

Impact of External Debt Servicing on Health Outcomes in Nigeria 1995-2017.

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ABSTRACT

The case of external debt servicing and health outcomes is the serious issue in human capital development in Nigeria. In 2017 national budget was N7.8 trillion only N342billion was allocated to health sector. While, allocation to debt service was N1.8 trillion which amount about 36 per cent of annual national expected revenue. Therefore, this study examines the impact of external debt service on health outcome in Nigeria 1995-2017. Annual time series data were used for Health Outcome (HOC) proxy by life expectancy at birth, Government Expenditure on Health (GEH), External Debt Service (EXDS) and Real Gross Domestic Product (RGDP) sourced from World Bank online Database 2018. Augmented Dickey Fuller Unit Root Test were employed to check the stationary of the variables and the results shows that all variables are stationary at first difference except External Debt Service (EXDS) that was stationary at level. LM residual diagnostic result shows the absence of serial correlation at 10% level of significant with p-value less than 0.10. Autoregressive Distributive Lag (ARDL) Bound test were conducted and show the existence of long run relationship between external debt service and health outcome with f-statistics 31.8661 greater than 10% critical value for the upper bound 3.2. However, Error Correction test was conducted the result show that about 5.2% of the disequilibrium error is being corrected each year and. However, VAR Granger Causality test was employed to determine the directions of causality among the variables and the result shows that Health Outcome (HOC) and Real Gross Domestic Product (RGDP) granger cause External Debt Service (EXDS). Similarly, Government Expenditure on Health (GEH) and Health Outcome (HOC) granger causes Real Gross Domestic Product (RGDP). Finally, the study recommends that the government should; enhance it expenditure on public health sector, negotiate with foreign creditors on fixed interest rate to make external debt service to be easier and security attentions are required fora peaceful atmosphere to encourage Foreign Direct Investors Non-governmental Organizations (NGOs) to contribute in Nigerian health sectors for the betterment of our health outcome.

Keywords: External debt service, Health Outcomes, Economic, Growth, Expenditure.

INTRODUCTION

Health is an indicator of the welfare status of every economy. This is the reason why health sector is primarily established for the prevention of disease, and improvement of living standard of the people. In developing countries, the health sector is facing challenges especially that of financing the inputs that will produce the required outcome. The major challenges are health facilities and personnel, inadequate drug-manufacturing plants, remigration of professional health workers to developed countries, poverty

and insufficient budgetary allocations. These are contributing toward low health outcome in Nigeria [1].

The amount of budgetary allocation devoted to financing health care delivery is goes long away to improve the qualities of health outcomes. Most of the external debts of the developing countries are disbursed on some real capital project such as road construction, Power supply, and defense and so forth while the human capital health and education/research and development which are the indicators of

social development are budgetary deficit. It is based on this belief that Sustainable Development Goals (SDGs) was set to achieve the significant health status/ outcomes in developing countries [2].

In financial literature, there are two means of financing healthcare delivery. They are government and market based means which can be domestic or international. The choice depends on the financial status of the economy. However, in most developed countries the health sector is financed by the government through the ministry of health. While in some economies private individuals provide the healthcare but in that case, market forces determine the price and quality of healthcare delivery. Private healthcare services are relatively expensive in an economy that is characterized with high level of poverty because such countries require an incentives in form of Subsidy to enable the poor attain minimum requirement of health outcome. However, the global health community has recognized that public spending on health in developing countries is essential for meeting the sustainable development goals, reducing poverty and fighting major disease that kills [3].

[4] stated that the light between macroeconomic, fiscal performance and government health spending is not driven by per capital GDP alone, but by the ability of low-income countries to reduce the level of their debts and increase the efficiency of their effort in revenue collection. Hence macroeconomic and fiscal policy should be considered in government health spending to enhance the overall well-being of the people and economic development. Government of the nations should prioritize health in their budget differently.

However, external debt is another source of financing government primary responsibility in Nigeria and its servicing is affecting some sectors or ministries especially the health and education. Debt servicing is the amount of money required to make payment on the principal and interest on outstanding loan, the interest on bond or the principal maturity bonds. In other words debt service is the amount of

interest and principal payments due annually on long term debt [5].

External borrowing by Nigeria started towards the end of British colonial rule in the country. The last of such borrowing was 1958 World Bank loan which was used to finance the Nigerian Railways Extension to Bornu in the Northern Nigeria. The loan stood at US \$250 million about N82.4 million, the major component of these loans was a soft World Bank loan. And because not much borrowing took place in that decade, public charges were relatively small, averaging N3.2 million per annum and representing 0.2 percent of GDP [6]. In 2004, Nigeria's total external debt stock was at its peak amounting to N4.9 trillion (\$32.6 billion). This debt stock has been on the increase above the World Bank debt stock to Gross Domestic Production (GNP) to 40 percent ratio established level. Nigeria's debt management office [7] reported that Nigeria's external debt rose from N428 billion to N543 billion (US \$3.62 billion) and then to N690 billion in 2007, 2009 and 2010 respectively [8].

According to [9] Nigeria started to experience external debt problems from the early 1980s, as a result of fall in the prices of oil in international market that caused a reduction in foreign exchange earnings of the country. The increase in the volume of Nigeria's debt is a reflection of increase in the loans from the International Capital Market (ICM) and multilateral institutions, bilateral sources, the accumulation of trade arrears, default charges on over-due scheduled payments, capitalization of unpaid interest and the depreciation of the dollar. Most of the loans taken by Nigeria, particularly in the pre-structural adjustment period, were sourced to finance development projects. It was during the period of the Structural Adjustment Programme (SAP) that borrowing for balance of payments support became very popular. But before now, borrowed funds were used to procure import needed for development projects. The country's borrowings from the World Bank are mainly for agriculture, water supply, road network, education, port development, small and medium-scale industrial projects, urban development,

and aspects of infrastructural development.

Nigeria's resort to the international capital markets for loans was the beginning of reckless borrowing by the successive governments. This caused a very deep deterioration in the internal debt profile and generated payments crisis, thus creating the need for rescheduling and refinancing. The evidence from the introduction of structural Adjustment Programme (SAP) in restructuring the economy of Nigeria, as a form of compliance to the dictate of International Monetary Fund, World Bank, Paris Club, and other International Finance Institutions (Debt Management Office, 2008).

According [10] the philosophy of SAP was predicated on demand management as a measure of curtaining external imbalance with a restrictive monetary policy. The main objective of SAP, he maintained was to achieve noninflationary growth and to stimulate domestic production of tradable goods. Moreover, SAP was to achieve a sustainable external debt service profile and hence, domestic savings and investment and inflow of external resources. Under the SAP period the external debt burden increased from \$19.5 billion in 1985 to \$34.4 billion in 1991 as a result of new borrowings, increased in foreign interest rate, capitalization of unpaid interest charges as well as the appreciation of exchange rates of various European and Japanese currencies against US dollar. The debt service ratio which stood at an annual average of 16.3% from 1982-1985 increased to 26.7 percent from 1986-1994 creating a great strain on the foreign exchange earnings.

Statement of the Problem

The case of debt servicing and health outcome in Nigeria is the serious issue in the human capital development. There is general consensus that health is wealth, the more qualitative health outcome in the country the greater will be the human productivity which is the first indicator of good welfare and development [11]. The Nigerian government does not allocated enough fund for health interventions. It is not their priority; it has been shown in the 2017 national budget of ₦7.298 trillion presented in the national assembly for

approval, where only a meager 4.17 per cent was allocated to the health sector. However, the federal government expenditure budget for the year 2018 was N8.6 trillion. A total expenditure of N340.456 billion was proposed for Federal Ministry of Health which is a nominal increase of 10 percent above the 2017 budget and overall 4% of the 2018 proposed budget, which is arguably one of the most critical sector that drive other sectors of the country. Furthermore, the breakdown of the nation budget allocation to health sector reveals that the federal government planned to spend N340 billion on the health of over 180 million Nigerians, amounting to N1, 688 per citizen of the whole year. While, 24 per cent of the national budget has allocated to debt servicing which is 1.8 trillion cost of debt servicing 2017 is about 36 per cent of national expected revenue (National Budget 2017). However, compare with an expenditure of United States of America in year 2017 health care of a prisoner in Guantanamo Bay was expend at least \$7 million in the year. Also, on health care alone the United State in year 2017 was planned to spend at least \$7,000 per citizen, which is about N3.5 million using a Foreign Exchange (FOREX) rate of N495 to a dollar. Switzerland in 2017 spent \$6,000 which is about N3 million. When compared to Nigeria's N1, 688 per head for a whole year, suggests why the country still grapples with poor health indices and poor mortality for a country that prides itself as the giant of Africa. While, only a healthier nation with a healthier people can plan for security, development or economic advancement.

Research Questions

- i. What is the impact of external debt servicing on health outcomes in Nigeria?
- ii. Is there a long run relationship between external debt servicing and health outcomes?
- iii. What are the causal relationships between external debt servicing and health outcomes in Nigeria?

Objectives of the Study

The main objective of this study is to determine the impact of external debt servicing on health outcome in Nigeria

for the period of 1995 to 2017. The specific objectives are to:

- (i) Investigate the long run relationship between external debt servicing and health outcomes.

- (ii) Determine the impact of external debt servicing on health outcomes.
- (iii) Analyze the causality between debt external servicing and health outcomes in Nigeria during the period.

LITERATURE REVIEW

Conceptual Literature Review

The Concept of Debt

Debt is an amount of money owed by a person, firm or government (the borrower) to a lender. Debt arise when a person, company/organization or government spend more than current income or they deliberately plan to borrow money to purchase specific good or services [12].

Public Debt: refers to as government debt, represents the total outstanding debt (bonds and securities) of a country's central government. Public debt can be raised both internal and external.

Types of Public Debt

Domestic Debt

Debt: Is the part of total government debt in the country that is owned to lender writhen the country. It complement is external debt commercial banks and other financial institutions constitute the source of fund for the internal debt. Internal public debt owned by a government (money a government borrow from it citizen) is part of the country's national debt.

Foreign/External Debt: Is the amount of money borrowed from a source outside the country. External debt has to be paid in the currency in which it is borrowed. It can be obtained from foreign commercial banks, international monetary fund (IMF), World Bank and fro the government of foreign nations.

Causes of External Debt in Nigeria: the Central Bank of Nigeria (2017), identified that numerous factors contributed to the increased size of Nigeria's external debt since independent. The major causes of the debt problem include:

- i. Rapid growth of public expenditure, particularly that on capital projects.
- ii. Borrowing from the international community at non-concessionary interest rates.
- iii. Decline in oil earnings from the late 1970s and the dependence on imports

which contributed to the emergence of trade arrears.

iv. Upward movements in the interest rate affected the size of the external debt stock.

These developments resulted in the bunching of debt service, and compounded the debt situation for the country [13].

The concept of Debt Service

Debt Service

Debt service is the amount of money required to make payment on the principal and interest on outstanding loans, the interest on bonds or the principal of maturity bounds. It also refers to interest payable on debt especially on government debt. In other words debt service is the amount of interest and principal payments due annually on long-term debt [14].

Debt Service Ratio

Debt service ratio is the ratio of debt service payments (principal + interest) of a country to that country's export earnings.

Debt services coverage ratio (DSCR); debt service coverage ratio is the ratio of cash available for debt servicing to interest, principal and lease payment.

Concept of Health Outcome

Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity [15].

Health outcome are changes in health that result from measures or special health care investment or intervention [16]. Also, is a change in the health of an individual, group of people, or population that is attributable to an intervention or series of intervention (World Health Organization, 2015).

Determinants of Health Outcome

According Sustainable Development Goals (SDGs) the health outcome of every country proxy by life expectancy can be determined by persistence decrease in the rate of under-five mortality, maternal mortality and prevalence of severe disease such as

HIV/AIDS, tuberculosis, malaria and so forth which depend on government expenditure on health, number of train personnel and female literacy [17].

Domestic Resource Mobilization (DRM): Domestic Resource Mobilization is the deliberate efforts targeted at increasing revenues generated from domestic savings, taxes, remittances, and other sources, as well as, reducing capital flight in order to boost revenue generation [18]. Domestic Resource Mobilization (DRM) means the creation of savings from domestic sources and channeling same to economically and socially beneficial ventures. Such resource creation can emanate from both the public and private sectors. The public sector does this through effective and efficient taxation and other different forms of public revenue generation, such as royalties, and excise duties. On the other hand, the private sector does so by reducing consumption, while at the same time increasing savings [19].

Out-of-Pocket Health Expenditure (OOP): This is any immediate cost paid specifically by people, which consolidate tips and in-kind payments, to health workers and providers of pharmaceuticals, therapeutic appliances, and different merchandize and ventures whose essential aim is to add to the positive change of the health status of people [20].

Physician to population ratio (PPR): Physician to population ratio refers to the density of healthcare professionals to the population (counting only physicians, nurses and mid-wives) to the population. It is measured by the total population divided by the amount of qualified and duly registered healthcare professionals [21]. This is also referred to as physician density. The higher the ratio, the better for the health system;

that is, a ratio of 10:100 is better than a ratio of 5:100.

Hospital Beds to Population (per 1,000 people): The ratio of hospital bed to population includes patient beds accessible out in public, private, general and specialized clinics and rehabilitation centers in a country. It is measured as hospital beds per 1,000 persons.

Female literacy: Is the percentage of women age of 15 and above with a qualification at least minimum of first school leaving certificate (can read and write).

Under-five Mortality: the probability of dying between birth and exact 5 years of age, expressed per 1000 live births.

Maternal Mortality: Maternal mortality rate refers to the amount of women who passes on as a result of one pregnancy issue or the other, or inside 42 days end of pregnancy per 100,000 live births. MMR can be measured per 1000, 10,000, or 100,000. It is also a measure of the performance of the health sector [22].

Life Expectancy: This refers to the average number of years that a newborn could hope to live, on the off chance that he or she will be liable to the age-particular death rates of a given period [23]. This indicator measures how long another conceived child is supposed to live on an average, given current age-particular death rates. Life expectancy at birth can serve as a marker of mortality conditions and also substitute for health conditions. Life expectancy at birth can also be referred to as life expectancy of an adult [24].

Prevalence of Disease: prevalence is a statistical concept refers to the number of cases of a disease that are present in a particular population at a given time. Therefore, prevalence of severe diseases is the proportion of individual in a population having disease (such as HIV/AIDS, Tuberculosis, Malaria, etc.)

THEORETICAL FRAMEWORK

Debt Overhang Theory

Debt overhang theory defined a scenario where firm debt is so large that any earning generated by new investment project are entirely appropriated by existing debt holders and hence even projects with a positive net present value cannot reduce the firm stock of debt or increase the value of the firm [25].

According to [26], debt overhang is the situation in which investment are reduced or postponed since the private sector anticipates that the returns from their firm investment will serve to pay back creditors. It moreover explains a debt burden that is so large that an entity cannot take an additional debt to finance future project, even those that are profitable enough to enable it to

reduce its indebtedness overtime. It serves as a dissuade current investment since all earnings from new projects would only go to existing debt holders, leaving little incentive for the entity to attempt to dig itself out of the hole. According to the debt overhang theory, when countries have higher external debt to Gross Domestic Product (GDP) ratio they may find relatively less funds available to produce an environment conducive for investment to provide an investment which further deteriorates the current level of economic growth.

This study is anchored on the above mentioned theory because the theory deals with the variables that reveal the effects of external debt on public, private investments and Gross Domestic Product (GDP). However, the variables used in the theory such as external debt and gross domestic product have influence in determining the impact of external debt service on health outcomes.

Empirical Literature Review

[27], examined the impact of debt servicing on the health sector in Nigeria's economy from the period of 1981 - 2013. Secondary time series data were used. Ordinary least square (OLS), autoregression distributed lag (ARDL) model approach and error correction mechanism (ECM) were employed and the result of the study revealed that debt servicing has a negative significant impact on health outcomes (Health service delivery). Increase in debt servicing results in a decrease in expenditure on health inputs and vice-versa. The study fails to test the causal relationships between the variables and also the author adopted both Ordinary Least Square (OLS) and Autoregressive Distributed Lag (ARDL). Therefore, the results are spurious due to lacking confidence in one technique in the impact of debt service on the health sector, also failing to conduct a causality test.

[28], explored the relationships between Health Expenditures and Health Outcomes in Africa. This paper provides econometric evidence linking African countries' per capita total as well as government health expenditures and per capita income to two health outcomes: infant mortality and under-five mortality. Use time series data on 47 African countries from 1999 to 2004. Health expenditures have a statistically

significant effect on infant mortality and under-five mortality. The results imply that total health expenditures are certainly an important contributor to health outcomes. In addition, both infant and under-five mortality are positively and significantly associated with Sub-Saharan Africa. While ethno-linguistic fractionalization and HIV prevalence positively and significantly affect the health outcomes, higher numbers of physicians and female literacy significantly reduce these health outcomes.

[29], explored the relationships between health expenditure and health outcomes in Africa - using data from 47 African countries between 1999 to 2014. Econometric analysis was adopted; health outcome proxy by infant mortality and under-five mortality and the result revealed that expenditure on the health sector has positive significance on health outcomes in sub-Saharan Africa. The result of the study is contrary to the prior expectation. Therefore, we suspect that the study will not be reliable.

[30] examined the impact of health financing mechanism in Zambia 1995 - 2010 secondary time series data were employed and input-output analysis adopted revealed that the various financing mechanisms in Zambia are not adequate to finance their health inputs which would yield desired health output to the citizen. The study did not analyze the causal relationship between domestic income and health outcomes of the country hence we suspect that the result is spurious.

[31] examined the effects of external debt servicing and public expenditure composition in sub-Saharan Africa. The study sampled 35 African countries and time series data for the period of 1975 - 1994 also, regression analysis was adopted and the result revealed that debt servicing shifts spending away from the social sectors such as education and health. The study fails to analyze the causality between external debt servicing and social sector (education and health) hence we suspect the result is spurious.

[32] the relationship between debt servicing and economic growth in Kenya for the period of 1970 - 2008, focused on both internal and external debt service. Secondary time series data were

used sourced from world development indicator 2010. Ordinary least square was employed and result of the study revealed that external debt has positive impact on economic growth while debt servicing has negative significant on economic growth, only one unit root test were employed. Therefore, the result is not reliable for decision making, suspecting the data need more diagnostic tests.

[33] Examined the relationship between Healthcare Financing and Health outcomes in Nigeria. The multivariate analytical tool used to describe the relationship that exists between health care financing, health facility utilization and health outcome in Nigeria. The focus of this research was on women who are of child bearing age and who had given birth to at least one child within the past five years. The study adopted the stratified sampling technique comprising of two rural Local Government Areas and one Urban Local Government Area in Cross River State, Nigeria. It demonstrated that the high levels of infant mortality and morbidity rate was associated with the high incidence of out-of-pocket payment, and the wide disparity and inequality in income distribution. The study further observed a disproportionate disparity in the spatial distribution of health facilities, with concentration of health facilities at the urban areas rather than the rural areas, which of course contributed to the poor service. Therefore, the results were not reliable for national policy making because it dwells on some selected local government areas and also in one state of Nigeria.

[34], examined the relationship between health care expenditure and economic growth in Nigeria for the period 1970-2009. The study employed the multivariate cointegration technique proposed by Johansen and found the existence of at least one cointegrating vector describing a long run relationship among economic growth, foreign aids, health expenditure, total saving and population. The cointegrating equation however shows some deviations in terms of the signs of the coefficients of foreign aids and health expenditure which partly may be attributed to some diversification of foreign aids to other

uses or that the allocation to health services is grossly inadequate. It is therefore suggested that an appreciable proportion of the national budget be allocated to the health care services to have a more robust health care programmes capable of fostering economic growth in Nigeria. The stationary results are mixed intergrations I(0) and I(1) and they failed conduct Autoregressive Distributive Lag (ARDL) in determining the long run relationships between the variable. Therefore, it results of long run relationships is regards as spurious.

[35], Examined the relationship between private and public health expenditures in Nigeria. Ordinary Least Square was used the results reveal complementarily of inputs between public and private health expenditures in Nigeria. The result is thus an indication that government health investment plans crowd in private health investment spending. The study recommends that the crowding in effect could be induced by government tax incentives and government regulation (policy intervention), economic intuition; the efficiency of private health spending is also a function of the weight of government health expenditure in the country. Implicationally therefore, the more balanced the composition of government health spending, the greater the increase in the level of effective private health care services in Nigeria. The study failed to include out-of-pocket health expenditure in the model. Hence, the result was not highly reliable because the missed variable in model will play a significant role in determining the relationships between private and public health expenditure in Nigeria.

[36], explored life expectancy, public health spending and economic growth in Nigeria. A vectors auto regressive (VAR) model was employee in analyzing the data, the result of the results of Granger causality test revealed that there is no causality between life expectancy and public health speeding and economic growth in Nigeria. The study fails to conduct VAR granger causality test which take each variable as dependent variable against others and also descriptive statistics was not employed to determine the behaviors residual

distribution in the model respectively. Hence we suspect that the result is not exquisite because it fails to conduct the lag selection criterion.

[37], Examined the impacts of health on Economic growth in Nigeria. The Cointegration, and Granger Causality techniques were used in analyzing Quarterly time series data of Nigeria for the period of 1995-2009. The study finds that GDP is positively influenced by health indicators in the long run and health indicators cause the per capita GDP. It reveals that health indicators have a long run impact on economic growth. Thus, the impact of health is a long run phenomenon. The study recommends the major policy implication of the study is that, a high level of economic growth can be achieved by improving the health status of the people. The study fails to conduct the correlation test to determine the relationships between the variables in the model. Therefore, that there is problem of multi colinearity in the model.

[38], examined the impact of external public debt and health outcome in Kenya. Secondary time series data were used sourced from world development indicator and Kenya national bureau of statistics. The health outcome proxy by life expectancy, the explanatory variables where interest payment on external debt, external public debt, debt service payment, labour and capital. Ordinary least square (OLS) were employed in the analysis and result revealed that the external debt and interest payment on external debt contribute negatively to health outcome while capital formation and labour force have a significant positive contribution to health outcome in Kenya. The study conducted only one unit root test, so we are not fully agreed that the all variable are robust and it recommended policies may not be applicable in Nigeria because of the differences in systems.

[39], examines the impact of health expenditure on economic growth in Nigeria, using time series data spanning from 1981 to 2013. Ordinary least square regression analysis, Auto-regressive Distributed Lag (ARDL) Model approach and Error Correction Mechanism (ECM) are employed as the estimating techniques to test the

existence of long-run relationship among the variables and the result shows positive impact that gross capital formation, and total health expenditure determine in part the level of economic growth in Nigeria while life expectancy rate indicates statistical negative impact on the growth contrary to theoretical economic expectation for the period covered by the study. Based on the results the following policy measures are suggested among others that government should encourage savings and investments in the economy, increase expenditures on health provisions, induce the level of labour productivity and place priority on the issues of security to lives and properties so as to pave way for growth and development of the Nigerian economy. The results are questionable because an aggregated data on health expenditures in Nigeria was started from 1995. Hence, the results regarded as spurious and advisable for policy making because it may led the nation to wrong directions.

[40], examined the impact of external debt on economic growth in Nigeria for the period 1981-2014 based on annual data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (various issues) and abstract of National Bureau of Statistics (NBS). The researcher examined the existence of Co-integration among the underlying variables using Auto-regressive Distributed Lag (ARDL) model after conducting preliminary statistical test to ascertain the normality of the variables as well as stationary of the data set using descriptive and unit root tests. The result of the ARDL test shows that a significant relationship exists between external debt and economic growth both at the long and short run. The study also examined the causality among the variables using Granger causality test and observed that no causality exist among the variables. The study adopts pairwise Granger causality and obtained no causal relationship between the variable. Therefore, the result regarded as spurious because it fail to used VAR Granger causality in determining causal relationship by taken each variable as dependent variable against others.

[41], examined the relationship between life expectancy and Government Expenditure in Nigeria between 1980

and 2015. The data for the study were sourced from Central Bank of Nigeria and Bureau of Statistics Annual Reports. Vector Autoregressive Distributive Model (VAR) was used as estimation technique. Results from forecast Error Variance Decomposition showed that the highest shocks to the life expectancy were accounted for by the share of government expenditure. The second in rank was the number of physicians and carbon dioxide also contributed immensely to low life expectancy in Nigeria. From the results, the contribution of real growth rate of income was indirect and marginal. Other variables such as Death and Birth rate did not contribute significantly to the life expectancy in Nigeria during the study period.

[42] examined the input of government health expenditure and health outcome in United States of America. Time series data were used and health outcome peroxide by under-five mortality and maternal mortality rates. Instrumental variables techniques were adopted and the result revealed that huge government expenditure in health has position significant to health outcome and welfare maximization in limited state of America.

[43] analyzed the health financing and implication on health access and equity in Canada, Nigeria and Ghana between 2000 to 2014 secondary time series data, and linear regression were used. The result revealed the total health expenditure as a percentage of GDP for both Nigeria and Ghana is less than half of Canada. Also, the governments of Ghana are stronger than Nigeria in terms of public health care funding. Therefore, financing of health sector in Nigeria and Ghana are parato inferior to Canada. The variables were not stationary at the same difference order and ARDL were not conducted. Therefore, we are suspecting that the study is spurious and is applicable to Nigeria or sub-sahara Africa.

[44], examined the impact of increase in external debt stock and its servicing on human capital development. Four hypotheses were formulated and tested at 5% level of significance. Ex-post facto research design was adopted and time series data spanning 30 years (1986-2015) were processed using the models

earlier formulated. Ordinary Least Square (OLS) regression technique was used to test the hypotheses. The study found that both external debt stock and external debt servicing had significant negative effect on human capital development; external debt stock borrowed from Paris club and multilateral creditors had insignificant negative effect; those borrowed from London club had insignificant positive effect while those borrowed from bilateral creditors had significant positive effect. On debt servicing, all the creditors showed insignificant positive effect except London club that had significant positive effect. The study concluded that nations could finance their budget deficits with external funds but should ensure that such funds are applied on priority projects that have the capacity to deepen the economy and improve the well fair of her citizens.

[6], investigates the impact of external debt on economic growth in Nigeria for the period 1999-2015. The data used was obtained mainly from secondary sources mainly from Central Bank of Nigeria (CBN) Statistical Bulletins and Debt Management Office. Time series data on Gross Domestic Product (GDP) as a proxy for Economic Growth, External Debt Stock (EXDS), External Debt Service Payment (EDSP), and Exchange Rate (EXGR) were used for the analysis. The techniques of Estimation employed in the study include Augmented Dickey Fuller (ADF) test, Johansen Co-integration, Vector Error Correction Mechanism and Granger Causality Test. Results show that external debt has an inverse effect on economic growth in Nigeria.

Gaps in Literatures Review

Many studies have been conducted similar to this research within and outside Nigeria over the period of time. [12] analyses the health financial and implication on health process and equity in Canada, Nigeria and Ghana between 2000-2014 using secondary time series data and regression analysis; [18] examined the impact of health financial in Zambia between 1995-2010 secondary times series data were used. [29] explored the life expectancy, health spending and economic growth in Nigeria. Vector auto regressive (VAR) ware employed.

Kwasi (2010) examined the effectiveness of external debt, servicing and public expenditure composition in sub-sahara Africa from 1975 to 1994. Muendi (2014) external debt and health outcome in Kenya, Aduralere&Olufemi (2015) the impact of external debt servicing on health sector in Nigeria between 1981-2013. Among others who conducted a research on a similar topic, none of such

study investigated the impact of external debt servicing on health outcome proxy life expectancy at birth in Nigeria using multiple techniques of analysis during the period of 1995 to 2017. Thus this is why the researcher deemed it important to carry out the study in order to help in providing the missing link during the period.

METHODOLOGY

Sources and method of data

The data for the study were secondary on External Debt service (EXDS), Health Outcomes (HOC) proxy by life expectancy at birth, Gross Domestic Product (GDP constant) and Public expenditure on health from 1995 to 2017 sourced from the World Bank online database 2018.

Techniques of Analysis

The analytical procedure adopted in this study are conditional Autoregressive Distributive Lag (ARDL) Bound test, Error Correction Mechanism (ECM) and Vector

Autoregressive (VAR) granger causality test.

Model Specification

Linier Regression Model

This study employed the model of classical Liberal theory adopted by Sajuyigbe (2018), examined the impact of External debt on economic growth of Nigeria which specified that the economic growth proxy by gross domestic product (GDP) is significantly included by external indices (External debt stock, external debt service payment and exchange rate) is formulated as follow;

$GDP=f(EXDS, EDSP, EXGP)$

$LnGDP_t = \beta_0 + \beta_1 LnEXDS_t + \beta_2 LnEDSP_t + \beta_3 LnEXGR_t + U_t \dots\dots\dots(1.1)$

Where;

- LnGDP_t = Gross Domestic Product
- LnEXDS_t = External Debt Stock
- LnEDSP_t = External Debt Service
- U_t = Disturbance term

The model is modified by substituting exchange rate with government expenditure on health, external debt stock with health outcome proxy by life expectancy at birth. However, the health outcome is regarded as dependent variable while the government

expenditure on health, external debt service and economic growth proxy real gross domestic product (RGDP) as independent variable to determine the impact of external debt service on health outcome in Nigeria for the period of 1995-2017. The modified models are:

$HOC = F(GEH, EX DS, RGDP) \dots\dots\dots eqn(1.2)$

Econometrically the model is specified as

$HOC_t = \beta_0 + \beta_1 GEH_t + \beta_2 EXDS_t + \beta_3 RGDP_t + U_t \dots\dots\dots eqn(1.3)$

Where β_0 = Intercept

$\beta_1, \beta_2,$ and $\beta_3,$ are parameters of independent variables and

HOC =Health Outcome

GEH = Government expenditure on health

EXDS = External Debt service

U_t = Error term (White noise).

A Prior Expectation

It expected that $\beta_1 > 0, \beta_2 < 0, \beta_3 > 0.$

Government Expenditure on health (GEH) and economic growth (RGDP)

expected have positive impact on the life expectancy. The more economy keeps growing; more money is realized expenditure on health can be increased by more increase the availability and

access ability of healthcare in both rural and urban areas. This can ultimately improve the health outcomes (HOC) of Nigerians. On the other hand, the debt servicing is expected to have negative impact on life expectancy. This is because as huge amount is directed to

servicing the debt, only little can be allocate to health sector.

Unit Root Model

Unit root test are performed to verify the robustness of the data in order to avoid the spurious results. The study will employ Augmented Dickey (ADF) the models specified are:

Augmented Dickey Fuller (ADF) Model

$$\Delta HOC_t = \beta_1 + \beta_2 + LEX_{t-1} + di \Delta LEX_t + U_t \dots\dots\dots eqn(2.1)$$

$$\Delta GEH_t = \beta_1 + \beta_2 + GEH_{t-1} + di \Delta GEH_t + U_t \dots\dots\dots eqn(2.2)$$

$$\Delta EXDS_t = \beta_1 + \beta_2 + EXDS_{t-1} + di \Delta EXDS_t + U_t \dots\dots\dots eqn(2.3)$$

$$\Delta RGDP_t = \beta_1 + \beta_2 + RGDP_{t-1} + di \Delta RGDP_t + U_t \dots\dots\dots eqn(2.4)$$

Where:

U_i = white noise (error term)

$t-1$ = the numbers of logged difference terms.

Hypothesis

H_0 : $\beta = 0$ against the alternative hypothesis

H_0 : $\beta < 0$ that the time series is stationary (No unit root).

Autoregressive Distributive Lag model

The employed autoregressive distributive lag (ARDL) to examined the impact of external debt service on health outcome by choosing optimal lag base on Akaike Information Criterion (AIC). The ARDL models specified are:

$$HOC_t = \gamma_{oi} + \sum_{i=1}^p \delta_i HOC_{t-i} + \sum_{i=0}^q \beta_{i1} GEH_{t-2} + \sum_{i=0}^q \beta_{i2} EXDS_{t-2} + \sum_{i=0}^q \beta_{i3} RGDP_{t-2} + \varepsilon_{it} \dots\dots\dots(3.1)$$

Where:

γ =constant

β and δ = coefficients

p, q =optimal lags and

ε =white noise (error term).

Conditional ARDL (Bound test) Model

The study conducted the bound test to determine the long run equilibrium [8] between external debt service and health outcome for period of 1995-2017. The bound test model is specified as:

$$\Delta HOC_t = a_0 + b_1 HOC_{t-1} + b_2 GEH_{t-1} + b_3 EXDS_{t-1} + b_4 RGDP_{t-1} + \sum_{i=0}^q a_{i1} \Delta HOC_{t-2} + \sum_{i=0}^q a_{i2} \Delta GEH_{t-2} + \sum_{i=0}^q a_{i3} \Delta EXDS_{t-2} + \sum_{i=0}^q a_{i4} \Delta RGDP_{t-2} + e_{1t} \dots\dots\dots(3.2)$$

Hypothesis:

H_0 : there is not cointegration among HOC, GEH, EXDS and RGDP

H_1 : there is cointegration among HOC, GEH, EXDS and RGDP

$$X_t = \sum_{i=1}^n \alpha_i Y_{t-1} + \sum_{j=1}^n \beta_j X_{t-j} + \mu_1 t \dots\dots\dots eqn (5.1)$$

$$Y_t = \sum_{i=1}^m \lambda_i Y_t - i + \sum_{j=1}^m \delta_j X_t - j + \mu_2 t \dots\dots\dots eqn (5.2)$$

However, the specific equations for this research work of the granger causality are given as:

Error Correction Model

An Error Correction was employed to determinethe speed adjustment from long run and short run equilibrium. The model is specified as:

$$\Delta HOC_t = a_0 + \sum_{i=0}^q a_{i1} \Delta HOC_{t-2} + \sum_{i=0}^q a_{i2} \Delta GEH_{t-2} + \sum_{i=0}^q a_{i3} \Delta EXDS_{t-2} + \sum_{i=0}^q a_{i4} \Delta RGDP_{t-2} + \lambda ECT_t + e_{1t} \dots\dots\dots(4.1)$$

Granger Causality Model

Granger causality test were conducted to determine the direction of causality between the variables in the model. The general equation of the granger causality is expressed as:

$$HOC_t = \sum_{j=1}^n \alpha_1 GEH_{t-1} + \sum_{j=1}^n \alpha_2 EXDS_{t-1} + \sum_{j=1}^n \alpha_3 RGDP_{t-1} + Ut_1 \text{-----eqn (5.3)}$$

$$GEH_t = \sum_{j=1}^n \beta_1 HOC_{t-1} + \sum_{j=1}^n \beta_2 EXDS_{t-1} + \sum_{j=1}^n \beta_3 RGDP_{t-1} + Ut_2 \text{-----eqn (5.4)}$$

$$EXDS_t = \sum_{j=1}^n \delta_1 HOC_{t-1} + \sum_{j=1}^n \delta_2 GEH_{t-1} + \sum_{j=1}^n \delta_3 RGDP_{t-1} + Ut_3 \text{-----eqn (5.5)}$$

$$RGDP_t = \sum_{j=1}^n \eta_1 HOC_{t-1} + \sum_{j=1}^n \eta_2 GEH_{t-1} + \sum_{j=1}^n \eta_3 EXDS_{t-1} + Ut_2 \text{-----eqn (5.6)}$$

DATA PRESENTATION AND ANALYSIS

Augmented Dickey Fuller unit root test is being conducted and the results hence been presented in table below.

Table 1: Unit Root Test Results

Variable	ADF Statistic	5% Critical Value	Prob. Value	Order of integration	Status
LEVEL VARIABLES					
EXDS	-3.226374	-3.004861	0.0319	I(0)	Stationary
FIRST DIFFERENCED VARIABLES					
ΔGEH	-4.0345816	-3.020686	0.0032	I(1)	Stationary
ΔHOC	-3.342525	-3.029970	0.0271	I(1)	Stationary
ΔRGDP	-3.394104	-3.012363	0.0231	I(1)	Stationary

Source: Author’s Computation using Eviews 9.0, (2019).

The unit root test result confirms our assertion for some variables. The result of unit root test shows that, GEH, LHO, RGDP, are non-stationary. This is true since the ADF test statistics for these three variables are less negative than the 5% critical values with the p-values being more than 0.05 respectively indicating non rejection of the unit root at the 5% level of significance. However, EXDS appear to be stationary at level since the ADF test statistics of this variable are more negative than the 5% critical values and the p-values being less than 0.05 indicating rejection of a unit root in these series.

Subjecting these variables to a first difference test revealed that they are stationary. At their first difference, their ADF test statistics for the GEH, HOC, and

RGDP are now more negative than their 5% critical values and their p-values being less than 0.05 indicating rejection of unit root hypothesis. This therefore, indicates that, GEH, HOC, and RGDP, are variables integrated of order one i.e. I (1) while EXDS are variable integrated of order zero i.e. I (0).

Lag Selection Criteria

The choice of the lag length is a crucial part of empirical research based on the Autoregressive Distributed Lag (ARDL) model since all inferences in this model hinge on the correct model specification. The procedure requires that the choice of deterministic variables and maximum lag length (k) be such as to prevent serial correlation in the disturbance processes.

Table 2: Lag Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1204.537	NA	1.14e+45	115.0988	115.2977	115.1419
1	-1121.196	126.9955	1.94e+42	108.6854	109.6801	108.9012
2	-1069.359	59.24197*	7.80e+40*	105.2723*	107.0629*	105.6609*

* indicates lag order selected by the criterion
 LR: sequential modified LR test statistic (each test at 5% level)
 FPE: Final prediction error
 AIC: Akaike information criterion
 SC: Schwarz information criterion
 HQ: Hannan-Quinn information criterion

Based on the order selection criteria given figure above, two lags have been selected for the estimation of the ARDL model. The selected lags are based on Akaike Information criteria test statistic. The residual diagnostic test given in tables in appendix has been done to ensure that we are dealing with the right lags.

Residual Diagnostic Checking

Residual diagnostic check tests have been conducted for the lags selected to

ensure that the selected lags are free of serial correlation and heteroscedasticity also ensure that the residuals of the selected lags are normally distributed. Based on the residual serial correlation test result using LM test, given in table below, we cannot reject the null hypothesis of no serial correlation as F-statistic is greater than prob. F (2,8).

Table 3: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.71425	Prob. F(2,8)	0.09317
Obs*R-squared	0.368403	Prob. Chi-Square(2)	0.8318

Source: Author's Computation using Eviews 9.0, (2019)

ARDL Bound Test

The major purpose of estimating an ARDL model in this study is to use it as

a basis for applying the Bound test so as to determine the existence or otherwise of the cointegration.

Table 4: ARDL Bounds Test Result

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	31.86618	3
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.37	3.2
5%	2.79	3.67
2.5%	3.15	4.08
1%	3.65	4.66

Source: Author's Computation using Eviews 9.0, (2019).

Base on the result of the ARDL Bound test given in the table above the f-statistics for the Bound test is 31.86618 which evidently greater than even the 10% critical value for the upper bound 3.2. Therefore, the null hypothesis of no

long run relationship is strongly rejected even at the 1% level of significance. Hence, we establish that, there is long run relationship among HOC, EXDS, GEH and RGDP respectively.

Table 5: Error Correction Result:

ARDL Error Correction Form				
Dependent Variable: HOC				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXDS)	0.000468	0.000319	1.469867	0.1723
D(EXDS(-1))	-0.000769	0.000287	-2.681875	0.0230
D(GEH)	0.002151	0.001648	1.305413	0.2210
D(GEH(-1))	0.008028	0.001652	4.860167	0.0007
D(RGDP)	0.027663	0.003987	6.937901	0.0000
D(RGDP(-1))	0.004215	0.004959	0.850021	0.4152
CointEq(-1) ECM	-0.052534	0.003517	-14.935303	0.0000

Cointeq = HOC - (0.0362*EXDS + 0.1580*GEH + 0.2183*RGDP -4.1279)

Source: *Author's Computation using Eviews 9.0, (2019).*

Based on the result in the table, it is clear that the error correction coefficient is negative (-0.052534) as required, and it is highly statistically significant. This means that there is a valid error correction. The result suggests that about 5.2% of the disequilibrium error is being corrected each year and the speed of adjustment towards the long run equilibrium is 5.2%. Hence, there is slow adjustment in HOC when EXDS, GEH, and RGDP change each year. Based on the long run coefficients reported in table, there is evidence of long run equilibrium

relationship between, Health Outcome, External Debt service, Government Expenditure on Health and Real Gross Domestic Product.

Granger Causality Result

The Vector Auto regression (VAR) Granger causality test has been performed to determine whether there is causality between External Debt Service (EXDS), Government Health expenditure (GEH), Health outcome (HOC), Real Gross Domestic Product (RGDP) during the period of the study in Nigeria. The results of the VAR Granger causality test are being reported in table below.

Table 6: Grangers Causality

VAR Granger Causality/Block Exogeneity Wald Tests			
Sample: 1995 2017			
Included observations: 21			
Dependent variable: EXDS			
Excluded	Chi-sq	Df	Prob.
GEH	4.780342	2	0.0916
HOC	7.703211	2	0.0212
RGDP	16.75111	2	0.0002
All	20.57867	6	0.0022
Dependent variable: GEH			
Excluded	Chi-sq	Df	Prob.
EXDS	1.156182	2	0.5610
HOC	3.012580	2	0.2217
RGDP	2.235242	2	0.3271
All	10.34164	6	0.1110
Dependent variable: HOC			
Excluded	Chi-sq	Df	Prob.
EXDS	1.246115	2	0.5363
GEH	0.027402	2	0.9864
RGDP	0.972719	2	0.6149
All	2.223251	6	0.8981
Dependent variable: RGDP			
Excluded	Chi-sq	Df	Prob.
EXDS	5.156205	2	0.0759
GEH	7.608663	2	0.0223
HOC	37.26487	2	0.0000
All	47.82346	6	0.0000

Source: *Author's Computation using Eviews 9.0, (2019).*

The result of the Granger Causality indicates that, using EXDS as dependent variable, it is clear that HOC and RGDP individually cause EXDS. Only GEH does not Granger cause EXDS individually. However, when taken the independent variables all together they appear to have influence on the EXDS as indicated by their joint probability value of 0.0022 which is less than 0.05 at the 5% level of significance.

When Government expenditure on health (GEH) is taken as dependent variable, it appears that no variable Granger cause GEH individually at the 5% level, which in this case, even jointly, the independent variables do not appear to influence government expenditure on health GEH.

Similarly, when taken Health Outcomes (HOC) as dependent variable, it appears

that no any variable granger cause HOC but individually and joint probability values are greater than 0.05% level of significance.

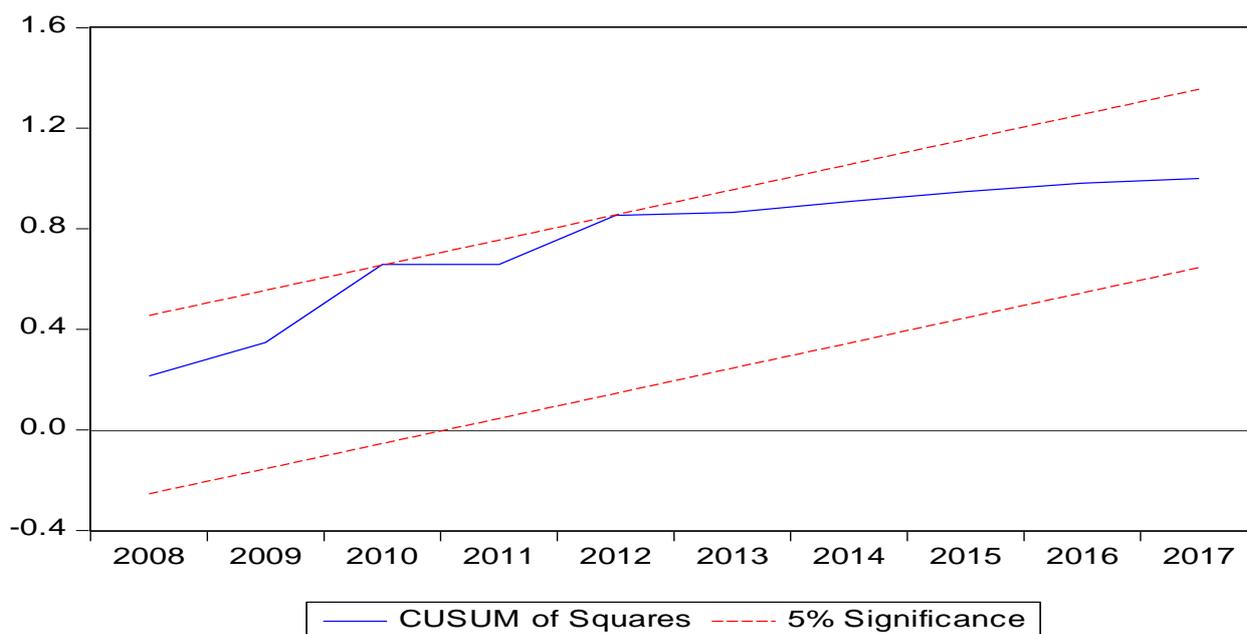
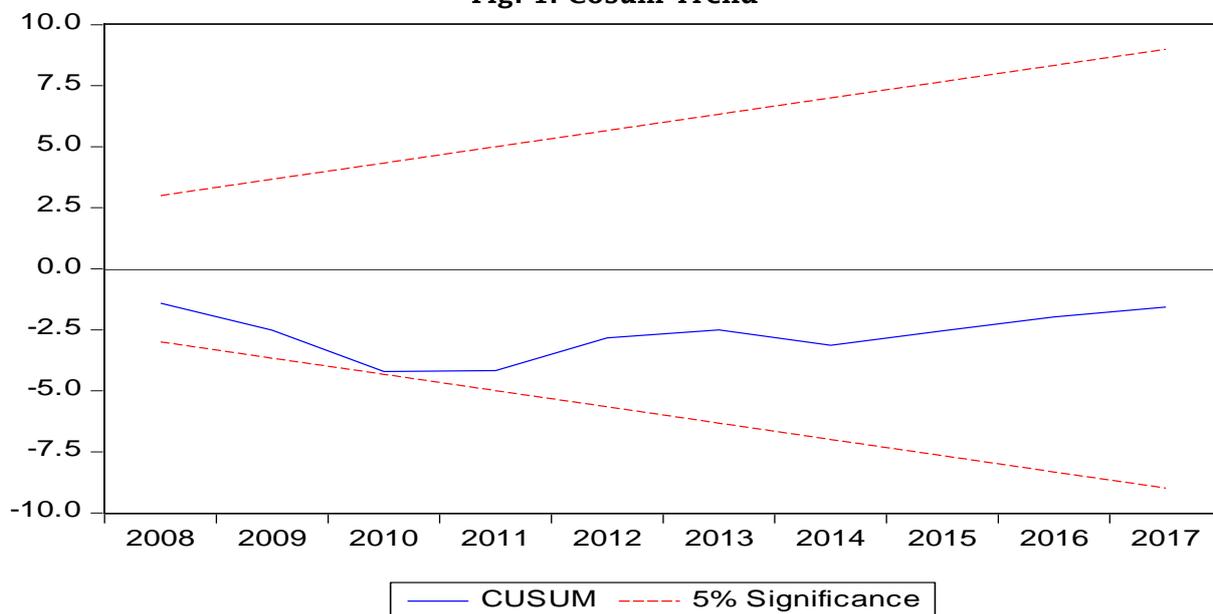
When Real Gross Domestic Product (RGDP) is taken as a dependent variable it appears that GEH and HOC Granger causes RGDP individually. EXDS does not appear to influence RGDP individually. The independent variable jointly influenced RGDP with a joint probability of 0.0000.

Stability Test-Plot of Cusum and Cusumsquare

The model stability test is necessary for prediction and econometric inference. We test for the stability of estimated parameters by using the cumulative sum of recursive residual (CUSUM) and the cumulative sum of square recursive residual (CUSUMsq) tests. The graphical

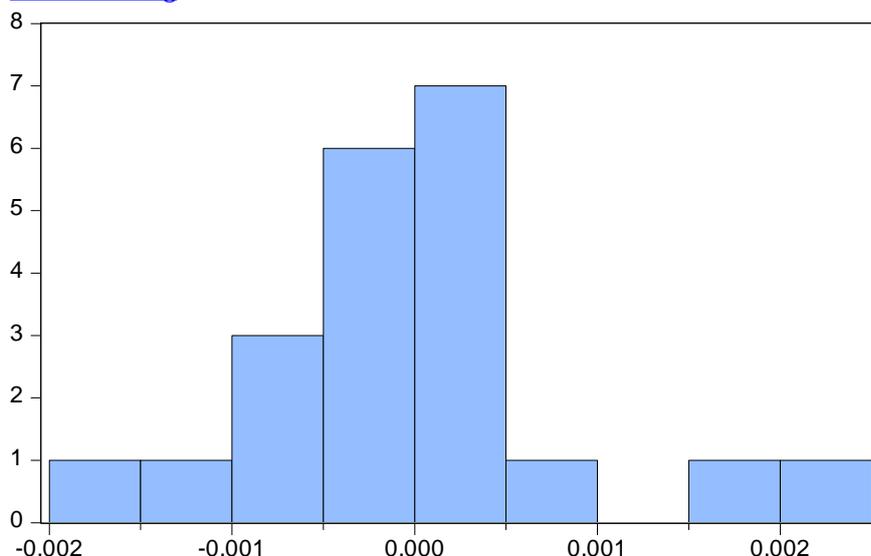
presentations of these tests are presented in figures below

Fig. 1: Cosum Trend



Neither CUSUM nor CUSUMsq test provided any evidence of instability in the estimated at 5% significance level for conventional specification. Therefore, both tests are within the 5% critical bound; this implies that all the coefficients in the short run model are stable and robust for prediction.

Result of Jarque-Bera normality test
 Jarque-Bera test of normality were conducted to determine residuals of the data distributed in model, the result is contained in the figure below:
Fig. 3: Normality Test



Series: Residuals	
Sample 1997 2017	
Observations 21	
Mean	-1.27e-16
Median	-7.24e-05
Maximum	0.002235
Minimum	-0.001681
Std. Dev.	0.000883
Skewness	0.604311
Kurtosis	3.895801
Jarque-Bera	1.980325
Probability	0.371516

The result reveals that, the residuals of the data are normally distributed. The null hypothesis of the residual of data is accepted at 37.15% confidence as indicated by the probability value 0.371516 and Jarque-Bera value of 1.980325 which is greater than zero.

Post Estimation Analyses

The robustness of the model has been defined by several diagnostic tests such

as serial correlation diagnostic test, and Jarque-Bera normality test. All the tests indicate that the model has satisfactory econometric properties, with a correct functional form and well the model's residuals are serially uncorrelated and normally distributed. Hence, the results reported are valid and reliable for policy making.

CONCLUSION

This paper examines the impact of external debts servicing on health outcome in Nigeria (1995-2017). The study specifically examined impact of external debt service on health outcomes, the long-run relationship between external debt servicing and health outcome and analyzed the causal relationship between the variables. Secondary data was employed in the study, sourced from World Bank, data base 2017. The data collected were analyze using various method of analysis ranging from unit root test, Lag selection criteria, residual diagnostic checking, Autoregressive Distributive Lag (ARDL), Bound test, ARDL cointegration and long-run form, CUSUM test and pear wise Granger causality test were conducted to achieved the specific objectives.

The result of ADF unit root test was shows that GEH, HOC, RGDP are non-stationary at level but appear to be stationary at first difference with the evidence that their p-value been less than 0.05 indicating rejection of null hypothesis. The Lag selection result, based on the order selection criteria

given, two lags have been selected for the estimation of the ARDL model. The selected lags are based on Akaike Information criteria test statistic. Then the result of residual serial correlation and heteroscedasticity test using LM test, reveals that, we cannot reject the null hypothesis of no serial correlation at all the lags at 10% level given the LM statistics and the probability values of less than 0.10%.

The result of ARDL Bound test shows that the f- statistics is 31.86618 which evidently greater than even the 10% critical value for the upper bound 3.2. Therefore, the null hypothesis of no long run relationship is strongly rejected even at the 1% level of significance. Hence, we establish that, there is long run relationship among HOC, EXDS, GEH and RGDP respectively. Then, the result for ARDL long-run relationship reveals that and the external debt service (EXDS) has negative impact on health outcome (HOC) with the coefficient -0.036249 and is not statistically significant at 5% level. Hence, 1% increases in external debt servicing (EXDS) the dependent variable

(HOC) will be increased by 3.6% and vice-versa.

The result for Error Correction Model (ECM) shows that the error correction coefficient is negative (-0.052534) as required, and it is highly statistically significant. This means that there is a valid error correction. The result suggests that about 52% of the disequilibrium error is being corrected each year and the speed of adjustment towards the long run equilibrium is low (52%) and the remaining 48% were not captured in the model.

The Granger causality test reveals that the H_0 External debt service (EXDS) does not Granger Cause Health outcome (HOC) we accepted the null hypothesis at 5% level of significant. This implies that no causality emanates from external debt servicing and health outcome. This can be explained as External Debt Servicing (EXDS) does not significantly affect the health outcome (HOC) proxy by life expectancy at birth, though against the expected result. It also, shows that the causal relationships between Health outcome (HOC) and Government expenditure on health (GEH) are existing. Therefore, we rejected the null hypothesis at 5% level of significant means that there is uni-directional causality between Health outcome (HOC) and Government expenditure on health (GEH).

Similarly, the result shows that there is uni-directional causality running between Health outcome (HOC) and real gross domestic product (RGDP) at 5% level of significance. Means the Health outcome (HOC) has played a significant role in Economic growth (RGDP). The null hypothesis H_0 is accepted that (GEH) does not Granger cause (EXDS), similarly RGDP and GEH at 5% level of significance.

Conclusively, the finding of this study revealed that the external debt service has negative impact on health outcome proxy by life expectancy at birth in Nigeria from the period of 1995-2017 also, it inline a priori expectation of this research. But has no causal relationship as revealed the VAR Granger causality

test using Health Outcomes (HOC) dependent variable similarly, Government Expenditure on Health (GEH) as dependent variable dose not granger cause by Health Outcomes (HOC) individually. Therefore, with the implementation of the policies recommends by this study the government will mitigate the negative impact of external debt servicing on health outcome in Nigeria.

Policy Recommendations

This study designs the recommendations base on the result of the findings to mitigate the effects external debt servicing on health outcome in Nigeria:

- i. the government should negotiate with foreign creditors on fixed interest rate also, the attention of foreign creditor such as International Monetary Fund (IMF) and World Bank to monitor how the government are disbursing the money they have been borrowed in order to restricts government from diversion funds and project from one sector to another just to get the political recognition without mind the welfare of their citizens.
- ii. Debt Management Office (DMO) should organize an expert specialize committee to audit or supervision on how was the previous debt been spend before the approval of the new external debt proposal.
- iii. The government has to increase an expenditure on health such as the remuneration of health worker especially primary health care, provide incentives such as free medication, ante natal and post natal care and also, free treatments of severe disease.
- iv. Government should create peaceful environment to encourage international partnership for health and non-governmental organization to patronize for the betterment of our health outcome.

REFERENCES

1. Abdul, M. (2017). Nigerian Debt Profile and its Effect on Economic Growth. Sixth Middle - East conference and global business,

economic, banking and finance. ISBN 978-1943-18-1.

2. Adeleye, N. (2018). Conditional Autoregressive Distributive Lag

- and Vector Error Correction Mechanism. Department of Economics Covenant University of Nigeria. Retrieved from www.cruncheconometrics.com.ng on 09/09/2018, 08:30pm.
3. Augustin, F. (2017).the external debt servicing and public-expenditure composition in sub-sahara Africa *African development review*, vol. 22, 378-393.
 4. Ayoola,S.O., Jimoh, O. S. & David, M.O. (2012). Relationship between Health Care Expenditure and Economic Growth in Nigeria.*International Journal of Economics and Finance*; Vol. 4, No. 11; 2012. ISSN 1916-971X.
 5. Babatunde.A., Awuniyi, C. Ayiniyi, R.K & Jennifer, E. (2017). The Nexus between External Debt and Economic Growth in Nigeria.*British Journal of Economics, Finance and Management Sciences*, Vol.14(1), 2048-125.
 6. Bassey, H. R. & Sebastian, E.K. (2012).Healthcare Financing and Health outcomes in Nigeria.*International Journal of Humanities and Social Science*. Vol. 2 No. 15; August 2012.
 7. Bukhari, gai&goftert (2017), government health expenditure and health outcome.Talahasses, 32306, florida, united states of America (USA), w/p.
 8. Central Bank of Nigeria CBN (2008), Statistical BullatinGoldden jubilee edition.
 9. Cihl (2008), "Non-profit organization for health system Canada".Retrieved from www.cihl.com on 27-02-2018, 12:55pm.
 10. Cobb C.W., & Douglas, P.H.(1928). A theory of production.*American Economic review*. 18 (Supplement): 139 - 165. Retrieved www.google.cholar.com
 11. Collins (2015).economic dictionary 4th edition retrieved from www.economicdictionary.com on 13-05-2018, 09:23pm
 12. Culpeper,&Bhushan. (2008.). Enhancing Domestic Resource Mobilization. *G-24 Policy Brief*, 25,1-3.
 13. Experience, M.&Oladeji, S. (2014). External debt servicing and debt relief transmission in Nigeria.*Journal of economics and sustainable development*.Vol.5 No. 2014.
 14. Gujarati, N.D and Sangeetha (2013), Basic econometrics 4/e, the McGraw-Hill Companies, special India edition page 304-331, 278.
 15. Idowu, D. O. (2014). The Impact of Health on Economic Growth in Nigeria.*Journal of Economics and Sustainable Development*.Vol.5, No.19, 2014.ISSN 2222-1700.
 16. Ikenna, C. E. (2018). Impact of External Debt on Human Capital Development in Nigeria.*International Journal of Advance Research and Innovation*.Volume 6. 1 (2018) 47-57. ISSN 2347 - 3258.
 17. International Monetary Fund (2013).external debt statistics: Guide for compliers and users. Washington DC.
 18. Investopedia, (2016).retrieved from www.investopedia.com on 13-05-2018, 08:23pm
 19. Isaac, A. & Michael, O. (2005).the impact of debt servicing on health sector in Nigeria *.International Journal of Economics Commence United Kingdom* Vol. III, 12, December, 2015. ISSN: 2348-0386.
 20. Isaac, I. A. &Michael , O. A. (2015). The Impact of Health Expenditure on the Growth of the Nigerian Economy.*International Journal of Economics, Commerce and Management*. Vol. III 12, December 2015. ISSN 23480386.
 21. Jhingan, M.L. (2003). *Advanced Economic theory*.Vrinda publication New Delhi-India
 22. John, A. C.&Andrew, E. Andrew, E.O. (2007). Health expenditure and health outcome in Africa working.*African Development Bank*.Working paper series in economics.
 23. John, C. A. & Andrew, E. O. E. (2007).Domestic Debt and

- Economic Growth in Nigeria. Departmental Journal, Delta State University, Asaba-Nigeria. Economic Research Working Paper No 91 (December 2007).
24. Joseph, C. (2015), assessing the impact of health financial in Zimbabwe. Vrije Universiteit Amsterdam, Netherland.
 25. Lawal, I. A. (2016). External Debt and Economic Growth. Department of Accounting and Finance, Landmark University. *Acta Universitatis Danubius*. Vol 12, no 6, 2016.
 26. Mbanwusu, C.U. (2011). Foreign Debt Management and Nigerian Debt Profile. *M.sc Thesis University of Nigeria, Nsukka*.
 27. Muendiruth, M. (2014). Impact of external public debt and health outcome in Kenya. school of economic university of Nairobi, Kenya. November 2014.
 28. Musyoka, R. (2011). The relationship between debt servicing and economic growth in Kenya. *school of economic university of Nairobi, Kenya*.
 29. Obadan, M.I. (2002). External Debt and Management Policy in Nigeria. *Economy, Structure, Growth and Development* (ed) Milton A. Iyoha, and Chris Itsede.
 30. Ogunsakin, S. & Olonisakin, T.Y. (2017). Health Expenditure Distribution and Life Expectancy in Nigeria. *International Journal of Scientific and Research Publications*, Volume 7, July 2017. ISSN 2250-3153.
 31. Okonjo-Iweala, N. (2001). Managing Nigeria's Debt, International and Governance Aspect. *paper prepared for the International Conference on Nigeria's Debt*, Abuja, may 17.
 32. Riman, H.B. & Akpan, E.S., (2012). healthcare financing and health outcome in Nigeria. *International Journal of Humanity and social Science* Vol. 2 NO. 15: August, 2012
 33. Robert, S. (1956). A contribution to the theory of economic growth. *quarterly journal of economics*, Vol. 70 Feb. 1956.
 34. Sajuyigba S., et al (2018). External Debt and Economic Growth of Nigeria. *South Asian Journal of Social study and Economics* 1(2) 1-11, (2018) SAJSSE.41264.
 35. Sajuyigbe, S., Ademola, A. T. & Adeyemi, Z.A. (2012). External Debt and Economic Growth of Nigeria. *South Asian Journal of Social Studies and Economics*. Vol. 1(2): No. SAJSSE.41264.
 36. Sanmun (2012). Economical and Financial Committee forum. External Debt Sustainability and development. Retrieved on 12 may, 2019, from: <http://sanmun.ibnesbru.org/resources/Research-paper-topic-201.pdf>
 37. Sustainable Development Goals (2010). SDGs Annual Reports 2009. Retrieved from www.sustainabledevelopment.un.org on 15-05-2018, 7:30pm
 38. Ubi, P.S. & Effiom, L.E. (2015). Domestic resource mobilization and industrial output in Nigeria. *West African Financial and Economic Review*, 13(2), 4-15.
 39. Udoka, C.O. (2010). Relationship between External Debt Management Policies and Economic Growth in Nigeria. *International Journal of Financial Research*, Vol. 1, No. 1, 2015, 45-56.
 40. Umoren, R. (2001). *Economic Reforms and Nigeria's Political Crisis*. Ibadan: Spectrum Books Limited.
 41. World Bank (2013), "World Development Report 2013" Retrieved from www.worldbank.org.wdr2013.
 42. World Bank (2015). *World Development Report 2015*. Retrieved from www.worldbank.org.wdr2015.
 43. World Health Organization, (2015). Annual Health Services Report. Retrieved from www.who.int.org on 15-05-2018 06:39pm.
 44. Yemisi, O. (2017), "analyzing health financing and the implication on health access. *new york university, united states of America (USA)*. August 2017.