



ABSTRACT

This research seeks to empirically investigate the effect of e-tax payment on revenue generation in Nigeria. The independent variables of the study are: E-company income tax; E-value added tax; and E-capital gain tax. While, the dependent variable is revenue generation (federally collected revenue). Data for the study which was secondary obtained from the records of federal Inland

A N EMPIRICAL INVESTIGATION OF THE EFFECT OF ELECTRONIC TAX PAYMENT ON REVENUE GENERATION IN NIGERIA

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Introduction

In emerging countries like Nigeria, electronic tax collection has gained improved importance. Overtime, the e-tax system was initiated globally (Cobham, 2010); and since then, e-tax system has come to be a common network, helping several tax payers across the globe. E-taxation is the electronic tax filing system. It requires taxpayers to pay their duties online from their individual or business bank accounts (FIRS, 2015). Okoye & Ezejiofor (2014) identified e-taxation as a tax system administration carried out online. They noted that because e-taxation is electronic tax filing system, the payment of e-tax can be made directly through bank account and via the use of ATM via debit card or credit card. While it is believed that the purpose of presenting e-taxation is to progress revenue generation in the system.

Revenue generation through taxation has remained a major concern for numerous nations Nigeria inclusive (Okauru, 2011). This is on the grounds that revenue is the thing that the administration uses to convey open products for the individuals (IMF, 2010). It is the measure of cash that an organization really gets during a specific time (Ofurum et al., 2018)

It is believed that the decision of introducing E-taxation is to increase income tax collection in the system, though, there is a paucity of empirical evidence that has shown the degree to which the new technology has achieved this purpose on



Revenue for the period 2014-2020(7 years). Quantitative data was used for this study. Ex-pos facto research design was employed for the study. Analysis of the results was done using correlation and regression analysis with the aid of a statistical software (e-views). Theories relevant to the subject matter were used to underpin the study. The study found that revenue generation has positive correlation with company income tax and value added tax, and a negative association with capital gain tax. The study also found that company income tax and value added tax positively impacts revenue generation and capital gain tax negatively impacts revenue generation before the advent of e-tax. While, company income tax, value added tax and capital gain tax negatively impacts revenue generation after the advent of e-tax. It is against these background that the study recommended that government through federal Inland Revenue service should ensure the presence of state of the art information communication technology infrastructure in order to meet the demands of the teaming taxpayers, also ease accessibility by taxpayers, mobile version of electronic tax portal should be created. This will no doubt increase the adoption rate by tax payers as mobile phones are being increasingly used.

KEYWORDS: *Investigation, Effect, Electronic-Tax payment, Revenue Generation, Nigeria.*

company income tax, value added tax and capital gain tax hence necessitating this research. The study seeks to examine the effect of E- tax payment on the revenue generation in Nigeria using e-company income tax payment; e-value added tax payment and e-capital gain tax payment as proxies for measuring E-tax payment which is the independent variable while the dependent variable is revenue generation and was proxy with federally collected revenue.

Statement of Research Problem

Poor contributions of tax revenues to total revenue collected in Nigeria are alarming (Okauru, 2011). African countries such as Ghana, Tunisia, Morocco, and so on, have their tax incomes constituting important share of their entire revenue, Nigeria being the giant of Africa has an important low portion of tax-to-total revenue when compared with these nations (Ofurum et al., 2018). OECD (2014) exposed that in Ghana 73% of its total revenue was made from taxation; in Tunisia, tax revenue accounted for 31.3% of her total revenue, while in Morocco, tax-to-total revenue ratio was 28.5%. Though, in Nigeria, tax-to-total revenue ratio was 5.2 percent in 2014 (Federal Inland Revenue Service, 2015, & CBN, 2016). Also obtainable archives displays that this figure has remained below 13%



since 2001, and tax revenues has not accounted up to 50% of collected revenue of government since this period to date (Ofurum et al., 2018). The E-tax was introduced with the chief aim of combating vices that were mainly associated with the collection of taxes like; Tax evasion, filing of wrong tax returns and claiming of undeserved tax refunds (Wamathu, 2014). Income resulting from taxes has remained very low and no physical growth really took place, hence the influence on the poor is not being felt. Inadequate tax workers, deceitful actions of tax collectors and absence of understanding of the significance to pay tax by tax payers are few of the difficulties of tax income (Afueroh & Okoye, 2014).

Previous study by Oniiri et al. (2015) noted that the tax system in Nigeria is bounded by myriad of problems ranging from slight data available on the history of tax revenues or taxpayers owing to an absence of good record keeping system (Federal Republic of Nigeria, 1997); the nonexistence of complete tax figures and a centralized archive for the current ones (Federal Republic of Nigeria, 2002); inadequate manpower and other essential capitals into redundant parts and job purposes (Ariyo, 1997); multiple taxation and its negative influence on taxpayers a problem resulting from a clash in the administrations' fiscal accountability and its fiscal power (Oduola, 2002); and thoughtful efforts by taxpayers to evade taxes (Oduola, 2003). With the application of E-taxation, it is anticipated that after empirical investigation, E-taxation will increase revenue generation in Nigeria. While it is believed that the intention of introducing E- taxation is to increase income generation in the system, though, there is a paucity of empirical evidence that has shown the degree to which the new technology has achieved this purpose on e- company income tax payment, e-value added tax payment and e-capital gain tax payment, hence the need for this study.

Research Questions

For the research work to be effective, the following research questions were postulated:

- 1) Does e-company income tax payment have an effect on revenue generation (federally collected revenue) in Nigeria?
- 2) Does e-value added tax payment have an effect on revenue generation (federally collected revenue) in Nigeria?
- 3) Does e-capital gain tax payment have an effect on revenue generation (federally collected revenue) in Nigeria?

Research Objectives

The main or general objective of this study is to investigate the effect of e-tax payment on revenue generation in Nigeria. Whereas the specific objectives of this study are as follows;

- 1) To determine the effect of e-company income tax payment on revenue generation (federally collected revenue) in Nigeria.
- 2) To examine the effect of e-value added tax payment on revenue generation (federally collected revenue) in Nigeria.



3) To ascertain the effect of e-capital gain tax payment on revenue generation (federally collected revenue) in Nigeria.

Significance of the study

The significance of the study means attributes, contributions or importance of this study. For the purpose of this study.

This research would be relevant to the future researchers and students of accounting, economics, business administration and other social and management sciences, as well as the legislations which will benefit immensely from this research because it will lead to awareness of e tax payment which will form the basis of tax policy formation, implementation and administration.

The research work would be relevant to various tax authorities; the Federal Internal Revenue Service, the State Internal Revenue Service, Local Government Revenue Committee as well as their tax officials who are responsible for collection of tax from individual or corporate bodies.

The research would also help the professional bodies like the Chartered Institute of Taxation of Nigeria (CITN) and the Institute of Chartered Accountant of Nigeria (ICAN), as well as their members

Literature Review

This study investigates e-tax payment and its effect on revenue generation in Nigeria.

Concept of E-Taxation

E-taxation is the system of collection and administration of tax procedure through an electronic medium. It is an online network through which the taxpayers have license to the platform via the use of internet, in other to have entrée into the facilities provided by the tax expert such as the registration for a tax identification number, electronic tax filing of tax returns (Olaoye & Atilola, 2018; Wasao, 2014).

In the USA, electronic taxation system was hosted in 1986; while in Australia, it was hosted in 1987. Canada introduced the practice of E-tax collection in 1993, while other industrialized states such as Malaysia and Netherlands started the use of E-tax collection in 2009. In Africa, Uganda started the use of E-tax collection in 2009, while Egypt introduced it in 2013.

In Nigeria, e-tax system was hosted in 2015 by the Federal Inland Revenue Service (FIRS) in combination with Nigeria Inter - Bank Settlement System (NIBSS) in order to maintain a close nearness with the international trades towards automated payments systems, for e-government (Olaoye & Atilola, 2018). E-tax system was also introduced to upsurge revenue generation in Nigeria and for stress-free and convenience for tax payers to be able to pay taxes from diverse locations and at various time (Olaoye & Atilola, 2018; Okunowo, 2015). The following taxes are paid online in Nigeria by Nigerian taxpayer: Company Income Tax (CIT), Value Added Tax (VAT), Capital gains Tax (CGT), and Petroleum Profits Tax (PPT). When these taxes are paid via the online platform,



taxpayer can applied and processed online his/her tax Certificate (TCC) without visiting the office of the tax authority (Olaoye & Atilola, 2018; Abdulrazaq, 2015).

E-taxation is the process of collection and administration of tax procedure through an electronic medium. According to Che-Azmi and Kamarulzaman (2014) E-tax payment system is one of the ways through which governments globally make use of information and communication technologies to enhance the provision of public services and the circulation of public administration information to the society. Wasao (2014) describes electronic tax system is an online system or channel where taxpayers are able to have access or permit to the platform through the use of internet, in other to have access to all the services provided by the tax authority such as the registration for a tax identification number and electronic tax filing of tax returns.

In Nigeria e-tax payment system was introduced in 2015 by the Federal Inland Revenue Service (FIRS) in conjunction with Nigeria inter - bank settlement System (NIBSS).

Company income tax and Revenue Generation

This is also refers to corporate tax. Corporate tax is a direct tax enforced by government on the revenue of a company. Some nations enforce such taxes at the national level, and a related tax may be enforced at state or local levels. Babatunde (2016) defined company income tax as a tax on the incomes of incorporated entities in Nigeria. This tax also comprises the tax on the incomes of non-resident businesses carrying on business in Nigeria. It is paid by limited liability companies inclusive of the public limited liability companies. It is therefore usually referred to as corporate tax. Company income taxes are charged on the incomes of business entities around the world (Andrew, Neville & Janet, 2012).

By law, Corporations are told to pay corporate duty in Nigeria dependent on the benefit. 30% is the sum charged on the benefit made in the first year of appraisal. Companies are mandated by law to pay company income tax in Nigeria based on the profit. The amount charged is 30% on the profit earned in the year preceding assessment. Companies resident in Nigeria are liable for CIT on their worldwide income and non-resident companies are liable only to CIT on their Nigerian-source income. Hence, the following hypotheses is advance:

Ho₁: E-company income tax payment has no significant effect on revenue generation (federally collected revenue) in Nigeria

Value Added Tax (VAT) and Revenue Generation

Value Added Tax (VAT) is an assessment on utilization charged at each phase of the utilization chain and borne by the last customer of the item or administrations (Oraka et al., 2017). In Nigeria, VAT is required and gathered at a level pace of 5% from every individual in totally invoiced sum on all merchandise and ventures not excluded from paying VAT under Value Added Tax Act 1993, as corrected. Bird (2005) depicted Value added tax as a multi-organized expense that is collected on merchandise and ventures in every phase of creation. In Nigeria it was known as service tax before it was changed to



value added tax. Here, the last burden of tax or the occurrence of tax falls on the consumer; and it is an indirect tax.

In a particular month, if the VAT collected for the government (output VAT) is more than the VAT paid to other persons (input VAT), the variance is be forwarded to the government on monthly basis, by the taxable person (Oraka et al., 2017; Federal Inland Revenue Services Information Circular No 9304). While if the improved is the situation, the citizen is qualified for a discount of the abundance VAT paid. All exports are zero evaluated for VAT, no VAT is payable on exports. Hence, the following hypotheses has been proposed:

HO₂: E-value added tax payment has no significant effect on revenue generation (federally collected revenue) in Nigeria.

Capital gains tax and revenue generation

Capital gain tax is an expense on benefit acknowledges on the offer of capital resource at a cost higher than the price tag. Jones (2003) characterized capital gain tax as an assessment on capital gains, the salary acknowledged on the offer of a non-stock resource that was more prominent than the sum acknowledged on the transactions. The most widely recognized capital additions are acknowledged from the offer of government bonds valuable metals, and property. The rate varies with countries. Most countries subject individuals and companies to capital gains-taxes on their annual capital profit. In Nigeria, the amount charged is 10% of the profits from the sale of the qualifying assets (Ogbonna & Ebimobowei, 2012).

Calculation of capital gains charge is carry out by subtracting from the sum received or receivable from the cost of acquisition to the person realizing the chargeable gain plus expense incurred on the enhancement of expenditures incidental to the realization of the asset. Capital gain tax can have direct effect on operating profit of firms as it reduces the net operating profit which return on shareholder is based. Capital gain tax though charged on gains from the sales of capital asset is usually not consider as income from operation, can improve the net income of firms or reduces it (capital gain/loss) in a particular year. Hence, the following hypotheses has been advanced:

HO₃: E-capital gain tax payment has no significant effect on revenue generation (federally collected revenue) in Nigeria.

Theoretical framework

The underpinning theoretical framework of this study is anchored on Technology acceptance model theory, and Ability to pay approach theory.

Technology Acceptance Model theory (TAM)

This theory was propounded by Davies (1989) the theory was later modified by Venkatesh and Bala in 2008, states that an individual's intention towards using a new system is determined by perceived usefulness, and perceived ease of use (PEOU), ,,,the



degree to which the user expects the target system to be free of effort and more so help to increase the degree of efficiency and effectiveness of performance. Accordingly the perceived ease of use also has a direct effect on predicting usage. TAM models are very useful within and across organizations setup for accessing the applications or technologies, or to make comparisons between user groups or applications. However, the limitation of TAM is when it is used outside of the work place. Perceived usefulness (PU) – This refers to the extent to which an individual believes that using a specific system would enhance and improve job performance Perceived ease of use (PEOU) –This refers to the extent to which an individual believes that by using a specific system would be easy to use and free from using a lot of pressure or effort (Davies, 1989).the level of economic and technological development in the country.

Ability-to-pay approach Theory: The ability-to-pay approach theory according to Akakpo (2009) as cited in Nnubia & Okolo (2018); Gatsi et al. (2013) is that, taxes are founded on taxpayers' ability to pay; thus, there is no quid pro quo. This theory is presented by Arthur Cecil Pigou (Samuelson, 2012). It treats proceeds and expenses of government distinctly. This theory pointed out that, taxes paid are understood as a sacrifice by taxpayers, which advance the subjects of what the sacrifice of each taxpayer should be and how it should be measured. According to Akakpo (2009) as cited in Nnubia & Okolo (2018).

Empirical literature

Akwe (2014) assessed the impact of e-company income tax payment on revenue generation in Germany for the period 2010-2011. The study covered 210 listed companies in Germany. The independent variable was e-company income tax payment while the dependent variable is revenue generation. The descriptive statistics and regression analysis were used to analyze the data. The findings showed that low e-company income tax payment affect revenue generation in the country while high e-company income tax payment improves revenue generation in the country.

Similarly, Okolo (2018) investigated the impact of e-company income tax payment on revenue generation in Nigeria. The study covered eight (8) deposit money banks in Nigeria for the period 2016 - 2018. Multiple regressions was used to analyze the data. The independent variable was e- company income tax payment and the dependent variable was revenue generation. The findings of the study was similar to that of Akwe (2014).

Nnubia, Okafor, Chukwunwike, Asogwa and Ogan (2020) analyzed the impact of e-tax assessment on income generation in Nigeria. The assessment applied optional information obtained from Federal Inland Revenue Service charge report and CBN Statistical delivery and Quarterly Economic Reports. These data were time arrangement data covers the time frame from first quarter of 2012 to second quarter of 2018. The information gathered were analyzed using Ordinary Least Square Method. The results show a hopeful gigantic effect of pre (before the starter of e-charge evaluation) organization personal expense and value added tax on income generation in Nigeria and an opposite irrelevant effect of post association yearly obligation pay and worth included



appraisal pay income age in Nigeria (after the presence of e-charge assortment) at 5% degree of basic.

Methodology

This section discusses the research methodology adopted for the study. This includes; the population of the study, sample size, and sampling technique. This research study is carried out to examine the effect of e-tax payment on revenue generation in Nigeria. It also explains the research design and all activities involved in the collection and analysis of data for the research work.

The longitudinal research design was adopted on the basis that it does not provide the study an opportunity to control the variables mainly because they have already occurred and cannot be manipulated. This research is designed to study the effect of e-tax payment on revenue generation in Nigeria. The study population comprise of the Federal Inland Revenue service data of E-tax collected for the period under consideration, and the data was obtained from Federal Inland Revenue service report and other relevant government publications from 2014 to 2020. That covers a period of seven years (7 years). The study population was adopted as the sample size of the study, a stratified random sampling technique was employed in order to gauge the study.

Variables and measurement

Variables and measurement refers to those inputs or constructs required and used in a research work and how they were measured. The variables used in this research study are the independent variables, dependent variable.

S/NO	Variables before the advent of E-Taxation	Symbo l	Variables after the advent of E-Taxation	Symbo l
1	Company income tax payment	CIT	E-company income tax payment	E-CIT
2	Value added tax payment	VAT	E-value added tax payment	E-VAT
3	Capital gains tax payment	CGT	E-capital gains tax payment	E-CGT
4	Federally collected revenue	FCR	Federally collected revenue	FCR

Model specification

The study employed revenue generation proxies with federally collected revenue as dependent variable while E-company income tax payment, E-value added tax payment and E-capital gains tax payment were the independent variable. Multiple regression models were used to determine whether the sets of independent variables together predict the dependent variable. The regression model was in econometric form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_i$$



Where;

β_0 - Is the constant or intercept

β_{1-3} - Are the regression coefficients or change induced in Y by each X
 X_1 - Independent variable E-company income tax payment

X_2 - Independent variable E-value added tax payment
 X_3 - Independent variable E-capital gains tax payment
 Y - Dependent variable federally collected revenue

ϵ_i - Is the error component

This can be rewritten in equation form thus;

$$FCR = \beta_0 + \beta_1 \text{ E-CIT} + \beta_2 \text{ E-VAT} + \beta_3 \text{ E-CGT} + \epsilon_i$$

β_0 is the constant while β_{1-3} are the coefficients of the independent variables, ϵ_i is the stochastic error term.

Results and Discussions

This section present and discuss the results from the data obtained. the research data would be analyzed using descriptive statistics, correlation analysis and regression analysis through the use of statistical software called Econometric view (E-view).

Trend Analysis of the Variables

Trend Analysis of Company income tax, Value Added tax and Capital Gain Tax before and after the Advent of E-Taxation

Periods	Company income tax	Value Added tax	Capital Gain Tax
Pre-electronic tax	Billions (Naira)	Billions (Naira)	Billions (Naira)
Q1-2014	174.1639	212.3853	0.7838
Q2-2014	556.2703	197.2551	0.2904
Q3-2014	273.129	211.3232	1.5191
Q4-2014	176.8439	201.2417	0.0565
Q1-2015	160.9244	193.3893	0.2486
Post-electronic tax	Billions (Naira)	Billions (Naira)	Billions (Naira)
Q2-2015	501.6561	64.9922	10.2796
Q3-2015	65.2876	56.399	0.2634
Q4-2015	265.3192	183.4499	0.2995
Q1-2016	166.0176	198.7343	0.228
Q2-2016	305.3955	197.7765	72.5931
Q3-2016	297.3369	207.214	24.1888
Q4-2016	164.7873	224.474	2.3935
Q1-2017	152.4191	221.3805	0.1106
Q2-2017	364.2424	246.3033	0.8258



Q3-2017	384.9345	250.5607	1.8449
Q4-2017	313.4608	254.1039	0.399
Q1-2018	203.6832	269.7938	0.318
Q2-2018	471.5832	266.7317	6.1663
Q3-2018	348.0970	273.5040	5.8435
Q4-2018	371.3172	298.0105	0.2707
Q1-2019	229.8280	293.0305	0.0964
Q2-2019	506.9517	311.9430	0.9752
Q3-2019	513.3815	275.1161	1.2986
Q4-2019	354.5373	309.8826	3.6068
Q1-2020	278.6499	324.5791	0.6433
Q2-2020	324.3219	327.1954	0.6174
Q3-2020	390.6746	424.7081	1.7837
Q4-2020	281.7342	454.6883	0.4742

Source: Planning, Research and Statistics Department, Federal Inland Revenue Service

Quarterly Report from Q1 of 2014 to Q4 of 2020.

Descriptive statistics of the variables under study

Descriptive statistics of the variables under study before the advent of E-taxation (1st quarter of 2014 to 1st quarter of 2015)

Variables	FCR	E-CIT	E-VAT	E-CGT
Mean	1904.854	240.1078	194.5256	2.420838
Median	2055.640	176.8439	193.3893	0.783800
Maximum	2783.460	556.2703	222.8020	16.78340
Minimum	1172.470	116.5074	170.6901	0.056500
Std. deviation	643.9119	122.1049	15.96699	4.495188
Skewness	0.097847	1.495023	0.169944	2.768486
Kurtosis	1.345074	4.508445	1.938594	9.443009
Jarque-Bera	1.504249	6.075214	0.672807	39.09231
Probability	0.471364	0.047949	0.714335	0.000000
Sum	24763.10	3121.401	2528.833	31.47090
Sum Sq. Dev.	497547.1	178915.4	3059.337	242.4806
Observations	28	28	28	28

Source: Econometric View Results

The descriptive statistics table 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 pre e- taxation on revenue generation in Nigeria.

Descriptive statistics of the variables under study after the advent of E-taxation



(2015 to 2020)

Variables	FCR	E-CIT	E-VAT	E-CGT
Mean	1313.129	281.2403	203.2241	9.223885
Median	1276.380	297.3369	221.3805	0.825800
Maximum	1911.710	501.6561	269.7938	72.59310
Minimum	778.1935	65.28760	56.39900	0.110600
Std. deviation	320.8294	129.3164	68.95271	20.21305
Skewness	0.464178	0.142580	-1.304348	2.648504
Kurtosis	2.635592	2.157827	3.520000	8.774530
Jarque-Bera	0.538762	0.428227	3.832670	33.26022
Probability	0.763852	0.807257	0.147145	0.000000
Sum	17070.67	3656.123	2641.914	119.9105
Sum Sq. Dev.	1235178	200672.7	57053.72	4902.807
Observations	28	28	28	28

Source: Econometric View Results

The descriptive statistics table shows the mean (average) for each variable, their maximum values, minimum values, and standard deviation. The result provides some insight into the nature of the effect of post e-taxation on revenue generation in Nigeria. Firstly, it was observed that over the period under review, the post e-taxation have positive average revenue generation (FCR) of 1313.129. The mean of company income tax (CIT) is 281.2403; this also means that the revenue generation has an optimistic company income tax in the period under study. It also discloses that a positive average value of 203.2241 and 9.223885 for value added tax (VAT) and capital gain tax (CGT). These values mean that within the period under review, the post e-taxation meet up 1313.129 on the average within the period under review. The maximum value of company income tax is 501.6561 and its minimum value is 65.28760. The maximum value of value added tax is 269.7938 and its minimum value is 56.39900, and maximum value for capital gain tax is 72.59310 and its minimum value is 0.110600. The large variances between the maximum and minimum value indicates that the data used for the study are homogeneous

Correlation analysis

Correlation matrix of the variables under study before the advent of e-taxation from 2014 to 2015

Variables	FCR	CIT	VAT	CGT
FCR	1.000000			
CIT	0.272072	1.000000		
VAT	0.085952	-0.092570	1.000000	
CGT	-0.300946	0.389833	-0.331612	1.000000

Source: Econometric view results



The connection framework is to check for multi-collinearity and to investigate the relationship between each logical variable and the needy variable. The correlation matrix shows that revenue generation (FCR) has positive association with company income tax (0.272072) and value added tax (0.085952), and negative association capital gain tax (-0.300946). Company income tax has a strong adverse link with value added tax (-0.092570) and positive association capital gain tax (0.389833). Value added tax also has an undesirable relationship with capital gain tax (-0.331612). In checking for multi-collinearity, the examination witnessed that no two logical variables were perfectly correlated.

Correlation matrix of the variables under study after the advent of e-taxation From 2015 to 2020

Variables	FCR	CIT	VAT	CGT
FCR	1.000000			
CIT	-0.178237	1.000000		
VAT	-0.556928	0.133073	1.000000	
CGT	-0.005983	0.173736	-0.069159	1.000000

Source: Econometric view results

The connection framework is to check for multi-collinearity and to investigate the relationship between each logical variable and the needy variable. The Table 5 above shows that revenue generation (FCR) has undesirable link with company income tax (-0.178237), value added tax (-0.556928), and capital gain tax (-0.005983). Company income tax has positive association with value added tax (0.133073) and capital gain tax (0.173736). Value added tax has an adverse connotation with capital gain tax (-0.069159). In checking for multi-collinearity, the study witnessed that no two logical variables were perfectly correlated.

Regression analysis of the data before the advent of e-taxation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4647.73	1255.591	-3.70163	0.0049*
CIT	2.244329	0.845481	2.654499	0.0263**
VAT	31.2883	6.311266	4.957532	0.0008*
CGT	-30.0204	24.23914	-1.23851	0.2469
R-squared	0.804161	Mean dependent var	1904.854	
Adjusted R-squared	0.738881	S.D. dependent var	643.9119	
S.E. of regression	329.0375	Akaike info criterion	14.67788	
Sum squared residual	974391.2	Schwarz criterion	14.85171	
Log likelihood	-91.4062	Hannan-Quinn criter.	14.64215	
F-statistic	12.31871	Durbin-Watson stat	2.297017	
Prob (F-statistic)	0.001543			

Source: Econometric view results

Note: * 1% and ** 5% level of significance



In testing for the cause-effect between the dependent and independent variables in pre e-taxation model (revenue generation), the regression analysis was reported. The result revealed difference in their coefficients magnitude, signs and number of significant variables.

The specific finding from each explanatory variable from the effect of pre e-taxation regression model is provided as follows:

Company Income Tax (CIT): based on the coefficient value of 2.244329, t-value of 2.654499 and a p-value of 0.0263 for company income tax. Organization personal assessment seems to have a hopeful impact on income generation and was factually significant at 5% since its p- esteem was under 0.05. The coefficient esteem which uncovers the level of variety brought about by the individual independent variable to the dependent shows a positive estimation of 2.244329, this uncovers organization annual duty emphatically impacts the income generation in Nigeria.

The t-estimation of 2.654499 presents that organization annual assessment optimistically affects income generation in Nigeria. The likelihood estimation of 0.0263 demonstrates that the effect of organization annual assessment on income generation in Nigeria is measurably critical at 5%.

This outcome thusly, recommends that we ought to acknowledge substitute speculation, which expressed that company income tax has noteworthy impact on income generation in Nigeria. This implies increment in organization personal duty shows higher income generation in Nigeria. With hopeful impact on income generation in Nigeria, it fit in with a priori expectation.

Value Added Tax (VAT): in light of the coefficient estimation of 31.28830, t-estimation of 4.957532 and a p-estimation of 0.0008 for value added tax. Value added charge seems to optimistically affect income generation and was factually noteworthy at 1% since its p-esteem was under 0.001. The coefficient esteem which uncovers the level of variety brought about by the individual autonomous variable to the dependent shows a positive estimation of 31.28830, this uncovers value added tax positively impacts the income generation in Nigeria. The t- estimation of 4.957532 shows that value added tax optimistically affects income generation in Nigeria. The likelihood estimation of 0.0008 demonstrates that the effect of value added tax on income generation in Nigeria is factually huge at 1%.

This outcome hence, proposes that we ought to acknowledge exchange speculation, which expressed that value added tax has noteworthy influence on income generation in Nigeria.

This finding was in variance with the outcomes of Olaoye and Atilola (2018) which found an unimportant alteration between pre and post value added tax revenue with t-value and p-value of

0.520 and 0.612 respectively; and was also in line with the finding of Afuberoh and Okoye (2014) which found that taxation has an important influence on revenue generation at 0.05 significant levels.



Capital Gain Tax (CGT): based on the coefficient value of -30.02036, t-value of -1.238508 and a p-value of 0.2469 for capital gain tax. Capital gain charge seems to negatively affect income generation and was factually inconsequential at both 5% and 10% separately, since its p-esteem was more prominent than 0.05 and 0.1 individually. The coefficient esteem which uncovers the level of variety brought about by the individual autonomous variable to the dependent shows a negative estimation of -30.02036, this uncovers capital gain charge contrarily impacts the income generation in Nigeria. The t-estimation of -1.238508 shows that capital gain charge negatively affects income generation in Nigeria. The likelihood estimation of 0.2469 demonstrates that the effect of capital gain charge on income generation in Nigeria is measurably irrelevant at 10%. This outcome hence, recommends that we ought to acknowledge null hypothesis, which expressed that capital gain charge has unimportant impact on income generation in Nigeria. This implies decline in capital gain charge demonstrates lower income generation in Nigeria. With negative effect on income generation in Nigeria, it fit in with apriori desire.

This finding was in accordance with the aftereffects of Olaoye and Atilola (2018) which found unimportant variance between pre and post capital Gain tax revenue with t-value and p-value of

1.218 and 0.247 reported to be respectively; and was also in variance with the finding of Afuberoh and Okoye (2014) which found that taxation has an important influence on revenue generation at 0.05 significant levels. From the coefficient table, the regression model can be retrieved as follows; $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_i$

Where, Y =dependent variable, B₀ = Constant, B₁ and B₂ = Independent variable, e = error term.

The independent variables are; E-Company income tax, E-Value added tax and E-Capital gains tax.

The dependent variable is federally collected revenue

Therefore, in writing the model equation, the following proxies will be used in this research; E-Company income tax (E-CIT), E-Value added tax (E-VAT), E-Capital gains tax (E-CGT) and federally collected revenue (FCR).

The equation will be re-written to suite the study, it is represented as; $FCR = \beta_0 + \beta_1 \text{E-CIT} + \beta_2 \text{E-VAT} + \beta_3 \text{E-CGT} + \epsilon_i$

$$FCR = -4647.73 \times 0 + 2.244329 (\text{E-CIT}) + 31.2883 (\text{E-VAT}) + -30.0204 (\text{E-CGT}) + \epsilon_i$$

Regression analysis of the data after the advent of e-taxation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1903.124	316.9999	6.003547	0.0002*
E-CIT	-0.25092	0.699201	-0.35887	0.728
E-VAT	-2.53711	1.294464	-1.95997	0.0816***
E-CGT	-0.41463	4.444114	-0.0933	0.9277



R-squared	0.321862	Mean dependent var	1313.129	
Adjusted R-squared	0.095817	S.D. dependent var	320.8294	
S.E. of regression	305.0721	Akaike info criterion	14.52663	
Sum squared resid	837620.8	Schwarz criterion	14.70046	
Log likelihood	-90.4231	Hannan-Quinn criter.	14.4909	
F-statistic	1.423882	Durbin-Watson stat	1.859837	
Prob (F-statistic)	0.298751			

Source: Econometric view results Note: * 1%, ** 5% and *** 10% level of significance

Discussions

The regression table after the advent of e-tax showed the result for OLS regression test result on post e-taxation adoption from 2015 to 2020 period. In testing for the cause-effect between the dependent and independent variables in post e-taxation model (revenue generation), the study reported regression analysis. The presented OLS regression estimation techniques. The result revealed difference in their coefficients magnitude, signs and number of significant variables.

In addition to the above, the specific finding from each explanatory variable from the effect of post e-taxation regression model is provided as follows:

Company Income Tax (CIT): based on the coefficient value of -0.250919, t-value of -0.358865 and a p-value of 0.7280 for company income tax. Organization annual duty seems to negatively affect income generation and was measurably unimportant at 10% since its p-esteem was more noteworthy than 0.1. The coefficient esteem which uncovers the level of variety brought about by the individual autonomous variable to the dependent shows a negative estimation of -

0.250919, this uncovers organization annual duty contrarily impacts the income generation in Nigeria. The t-estimation of -0.358865 showcases that organization annual assessment negatively affects income generation in Nigeria. The likelihood estimation of 0.7280 shows that the impact of organization personal duty on income generation in Nigeria, is factually immaterial at 10%. This outcome thusly, proposes that we ought to acknowledge null hypothesis, which expressed that organization income tax has immaterial impact on income generation in Nigeria. This implies decline in organization personal assessment demonstrates lower income generation in Nigeria. With negative effect on income generation in Nigeria, it fit in with a priori desire.

This finding was in accordance with the consequences of Olaoye & Atilola (2018) which found an insignificant change among pre and post organization personal expense income with t-worth and p-esteem expressed to be 0.833 and 0.421 individually; and furthermore crafted by Ojong, et al. (2016) which uncovered that there is no important association between organization annual assessment and the development of the Nigeria economy. The examination was in fluctuation with the finding of Afuberoh & Okoye (2014) which found that tax assessment has a noteworthy influence on income generation at 0.05 noteworthy levels.



Value Added Tax (VAT): based on the coefficient value of -2.537111, t-value of -1.959970 and a p-value of 0.0816 for company income tax. Value added charge seems to impact income generation and was measurably critical at 10% since its p-esteem was under 0.1. The coefficient esteem which uncovers the level of variety brought about by the individual autonomous variable to the dependent shows a positive estimation of -2.537111, this uncovers esteem included duty contrarily impacts the income generation in Nigeria. The t-estimation of -1.959970 shows that value added tax negatively affects income generation in Nigeria. The likelihood estimation of 0.0816 shows that the influence of value added charge on income generation in Nigeria, is measurably huge at 10%.

Capital Gain Tax (CGT): Based on the coefficient value of -0.414629, t-value of -0.093298 and a p-value of 0.9277 for capital gain tax. Capital gain charge seems to negatively affect income generation and was factually irrelevant at 10%, since its p-esteem was more noteworthy than 0.1. The coefficient esteem which uncovers the level of variety brought about by the individual free factor to the dependent shows a negative estimation of -0.414629, this uncovers capital addition charge contrarily impacts the income age in Nigeria. The t-estimation of -0.093298 shows that capital gain charge negatively affects revenue generation in Nigeria. The likelihood estimation of 0.9277 shows that the impact of capital gain charge on income generation in Nigeria, is factually irrelevant at 10%.

Conclusion

The paper empirically investigated the impact of E-taxation on revenue generation in Nigeria and variables such as E-company income tax (E-CIT), E-Value added tax (E-VAT), E-Capital gains tax (E-CGT) and federally collected revenue (FCR) from 2014 to 2020 were used. The data were analyzed using the pre and post adoption era. The result shows that E-company income tax (E-CIT) and E-Value added tax (E-VAT) had positive impact on revenue generation (federally collected revenue) during the pre-adoption era (before advent) while E-capital gains tax (E-CGT) had negative impact on revenue generation (federally collected revenue) during the pre-adoption era (before advent).

The result also revealed that E-company income tax (E-CIT) and E-capital gains tax (E-CGT) had negative impact on federally collected revenue (revenue generation) during the post adoption era (after advent) which led to the acceptance of null hypothesis one and three while E-Value added tax (E-VAT) had a positive impact on revenue generation (federally collected revenue) which led to the acceptance of the second alternative hypotheses.

Recommendations

In line with the findings of the study, the following recommendations were put forward:

1. In order to ensure optimum and efficient collection of taxes as and when due, government through Federal Inland Revenue Services should work out



- modalities on the best way to sharpen partnerships on the basics of E-tax collection.
2. Government by means of Federal Inland Revenue Services must give useful, respectable, greatness and available site for one and all. Government ought to make versatile adaptation of electronic assessment entrance so as to build the appropriation rate by citizens as cell phones are in effect continuously utilized.
 3. Government by means of Federal Inland Revenue Services ought to guarantee that the arrangements of the laws which manage defaulters are executed. That is, ensuring that the defaulters are brought to book and managed in like manner.
 4. Federal Inland Revenue Services should come up with measures to ensure that defaulters are brought to book and dealt with according to the provisions of the laws.
 5. To ease accessibility by taxpayers, mobile version of electronic tax portal should be created. This will no doubt increase the adoption rate by tax payers as mobile phones are being increasingly used

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