means by which aquaculture can improve food security and poverty reduction. Again, these may be direct (sale & consumption of self-produced fish by farm households) or indirect (elasticity effects associated with rising incomes for households adopting aquaculture, or reduced consumer prices due to increased fish supply). Similarly, Stevenson and Irz (2009) identify entry into aquaculture by new producers, employment on fish farms and in associated value chains, and increased supply of fish for consumption by the poor as pathways via which aquaculture may contribute to poverty reduction. A final indirect pathway relates to consumption linkages generated by re-spending income from sales of fish on locally produced non-tradable goods and services in the form of multiplier effect (Delggado, Wada, & Rosegrant. 2003). This study therefore looks at the impact of fishery production on the Nigeria gross domestic product (GDP).

It is based on the increasing problem posed by the dwindling fortunes in agricultural production such as fish production by individuals and the nation at large that government has been embarking on various recent agricultural policies and programmes [National Accelerated Food Production Program (1973), Agricultural Development Program (ADP) (1975), The River Basin and Rural Development Authorities (1976), Operation Feed the Nation (OFN) (1976), Land Use Decree (1978), Green Revolution (GR) (1980), National Fertilizer Company of Nigeria (NAFCON), National Agriculture Land Development Authority (NALDA) (1991), Cassava Multiplication Program (1985-1999) and very recently the Transformation Agenda of the Federal Ministry of Agriculture (2011), FADAMA project, Npower Agro (2017), Farmer Moni (2020), and so on] to develop fish farming under the agricultural sector to control and reduce unemployment. These policies have not yielded any positive result, as economic growth rates is on the decline as shown in the figure 1 below:

Figure 1. Real GDP (growth rate) 1986-2020



Source: Central Bank of Nigeria (2020)

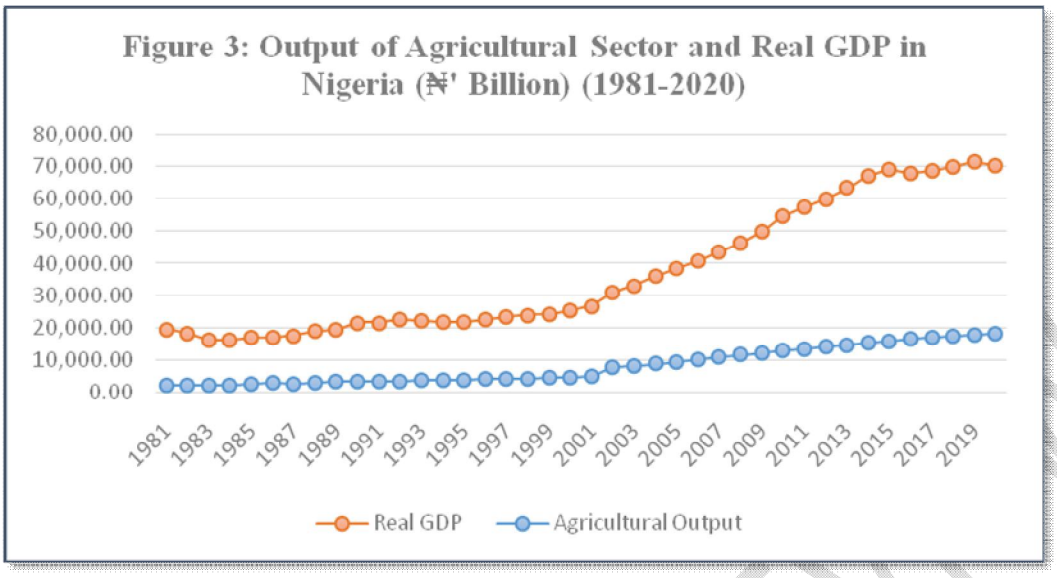


Note: Values for fish production are on the secondary axis

Source: Central Bank of Nigeria (CBN) (2020)

According to CBN (2020), between 1960 and 2020, in the fishery subsector, local production is inadequate for domestic demand and consumption. Nigeria imports 700,000MT of fish annually which is 60,000 MT more than total domestic production (Ibru, 2005 in Essien & Effiong, 2010). However, the subsector has recorded the highest average growth rate of 10.3% (1961-2020) compared to the 6% recorded in crop production in the same period (CBN, 2020). With an average contribution of 4.3% to total agriculture GDP between 1960 and 2020 and provision of at least 50% animal protein, fisheries contributes to economic growth by enhancing food security and improving livelihood of fish farmers and their households (Gabriel et al., 2007; Essien & Effiong, 2010; CBN, 2020). Forestry is the smallest sub-sector in Nigerian agriculture contributing only 3.0% (between 1960 & 2011); however, the subsector plays a major role in providing industrial raw materials (timber), providing incomes as well as preserving biodiversity.

The cumulative output values of these agricultural subsectors show the strength of the agricultural sector. As shown in figure 2, productivity is low and contributions to the economy are below expectation.



Source: Central Bank of Nigeria (CBN) (2020)

Among other constraints, low productivity has been identified as a major contribution to the declining growth rate in Nigerian agriculture sector. Iyoha and Oriakhi (2014) find that slow growth in capital per worker and not slow Total Factor Productivity (TFP) is responsible for slow growth in the agriculture sector. This was further explained to be due to inadequate capital investment and rapid growth of the population and labour force. Also, Muhammad-Lawal and Atte (2016) recommends increase in per-capita productivity through the introduction of improved technology in agricultural production. They also indicated a positive and consistent relationship between GDP growth rate, population growth rate, and the Consumer Price Index as factors affecting domestic agricultural production in Nigeria. However, it is estimated based on the prospects of the sector that by 2015, it is possible to provide 3.5 million jobs within the agriculture value chain, increase farmers‟ incomes by $2 billion and also reduce food insecurity by 20 million metric tons (MT) increase in food supply (FMARD, 2012). This can only be achieved by intensified efforts in increasing productivity and developing the agriculture value chain. It is on the basis of this, that this study is set to look at the gross domestic product in Nigeria.

2.0 LITERATURE REVIEW

This section tries to explain the key concept of the work, empirical literature and the theoretical literature.

A. Fishery

Fishery involves water products gained by involving in fishing activities. It also involves raising and harvesting of fish. Fish production is said to have Contributed to employment generation and

national income. It has significantly contributed to and fostered the economic advancement of several countries. It has also been correctly observed that even the leading industrialized countries were once predominantly agricultural. Similarly, developing countries now have the dominance of fishery production, which largely contributes to labour and capital employment and growth in their national income.

Fish farming according to Ogundari and Ojo (2010) involves rearing of fish from hatchery to marketable size in an enclosed water body. Stickney (2009) sees it as raising fish commercially in tanks, earthen ponds, and ocean enclosures, usually for food. Iweama (2017) defined fish farming as the rearing of related fish species under scientifically controlled conditions in an enclosed environment such as pond, where they feed, grow, breed and are harvested for consumption or for sale. Fish farming as sighted in Williams (2016) refers to the commercial production of fish in an enclosure or, when located in a body of freshwater or marine water, in an area that is penned off from the surrounding water by cages or open nets. This study adopts the definition of fish farming in Iweama (2002), given that it is all encompassing and depicts the fish farming system in Nigeria.

B. Economic Growth

Economic growth as a concept is relative and thus scholars have viewed it from different perspectives. For example, Abou (2013) explains economic growth as the process whereby per capita income of a country consistently increases over a long period of time. In other words, economic growth is seen as the sustained increase in the country's per capita output or income which is accompanied by the increase in labour force, consumption and volume of trade. He describes the determinants of growth as structural and technological changes. A nation's Real Gross Domestic Product (RGDP) is usually the means by which its economic growth is measured and compared because growth is usually calculated in real, inflation-adjusted in terms, and hence government, investors and other stakeholders deduce the growth pattern of the economy. The term has been defined by various authors as outlined in the succeeding paragraphs.

Schumpeter in Todaro and Smith sees economic growth as a gradual and steady change in the long-run which comes about by a gradual increase in the rate of savings and population. In the same vein, Freedman, also in Todaro and Smith, viewed economic growth as an expansion of the system in one or more dimensions without a change in its structure. Thus economic growth is related to the quantitative and sustained increase in the countries per capita output or income accompanied by expansion in its labor force, consumption level, capital and volume of trade (Ijirshar, Joseph and Godoo, 2016).

2.2 Empirical Literature

The impact of fish farming on household income in Mymensingh district of Bangladesh was studied by Rahman and Hague (2011). The variables of the study are income, pond size, training, access to information, and age. Data collection was done through personal interview of the respondent farmers, while descriptive statistics were used in data analysis. The result shows that fish farming contributes on the average 51 percent of household income of the respondent farmers. The study recommends that policy makers in the field of fisheries should take into account the identified factors necessary for rapid expansion of fish farming in Bangladesh.

The contribution of small-holder aquaculture to poverty alleviation and household food security in Zambia was studied by Musuka and Musonda (2013). The variables of the study are poverty, fish production, income, and food security. Data collection was done using semi-structured questionnaire, focus group discussion, and participant observation, while descriptive statistic was used in data analysis. The result shows that adoption of small-holder aquaculture helps in poverty alleviation, improved rural household food security, and better nutritional status. The study advocates for improved statistical data collection on aquaculture, and quick settlement to land-use conflicts.

Oyinbo and Rekwot (2013) investigated fishery production and economic growth in Nigeria with emphasis on pathway for sustainable economic development. Using times series data on index of fishery production and real gross domestic product covering from 1970 to 2011, they found that fishery production as it were, did not granger cause economic growth. This implies that fishery production at its level was not significant in influencing economic growth. The study therefore advocates for assistance from both the public and private sectors to ensure a steady increase in production and a remarkable influence on economic growth, leading to food security and poverty reduction.

In assessing the contribution of aquaculture to poverty reduction in Ghana, Kassam (2013) made use of structured questionnaire and oral interview in his survey. Index of poverty, income, consumption, employment, multipliers, and institutions were the variables used in his assessment. The result shows that small-scale aquaculture increases household income of non-poor farmers who were trained in the use of better management practices, while the poor can benefit indirectly through employment, consumption and multiplier effect. The study recommends for an increase in extension services and training of fish farmers, and increase in the granting of credit facilities to the farmers for increase in output and employment.

A study in Bangladesh, carried out by Toufique and Belton (2014) examined the pro-poor nature of aquaculture with empirical evidence of impacts on fish consumption, focusing on poverty and consumption as variables of interest. Analysis of nationally representative time series dataset on fish consumption in Bangladesh over the period 2000 to 2010, and the disaggregation of results according to poverty categories based on national poverty lines were made. The result shows that with respect to fish consumption, the pro-poor nature of aquaculture growth was contingent on

the expansion of fish supply and its effect of dampening fish prices, and the extent to which growth processes in the wider economy reduced inequality. The study recommended for a massive government support to fish farmers both in funding and policy making to ensure expansion in fish supply and reduced inequality in the economy

3.0 METHODS AND PROCEDURES

This section consists of the theoretical framework which provides the theoretical basis of this study and the research methodology which throws more light into the empirical investigation conducted. Also in order to fully assess the impact of the fishery production on economic growth in Nigeria, a model with dependent and explanatory variables to be estimated is specified, a priori expectations of these variables, techniques of estimation and method of data analysis are all treated.

3.1 Theoretical Framework

The Solow version of Neo classical is more suitable for this study due to its dynamism. The Solow model focuses on four variables: Output (Y), Capital (K), labour (L), and knowledge (A). At any point, the economy has some of amount of capital, labour and knowledge Romer (2009). These are combined to produce output. The production function takes the form:

$$Y_{(t)}=f(K_{(t)},A_{(t)},L_{(t)}) \qquad 3.1$$

$Y_{(t)}$ = output at time t, $K_{(t)}$ = capital at time t, $L_{(t)}$ = labour at time t, $A_{(t)}$ = knowledge at time t.

$A_{(t)}$ and $L_{(t)}$ enter the model multiplicatively, hence $A_{(t)}$ $L_{(t)}$ is effective labour. Note, there is technology progress if the amounts of knowledge (A) increase.

The analysis is extended to incorporate the Agricultural output (fishery output) variables as they affect economic growth. Thus the production function 3.1 above, becomes

$$Y_{(t)}=K_{(t)}^{\beta}AGO_{(t)}^{\lambda}(A_{(t)}L_{(t)})^{\gamma}. \qquad 3.2$$

As stated in the equation 3.2 above, $Y_{(t)}$ is economic growth proxy by Gross Domestic Product (GDP), Labour proxy by education or learning. It enters the Model multiplicatively as $A_{(t)}$ and $L_{(t)}$ while Capital (K) at period *t* proxy by Gross Fixed Capital Formation and AGO is the Agricultural output. Therefore, the extended version of the Solow growth model indicates that Agriculture is one of the determinants of the economic growth. This agricultural sector can however be disaggregated to capture the other subsectors such as fishery production, livestock production etc.

3.2 Model Specification

To achieve the core objective of the study, equation 3.3 is modified in line with the model captured by Amaefuna (2019) where fishery production output was modeled as a function of gross domestic product (GDP). Thus the functional model was specified below:

$$GDP = f(FP, LO, GFCF) \quad 3.3$$

The model is restated in an econometric form as:

$$GDP_t = \beta_0 + \beta_1 FP_t + \beta_2 LAB_t + \beta_3 GFCF_t + U_t \quad 3.4$$

Where:

β_0 = Constant Term / Parameter Intercept

β_1 = Regression co-efficient of Fishery production

β_2 = Regression co-efficient of Labour productivity

β_3 = Regression co-efficient of Gross Fixed Capital Formation

Ut = Error Term

Apriori Expectation

$\beta_1\ \beta_2\ \beta_3 > 0$

3.3 Estimation Technique and procedure:

In an attempt to establish the impact of agricultural output on economic performance in Nigeria, an appropriate econometric method is to employ an Ordinary Least Square (OLS) method for modeling. Before the above function is estimated, both dependent and independent variables are subjected to some statistical tests such as stationarity test. The battery tests are as follow:

(a) Unit Root Test:

Rigorous investigations are made using ADF unit root test to check the stationary property of the variables in the model, should there be any. The purpose of this test is to establish if the time series have a stationary trend; and if non - stationary, to show the order of integration 'differencing'. The most popular ones are Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller which relies on rejecting a null hypothesis of unit root test (the variables are non-stationary) in favour of the alternative hypotheses of stationarity. The tests are conducted with and without a deterministic trend (t) for each of the variables.

$$\nabla Y_t = \alpha + \beta_t + \gamma Y_{t-1} + \delta \nabla Y_{t-1} + \cdots + \delta_{\rho-1} \nabla Y_{t-\rho+1} + \varepsilon_t \quad 3.5$$

Where $\alpha\alpha$is a constant, $\beta_t\beta_t$the coefficient on a time trend and $\rho\rho$the lag order of the autoregressive process. By including lags of the order *p* the ADF formulation allows for higher-order autoregressive processes. This means that the lag length *p* has to be determined when applying the test. The unit root test is then carried out under the null hypothesis $\gamma = 0$ against the alternative hypothesis of $\gamma < 0$.

ADF means Augmented Dickey Fuller

Significance at 5% level

Decision Rule:

If ADFs > critical value- stationary

If ADFs < critical value- Non stationary

(b) Co-integration Test

Capitalizing on the likelihood of co - movement in their behaviour which implies that there is possibility that they trend together towards stable long run equilibrium, Johansen co - integration test is applied. The objective of this test is to determine if there is existence of long ran equilibrium relationship among the variables used in the study. As pointed out by Engel and Granger (1987), the concept of co -integration creates a link between integrated process and the concept of steady equilibrium. Co - integration occurs when two or more time series variables which themselves may be non-stationary, drift together at roughly the same time. This implies that a linear combination of the variable is stationary. The null hypothesis is that the variables are not co - integrated.

The Granger Causality was used to determine the causal direction between fisher production and economic performance of Nigeria. The dependent and explanatory variables by employing the Granger causality test. The most common way to test the causal relationships between two variables is the Granger- Causality proposed by Granger (1969).

$$X_t = \sum_{i=1}^{m} \alpha i Y_{t-1} + \sum_{j=1}^{n} \beta j X_{t-1} + U_{1t} \qquad 3.6$$

$$Y_t = \sum_{i=1}^{m1} \gamma i Y_{t-1} + \sum_{j=1}^{m1} \delta j X_{t-1} + U_{2t} \qquad 3.7$$

(c) Error Correction Mechanism

An Error Correction Mechanism was employed to ascertain the speed of adjustment from the short run equilibrium to the long run equilibrium state. The functional form, on which our econometric model was based, employed a multiple regression equation model in this work.

Further, OLS regression is applied to test for long run relationship between growth and the explanatory variables.

4.0 RESULT AND INTERPRETATION

4.1. Unit root (Augmented Dickey-Fuller Test)

The Augmented Dickey Fuller test in the table above shows thatGDP, FP, LO and GFCF were stationary at first differencing at 5% critical value.

Table 1. Unit root (Augmented Dickey-Fuller Test)

Variables	**Adf test at level**	**Adf test at 1st Difference**	**5% critical values**	**Order of integration**	**Remarks**
GDP	-2.408636	-5.414915	-3.533083	1(1)	Stationary
FP	-2.132146	-6.270624	-3.533083	1(1)	Stationary
LO	-1.612713	-3.628337	-3.533083	1(1)	Stationary
GFCF	-1.821574	-5.329493	-3.533083	1(1)	Stationary

Source: Eviews 9.

4.2 Test for Co-integration

Given that the series are integrated of order one 1(1), Johansen cointegration approach is found worthy in ascertaining if there is a long run relationship exist between the variables of the model. Johansen method detects a number of cointegrating vectors in non-stationary time series. It allows for hypothesis testing regarding the elements of cointegrating vectors and loading matrix. The result of the cointegration test is as follows: Null hypothesis (H_0): there is no cointegration among the variables. Alternative hypothesis (H_1): there is cointegration among the variables

Table 2. Johansen Cointegration test Result

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	

No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.608749	47.45452	47.85613	0.0545
At most 1	0.315586	20.24073	29.79707	0.4067
At most 2	0.213635	9.244151	15.49471	0.3433
At most 3	0.075433	2.274467	3.841466	0.1315

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Eview 9

From the table above, the trace likelihood ratio results point out that the null hypothesis of no cointegration among the variables is accepted in favour of the alternative hypothesis up one cointegrating equation at 5% significant level because their values less than the critical values. Specifically, from the result above, the evidence that residuals are not stationary since the trace statistics (47.45) is less than the critical value at 5% (47.85) or probability values greater than 0.05; thus, our variables are not co-integrated indicating a possible short run relationship

4.3 Error Correction Model (ECM)

Table 3. Error Correction Model Result

Dependent Variable: D(GDP)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FP)	0.010316	0.005234	2.971045	0.0499
D(LO)	-0.000145	0.000395	-4.365954	0.0175
D(GFCF)	33.78112	106.6297	-3.316808	0.0040

C	1505.286	612.9176	2.455936	0.0213
ECT(-1)	-0.146360	0.089228	-1.640290	0.0135
R-squared	0.184074	Mean dependent var		1618.388
Adjusted R-squared	0.053526	S.D. dependent var		1578.292
S.E. of regression	1535.471	Akaike info criterion		17.66207
Sum squared resid	58941808	Schwarz criterion		17.89561
Log likelihood	-259.9311	Hannan-Quinn criter.		17.73678
F-statistic	1.410007	Durbin-Watson stat		1.735124
Prob(F-statistic)	0.259580			

Source: Eviews 9

The estimated model can be expressed as thus:

$$GDP = 1505.25 + 0.0103FP - 0.00014LO + 33.78GFCF$$

From the estimated model above, the coefficient of the constant implies that if FP, LO and GFCF are set equals to zero, GDP will increase by about 1505.2 percent. The coefficient of fish production is 0.01, which implies that with the influence of all other variables held constant, an increase in the fish production by one percent on the average, will lead to an increase in GDP by about 0.01 Percent. The coefficient of labour output is -0.000145, this suggest that all things being equal, as labour output increases by one percent on the average, GDP decreases by about 0.00014 percent. More so, the coefficient of gross fixed capital formation is 33.78, which implies that with the influence of all other variables held constant, an increase in the GFCF by one percent on the average, will lead to an increase in GDP by about 33.78 Percent.

4.4 Discussion of Findings

This study critically examined the impact of fishery production on economic growth in Nigeria within the period, 1981 - 2021 using secondary data sourced from Central Bank of Nigeria statistical bulletin (2021) and the World Bank indicators. The unit root test was done using augmented dickey fuller and the result shows that variables are stationary at first difference. The study adopted ordinary least square techniques for the regression analysis. From the result in the table 3 shows that fish production has positive and significant impact on economic growth in

Nigeria. This implies that the products of our water resources promote economic growth in Nigeria. By implication, the various programmes and policies of the government in boosting fish production is fast yielding results. This finding supports the work of Omorogbe, Zivkovic, and Ademoh (2014) who found out that water resources triggers economic growth.

This study also finds that labour productivity has negative and significant impact on economic growth. This means that labour productivity does not contribute to economic growth in Nigeria. This may be ascribed to the poor labour laws and the subsistent production (labour intensive) method of farming which has not supported improved agricultural output capable of boosting economic growth. In addition, the study, also found out that gross fixed capital formation has positive significant impact on economic growth in Nigeria. This shows that from investment side GFCF is an important element of the GDP growth.

The coefficient of ECT (0.146) which measures the speed of adjustment towards long-run equilibrium carries the expected negative sign and significant at 5 percent level. The coefficient of the ECT indicates a feedback of 14.6% of the previous year's disequilibrium. This also implies the speed with which GDP adjust from short-run disequilibrium to change in FP, LO and GFCF in order to attain long-run equilibrium of 14.6% within one year.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

In line with the objectives of this study the following conclusions were reached. In determining the impact of fishery production on economic growth in Nigeria, the study concluded that fish production and gross fixed capital formation have positive and statistically significant impact on economic growth in Nigeria. However, the study finds that labour output has no significant impact on Nigeria's economic growth for the period under review.

5.2 Recommendations

In line with the major findings generated from this study, this researcher offers the following recommendations.

i. The government should continue to encourage fish production in order to bring more inflow of funds which triggers economic growth. This is can be done by reducing the contamination of the seas and oceans for a better output of aqua products in Nigeria.
ii. Thirdly, there should be enabling farming environment (devoid of insecurity, high tax rates, and so on) so as to promote both local and foreign investment in order to increase capital formation and consequently economic growth in the country.
iii. That more should be done to promote mechanized and smart agriculture so as establish a stronger relationship between agricultural outputs and the economic growth in Nigeria.

Agriculture has been shown to play a role in economic growth, the problems bedevilling the agricultural sector needs to be resolved so that it can contribute significantly to GDP.

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