

## **Tax Digitization and Revenue Generation in Nigeria**

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**ABSTRACT:** The study evaluated the effect of tax digitalization on revenue performance in Nigeria from 2010 to 2023. Tax digitalization was proxied by Company Income Tax (CIT) and Value Added Tax (VAT). The period of digitalization commenced from 2010 to 2023. The design, therefore, examined significant differences in the effect of CIT and VAT on the Nigerian Federal Tax Revenue (FEDREV) between the post-period, 2017 -2023, and the pre-period 2010 to 2016 of tax digitalization. Ordinary Least Square (OLS) regression model was utilized in estimating the effect of tax variables on Nigerian FEDREV, while the Chow test was employed in analyzing the significance of the differences observed in the effect of tax variables on the FEDREV between the pre and post-periods of tax digitalization and also used in testing the hypotheses of the study. Findings revealed that CIT and VAT, revenue effect on the Nigeria FEDREV significantly differed between the pre- and post-periods of tax digitalization. This posits that revenue outcome tax variables after digitalization were significant to the FEDREV. The study therefore recommended the formation of a federal fiscal system that would guarantee the full potential of tax digitalization in Nigeria in enhancing revenue performance.

**KEYWORDS:** Tax, Digitalization, Revenue Generation, Nigeria

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### **1.0 INTRODUCTION**

Revenue generation remains one of the most topical issues in Nigeria and continues to pose a significant challenge despite various strategies by successive governments to enhance it over the years. Revenue from oil and non-oil sources constitute the major sources of government revenue in Nigeria. Between 1971 and early 2000, oil revenue alone generated more than US\$300 billion which is roughly ten times the 2023 annual budget estimate of US\$30 billion (Baunsgaard, 2003 cited in Obiechina, 2010). In comparison, tax revenue within the same period generated about US\$18 billion which represents about 37 percent of total government revenue. Surprisingly, the non-oil revenue surpassed oil revenue in 2021 due to the lower oil prices and production levels (Akinmurele, 2022). In addition, corporate income tax, customs, and value-added tax were the main contributors to the bulk of the non-oil revenue.

For a country that boasts of its size in South Saharan Africa, Nigeria has not been able to generate commensurate revenue from taxable persons. With the average tax-to-GDP ratio among the Organization for Economic Cooperation and Development (OECD) countries at 33.9%, Nigeria has witnessed low tax collection over the years. The highest tax-to-GDP ratio in Nigeria is reported to be 9.7% in 2011 while the lowest is 5.3% in 2016 (Revenue Statistics in Africa, 2024). Insufficient tax revenue limits both infrastructure investment, and public services, increases income inequality, and over-reliance on debt (Choudhary, Ruch & Skrok, 2024). It therefore remains obvious that Nigeria needs to find more innovative ways to increase revenue to meet the annual budget deficits instead of the dependence on debts.

Tax digitalization refers to the utilization of digital technology in tax revenue administration and collection. According to Nnamani and Akintoye (2024), tax digitalization refers to the use of information technology and other electronic means for tax administration and collection. The objective is to leverage digital tools to maximize efficiency, and effectiveness in revenue generation. The tax collection system in Nigeria has been undergoing changes prompted by the numerous challenges that have bedeviled the system. To curtail corruption and fraud in the system, the Federal Inland Revenue Service (FIRS) introduced the modernization project in 2005 for improved tax collection in the country. This further led to the introduction of the taxpayer identification number (TIN) in 2011 which leveraged technology for taxpayer identification; the integrated tax administration system (ITAS) in 2013 for ease of tax compliance; the standard integrated government tax administration system (SIGTAS) in 2014 for revenue assessment and collection. The use of digital means to optimize tax revenue collection in Nigeria commenced in 2017. However, the TaxPro-Max

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initiated by FIRS in 2021 to automate tax filing and payment has further improved the digitization exercise in Nigeria (Muhammed et. al., 2023) which is hoped will further improve revenue collection.

Over the years, revenue generation has always been generally manually administered with the inherent challenges of corruption, tax compliance, and evasion especially in low-income economies. The Federal Inland Revenue Service which is the agency responsible for tax-related matters in Nigeria took major steps to overhaul the current tax system which adversely affects revenue generation for the economy. Various reforms which culminated with the use of digital tools were introduced into the tax system to create a more robust tax system. Additionally, ease of use of digital tools is assumed to increase tax revenue. According to Olaghere and Adewuyi (2020), most countries in Africa have digitally transformed tax revenue generation. African tax administrators have steadily embraced technology to meet the rising leverage of business processes with technology. This implies that taxpayers transact digitally and exchange billing information with the tax authority. Digital tools decrease administration costs, reduce compliance costs, and improve tax records for both the taxpayer and the tax authorities (Rossel, Santoro, & Hakizimana, 2023). Nigeria joined the line-up of nations that digitalized tax administration in 2017 with the entrance of new electronic tax services that would improve tax revenue generation. Digital tax system improves ease of tax payment thereby improving compliance and revenue (Awa, Diouf, & Faith (2024). The use of digital tools therefore to collect tax revenue is

Existing empirical studies on tax digitization in Nigeria are few and not consistent. While studies on the digitalization of tax administration in various countries reveal a reduction in tax evasion (Yamen, Coskun & Mersni, 2022; Olanokanmi and Adejuwon, 2024) and increased tax compliance (Adefulu, Makinde, Akinyosoye, & Nwankwere, 2023; Ogbada, Onyedika, and Modebelu, 2023), studies on effect of tax digitalization on revenue generation in Nigeria reveal inconsistent results (Ashafoke and Obaretin, 2023; Opeyemi et. al., 2022; Nnubia, Okafor, Chukwunwike, Asogwa, and Ogan, 2020; Ofurum, Amaefule, Okonya, and Amaefule (2018). Cross-country studies however show that digitalization of tax administration and payment increases compliance and tax collection significantly in low-, and medium-income countries (Okunogbe and Santoro, 2023). This contradicts a few of the studies carried out in a low-income economy (Ofurum, Amaefule, Okonya, and Amaefule, 2018; Nnubia, Okafor, Chukwunwike, Asogwa, and Ogan, 2020).

This study therefore investigates the effect of tax digitization on revenue performance in Nigeria. Specifically, the study ascertains the difference in effect of company income tax, and value-added tax on federal revenue generation in Nigeria before and after the tax digitalization. The broad objective is to compare revenue generated before and after digital tax was implemented.

### 1.2 Research Questions

1 How does the difference in revenue from Company Income Tax (CIT) affect the Federal Tax revenue (FEDREV) before and after the tax digitalization in Nigeria?

2 To what extent does the difference in revenue from Value Added Tax (VAT) affect the Federal Tax revenue (FEDREV) before and after the tax digitalization in Nigeria?

### 1.3 Hypotheses of the Study

1 HO<sub>1</sub> There is no significant difference in the effect of Company Income Tax (CIT) revenue on Federal Tax revenue (FEDREV) before and after the tax digitalization in Nigeria.

2 HO<sub>2</sub> There is no significant difference in the effect of Value Added Tax (VAT) revenue on the Federal Tax revenue (FEDREV) before and after the tax digitalization in Nigeria.

## 2.0 LITERATURE REVIEW

### 2.1 Tax Digitalization

Digitalized taxation allows the use of digital technologies and platforms for tax administration processes (Nnamani & Akintoye, 2024). Tax digitalization refers to the network of computers enabling tax administrators to connect the tax platform, and the utilization of the tax identification numbers to file returns electronically (Olaoye and Atilola, 2018). Tax digitization includes the leveraging of digital identities, digital payments, and the exchange of data to achieve a seamless tax collection. Tax digitization offers accessible and 'evidence-based transactions' (Awa, Diouf, and Faith, 2024). Digitalized tax therefore refers to the use of digital tools to commence and complete a taxation process without moving to the tax office. The integration of technology provides a seamless and efficient tax service.

#### 2.1.2 Tax Digitization in Nigeria

The need to automate the tax payment system in Nigeria is driven by the urgent need to not only improve the ease of doing business in Nigeria (ICTD, 2021) but leveraging technology for effective revenue generation. The collaborative efforts of major stakeholders including the Federal Inland Revenue Service (FIRS), Nigerian Intelligence Finance Unit (NIFU), and National Identity Management Commission (NIMC) enabled the linkage of taxpayers with the electronic tax system.

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Digital transformation of the tax system in Nigeria includes the introduction of six new electronic taxation services by the Federal Internal Revenue Service in 2017. According to Olaghere & Adewuyi (2022), these e-services include

- e-Registration which captures new taxpayers with FIRS;
- e-Stampduty for collection of stamp duty revenue on qualifying documents;
- e-Taxpay for modern tax collection on all federal government taxes and levies through Interswitch, Remita, and Nigeria Interbank Settlement System (NIBSS) platforms;
- e-Receipt which is generated and verified after the tax payment through e-Taxpay platforms;
- e-Filing which is for the online filing of tax returns on the official website;
- E-TCC which handles all matters related to the application, issuance, and verification of tax clearance certificate (TCC).

The digitization of the above processes is expected to simplify and automate all tax administration processes, thereby enabling the reduction of the turnaround times for registration, filing, payment, and receipt of the electronic tax clearance certificate (ICTD, 2021).

Whether direct or indirect tax, digital tax administration enables enhanced tax collection (Olaoye & Atilola, 2018) with reduced collection costs. Direct taxes enable efficient and transparent filing processes, improve compliance, and reduce errors. Indirect taxes such as value-added-tax enable transactions and facilitate real-time data collection, better enforcement, and reduced evasion (Awa, Diouf, & Faith (2024). The in-built self-enforcing mechanism enables greater compliance in VAT returns whereby buyers report maximizing the amount initially paid while sellers report minimizing the amount received, thereby reducing tax evasion (Okunogbe and Santoro 2023).

### 2.1.3 Revenue Generation

Revenue generation refers to income from all sources utilized for economic, social, and infrastructural requirements of the country. Revenue generated by the government refers to income earned by the government from all sources. Revenue mobilized by the government is broadly classified into tax and non-tax revenue. Tax revenue provides the government with a stable flow of funds (Nnamani & Akintoye, 2024) which makes the country rely less on natural resource revenue and debts (Okunogbe & Santoro, 2024). Revenue generation remains a necessity in every country due to the critical nature of revenue for meeting needs (Ashafoke & Obaretin, 2023).

#### 2.1.3.1 Revenue Generation from Tax Digitization

Tax digitization which is embodied in tax reform is a major governmental effort to increase non-oil revenue generation in Nigeria (Nnamani & Akintoye, 2024). Though tax revenue in Africa is low as a result of the level of income (Okonugbo and Santoro, 2024), revenue generation in Nigeria is even lower as a result of tax evasion and administrative incompetencies. Ogbueghu (2016) argues that government revenue has drastically reduced as a result of tax evasion. Achieving a significant increase in tax revenue will depend on the efficiency of tax revenue administration and collection. Digital taxation therefore encompasses a more robust tax revenue system aimed at not only simplifying the tax revenue collection but also capturing more taxable persons in the tax net.

While the use of digital tools for tax services is far from perfect, empirical studies reveal that digitization improves tax revenue. Olasunkanmi and Adejuwon (2024) posit that the digitalization of taxation can reduce tax evasion and risk thereby improving revenue generation in Nigeria. In line with this, the 2022 report of the Institute of Chartered Accountants of England and Wales (ICAEW) suggests that tax digitalization in Nigeria has led to improvement in tax revenue generation (ICAEW, 2022). Nnubia, Okafor, Chukwunwike, Asogwa, & Ogan (2020) however reiterate that digital taxation reduced inflow from both VAT and CIT. Imperfections still exist in the digitalized tax system and they include insecurity, acceptance and use of the system, and downtimes during peak periods (Olaghere and Adewuyi, 2020).

## 2.2 Theoretical Framework

### 2.2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) explains the rationale behind the acceptance and use of information technology by individuals and organizations (Marikyan & Papagiannidis, 2024). As proposed by Davis (1989), the TAM recognizes that technology comes with benefits that must be harnessed by the users. However, users can only embrace technology when there is perceived ease of use and perceived usefulness. Users will use a technology when the effort is less than the obvious benefit. The theory stemmed from the Theory of Reasoned Action (TRA) which posits that beliefs determine behavior. To further elucidate the TAM, Davis (1986) introduced the following constructs: perceived usefulness (PU), perceived ease of use (PEOU), attitude, and intention to use. While perceived usefulness determines the degree use of a technology would be beneficial, perceived ease of use describes the degree use of a technology would be free from effort (Burgess and Worthington, 2021). Both the PU and PEOU are the external variables that determine the attitude of the individual toward acceptance of the technology. Many end-user technologies have

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been tested with the theory. Acceptance and use of tax digitalization by taxable persons in Nigeria should stimulate the economy. However, the PU and PEOU should affect the attitude of taxpayers as well as the intention to pay tax digitally when due.

### 2.3 Empirical Review

Nnamani and Akintoye (2024) examined digital taxation and sustainable economic development in Nigeria from 2000 to 2022. Digital taxation was proxied with CIT and VAT while HDI, unemployment rate, and moderating influence of tax reforms proxied the dependent variable. Both primary and secondary data were obtained for the study. Empirical analysis was carried out with correlation and regression analysis. Results showed that real GDP has a positive and significant relationship with CIT and VAT. Tax reform was also found to be a strong and positive moderator of the relationship between digital taxation revenue and sustainable economic development.

Olasunkanmi and Adejuwon (2024) empirically assessed the effect of digitalization of the tax system on revenue generation in Nigeria. The objective was to ascertain tax digitalization and revenue generation in Nigeria. A descriptive research design was employed for the study. Primary data was collected from a sample size of 352 tax administrators of FIRS in the South Western states of Nigeria through an online survey. Results revealed that tax digitalization has a significant relationship with both tax revenue and tax evasion. Further findings revealed that the implementation of e-tax policies with competent IT personnel can reduce tax evasion and risk to a minimum.

Udo (2024) carried out a study on digital taxation and sustainable economic growth in Nigeria for the period 2017 to 2023. Secondary data obtained from government agencies were analyzed with t-test statistics and descriptive statistics. Results showed that e-tax payments and digital economy taxes significantly influence sustainable economic growth in Nigeria.

In their study, Adefulu, Makinde, Akinyosoye, and Nwankwere (2023) empirically examined tax digitalization and revenue tax compliance of the Federal Inland Revenue Service (FIRS), Abuja. The cross-sectional survey retrieved data from 603 employees of FIRS Abuja. Multiple regression results showed that tax digitalization had a positive, and significant effect on revenue tax compliance in Nigeria.

Ogbada, Onyedika, and Modebelu (2023) investigated the effect of digitalization and effective tax administration in Nigeria for the period 2010 to 2021. The study utilized the quantitative research method and ex-post facto research design to assess the effect of digitalization proxied with ICT on tax revenue and tax evasion. Analyses carried out with linear regression showed that ICT has no significant low adverse effect on tax revenue in Nigeria. The second hypothesis revealed that ICT has no significant low-level effect on the level of tax evasion in Nigeria.

Ashafoke and Obaretin (2023) ascertained the effect of digital channels on revenue generation in Nigeria. An exploratory research design was utilized for the study. Primary data was collected from about 200 FIRS staff and selected BIG4 auditing firms in Nigeria. Statistical analysis was carried out with the Structural Equation Model (SEM) through the STATA software. Findings revealed a positive and insignificant relationship between revenue generation and tax e-commerce. The same goes for the relationship between revenue generation and content providers in Nigeria.

Opeyemi et. al. (2022) examined the effect of tax reforms and digitalization on government revenue from 1996 to 2020. Secondary data was analyzed with the auto-regressive distributed lag approach to cointegration. Results showed that company income tax reforms increased government revenue but inhibited state government revenue in Nigeria.

Nnubia, Okafor, Chukwunwike, Asogwa, and Ogan (2020) empirically analyzed the effect of e-taxation on revenue generation in Nigeria. The study utilized ordinary least square to analyze secondary data obtained from public institutions from the first quarter of 2012 to the second quarter of 2018 in a pre-post method. Findings revealed that the contribution of both CIT and VAT to revenue generation decreased after the introduction of e-taxation in Nigeria in 2015.

Ofurum, Amaefule, Okonya, and Amaefule (2018) in their study "Impact of E-Taxation on Nigeria's Revenue and Economic Growth: A pre-post analysis" utilized ex-post facto design to ascertain how the implementation of E-taxation in 2015 affected tax revenue, federally collected revenue and tax-to-GDP ratio. The Paired sample t-test was used to analyze the means of the pre-post E-taxation period. Findings showed that federally collected revenue and tax-to-GDP ratio significantly decreased with the introduction of e-taxation. Tax revenue also decreased but the reduction was not significant.

Olaoye and Atilola (2018) investigated the effect of e-tax payment on revenue generation in Nigeria from the first quarter of 2012 to the second quarter of 2018, a period of thirteen quarters each for both the pre and post-e-taxation periods. The study utilized trend analysis, descriptive statistics of mean and standard deviation, and paired sampled t-tests to arrive at the finding that e-tax payment had an insignificant positive effect on value-added tax revenue. Also, a positive insignificant difference exists between pre and post-company income tax revenue in Nigeria.

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### 3.0 RESEARCH METHODOLOGY

#### 3.1 Model Specification

A linear relationship was established between Company Income Tax, Value Added-Tax, and Federal Revenue (FEDREV). During the period of investigation (2010 to 2023), the variables were affected by tax digitization in 2017. Hence, 2017 became the year of structural change. The Chow Test was applied to determine relative differences in coefficients of the variables between the pre-period (2010-2016) and post-period (2017-2023) years of tax digitalization to determine the effect of the digitalization on the dependent variable of Federal tax revenue for investigation. The model is specified below:

##### Model A1: Company Income Tax and FEDREV

$$\text{FEDREV} = F(\text{CIT})$$

$$A_1 \text{ CIT}(\text{pre}) \neq A_1 \text{ CIT}(\text{post})$$

##### Model B2: Value Added Tax and FEDREV

$$\text{FEDREV} = F(\text{VAT})$$

$$A_2 \text{ VAT}(\text{pre}) \neq A_2 \text{ VAT}(\text{post})$$

##### Where:

FEDREV = Federal Tax Revenue

$A_1 \text{ NCIT}(\text{pre})$  = the coefficient of the Company Income Tax in a regression estimate before tax digitalization

$A_1 \text{ NCIT}(\text{post})$  = the coefficient of the Company Income Tax in a regression estimate after-tax digitalization

$A_2 \text{ VAT}(\text{pre})$  = the coefficient of the Value Added-Tax in a regression estimate before tax digitalization

$A_2 \text{ VAT}(\text{post})$  = the coefficient of the Value Added-Tax in a regression estimate after-tax digitalization

#### 3.2 Methods of Data Analysis

**Ordinary Least Square Regression Model:** The Ordinary Least Square Regression Model was used to express the relationship between the dependent variable FEDREV; Company Income Tax, and Value Added Tax.

##### Chow Test: Chow Forecast:

The test is often used to test for a single break at a known period. The test assesses whether the coefficients in a regression model are the same for periods or differ. However, the estimate of the break periods is necessary to evaluate the dimension and magnitude of the effect the independent variables have on the dependent variable at the break periods. The Chow test is often used to test for a single break in the mean at a known period. Chow Test analyzes the structural stability applicable to time series data that have structural breaks. In the current study, data generated on FEDREV tax variables CIT, and VAT respectively were affected by digitalization in 2017 which became the year of structural change. The Chow Test was applied to determine relative differences in coefficients of the variables between the pre- (2010-2016) and post-period (2017-2023) of tax digitalization to determine the significance of their relative differences on the dependent variable FEDREV as adopted by Amaefule, Onyekpere and Onyekperem (2017), Orits, Jeroh, and Oghenevwoke (2021).

#### 4.2 Data Analysis

Having presented an array of variables for the period of tax digitalization, analysis was further carried out concerning the model. The model presents data analysis of tax digitalization and FEDREV.

##### Model A: Analysis of Tax Digitalization and Federal Government Tax Revenue (FEDREV)

The Model relationship of tax digitalization and FEDREV as proxied by tax variables CIT and VAT in the pre and post-period of tax digitalization is presented in Table 4.3 below.

**Table 4.1: Nigerian Tax Digitalization Coefficients, CIT, VAT in Pre and Post Periods**

**Dependent Variable: FEDREV**

| Regression         | CIT(Pre) | CIT (post) | VAT(Pre)  | VAT (post) |
|--------------------|----------|------------|-----------|------------|
| Constant (C)       | 3148.577 | 5622.496   | 2028.227  | 7296.484   |
| Coefficient        | 0.006502 | 1.376260   | 0.002891  | -0.000727  |
| t-Statistic        | 2.139132 | 2.740703   | 0.766589  | -0.260407  |
| R-squared          | 0.477855 | 0.600366   | -0.073795 | 0.013381   |
| Adjusted R-squared | 0.373426 | 0.520439   | 0.105171  | -0.183943  |
| F-statistic        | 4.575885 | 7.511453   | 0.587659  | 0.067812   |

**Source:** Extracted from E-view 10

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Table 4.1 above shows the regression results of the Company Income Tax (CIT) and Value Added Tax (VAT) over the pre and post-periods of tax digitization in Nigeria. The estimation showed that for the pre-period of tax digitization, the Company Income Tax (CIT) coefficient 0.006502 was positive which revealed that it had a positive effect on the FEDREV. The intercept was estimated at 3148.577, and the equation revealed that, during the pre-tax digitalization period, CIT had a positive and increasing effect on FEDREV. The equation was expressed thus:  $FEDREV_{pre} = 3148.577 + 0.006502 CIT_{pre} + Ut$ .

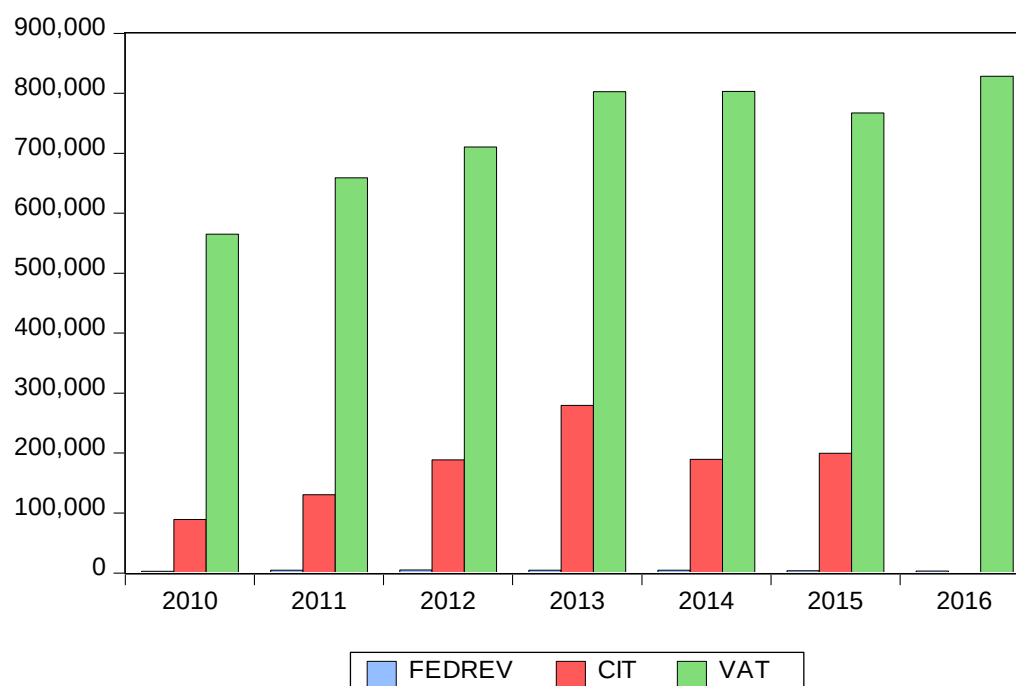
Over the post period of tax digitalization, the Company Income Tax (CIT) coefficient was still positive with a value of 1.376260 which revealed that Company Income Tax had a higher positive effect on FEDREV in the post period of tax digitalization. The intercept was estimated at 5622.496. The equation line further expresses the relationship and was represented thus:  $FEDREV_{post} = 5622.496 + 1.376260 CIT_{post}$ .

The regression results of the Nigerian Value Added Tax (NVAT) over the two periods, the pre and post-periods of tax digitalization are shown in Table 4.1. The estimation showed that for the pre-period of tax digitalization, the VAT coefficient 0.002891 was positive and had a positive effect on the FEDREV. The intercept was estimated at 2028.227 and the equation was expressed thus:  $FEDREV_{pre} = 2028.227 + 0.002891 VAT_{pre} + Ut$ .

Comparatively, over the post-period of tax digitalization, the Value Added Tax (VAT) coefficient revealed a negative relationship with a coefficient value of -0.000727 which revealed that VAT was negatively related to FEDREV in the post-period of tax digitalization. The intercept was estimated at 7296.484. Analysis revealed that the VAT<sub>post</sub> coefficient had a positive effect on FEDREV. The equation line further expresses the relationship and is represented thus:  $FEDREV_{post} = 7296.484 - 0.000727 VAT_{post}$

### Graphical Trend in the Pre-Period of FEDREV and Tax Variables

A graphical presentation of the trend of Federal Government Revenue and tax variables over the period of pretax digitalization period of 2010-2016 is displayed in Figure 4.1 below. The trend revealed that FEDREV, CIT, and VAT showed variation in trend for the period in view. The VAT maintained an upward trend and attended its peak in the year 2016 while CIT attended its peak in 2013.



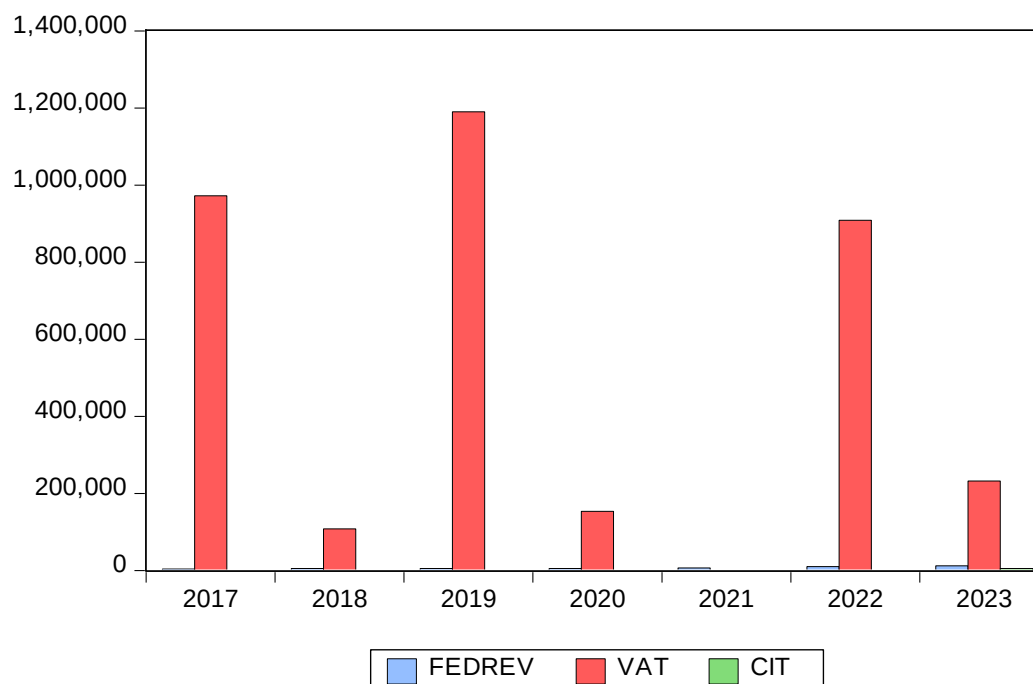
### Graphical Trend in the Post Period of FEDREV and Tax Variables

A graphical presentation of the trend of Federal Government Revenue and tax variables over the period of post-tax digitalization period 2017 - 2023 is displayed in Figure 4.2 below. The trend revealed that FEDREV, CIT, and VAT showed variation in trend for the period in view. The VAT maintained an upward trend and attended its peak in the year 2019. CIT and FEDREV remained at the base level.



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### Graphical Trend in the Post Period of FEDREV and Tax Variables



### Forecasting the Model Parameters of the two Periods in Nigeria using the Break Date 2017

Over the period 2010 to 2023, Nigeria FEDREV experienced a structural break in 2017 as a result of tax digitalization. Chow Test is a test for structural stability and is applied to the time series data since it had a structural break in 2017 (occasioned by a period of digitalization) splitting the data into the two periods. The Chow forecast test is used to assess whether the significance of the coefficients in the regression model is the same for the periods concerning their reported F-statistics. The estimate of the break periods is necessitated for the evaluation of the dimension and magnitude of the effect of the explanatory variables on the dependent variable.

**Table 4.2: Chow Test**

|             | Company Income Tax (CIT)                                              | Value Added Tax (VAT)                                                 |
|-------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| F-statistic | 24.38777                                                              | 14.74821                                                              |
| DF          | (7, 5)                                                                | (7, 5)                                                                |
| Probability | 0.0014                                                                | 0.0046                                                                |
| Remark      | (P-value < 0.05) denotes significant differences and rejections of Ho | (P-value < 0.05) denotes significant differences and rejections of Ho |

### Extracted from E-view 10

Analysis of the significance of the differences observed in the regression coefficient of the Company Income Tax and Value Added Tax over the pre and post-periods of tax digitalization was carried out concerning the results of Table 4.2. Results of the table revealed that the F-Statistics values of the CIT is 24.38777 within the pre and post-periods and the probability value is 0.0014. Since the P-values were lower than 0.05 it denotes significance. Therefore, the CIT effect on FEDREV after digitalization significantly differed from its effect before the digitalization period. This led to the rejection of the stated null hypothesis.

Analyzing the significance of the differences observed in the regression coefficient of Value Added Tax over the pre and post-periods of tax digitalization were further analyzed for the results of Table 4.2. Results of Table 4.2 revealed that the F-Statistics values of the VAT are 14.74821 within the pre and post-periods. However, the probability value is 0.0046. Since the P-value is lower than 0.05 it denotes significance. Therefore, the VAT effect on FEDREV after the digitalization period significantly differed from its effect before the period of digitalization. This led to the rejection of the stated null hypothesis two.

### DISCUSSION OF FINDINGS

Results of the study revealed that the CIT effect on FEDREV after-tax digitalization significantly differed from its effect on the pre-period. Results of Table 4.2 revealed that the F-Statistics values of the CIT is 24.38777 within the pre- and post-periods and the probability value is 0.0014. The findings led to the rejection of the null hypothesis. Therefore, CIT has a significant effect on FEDREV after-tax digitalization. In line with this, Olasunkanmi and Adejuwon (2024) posit that tax digitalization has a significant relationship with tax revenue and tax evasion in Nigeria. Also, the analyses showed that the VAT effect on FEDREV after-tax digitalization significantly differed from its effect on the pre-period. Findings led to the rejection of the null hypothesis two. Therefore, VAT has a significant effect on FEDREV after-tax digitalization. In support, Adefulu, Makinde, Akinyosoye, and Nwankwere (2023) found that tax digitalization significantly affects revenue tax compliance in Nigeria. This implies that more taxpayers are captured in the tax net. Also, more taxpayers comply with the payment of tax liabilities. However, the study of Opeyemi et. al. (2022) found that though tax reforms increased government revenue, the reforms inhibited state government revenue in Nigeria. Both CIT and VAT accrue to federal government revenue and are a major target of the e-services provided by FIRS in Nigeria. On the other hand, the study of Olaoye and Atilola showed that the difference between pre and post-e-taxation periods in Nigeria is insignificant. Tax digitalization therefore appears to be the way forward towards a massive turnaround in non-oil revenue generation in Nigeria.

### CONCLUSION AND RECOMMENDATIONS

The continuous improvements in digital processes in every facet of human existence show that technology is here to stay. The Nigerian tax system needs to be fully digitalized to maximize the benefits of a digitalized tax system, thereby improving efficiency, compliance, and revenue. Developing digitally implies a robust interface of human resources and digital tools with an emphasis on creating user-friendly digital services that preserve taxpayer information. The study therefore recommends the following:

1. The institutionalization of a federal fiscal system that would guarantee the full potential of tax digitalization in Nigeria in enhancing revenue performance;
2. The collaboration of the tax authority with related agencies and financial institutions to harmonize taxpayer data. This will further increase the tax net;
3. The adaptation of digital tools for the taxpayers in Nigeria.
4. Ensure continuous monitoring of the digitized system to avoid glitches and errors that can leak taxpayer data.

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