MODERATING THE INTERACTION OF HEALTH AND EDUCATION ON SUSTAINABLE DEVELOPMENT: EVIDENCE FROM NIGERIA

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ABSTRACT

Investment in human capital resources can enhance labour productivity and economic growth. The health condition and level of education also play significant roles in improving labour performance and productivity which can bridge income inequality gap, reduce poverty rate and enhance sustainable development in the economy. This study investigates the impact of the interaction between government expenditure on health and education on sustainable development in Nigeria. Time series data were sourced from the Central Bank of Nigeria statistical bulletin, World Bank World Development Indicators, and the United Nations Development Programme for the period of 1992 to 2021. The Autoregressive distributed lag (ARDL) approach to cointegration was employed to establish relationship between the variables based on the unit root test results. The findings of the study show that no long-run association exist between the explanatory variables and dependent variable, whereas, the result of the Error Correction Model (ECM) short-run analysis revealed that the variables of government spending on health, education and the interaction between government spending on health and education have positive and significant association with sustainable development. While the variables of quality of governance reported an insignificant association with sustainable development in Nigeria over the observed period. This study recommends practicable policies and actions targeted at increasing efficiencies in the implementation of public expenditure on education and health, and improving the quality of institution, for the purpose of ensuring sustainable development in Nigeria.

Keywords: Health Expenditure, Education Expenditure, Sustainable Development, HDI, ARDL
JEL Classification Code: *F13, M53, F21, E24, F31*

1.0 Introduction

Most growth theories consider human capital resources as an essential factor of production, and its improvement can aid economic growth and development. Labour is considered one of the most essential factor input which justifies the pivotal role it plays in business performance and economic growth. The importance of labour in economic growth is emphasized by the classicalist, neo-classicalist and endogenous growth model, and depends largely on mental and physical capabilities, human capital investment and technological advancement (Jack, 1999). The health condition and level of education also plays significant roles in improving labour performance and productivity which can bridge income inequality gap and reduce poverty in the economy. Chatterjee and Teame (2022) reported that availability and accessibility are the key determinants of choice of health and education.

The state of health determines human's well-being and efforts put into productive activities. The goal 3 of the sustainable development goals (SGDs) center on healthy living and well-

being. The state of health can affect labour productivity and economic growth. Economies with poor health condition are likely to have poor labour productivity and mostly characterized by high income inequality and poverty rate. This is why the government of any country budget substantial amount for investments in health projects in the course of achieving sustainable developmental and reducing poverty rate in the economy.

Moreso, access to education affects labour productivity, income level and poverty rate in an economy. Education has become a fundamental objective of SDGs and a means through which sustainable development can be achieved in a country. Education is a means through which an economy can innovate and unlock its potentials towards national transformation, and sustainable development (Aberu & Lawal, 2022). Some studies have shown that health and access to education enhance the productivity of labour (Mehmood et al., 2022), while results of other studies show that labour productivity plays a significant role in reducing poverty (Firman et al., 2019) and aid in the development of the economy, yet less has been done to investigate the impact of the interaction between health and education on the development of an economy.

Despite the tremendous positive appraisal of quality of health and education in an economy, the increasing spending on health and education by the Nigerian government is yet to yield desirable outcome, since the country is still characterized with high poverty rate and underdevelopment. The results of past studies on the impact of health and education spending on sustainable development has been contradictory and inclusive, whereas, little has been done to investigate the impact of the interaction between health and education spending on sustainable development in Nigeria. This study is carried out to investigate the moderating role of the interaction between government spending on health and education, on sustainable development in Nigeria within the period 1992 – 2021. This study also centers on two key objectives of the SDGs which are objectives 3 (good health and well-being) and 4 (quality education). With the notion that improved health care and education quality can be attained through adequate government spending on the health and education sector, this study evaluate the proportion of government spending on health and education from the total government expenditure, and how it translates to sustainable development in the country.

In the remaining parts of this study, relevant theories and studies are reviewed in literature review section; the method and technique of data analysis is discussed under methodology section; while results are presented and discussed in the results section; and the conclusion and policy implications section presents the summary and recommendations from the findings of this study.

2.0   Literature Review

2.1   Conceptual Review

The concepts of health expenditure and education expenditure are pivotal in the analysis of a nation's developmental trajectory. Both types of public spending play crucial roles in the formation of human capital, which is essential for sustainable economic growth and societal well-being. This review delves into the theoretical underpinnings, economic implications, and interrelations of health and education expenditures.

Government Spending on Health: Public health expenditure refers to the financial resources allocated by governments and public institutions towards the maintenance and improvement of public health. This expenditure encompasses a wide range of activities aimed at preventing disease, promoting health, and prolonging life among the population as a whole. From a welfare economics perspective, health spending is justified as it enhances overall societal welfare. Improved health outcomes lead to better quality of life and reduced inequalities.

Moreover, healthier populations are more productive, leading to higher economic output. Improved health could extend working years, reduce absenteeism, and increase workplace efficiency.

Public health expenditure encompasses a broad range of financial allocations aimed at promoting, protecting, and improving the health of the population. It includes spending on preventive and curative care, health infrastructure, workforce training, and research and development. Conceptually, it is viewed as an investment in public goods, a means to ensure equity and access, and a crucial component for strengthening health systems. Effective public health expenditure not only enhances individual health outcomes but also contributes significantly to the overall social and economic development of a nation.

Government Spending on Education: Public education expenditure refers to the financial resources allocated by governments and public institutions to support the education system. This expenditure is aimed at providing access to quality education for all individuals, enhancing educational infrastructure, and improving educational outcomes. Education is a critical component of human capital formation. It equips individuals with the knowledge and skills necessary for productive employment and innovation. Beyond private returns, education has substantial social returns, including reduced crime rates, improved civic participation, and enhanced societal cohesion. Education could contribute to economic growth by increasing labour productivity, fostering innovation, and facilitating the adoption of new technologies. In addition, education can reduce income inequality by providing individuals from diverse backgrounds with equal opportunities to improve their economic status. Enhanced access to education is a key driver of social mobility, enabling individuals to improve their socio-economic standing. Public education expenditure encompasses a broad range of financial allocations aimed at promoting access to quality education, enhancing educational infrastructure, and improving educational outcomes. It is viewed as an investment in human capital, a means to ensure equity and access, and a critical component for strengthening education systems. Effective public education expenditure not only contributes to individual learning and development but could also play a vital role in fostering economic growth, social cohesion, and overall societal well-being.

2.2   Theoretical Review

Government spending on health and education is widely recognized as a critical driver of sustainable development. Various economic theories provide a framework for understanding how these expenditures contribute to long-term economic growth, social stability, and environmental sustainability. Some of these theories includes the Endogenous Growth Theory and Keynesian Theory.

The Endogenous Growth Theory states that economic growth is primarily the result of endogenous and not external forces. Paul Romer and Robert Lucas (1994) is a key proponent of the endogenous growth model and argue that investment in human capital, innovation, and knowledge are significant contributors to economic growth. The theory contrasts with the neoclassical growth model, which claims that external factors such as technological progress, etc. are the main sources of economic growth. The Endogenous growth theory extends traditional growth theories by emphasizing the role of internal factors, particularly innovation and knowledge, in driving long-term economic growth. Based on the proposition of this theory, it could be argued that investments in education and health are crucial for fostering innovation and technological advancements, which are key drivers of endogenous growth. By focusing on internal factors like human capital and innovation, governments can achieve sustainable and self-sustaining economic growth. In this light, endogenous growth theory

provides a framework that explicitly recognizes the importance of innovation and knowledge creation in economic development.

The Keynesian Growth Model recognises the significant role of government intervention in the economy. Moreover, the Keynesian growth model emphasized the role of government particularly the use of fiscal measures through revenue generation and expenditure, in stabilizing the economy and achieving macroeconomic objectives. According to the Keynesian model, economic growth is driven by aggregate demand, which includes consumption, investment, government spending, and net exports. Government spending has a multiplier effect on the economy, meaning that an initial increase in expenditure leads to a greater overall increase in national income and output. The Keynesian model advocates for counter-cyclical fiscal policies, where the government increases spending during economic downturns to stimulate demand and reduce spending during booms to prevent overheating. Strategic public investment in sectors like health and education can stabilize the economy by maintaining demand and employment levels.

This study aims at exploring the individual impacts of government spending on health and education, and the interactive impact of the determining variables on sustainable development in Nigeria. The endogenous and Keynesian growth theories therefore fit into this study and adapted as the theoretical framework in the regard.

2.3   Empirical Review

Some past studies discovered that human capital development and investments impacts labour productivity. Some of these studies include the work of Ndjobo and Otabela (2023) who analysed the impact of the interaction between ICTs and human capital on income inequality in 89 developing countries over the period of 2000-2015. They employed the panel fixed effects instrumental variables technique and discovered that the interaction between ICTs and human capital reduces overall income inequality, and increases income shares of the poorest in relationship to the richest in developing countries. Similarly, Mehmood et al. (2022) investigated the impact of health on labour productivity in South Asia from 1991 to 2019, applying the panel OLS, fixed-effects, random effects and generalized method of moments discovered that health and education have positive and significant influence on labour productivity. Whereas, Chatterjee and Teame (2022) investigated the long-run impact of income inequality on health and education in African continent. Their study focused on 31 African countries and covered the period of 1980-2017, employing the VECM, FMOLS and DOLS estimation technique they found that income inequality adversely impacts both health and education in the long-run and short-run periods and that positive health and education environment can be instigated by the government will. Ugwu et al. (2020) assessed the relationship between health outcome and labour productivity in Nigeria between 1970 and 2018 using the ARDL approach and discovered that the variables of life expectancy rate, and literacy rate and gross domestic investment have a positive and significant relationship with labour productivity in Nigeria. In addition, Ohikhuare et al. (2022) examined the individual and interactive impacts of public health investment, human capital accumulation and financial opportunity, on labour productivity in West Africa from 1992 to 2020. Their findings show that expenditure on public health and human capital accumulation positively impacts labour productivity, while the interactions between public health investment and human capital accumulation, and that of human capital accumulation and financial opportunity positively impacts labour productivity both in the short-run and long-run analysis.

There have also been a few studies on the relationship between health, education and variables of development. El Tantawi et al. (2022) assessed the association of the interaction between unemployment and expenditure on health and education on income inequalities

among 11-15 years old school children for the period 2009 to 2019 and found that unemployment and expenditure on health and education mediated the association between income inequality. Moreso, Yusuf and Setiawan (2022), analysed the relationship between health and economic growth in Indonesia in the period 1985-2021 using the Engle-Granger ECM and causality model. Their results showed a bidirectional causality between healthcare expenditure and economic growth, and between human development index and economic growth, with a unilateral causality between mortality rate and economic growth in the observed country. Firdous et al. (2023) explored the nexus between economic growth, environmental degradation, and public health in Pakistan from 1972 to 2020 using OLS and discovered that economic growth positively impacts public health. Umaru (2011) examined the relationship between government expenditure on education and health on economic growth and development in Nigeria between 1977 and 2007 using the VAR cointegration model and discovered that expenditure on education and health have positive and significant impact on economic growth and development in Nigeria. Urhie et al. (2020) evaluated the nexus between economic growth, air pollution, government expenditure on health and health performance in Nigeria during the 1980-2017 period. Their findings revealed a positive and significant relationship between economic growth and air pollution in Nigeria, which invariably signifies that has the economy grows there is much tendency to experience negative health conditions. Surprisingly, their findings show that government expenditure on health significantly improves health condition in Nigeria during the observed period. Aberu and Lawal (2022) investigated the relationship between education and sustainable development in Nigeria from 1992 to 2021 using ARDL model and found that education has a significant negative relationship with sustainable development while population has positive and significant relationship with sustainable development in Nigeria. Ojike et al. (2021) assessed the nexus between education, health spending and sustainable development in Nigeria using the ARDL technique to co-integration. They proxied sustainable development with Sustainable Society Index and their findings revealed that government expenditure on health and education has positive and significant relationship with sustainable development in both the short-run and long-run in Nigeria.

It could be deduced from the above that, previous studies presents inconsistent findings on the impact of government health and education spending on economic growth and development. Perhaps, investigating the interaction of government health and education expenditure on sustainable development could contribute to body of existing knowledge. In the current study, attempt is made to evaluate the interaction between public expenditure on health and education on sustainable development in Nigeria. Here, the human development index (HDI) is used to proxy sustainable development. The HDI is a composite measurement of developmental variables consisting life expectancy at birth, adult literacy rate, combined gross enrolment ratio and per capita GDP. The value of HDI ranges from 0 to 1, where 0 depicts the worst quality of life scenario, while 1 represents the perfect living standard. Since the introduction of the HDI in 1990 by Meghnad Desai and Amartya Sen as a measure of average accomplishment, the United Nations Development Programme (UNDP) has been presenting it as the average measurement of human development, and been used as one of the quality of life yardstick to rank countries of the world. The HDI measures the state's capacity to create an enabling environment for the citizens to enjoy long, health and creative lives (HDI Report, 2022), and a low HDI is a threat to sustainable development. Using the HDI to represent sustainable development will reflect the extent to which health and education spending have actually improved the social welfare of the Nigerian citizens.

3.0   Methodology

Relying on both the endogenous and Keynesian growth models, this study adopts and modified the model of previous researchers in similar studies (Aberu & Lawal, 2022; Ohikhuare et al., 2022), and presented below:

$$SD = F (GH, GE, GH*GE, QG) \qquad (1)$$

Where SD represents sustainable development, F is the functional relationship, GH is government expenditure on health, GE is government expenditure on education, while QG represents quality of governance. Whereas, the nature of governance and institutional quality in economic development cannot be overrated (Keynes, 1936; North, 1990), hence, its inclusion in the model.

The model is specified in its explicit form to reflect the time series nature of the variables as below:

$$SD_t = F (GH_t, GE_t, GH*GE_t, QG_t) \qquad (2)$$

The model in its econometrics form is presented in equation (3)

$$SD_t = a_0 + a_1 GH_t + a_2 GE_t + a_3 GH*GE_t + a_4 QG_t + \varepsilon_t \qquad (3)$$

a_0 is constant; a_1, a_2, a_3, and a_4 are the coefficients of lung-run elasticities associated with the explanatory variables; ε is the error term; t is the period spanning 30years; while ε is the error term. The observation period 1992 – 2021 was selected based on data availability. The data description, notation, estimations and sources are presented in Table 1 below.

Table 1: *Variable Description and Sources*

Variables	Notation	Definition	Measurement	Source
Sustainable Development	SD	Human Development Index	index	UNDP
Government Expenditure on Health	GH	Percentage of government health spending of GDP	%	CBN & WDI
Government Expenditure on Education	GE	Percentage of government education spending of GDP	%	CBN & WDI
Quality of Governance	QG	i.Political Stability and Absence of Violence/Terrorism ii.Regulatory Quality iii.Rule of Law iv.Control of Corruption	index	ESG

UNDP: United Nations Development Programme; WDI: United Nations Development Programme; CBN: Central Bank of Nigeria and; ESG: Environment Social and Governance

Source: Authors' Compilation, 2023.

The annual time series data of the variables for the period of 1992 – 2021 were obtained from UNDP, the central bank of Nigeria (CBN) statistical bulletin, World Development Indicators, and Environment Social and Governance (ESG). From Table 1 above, Sustainable development (SD) is measured with the Human Development Index which measures social welfare using the indices of life expectancy at birth, adult literacy rate, combined gross enrolment ratio and per capita GDP. GH and GE represent total government expenditure on health and expenditure respectively, and are expressed in billion naira. QG is the quality of

governance which is measured using four dimensions including Political Stability and Absence of Violence/Terrorism, Regulatory Quality, Rule of Law, and Control of Corruption. The arithmetic mean of the dimensions was used to form the institutional quality index.

The a-prior expectation was that all explanatory variables will have a direct positive relationship with sustainable development in Nigeria. Therefore, the signs expected in the coefficient of the cointegration are as follows;

$$\alpha_1, \alpha_2, \alpha_3, \alpha_4 > 0$$

To control for outliers and ensure the variables are assessed within the same range of measurements, the variables are converted into the logarithm form. The new equation is presented below.

$$LSD_t = a_0 + a_1 LGH_t + a_2 LGE_t + a_3 LGH^*LGE_t + a_4 QG_t + \varepsilon_t \qquad (4)$$

The data used in this study was analysed using E-Views version 12. To proceed with the analysis, the stationary of the variables was tested using the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) test of unit roots. This is done to ascertain the condition at which each of the variable is stationary, which would inform the estimation technique to employ. Results are presented in the next section.

4.0   Results and Discussion

The trends of the data used in this study is displayed in Fig. 1 below. The data is for the period of 1992 – 2021 due to data availability.
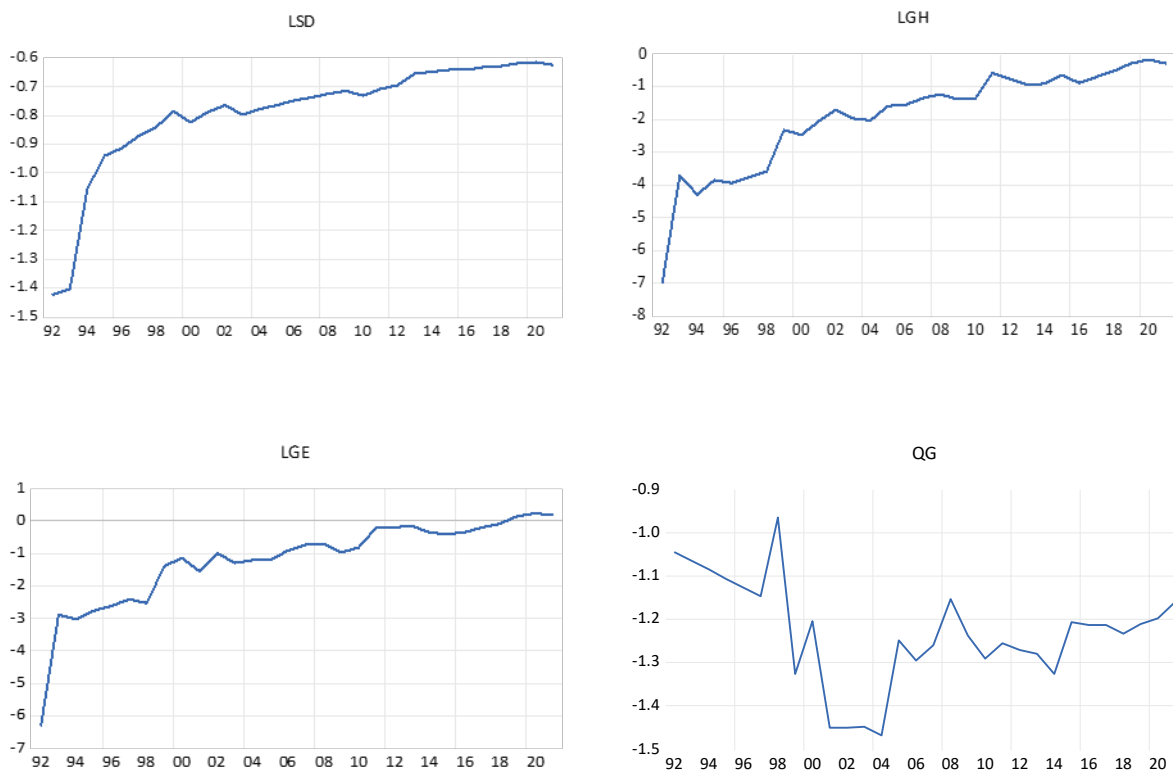

Fig. 1. Variables trend.

Source: Authors' computation (2023)

Table 2: *Descriptive Statistics.*

Variables	LSD_t	LGH_t	LGE_t	**LGH_t*LGE_t**	QG_t
Mean	-0.790345	-1.920696	-1.224088	6.034408	-1.231500
Median	-0.743402	-1.458534	-0.925106	2.134064	-1.223923
Maximum	-0.616186	-0.166921	0.256883	48.67160	-0.965011
Minimum	-1.422958	-6.976503	-6.313863	0.027863	-1.467567
Std. Dev.	0.199030	1.557629	1.369679	9.784809	0.122216
Skewness	-2.088230	-1.349464	-1.852260	2.987864	-0.176041
Kurtosis	7.092406	4.764064	7.343027	13.09625	2.886505
Jarque-Bera	42.73826	12.99517	40.73169	172.0546	0.171053
Probability	0.000000	0.001507	0.000000	0.000000	0.918029
Sum	-23.71035	-57.62088	-36.72265	181.0322	-36.94500
Sum Sq. Dev.	1.148776	70.36003	54.40457	2776.532	0.433162
Observations	30	30	30	30	30

Source: Authors' computation using E-views 12 (2023)

The descriptive statistics is presented in Table 2. The descriptive statistics shows the characteristics of the variables like the mean, maximum, minimum, standard deviation among others. The result of Jarque-Bera reflects the normal distribution of all variables used in the model. The Kurtosis value reveals the absence of outliers in the data, while the standard deviation values show existence of variability in the variables, sufficient to explain interaction between the independent variables and the dependent variable.

To proceed with the analysis, the stationary of the variables was tested using the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) test of unit roots. The unit root test was conducted to determine if there is trend in the variables used in the model. The ADF and PP tests is necessary because analyzing time series data that is non-stationary will provide inaccurate findings (Gujarati, 2003). The result of the ADF and PP tests is presented in Table 3.

Table 3: *Unit Root Test results.*

Variables	ADF		PP	
	Level	First difference	Level	First difference
LSD_t	-2.489964(0.129)	-3.985654(0.005)***	-6.443944(0.000)***	-3.997093(0.005)***
LGH_t	-4.095584(0.004)***	-13.95346(0.000)***	-4.230762(0.002)***	-13.95346(0.000)***
LGE_t	-5.408805(0.000)***	-5.178791(0.000)***	-5.159594(0.000)***	-16.96422(0.000)***
LGH_t*LGE_t	-3.090636(0.041)**	-5.357785(0.000)***	-9.789874(0.000)***	-32.90305(0.000)***
QG_t	-2.586506(0.108)	-8.835079(0.000)***	-2.795035(0.071)	-8.514352(0.000)***

*** indicates 1% significance level while ** is 5% significance level.
Source: Authors' computation using E-views 12 (2023)

From the unit root tests results, it was revealed that the variable of quality of governance was stationary at first difference, that is, I(1), while other variables were stationary at level, that is I(0). This result meets the requirement to adopt the autoregressive distributed lag (ARDL) approach to co-integration. Hence, the ARDL was used to establish the long-run co-integration among the variables and the result is presented in Table 4 below:

Table 4: *ARDL Cointegration Result (bound tests).*

$LSD_t = F (LGH_t, LGE_t, LGH_t*LGE_t, QG_t)$	Sig. level	Critical values for bound test: Case III	
F-statistics		Lower bounds	Upper bounds

(61.06528)***	1% level	3.29	4.37
Lag length	5% level	2.56	3.49
(1,1,1,1,1)	10% level	2.2	3.09

**Indicates 1% significance level
Source: Authors' computation using E-views 12 (2023)

The results from the cointegration test reveal that the value of the F-statistic is 61.06528 which is greater than both the lower bound value of 2.56 and upper bound value of 3.49 at 1% significance level. Hence, a long-run association exist between the explanatory variables and dependent variable. That is, government spending on both health and education have a long-run relationship with sustainable development in Nigeria. With the ARDL cointegration test result, it becomes imperative to carry out the analysis of but short-run and long-run estimates of the explanatory variables coefficients. This was done by estimating the autoregressive distributed lag (ARDL) and error correction model (ECM).

Table 5: *Estimated Long-run and Short-run results.*

Dependent variable = LSD_t		
	Long-run results	Short-run results
Variables	Statistic(p value)	Statistic(p value)
LGH_t	0.063363 (0.203)	0.040109 (0.008)
LGE_t	0.038618 (0.542)	0.045639 (0.016)
LGH_t*LGH_t	0.012766 (0.326)	0.021032 (0.000)
QG_t	0.139698 (0.137)	-0.032215 (0.306)
Constant	-0.431245 (0.001)	-0.257093 (0.000)
ECM (-1)		-0.596165 (0.000)

Source: Authors' computation using E-views 12 (2023)

The result of the long-run and short-run analysis is depicted in Table 5 above. From the short-run result, government expenditure on health, education and the interaction between the two explanatory variables have a positive and significant association with sustainable development in Nigeria, while the variable of quality of governance has no significant association with sustainable development. This is in-line with findings some previous studies (Aberu & Lawal, 2022; Ojike et al., 2021). The coefficient of health expenditure and education expenditure are 0.0401 and 0.0456 respectively, while the coefficient of the mediating variable is 0.0210. This means that 1% increase in government spending on health and education as a percentage of GDP will lead to 0.04% and 0.045% improvement in sustainable development in Nigeria, respectively. On the other hand, quality of governance recorded a negative and non-significant value of -0.0322. This implies that the quality of governance does not impact sustainable development in Nigeria. Moreso, the ECM value (-0.5962) is significant, negative and less than, which implies that, if there is disequilibrium in the system, it takes an average speed of about 59.62% to adjust from the short run to the long run.

From the long-run results, all the regressors recorded a positive but insignificant association with sustainable development in Nigeria. That is, none of the identified variables are sufficient to explain variation in sustainable development in the long-run in Nigeria. This findings is not in conformity with previous studies. This reveals that, while health and education expenditures are critical for sustainable development, their long-run effectiveness in Nigeria can be significantly undermined by macroeconomic factors. This could be inefficient fund allocation, inadequate infrastructure, poor service quality, political and economic instability, rapid population growth, policy discontinuity, cultural barriers, and environmental challenges. Addressing these issues requires comprehensive and integrated policy

approaches, improved governance, and sustained efforts to enhance the quality and accessibility of health and education services across the country.

Afterwards, post-estimation tests were carried out to establish the reliability and stability of the results generated. This includes the estimation of the tests for serial correlation, normality and heteroscedasticity. As shown in Table 6, the model passed all the three tests at 5% significant level. Moreso, the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of square of recursive residuals (CUSUM of squares) were plotted to ascertain the stability and consistency of the model. As displayed in Fig 2 and 3 below, the plots of the statistics for both CUSUM and CUSUM of squares are within the critical bounds at 5% significance level.

Table 6: *Post-Estimation tests results.*

	F-statistics	*P* values
Normality	1.460467	(0.4818)
Serial correlation	0.723840	(0.4992)
Heteroscedasticity	0.688107	(0.7112)

Source: Authors' computation using E-views 12 (2023)
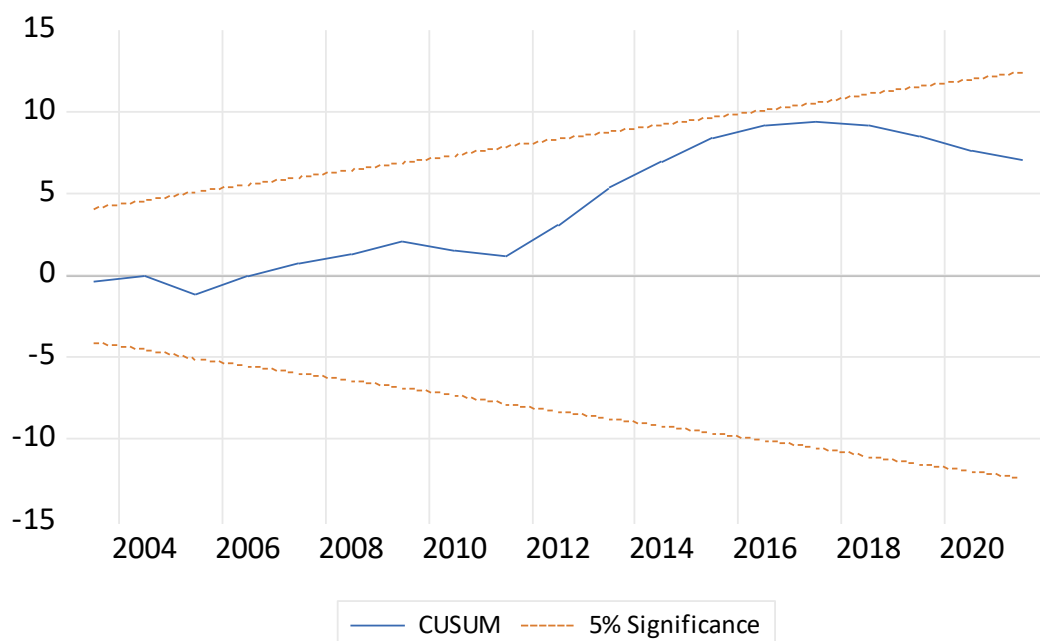
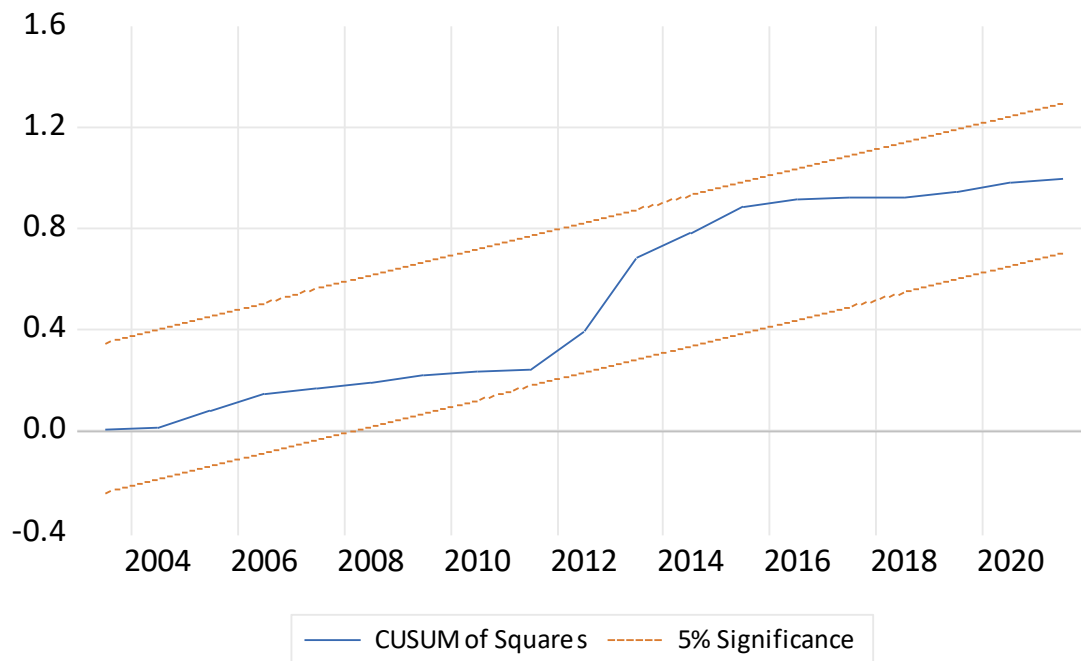**Fig. 2**: Plot of cumulative sum of recursive residuals

Fig. 3: Plot of cumulative sum of squares of recursive residuals

5.0   Conclusion and Policy Recommendations

In this study, the relationship between the interaction of health and education expenditure were assessed on sustainable development in Nigeria over the period of 1992 to 2021. The ARDL approach to integration was used to establish the relationship among the variables and the results suggest a long-run relationship. The ECM approach for short-run analysis revealed that government expenditure on both health and education influences sustainable development in Nigeria, individually and jointly, whereas, the quality of governance recorded a negative and insignificant association with sustainable development in Nigeria over the observed period. However, the long-run estimates shows that the variables of government expenditure on health and education, as well as quality of governance do not have a long-run association with sustainable development in Nigeria. This implies more efforts need be put in place by the government in policy formulation and implementation, that would ensure the long-term benefits of the current educational and health service delivery in the country.

Based on the findings of this study the following were recommended:

i.   The federal government should increase fund allocated to the health and education sector; make available required tools, equipment and other facilities needed for provision of improved healthcare and educational services; as well as increase the remuneration of employees (teachers and health care practitioners), to prevent brain drain. This would enhance improvement in the respective sectors and aid in sustainable development of the country.

ii.   Continuing medical education should be promoted for health care providers in public and private health centers, in order to expose them to contemporary health issues, equipment and treatment regimens.

iii.   The government should implement more effective policies aimed at eradicating corruption which weakens the effectiveness of the political institution; the government should also tighten its regulatory control and foster policies aimed at promoting the rule of law.

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