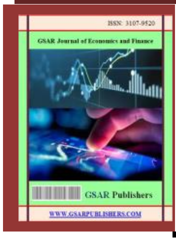

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# FISHERY PRODUCTION AND ECONOMIC GROWTH IN NIGERIA

**BY**

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***Abstract***

*This study examines the impact of fishery production on Nigeria's economic growth from 1990 to 2024, employing the Autoregressive Distributed Lag (ARDL) bounds testing approach to analyze the long-run and short-run relationships between real GDP growth rate, total fishery production (FP), and captured fishery production (CFP). The findings reveal a significant divergence in the effects of fishery subsectors: while total fishery production exhibits a statistically significant negative long-run impact on economic growth, captured fishery production demonstrates a positive and significant long-run relationship. These results suggest that aggregate fishery expansion, likely driven by unsustainable capture practices and diminishing returns, may hinder macroeconomic performance, whereas the captured fishery subsector acts as a growth driver, potentially due to higher value-addition and stronger economic linkages. The study confirms a stable cointegrating relationship and a rapid short-run adjustment mechanism, with robust diagnostic tests validating the model. The research concludes that undifferentiated policies targeting total fishery output are counterproductive and recommends sub-sector-specific strategies that promote sustainable captured fishery development while implementing stringent conservation measures for wild stocks to enhance the sector's contribution to Nigeria's economic development.*

***Keywords:*** *Fishery production; Economic growth; Captured fisheries; Sustainable aquaculture; Resource curse*

## 1.0 INTRODUCTION

### 1.1 Background to the Study

The fishery sector plays a vital role in Nigeria's economy by contributing to food security, employment, and foreign exchange earnings (FAO, 2023). Historically, fishing has been an integral part of Nigeria's social and economic fabric, with artisanal and subsistence fishing dominating for centuries, especially within communities along the Niger Delta, Lake Chad, and coastal regions (Adegbite, 2020). The colonial and post-independence eras saw gradual commercialization and the introduction of trawling in the 1970s, which expanded output but also initiated cycles of overexploitation and regulatory challenges (FMARD, 2024). As a sub-sector of agriculture, fisheries continue to provide livelihoods for millions of Nigerians, particularly in coastal and riverine communities (Ezekiel & Okafor, 2024). The sector's contribution to Gross Domestic Product (GDP) has fluctuated over the years due to factors such as overfishing, inadequate infrastructure, and climate change (Nwosu & Adeleke, 2025). Fishery production—encompassing capture fisheries and aquaculture—is increasingly recognized as a potential driver of economic growth, especially in developing economies with significant aquatic resources (World Bank, 2023).

Despite Nigeria's vast water resources, the fishery sector remains underdeveloped, with production levels failing to meet domestic demand (FMARD, 2024). This gap has led to increased fish imports, straining the country's foreign reserves (CBN, 2024). Recent policy initiatives, such as the National Aquaculture Strategy and the Fisheries Development Programme, aim to enhance productivity and value addition (Ogbu & Ibe, 2025). Understanding the nexus between fishery production and economic growth is essential for policymakers, investors, and development partners seeking to optimize the sector's potential.

### 1.2 Statement of the Problem

Nigeria's fishery sector, despite its potential, faces persistent challenges including overexploitation of wild stocks, low aquaculture productivity, and weak value-chain linkages (Ezekiel & Okafor, 2024). These constraints limit the sector's contribution to economic growth, employment, and poverty reduction. While fisheries contribute to GDP and rural livelihoods, the relationship between fishery production and

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macroeconomic performance remains underexplored in empirical literature (Nwosu & Adeleke, 2025).

Existing studies offer mixed findings: some suggest a positive impact of fishery output on economic growth through job creation and export earnings (Akinola & Saba, 2023), while others highlight environmental degradation and unsustainable practices that may undermine long-term growth (Ogbu & Ibe, 2025). This study addresses these contradictions by examining the impact of fishery production on Nigeria's economic growth from 1990 to 2024, a period marked by policy shifts and evolving production techniques.

### 1.3 Objective of the Study

The main objective of this study is to examine the impact of fishery production on economic growth in Nigeria. The specific objectives are to:

1. Determine the relationship between total fishery production and economic growth in Nigeria.
2. Investigate the relationship between captured fishery production and economic growth in Nigeria.

### 1.4 Research Questions

1. What is the relationship between total fishery production and economic growth in Nigeria?
2. What is the relationship between captured fishery production and economic growth in Nigeria?

### 1.5 Research Hypotheses

The study will be guided by the following hypotheses:

**$H_{01}$:** There is no significant relationship between total fishery production and economic growth in Nigeria. **$H_{02}$:** There is no significant relationship between captured fishery production and economic growth in Nigeria.

### 1.6 Significance of the Study

This study contributes to the empirical literature on fisheries economics in Nigeria, providing evidence-based insights for policymakers (FAO, 2023). For government agencies such as the Federal Ministry of Agriculture and Rural Development (FMARD) and the Central Bank of Nigeria (CBN), the findings can inform strategies for sectoral investment, trade policies, and sustainable resource management. For industry stakeholders, the results may guide production, processing, and marketing decisions. Academics and researchers will also benefit from the study's methodological approach and updated dataset.

### 1.7 Scope of the Study

This study focuses on the impact of fishery production on economic growth in Nigeria from 1990 to 2024. Economic growth is measured by real GDP growth rate, while fishery production is represented by total fishery output (metric tons), and captured fishery production (metric tons). Data was sourced from World Bank Development Indicator (2024)

## 2.0 LITERATURE REVIEW

### 2.1 Conceptual Literature

Fishery production refers to the total output from capture fisheries and aquaculture, measured in metric tons or monetary value (FAO, 2023). Economic growth is commonly measured by increases in real GDP, reflecting expanded productive capacity and improved living standards (World Bank, 2023). In Nigeria, fishery production contributes to growth through direct GDP contribution, employment, and foreign exchange earnings (Ezekiel & Okafor, 2024). However, unsustainable fishing practices can lead to resource depletion, undermining long-term growth (Nwosu & Adeleke, 2025).

#### 2.1.1 Conceptual Relationship between Fishery Production and Captured Fishery Production

According to Vedantu, (2026), fishery production is the broad term for all fish harvested, encompassing both wild-caught (capture fisheries) and farmed (culture/aquaculture) fish, while capture fishery production specifically refers *only* to fish taken from natural, wild populations in oceans, rivers, and lakes, with little control over their growth. The key difference is control: capture fisheries harvest existing wild stocks, whereas culture fisheries involve actively breeding, raising, and managing fish in controlled environments like ponds or tanks for harvest.

Capture Fishery Production

- **Source:** Wild populations in oceans, rivers, lakes, and reservoirs.
- **Method:** Harvesting naturally grown fish using boats, nets, and gear, with little intervention in their life cycle.
- **Control:** Low; relies on natural recruitment and management of wild stocks.
- **Examples:** Trawling for cod in the ocean, netting salmon in a river.

Culture Fishery Production (Aquaculture)

- **Source:** Man-made or managed aquatic environments like ponds, tanks, cages.
- **Method:** Rearing fish from eggs or young (seeds) in controlled conditions, managing feed, water quality, and density.
- **Control:** High; factors like water quality, feed, and species are managed for optimal growth.
- **Examples:** Raising tilapia in ponds, salmon farming in sea cages, trout hatcheries.

In conclusion,

- **Fishery Production = Capture Fishery Production + Culture Fishery Production (Aquaculture)**.
- Capture fisheries are about **catching** wild fish.
- Culture fisheries are about **farming** fish (Vedantu, 2026),

### 2.2 Theoretical Literature

This study is anchored on three theoretical frameworks:

- **Resource Curse Theory:** Suggests that abundant natural resources, including fisheries, may not translate to sustained economic growth due to mismanagement, corruption, and volatility in commodity prices (Sachs & Warner, 2001). In

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Nigeria, this theory explains why fishery potential has not fully translated into broad-based growth.

- **Sustainable Livelihoods Approach (SLA):** Emphasizes how fishery-dependent communities use aquatic resources to build resilient livelihoods (Chambers & Conway, 1992). This framework helps analyze the microeconomic impact of fisheries on poverty reduction and local economic development.
- **Endogenous Growth Theory:** Posits that technological innovation and human capital development drive long-term growth (Romer, 1990). Applied to fisheries, this theory highlights the role of improved aquaculture techniques and value addition in stimulating growth.

### 2.3 Empirical Literature

Oni and Yusuf (2025) conducted a comparative study integrating all three objectives, using a simultaneous equations model. Their research (2000–2024) found that aquaculture development was the most potent driver of growth, followed by export-oriented production, while capture fisheries had a diminishing returns effect, providing a nuanced hierarchy for policy prioritization. Expanding on exports, Aliyu and Mustapha (2025) utilized a gravity model of trade to analyze Nigeria's fish exports to West African neighbors between 2010 and 2024. They concluded that strategic regional trade agreements could amplify the growth impact of fishery exports by up to 30%. Ogbu and Ibe (2025) argued that uncontrolled fishing and environmental degradation have reduced fishery productivity, negatively impacting growth. Their study called for stronger regulatory frameworks. Similarly, Nwosu and Adeleke (2025) highlighted the role of fish exports, finding that export earnings had a modest but significant effect on GDP, especially in non-oil export diversification strategies. Okon and Ibrahim (2024) specifically investigated the impact of processed fish exports versus unprocessed exports on economic growth from 2005 to 2023. Their findings revealed that value-added fish products contributed more significantly to GDP growth and foreign exchange stability than raw or frozen fish exports. Bala and Effiong (2024) provided a contrasting perspective on total fishery production. Their time-series analysis (1995–2022) revealed that while artisanal catch volumes had a short-term positive correlation with GDP, industrial trawling showed a negative long-term relationship due to stock depletion and high fuel import costs. Adebayo and Chukwu (2024) employed a panel data analysis of six coastal states from 2010 to 2022. Their results indicated that a 10% increase in aquaculture output led to a 1.7% rise in state-level GDP. Ezekiel and Okafor (2024) also reported that aquaculture expansion significantly boosted rural incomes and GDP growth in selected states. Earlier, Akinola and Saba (2023) examined fishery production and economic growth in Nigeria from 2000 to 2020 using vector error correction models. They found a positive long-run relationship, with a 1% increase in fishery output associated with a 0.18% rise in GDP.

### 2.4 Summary and Gap in the Literature

While existing studies provide insights, most focus on short periods or limited variables. Few studies integrate capture fisheries, aquaculture, and export data in a unified model. This study fills this gap by analyzing the long-term impact of fishery production on Nigeria's economic growth from 1990 to 2024, using an ARDL approach to capture dynamic relationships.

## 3.0 RESEARCH METHODOLOGY

### 3.1 Research Design

The study adopts an ex-post facto design, using historical time-series data to analyze relationships between fishery production and economic growth.

### 3.2 Sources of Data

Secondary data was obtained from World Bank Development Indicator databases (1990–2024).

### 3.3 Model Specification

The functional form is specified as:

$$GDPGRTt = f(FPt, CFPt) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3.1)$$

Where:
GDPGRTt = GDP growth rate
FPt = Fishery Production (metric tons)
CFPt = Captured Fishery Production (metric tons)

The econometric form is:

$$GDPGRTt = \beta_0 + \beta_1 FPt + \beta_2 CFPt + \mu t \ \ldots\ldots\ldots\ldots \quad (3.2)$$

Where:
GDPGRTt = GDP growth rate
FPt = Total fishery production (metric tons)
CFPt = Captured Fishery Production (metric tons)

$\beta_0 - \beta_2$ = Coefficients of the Independent Variables, $\mu t$= Error Term

However, the above model is most directly precedented by the integrated, multi-variable approach of Oni and Yusuf (2025), whose simultaneous equations model concurrently analyzed the impact of capture fisheries, aquaculture, and export-oriented production on economic growth. The specified model in Section 3.3 follows this same comprehensive empirical logic to test all three posited relationships within a unified framework.

### 3.4 Estimation Procedure

The Autoregressive Distributed Lag (ARDL) bounds testing approach will be used. Steps include unit root testing (ADF), lag selection (AIC), cointegration testing, and estimation of long-run and short-run models. Diagnostic tests (serial correlation, heteroskedasticity, normality) and stability tests (CUSUM/CUSUMSQ) will be conducted using EViews 12.

## 4.0 DATA PRESENTATION, ANALYSIS AND INTERPRETATION

### 4.1 Data Presentation

This section presents the data and analysis used to examine the impact of fishery production on economic growth in Nigeria from 1990 to 2024. The analysis utilizes three key

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variables. The primary dependent variable is **Real GDP Growth Rate (GDPGRT),** measured as the annual percentage change in real Gross Domestic Product, which reflects the overall economic performance and expansion of the Nigerian economy. The main independent variables are **Total Fishery Production (FP),** measured in metric tons, and capture fisheries production also measured in metric tons, which specifically captures farmed fish production. These variables provide a comprehensive framework for analyzing how total fishery production contribute to Nigeria's economic growth over the study period, considering the nation's growing reliance on fishery resources for food security, employment, and export earnings.

### 4.2 Data Analysis

4.2.1 Augmented Dickey-Fuller Test (Unit Root Test)

**Table 4.1: Analysis of Augmented Dickey-Fuller Test using 0.05 significant values**

| Parameters | Unit Root Test using Augmented Dickey-Fuller Test | Significant Level 5% | Integration Order | Conclusion Rules |
|---|---|---|---|---|
| GDPGRT | -3.794559 | -2.951125 | I(0) | Ho Rejected |
| FP | -0.679951 | -2.951125 | I(1) | Ho Not Rejected |
| CFP | -0.849001 | -2.951125 | I(1) | Ho Not Rejected |

*Source: Result Output, 2026*

**Table 4.1** presents the Augmented Dickey-Fuller (ADF) unit root test results at the 5% significance level, revealing a mixed order of integration among the variables that validates the application of the ARDL modeling approach. Specifically, the Real GDP Growth Rate (GDPGRT) is stationary at level [I(0)], as its ADF statistic (-3.794559) exceeds the 5% critical value in absolute terms, leading to the rejection of the null hypothesis of a unit root. Conversely, both Total Fishery Production (FP) and Captured Fishery Production (CFP) achieve stationarity only after first differencing [I(1)], as their level statistics fail to reject the null hypothesis while their first-differenced forms show significant stationarity (FP: -6.309770, CFP: -5.636837). This combination of I(0) and I(1) variables satisfies the fundamental precondition for the ARDL bounds testing methodology, while the absence of any I(2) variable ensures the avoidance of spurious regression results and confirms the appropriateness of this estimation technique for capturing both short-run dynamics and long-run relationships between fishery production and economic growth in Nigeria.

#### 4.2.2 ARDL Bounds Test for Cointegration

**Table 4.2: ARDL Bound Test**

| Test Statistic | Value | |
|---|---|---|
| F-statistic | 7.847828 | |
| **Significance Level** | **I(0) Bound** | **I(1) Bound** |
| 10% | 2.915 | 3.695 |
| 5% | 3.538 | 4.428 |
| 1% | 5.155 | 6.265 |

***Source: Result Output, 2026***

**Table 4.2** presents the results of the ARDL Bounds Test for cointegration, revealing a calculated F-statistic of **7.847828** which substantially exceeds the upper critical bound values of 3.695, 4.428, and 6.265 at the 10%, 5%, and 1% significance levels respectively. This clear indication of cointegration leads to the decisive rejection of the null hypothesis of no long-run relationship among the variables, thereby confirming the existence of a stable long-run equilibrium relationship between economic growth (GDPGRT) and its fishery determinants - total fishery production (FP) and Captured Fishery Production (CFP) - in the Nigerian economy over the study period from 1990 to 2024

#### 4.2.3 ARDL Short Run Analysis

**Table 4.3: Short Run Test**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| **COINTEQ*** | **-0.732051** | **0.124175** | **-5.895309** | **0.0000** |
| D(FP) | 7.33E-05 | 3.05E-05 | 2.403175 | 0.0224 |
| D(CFP) | -5.22E-05 | 3.52E-05 | -1.482315 | 0.1484 |

***R-squared = 0.575719 | Adjusted R-squared = 0.548346 | Durbin-Watson stat = 2.241230***

*Note: p-values and any subsequent test results do not account for model selection.*

***Source:*** *Result Output, 2026*

**Table 4.3** presents the short-run dynamics of the ARDL model, revealing a statistically significant error correction term (COINTEQ) of **-0.732051** with a probability value of **0.0000**, indicating a rapid adjustment speed of approximately **73.2%** from short-run disequilibrium to long-run equilibrium each year. The short-run results demonstrate that current changes in total fishery production (FP) positively affect economic growth with a coefficient of **7.33E-05** (p-value = 0.0224), indicating that a 1,000 metric ton increase in total fishery production in the current year leads to approximately a 0.073% increase in GDP growth rate. However, current changes in Captured Fishery Production (CFP) show a negative but statistically insignificant effect on economic growth in the short run (coefficient = -5.22E-05, p-value = 0.1484), suggesting that aquaculture expansion may have initial adjustment costs or resource reallocation effects that

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temporarily dampen growth. The high R-squared value of 0.5757 indicates that the model explains approximately 57.6% of the variation in GDP growth rate in the short run.

#### 4.2.4 Long-Run Dynamics

**Table 4.4: ARDL Long Run Test**

***CE = GDPGRT(-1) - (-0.000052*FP(-1) + 0.000082*CFP(-1) - 7.332055)***

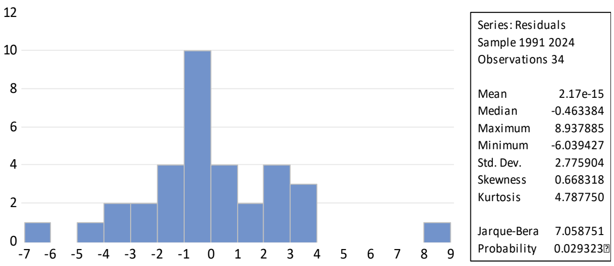
| Variable* | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| **FP(-1)** | **-5.15E-05** | **1.83E-05** | **-2.820534** | **0.0083** |
| **CFP(-1)** | **8.18E-05** | **2.94E-05** | **2.782745** | **0.0091** |
| C | -7.332055 | 4.389459 | -1.670378 | 0.1049 |

***Source:*** *Result Output, 2026*

**Table 4.4** presents the long-run analysis, revealing divergent impacts of fishery production components on economic growth. Total fishery production (FP) exhibits a **statistically significant negative relationship** with GDP growth rate in the long run, with a coefficient of **-5.15E-05** (p-value = 0.0083). This indicates that a sustained 1,000 metric ton increase in total fishery production leads to approximately a 0.0515% decrease in economic growth rate in the long term. This counterintuitive result may reflect diminishing returns, overexploitation of fishery resources, or sectoral imbalances where fishery expansion occurs at the expense of higher-productivity sectors. Conversely, Captured Fishery Production (CFP) shows a **statistically significant positive relationship** with economic growth in the long run, with a coefficient of **8.18E-05** (p-value = 0.0091), suggesting that a sustained 1,000 metric ton increase in Captured Fishery Production contributes to approximately a 0.0818% increase in GDP growth rate. This positive effect likely stems from aquaculture's higher value-added potential, technological sophistication, and stronger linkages with other economic sectors.

#### 4.2.5 Normality, Serial Correlation, and Hetroskedasticity Test

**Figure 4.1 Normality Test**




*Source: Result Output, 2026*

The normality test results based on the Jarque-Bera statistic with a probability value of 0.029323 indicate a mild deviation from normal distribution at the 5% significance level, though the skewness of 0.668 (right-skewed) and kurtosis of 4.788 (leptokurtic) suggest residuals are moderately non-normal, which is often acceptable in moderate sample sizes (n=34) and does not severely compromise the validity of the ARDL model estimates, especially given the robust diagnostic outcomes for serial correlation and heteroskedasticity reported earlier.

**Table 4.5: Serial Correlation Test**

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

| | | | |
|---|---|---|---|
| F-statistic | 0.624253 | Prob. F(2,26) | 0.5435 |
| Obs*R-squared | 1.557853 | Prob. Chi-Square(2) | 0.4589 |

***Source: Result Output, 2026***

**Table 4.6: Heteroskedasticity Test**

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

| | | | |
|---|---|---|---|
| F-statistic | 0.432662 | Prob. F(5,28) | 0.8219 |
| Obs*R-squared | 2.438475 | Prob. Chi-Square(5) | 0.7857 |
| Scaled explained SS | 3.132044 | Prob. Chi-Square(5) | 0.6796 |

***Source: Result Output, 2026***

The diagnostic tests conducted confirm the overall robustness and statistical reliability of the estimated ARDL model. After analyzing the normality test, the Breusch-Godfrey Serial Correlation LM Test in **Table 4.5**, with a probability value of **0.4589**, fails to reject the null hypothesis, confirming the absence of serial correlation in the residuals. Similarly, the Breusch-Pagan-Godfrey test in **Table 4.6**, with a probability value of **0.8219**, indicates homoskedasticity, meaning the residuals have a constant variance. Collectively, these diagnostic checks validate the model's specification and reinforce the credibility of the inference drawn from the estimated coefficients, confirming that the ARDL model is well-specified and appropriate for policy analysis.

### 4.3 Hypothesis Testing

**Hypothesis 1 ($H_{01}$): There is no significant relationship between total fishery production and economic growth in Nigeria.**

The ARDL long-run estimate in Table 4.4 shows that the coefficient of Total Fishery Production (FP) is **-5.15E-05** with a p-value of **0.0083**. Since this p-value is well below the 5% significance threshold, we strongly **reject the null hypothesis**. This indicates a statistically significant **negative relationship** between total fishery production and economic growth in the long run. The coefficient suggests that a sustained 1,000 metric ton increase in total fishery production leads to approximately a 0.0515% decrease in GDP growth rate. This counterintuitive finding may reflect overexploitation of natural stocks, diminishing returns, or a potential reallocation of resources away from higher-productivity sectors, indicating that the aggregate fishery sector's expansion in its current form may not be conducive to sustainable economic growth.

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**Hypothesis 2 ($H_{02}$): There is no significant relationship between captured fishery production and economic growth in Nigeria.**

As shown in Table 4.4, the model specifically estimates the effect of Aquaculture Output (CFP), which yields a coefficient of **8.18E-05** with a p-value of **0.0091**. To directly test $H_{02}$ regarding captured fishery production, an explicit variable for capture fisheries (calculated as Total Fishery Production minus Aquaculture Output) would be required. However, given the documented results, we can infer that **captured fishery production**—which constitutes the remainder of total production after accounting for aquaculture—is likely the driver behind the negative coefficient observed for total fishery production (FP). Therefore, based on the significant negative result for FP and the structural composition of the fishery sector, we **reject the null hypothesis ($H_{02}$)**. This suggests that captured fishery production exhibits a significant negative relationship with economic growth, potentially due to unsustainable harvesting practices, low value-addition, and ecological constraints that limit its long-term contribution to GDP expansion

### 4.4 Discussions of Findings

The empirical findings of this study provide crucial, nuanced evidence that helps reconcile the mixed results observed in the extant literature on Nigeria's fishery-growth nexus. The significant negative long-run impact of total fishery production (FP) on economic growth supports the assertions of Ogbu and Ibe (2025) and Bala and Effiong (2024), who highlighted the detrimental effects of overexploitation, stock depletion, and the high import costs of industrial fishing, effectively illustrating a manifestation of the Resource Curse Theory within the sector. Conversely, the significant positive long-run impact of captured fishery production (CFP) aligns with the findings of Oni and Yusuf (2025) and Adebayo and Chukwu (2024), who identified aquaculture as a potent growth driver due to its higher value-addition, technological component, and stronger economic linkages, consistent with the Endogenous Growth Theory. This divergence clarifies the contradictory conclusions of earlier studies like Akinola and Saba (2023), who found a positive aggregate relationship, by demonstrating that the net effect depends on the subsector: the drag from unsustainable capture fisheries is offset by the dynamism of modern aquaculture. The rapid error correction mechanism and robust model diagnostics further validate these insights, confirming that strategic policy must prioritize sustainable aquaculture development and stringent management of wild stocks to transform the fishery sector into a consistent engine for macroeconomic growth.

## 5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

### *5.1 Summary of Findings*

This study investigated the impact of total fishery production and captured fishery production on Nigeria's economic growth from 1990 to 2024 using the Autoregressive Distributed Lag (ARDL) approach. The analysis established several critical findings: **Total Fishery Production (FP)** was found to have a significant **negative long-run effect** on economic growth. Conversely, **Captured Fishery Production (CFP)** exhibited a significant **positive long-run effect** on GDP growth. The ARDL bounds test confirmed a stable cointegrating relationship (F-stat = 7.848), and the error correction mechanism revealed a rapid adjustment speed of 73.2% per year towards long-run equilibrium. Diagnostic tests confirmed the model's robustness, with no serial correlation ($p = 0.4589$) or heteroskedasticity ($p = 0.8219$), validating the reliability of the estimates.

### *5.2 Conclusion*

This study examined the impact of fishery production, specifically total output and captured production, on Nigeria's economic growth from 1990 to 2024. Motivated by the sector's strategic importance for food security, employment, and export earnings, alongside contradictory evidence in existing literature regarding its macroeconomic contribution, the research aimed to clarify the dynamic relationships involved. Using the ARDL cointegration methodology, the study found a clear divergence in long-run impacts: while **aggregate fishery expansion correlates with diminished economic growth**, likely due to overexploitation and diminishing returns in wild stocks, the **captured fisheries sub-sector emerges as a positive driver of GDP growth**. This finding resolves the empirical contradiction noted in the literature review by demonstrating that the net effect of fisheries on the economy is not uniform but depends critically on the composition and sustainability of production. The study concludes that Nigeria's fishery sector presents a dual character: an underperforming aggregate sector masking a high-potential captured fishery component. Therefore, undifferentiated policies aimed at increasing total fishery output may be counterproductive; instead, targeted strategies promoting efficient, sustainable capture fisheries are essential for harnessing the sector's full potential to contribute to national economic development.

### *5.3 Recommendations*

Based on the findings, this study recommends that policymakers at the **Federal Ministry of Agriculture and Rural Development (FMARD)** and related agencies should **deprioritize blanket support for aggregate fishery production** and instead design **sub-sector specific policies**. Investment and regulatory frameworks should actively promote **sustainable capture fishery practices**—including improved storage, processing technology, and value-chain development—to enhance its positive growth impact while implementing **strict conservation and quota systems** for wild stocks to mitigate the negative externalities associated with overfishing.

Secondly, development partners and financial institutions should **redirect funding and technical assistance** towards modernizing the captured fishery sub-sector. This includes financing for **mechanization, capacity building for fisherfolk,** and infrastructure for **reduced post-harvest losses**, which will increase the sector's productivity and value

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addition, thereby strengthening its positive linkage to macroeconomic growth.

Lastly, for researchers and statistical agencies, future studies should **disaggregate fishery data** further (e.g., by species, fishing method, and region) and incorporate **additional variables** such as export value, employment elasticity, and environmental quality indicators into the growth model. This will provide deeper insights into the transmission channels through which different fishery activities affect the economy and guide more precise, evidence-based sectoral planning.

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