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TAXATION AND SOCIAL SERVICES: EVIDENCE FROM NIGERIA

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Abstract
This study econometrically examined taxation effect on social services in which how taxation incomes finance education services were investigated. Data were collected from FIRS bulletin and CBN statistical bulletin covering 1981 to 2020. To realize econometric impact of taxation on social services, regression model, Cointegration, VECM and granger causality wald test were analytically engaged. Petroleum profit tax, company income tax, Value added tax and Custom and Excise Duties have positive significant impact on Social services both in the short run and in the long run in Nigeria. It is concluded that taxation positively ignited education services and vice versa. This displayed bidirectional causality amid taxation and social services. Also taxation has positive significant impact on education services both in the short and long run in Nigeria. The huge revenue earned by the government through taxation assisted government to improve her education and EDUT services. It is recommended that administration of taxes especially company income tax and customs and excise duties should be done in a way that collection and remittance cannot be evaded so that its effectiveness will be properly comprehended in the magnitude of social services provision.

Keywords: Social services, Education, Financing, Taxation

1. Introduction

Education in Nigeria has been a great challenge to both the government and private sectors in Nigeria. Most of the building in Nigeria University and other sectors of education including both infrastructures and equipment have been experiencing outdating and dilapidation. The nexus amid taxation and education in Nigeria is not disconnected. Education in Nigeria needs exigent financing. This is pertinent because no government can implement her functions effectively and productively without suitable financial funds at her disposal. Funds are needed to fulfill righteousness on both academic and nonacademic staff, maintain both academic intellectuals and equipment. Adequate financing's importance on education cannot be overemphasized. For instance, in 1981, government of Nigeria spent 0.17 billon to revamp education from collapsing when income realized from taxation is 4.73 billion. It was

increased to 2.4 billion when tax income was 18.33 billion in 1990 which displayed 243% increment on the education financing. Government upsurged finance on education to 57.96 billion in year 2001 when realized 903.46 billion from taxes. This showcased 2315% increment compared to 1990. Expenditure of government on education further increased to 170.80 billion in 2010 while income realized from taxes was increased to 1,907.58 billion (CBN, 2020). This further explained the efforts of government to stabilize education in Nigeria using taxes income. Expenditure on education was also skyrocket to 593.33 billion in 2019 when income garnered from all taxes was 4,725.60 billion during the period when country experienced crash in price of crude oil in world market. These are financed with taxation which are forcefully realized from both individual and private sector through effective FIRS. According to Adeyemi (2011) education is financed in developed country by efficient taxation. Taxation revenue which has replaced wealth regaling by government through crude oil which invariably crashed globally.

Despite the efforts of government to stabilize and improve education services with enormous spending on education, country is still battling with teachers/lecturers strike, dilapidated infrastructures, low quality education, brain drain, inadequate qualified lecturers, downplayed laboratories' equipment and denigration of outputs. The question now is has government earned adequate taxes wealth capable of financing education? Are the wealth realized from taxation and allocated for financing education not fully monitored? This study showcased the cordial relationship amid taxation and education financing in Nigeria.

2. Literature Review

Taxation

Taxation is considered as an encumbrance which inhabitants must tolerate to manage his o government because of the fiscal functions to displaying in the country. Taxation is germane sources of revenue influx for government, such revenue are utilised to funding or running public services and execute other social services. Ochiogu (2004) delineates tax as an imposed levy showers on the individual and private/ corporate organization. It is imperative and germane source of intake typically represents more than ninety percent of government income (Adams, 2001, Adegbite & Azeez, 2022). It is also referred to as the exhibition of civil responsibilities as ways of supporting government for effective provision of social services such as education, roads, security and other social services responsibilities for the wellbeing of the society. Taxation is employed by government to influence economic activities positively or negatively so as to realize desired objectives(Adegbite, 2021). Therefore:

H_{O1}: Taxation is indispensable to social services provision in Nigeria

Social Services and Education

Social services are the cumulative of social amenities and facilities such as education, health, defense, transportation and other public goods which are provided for the enhancement and stabilization of citizenry. The services could be in the form of education services facilities such as health, transportation, good roads, water provision, qualified teachers and other education facilities provision. The reasonable economic plans are to upsurge economic growth through education which is the paramount subsets of social services. These services enhance per capita income which invariably surge up standard of living. Education services facilitate and accelerate the existence of social, physical, and economic structures. If the populace are not deprived of these services, development of such country are absolutely possible. Education services are seen generally as basic and essential services that must be available for development of both human and economy. The physical structures necessary

for the running of society can likewise be perceived as education services. These are specific elements which function as facilitator for improvement, development as well as enhancement in citizens' welfare (Adegbite, 2016). This can also unequivocally be seen as persistent rates of income per capita growth. Todaro and Smith (2011) in their submission, education services provision accelerated and facilitated development of any nation and also upsurge both material and human resources which ultimately enhance economic development. It is hypothesized that:

H_{O2}: Taxation enhances education services financing favourably in Nigeria

Theoretical Review

As the world economy swings towards more information based sectors. Human capital and skills development becomes a pertinent issue for practitioners and policy makers involved in economic development, both at regional and national levels (Jacobs, 2007). However, the effects of vocational and educational training activities exercise upon changing regional and national economies becomes less than thoroughly analyzed and explained. Since the existence of theory of human capital in 1960s, numerous of researchers have struggled to discuss the related issues. The theory of Human capital perceive training and schooling as investment in competences and skills. It is debated that based on expectation of investment returns, training and education decision were made solely or unanimously as they receive as a channels of boosting their productivity. A similar aspect of studies emphases on the interface between skills / educational levels of the employees and technological activities measurements. With reference to this theory, more skilled /educated labor force make it convenient for any organisation to adopt and actualize new technologies, thus reinforce returns on training and education. This theory is relevant to this studies because human capital which can be derived from education and training are the responsibilities of a responsible government. Therefore, government can finance education from the proceeds of taxation. This theory emphasis that taxation when allocates it judiciously can finance education from primary schools to tertiary institutions. Any nation that spend extensively on empowerment of her citizens will be developed in a decade. This theory further strengths that aggregate impacts of education on any country is growth and development.

Theory of Infrastructure-led Development was developed by Agenor (2010). The theory proposes a long-term economic development based on education which was referred to as the main engine of growth. The theory stipulates that government investment in education enhances productivity of both commodities. The theory suggests that a large shift toward spending on social services and infrastructure especially education can generate desirable impacts on economy only if efficiency degree of social services is adequately high. The theory inveterate that if the social service such as education levels are low significantly, the human capital production and technology will be insignificant to economic development which can lead to low and poor productivities. For instance, in the nonexistence of EDUT services and formidable education system in Nigeria, there will be devastation in human capital enhancement which will invariably dispense underdevelopment, and other sectors will also be drastically affected, which will affect economic development. However, this study also anchored on this theory because as long as adequate social services provision such as EDUT services and sound education services are certain, human capital can be enhanced, modern technology will be fully utilized, and economic and social benefits will be applauded.

Empirical Review of Related Studies

Adeyemi (2011) examined education financing in Nigeria. Financial review on education since the beginning of formal education in Nigeria was unveiled. The education financing sources of both developing and developed countries were emphasized while Nigeria debt servicing level and external debt stock level were given. The study displayed total revenue accruing to the Federal Government are allocated to education sectors periodically. The findings specified that education funding was less that 17% yearly despite that UNESCO advocated that 26% minimum of national budget must earmark on education. It was advised that effectively funding on education are recommended for any country that yearns for growth in future.

Yakovlev (2014) estimated the connected impact of personal income tax, and average tax rate on growth. The study analyzed the data collected with GMM and revealed that average tax rate is significantly and negatively connected with growth. But, statistical significance was absent in both variables while average tax rate was significant but negative in GMM model that considered all variables selected as endogenous. The multiple analysis indicators disclosed that state higher taxes were generally connected with low economic performance. In the same vein, Ugwunta and Ugwuanyi (2015) garnered cross-sectional data from Sub-Saharan African countries to decide on non-distortionary and distortionary taxes effects on economic growth. The panel data technique was employed choosing fixed -effect model as a parameter. Findings disclosed that distortionary tax impacted negatively and insignificantly on growth of economy but non-distortionary tax impacted on economic growth positively and insignificantly.

Onakoya *et al.* (2016) employed Generalized Least Squares (GLS) to investigate taxation impact on Africa economic growth from 2004-2013. Findings displayed that tax revenue has positive connection to African economic growth which invariably advocated that taxation promotes Africa economic growth. The study at last concluded that African countries needed to enhance tax revenue so that Africa economy would experience accelerating growth.

Adegbite (2016) examined education tax on Nigeria human capital development. The study further investigated causality direction among Human capital development, Petroleum profit tax, education tax, and company income tax. Co-integration together with Granger causality tests were used to analyse data from 2000 to 2015. It was revealed from the outcome that education tax had impact on Nigeria human capital development positively and significantly. The study advocated that government should exploit education tax revenues efficiently and efficiently for development of human capital in Nigeria.

Oboh et al, (2018) analyzed tax revenue impact (direct and indirect tax) on the growth of economy of the countries belonged to Economic Community of West African States (ECOWAS), using SURE (Seemingly Unrelated Regression Estimate) analysis for selected five (5) ECOWAS countries such as Ghana, Nigeria, Sierra Leone, Burkina Faso and Benin. The data was realized from World Bank World Development Indicators from 2000 to 2015. Findings revealed that aggregated tax revenue possessed positive effect which is significant on economic growth.

Maganya (2020) engaged autoregressive distributed lag model (ARDL) to investigate taxation effect on Tanzania economic growth from 1996 to 2019. Several preliminary tests which are sacrosanct such as stationary tests and pair-wise Granger causality tests were also engaged The results divulged that taxes on domestic services and goods are positively and statistically connected to the growth of GDP but income taxes negatively and significantly

connected to the growth of Tanzania GDP. The study advocated that government should focus at growing, sustaining, nurturing tax base in order to drive Tanzania economic growth positively.

Adegbite (2021) gauged the effects of taxation on transportation in Nigeria between 1981 and 2019. The study additionally assessed the causality between transportation and revenue of taxation in Nigeria. VECM as an analytical tool together with Johanson Cointegration test, and Vector Autoregression were embraced for analysis. It was concluded that taxation assisted transportation financing in Nigeria favourably and significantly. Nevertheless, this study also restricted to transportation financing in Nigeria but not extended to how internal security is being financed.

The existing literature examined were restricted to taxation impact on economic growth except Adeyemi (2011) and Adegbite (2016) who extended their studies to education financing and human capital development respectively. Also, the study on the impact of taxation on social services with referenced to education services in Nigeria is inadequate which made the current study pertinent and relevant. However, this study is unique and stand out among the existing literature because of its impacts on social services, and the involvement of other econometric analytical tools in determining the extent of taxation on social services in Nigeria.

3. Methodology and Model Specification

Value added tax (VAADT), petroleum profit tax (PEPT), company income tax (COTAX), Custom and Excise Duties (CEXDT), and EDUT data were collected from FIRS bulletin and CBN statistical bulletin covering 1981 to 2020 in order realized the econometric impact of taxation on EDUT through regression model, Johansson Cointegration (JTFC), analysis, VECM and granger causality wald (GCW) test. PPMC also was employed to examine the rapport between taxation and EDUT indicators. To survey taxation impact on EDUT services in Nigeria, EDUT services is regarded as dependent variable while components of taxation such as VAADT, PEPT, COTAX and CEXDT are employed as independent variables. EDUT are the income aggregately spent by FGN on education sectors in Nigeria. The regression model is:

Model 1:

EDUC = *f* (Taxation) (1)

EDUC = *f* (PEPT, VAADT, COTAX, CEXDT μ) (2)

$EDUC = a0 + B1VAADT + B2COTAX + B3CEXDT + B4PEPT + \mu_1$ (3)

VECM model are as follows:

$$\Delta EDUT_t = \alpha + \sum_{i=1}^{k-1} \beta_i \Delta EDUT_{t-i} + \sum_{m=1}^{k-1} \emptyset_m \Delta PEPT_{t-m} + \sum_{n=1}^{k-1} \emptyset_n \Delta VAADT_{t-n} + \sum_{j=1}^{k-1} \emptyset_i \Delta COTAX_{t-j} + \sum_{s=1}^{k-1} \emptyset_n \Delta CEXDT_{t-s} + \lambda ECT_{t-1} + \mu_{2t} \quad (4)$$

$$\Delta PEPT_t = \alpha + \sum_{i=1}^{k-1} \beta_i \Delta EDUT_{t-i} + \sum_{m=1}^{k-1} \emptyset_m \Delta PEPT_{t-m} + \sum_{n=1}^{k-1} \emptyset_n \Delta VAADT_{t-n} + \sum_{j=1}^{k-1} \emptyset_i \Delta COTAX_{t-j} + \sum_{s=1}^{k-1} \emptyset_n \Delta CEXDT_{t-s} + \lambda ECT_{t-1} + \mu_{3t} \quad (5)$$

$$\Delta VAADT_t = \alpha + \sum_{i=1}^{k-1} \beta_i \Delta EDUT_{t-i} + \sum_{m=1}^{k-1} \emptyset_m \Delta PEPT_{t-m} + \sum_{n=1}^{k-1} \emptyset_n \Delta VAADT_{t-n} + \sum_{j=1}^{k-1} \emptyset_i \Delta COTAX_{t-j} + \sum_{s=1}^{k-1} \emptyset_n \Delta CEXDT_{t-s} + \lambda ECT_{t-1} + \mu_{4t} \quad (6)$$

$$\Delta COTAX_t = \alpha + \sum_{i=1}^{k-1} \beta_i \Delta EDUT_{t-i} + \sum_{m=1}^{k-1} \emptyset_m \Delta PEPT_{t-m} + \sum_{n=1}^{k-1} \emptyset_n \Delta VAADT_{t-n} + \sum_{j=1}^{k-1} \emptyset_i \Delta COTAX_{t-j} + \sum_{s=1}^{k-1} \emptyset_n \Delta CEXDT_{t-s} + \lambda ECT_{t-1} + \mu_{5t} \quad \mathbf{(7)}$$

$$\Delta CEXDT_t = \alpha + \sum_{i=1}^{k-1} \beta_i \Delta EDUT_{t-i} + \sum_{m=1}^{k-1} \emptyset_m \Delta PEPT_{t-m} + \sum_{n=1}^{k-1} \emptyset_n \Delta VAADT_{t-n} + \sum_{j=1}^{k-1} \emptyset_i \Delta COTAX_{t-j} + \sum_{s=1}^{k-1} \emptyset_n \Delta CEXDT_{t-s} + \lambda ECT_{t-1} + \mu_{6t} \quad (8)$$

Where EDUT proxied as money exhausted on EDUT services provision and sustainability by federal government. α is intercepts, β_i, $\emptyset_i$ $\emptyset_m$, $\emptyset_n$ *and* $\emptyset_s$ are taxation coefficients of EDUT, COTAX, PEPT, VAADT and CEXDT respectively.
s, t, m,i, and n, and are regarded as lags numbers.
μ_{1-6t} is error term (stochastic) with zero mean and constant variance

4. Results and Discussions

4.1. Trend analysis showing Taxation and Education Financing in Nigeria

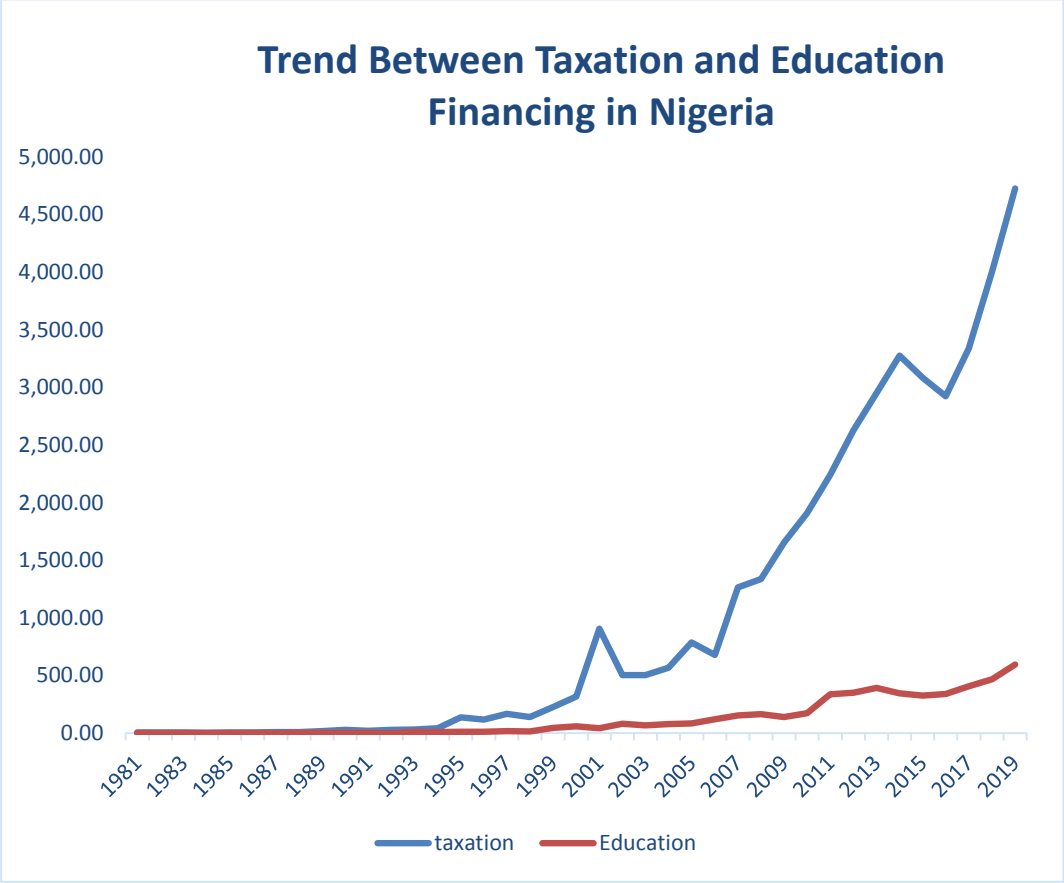

Fig 1 showed the trend analysis between taxation and education financing in Nigeria. From Fig 1, it is shown that relationship exist between taxation and education financing. According to CBN statistical bulletin, in 1981, the income realized from taxation is 4.73 billon while 17millon was spent on education but in 2019, 4,725.60 Billon was realized from taxation in which 593.33 billon was dispensed on education in Nigeria. It is further shown that taxation has pertinent roles on education financing in Nigeria. Financing of education responses as the results of increment in taxation income which translated that education benefited from income garnered through taxation.

4.2. The Effect of Taxation on Education Financing in Nigeria

Table 1:The Impact of Taxation on Education Financing in Nigeria

Dependent variable	Independent variables	Coefficient	Standard error	T	P>/T/	(95% conf. Interval)

EDUC	PEPT	.222557	.055226	4.03	0.000	.0011161 .0033861
	VAADT	.046051	.007151	6.44	0.000	-.0191533 .111258
	COTAX	.0115629	.002581	4.48	0.000	-.0600851 .0369593
	CEXDT	.053937	.006331	8.52	0.000	.3911438 .4875939
	CONSTANT	19.72553	1.907692	10.34	0.000	-13873.38 9928.394
R^2 = 0.5753		Adj R^2 = 0.5624	Prob > F = 0.0000		F(4, 34) = 335.72	

Source: Author's Collation (2022)

Table 1 exposed taxation impact on EDUC in Nigeria. It was divulged from Table 1 that 1% increase in PEPT increases EDUT by 0.22%. This advocated that PEPT positively influence EDUT (β = .222557, t = 4.03, P> |t| = 0.010). VAADT also enhanced EDUT by 0.046%. This also advocated that VAADT imparted EDUC positively (β= .046051, t= 6.44, P>|t|=0.000). COTAX, and CEXDT increase EDUC by 0.11% and 0.053% with the significant outcome of t= 4.48 P>|t|=0.000; and t=8.52, P>|t|=0.000 < 0.005 respectively. The Adjusted R^2 of (0.5624) 56.2% specifically predicted the incorporated independent variables sufficiently determined taxation effect on EDUT. It further indicated that taxation justified 56.2%% short run determinant of EDUT. However, the hypothesis that taxation significant influence EDUC is upheld.

4.2.1: Test for Unit roots

Table 2: Unit roots Test

Variables	ADF Statistic	Critical value (1%)	Critical value (5%)	Critical value (10%)	Integration Order	Remarks
EDUT	-3348 **	-3.682	-2.972	-2.618	I(0)	Stationary (Level)
PEPTAX	-3.566 **	-3.682	-2.972	-2.618	I(0)	Stationary (Level)
VADTAX	-4.124***	-3.682	-2.972	-2.618	I(0)	Stationary (Level)
CUEDTAX	-5433***	-3.682	-2.972	-2.618	I(0)	Stationary (Level)
COITAX	-6322***	-3.682	-2.972	-2.618	I(0)	Stationary (Level)

(**) means Significant at 5% and 10% only, but *** means significant in all (10%, 5% and 1%).

Source: Author's Collation (2022)

It was observed from Table 2 that all the variables involved in this study are stationary at level because ADF statistics of each variable is more than 5% and 10% critical value of -2.972 and -2.618 respectively. This authenticated that all variables are empty of unit roots in all the observations.

4.2.2 Selection Order Criteria (SOC) Test

Table 3: SOC on Taxation and Education Financing in Nigeria

Lag	LL	LR	Df	P	FPE	AIC	HQIC	SBIC
0	-2461.5				1.1e+55	140.943	141.019	141.165
1	-2318.95	260.46	25	0.000	1.6e+52	134.399	134.859	135.732
2	-2242.61	152.67	25	0.000	2.4e+51	132.391	133.234	134.835
3	-2174.28	136.67	25	0.000	2.5e+49	127.578	128.805	131.133
4	-1955.19	438.19*	25	0.000	9.1e+46*	121.388*	122.999*	126.054*

Endogenous: EDUC, PEPT, VAADT, COTAX, CEXDT

Exogenous: _cons

Source: Author's Collation (2022)

SOC Test was done in order to circumvent overestimated and underestimated Lag in this study, test of Lag selection was carried out. In Table 3, AIC, FPE, HQIC and SBIC supported Lag 4 as the acceptable Lag to be adopted in this model. 121.388*, 9.1e+46*, 122.999* and126.054* of AIC, FPE, HQIC and SBIC respectively supported Lag 4 as vindicated in Table 3.

4.2.3 JTFC on Taxation and Education Services

Table 4: JTFC on Taxation and Education Services

Rank	Eigen Value	Parm	LL	Trace statistic	Critical value 5%	Critical value 1%	Eigen Value
0	-	55	-2360.0833	296.6055	68.52	76.07	-
1	0.96452	64	-2299.9848	176.4086	47.21	54.46	0.96452
2	0.87931	71	-2261.9234	100.2858	29.68	35.65	0.87931
3	0.81452	76	-2231.5966	39.6322	15.41	20.04	0.81452
4	0.57915	79	-2216.0182	2.4754**	3.76	6.65	0.57915
5	0.20977	80	-221.7805				0.20977

Source: Author's Collation (2022)

Table 4 created information about drift specification, sample, and lags numbers involved in the model. The core table comprises a row distinctly for "r" value, and cointegrating equations numbers. The number of cointegration was considered where the trace statistic is less than Critical value of 5% and 10%. When r = 0, 1, 2, and 3, the trace statistic are far greater that critical values. Contrarily, the trace statistic is less that critical values where r = 4 (2.4754 < 3.76 and 6.65 of 5% and 10% critical value respectively). This exposed that there are four cointegrating equations or vectors among the incorporated variables. This showed that they are cointegrated (incorporated variables) which call for VECM.

4.2.4 VECM (Short run, and Long run effects)

Table 5: VECM on Taxation and Education Services (Short run effects)

Equation	Parms	RMSE	R sq	chi2	P>chi2
D_ EDUC	17	13436.4	0.9494	337.4651	0.0000
D_ PEPT	17	4.2e+06	0.9059	173.3255	0.0000
D_ VAADT	17	43456.7	0.9364	264.8861	0.0000
D_ COTAX	17	150117	0.8694	119.8257	0.0000
D_ CEXDT	17	19984.6	0.9824	1007.29	0.0000
Log likelihood = -2096.214	Det(Sigma_ml) = 7.23e+45	AIC = 124.8694	HQIC = 126.2346	SBIC	= 128.8244

Source: Author's Collation (2022)

discovered that PEPT, VAADT, COTAX and CEXDT have significant short run effects on EDUC because P>chi2 with value of 0.0000 for all variables below 0.05 sig level which invariably dispensed favourable short run effects of taxation on EDUT.

Table 6: JNRI Test on Taxation and Education Financing in Nigeria (Long run effects)

Beta	Coefficient	Std Error	Z	P>|z|	[95% Conf. Interval]
_ce1					
EDUC	1	.	.	.	.

PEPT	.7057357	.0373801	18.88	0.000	.0051401	.0063313
VAADT	.5476494	.0172747	31.70	0.000	-.5815073	-.513791
COTAX	.1316053	.0137996	9.54	0.000	.1045585	.1586521
CEXDT	.5401607	.0320582	16.85	0.000	-.6029936	-.4773279
-CONS	4802.174	.	.	.	.	

Source: Author's Collation (2022)

Table 6 encompassed information about, equation fitness, sample and fitness of overall model. According to Table 6, 1% triggers in PEPT increases EDUT by 0.70%. It advocated a positive effect of PEPT on EDUT which is significant (β= .7057357, t= 18.88, P>|t|=0.000). 1% increase in VAADT increases EDUT by 0.54%. This also means VAADT imparted EDUT positively and significantly (β= .5476494, t= 31.70, P>|t|=0.000). This means that if VAADT increases EDUT increases. Furthermore, 1% surge in COTAX increases EDUC by 0.13%. This however advocated a positive effect COTAX on EDUC which also significant (β= .1316053, t= 9.54, P>|t|=0.000). Moreover, 1% triggers in CEXDT increases EDUT by 0.54%. This disclosed a positive effect of CEXDT on EDUT (β = .5401607, t = 16.85, P>|t|=0.000).

All the variables' coefficient is econometrically significant as confirmed and supported by P>|z| equals to 0.000. The incorporated variables coefficient advocated the long run association with EDUC significantly and econometrically.

4.2.5 VAR on Taxation and Education Services Financing in Nigeria

Table 7: VAR on Taxation and Education Services Financing in Nigeria

Equation	Parms	RMSE	R sq	chi2	P>chi2
EDUT	21	12701.5	0.9976	14524.52	0.0000
PEPT	21	3.2e+06	0.9857	2410.583	0.0000
VAADT	21	20664.6	0.9982	19040.41	0.0000
COTAX	21	87268.3	0.9838	2131.257	0.0000
CEXDT	21	19759	0.9981	18518.38	0.0000
Log likelihood = -2019.298	Det(Sigma_ml) = 8.92e+43	AIC = 121.3885	HQIC = 122.9992	SBIC	= 126.0545

Source: Author's Collation (2022)

VAR in Table 7 also confirmed that favourable effects of taxation on EDUC. That is cordially relationship existed among EDUC, PEPT, VAADT, COTAX and CEXDT. P>chi2 with value of 0.0000 for all variables below 0.05 sig level is the signal of favourable short run effects of taxation on EDUT.

4.2.6 GCW Tests

Table 8: GCW Test on Taxation and Education Financing in Nigeria

Equation	Excluded	chi2	Df	Prob> chi2	Decision
EDUT	PEPT	86.085	4	0.000	PEPT granger - cause EDUT
EDUT	VAADT	251.18	4	0.000	VAADT granger- cause EDUT
EDUT	COTAX	51.494	4	0.000	COTAX granger- cause EDUT
EDUT	CEXDT	104.64	4	0.000	CEXDT granger – cause EDUT
EDUT	ALL	577.76	16	0.000	ALL jointly granger- cause EDUT
PEPT	EDUT	42.965	4	0.000	EDUT granger- cause PEPT
PEPT	COTAX	21.103	4	0.002	COTAX granger - cause PEPT

PEPT	VAADT	76.288	4	0.000	VAADT granger- cause PEPT
PEPT	CEXDT	18.365	4	0.001	CEXDT granger – cause PEPT
PEPT	ALL	657.94	16	0.000	ALL jointly granger cause PEPT
VAADT	EDUT	97.216	4	0.000	EDUT granger- cause VAADT
VAADT	COTAX	56.688	4	0.000	COTAX granger - cause VAADT
VAADT	PEPT	234.65	4	0.000	PEPT granger – cause VAADT
VAADT	CEXDT	134.35	4	0.000	CEXDT granger- cause VAADT
VAADT	ALL	1175.5	16	0.000	ALL jointly granger cause VAADT
COTAX	EDUT	39.839	4	0.000	EDUT granger- cause COTAX
COTAX	PEPT	13.055	4	0.011	PEPT granger - cause COTAX
COTAX	VAADT	74.786	4	0.000	VAADT granger- cause COTAX
COTAX	CEXDT	40.839	4	0.000	CEXDT granger – cause COTAX
COTAX	ALL	707.55	16	0.000	ALL jointly granger cause COTAX
CEXDT	EDUT	11.441	4	0.000	EDUT granger- cause CEXDT
CEXDT	COTAX	29.406	4	0.000	COTAX granger - cause CEXDT
CEXDT	PEPT	41.295	4	0.005	PEPT granger – cause CEXDT
CEXDT	VAADT	552.01	4	0.000	VAADT granger- cause CEXDT
CEXDT	ALL	1458	16	0.000	ALL jointly granger cause CEXDT

Source: Author's Collation (2022)

It was shown in Table 7 that all the incorporated variables granger caused EDUT. PEPT, because of Prob > chi2 which is 0.000 less than 0.05, granger caused EDUT. In row 2 of the same Table 8, it was displayed that EDUT also granger caused PEPT. This displayed bidirectional causality amid EDUT and PEPT. The policy implication is that PEPT is collected by government to also cater for EDUT services in the country. EDUT services is also provided to upsurge and increase intellectual and human capital of the designated workers. Also, VAADT had chi2 of 251.18 with Prob > chi2 of 0.000 < 0.05, this divulged that VAADT granger causes EDUT. It was also appeared in row 3 of the same Table 8 that EDUT granger caused VAADT. This expatiated that human capital and intellectual development emitted VAADT because of the involvement of human in the stages of production of goods and services in which this tax are forcefully levied. Without education services provision the human capital and intellectual would not have developed.

Furthermore, COTAX displayed chi2 of 51.494 with Prob > chi2 of 0.000 < 0.05. This further showed that COTAX positively granger caused EDUT. In row 2 of the same Table 8, EDUT also ignited COTAX with chi2 of 100.14 and Prob > chi2 of 0.000 which less than 0.005. This also displayed bidirectional causality relationship between EDUT and COTAX. More so, CEXDT with chi2 of 104.64 and Prob > chi2 of 0.000 < 0.05, this also indicated that CEXDT ignited granger causality relationship with EDUT. It was further exhibited that bidirectional causality relationship emitted between CEXDT and EDUT because in the last row of Table 8, EDUT showed chi2 of 22.142 and Prob > chi2 of 0.008 < 0.05. The policy implication is that the money realized from CEXDT added and supported EDUT services provision in Nigeria. Therefore, the hypothesis that taxation triggered EDUT service is accepted absolutely which translated that causality existed between EDUT and taxation.

4.3 Discussion of Findings

This study econometrically examined taxation effect on social services with in which how taxation incomes determined education services was investigated. The findings exposed that PEPT enhanced EDUT significantly and positively both in long and short run. The implication of this is that government realized income are being spent on the provision of good EDUT and building of intellectual and human capital which invariably involving in the

development of the country. It was further revealed that PEPT ignited EDUT and vice versa. VAADT also increased EDUT provision positively and significantly as exposed in the outcome. This expatiated that VAADT which is being forcefully charged on the production stages enhanced EDUT provision. VAADT granger-caused EDUT and EDUC and vice versa. This explained further that investment in EDUT with tax income by government also ignited VAADT. EDUC services are also provided to upsurge and increase intellectual and human capital of the designated workers which invariably ignited VAADT.

More so, COTAX and CEXDT positively influenced EDUT provision. That is, the realized incomes from these taxes have been employed efficiently to upsurge country EDUT provision. COTAX and CEXDT added to the country human, intellectual and EDUT services provision and sustainability which are the germane keys and parameters to Nigeria economic, social, and technological development. This translated that without EDUT provision and enhancement, no income would be generated from taxation. Also, taxation is a key that not limited promote sustainable growth but extended to minimizing poverty in underdeveloped or developing countries through provision of education. It also provides developing countries with a predictable and stable needed fiscal environment to enhance growth, finance physical and social infrastructure needed for sustainable growth and development as supported by (Maganya, 2020; Oboh et al., 2018).

5. Conclusion

This study econometrically examined taxation effect on education services in which how taxation incomes financing education services were investigated. Data were collected from FIRS bulletin and CBN statistical bulletin covering 1981 to 2020. To realize econometric impact of taxation on social services, regression model, Cointegration, VECM and granger causality wald test were analytically engaged. PEPT, VAADT, COTAX and CEXDT have positive significant impact on education services both in the short run and in the long run in Nigeria. It is concluded that taxation positively ignited education services and vice versa. This displayed bidirectional causality amid taxation and education services. Also taxation has positive and significant impact on education services both in the short and long run in Nigeria. The huge revenue earned by the government through taxation assisted government to improve her education services. Government financing on education expands general welfare, boosts growth and reduces poverty. It is recommended that administration of taxes especially COTAX and CEXDT should be done in a way that collection and remittance cannot be evaded so that its effectiveness will be properly comprehended in the magnitude of education services provision.

References

Adegbite, T. A. (2016). Empirical Analysis of the Effect of Education Tax on Human Capital. *International Journal of Research in Engineering and Applied Sciences,* 6(12), 103–118.

Adegbite, T. A. (2021). Taxation and Transportation : Granger Causality Approach in Nigeria. *Studia Universitatis Vasile Goldis‖ Arad. Economics Series*, 31(3), 1-20.

Adegbite, T. A., & Azeez, B. A. (2022). Company Income Tax Revenue and Economic Growth : Empirical Evidence from Sub-Sahara Countries in Africa. *The Journal of Economic Research & Business Administration*, *1*(139), 39–49.

Adeyemi T.O. (2011) Financing of Education in Nigeria: An analytical review. American Journal of Social and Management Sciences, 2(3), 295-303

Central Bank of Nigeria (CBN) (2020), *Annual Statistical Bulletin. Https//www.cbn.gov.ng*

Jacobs, B. (2007). *Optimal Tax and Education Policies and Investments in Human Capital. Human Capital: Theory and Evidence*. Cambridge: Cambridge University Press.

Maganya, M. H. (2020). Tax revenue and economic growth in developing country : An Autoregressive Distribution Lags Approach. *Central European Economic Journal*, 7(54), 205 - 217.

Oboh, J. O., Chinonyelum, O. J., & Edeme, R. K. (2018). Tax Revenue and Economic Growth in Selected ECOWAS Countries: Evidence from Sure Model. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 8(3), 310–324.

Onakoya, A.B., Afintinni, O.I., & Ogundayo, G.O. (2016). Taxation Revenue and Economic Growth in Africa, *Journal of Accounting and Taxation*, 9(2), 11-22.

Ugwunta, O. D., & Ugwuanyi, U. B. (2015). Effect of distortionary and non-distortionary taxes on Economic Growth: Evidence from Sub-Saharan African countries. *Journal of Accounting and Taxation, 6*(7), 106–112.

Yakovlev, P. A. (2014). State Economic Prosperity and Taxation, Mercatus Center George Manson *University Working Paper* 1(2), 14-19.