EFFECT OF TAX INCENTIVES ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT
The study examined the effect of tax incentives on economic growth in Nigeria. The data were drawn for 2007 to 2016 as regards to tax incentives. The main type of data used in this study is secondary; sourced from the CBN Statistical Bulletin. This study applied ex post facto research design. The data collected were analysed using Ordinary Least Square Method. The results show that Annual allowance is positive and has significant impact on economic growth in Nigeria; whereas Investment allowance is negative and has significant impact on economic growth in Nigeria. The study, therefore among others recommends that in order to encourage investment in the manufacturing industry, the policy makers and the government should formulate and enact laws that increase the rate of investment allowance from 15% to 20% on plant and machineries used in manufacturing business.

Keywords: tax incentives, economic growth, Nigeria.

INTRODUCTION

Over the years, it has been observed that income tax revenue has been grossly understated due to improper tax administration arising from under assessment and inefficient machinery for collection (Adegbie and Fakile, 2011). The success or failure of any tax system depends on the extent to which it is properly managed; the extent to which the tax law is properly interpreted and implemented (Naiyeju, 1996). The Nigeria law of companies and Allies Mather Act of 1990 as amended incorporating all legal provision have made provision for certain tax incentives for corporate bodies and individuals. Basically, tax incentives are designed to encourage investment in certain preferred sectors of the economy and sometimes they are geared towards attracting in-flow of foreign exchange to compliment domestic suppliers for rapid economic development. Generally, these incentives are in the areas of manufacturing, export, agriculture and solid mineral, VAT, individuals and other areas. These incentives include: Personal allowance, Capital allowance, Investment allowance, Loss relief, Roll over relief, Annual allowance, Pioneer relief, Tax free dividend, Export Processing Zones Relief, Research and development and Tax free holiday.

It is good to note that the incentives are to ease off the burden of tax on tax payers. Tax evasion and avoidance encourage investors, which in turn will enhance economic growth and development for purposes of influencing the
structure and character of private investment. As the Nigeria market become more responsive, potential competitors are at an advantage. For example, if within the textile industry, a firm that import yarn for weaving is denied a tax holiday which a similar firm that undertake both spinning and weaving is granted, the former is likely to seek to maintain its competitive positions by carrying its backward integration further to spinning stage. Thus incentives to industries act like a catalyst to industrial development by reducing the import content of domestic manufacture improve the balance of payment and enhance the total impact of industrialization on income and employment within the Nigerian economy. This research therefore intends to evaluate the impact of tax incentives on economic development that is seen in terms of industrial growth in Nigeria.

**Statement of Problem**

In developing countries, the government has to play an active role in promoting economic growth and development because private initiative and capital are limited. Fiscal policy or budget has become an important instrument in promoting growth and development in such economies. Taxation is an important part of fiscal policy which can be used effectively by government and developing economies. Taxation play a very vital role in economic development of a country which includes: resources mobilization, reduction in inequalities of income, improvement in social welfare, foreign exchange, regional development, control inflation etc. Various studies have been carried out on the determinants of voluntary disclosure of quoted firms, those studies includes: Anyanwu (1997); Ogbonna and Appah (2012); Yaya (2013); Akwe (2014); Saibu (2015); Gareth (2000); Bonu and Pedro (2009); Saima et al. (2014). The scope and methodology of those studies differs and hence their findings, for instance, Anyanwu (1997); Ogbonna and Appah (2012); Yaya (2013); Akwe (2014) indicated positive relationship between taxation and economic growth, others, Saibu (2015); Gareth (2000); Bonu and Pedro (2009); Saima et al. (2014) showed negative relationship. Most of the studies testing empirically the relationship between taxation and economic growth have found a negative impact of the aggregate tax on economic growth, but there are some articles that do not find such results. Some others like Essoh (2011) suggested no significant relationship between these two major variables. While some studies applied the single ordinary least square estimating technique, others utilised co-integration tests, unit root tests, and descriptive techniques. In view of these disparate findings, this study seeks to further investigate both the short run dynamics and evaluate the long run relationship between tax incentives and economic growth in Nigeria. The study focuses on the impact of annual allowance, investment Allowance, capital allowances, on Nigeria’s Economic growth between 2007 and 2016. The choice of the study period provides an opportunity for a comprehensive assessment of the effect of taxation on the Nigerian economy.
Objectives of the Study
The general objective of this empirical study is to ascertain the effect of tax incentives on economic growth in Nigeria. Specifically, this study aims to:
1. Determine the effect of annual allowance on economic growth in Nigeria.
2. Ascertaining the effect of investment Allowance on economic growth in Nigeria.

Research Hypotheses
1. Annual allowance has no significant effect on economic growth in Nigeria.
2. Investment Allowance has no significant effect on economic growth in Nigeria.

Significance of the Study
The outcome of this organized inquiry will be useful to regional and national governments by providing informed basis for peer review and hence policy improvement with regards to tax incentives and Nigeria economic growth. The outcome of this study will assist government in understanding the core importance of tax incentive effect in shaping and improving their economic growth. Hopefully, by virtue of the outcome of this study, copious attention will be given tax incentives as veritable tool to revenue generation through investment and economic growth in Nigeria. Stakeholders will have an understanding on the divulged levels of foreign direct investment and the actual resultant effect of tax incentives on developmental issues. As regards to prospective entrepreneurs, it will serve as an encouragement for them to engage into their own businesses.

REVIEW OF RELATED LITERATURE
Concept of Tax Incentives
Tax is a compulsory levy imposed on a subject (individual or corporate) or upon his property, income and/or consumption by the government in order to generate revenue to provide security, social amenities and create conditions for the economic well-being of the society (Appah, 2004; Appah and Oyandonghan, 2011). Anyanfo (1996) and Anyanwu (1997) further buttressed that tax are imposed to regulate the production of certain goods and services, protection of infant industries, control business and curb inflation, reduce income inequalities etc. Danbatta (2005), defined tax as a “compulsory contribution made by individuals and organizations toward defraying the expenditure of the government”. Tax can either be direct or indirect; direct taxes are imposed on the income or consumption of a tax payer who bear the burden of taxation. Indirect taxes on the other hand, are imposed on goods and services on which the tax payer does not bear the burden of taxation, but can transfer it a final consumer.
who bears the burden, in form of price. The Oxford Advance Learners Dictionary defines incentives as reduction in the effective tax burden on the favoured activity as against that currently imposed upon it in the hope that the reduction in government revenue (due to tax forgone) will be compensated by an expected expansion of the national economy and ultimately by resulting increases in total revenue from such broadened economic basis. Incentive refers to anything that encourages one to do something. Hence, a tax incentive is a generic term for all the measures adopted by the government to deliberately manipulate the tax system to the advantage of potential tax-payer (Dotun, 1996).

Tax incentive is a deliberate reduction in or total elimination of tax liability granted by the government in order to encourage a particular economic unit to act in some desirable ways. The desirable ways maybe to invest more, employ more, export more, sell more, consume less, import less and pollute less and so on (Sanni, 2002). Empirical studies like those of (Sanni, 2002) and (Adedotun 1996) have reported different views on tax incentives as a catalyst for economic growth and development. Taxation has been used to encourage savings, investment and re-distribute income. Also priority sectors like Export Processing Zone (EPZ), solid minerals; oil and gas have been encouraged. The manufacturing sectors have received the right doses of tax incentives. Government also uses taxation to stimulate the economy by using tax policy to influence purchasing power and production costs (Ariwodola, 2001). Countries have introduced investment incentives for varying reasons; in some case, the incentives may be seen as a counter weight to the investment disincentives inherent in the general tax system (Holland and Vann, 1996). UNCTAD defines tax incentives as any incentives that reduce the tax burden of any party in order to induce them to invest in particular projects or sectors. They are exceptions to the general tax regime and may include, reduced tax rates on profits, tax holidays, accounting rules that allow accelerated depreciation and loss carry forwards for tax purposes, and reduced tariffs on imported equipment, components, and raw materials, or increased tariffs to protect the domestic market.

**Annual Allowance**

As the name implies, the annual allowance is granted every year to a business owing an asset that was used for the purpose of the business. The allowance is granted in the first year applying the relevant percentage on the cost of the asset less any initial allowance granted. In the second and subsequent year, the same amount as was given in the first year is also given. Thus the annual amount is given on straight line basis. Where an initial allowance had been given both initial and annual allowances may be claimed in the first year. Where the basis period for a year of assessment is a period of less than one year, the annual
allowance are not proportionately reduced. However, annual allowances are not proportionately increased if the period for a year of assessment happens to be a period of more than one year. It shall be limited to a period of 12 months. This situation is applicable when the commencement provisions are involved and when qualifying capital expenditure is incurred in the middle of a basis period. It should be noted that the tax laws by prescribing the straight lines basis for calculating the annual allowance implicitly fixed the life span of the asset. Thus, if the annual allowances rate for an asset is given as 20%, this implies that the asset will be written-off for tax purposes in 5 years (i.e., 100/20). If the rate is given as 10%, the asset is to be written-off in 10 years. The implication of this is that an asset could be written off for tax purposes yet the business could be using the asset to earn income. To avert a situation, the tax laws provide that the annual allowance is to be granted such that a nominal sum N 10 is left in the books for each asset until is eventually sold or otherwise disposed of by the business. Clearly, what this means is that the business continues to use the asset after the end of the asset’s useful life. It should be noted that the straight-line method of arriving at the annual allowance was introduced with effect from the 1985 year of assessment. Before then, annual allowance was calculated using the Reducing Balance Method.

**Investment Allowance**

As an incentive for investments, an investment allowance of 10% was granted to companies in the business of agricultural production (other than in marketing and process). This allowance is given in addition to the initial allowance granted on such assets. The allowance, like the initial allowance, is granted once on an asset and is not affected by the length of the basis period during which the asset was first put to use. But unlike the initial allowance, it is not deducted from the cost of the asset in arriving at the tax written down value of the asset. Like the initial allowance, investment allowance is granted on the cost of the asset in the year the asset is first put to use. Also, investment allowance is claimable and hence deductible from profit only in respect of production machinery in the year of expenditure and cannot be carried forward if not claimed or not relieved. Therefore if a business sustains a loss in a year that investment allowance is claimable for tax purposes, the allowance will be lost even when a claim is made as it cannot be relieved from a loss. In order to encourage investment in the manufacturing industry, the 1996 Finance miscellaneous Decree increased the rate of investment allowance from 10% to 15% on plant and machineries used in manufacturing business. Thus, the rate of investment allowance is now 15% effective from 1st January 1996. Investment allowance is also granted on qualifying capital expenditure incurred on new assets on or after 1st April 1969 as a replacement of an asset of a business destroyed or damaged in any part of Nigeria during the period commencing 16th
July, 1967 and ending 15th January, 1970 as a direct result of any military operation or other operation connected with civil war. The amount of investment allowance is increased to 25% of the capital expenditure incurred. Wikipedia (2008), a general investment allowance of 10% of the cost incurred on plant and equipment has been allowable to all companies from 1996 to date. Since 1999, there has been an initial allowance of 95% of the cost incurred on plants for agricultural production, while a 50% Initial allowance and 25% annual allowance has been granted for plant purchase for any other activity. Industrial plant and machinery bought in replacement of old ones are granted a once and for all 95% capital allowance in the first year with 5% retention as the book value until the final disposal of the assets.

**ECONOMIC GROWTH**

Economic growth refers to an increase in the capacity of the economy to produce goods and services compared from one period to another. It can be measured in nominal terms, where it is not adjusted for inflation, or in real terms, where it is adjusted for inflation. The growth of an economy is thought of not only as an increase in productive capacity but also as an improvement in the quality of life to the people of that economy and it is associated with technological improvements. Gross Domestic Product (GDP) refers to the monetary value of all the finished goods and services produced within a country's borders in a specific time period. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory and is measured annually. GDP is commonly used as an economic indicator of the overall health of an economy, as well as to measure the standards of living in a country (Lipsey & Chrystal, 2007).

Fiscal policies are concerned with government spending and taxation policies. The burden of resource mobilization to finance essential public development projects must be focused on how the government will raise adequate revenues for its development efforts. In the long-run, the government can only rely on the efficient and equitable collection of taxes as a more sustainable way to raise revenue to meet its development goals (Todaro & Smith, 2003). The key question however remains whether by offering huge tax incentives governments in developing nations have been able to increase investments to the extent of increasing economic growth rates and improving the welfare of its citizens. Studies in both developed and developing nations suggest that tax incentives are an inefficient and expensive way of encouraging investments. Most studies show that the most important determinants of FDI in developing countries consists of long term considerations affecting profitability, market size and market potential (Irish, 1978).
THEORETICAL FRAMEWORK

There are several theories that can be used to explain the issue of tax revenue as well as economic development. These are theories relating to tax compliance as well as theories of economic development. Some of these theories are explored here. Firstly, those on tax compliances are looked out and then followed by those of economic development.

**Benefit Received Theory:** This theory proceeds on the assumption that there is basically an exchange relationship between tax-payers and the state. The state provides certain goods and services to the members of the society and they contribute to the cost of these supplies in proportion to the benefits received (Bhartia, 2009). Anyanfo (1996) in (Ogbonna and Ebimobowei, 2012) argues that taxes should be allocated on the basis of benefits received from government expenditure.

**Cost of Service Theory:** This theory is similar to the benefits received theory. It emphasizes the semi-commercial relationship between the state and the citizens to a greater extent. In this theory, the state is being asked to give up basic protective and welfare functions. It is to scrupulously recover the cost of the services and therefore this theory implies a balanced budget policy (Ogbonna and Ebimobowei, 2012).

**The Harrod-Domar Model:** This model was used in development economics to explain an economy’s growth rate in terms of the level of saving and capital productivity. It was developed by Sir Roy F. Harrod and Evsey Domar in 1946. This model was the precursor to the exogenous growth model. It states that there are three concepts of growth which include Warranted growth (output growth rate at which firms believe they have the correct amount of capital and therefore do not alter their investment levels), the natural rate of growth (rate at which the labour force grows, indicating a change in aggregate output) and actual growth (the actual aggregate output change) (Friedland & Sanders, 1985). The model suggests that in the absence of government interventions, the growth rate of national income will directly be related to the savings ratio; therefore, the more an economy is able to save and invest, the greater the growth in GDP. It further states that the growth rate of national income will be inversely related to the economic capital-output ratio - the higher the capital is, the lower the GDP growth rate (Friedland & Sanders, 1985). According to the model, there are two possible problems which can be experienced in an economy. First, the relationship between the actual and natural (population) growth rates can cause disparities between the two, as factors that determine actual growth are separate from those that determine natural growth. Factors such as birth control, culture, and general tastes determine the natural growth rate. However, other effects such as the
marginal propensities to save and consume influence actual output. There is no guarantee that an economy will achieve sufficient output growth to sustain full employment in a context of population growth. The second problem is the relationship between the actual and warranted growth. If output is expected to increase then investments will increase to meet the extra demand but when actual growth either exceeds or fails to meet warranted growth expectations, attempts to meet the actual demand will be exaggerated causing economic instability (Todaro & Smith, 2003). Exogenous theorists observed that countries which were able to save 15% to 20% of GDP could grow at a much faster rate than those that saved less and this growth was self-sustainable. They stated that the mechanism of economic growth and development is a matter of increasing national savings and investment (Todaro & Smith, 2003). A good example of a country which has achieved economic growth by encouraging savings is Singapore.

**Neoclassical Theory – The Solow Growth Model:** It was named after Robert (Bob) Solow and Trevor Swan and was meant to demonstrate why the Harrod-Domar model was not a good model to adopt. The model states that economic growth is derived from an increase in capital and labour inputs, ideas and new technology. He observed that a sustained rise in capital investment increases the growth rate only to a certain level then the growth rates start declining because of the law of diminishing returns that is, as the ratio of capital to labour increases, the marginal product of additional units of capital decreases and hence the economy will adjust back to a steady state growth path, with real GDP growing at the same rate as the growth of the workforce plus a factor to reflect improving productivity (Begg et al, 2005). A steady state of growth refers to a situation where output, capital and labour are all growing at the same rate, so output per worker and capital per worker are constant. Neo-classical theorists state that to raise the rate of economic growth, an increase in the labour supply and a higher level of productivity of labours and capital are fundamental and differences in the levels of technological advancements between countries explain the variations in growth rates observed in the world today. Technological advancements not only increases incomes due to increased production but also transform lives through new product and process inventions (Lipsey & Chrystal, 2007).

**EMPIRICAL STUDIES**

Edame and Okoi (2014) examines the impact of taxation on investment and economic growth in Nigeria from 1980-2010. The ordinary least square method of multiple regression analysis was used to analyze the data. The annual data were sourced from the central bank of Nigeria statistical bulletin and NBS. The result of the analysis showed in conformity to our prior expectation because
the parameter estimates of corporate income tax (CIT) and personal income tax (PIT) appears with negative signs, this means that an inverse relationship exists between taxation and investment. The economic implication of the result is that a one percent (1%) increase in CIT will result in a decrease in the level of investment in Nigeria. Consequently, an increase in PIT will result in a decrease in the level of investment. Finally, the result therefore showed that taxation is negatively related to the level of investment and the output of goods and services (GDP) and is positively related to government expenditure in Nigeria. We also observed that taxation statistically is a significant factor influencing investment, GDP, and government expenditure in Nigeria. Based on the result of our findings, it is recommended that the government of Nigeria should use taxation to achieve its set target that will enhance economic growth and development.

Uwaoma and Ordu (2016) examined the impact of Tax incentives on economic development in Nigeria that is seen in terms of industrial growth in the nation with evidence from years 2004 to 2014. The population of this study includes 51 respondents drawn from taxpayers, management, and members of staff of some selected manufacturing companies in the South-South geo-political zone of Nigeria and Federal Inland Revenue Services. Using probability method, a sample size of 45 respondents was used whilst Thirty (30) companies were studied. The classes of personnel included in the research were administrative managers, accounts managers, internal auditors, and marketing and production staff. Survey method including the use of questionnaire and interview was adopted, whilst correlation method of analysis was adopted. Twenty eight (28) correctly responded copies of questionnaire out of 30 administered were obtained for the analysis; Spearman’s Rank Correlation Coefficient (rho) statistical tool was used in testing the hypothesis using Statistical Package for Social Sciences software (SPSS). The findings reveal that sufficient tax incentives enhance industrial growth and economy whilst in conclusion, it was recommended among others that, government should waive certain taxes on corporate bodies to help them develop and mature especially at their early stage. Government should not focus on the revenue that may be lost at this point because in the long-run the benefit surpasses what is lost at the initial time.

Onakoya and Afintinni (2016) investigated the cointegration relationship between tax revenue and Economic growth in Nigeria from 1980 to 2013. Various preliminary tests including descriptive statistics, trend analysis, and stationary tests using Augmented Dickey Fuller (ADF) test were conducted. The Engle-Granger Cointegration test was employed to determine whether a long run relationship existed between the variables. The Vector Error correction model was employed to confirm the long run relationship and determine the short run dynamics between the variables. Two post estimation diagnostics tests.
(autocorrelation, and Heteroscedasticity) were also conducted in order to confirm the robustness of the model. Findings indicated that a long run [but no short run] relationship existed between taxation and economic growth in Nigeria. The result also, revealed a significant positive relationship at 5% level of significance between Petroleum profit tax, Company Income tax and economic growth, but a negative relationship between economic growth and customs and Excise Duties. However, the tax components are jointly insignificant in impacting the Nigerian economic growth.

Onakoya, Ašintinni and Ogundajo (2016) investigated the impact of taxation on economic growth in Africa from 2004 to 2013. The study carried out various preliminary tests including descriptive statistics, and stationary tests using Augmented Dickey Fuller (ADF) test, Levin et al. test, Im, Pesaran and Shin W-stat tests. The appropriate fixed and random effect test was employed to determine the fitness of the model using the Hausman test. The study conducted the Hausman-Test to determine the appropriate estimator between Fixed and Random Effect. To confirm the robustness and validity of regression model, some post estimation tests are conducted which were omitted Variable Test, and Heteroscedasticity test. Findings indicated that tax revenue is positively related to GDP and promotes Economic Growth in Africa. It was significant at 5% level. The study concluded that tax revenue has a significant positive relationship with Gross Domestic Product. Therefore, high and weak levels of taxation are favorable to economic growth as upheld by the economic effect of IbnKhaldun’s theory on taxation, which approves the positive impact that lower tax rate have on work, output and economic performance.

Saidu (2014) examining the impact of tax incentives on economic growth and industrial development of companies in Nigeria. The methodology used for data collection was survey method and content analysis. Data was generated from both primary and secondary sources. The technique used for data analyses was chi-square test and statistical package for social sciences (SPSS.) Findings were made that there are significant relationships between tax incentive and economic growth which was indicated by responses of respondents and test of hypothesis using the SPSS. Findings were also made that tax incentives are found to be available to qualified companies who possess those criteria to qualify for those incentives. A research study carried out by Taufik and Imbarine (2012) applied the square root transformation of ordinary least squared (OLS) and reports positive effect of tax revenue on growth in an open trade environment. Similar result was obtained in another study by N’Yilimon (2014) using unit root test on panel data. It suggests also the absence of a non-linear relationship between taxation and economic growth of WAEMU countries.
Tanzi (1989) also finds that total tax revenue has high positive significance to the change in GDP, in which four of the components of tax revenue (GST, IPCT, ITT, and TTR). However, the impacts of tax revenue were not consistent for all countries in the four level of income. However, the study of Margareta and Åsa (2012) which deployed the fixed effects regression on a panel data of 25 OECD countries from 1970 to 2010 reports that both taxation of corporate and personal income negatively influence economic growth. The correlation between corporate income taxation and economic growth is more robust. This is contrary to the findings of Ugwunta and Ugwuanyi (2015) which adopted an ex-post facto research design, with a panel data estimation technique. An insignificant but positive relationship was found to exist between non distortionary taxes and economic growth of sub – Saharan countries.

**GAP IN LITERATURE REVIEW**

Many previous studies done on tax incentives in African countries show that the tax incentive programs do not necessarily increase the flow of FDIs into the countries and therefore do not deliver on the intended purposes. Most developing countries are unable to raise adequate revenues to meet their budget income needs and invest in their infrastructure and development projects that will improve their economies. While many governments are aware of the fact that they are losing more resources due to the incentive regimes, many are slow or reluctant to change their taxation policies towards better practices and seal revenue loopholes in the economy because of stiffened competition for investors among the developing nations. All stakeholders including academicians, regulators and industry players agree on the importance of effective tax policies in any economy and as such countries across the globe must work hard towards adopting international best tax practices and the government, citizens and investors must make sacrifices and invest in our economy to spur higher economic growth rates. Therefore, this study investigates the effect of tax incentives on economic growth in Nigeria.

**METHODOLOGY**

**Research Design**

Both the diagnostic and explanatory approaches were adopted for the study. The diagnostic approach shows the association between the variables while the explanatory approach studies the causal relationship between the variables (Kothari, 2004). The descriptive approach provided the foundation to the study by clearly giving an in-depth profile and understanding on the two issues of tax incentives and economic growth while the explanatory approach was adopted to estimate how and to what extend tax incentives offered in Nigeria affect economic growth. The study adopted the archival research...
strategy because government records and documents where used as the main source of data (Saunders et al, 2009)

**Population and Sample Size**

The population of the study does not consists of all the numerical figures or size but constituent elements of taxes in Nigeria such as company income tax, petroleum profit tax, value added tax and so on. This is without exception of any state and geo-political zones in Nigeria including the Federal Capital Territory (FCT) and the data were drawn for 2007 to 2016 as regards to tax incentives.

**Model Specification**

Ordinary Least Square Method is statistical tool used. Regression analysis is a constructive statistical technique that can be used to analyze the associations between a set of independent variables and single dependent variables (Lind et al. 2008).

The model that was applied in data analysis is given below. GDP is the dependant variable, AA, and IA are the independent variables. Therefore, the model for the study is:

\[ GDP = \beta_0 + \beta_1 AA + \beta_2 IA + \mu \]  

Where,

- GDP = gross domestic product
- AA = Annual allowance
- IA = Investment allowance
- \( \beta_0 \) = constant
- \( \beta_1 \) and \( \beta_2 \) = parameters that were estimated
- \( \mu \) = the random error term

**Measurement of Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP = Economic growth measure of GDP per annum measured as percentage real GDP growth rate</td>
<td></td>
</tr>
<tr>
<td>AA = Annual allowance measured as 10% percentage of investments</td>
<td></td>
</tr>
<tr>
<td>IA = Investment allowance measured as a percentage of investments to GDP</td>
<td></td>
</tr>
</tbody>
</table>

**IV. DATA ANALYSIS AND INTERPRETATION**

The summary of the analysis result and its corresponding interpretations of the effect of tax incentives on economic growth in Nigeria are presented below.
Effect of Tax Incentives on Economic Growth in Nigeria

**Descriptive Statistics**

**Table 4.1 Descriptive Statistics**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>GDP</th>
<th>AA</th>
<th>IA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>46721.66</td>
<td>5154.800</td>
<td>0.012040</td>
</tr>
<tr>
<td>Median</td>
<td>40352.71</td>
<td>5693.000</td>
<td>0.010650</td>
</tr>
<tr>
<td>Maximum</td>
<td>90136.99</td>
<td>8392.000</td>
<td>0.021400</td>
</tr>
<tr>
<td>Minimum</td>
<td>14735.32</td>
<td>1306.000</td>
<td>0.008900</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>28898.37</td>
<td>2521.899</td>
<td>0.003996</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.255081</td>
<td>-0.304552</td>
<td>1.550721</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.420891</td>
<td>1.661592</td>
<td>4.071848</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>1.147438</td>
<td>0.900977</td>
<td>4.486582</td>
</tr>
<tr>
<td>Probability</td>
<td>0.563426</td>
<td>0.637317</td>
<td>0.106109</td>
</tr>
</tbody>
</table>

The table above shows the mean (average) for each variable, their maximum values, minimum values, standard deviation. The result provides some insight into the nature of the effect of tax incentives on economic growth in Nigeria. Firstly, it was observed that over the period under review, the tax incentives have positive average economic growth (GDP) of 46721.66. The mean of annual allowance (AA) is 5154.800, this also means that the economic growth has a positive annual allowance in the period under study. The table also reveals that a positive average value of 0.012040 for investment allowance (IA). These values mean that within the period under review, the tax incentives meet up 467 on the average within the period under review. The maximum value of annual allowance is 8392.000 and its minimum value is 1306.000, maximum value for investment allowance is 0.021400 and its minimum value is 0.008900. The large differences between the maximum and minimum value shows that the data used for the study are homogeneous.

**Correlation Analysis**

**Table 4.2 Correlation Analysis**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>GDP</th>
<th>AA</th>
<th>IA</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.000000</td>
<td>0.933408</td>
<td>-0.448600</td>
</tr>
<tr>
<td>AA</td>
<td>0.933408</td>
<td>1.000000</td>
<td>-0.105188</td>
</tr>
<tr>
<td>IA</td>
<td>-0.448600</td>
<td>-0.105188</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

The correlation matrix is to check for multi-collinearity and to explore the association between each explanatory variable and the dependent variable. The table shows that GDP has positive association with annual allowance (0.933408), and negative association investment allowance (-0.448600). Annual allowance has a strong negative association with investment allowance (-
0.105188). In checking for multi-collinearity, the study observed that no two explanatory variables were perfectly correlated.

**Regression Analysis**  
**Table 4.3: GDP Model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>24641.52</td>
<td>2922.525</td>
<td>8.431583</td>
<td>0.0001</td>
</tr>
<tr>
<td>AA</td>
<td>10.26879</td>
<td>0.294898</td>
<td>34.82147</td>
<td>0.0000</td>
</tr>
<tr>
<td>IA</td>
<td>-2562577.</td>
<td>186117.3</td>
<td>-13.76861</td>
<td>0.0000</td>
</tr>
</tbody>
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R-squared 0.995415  
Adjusted R-squared 0.994105  
Mean dependent var 46721.66  
S.D. dependent var 28898.37  
S.E. of regression 2218.734  
Akaike info criterion 18.49059  
Schwarz criterion 18.58136  
Hannan-Quinn criter. 18.39101  
Log likelihood -89.45293  
F-statistic 759.8942  
Durbin-Watson stat 1.750639  
Prob(F-statistic) 0.000000

The R-squared which is the co-efficient of determination or measure of goodness of fit of the model, tests the explanatory power of the independent variables in any regression model. From our result, the R-squared \( R^2 \) is 99% in GDP Model. This showed that our model displayed a good fit because the \( R^2 \) is closer to 100%, these explanatory variables can impact up to 99% out of the expected 100%, leaving the remaining 1% which would be accounted for by other variables outside the models as captured by the error term. The F-statistics measures the overall significance of the explanatory parameters in the model, and it shows the appropriateness of the model used for the analysis while the probability value means that model is statistically significant and valid in explaining the outcome of the dependent variables. From table 4.3 above, the calculated value of the f-statistics is 759.8942 and its probabilities are 0.000000 which is less than 0.05. We therefore accept and state that there is a significance relationship between the variables. This means that the parameter estimates are statistically significant in explaining the relationship in the dependent variable. The t-statistics helps in measuring the individuals’ statistical significance of the parameters in the model from the result report. It is observed from table 4.3 above that annual allowance \( |AA| \) and investment allowance \( |IA| \) were statistically significant at 5% with its values as 34.82147 and -13.76861 respectively. This implies that they have contributed significantly to economic growth \( |GDP| \) at
the rate of 5% level of significant. Our model is free from the problem of autocorrelation because the Durbin-Watson value is 1.750639 which is approximated as 2 (that means the absence of autocorrelation in the model used for the analysis). The a’priori criteria are determined by the existing accounting theory and states the signs and magnitude of the variables from the result. Annual allowance (AA) has positive sign and its values are 34.82147. In the Model, this implies that increase in Annual allowance increases the economic growth (GDP) by 348%. Investment allowance (IA) has negative sign and its values are -13.76861. In the Model, this also implies that decrease in Investment allowance decreases the economic growth (GDP) by 138%, and this conforms to our theoretical expectations.

Hypotheses Testing

H0: Annual allowance has no significant effect on economic growth in Nigeria.

From the result of our test in table 4.3 above, we found out that the value of our t-test for annual allowance is 34.82147 with a probability of 0.0000. This probability value is less than the desired level of significant of 0.05. We accept the alternative and reject the null hypothesis, which says that Annual allowance has significant effect on economic growth in Nigeria. Thus, Annual allowance is positive and has significant impact on economic growth in Nigeria at 5% level of significant.

H0: Investment Allowance has no significant effect on economic growth in Nigeria.

Drawing inference from table 4.3 above, we found out that the computed value, t-value for Investment Allowance is -13.76861, while its probability is 0.0000. Since its probability value is less than the desired level of significance of 0.05. We therefore, reject the null and accept the alternative hypothesis, which says that Investment Allowance significantly affect economic growth in Nigeria. Thus, Investment Allowance is negative and has significant impact on economic growth in Nigeria at 5% level of significant.

V. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

SUMMARY OF FINDINGS
The study investigates the effect of tax incentives on economic growth in Nigeria, and the following were found at the 5% level of significant:

I. Annual allowance is positive and has significant impact on economic growth in Nigeria.

II. Investment allowance is negative and has significant impact on economic growth in Nigeria.

CONCLUSION
From the foregoing analysis and findings, we can derive empirical conclusions with respect to effect of tax incentives on economic growth in
Nigeria. Tax incentive is a deliberate reduction in or total elimination of tax liability granted by the government in order to encourage a particular economic unit to act in some desirable ways. The desirable ways maybe to invest more, employ more, export more, sell more, consume less, import less and pollute less and so on. Empirical studies like those of [Sanni, 2002] and [Adedotun 1996] have reported different views on tax incentives as a catalyst for economic growth and development. Taxation has been used to encourage savings, investment and re-distribute income. Also priority sectors like Export Processing Zone (EPZ), solid minerals; oil and gas have been encouraged. The manufacturing sectors have received the right doses of tax incentives. Government also uses taxation to stimulate the economy by using tax policy to influence purchasing power and production costs. Countries have introduced investment incentives for varying reasons; in some case, the incentives may be seen as a counter weight to the investment disincentives inherent in the general tax system.

RECOMMENDATIONS
The study, therefore recommends the following based on the findings of the study.

- The tax authority should consider proportionately increase of annual allowances if the period for a year of assessment happens to be a period of more than one year. This will attract more investors thereby improving the economic growth of the country.
- In order to encourage investment in the manufacturing industry, the policy makers and the government should formulate and enact laws that increase the rate of investment allowance from 15% to 20% on plant and machineries used in manufacturing business.

REFERENCES


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