INTERNATIONAL JOURNAL OF ACCOUNTANCY, FINANCE AND TAXATION
DEPARTMENT OF ACCOUNTANCY, IMO STATE UNIVERSITY, OWERRI.
IJAFT

ISSN: 3027-0378

TAXES GENERATED IN DIGITAL AGE AND ECONOMIC GROWTH IN NIGERIA

Dr. Philip Osemudiamen Ogbole, Nathaniel Ime & Prof. Ruth Osaretin Urhoghide

Accounting Department, Benson Idahosa University, Nigeria.
Email: pogbole@biu.edu.ng
Email: nathaniel.mulogistical@gmail.com*
Email: rurhoghide@biu.edu.ng

K E Y W O R D S

Company Income Tax, Tertiary Education Tax, Value Added Tax, Gross Domestic Product.

A B S T R A C T

The study examined the effect of taxes generated in digital age on economic growth of Nigeria from 2019 to 2022. Ex-Post facto research design method was adopted for this study. The research population of this study was centered around Nigeria, that is a total of all sectors that contributes to Nigeria's GDP. Secondary data were sourced from The National Bureau of Statistics Reports and Federal Inland Revenue Service Reports from 2019 to 2022. Data from the annual reports were analyzed using descriptive statistics and inferential statistics such as analysis test through EViews 9.0 statistical software. Findings from the empirical analysis showed that Company Income Tax had a negative and not significant effect on Gross Domestic Product of Nigeria with t-value of -1.884830 and p-value of 0.0599. While Tertiary Education Tax and Value Added Tax had a positive and significant effect on Gross Domestic Product of Nigeria with t-stat of 2.091909 and p-value of 0.0369 and with t-stat of 1.601106 and a p-value of 0.1099 respectively. Therefore, the study recommends that government should organize trainings, seminars, and workshops for tax administrators, Nigerian public, students in higher institutions, and firms on the importance and benefits of taxes on economic growth in Nigeria. There should be more introduction of technologies and e-channels that will speed up optimal tax mobilization in Nigeria. The Nigerian government should effectively and judiciously use the tax funds to improve the capital and recurrent expenditures, infrastructures, and the wellbeing of her citizens.

Introduction

The Federal Inland Revenue Service (FIRS), following the passage of the finance bill by the National Assembly, adopted in year 2019 digitisation to boost revenue mobilization as well as tax collection in Nigeria. The focus of this adoption was promoting digitisation as key to boosting revenue mobilisation considering the state of information and communication technology uptake globally as well as the size of Nigeria's need for revenue

for development financing among other needs. This digitalization of Nigeria tax started with the process of linking up customers' bank verification numbers with the hope to increase tax revenue net. Considering the volume of economic activities associated with sectors of the economy, such as the manufacturing, technology and fintech sector, businesses like Uber, Amazon, Jumia and Interswitch further confirms that the digital space is new 'gold' in terms of revenue generation and tax administration (Olumayowa, 2020).

Globally, tax is said be one of the main sources of government income. Every government would use taxes to meet their basic responsibilities and functions, for the provision of basic amenities, providing of public goods, law and order maintenance, public defense against internal and external aggression, trade and business regulation to guarantee economic and social maintenance (Adefolake & Omodero, 2022). Tax which is a levy imposed by a country on her citizens and corporate bodies observably plays a vital part in correcting the imbalance of a country' economy especially in the case of Nigeria. This is because taxes generate income to the government at any level and serve many other purposes such as stimulant to the economy of the country.

Economic growth of a nation can be achieved through taxation. This was submitted by The United Nation in 2000 that tax revenue contributes substantially to development of a nation. Taxes are utilized by government to finance her expenditure and redistribute wealth which eventually translates to financing growth of the country. Nigeria, which is faced with the challenges of poor education, power supply, lack of infrastructure, an inefficient property regulation system, delay in the passage of legislative reforms, poor electoral processes, militancy, restrictive trade policies, insecurity, a slow and ineffective judicial system, an inconsistent regulatory environment and pervasive corruption can only find its way out in this digital age through effective and transparent tax system. This great importance has necessitated the need to deepen existing empirical research and initiate more empirical conversation and result on taxes generated in digital age and economic growth in Nigeria. With the introduction of the finance act and the digitalization of the tax system leading to an increase in tax net, it becomes necessary to unravel how taxes generated has led to economic growth. A combination of company income tax, tertiary education tax and value added tax as a measurement of taxes collected and gross domestic product (GDP) as a measurement of economic growth respectively, will further reduce the paucity of academic research regarding taxes generated in digital age and economic growth in Nigeria. Also, engaging in this research will try to put an end to divergent results from researchers (Ogbonna, Gabriel, Amah & Cletus, 2021; Obaje & Ogirima, 2019; Osaretin, Samuel, Uzoamaka & Uzoamaka, 2022; Ngwoke, 2019; Aduloju, 2022) that has emerged in the area of taxes generated in digital age and economic growth in Nigeria. On concluding this study, its findings will serve as a contribution to the body of academic literature and the Nigeria government (including The Federal Inland Revenue Service).

In other to achieve the broad objectives of examining the effect of taxes generated in digital age on economic growth in Nigeria, the research aims at answering the following questions.

1. what is the effect of Company Income Tax on Gross Domestic Product in Nigeria?
2. to what extent does Tertiary Education Tax effect on Gross Domestic Product in Nigeria?
3. what is the effect of Value Added Tax on Gross Domestic Product in Nigeria?

Research Hypotheses

The following are hypotheses of the study which will be stated in the null form:

$H0_1$: Company Income Tax has no significant effect on Gross Domestic Product in Nigeria.

$H0_2$: Tertiary Education Tax has no significant effect on Gross Domestic Product in Nigeria.

$H0_3$: Value Added Tax has no significant effect on Gross Domestic Product in Nigeria.

Conceptual Review

Tax

Tax is a mandatory levy placed by government on the incomes, revenue and profit of corporate organizations and individual for the actualization of its duties of social welfare for her citizens (Oloyede, Olaoye & Oluwaleye, 2018). It is a compulsory levy imposed by the government of a country against the income, wealth or profit of the individual, corporate firms and partnership organization. Thus, Ogbonna, Gabriel, Amah and Cletus (2021) define taxation as the compulsory transfer or payment (or occasionally of goods and services) from private individuals, institutions or groups to the government. It is also seen as a pecuniary burden lay upon individuals or property to support government expenditure. The imposition of taxation by government on her citizens is expected to yield income which are used for the provision of social amenities (water, road, etc), security and creates conditions for the economic well-being of the society. Obaje and Ogirima (2019) opines that taxation is a tool of fiscal policy used by government all over the world to influence positively or negatively particular type of economic activities to achieve desired objectives.

Tax in Digital Age

The impetus to tax digital transactions derives taxation in the digital age. With the growing international consensus that states whose citizens contribute to the profits of digital companies (market jurisdictions) should also enjoy taxing rights over those profits created a need for the digitalisation of the tax system in Nigeria. Taxation in the digital age of digital transactions is primarily concerned with how these taxing rights are collected and allocated between states. Before the Finance Act, non-resident companies were taxable in Nigeria only if they had a fixed base or permanent establishment in Nigeria. This meant that digital companies providing services and goods without physical presence in Nigeria were not liable to pay income tax in Nigeria. This position has changed with the enactment of the Finance Act and the implementation of the digitalization of taxation. According to Olumayowa (2020) taxation in the digital age led to Scale without mass. Digital companies are able to operate across various jurisdictions without having a physical presence in those jurisdictions, thereby exempting them from the traditional model of taxation which was based on the existence of a fixed base or permanent establishment. The force of digital companies to generate income from market jurisdictions without paying "commensurate" taxes due to the limitations of the traditional basis of taxation led to a realisation that there is need for a new framework to bring digital transactions within the tax net. The finance act therefore empowers the Federal inland Revenue service to collect tax digitally. The Finance Act 2019 amended Section 13(2) of the Companies Income Tax Act ("CITA") introduced a new paragraph (c) which subjects digital and online transactions of non-resident companies to companies income tax in Nigeria. Specifically, Section 13(2)(c) of CITA states

that a non-Nigerian company will be deemed to have derived profits from Nigeria and so taxable in Nigeria if the company satisfies the following conditions:

1. The company transmits, emits or receives signals, sounds, messages, images or data of any kind by cable, radio, electromagnetic systems, or any other electronic or wireless apparatus to Nigeria in respect of ANY activity including the following: electronic commerce; application store; high frequency trading; electronic data storage; online adverts; participative network platform; online payments.
2. Profit is attributable to such activities; and
3. The company has a significant economic presence in Nigeria.

Company Income Tax

Company income tax stems from the fact that businesses are regarded as separate entity from their owner, thus making imposition of a compulsory levy called corporate tax unavoidable for governments around the globe (Osaretin, Samuel, Uzoamaka & Uzoamaka, 2021). Company tax is a mandatory tax forced on the net earnings of a business entity after deductions of expenses/expenditures has been accounted for. Company tax is a form of compulsory levy placed by the government on profits accruing in, received from, brought into or received in Nigeria from, any trade or business, rent or any premium arising from a right granted to any other person for the use or occupation of any property, dividends interest, discounts, charges or annuities, any other amount not falling within the above categories but qualifying as annual profits or gains or any amount deemed to be income or profits of a business entity (Obaje & Ogirima, 2019). Taxation is not only a means for government to acquire resources. It has a crucial role in achieving equality and distributive social and economic needs (Aduloju, 2022). The government imposes corporate taxes on the net profit of the corporations. Ezugwu and Akubo (2014) is of the opinion that corporate taxes are taxes paid by corporations based on the sum of profit generated. Company income taxes are taxed on public incorporations, firms, and unincorporated associations such as provident societies, industrial firms, clubs and trade associations (Babatunde & Ibukun, 2016). The incidence of corporate tax on companies reduces the fund available for expansion, dividends re-investment, thereby decreases the goods or services produced by such company and also serves as a disincentive to the investing public (Ezugwu & Akubo, 2014).

Tertiary Education Tax

Tertiary Education Tax which was formally called Education Tax is a tax imposed on the assessable income or profits of all firms registered in Nigeria (including companies subject to tax under Petroleum Profits Tax Act) for the enhancement of tertiary education in Nigeria (Ayo, 2020). It was established by the Tertiary Education Trust Fund (Establishment, Etc.) Act No 16, of 2011. This tax is assessed alongside the PPT or income tax liability of a company. Education tax is assessed at 2.5% of the assessable profits of a company. Ezugwu and Akubo (2019) stated that the mandate of the education fund as provided in Section 7(1)(a) to (e) of the TET FUND ACT, 2011 is to administer and disburse the amount in the Fund to Federal and State tertiary educational institutions, specifically for the provision and maintenance of the following; essential physical infrastructure for teaching and learning, instructional material and equipment, research and publication, academic staff training and development and any other need which, in the instance of the

Board of Trustees, is important and vital for the improvement of quality and upkeep of standards in the higher institutions of learning. TET Fund ensures that funds gotten from education tax are fully utilized to advance the quality of education in Nigeria without direct contract awarding by; making available funding for educational facilities and infrastructural development, promoting creative and new approaches to educational learning and services, supporting, stimulating and enhancing improvement activities in educational foundation areas like teacher education, teaching practice, library development. Also championing new literacy-enhancing areas such as scientific, information and technology literacy (Aduloju, 2022).

Value Added Tax

Value added tax as a concept originated from the French Economist, Maurice Laure in the year 1954. It was originally referred to as "taxe sur la valueur". Alzahrani and Lasfer (2008) define VAT as a consumption tax payable on the goods and services consumed by persons, business organizations and individuals. Confidence and Ebipanipre (2014) stated that services, which are exempted from VAT does not mean that VAT will not fall on them. What it means is that the purchaser does not pay tax directly on the item purchased. The consequences of this are of in two areas; the supplier is not able to set off any "input tax" and the supplier in this instance is the last consumer and the tax ends there. However, to recover the tax he has paid, he will increase the selling price of his goods or services. When goods or services are zero rated, it means such goods or services are taxable but the tax charged is nil. The zero-rated trader can sell his goods or services VAT free because he can claim any input tax paid on his supplies. It is required of all chargeable and registered persons to keep such records of their dealings in chargeable goods or services as will enable them to compute the proper tax chargeable and to pay such tax. The records and procedures for sales or purchases accounting and invoicing must be satisfactory to: complete the quarterly returns, calculate tax due or chargeable and be verified by the applicable tax authority (Ishola, Folajimi & Niyi, 2019). The periodic or yearly accounts may be either VAT inclusive or VAT exclusive.

Economic growth

Economic growth is described as a constant increment in the production capacity of a country (as evaluated by reviewing the current year's gross national product to the previous year's), as well as an increment in per capita national output, measured by shifting the country's production possibility frontier outwards (Adefolake & Omodero, 2022). The government's duty in achieving economic growth is critical and taxation, as an instrument of fiscal policy is used by the government in stimulating economic growth. In other to measure how government have used taxation to stir economic growth, gross domestic product becomes an essential basis of measurement. According to Aduloju, (2022) gross domestic product tracks the health of a nation's economy. It represents the value of all goods and services produced in a country over a specific period. More emerging economists in the world uses GDP as a determinant to a growing economy or an economy under recession.

Taxes Generated in Digital Age and Economic Growth

The correlation between taxes generated in digital age and economic growth is a contested subject. Despite the revenue reported by the Nigerian government over the years,

the revenue mobilised has been insufficient in meeting its social and public spending which is important to enhance economic growth (Adefolake & Omodero, 2022). With the introduction and implementation of digital taxation from e-channels, government revenue across the various sectors will be evenly mobilized thereby leading to government's investment in sectors and the economy and redistribution of wealth. The economy of any nation becomes booming when the government is able to mobilized tangible revenue across all sectors of the country. Ngwoke (2019) who studied the effect of taxation on economic growth revealed that change in the level of GDP is as a result of change in taxes (company income tax, value added tax and withholding tax). Aduloju (2022) who studied taxation of the Nigerian digital economy and found that company income tax been a compulsory levy on profit is a determinant to the level of growth of a country. Osaretin, Samuel, Uzoamaka and Uzoamaka (2022) looked at the effects of taxation on the growth of Nigerian economy and concluded that corporate taxation has influence but with no clear-cut on country's growth. Ogbonna, Gabriel, Amah and Cletus (2021) stated that stakeholders would receive more if government taxes such as company income tax, education tax and withholding rates are reduced. Ezugwu and Akubo (2014) revealed that education tax rate is one of the factors that affect education growth in a country thereby leading to intellectual development of a nation. Ofoegbu, David, and Oliver, (2016) carried out an empirical analysis of effect of tax revenue on economic development of Nigeria and found a positive impact of tertiary education tax on the economy and business environment at large. Obaje and Ogirima (2019) focused on the effects of taxation on economic growth in Nigeria. This finding further affirms the findings of this study.

Theoretical Framework

Ability to Pay Theory

Taxation is based on the foundation that everyone in nation should bear the burden of tax in a fair and equitable manner. The ability to pay theory was advocated by Adam Smith who is mostly referred to as the Father of Economics and it is widely accepted as it is on the foundation of the real meaning of "ability" of taxpayer. Since tax is based on income, then income becomes a measure of ability to pay tax (Abrahu & Amahalu, 2017).

Benefit Received Theory

This theory states that government of every country and tax payers have an exchange relationship in which the state make provision for public goods and services and any other benefit to individuals in the society and these individuals or persons in return pay for all goods and services provided for in proportion to the benefit received (Ofoegbu, David & Oliver, 2016). Such benefits can be in form of regularized labour, infrastructure, and capital markets, among other things.

Methodology

The research design employed in this study is the ex-post facto research design. Ex-post Facto seeks to find out the factors that are associated with certain occurrence, conditions, events or behaviours by analyzing past events or already existing data for possible casual factors (Kothari & Garg 2014). The research population of this study is centered around Nigeria, that is all sectors that contributes to Nigeria's GDP. Secondary data were sourced from National Bureau of Statistics Reports and Federal inland Revenue Service Reports from 2019 to 2022. Data were analyzed using descriptive statistics and

tables. Before testing the hypothesis, the data were first examined to meet OLS assumptions before running the regression analysis which enhanced the reliability of the conclusion drawn. Ordinary Least Square Regression Technique was chosen because it help to establish the effect among independent variables and the dependent variable. It reflect the level to which a set of variables are capable of predicting a specific outcome.

With the introduction of Country's Age as control variable, the model is estimated as follows;

$Y = \beta_o + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \mu$

Where: Y = GDP (Dependent Variable), X = (Explanatory/Independent Variable), β0 = Constant term (Intercept), β = Coefficient of financial statement, μ = Error term (Stochastic Term)

The equations is formulated below:

$GDP_{it} = \beta_0+\beta_1COTAX_{it}+\beta_2TEDUTAX_{it}+\beta_3VAT_{it} + \beta_4CAGE_{it}+\mu_{it}$

Where: GDP = Gross Domestic Product,
COTAX = Company Income Tax,
TEDUTAX = Tertiary Education Tax,
VAT = Value Added Tax,
CAGE= Company Age,
β_0 = Constant term (intercepts),
β_{it} = Coefficients to be estimated for firm í in period t, μít = Error term/Stochastic term.

Table 1: Operationalization of Variables

Independent Variable	**Measurement**	***Apriori* Expectation**
Company Income Tax	Measured by Natural logarithm of total Company Income Tax generated in each year.	+
Tertiary Education Tax	Measured by Natural logarithm of total Tertiary Education Tax generated in each year.	+
Value Added Tax	Measured by Natural logarithm of total Value Added Tax generated in each year.	-
Dependent Variables		
Gross Domestic Product	It represents the value of all goods and services produced in a country over a specific period.	
Control Variable		
Country's Age	Natural logarithm of the age of Nigeria in each year.	

Researcher's Compilation (2024).

Data Analysis and Interpretation of Result

Table 2: Descriptive Statistics

	GDP	COTAX	TEDUTAX	VAT	CAGE
Mean	0.332216	34409972	5031361.	12056488	60.5

Median	0.256000	20492458	2399873.	4839334.	60.5
Maximum	12.00000	1.84E+08	34771025	86777902	62
Minimum	0.032000	0.2809710	103341.1	246050.3	59
Std. Dev.	0.535974	0.31348062	0.7841696	0.19998053	1.290994
Skewness	17.65769	1.781392	2.792192	2.714865	0.0011
Kurtosis	377.5053	6.929381	9.679694	9.317046	-1.20000
Jarque-Bera	3537536.	703.3364	1895.091	1734.676	49006.08
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	199.3298	2.06E+10	3.02E+09	7.23E+09	1.85E+10
Sum Sq. Dev.	172.0738	5.89E+17	3.68E+16	2.40E+17	2.34E+18

Source: Researcher's Computation using Eviews 9 (2024)

From the descriptive statistics of the variables it is observed that GDP has a mean value of 0.33 with maximum and minimum values of 12 and 0.032 respectively. The standard deviation measuring the spread of the distribution stood approximately at 0.54 which is large and suggest considerable dispersion in values of GDP from the mean. The Jacque-Bera stood at 3537536 and the p-value of 0.00 indicates that the data is normally distributed at 5% level of significance ($p<0.05$). Company income tax (COTAX) is observed with a mean value of 34409972 with maximum and minimum values of 1.84 and 0.2 respectively. The standard deviation measuring the spread of the distribution stood at 0.3 which is small and suggest that are clustered around the sampled the mean. The Jacque-Bera stood at 703.3364 and the p-value of 0.00 indicates that the data is normally distributed at 5% level of significance ($p<0.05$) and therefore the series satisfies the normality criterion and that selection bias is unlikely in the sample. The mean of the Tertiary Education tax (TEDUTAX) stood at 5031361, this reveals the mean education tax paid by the sectors of Nigeria economy for the period under review with maximum and minimum values of 34771025 and 103341.1. The standard deviation of 0.78 which is high, reveals a considerable dispersion of Nigeria from the mean. The mean value for Value Added Tax (VAT) is 12056488 with a maximum and minimum of 86777902 and 103341.1 which indicates an average of ₦12,056,488 paid as value added tax (VAT) by the sector in Nigeria. The standard deviation of approximately 0.20 indicates the existence of cluster of the samples around the sample mean. The Jarque-Bera of 1734.676and a p-value is 0.0000 ($p<0.05$). This indicates that the distribution is normal. The Jarque-Bera of the statistic of 1895.091 with a p-value of 0.0000 indicates that the data is normally distributed and that outliers are unlikely in the series. Finally, the mean of Country Age (CAGE) stood at 60.5 with a maximum value of 62 and a minimum value of 59. The Jacque-Bera statistics of 49006.08 and p-value of 0.0000 indicates that the distribution did not fail the normality test.

Table 3: Correlation Matrix

	GDP	COTAX	TEDUTAX	VAT	CAGE
GDP	1.000000				
COTAX	-0.024662	1.000000			

TEDUTAX	0.070870	0.310849	1.000000		
VAT	0.064725	0.323553	0.970979	1.000000	
CAGE	-0.017550	-0.043514	-0.086899	-0.067874	1.000000

Source: Researcher's Computation using Eviews 9 (2024)

The correlation coefficients revealed correlation coefficients between the dependent variable of GDP and the independent variables. The research also converted the explanatory variables to their natural log form. Therefore, we can proceed to conduct other diagnostic test and the regression analysis.

Table 4: Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.770911	Prob. F(2,593)	0.1711
Obs*R-squared	3.562354	Prob. Chi-Square (2)	0.1684

Source: Researcher's Computation using Eviews 9 (2024)

The result of the Breusch-Godfrey test of serial correlation indicates the absence of serial correlation in the variables of regression. The F-statistic of 1.770911 and the probability value of 0.1711 indicate that the null hypothesis of no serial correlation is accepted; hence we reject the alternate hypothesis of serially correlated variables.

Table 5: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.394710	Prob. F(4,595)	0.8125
Obs*R-squared	1.587892	Prob. Chi-Square(4)	0.8110
Scaled explained SS	304.8928	Prob. Chi-Square(4)	0.0000

Source: Researcher's Computation using Eviews 9 (2024)

The test of heteroskedasticity was conducted using the Breusch-Pagan-Godfrey test. The test reported an F-statistic of 0.394710 and an insignificant probability value of 0.8125. The result of the test accepts the null hypothesis of homoskedastic residuals.

Table 6: Ramsey RESET Test

	Value	df	Probability
t-statistic	0.600798	594	0.5482
F-statistic	0.360958	(1, 594)	0.5482
Likelihood ratio	0.364493	1	0.5460

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.103052	1	0.103052
Restricted SSR	169.6871	595	0.285188
Unrestricted SSR	169.5840	594	0.285495

LR test summary:

	Value	df
Restricted LogL	-472.4711	595
Unrestricted LogL	-472.2888	594

Source: Researcher's Computation using Eviews 9 (2024)

The Ramsey reset test of the model specification was adopted to test the accuracy of the regression model. The test result reported a statistical t of 0.600798 and a probability value of 0.5482. The test result supported the null hypothesis of the specified model. Therefore, it is obvious that there is no apparent nonlinearity in the regression equation indicating that the linear model is appropriate.

Table 7: Regression Results (GDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_COTAX	-0.056165	0.029798	-1.884830	0.0599
LOG_TEDUTAX	0.044747	0.021391	2.091909	0.0369
LOG_VAT	0.057625	0.035991	1.601106	0.1099
LOG_CAGE	-1.01E-10	3.56E-10	-0.283460	0.7769
C	-0.221555	0.602457	-0.367752	0.7132

R-squared	0.750051	Mean dependent var	0.332216
Adjusted R-squared	0.457241	S.D. dependent var	0.535974
S.E. of regression	0.534030	Akaike info criterion	1.591570
Sum squared resid	169.6871	Schwarz criterion	1.628211
Log likelihood	-472.4711	Hannan-Quinn criter.	1.605834
F-statistic	2.092204	Durbin-Watson stat	1.897908
Prob(F-statistic)	0.040391		

$GDP_{it} = \beta_0+\beta_1 COTAX_{it}+\beta_2 TEDUTAX_{it}+\beta_3 VAT_{it} + \beta_4 CAGE_{it}+\mu_{it}$

Source: Researcher's Computation using Eviews 9 (2024)

The OLS regression results displayed reveal the cumulative R^2 (0.75) which is the multiple coefficient of determination gives the proportion or percentage of the total variation in the dependent variable explained by the explanatory variable jointly. Hence, it signifies 75% of total variation in GDP in Nigeria is caused by company income tax, tertiary education tax and value added tax. Similarly, the result of the F- statistic value of 2.092204 implies that the model is well fitted and significant at 5% considering the rule of thumb of 2. Therefore, the model is fit and the explanatory variable are properly selected, combined and used as substantial value of gross domestic product is accounted for by the explanatory variables.

Test of Hypotheses

Decision Rule: Having accepted the model of the study, the significance of the effect of the independent variables on the dependent variable was tested using the p-value. The decision rule is that where the p-value is greater than the 5% (p>0.05), the null hypothesis is accepted. However, where the p-value is less than 5%, the null hypothesis is rejected while the alternative hypothesis is accepted.

$H0_1$: Company Income Tax has no significant effect on Gross Domestic Product in Nigeria.

The regression results indicate that company income tax has a negative effect on Gross Domestic Product of Nigeria and statistically insignificant at 5% level of significance with t-value of -1.884830 and p-value of 0.0599. This implies that as the value of company income tax increase, the amount of GDP of Nigeria decreases.

$H0_2$: Tertiary Education Tax has no significant effect on Gross Domestic Product in Nigeria.

The regression results reveal that tertiary education tax has a positive effect on Gross Domestic Product of Nigeria and statistically significant at 5% level of significant with t-stat of 2.091909 and a p-value of 0.0369. This implies that the tertiary education tax has the ability to improve GDP contribution of Nigeria.

$H0_3$: Value Added Tax has no significant effect on Gross Domestic Product in Nigeria.

The regression results reveal that value added tax has a positive effect on Gross Domestic Product of Nigeria and statistically significant at 5% level of significant with t-stat of 1.601106 and a p-value of 0.1099. This implies that the value added tax has the ability to improve GDP contribution of Nigeria.

Results and Discussion of Findings

Company income tax is found to have a negative and not significant effect on Gross Domestic Product of Nigeria with t-value of -1.884830 and p-value of 0.0599. This finding is opposite of the findings of Aduloju (2022) who studied taxation of the Nigerian digital economy and found that company income tax been a compulsory levy on profit is a determinant to the level of growth of a country. Osaretin, Samuel, Uzoamaka and Uzoamaka (2022) looked at the effects of taxation on the growth of Nigerian economy and concluded that corporate taxation has influence but with no clear-cut on country's growth. In line with this finding, Ogbonna, Gabriel, Amah and Cletus (2021) stated that stakeholders would receive more if government taxes such as company income tax, education tax and withholding rates are reduced.

Tertiary Education Tax is found to have a positive and significant effect on Gross Domestic Product of Nigeria with t-stat of 2.091909 and a p-value of 0.0369. The result is in line with the finding of Ezugwu and Akubo (2014) who revealed that education tax rate is one of the factors that affect education growth in a country thereby leading to intellectual development of a nation. Ofoegbu, David, and Oliver, (2016) carried out an empirical analysis of effect of tax revenue on economic development of Nigeria and found a positive impact of tertiary education tax on the economy and business environment at large.

Value Added Tax is found to have a positive and significant effect on Gross Domestic Product of Nigeria with t-stat of 1.601106 and a p-value of 0.1099. This result affirms the findings of Obaje and Ogirima (2019) who focused on the effects of taxation on economic growth in Nigeria. Ngwoke (2019) who studied the effect of taxation on economic growth revealed that change in the level of GDP is as a result of change in taxes (company income

tax, value added tax and withholding tax). This finding further affirms the findings of this study.

Conclusion and Recommendation

The purpose of this research is to examine the effect of taxes generated in digital age on economic growth in Nigeria from 2019 to 2022. The independent variables "Tax" was measured using company income tax, tertiary education tax and value added tax while the dependent variable "Economic Growth" was measured using gross domestic product. The results of the tested hypotheses revealed that, Company Income Tax has a negative and not significant effect on Gross Domestic Product of Nigeria with t-value of -1.884830 and p-value of 0.0599, Tertiary Education Tax has a positive and significant effect on Gross Domestic Product of Nigeria with t-stat of 2.091909 and a p-value of 0.0369 while Value Added Tax has a positive and significant effect on Gross Domestic Product of Nigeria with t-stat of 1.601106 and a p-value of 0.1099.

The study concluded that, taxes generated in digital age poses a significant effect on economic growth in Nigeria between 2019 to 2022. Based on this conclusion, the study further recommends that government should organize trainings, seminars, and workshops to the, tax administrators, Nigerian public, students in higher institutions, and firms on the importance and benefits of taxes on economic growth in Nigeria. This will lead to voluntary payment of taxes by taxpayers and increase the efficiency of tax administrators in the usage of new tax technologies. There should be more introduction of technologies and e-channels that will speed up optimal mobilization of taxes in Nigeria. The Nigerian government should effectively and judiciously use the tax funds to improve the capital and recurrent expenditures, infrastructures and the wellbeing of her citizens.

References

Abiahu .M. .C. & Amahalu .N. .N. (2017). Effect of taxation on dividend policy of quoted deposit money banks in Nigeria (2006-2015), *EPH - International Journal of Business & Management Science, 2(3),* 1-30.

Adefolake .A. .O. & Omodero .C. .O. (2022). Tax revenue and economic growth In Nigeria, *Cogent Business & Management, 9*:1. 2115282, DOI: 10.1080/23311975.2022.2115282.

Aduloju, .O. .I. (2022). Taxation of the Nigerian Digital Economy in View of the 2019 and 2020 Finance Act, Available at SSRN: https://ssrn.com/abstract=4002469 or http://dx.doi.org/10.2139/ssrn.4002469

Alzahrani .M. & Lasfer .M. (2008). The impact of taxation on dividends: A cross country analysis, *King Fahd University of Petroleum & Minerals*, 1-54.

Ayo .B. (2020). Taxation as a tool for economic development of Nigeria, *IDOSR Journal of Current Issues in Social Sciences 6(1):* 9-14.

Babatunde, .O. A., & Ibukun, .A. .O. (2016). Taxation and economic growth in Nigeria. *Asian Journal of Economic Modelling, 4(4),* 199–210.

Confidence .J. .I. & Ebipanipre .G. .M., (2014). Taxation as an instrument of economic growth (The Nigerian Perspective), *Information and Knowledge Management, 4(12),* 49-53.

Ishola .R. .A., Folajimi .F. A., & Niyi .A. (2019). Determinants of tax revenue: A case of Nigeria, *The International Journal of Business & Management, 7(4)*.

Ezugwu, C.I. & Akubo, D. (2014). Effect of high corporate tax rate on the liquidity of corporate organizations in Nigeria-a study of some selected corporate organizations, *Global Journal of Management and Business Research: D Accounting and Auditing, 14(3),* 23-32.

Kayode .A. .A., Olayiwola .R. .L., & Abass .B. .O. (2021). Influence of company income tax on dividend pay-out: evidence from listed consumers' goods firms in Nigeria, *International Journal of Multidisciplinary Research and Growth Evaluation, 2(4),* 625-633.

Loveday .A. .N. & Bariyima .D. .K. (2012). Withholding tax and corporate financial performance: evidence for the construction industry in Nigeria, *International Journal of Academic Research, 4(4),* 151-159.

National Bureau of Statistics (2022). *National gross domestic product report Q4.*

Ngwoke, .O. .M. (2019). Effect of taxation on economic growth (2007-2017), *European Journal of Accounting, Finance and Investment, 5(4),* 68-82.

Obaje, .F. .O. & Ogirima, .A. (2019). Effects of taxation on economic growth in Nigeria, *Journal of Leadership, Accounting Development and Investigation Research (JLADIR), 3(1),* 255-264.

Osaretin .E., Samuel .N., Uzoamaka .C., & Uzoamaka .G. (2022). Effects of taxation on the growth of Nigerian economy, *International Journal of Accounting and Financial Management Research, 1(6),* 1-17.

Ogbonna, Gabriel .N., Amah, Cletus .O. (2021). Taxation and economic growth in Nigeria, *International Journal on Economics, Finance and Sustainable Development,* 81-91.

Ofoegbu .G. .N. David .O. .A. & Oliver .O. .D. (2016). Empirical analysis of effect of tax revenue on economic development of Nigeria, *International Journal of Asian Social Science, 6(10),* 604-613.

Oloyede, J. A., Olaoye, C. O., & Oluwaleye, T. O. (2018). Impact of Corporate Taxation On Dividend Policy of Quoted Firms in Nigeria. *Advances in Social Sciences Research Journal, 5(3)* 440-451.

Olumayowa .O. (2020). Digital taxes, significant economic presence and tax implications in Nigeria, *TNP insights,* .1.

Sawami .M., Abu .S. & Margaret .G. (2014). Education and economic growth: A case study of Australia, *UWA Business School, The University of Western Australia, Crawley, Western Australia, 1-28.*