

#### GOVERNMENT EXPENDITURE AND ITS EFFECT ON ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS IN NIGERIA

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**Copyright** © 2020 The Author(s). This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited. **ABSTRACT:** This study examined government expenditure and its effect on achieving the Sustainable Development Goals in Nigeria. This was undertaken given that Nigeria is a democratic underdeveloped economy seeking sustainable development. The Millennium Development Goals, the predecessor of SDGs, did not achieve much and now there are the Sustainable Development Goals to finance in the face of a volatile mono-economy, corruption, weak budgetary system, decaying infrastructure and security challenges. The specific objective of this study is to analyze the structure and trend of government expenditure from 1986 to 2020. The study adopted an ex-post-facto research design. Secondary data was obtained from publications of the Central Bank of Nigeria, National Bureau of Statistics, Transparency International and the World Bank. Descriptive and analytical statistics were used for analysis. The findings of the study revealed that recurrent expenditure outlay is higher than capital expenditure, the economic and social service sectors expenditure is inadequate to foster any meaningful sustainable development and, corruption is rife in the country. Hence, the study concludes that there are indications that the SDGs just like its predecessors, the MDGs, is on the verge of achieving poor outcomes if urgent measures are not taken to correct this. So, the study recommends that the structure of government expenditure should be reversed and made adequate; environmental sector expenditure should be disaggregated for easy inference to ensure that the issues of environmental degradation are dealt with; and agencies such as the Independent Corrupt Practices Commission, Economic and Financial Crimes Commission, the Nigerian Police and other security agencies should be strengthened.

**KEYWORDS**: Government expenditure, Sustainable Development Goals, Millennium Development Goals, Economic Development.

JEL Classification code: H50, O10



## INTRODUCTION

In September 2015, Heads of State and Government of 193 countries agreed to set the world on a path towards sustainable development through the adoption of the 2030 Agenda for Sustainable Development. This agenda includes 17 Sustainable Development Goals (SDGs) with 169 targets, which set out quantitative objectives across the social, economic, and environmental dimensions of sustainable development, all to be achieved by 2030. The goals provide a framework for shared action "for people, planet and prosperity". Building on the accomplishments of its predecessor, the Millennium Development Goals (MDGs), the SDGs addresses the most pressing global challenges of our time, calling upon collaborative partnerships across and between countries to balance the three dimensions of sustainable development—economic viability, social inclusion and environmental sustainability (FAO, 2015).

The Millennium Development Goals (MDGs) provided 8 sets of international goals and targets to drive human development progress between 2000 and 2015. Nigeria was an international leader on the MDGs, encouraging implementation and introducing new policies. However, progress in the country was mixed and many goals and targets remained unmet (Olabode et al., 2014). The Sustainable Development Goals (SDGs) provide a much more ambitious international framework for driving progress between 2016 and 2030. The jump from the MDGs to the SDGs was not simply a question of extending the timeline. New goals were added, entirely new sectors were introduced, and the SDGs now also specify how goals would be achieved, not just outcome goals. An emphasis on rights, justice, social inclusion, sustainability, access to technology and reducing inequality placed new demands on policy at all stages—in planning, implementation and monitoring.

Achieving the SDGs is universal and no one should be left behind (as described in Goal 1: to eradicate poverty). Luckily, Nigeria is not starting from scratch as the experiences of the MDGs, if properly leveraged, should provide the foundation for achieving the SDGs. Also, the various policies of the Nigerian Government, including the NEEDS I and II, the National Vision 20:2020, the Transformation Agenda and the Change mantra were all geared towards ensuring sustainable development in the country. But, current Human Development Indicators on Nigeria showed that like other developing economies, the country is still being confronted with challenges in its development stride even after the MDGs and all the other efforts to improve the quality of life of its citizens for sustainable development.

Government expenditure is an exogenous variable according to Keynes, which can be applied as a policy measure to stimulate growth. Wagner on the other hand argued that public expenditure is an endogenous variable or an outcome, not a cause of growth in national income. The principal view between scholars as well as public policymakers, however, is that government can contribute significantly in increasing the level of economic growth through fiscal policy as an essential instrument because it enables them to intervene in realizing macroeconomic agenda and the SDGs. The achievement of this fiscal policy objective however depends on the ability of the government to allocate resources efficiently through the budget and expenditure process to full implementation and monitoring. This has become a bother in Nigeria. Idenyi, Obinna, Promise and Ogbonnaya (2016) alleged that despite the huge government expenditure on the agricultural, health, road construction, power, telecommunication and transportation sectors, it is still evident that this rising expenditure is yet to translate into economic growth and manifest in increased socio-economic inclusions and



environmental sustainability. This development has attracted interest and empirical examination of the impact of government expenditure, not just on economic growth, but also in achieving the sustainable development goals in Nigeria.

There are researches on the effect of government expenditure and the attainment of sustainable development goals in Nigeria and the outcome of this few empirical research are conflicting. Nigeria had a remarkable economic growth between 1999 and 2014, which was in the MDGs period, but this was not reflected in combating the problem of poverty which happens to be the number one goal of MDGs, and now there is the SDGs. At the end of the MDGs period in 2015, there were several unsupported claims that Nigeria achieved most of the goals ahead of the deadline (Akinlabi, Jegede & Kehinde, 2011). But the United Nations report on MDGs in Nigeria contradicts this assertion. These were not unexpected, as a review of the MDGs targets by the end of 2015. Nigeria, like other sub-Saharan African nations, has failed to meet any of the targets due to a multiplicity of health system–related problems, political governance and other systemic challenges (Amassoma, Nwosa & Ajisafe, 2011).

Government Spending Watch (2015) reported that globally, government expenditure fell onethird short of MDG needs, and the SDGs is here requiring at least US\$1.5 trillion extra a year in public finance. This means that a total of US\$22.5 trillion in additional finance will be needed over the lifetime of the SDGs. If this is not achieved, the SDGs may well be dead at birth. Also, succeeding the Millennium Development Goals (MDGs), the 2030 Agenda is interlinked and indivisible—no one goal is separate from the others, and each call for comprehensive and participatory approaches. The sheer weight of indicators represents an immense challenge for countries like Nigeria. It is four times greater in number than for the MDGs and many of the indicators are disaggregated to reflect the 2030 Agenda's guiding principle of "leaving no one behind".

Hence, the objective of this study is to examine the structure and trend of government expenditure from 1986 to 2000, that is the pre-MDGs period and from 2001 to 2015, the period of MDGs to 2016, to 2020, the early period of the SDGs, and the implications of these for government expenditure towards achieving the SDGs that is already in about the 5th year of implementation. The paper proceeds as follows: section 2 reviews literature; section 3 presents the methodology of the study; section 4 deals with data presentation and analysis; section 5 concludes and makes valid recommendations.

# LITERATURE REVIEW

# **Government Expenditure**

Government expenditure is the expenditure incurred by public authorities like central, state and local governments to satisfy the collective social wants of the people. Keynes (1936) advocated the role of government expenditure in the determination of the level of income and its distribution. In developing countries, government expenditure policy not only accelerates economic growth and promotes employment opportunities, it also plays a useful role in reducing poverty and inequalities, which is the basis for the policy of sustainable development goals. According to Bhatia (2006), public expenditure refers to the expenses, which the government incur for its maintenance and also for the society and the economy as a whole.



Anyafo (1996) wrote that government expenditure is the total, in cash terms of the federal, state and local government spending plus financial transfers to the parastatals at the three levels of government.

Government expenditure is traditionally classified into recurrent and capital expenditure. Recurrent expenditures are current or consumption expenditures incurred in civil administration, defence forces, public health and education, and maintenance of government machinery. This type of expenditure is of a recurring type which is incurred year after year. On the other hand, capital expenditures are incurred in building durable assets like highways, multipurpose dams, irrigation projects, buying machinery and equipment. They are nonrecurring types of expenditures in the form of capital investments. Such expenditures are expected to improve the productive capacity of the economy for sustainable growth.

#### Sustainable Development Goals (SDGs)

The Brundtland Commission Report entitled Our Common Future (1987), defined sustainable development as "development, which meets the needs of the present without compromising the ability of future generations to meet their own needs". In response to the Brundtland Report, the UN convened a Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in June 1992 (Earth Summit). The summit put the concept of sustainable development on the national and international policy agendas with a clear message that "without better environmental stewardship, the development will be undermined and without accelerated development in countries, environmental policies will fail" (Serageldin, 1994).

Schmidt-Traub (2015) reported the UN needs assessment framework translates the 17 SDGs into eight "SDG investment areas": (i) health, (ii) education, (iii) social protection, (iv) food security and sustainable agriculture, (v) infrastructure—including (a) energy access and low-carbon energy infrastructure, (b) water and sanitation, (c) transport infrastructure, and (d) telecommunications infrastructure—(vi) ecosystem services and biodiversity, (vii) data for the SDGs, and (viii) emergency response and humanitarian work.

#### **Theoretical Framework**

Economists are divided along the ideological lines of Wagner's hypothesis and Keynesian theory and the contention has remained whether government expenditure contributes to the growth or hinders economic growth. Wagner asserted that causality runs from national income to government expenditure while Keynes maintained that causality runs from government expenditure to national income. The principal view between scholars as well as public policymakers, however, is that government can contribute significantly to increasing the level of economic growth. This is in line with the Keynesian theory of public expenditure. The achievement of these policy objectives however depends on the ability of the government to allocate its resources efficiently through its expenditure and the prevailing conditions like corruption. It is in the light of this that Rose-Ackerman (1978) and Chetywynd, Chetywnd and Spector (2003) propounded theories of corruption, namely economic transmission theory and the governance theory of corruption (Lambsdorff, 2007). These theories explained the coexistence and consequences of corruption, economic growth and macroeconomic development, highlighting the linkages and outcomes in the light of institutions, economic and governance variables. They alleged that corruption that reduces governance capacity will also inflict critical collateral damage, reduce public trust in government institutions and the incentive to engage



in productive economic activities will decline, leading to public distrust of government programmes, thereby encouraging anarchy, crime and national insecurity that frustrates macroeconomic development.

With regards to empirics, various works have been done on government expenditure and economic growth in Nigeria. Some of these are Abu and Abdullahi (2010); Edame (2014); Chude and Chude (2013); Robinson, Eravwoke and Ukavwe (2014); Oyinlola and Akinnibosun (2013); Amassoma, Nwosa and Ajisafe (2011); and a host of others. But, only a few on sustainable development goals like this study that did backcasting to evaluate a preceding programme (MDGs) and how this can impact the SDGs for successful outcomes.

## METHODOLOGY

The study adopts an ex-post facto research design that sources secondary data from the Central Bank of Nigeria Annual Statistical bulletin, the National Bureau of Statistics Abstract of Statistics, Transparency International and World Bank Development Indicators. The kind of annual data required for the study includes the following: capital expenditure (CEX), revenue expenditure (REX), economic sector expenditure (ECO), social services sector expenditure (SOC), environmental sector proxy by carbon-dioxide emission (CO2), total government expenditure (TGE), corruption perception index and gross domestic product (GDP). To avoid spurious regression analysis, the Augmented Dickey-Fuller (ADF) unit root test was used to determine the level of stationarity of the time-series data. And the Chow breakpoint test was conducted to determine whether there was a change in the trend of government expenditure in the period of the study. Finally, Descriptive statistics were used for the analysis. This involved doing a backcasting to analyze the government expenditure on a preceding programme (MDGs) and how this will impact the SDGs for successful outcomes.

### **Unit Root Test**

The test of stationarity is important because time series data may not be stationary; in that case, the problem of spurious results will arise (Granger & Newbold, 1974). The study employed the Augmented Dickey-Fuller (ADF) unit root test on the variables in the study. The Dickey-Fuller (DF) unit root test is based on the regression equation given as:

$$\Delta Y_t = \beta Y_{t-1} + U_{ti} U_t \sim \mu (0, \delta), Y_0 = 0$$

which can be written as  $Y_t = (1 + \beta)Y_{t-1} + Ut$  - - - eqn 1

where  $\Delta Y_t$  is the first difference in the dependent variable,  $U_t$  is the error term and  $\mu$  (O, $\delta$ ) are the notations for the basic assumptions concerning the error term (U<sub>t</sub>) denoting randomness, normally distributed, zero mean and constant variance.



#### **Chow Breakpoint Test**

The Chow breakpoint test tests whether there is a structural change in all of the equation parameters. However, if the equation is linear, it allows you to test whether there was a structural change in the subset of the parameters. To carry out the test, we partition the data into two subsamples. In this case, it is assumed that the Gross Domestic Product and Government expenditure relation may have changed after the introduction of the Millennium Development Goals (MDGs) in 2000, so the sample is divided into two periods: 1986–2000, 2001–2015 and the Chow test was computed in two possible regressions:

Time period 1986–2000: $Y_t = \lambda_1 + \lambda_2 X t + u_1 t$ $n_1 = 15$	-	-	- eqn. 2
Time period 2001–2015: $Y_t = \gamma_1 + \gamma_2 X_t + u_2 t \ n_2 = 16$	-	-	- eqn. 3
Time period 1986–2015: $Y_t = \alpha_1 + \alpha_2 X_t + u_t  n = (n_1 + n_2) = 31$	-	-	- eqn. 4

This Chow test was estimated under the null hypothesis that the regressions are statistically the same (i.e., no structural change or break).

#### DATA PRESENTATION AND DISCUSSION OF FINDINGS

#### **Unit Root Test**

The unit root was used to examine the stationarity of time series data; the ADF test is employed given that the model is linear. It is important because it enhances the validity of results and is also a prerequisite for further analytical tools. At levels, the time series data were not stationary as shown in the table below, hence the need for difference. The full result of the stationarity test is presented in table 1 below:

<b>X</b> 7 • 1 1			0
Variables	ADF Test	5% Critical	Or
	Levels	Value	inte

Table 1: Stationarity test result

REX -1.86 -2.96 NS -5.58 I(   CEX -1.28 -2.96 NS -6.91 I(   TGE -0.75 -2.96 NS -9.46 I(   ECO -1.28 -2.96 NS -5.54 I(   SOC -0.60 -2.96 NS -4.04 I(   CO2 -1.21 -2.96 NS -5.92 I(   CPI -0.55 -2.96 NS -7.24 1(	Variables	ADF Test Levels	5% Critical Value	Order of integration	ADF test 1 <sup>st</sup> Difference	Order of Integration
CEX -1.28 -2.96 NS -6.91 I(   TGE -0.75 -2.96 NS -9.46 I(   ECO -1.28 -2.96 NS -5.54 I(   SOC -0.60 -2.96 NS -4.04 I(   CO2 -1.21 -2.96 NS -5.92 I(   CPI -0.55 -2.96 NS -7.24 1(	REX	-1.86	-2.96	NS	-5.58	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
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ECO-1.28-2.96NS-5.54I(SOC-0.60-2.96NS-4.04I(CO2-1.21-2.96NS-5.92I(CPI-0.55-2.96NS-7.241(	TGE	-0.75	-2.96	NS	-9.46	I(1)
SOC -0.60 -2.96 NS -4.04 I(   CO2 -1.21 -2.96 NS -5.92 I(   CPI -0.55 -2.96 NS -7.24 1(	ECO	-1.28	-2.96	NS	-5.54	I(1)
CO2-1.21-2.96NS-5.92I(CPI-0.55-2.96NS-7.241(	SOC	-0.60	-2.96	NS	-4.04	I(1)
<b>CPI</b> -0.55 -2.96 NS -7.24 1(	CO2	-1.21	-2.96	NS	-5.92	I(1)
	CPI	-0.55	-2.96	NS	-7.24	1(1)

Source: Author's Compilation from E-views 9.0 (October 2021)

NS: Not stationary



The result revealed that all the variables are stationary only at 1<sup>t</sup>st difference 1(1). This is substantiated by the ADF test statistic in comparison to the critical values, with the former greater than the latter (taking absolute values) at a 5% significant level.

### **Chow Breakpoint Test**

The Chow breakpoint test tests whether there is a structural change in all of the equation parameters. The study chose a date that is significant to this study, 2000, the year the Millennium Development Goals (MDGs) commenced.

Table 2: Chow's breakpoint test result

Test	Value	Degree of freedom	Probability
F-Statistic	0.7513	8, 15	0.6483
Loglikelihood Ratio	10.446	8	0.2351
Wald test	6.0108	8	0.6460

Source: Author's Computation (October 2021)

From table 2, we found that for 8 and 15 degrees of freedom, the 5 per cent critical F value is 2.96, while the F statistic is 0.7513. Therefore, the probability of obtaining an F value of as much as or greater than 0.7513 is much greater than the 5 percent significant level; the Chow test, therefore, seems to support that the parameters for REX, CEX, TGE, ECO, SOC, CO<sub>2</sub> and CPI have not undergone any structural change in Nigeria over the period 1986–2020. This necessitated a further investigation into the structure of the trend of government expenditure for the period of the study.

#### **Descriptive Analysis**

# Trend of Recurrent Expenditure and Capital Expenditure in Nigeria (1986–2000)

In 1986, at the commencement of the Structural Adjustment Programme (SAP), Nigeria started striving for faster and more inclusive economic growth and development through creating an enabling socio-economic environment. In the context of traditional economics, the country spent the sum of N8.53 billion in capital expenditure, an amount that is 10% higher than the recurrent expenditure of N7.70 billion for that year. This trend was reversed immediately in 1987 when CEX was only N6.37 billion against the N15.65 billion recurrent expenditure, a difference of about 145%. This trend continued and was much worse in 1993 at 150% when REX was N136.73 and CEX was a paltry N54.5 billion. This indicated that the country was a consuming nation with not much meaningful investment in infrastructure necessary for sustainable development. It was in 1996, which was a decade after, that CEX (N212.93 billion) was higher than REX at N124.49 billion with a difference of 71%. However, this was shortlived as in the year 2000 (the year of the commencement of the MDGs), REX of N461.6 billion was higher than CEX which was N239.45 billion by almost 100%. The implication of this is that Nigeria in the period 1986-2000 before MDGs expended more on consumables than investment; hence, the country lacked the necessary infrastructure necessary to spur economic growth and sustainable development. Also, the mean of REX for the period was N128.20 billion that was higher than that of CEX (N127.07 billion).



At the commencement of the MDGs, expenditure in 2000/2001, the pattern of government expenditure did not change, rather it worsened. All through the period of the implementation of MDGs (2001–2015), REX was higher than CEX such that the average of REX was N2,282.32 billion and that of CEX was N707.49 billion, which is a difference of 222.6%. This pattern of expenditure has continued in the early period (2016–2020) of the implementation of the SDGs. This is shown in figure 1 below. CEX which is the basis for long term sustainable development was worse off in the MDGs years than even the years preceding it. The implication is that Nigeria will not achieve the expected outcomes of the SDGs. Hence, these patterns of expenditure that favour REX against CEX must be discarded for a pattern that favours investment in critical development infrastructure to ensure that Sustainable Development Goals (SDGs) is achieved. While capital expenditure has a lasting impact on the economy and helps provide a more efficient, productive economy, recurrent expenditure doesn't have such a lasting impact.



Figure 1: Bar Chart Showing Recurrent Expenditure and Capital Expenditure (1986– 2020)

Source: Authors Computation using Microsoft Excel

#### Trend of Economic and Social Government Expenditure, 1986–2016

In 1986, government expenditure on the economic sector of the economy was N1.38 billion and that of the social sector was N1.13 billion, which are 8.5% and 6.9% of total government expenditure (TGE) respectively for that year. The government expenditure is tilted in favour of the administrative sector which will not contribute as much as these two sectors in fostering sustainable development in the economy given the nature of the expenditure outlay. The economic sector in 1987 had N3.35 billion (12% of TGE) which was maintained in 1988 and this increased to N9.35 billion (13% of TGE) in 1989 before declining in 1990, maintaining its lowest figure of 5.84% of TGE in 1992. It further increased to N26.09 billion (13.6% of TGE) in 1993 and attained its highest growth of the period 1986–2000 in the year 1997 with N175.81



billion (53.5% of TGE). Afterwards, it witnessed continuous decline so much it was only N140.1 billion (19.9% of TGE) in 2000. The consequence of this is that economic empowerment was minimal as economic growth was also minimal. It was in this economic condition that MDGs commenced in Nigeria.

The highest government expenditure growth of 30.7% of TGE for the period of MDGs (N312.77 billion) was expended at this point. It declined to N268.28 billion (26% of TGE) immediately afterwards in 2002 and this free fall continued up to 2005 when economic sector expenditure grew to N329.34 billion (18% of TGE) from the 2004 figure of N226.5 billion (15.82% of TGE). Hence, the period of the implementation programme never attained the pre-MDGs highs of the period of 1997 to 1999 where it grew to 53.5% of TGE and 43.3% of TGE respectively. Even at the end of the MDGs that heralded the entry of the SDGs programme, it was merely at N624.11 billion (12% of TGE) and N519.01 billion (10% of TGE) respectively, thereby presenting a weak base for the commencement of MDGs.

Given that the economic sector is the empowerment sector that creates growth and development, and its expenditure during the pre-MDGs period is higher than in the MDGs periods, this is worrisome. This is more so, given the continued decline for MDGs into the SDGs period as shown in figure 2. This will not engender sustainable development, so efforts must be made to provide an enabling economic environment to encourage investment in the economic sector for sustainable development. The social sector in 1986 had an expenditure of N1.13 billion (6.97% of TGE) which declined quickly to N0.92 billion (4.1% of TGE) in 1987. This improved to N3.84 billion (13.86% of TGE) and N6.07 billion (14% of TGE) in 1988 and 1989 respectively. These were the highest expenditure outlay for this sector before the commencement of the MDGs programme. In 1990, social sector expenditure declined to N5.5 billion (9% of TGE) which was maintained in six of the remaining periods before MDGs. The expenditure for the rest of the period witnessed lower percentage growth, with the lowest in 1992 at N3.47 billion (3.7% of TGE). Ironically, in 2000, when the MDGs programmes commenced, it immediately leapt to N112.76 billion (16% of TGE) from the 1999 figure of N88.62 billion (9.3% of TGE) as shown in figure 2.

Thus, it can be seen that the case of social inclusion was not achieved in the years before the commencement of the MDGs. Perhaps, this was why in the period of the MDGs, unlike the low trend witnessed in the economic sector expenditure, the social sector witnessed improved expenditure averages than that of the pre-MDGs period. It was double digits percentage growth all through the period with the highest level achieved in 2012 and 2013 when expenditure were N887.46 billion and N998.75 billion respectively (19.2% of total government expenditure). Although there was an improvement in expenditure to the sector, it was minimal to achieve any meaningful goal of social inclusion and this may not change soon as, since the end of MDGs in 2015, we have witnessed declines in expenditure to N890.6 billion (17.8% of TGE) and N861.12 billion (16% of TGE) in 2015 and 2016 respectively. Although there were periods of increases in the early periods of the implementation of the SDGs, the expenditure outlay returned to a decline in 2019 and 2020 respectively.

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Figure 2: Bar Chart Showing Expenditure on Economic Sector, Social Sector, and Total Government Expenditure (1986–2020)

Source: Authors Computation using Microsoft Excel

#### **Environmental Consideration**

Environmental sector expenditure items are aggregated in Nigeria such that obtaining disaggregated data is difficult and often inconsistent, so the study proxies environmental sector expenditure with carbon dioxide (CO<sub>2</sub>) emission to make inferences about the impact of this expenditure. In 1986, carbon dioxide emission in Nigeria was at 73,505.02 kilo tonnes (KT). Shortly afterwards, in 1987, it declined to 59,343.06 KT, a decline of 19%. But in 1988, it increased to 70,747.43 KT effectively wiping out the progress made the previous year. In 1989, a decline to 42,441.86 KT (40%) was maintained for the next three years up till 1992, when it worsened to 64,883.9 KT (30%). This was reversed in 1994 to 46,658.91 KT and subsequently to its lowest for the pre-MDGs period at 34,917.17 KT achieved in 1995. Then from 1996–1999, it maintained an average of 41,395.85 KT. Ironically, in 2000, carbon dioxide emission increased drastically to 79,181.53 metric tonnes (76.7%) from 44,788.74KT in 1999.

This was the environmental condition when the MDGs programme was inaugurated. It is expected that with the commencement of MDGs, there will be a drastic decline in environmental degradation but alas, the year 2000 was the least in carbon dioxide emission all through the MDGs period, but for 71,788.86 KT achieved in 2009. The worst was in 2005 when CO<sub>2</sub> emission was 104,696.52 KT. The range for the period was 71,788.86 KT in 2009 to 104,696.52 KT, averaging 92,763.33 KT, far higher than the pre-MDGs average of 52,529.78 KT by 76.6%. This is a clear indication that environmental conditions worsened during the MDGs and SDGs periods and expenditure was ineffective in curbing emission or as others suggested, shrouded in aggregation to cover up for the possible corruption in the system.



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Figure 3: Bar Chart Showing Carbon Dioxide Emission in Nigeria (1986–2020)

Source: Authors Computation using Microsoft Excel

# **Trend of Corruption**

The analysis made above necessitated the examination of the issue of corruption in government expenditure in Nigeria as have been mentioned in various studies such as Nageri, Umar and Abdul (2013) and Ogbeidi (2012). The study examined this for the period 1986–2000, 2001–2015 and 2016–2020 as shown in figure 4. According to the data obtained from transparency, the international corruption perception index over various years was extrapolated for the year 1986–1993. In 1986, corruption was at a 1.1 level in Nigeria, and it remained within that range till 1993 when it went to 1.21, an indication of the deteriorating level of accountability and transparency in government expenditure. It continued to decline further up to 1997 when it hit the lowest value of 1.0, which was the least ever attained by Nigeria through the period of this study 1986–2020. During the period of the MDGs, it was only at the commencement of the goals in 2001 that the country attained a low figure equivalent to the pre-MDGs period. Despite the efforts at curbing corruption, data obtained showed a rapid decline from 1.6 in 2002 to 1.9 in 20059 and subsequently worsened from 2.2 in 2006 to 2.6 and 2.7 in 2015 and 2016 respectively when the MDGs programme transited to the SDGs. The SDGs period witnessed corruption rise to 2.8 before declining subsequently to 2.7, 2.6 and 2.5 in 2016–2020.

The implication of corruption for government expenditure is so severe that given a corrupt environment, nothing thrives and sustainable development will be a mirage. On average, corruption in the pre-MDGs period stood at an index of 1.18 and for the MDGs period, it stood at 2.2, a growth of 86% indicating that corruption almost doubled during the period, before the recent slow declines.

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Figure 4: Bar Chart Showing Corruption Perception Index in Nigeria (1986–2016)

Source: Authors Computation using Microsoft Excel

## CONCLUSION AND RECOMMENDATIONS

The trend of government expenditure for the period before the commencement of MDGs was worrisome as the trend of REX was much higher than CEX throughout the period up till 1996 when CEX outlay was higher and this was overturned by REX in 2000 and remained so to the end of that period. With the commencement of the MDGs in 2000, it was expected that this trend would be reversed, instead, it worsened as all through this period REX outlay was higher than CEX, which should be the building block for achieving the major investment goals for the MDGs and subsequently the SDGs. So, it can be concluded that the current state of the Nigerian economy could be partly linked to the nature of the government expenditure. For a developing nation, such as Nigeria, CEX particularly in capital projects or infrastructural development ought to constitute a significant proportion of total government expenditure to lay the foundation for economic growth and sustainable development, but this has not been the case in Nigeria.

In terms of sectoral expenditure in the economy, the economic and social services sectors expenditure which should be the cornerstone of the MDGs had an inadequate allocation to foster any meaningful economic viability and social inclusion before the MDGs. This worsened in the MDGs period, as both the economic and social sectors expenditure averages were never more than 40% per period, and this was attained only in 2008 and 2009. In other periods, the expenditure witnessed outlays of between 25%–30% without any discernible figure for environmental consideration possibly due to aggregation to create room for rent-seeking behaviours and corruption. This necessitated the use of carbon dioxide (CO<sub>2</sub>) emission as a proxy for environmental expenditure consideration. Some interesting facts emerged, revealing that CO<sub>2</sub> emission before MDGs was 52,529 KT, while during the MDGs period, it escalated to 927,633 KT, a figure that brings to question the use of expenditure allocated to the sector. Given these results and the insinuations from various writers on corruption in Nigeria, the research examined the trend of corruption for the three periods (1986–2000, 2001–2015



and 2016–2020 periods) used in the study. It was interesting to note that in the pre-MDGs periods, the corruption index ranged between 1 and 1.25, but in the MDGs period, it ranged between 1 and 2.7, averaging 2.1 as against that of the pre-MDGs period of 1.18, an indication that corruption in the country increased almost double from the pre-MDGs period, although this witnessed a slight decline in the early periods of the SDGs implementation.

Finally, in analyzing the trends of government expenditure for the periods of the study, there are indications that the SDGs, just like their predecessor MDGs, is on the verge of achieving the same poor outcomes or even worse results given the prevailing socio-economic expenditure profile of the country and the non-transparent aggregated manner environmental expenditure is treated, if urgent measures are not taken to correct this. It is in the light of these that the study makes the following recommendations.:

- i) The structure of government expenditure should be reversed such that capital expenditure is given priority over recurrent expenditure for the sustainable development goals to be achieved as it is the CEX that ensures that infrastructures for sustainable development are provided.
- ii) Environmental sector expenditure should be disaggregated for easy inference especially given that it is a major component of the sustainable development goals, which also advocates transparency, accountability and reportage of each important sector. This is to ensure that the issues of carbon dioxide emission and other environmental degradation agents are dealt with.
- iii) The economic and social services sector are veritable tools for economic viability and social inclusion as spelt out in the SDGs. As key drivers of other activities sectors, allocation to these sectors should be adequate to make a meaningful impact in order to engender the drive for sustainable development.
- iv) The issue of corruption has grave consequences on the economy, so this should be tackled adequately by strengthening agencies like the Independent Corrupt Practices Commission, Economic and Financial Crimes Commission, the Nigerian Police and other security agencies involved as sustainable development is impossible in a state of corruption and insecurity.

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