

The Relationship between Macroeconomics Variables and Tertiary School Enrolment in Nigeria 1986-2018)

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Abstract: *The study examined the connection between macroeconomic variables and tertiary school enrolment in Nigeria for the period 1986-2018. The data used for the study was obtained from the Central Bank of Nigeria (CBN) official bulletin and Annual Report and Accounts of various issues. The dependent variables for the study is tertiary school enrolment while the independent variable are money supply, interest rate, exchange rate, inflation and government expenditure as a measure or proxy for macroeconomic variables. The study deployed unit root test to establish the stationarity of the variables, and the auto regressive distribution lag (ARDL) to determine the effect of macroeconomic variables in school enrolment. The result obtained indicated that macroeconomic variables have no short run and long run effect on tertiary school enrolment in Nigeria. The study concluded that macroeconomic instruments cannot influence tertiary school enrolment in Nigeria. The study recommended among others that government should continue to create programmes such as Amajari school, school teachings programme, free textbooks and uniforms etc to encourage parents to sent their children to school and also encourage private sector investment to create job opportunities for the unemployed graduates.*

Keywords: *Macroeconomic Instruments, Tertiary School Enrolment, Fiscal Tools, Monetary Tools Programme*

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INTRODUCTION

Macroeconomic variables are signals showing the present style in the economy. The arrangement, behavior and decision-making of an economy as a whole (Osullivan and Sheffrna, 2003). Everybody anticipates that the government in order to handle the economic aggregates must carry out an investigation and understand the key indices or instruments that decides the present behavior of macroeconomy of any country (Berharden, 2009). The key macroeconomy indices used for the study are money supply, inflation rate, government spending, exchange rate and interest rate. In the present economy, we interpret macroeconomic indices quite differently within the parameters of the international crisis and other outside economic shocks as they happen.

The most priceless possessions in every economy are the human beings (Ogunliye, Owolabi, Sanyaolu and Lawal, 2017). To attain development, it therefore becomes very important for these possessions to be handled correctly and efficiently. One way of doing this is by making adequate investment in human capital. Human capital refers to the capability and skills of human resources and human capital development refer to the procedure of acquiring the increasing the number of persons who have the skills, education and knowledge which are capital for the economic development of the country (Adekunle, 2011). Government should therefore up its attempt to make sure that more pupils are enroll in tertiary school education in Nigeria.

Statement of the Problem

Over the years, macroeconomic variables and school enrolment have drawn important attention from development professionals and have been argued at length. a number of studies carried out on macroeconomic indices and tertiary school enrolment are with varied findings. For instance, Ndiku (2016) studied the effect of the speedy development of university instructional effectiveness in Maseno University. The result of the study showed that there was a proportionate development and advancement of teaching amenities to match the rising enrolment which has compromise instructional efficiency and value of education given in Maseno University. Okeke (2015) examined the effect of public health and education spending on their sectoral result.

The study used Vector Error Connection Mechanism (VECM) to examine the effect of government spending on overall school enrolment and under -5 death rate in Nigeria for the period 1980-2010.

The findings showed that government health spending greatly decreased under -5 death rate while government spending did not greatly impact on overall school enrolment.

Furthermore, empirical studies in Nigeria are few that used time series data to clarify the macroeconomic indices nexus and tertiary school enrolment in Nigeria.

In all, most of the studies did not think about the short run shocks on tertiary school enrolment. Also, a good number of the extent literature used panel and cross-sectional data and as well lack agreement on their results on macroeconomic instruments association and tertiary school enrollment. One of the bases for this is the fact that these countries have different stage of macroeconomic indices and tertiary school enrolment and their measurements. The present study therefore complements the obtainable empirical studies by using yearly data for the year 2018 and auto distributive lag model that is able of exposing both short and long run shocks of macroeconomic indices relationship and tertiary school enrolment in Nigeria.

Objective of the Study

The objective of the study is to investigate the relationship between macroeconomic variables and tertiary school enrolment in Nigeria. However, other specific objective include:

- (1) Evaluate the effect of interest rate on tertiary school enrolment in Nigeria.
- (2) Analyze the effect of money supply on tertiary school enrolment in Nigeria.

- (3) Determine the effect of government expenditure on tertiary school enrolment in Nigeria.
- (4) Ascertain the effect of inflation rate on tertiary school enrolment in Nigeria.
- (5) Examine the effect of exchange rate on tertiary school enrolment tin Nigeria.

Research Questions

The following research questions are raised in this course of this study:

1. How does interest rate affect tertiary school enrolment.
2. How does inflation rate affect tertiary school enrolment?
3. What are the effects of money supply on tertiary school enrolment in Nigeria?
4. How does exchange rate affect tertiary school enrolment in Nigeria?
5. What are the effects of government expenditure on tertiary school enrolment in Nigeria?

Research Hypothesis

The following are the research hypothesis for the study stated in their null form.

- H₀₁: Interest rate has no significant effect on tertiary school enrolment in Nigeria
H₀₂: Inflation rate has no significant effect on tertiary school enrolment in Nigeria.
H₀₃: Government expenditure has no significant effect on tertiary school enrolment tin Nigeria.
H₀₄: Money supply has no significant on tertiary school enrolment in Nigeria.
H₀₅: Exchange rate has no significant effect on tertiary school enrolment tin Nigeria.

Significant of the Study

Result from the study will be of great advantage to the following persons or groups.

1. **Government:** the result of this study will enable the government to make sufficient supplies for education. The will train them more on the significance of good and solid education in a country. This research will also help the government to know the state of affairs of the education sector in the country and how to better it particularly in terms of budgetary allotment.
2. **Education Sector:** It will aid the government on the need to assign more resources to the education sector because of their high inclination to human capital growth.
3. **Investors:** For potential investor and investors, the study would extensively shed some leading lights on the investment opportunities in the education sector and the effect of macroeconomic instruments on their investment opinion.
4. **Academics, Scholars and Researchers:** This study will unlock a new area that has not been studied before therefore, arousing inquisitiveness in trying to dig deeper in this field particularly for those who may be attracted in conducting their research in this field. Finally, it will add to the obtainable body of knowledge, thus giving pertinent information that could direct further research on the topic.

LITERATURE REVIEW

Conceptual Framework

Macroeconomic indices are such tools or instrument that government used in the management of the economy at both the local and nationwide level and they influence a large people rather than a small amount of selected individuals or group of individual. The following macroeconomic indices such as inflation/money supply, exchange rate,

government spending and interest rate are employed in this study as a gauge of macroeconomic instruments and their connection with tertiary school enrolment in Nigeria.

Interest rate is the price of loaning money for business or other transaction motives. Investors loan funds from banks and other financial institutions to fund their business. Similarly, government also loan money to fund their financial plan. Interest rate is one the strongest factor that influences financial plans, as financial plans are the guiding doctrines of investors. The reaction of investment spending changes eagerly as interest rate which is the mind of money making analysis, Acha and Acha (2011). The aim of interest rate is in its reaction to capital investment to look ahead in narrowing the discrepancy concerning the result of cost and interest rate in the commercial banks.

Inflation is the persistent rise in the overall price level within the economy which affects the worth of the home currency (Fafukasi, 2012). It is not one time and uphill price rise but has to be maintained through time and influences all commodities and services within the economy. A lot factors are accountable for inflation in Nigeria. The inflation which occurs from surplus total demand is called demand push inflation; the cost push inflation arises from uphill movement in the price of production while the structural inflation occurs from some variables such as ineffective production, marketing and distribution system in the productive segments of the economy. Other form of inflation is developing country could be imported, open and many market oriented economies, there are a embodiment of empirical studies on the over-arching problems of inflation, yet only chosen few seem to know about the determinants, workings and the actual effects of inflation on national economic growth.

Government spending is the total in cash terms of the Federal State and the Local Government expenditure including transfers to the parastatals and the three levels of government Anyato, (2016). The provision of social and physical amenities through public investment and spending on some commodities and services. Hypothetically it can directly enhance output in the private segment through more effective allotment of resources due to the unique features of solid goods (Kethie, 2009). It is the duty of the state through spending to make available the desired services which the price methods cannot offer or create at all or would only do so at high cost and with lesser social benefits. The recurrent spending is government spending made frequently annually. Some examples include personnel cost, operating cost cost, utility services, furniture and equipment. On the other capital spending are used up on new construction, land and building acquisitions etc.

Money supply is a collection of liquid assets that is commonly accepted as a means of exchange and for payments of debt. In that role, it serves to save on the use of scarce resources dedicated to exchange, increase resources for production, enhance trade, encourage specialization and involvement to social welfare (Sing et al, 2011).

The supply of money at any time is the aggregate quantity of money in the economy at a given time (Chingan, 2006). In Nigeria, the narrow money supply (MI) is defined as money outside bank plus demand deposit of commercial bank plus domestic deposit with the central Bank less Federal Government deposits at Commercial Bank.

Exchange rate is the cost of one's currency in relation to another. Exchange rate is the proportion between a unit of one currency and the amount of another currency for which that unit can be swapped at a given time (Ngerebo and Ibe, 2013). In other words, exchange rate is the cost of one's currency in relation to another and is the amount of units of a currency needed to purchase another currency (Mordi, 2006).

Exchange rate of currency is the connection between local and international value of commodities and services. Also, exchange rate can either increase or decrease. An increment happens if fewer unit of local currency exchanges for a unit of international currency while decrease in exchange rate happens if additional units of local currency exchanges for a unit of international currency.

Tertiary school enrolment rate is a fraction of the proportion of secondary school graduates that successfully register into university more accurately, the tertiary enrolment rate is the proportion of overall enrolment (in spite of age), in post secondary institutions people within five years of the age at which students normally graduate high school. Overall student enrolment is defined as the amount of students, despite of age in all types of tertiary educational institutions in the province including public, private and all other institutions providing prepared tertiary educational programmes. In Nigeria, obtainable proof has shown that tertiary enrolment growth rate are quite conflicting and slow. The population of tertiary enrolment in Nigeria shows that tertiary enrolment has relatively been rising over the years, with the higher growth rate of 21.64 percent in 1991 and the least growth rate in 2004. On the other hand, 1995 and 2004 showed key disturbances in the tertiary enrolment in Nigeria. This is basically as a result of the political crisis and industrial disagreement seen in these periods. It should be taken into consideration that regardless of various policy interventions put in place by the government over the years to encourage schooling at all levels of education, enrolment rates of school-aged children still remain awfully poor. Apart from this, documentary proof of the effect of education, in general on economic growth are many but the effect of tertiary enrolment particularly is till burgeoning. Therefore, the major purpose of this paper is to investigate the effect of tertiary enrolment on economic growth in Nigeria. The fact that diverse schooling levels of economic growth at the time that an educational increase took place particularly in secondary and chiefly in higher education. The results may perk up decisions of policy makers about education and its involvement in economic growth.

Theoretical Literature

The hypothetical framework of this study is based on the Keynesian theory because the theory is connected to economic growth investment and output of human capital.

The Keynesian theory of 1936 during the great melt down states that it was insufficient total demand as well as the part that a vigorous stabilization law was required to keep good economic performance. As a result, fiscal law stressed as the therapy for insufficient aggregate that requires stability and consequently should be stabilized by necessary monetary and fiscal laws. Thus, Keynesian proposed thorough interference to modify the economy in the neighbourhood, curb unemployment and inflation. Keynesian theory of model stressed the importance of government interference as major determinant as the key determinants of growth level in an economy that is in full employment, and an increase in the productivity of capital. Since Keynesian emphasized the need of government interference through expenditure and debt financing, it follows therefore,

that the assumption is appropriate in the study of developing country like Nigeria. Keynes posits on the need for the economic growth, "Credit becomes the way through which production moves. The bank as their obligation requires should provide the transport services necessary so that the productive strength of the community can be employed to their full capacity". Keynes advocated for quick returns on economic theories and policy concern on short term requirements and alteration on a nation's economy.

Empirical Review

Ndiku (2016) ascertain the effect of the quick growth of university instructional efficiency in Maseno University. The study was done in Maseno University. The intended population was 7,175 comprising of 7,000 undergraduate students and 175 lecturers of Maseno University in the 2011 / 12 academic year. Simple random sampling was used to select 210 students and 96 lecturers making a sample of 306. Data were gathered using a questionnaire for students and lecturers. Research instruments were tested using face and content validity while reliability was examined using test-retest technique at r 0.7. Data was analyzed descriptively with the aid of frequencies and percentages by help of SPSS version 1.7 and shown in tables and graphs. The result of the study revealed that enrolments, particularly a steady rise. However, the study showed that there was no corresponding development and enhancement of teaching amenities to match the increased enrolment, which is made up instructional effectiveness and quality of education given in Maseno University.

Sede and Ohemeng, (2015) investigated the socio-economic determinants of life expectancy in Nigeria using data from 1980-2011. Judging from the endogeneity characteristics of the indices, A VAR and VECM frameworks was used. Socio-economic characteristics were substituted by secondary school enrolment, government spending on health, per capita income, unemployment rate and the Naira foreign exchange rate. It was found that, the conventional socio-economic indices such as per capita income, education and government spending on health was thought to be highly efficient in deciding life expectancy of developing countries which are not significant as in the case of Nigeria.

Oluwatoyin, Adegboye, & Fagbeminiyi, (2018) Studied the impact of public health spending on health outcomes in Nigeria between 1979 and 2012. This study utilized the Johansen Cointegration and the Vector Error Correction Model (VECM) econometric technique to establish the long-run connection between public expenditure on health and health outcomes in Nigeria. The study revealed that public expenditure on health has an important relationship with health outcomes in Nigeria. It was also revealed that environmental factors such as carbon dioxide emissions which were used in this study impacted on individuals' health.

Okeke (2015) investigated the impact of public health and education spending on their sectoral outcomes. Under-5 death rate and total school enrolment were used as health and education outcomes correspondingly. The study used vector error correction mechanism (VECM) to examine the effect of government spending on total school enrolment and under-5 mortality rate in Nigeria in the period 1980-2010. The findings propose that government health spending considerably decrease under-5 mortality rate while government spending on education did not notably impact total school enrolment. Moreover, female education was seen to have a negative association with under-5 mortality (health outcome) though its impact was not significant. The

study also revealed an extra rise in per capita GD1 will raise total school enrolment considerably. Based on the finding that health spending significantly lowers under- 5 death rate,

According to Sen (2018), education has both innate and instrumental worth; it is advantageous not only for the individual but also for the society as a whole. Education as private good benefits straight those who receive it, which in turn impacts the individual's prospective earnings stream. At the comprehensive level, a improved educated work force is thought to increase the stock of human capital in the economy and increase its productivity. In analysis of the externalities rampant in education, it is generally, acknowledged that the state has a key role to play in ensuring fair allotment of educational opportunities to the whole population. This is mostly crucial in developing countries such as Nigeria that experience high levels of poverty, inequality and market imperfections. Public interference in education can lead to enhancement in the prospective flow of individuals, enabling fair distribution of wealth and assist in decreasing poverty (Mukherjee, 2007).

Furthermore, the validation of public expenditure on social goods, particularly education, is rests on the classical literature on public goods, where it is posited that social goods provide a justification for the allocative function of budget plan. It is posited that the public sector carries out some functions because some goods cannot be provided proficiently through the market system due to obvious market failures or connected inefficiencies. Market failure happens because the benefits fashioned by social goods are not restricted to one exact consumer who buys the goods, as is the case with private goods. The non-opposition or non-excludability nature of public goods has significant consequences for consumer behavior and on the stipulation of both private and social goods (Musgrave & Musgrave, 1989). Even though the market mechanism is structured for the provision of private goods, the distinctiveness of the name given to purchasers of private goods is lacking in social goods. It would be inept therefore to exclude any consumer from sharing in the benefits of a social good since such consumption does not decrease the benefits according to others (Onwioduokit & Tule, 2002).

Research Methodology

Research Design and Sources of Data

The study used the ex-post facto research design to examine the relationship between macroeconomic variables and tertiary school enrolment in Nigeria. The data for the study was generated from the Central Bank of Nigeria Statistical Bulletin and Annual Reports and Account. The time frame for the study is 30 ears spanning 1986-2018.

Model Specification

The model for the study was adapted from the work of Eravwoke and Esiti (019) who studied tertiary school enrolment in Nigeria, implication for national development and its variables are:

Y = f(TSE, GREE) where
Y = National Development
TSE = Tertiary School Enrolment
GREE = Government Recurrent Expenditure

This present study modified the models as:

TSE = f(MS, EXR, INF, GOVEXP, INT) where:
TSE = Tertiary School Enrolment

MS = Money Supply
INF = Inflation
GOVEXP = Government Expenditure
EXT = Exchange Rate
INT = Interest Rate

The relationship can be explicitly formulated into model thus:

C_0 is a constant or intercept, C_1, C_2, C_3, C_4 and C_5 are the coefficients of the explanatory variables, and p is the stochastic error term.

Data Presentation and Analysis

Date Presentation

The logged data for the study was presented in appendix 1. The data was tagged to present the data in the same base before it was used for the analysis. Another reason is to achieve normality.

Analysis of Data

Table 1: Descriptive Statistics

	Macroeconomic Variables and Tertiary School Enrolment					
	TSE	LMS	INF	EXR	LGOVT	INT
Mean	7.912368	6.547237	68.07474	90.09474	11.67463	17.61579
Median	5.345000	6.611111	70.18000	97.40000	11.81725	17.68500
Maximum	49.00000	10.12982	85.66000	360.5000	14.53615	29.80000
Minimum	0.740000	2.672078	37.97000	0.610000	8.431766	7.750000
Std. Dev.	8.504014	2.555846	12.61960	91.1405	2.287401	5.626656
Observations	32	32	32	32	32	32

The summary statistics show that the average mean of Tertiary School Enrolment is about 7.912. The average mean for money supply is 6.54, while averages mean of inflation rate, exchange rate, government expenditure and interest rate were 6.547237, 68.07474, 90.09474, 11.67463 and 17.61579 respectively. The standard deviations of macroeconomic variables such as money supply inflation rate, exchange rate government expenditure and interest rate are 2.971298, 2.555846, 12.61960, 91.21405, 2.287401 and 4.626646. The values of the standard deviations indicate that there is wide spread in tertiary school enrolment in Nigeria. This is also evident in the wide gap between the maximum and minimum values. For example, the maximum value of life expectancy is 449.0000 while the minimum is 0.740000 with difference of 48.26. Similarly, the maximum of money supply is 10.12982 while the minimum is 2.672078. These performance variations are rather at the high side. Even in the case of inflation rate the maximum is 85.66 and the minimum is 37.97. It is equally observed that exchange rate varied widely over time. For instance, exchange rate is 360.5 while its minimum value is 0.61. The wide variation over time indicates high level of fluctuation of Macroeconomic Variables which affects tertiary school enrolment in Nigeria.

The variables for this analysis are subjected to two types of unit root test to determine whether they are unit root or stationary. The tests employed are the Augmented Dickey Fuller (ADF) test and the Phillips-Perron test (PP) Test. The null in both the ADF and PP is the presence of unit root.

Table 2: Augmented Dickey Fuller Test (ADF)

Variable	At Level		First Difference		Order of Integration
	t-Statistic	Prob	t-Statistic	Prob	
MS	-2.264016	01892	-2.425122	0.1437	1(2)
INT	-4.656213	0.0007			1(0)
INF	-4.323164	0.0025			1(0)
EXR	1.753328	0.9995		0.0004	1(1)
GOVT	-2.046787	0.2665	-4.355259	0.0050	1(1)
TES	-1.873990	0.9996	-3.596335	0.0492	1(1)

Table 3: Augmented Dickey Fuller Test (ADF)

Variable	At Level		First Difference		Order of Integration
	t-Statistic	Prob	t-Statistic	Prob	
MS	2264016	0.1892	-4.575709	0.0010	1(2)
INT	-4.774825	0.0005			1(0)
INF	-2.775847	0,0730			1(0)
EXR	1.753328	0.9995		0.0004	1(1)
GOVT	2264016	0.1892	-3.355259	0.0050	1(1)
TES	-4.774825	0.0005	-8.904031	0.0000	1(1)

The analyses of the stationarity of the variables were performed using the ADF and PP tests. Both tests showed similar result outcomes. The ADF result is shown on Table 2 while the PP results were in Table 3. From both Tables, the results for INT and INF were integrated at levels. This suggests that the variables are stationary at their level forms. However, MS, EXR, GOVT and TES were not stationary in their levels [I(0)], but were found stationary in the first differences I(1). It is worthy of note that MS was not stationary at I(0) and I(1) using the ADF but was found stationary at I(1) using the P. Thus the result of the PP was taken to imply that MS is stationary at I(1).

These results of Unit root tests (stationarity test) showed that some of the variables (INT and INF) are stationary at level I(0) while others including MS, EXR, GOVLT and TES, P are found stationary at first difference I(1). The stationarity found at level suggests that the variable cannot be affected by changes in time series when they are employed in regression analysis. On the other hand, the variables that are stationary at first difference showed that they respond to changes in time series. Based on the nature of the variables having a combination of I(0) and I(1) stationaries, the most suitable tool of analyses is the Autoregressive Distributive Lag (ARDL) technique.

4.3 Estimation of the Specified Models

The Autoregressive Distributive Lag (ARDL) technique was used to investigate the effect of macroeconomic variables on school enrolment in Nigeria. The two forms of regression analysis conducted are the Bound test and ARDL Short run regression estimation.

4.3.1 Estimation of Long run Effect

The estimation of long run relationship in the specified models are shown on Table 4. The analysis is the Bound, test to determine the long run relationship macroeconomic variable and School enrolment. The ARDL results compared the bound critical values with the F-statistics values. The decision rule is: If the F-statistic is above the upper and lower critical bound values, then there is a long run relationship in the model; but where the F- statistics is below the upper and lower bound critical values, it is inferred that there is no long- run effect (relationship). The null hypothesis is that “No long-run relationship exists”.

Table 4: ARDL Bounds Test for Long-Run effect of Macroeconomic Variable on School Enrolment

Models	F-Statistic	Lower Critical Value Bound at 5% level	Upper Critical Value Bound at 5% level
Model 3: School enrolment	2.0375	2.62	3.79

Significant at 5%

Source: Extracts from Eviews 9 output on Appendix

From the results in Table 4, the critical bound values were computed at 5% level of significance. The lower critical bound value is 2.62 while the upper critical value is 3.79. The F-statistics for the model is 2.0376. the results shows that the model have F-statistics lower than the upper (3.79) and lower (2.62) critical bound values. This model with F-statistics that is lower than the critical bound values, suggest rejection of the alternate and acceptance of the null hypothesis. The results are summarized as follows:

1. Macroeconomic variables (money supply, exchange rate, inflation rate, government expenditure and interest rate) do not have a significant long-run effect on school enrolment in Nigeria.

Hypothesis Testing: Ho: Macroeconomic variables have no significant effect ton school enrolment in Nigeria.

Variables	Coefficient	Std. Error	t-Statistic	Prob.
TSE(-1)	-0.371610	0.591514	-0.628235	0.5940
LMS	7.9374 10	8.225764	0.964945	0.4364
LMS(-1)	-19.68070	9.163062	-2.147829	0.1648
LMS(-2)	5.276050	9.333138	0.565303	0.6288
LMS(-3)	3.623223	10.93995	0.331192	0.7720
LMS(-4)	-11.99043	7.689410	-1.559343	0.2593
INF	0.371838	0.274361	1.355288	0.3081
INF(-1)	-0.070191	0.102963	-0.684628	0.5643
INF(-2)	0.030231	0.108744	0.278002	0.8071
INF(-3)	0.021281	0.069825	0.304780	0.7893
INF(-4)	0.178576	0.127485	1.400765	0.2963
EXR	0.006902	0.031245	0.220907	0.8457
EXR(-1)	0.115773	0.049222	2.352049	0.1430
LXR(-2)	0.212802	0.079622	2.672651	0.1161

EXR(-3)	0.064430	0.079420	0.811262	0.5024
EXR(-4)	0.092355	0.076530	-12.845134	0.3509
LGOVT	-5.354935	2.165471	-2.472873	0.1319
LGOVT(-1)	-8.700304	5.233308	-1.662486	0.2383
LGOVT(-2)	13,26656	6.404350	2.071491	0.1741
LGOVT(-3)	-2.597293	5.342740	-0.486135	0.6749
LGOVT(-4)	9.557858	4.018439	2.378500	0.1405
INT	-0.297607	0.348390	-0.854236	0,4830
INT(-1)	-0.613393	0.447543	-1.370581	(1.3041
INT(-2)	-1.071645	0.544889	-1.966721	0.1881
INT(-3)	-1.599522	1.039178	-1.539219	0,2636
INF(-4)	-0.133853	, 0.228710	-0.585249	6.6176
C	75.49205	45.8097 1	1.647949	62411
R-square	0.697829			
F-statistics	1.86212	Durbin-Watson Stat		2.229183
Prob(F-statistics	0.087853			

The result of the ARDL to analyze the short run effect of macroeconomic variables on school enrolment in Nigeria. The endogenous coefficient of school enrollment (TSE) showed negative relationships at lags 1, but the probability values are greater than 0.05, and not statistically significant. This means that school enrolment is not an endogenous variable in the model of the relationship between macroeconomic variables and school enrolment nexus.

Moreover, the result showed that money supply (MS) have negative relationships at lag 1 and 4; - and a positive relationship in current year, lags 2 and 3, respectively. However, the probability values of t-statistics are greater than 0.05 level at all the periods. This means that money supply does not have a significant short run effect on school enrollment in Nigeria.

Moreover, the coefficient of inflation rate (INF) are positive in the current year, lags 2, 3 and 4; but negative relationship in lag 1. The p.values are greater than 0.05 indicating no significant short run effects. Thus the study posit that inflation rate does not have a significant short run effects on school enrolment in Nigeria.

As is the trend with other, exchange rate, government expenditure and interest rate have varying direction (negative and positive) of relationships with school enrolment in Nigeria. In a similar note, the p.values are greater than 0.05 and thus the variables re seen to have no significant effect on school enrolment in Nigeria. The study thus concluded that exchange rate, government expenditure and interest rate do not have a significant effect on school enrolment in Nigeria.

Post-Estimation Test

Breusch-Godfrey Serial Correlation LM Test

This serial correlation test was used to check for the serial relationship between the variables. The null hypothesis stated absence of serial correlation while the alternate hypothesis states the presence of serial correlation. The prob. Chi square if less than 5% level of significant signifies the acceptance of the alternative and rejection of null hypothesis while the prob. chi square

greater than 5% level of significance signifies the acceptance of the null hypothesis and rejection of the alternate hypothesis.

Table: Interpretation of Serial Correlation

MODEL	LM-STAT	PROB.
School Enrolment	9.560477	0.0566e

Source: Author's Computation

The result above showed that the prob. (chi-square) having a value of 0.0664 which is greater than 5% level of significance, therefore we accept the null hypothesis which state that there is no serial correlation.

Normality Test

In general, a normality test is used to verify if a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed. The essence of this is to check if the residual of the model is normally distributed. One of the assumptions of least square estimator is that the residuals are normally distributed; obeying well defined probability laws and also can bear any value which could be negative, positive or zero.

Table: Jaque Bera Normality Test Result

MODEL	LM-STAT	PROB.
School Enrolment	2.134205	1.502088

Source: Author's Computation

Discussion of the Findings

The research investigated the impact of macroeconomic indices on school enrolment in Nigeria for the period 1986-2018. Data were collected from the CBN Statistical Bulletin on several issues. The data gotten were subjected to statistical and econometrics examination and the following findings were gotten.

The study found that macroeconomic indices do not have considerable impact on school enrolment in Nigeria. This shows that macroeconomic indices cannot sway the level of school enrolment in Nigeria and hence do not compel school enrolment in Nigeria. The current study could not hold up extant literature which states that well-structured and developed macroeconomic indices are seen as the foundation of any organization and institution and the economy at large (Ndiku, 2016) and that macroeconomic indices have important result on school enrolment date (Yede and Ohemangi, 2015).

Summary of the Findings, Conclusion and Recommendation

The study investigated the impact of macroeconomic indices on tertiary school enrolment in Nigeria for the period 1986-2018. The findings of the study are summarized as follows:

Macroeconomic indices Such as money supply, inflation rate, exchange rate, government spending and interest rate do not have important impact on school enrolment in Nigeria both long run and short run.

The study has shown that the above macroeconomic indices are not policy instruments for both short and long run management of tertiary school enrolment in Nigeria. A combined administration of the above instrument is not enough policy tools in managing tertiary school enrolment of a developing economy like Nigeria.

It is therefore suggested that important policy instruments be put in place other than the one stated above if government wants to improve tertiary school enrollment in Nigeria. This can be achieved by the creation of people oriented programme that will draw children to go to school. The establishment of Amajarin School, school feeding programme, free textbook and uniforms for school pupil, creation of jobs for graduate is a few examples of government programme that can efficiently sway tertiary school enrolment positively in Nigeria. The government should also make certain the sustainability of the programmes once created. Private sector investment should also be encouraged by the government at all levels in other to create job opportunities for our tertiary graduates wandering about the streets.

The coefficient of determination shows the general the descriptive authority of the macroeconomic indices being the independent variables loyal as the dependent variable. Table 5 showed R² coefficient as 0.697829 which means that about 69% of the changes in school enrolment dynamics in Nigerian can be explained by the chosen macroeconomic indices (MS, INF, EXR, GOVT and INT) in Nigeria. The result of the F-statistics is 1.86212 which a consequent p.value of 0.087853. Since the p.value is greater than 0.05, the study cannot reject the null hypothesis. Thus it states that macroeconomic indices do not have considerable short run impact on school enrolment in Nigeria. The Durbin Watson of 2.019 shows that the model is dependable.

REFERENCES

- Acha, I. A. & Acha, C.K. (2011). Interest Rate for Saving and Investment in Nigeria. *Research Journal of Finance and Accounting*. 2(3), 71-83.
- Adelakun, J.O. (2011.). Human Capital Development and Economic Growth in Nigeria. *European Journal of Business and Management*. 3(9), 29-38.
- Anyato, O. (2016). Government Expenditure Effect on Economic Growth: the Case of Sweden, 1960-2001. Department of Business Administrative and Social Sciences. *Lulea University of Technology, Sweden*. 34.
- Blanchard, O. (2009). *Macroeconomics* 5th Edition, New Jersey: Pearson Education Inc.
- Bouchouicha, R., & Futi, Z. 2021. Real Estate Markets and the Macroeconomic: Dynamic Coherence Framework. *Economic Modelling*. 29(5), 1820-1829.
- Kellick, N. (2009). Nigeria's Economy and the Danger of Oil Dependency. Authority.130-135

- Keynes, J.M. (1930). *The General Theory of Employment, Interest and Money*. Harcourt Brace and World, New York. 239-245
- Ndiku, J.M. (2016). Effect of Increased Student Enrolment on Human Capital Development. *Teaching and Learning Resources in Maseno University, Kenya*. 145-155
- Ngerebo-a, T.A. & Ibe, R.C. (2013). Exchange Rate and Macroeconomic Performance in Nigeria: a Casual Post Structural Programme Investigation. *Global Journal of Management and Business*. 4(7), 5 50-570.
- Ogunleye, O.O., Owolabi, O.A., Sanyaoly, O.A. & Lawal, O.O. (2017). Human Capital Development and Economic Growth in Nigeria. *IJRDO-Journal of Business Management*. 3(8), 17-37.
- Okeke, B.c. (2015). Impact of Public Sector Spending on Health and Education Outcomes in Nigeria. *International Journal of Health*. 7(6), 23-24.
- Oluwatoyin, M.A., Adegboye, B.F., Fasina, F. & Fagbeminiyi, F.F. (2018). Public Health Expenditure and Health Outcomes in Nigeria. *International Journal of Yoga Physiotherapy and Physical Education*. 1(1), 04-06.
- Onwioduokit, A. & Tule, P. (2012). Potential-Real GDP and Growth Process of Nigeria Economy An Empirical Re-Evaluation of Okun's Law. *European Scientific Journal*, 8(9), 25-33.
- O'Sullivan, A. & Sheffrn, S.M. (2003). *Economics: Principles in Action*. New Jersey: Pearson, Prentice Hall. 90-115
- Sede, P.I. & Ohemeng, W. (2015). Scio-Economic Determinants of Life Expectancy in Nigeria (1980-2011). *International Journal of Yoga, Physiotherapy and Physical Education*, 5(2).