



## ASSESSING INCLUSIVE GROWTH IN NIGERIA: AN APPLICATION OF THE SOCIAL OPPORTUNITY FUNCTION

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**ABSTRACT:** *Inclusive growth, pro-poor growth and broad-based growth are all terms used to explain growth processes that enable the entire population including the poor to actively participate and benefit from the economic growth process. In recent times, Nigeria's GDP has been low, this is occasioned by slow growth, recession and the covid-19 pandemic. GDP growth rate had averaged 0.82% in the last decade and reached an all-time low of -14.66% in the first quarter of 2022. This study investigates inclusive growth in Nigeria using the social opportunity function. The social opportunity methodology is used to determine whether inclusive growth has been achieved overtime using education, health and employment sectors of the economy. The objective of this study is to assess inclusive growth performance in Nigeria as it relates to equitable distribution of opportunities. Data obtained from the General Household Survey (GHS) 2012/2013, 2015/2016 and 2018/19 of the National Bureau of Statistics were used for the analysis. The study revealed that inclusive growth was not achieved in Nigeria in the provision of employment, education and health care for the population. For inclusive growth to be achieved, timely interventions in education, health and unemployment are recommended.*

**KEYWORDS:** Inclusive growth. Social opportunity function, Equity index of opportunity, Nigeria.



## INTRODUCTION

Inclusive growth is a broad-based concept. It refers to growth that encompasses equality of opportunity in terms of access to markets, employment, resources and regulatory environment that provide a level playing field for all. It is a growth process that emphasises active participation of the poor, creates new opportunities for everyone and ensures equal access to the opportunities created. Inclusive growth aims at reducing poverty and ensuring shared prosperity for all (United Nations Development Programme, 2017; African Development Bank, 2010). Inclusive growth means economic growth that creates employment opportunities and helps in reducing poverty. It means having access to essential services in health and education by the poor. It includes providing equality of opportunity, empowering people through education and skill development.

Traditional economic growth theories have often assumed that economic growth will solve issues of poverty and inequality in the society, but this has not always been the case. Evidence has shown that though some level of growth is necessary for sustained reduction in poverty, growth by itself is only a sufficient condition because it can overlook the poor or marginalised groups resulting in increased inequalities. High and rising levels of inequality in income and opportunities can lower the impact of poverty reduction of a given rate of growth (Ali & Son, 2007). The experiences of economic growth in Nigeria in the last decade shows that, despite expansion of output in the form of increase in GDP, this has failed to translate to economic development, poverty reduction and inequality because it was not sufficiently inclusive. Therefore to overcome the problem of excess labour reserves with high growth rate, it is important to make growth inclusive (social and economic growth). Nigeria's GDP growth rate averaged 0.82 percent between 2010 and 2022 reaching an all-time high of 6.22 percent in 2013 and a record low of -14.66 percent in the first quarter of 2022. Poverty and incidence rate measured by the poverty gap of \$1.90 per day increased from 21.9 percent in 1986 to 60.9 percent in 2010 (National Bureau of Statistics, 2010).

The National Bureau of Statistics also reported that 40.1 percent of the total population were classified as poor in 2019. These were persons whose real per capita expenditure fell below \$381.8 per year, this translates to 82.9 million Nigerians considered poor by national standard (NBS, 2019). Furthermore, the World Bank report on poverty rate in Nigeria showed that poverty rate increased to 42.0 percent in 2020 and is projected to increase to 42.6 percent in 2022 (World Bank, 2022). This means that the number of poor people will increase from 82.9 million in 2019 to 95.1 million in 2022. This implied that not everyone benefited from whatever prosperity was recorded. There still existed high rates of unemployment and underemployment, low Human Development Index, institutional lapses and bottlenecks, public sector inefficiency and economic instability (Oluseye & Gabriel, 2017).

In addition, the Gini index which is a measure of income inequality increased from 0.43 to 0.55 in 2009 and 2015 respectively (WDI, 2019), indicating that opportunities from economic growth had been unequally distributed and the gap between the poor and the non-poor widened overtime, resulting in income inequality originating from unequal opportunities despite economic growth (Adedeji et al., 2013). Individuals who face better opportunities such as increased access to health care, education and employment opportunities are able to develop their full potentials and achieve more outcomes in terms of improved earnings and health status.



Available studies on inclusive growth in Nigeria have focused on various sectors of the economy. Some have studied the implications of inclusive growth for the macro economy and its determinants (Tella & Alimi, 2016; Oluseye & Gabriel, 2017). Others have studied it from the perspective of health, demographic changes including considering achieving inclusive growth through intervention in the informal sector using the small and medium scale enterprises (Oseni & Oseni, 2015; Sherriffdeen & Olorunfemi, 2016). Ogujiuba and Alehile (2011) examined it from the policy angle and its implications for poverty reduction. An area that has not received consideration in the literature is the assessment of inclusive growth performance in Nigeria with particular emphasis on access to and equitable distribution of opportunities created by economic growth. Creation of economic opportunities and achieving equitable access to such opportunities by all irrespective of their socio-economic status in the society is a prerequisite for inclusive growth and sustainable development (Samir & Sajid, 2011).

This study focused on a dynamic rather than static assessment of whether inclusive growth has been achieved overtime in Nigeria by applying the concept of the social opportunity function. This methodology is applied because it is useful in determining firstly, if there has been an increase in the average opportunities available for all, especially the poor in the area of employment, education and health. Secondly, whether the opportunities created have been equitably distributed. The focus on education and health arises because these aspects of human capital are key for the proper functioning of the individual and enhances their social and intellectual capabilities making them better suited for the employment market. The specific objectives of the study are to estimate the opportunities available to the poor in terms of employment, education and health and further investigate if the opportunities created are equitably assessed by the population.

### **Stylized Facts on Inclusive Growth in Nigeria**

Nigeria is well blessed with human and natural resources and has experienced good economic growth between 2000 and 2015. Despite this superb growth, the people remain poor, unemployed and lack access to good health care and other facilities for the total well being of humans. This is further compounded by the growing income inequality between the rich and the poor. Nigeria's economy experienced on average a 7.5 percent growth in GDP between 2010 and 2015, making her the largest economy in the world. Unfortunately, the growth recorded did not translate to poverty reduction, unemployment and improved standard of living for the people. Thus making the growth non inclusive. Therefore, focusing on a broad based active participation in growth activities especially for a resource rich and labour abundant economy like Nigeria is a strategy that should be pursued by policy makers. The realisation of inclusive growth by the Nigerian government was a major reason for the economic recovery and growth plan (ERGP). The essence of the ERGP was to make growth inclusive by reducing poverty and creating opportunities for gainful employment as well as enhance human capacity to take advantage of these opportunities. To achieve this, a private sector led growth combined with an active government role in human capital investment was pursued by the government. Despite all this, the inclusive growth process is still not achieved as it is froth with a lot of inconsistencies.

Since inclusive growth is about shared prosperity, there are four outcomes for it to thrive. They are sustainable and equitable growth, social inclusion, empowerment and security (Ali & Son, 2007). Three measures are strategic to achieving these outcomes of inclusive growth: creating



employment opportunities and promoting higher productivity, developing human capabilities through adequate investment in basic social services of education and health, and providing social safety nets and targeted interventions to help those who are vulnerable or suffer from extreme deprivation (Ali & Son, 2007). Social opportunity depends on the increasing average opportunities available to the population and distributing the available opportunities equally among the population. By doing this, the social opportunity function attaches greater weight to the opportunities enjoyed by the poor. The poorer a person is, the greater the weight will be. Such weighting technique ensures that opportunities created for the poor are more important relative to those created for the non-poor (Adedeji et al., 2013). Given that education, health and unemployment are key measures of achieving inclusive growth, it is useful to take a cursory look at the state of these sectors in Nigeria.

### **Education and Health**

In Nigeria, primary education is officially free and compulsory for children aged 0-15 years, yet about 10.5 million children aged 5-14 years are not in school. Only 61 percent of children between 6-11 years old regularly attend school (NDHS, 2018). In response to the 1990 world conference on Framework Action on Education for All (EFA), the Nigerian government launched the Universal Basic Education (UBE). The UBE involves basic education for children aged 0-15 years and it is free, compulsory, universal and qualitative. The essence of the UBE is to ensure that as many children of school age as possible get access to basic education at the primary and secondary level. This is a means of reducing the level of illiteracy in the country, while improving their proficiency as well as developing their understanding of the world. Basic education in Nigeria covers formal compulsory schooling consisting of six years at the elementary level, three years each at the junior and senior secondary education and four years tertiary education (6-3-3-4) (NDHS, 2018). This system was recently reformed to the 9-3-4 system of education in recognition of international standards as designed by education for all.

Over the years a remarkable increase has occurred in access to primary and secondary education. The gross primary school enrolment rate was 93.67 percent as at 2013. Although there have been fluctuations in the school enrolment rate over the years, it reached a maximum of 112.81 percent in 1983 and a minimum value of 40.84 percent in 1990. As of 2018, the gross enrolment rate in elementary school in Nigeria stood at 68.3 percent. This may be worse now as many children have been forced out of school due to high insecurity and insurgency especially in the Northeastern zone of the country. Secondary school enrolment, though significantly lower than primary school enrolment, reached a maximum value of 55.70 percent as of 2013 and a minimum value of 4.41 percent in 1970. As of 2018, gross enrolment rate in secondary school in Nigeria was 36.7 percent.

Health care in Nigeria is provided by both the public and private sectors. Besides being a major health services provider, the government formulates and designs health policy as well as manages the health system. The private sector accounts for 38 percent of all registered facilities in the country, of which 25 percent are at the secondary care level, while 75 percent are primary care FMOH (cited in Olaniyan and Toyin (2015)). The public health sector on the other hand is built on the basis of the three-tier government structure in Nigeria. The local government is responsible for primary health care, while the state government provides care at the secondary level through the general hospitals. Public health sector is mainly financed by the government and expenditure consists of recurrent and capital spending from government budgets, external borrowing, grants and social health insurance funds. Due to reforms in the health sector, key

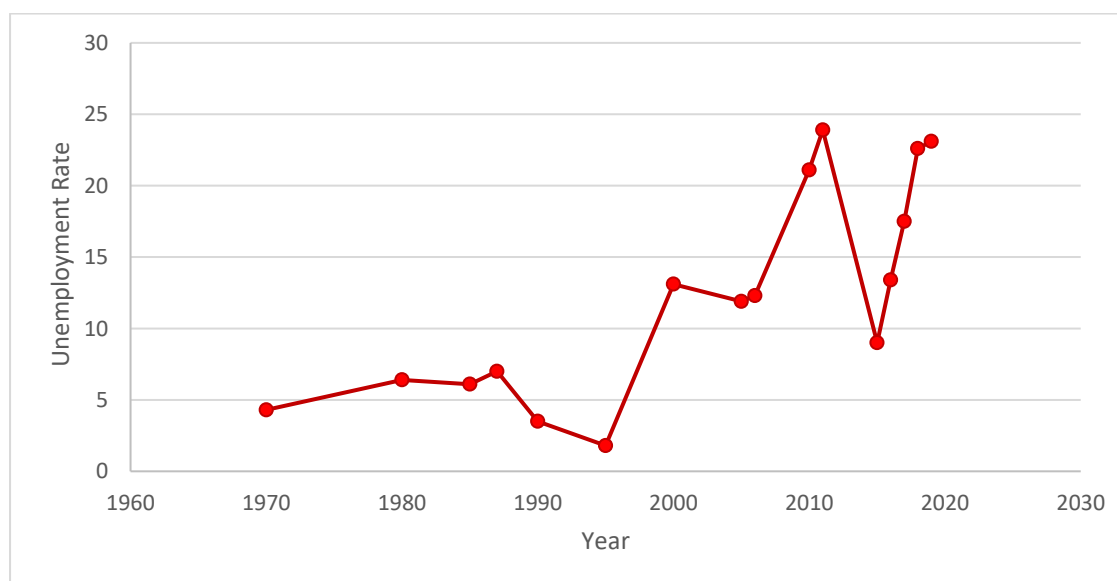


health indicators have improved marginally. The mortality rate (under 5) fell from 285 per 1,000 live births in 1970 to 119.9 in 2018. Life expectancy increased from 41 years in 1970 to 55 years in 2019.

## Unemployment

Unemployment in Nigeria is widespread. The level of unemployment in Nigeria has fluctuated over the years. It rose from 4.3 percent in 1970 to 6.4 percent in 1980 and rose to 7.0 percent by 1987. This increase in the unemployment rate can be attributed to the economic downturn in the 1980s which occurred due to the sudden fall in the price of crude oil. The situation was further compounded by the continuous retrenchment and placement of embargo on employment in the public sector (Obadan & Odusola, 2001). Unemployment rate consistently fell from 7.0 percent in 1987 to 1.8 percent in 1995, after which it rose to 13.1 percent in 2000. It declined to 11.9 percent in 2005 and rose again from 12.3 percent in 2006 to 21.1 percent in 2010. It rose to an all-time high of 23.9 percent in 2011 and declined again to 9.0 percent in 2015, and rose to 23.1 percent as of the third quarter of 2019. Currently, the unemployment rate in Nigeria is 33.3 percent and 35 percent for 2020 and 2021 respectively.

**Figure 1: Rate of Unemployment in Nigeria (1970-2018)**



*Source: World Development Indicators 2019.*

## LITERATURE REVIEW

Economic growth is usually measured by the growth in GDP and it is expected that this growth will translate to increased well being of the citizens in the country. Many studies have argued that though economic growth is expected to lead to reduction in poverty, it is usually not so because country specifics and experiences differ widely. For instance, some countries experience an increase in poverty levels during periods of high economic growth (Kakwani & Son, 2003; Peragine et al., 2013; Bakare, 2014). Further economic growth is said to lead to





poverty reduction when the poor have access to equal opportunities. Therefore, the equal opportunity framework stresses the link between opportunities available and the conditions for accessing them (Peragine et al., 2014). Access to equal opportunities in an economy may be related to the potential for future growth. But when inequality exists, it could systematically exclude some groups of the population from participation in economic activity and that is harmful for growth. Making growth inclusive is a paradigm shift from the traditional growth mode, instead inclusive growth emphasises creating equal opportunities for all classes of citizens, thereby reducing poverty in the economy.

According to Anand et al. (2013), since growth is meant to be inclusive, it is imperative to study how the micro and macro dimensions of inequality can be integrated to reflect the pace and distribution of economic growth. This implies that for inclusive growth to be sustainable, it should be broad based across sectors and equitable (Berg & Ostry, 2011a; cited in Anand et al., 2013). Some key elements that make growth inclusive include employment and productivity, access to good education and quality health care services. Ali & Son (2007) showed that creating employment opportunities and promoting productivity helped to improve the standard of living of citizens in a country. In terms of access to quality health care services, Tella et al. (2016) revealed that financing the health sector is important to achieving unilateral health coverage which translates to inclusiveness of growth. Likewise, access to quality education is also germane to achieving sustainable economic development. Onwioduokit (2020) further examined the role of education in inclusive growth in Nigeria. He showed that education should be financed by the government, especially at the primary and secondary levels, this is to guarantee access to education by indigent students.

In literature, different methods have been used to measure inclusive growth, the social opportunity function which is similar to the social welfare function has been used (see Ali & Son, 2007; Adedeji et al., 2016). Others include fixed effects method (Tella et al., 2016); Autoregressive Distributed Lag Model ARDL (Oluseye & Gabriel, 2017; Onwioduokit, 2020).

## METHODOLOGY

The theoretical framework applied in this study is the social opportunity function which is an offshoot of the utilitarian social welfare function. In this model inclusive growth is achieved when the social opportunity function is maximised. This depends on increasing the average opportunities available to the population and the equitable distribution of the available opportunities among the population. Greater weights are associated with the opportunities enjoyed by the poor. Such weighting ensures that the opportunities created for the poor are greater than those for the non-poor. Focus is on the extra opportunities created for the poor without making the non-poor worse-off.

Following Ali and Son (2007), supposing there are  $n$  persons in the population having incomes  $x_1, x_2, x_3, \dots, \dots, x_n$  where the poorest individual in the population is  $x_1$  and the wealthiest  $x_n$ . The social welfare function  $w$ , which is an increasing function of income  $x$  is specified as;

$$W = W(x_1, x_2, \dots, \dots, x_n) \quad (1)$$



Similarly, the social opportunity function  $O$ , is expressed as an increasing function of income  $x$ . The Social opportunity function is denoted as

$$O = O(y_1, y_2, \dots, y_n) \quad (2)$$

Where  $y_1$  denotes the opportunity enjoyed by the  $i^{th}$  person having income  $x_1$ .

Opportunity is expressed in the form of access to health, education or employment.  $y_1$  can take the form of a binary value of 0 and 100, when the  $i^{th}$  person has access to a specified opportunity, it takes a value of 100, that is, having access to employment and 0 if there is lack of access. Access to a given opportunity (employment, health and education) is denoted as;

$$Y^*(E) = \left( \frac{\sum_i^{QN} y_i}{QN} \right) \quad (3)$$

Where; the cumulative percentage of the population is denoted by  $E$ . Given, that  $y_1$  is a binary number which assumes the value 0 or 1,  $Y^*(E)$  denoted as the average opportunity.  $QN$  the percentage of the population that has access to a given opportunity. Maximizing  $Y^*(E)$  is a necessary but not sufficient condition in determining if inclusive growth has been achieved. A comprehensive assessment of inclusive growth, involves considering the distribution of opportunities across different income groups in the population. Also, distributional concerns require that the opportunity function satisfy the transfer principle. This connote that the transfer of opportunity from a non-poor individual to one who is poor will enhance the social opportunity function. This is captured by the opportunity curve.<sup>1</sup> The opportunity curve also referred to as the partial approach to measuring inclusive growth is useful for determining the growth pattern in terms of access and equity of opportunity. However, it does not quantify the exact amount of change that has occurred in opportunities overtime.

To capture the magnitude of changes in opportunities overtime, the social opportunity function is utilized and an index from the area under the opportunity curve which is analogous to the concentration curve is estimated. The opportunity index is obtained as twice the area under the generalized concentration curve. This is denoted as;

$$OI = 2 \int_0^1 Y^*(E)C(q)dq = Y^*(E)EIO \quad (4)$$

Where;  $EIO = 1 - C$ ; is the equity index of opportunity and  $C$  the concentration index of opportunity. If  $EIO$  is greater (less) than 1 then opportunity is equitable (inequitable). The equation shows that the opportunity index is a product of the average opportunity and the equity index of opportunity (Son, 2011).

To ensure inclusive growth  $OI$  must increase, this can be achieved by increasing the average opportunities  $Y^*(E)$  or increasing the equity index of opportunity  $EIO$ , or increasing both the average opportunities and the equity index of opportunities. Differentiating both sides of equation 4.

$$dOI = Y^*(E)dEIO + EIOdY^*(E) \quad (5)$$

<sup>1</sup> For more information on the application of opportunity curve in the measurement of inclusive growth see Ali and Son (2007), Adedeji, Du and Opoku-Afari (2013).



Where  $dOI$  quantifies the changes in magnitude of growth inclusiveness. Growth inclusiveness is increased if  $dOI$  is  $> 0$ . The first term on the right side of equation 5, is the contribution to growth inclusiveness as a result of a change in the distribution of opportunities when the average opportunity remains constant. The second term show the contribution of changes in the average opportunity to the inclusiveness of growth when the distribution of opportunity remains unchanged. The policy implication of the above formulation is that if there are improvements in the average opportunities accessible to the population and if these opportunities are distributed equitably then growth inclusiveness can be achieved.

The data utilised in this study to determine access and equity of opportunity was the General Household Survey (GHS) which contains micro level information about the household. The GHS was conducted by the Nigerian National Bureau of Statistics in collaboration with the Federal Ministry of Agriculture and Rural development and The World Bank Living Standards Measurement Study (LSMS) team as part of the Integrated Surveys on Agriculture (ISA) program. It is a nationally representative survey of 5,000 households which are also representatives of the six geopolitical zones in Nigeria which are grouped into urban and rural areas. The GHS offers information on demographics, education, healthcare utilisation, labour, food and non-food expenditure. Specifically, three sets of the General Household Survey (GHS) of the National Bureau of statistics in Nigeria, 2012-2013; 2015-2016 and 2018-19 waves were utilised in the analysis. We utilised 4,755, 3,442 and 4,550 households for 2012-13, 2015-16 and 2018-19 periods respectively. Variables used in the analysis are shown in Table 4.1. Dummy variables were utilised in the analysis with 1, indicating access to such opportunities and 0, where there is no access.

**Table 4.1: Variable Description**

<b>Variable</b>	<b>Description</b>
<b>Individual Characteristics</b>	
Age	Age expressed in years
Male	=1 if male , 0 otherwise
Female	= 1 if female, 0 otherwise
<b>Access to Employment Opportunities</b>	
Employed_male	=1 If employed male, 0 otherwise
Employed_female	=1 if employed Female., 0 otherwise
<b>Access to Education</b>	
Primary	=1 if in primary school for children aged 6-11, 0 otherwise
Secondary	=1 if in secondary school for those aged 12-17, 0 otherwise
Tertiary	=1 if in tertiary institution for those above 17, 0 otherwise
<b>Access to Health Facilities</b>	
Government Hospital	=1 if utilising public health institution, 0 otherwise
Private Hospital	= 1 if utilising private hospital, 0 otherwise
Rural Clinic	= 1 if utilising rural clinic, 0 otherwise
Health Facility	=1 indicate access to health care in health facilities,0 otherwise

*Source: Authors extraction from GHS 2012-13 2015-16 and 2018-19.*





## EMPIRICAL RESULTS AND DISCUSSION OF FINDINGS

The full approach to measuring inclusive growth is applied in this study. It is used to obtain estimates of the Average Opportunity ( $Y^*(E)$ ), Opportunity Index (OI) and the Equity Index of Opportunity (EIO). These estimates are prerequisites for evaluating the changes in access to health, employment opportunity and education. They also help to quantify how equitably these opportunities have been distributed over time across the various socio-economic groups of the population.

### Access to Employment Opportunities in Nigeria

The result from Table 5.1 on access to employment opportunity showed that in 2012-13, approximately 43.7 percent of the male population was employed. This figure declined to 31.8 percent in 2015-16 and increased to 52.56 percent in 2018-19. **Table 5.1: Opportunity for Access to Employment in Nigeria.**

Population Share (percent)	Male			Female			Total		
	2012-2013	2015-2016	2018-2019	2012-2013	2015-2016	2018-2019	2012-2013	2015-2016	2018-2019
10	51.56	45.83	50.96	45.16	40.93	55.31	48.30	42.80	51.70
20	46.62	25.69	57.24	43.80	49.33	35.67	45.31	40.18	46.50
30	51.98	37.42	53.95	40.62	45.84	43.05	46.32	41.98	49.83
40	48.93	32.90	55.46	41.33	42.00	42.54	44.95	37.60	46.50
50	48.73	39.80	57.28	41.23	38.46	44.55	44.61	39.09	49.50
60	49.19	33.41	53.84	45.23	40.68	42.73	47.25	37.32	49.95
70	49.88	42.59	54.53	48.61	34.80	49.35	49.21	38.75	46.77
80	43.01	35.04	55.79	46.85	31.41	52.56	45.02	32.95	51.25
90	51.78	27.16	56.28	42.59	33.88	43.69	46.99	31.03	53.00
100	43.70	31.80	52.56	40.37	41.13	54.94	41.95	36.69	48.92
<b>Opportunity Index</b>	44.57	32.75	52.03	39.97	43.19	53.84	42.36	38.16	48.46
<b>Equity Index of Opportunity</b>	1.02	1.03	0.99	0.99	1.05	0.98	1.01	1.04	0.99

*Source: Authors Calculation based on 2012-2013, 2015-2016 and 2018-19 GHS Survey*

The EIO (1.02) and (1.03) for 2012-13 and 2015-16 respectively were greater than 1. The 2018-19 estimate (0.99) was less than one. The results suggest that there was an equitable distribution of job opportunities for the male population across the income groups which improved over the two-year period. However, by the 2018-19 period, this distribution became inequitable. The opportunity index (OI) increased from 32.8 percent to 52.0 percent in 2015-16 and 2018-19 periods respectively. Less than half of the female population had access to job opportunities for the first two periods. This was despite the marginal increase in the job opportunities available to women from 40.4 percent to 41.1 percent in 2012-2013 and 2015-2016 periods respectively. These job opportunities increased to 54.9 percent in 2018-19. The EIO (0.98) in 2018-19 suggests that the distribution of employment opportunities in the female population was not equitable but skewed towards women on the upper part of the income



distribution. The OI improved from 39.9 percent to 53.8 percent in 2012-13 and 2018-19 respectively.

In 2012-13, approximately 41.9 percent of the population had access to employment opportunities. This figure declined to 36.7 percent in 2015-16 signalling a decline in the job opportunities available to the entire population. These opportunities increased by 10.3 percent in the 2018-19 period. These findings indicated that less than half of the population had access to employment. The decline in the EIO from (1.04) to (0.99) in 2018-19 indicated an unfair distribution of the available job opportunities amongst the populace which favours the wealthy.

### Access to Health Care Facilities in Nigeria

Results for inclusiveness in the utilisation of various categories of health care facilities by the sick in Nigeria are presented in Table 5.2. Findings indicate that on the average 19.3 percent and 30.9 percent of sick people had access to medical care from government hospitals in 2012-13 and 2015-16 respectively. This estimate declined to 15.9 percent in the 2018-19 period.

**Table 5.2: Opportunity for Access to Various Health Facilities in Nigeria, 2012-2019.**

Population Share	Government Hospital			Private Hospital			Rural Health Facility		
	2012-2013	2015-2016	2018-2019	2012-2013	2015-2016	2018-2019	2012-2013	2015-2016	2018-2019
(percent)									
10	37.95	38.00	19.09	58.09	57.81	77.88	0.21	3.64	3.02
20	39.28	39.96	20.58	54.10	59.04	77.14	2.50	0.88	2.28
30	28.14	34.24	24.38	69.47	64.83	73.65	0.40	0.83	1.97
40	26.80	32.90	28.37	67.73	65.99	70.03	0.72	0.61	1.58
50	43.99	25.94	22.20	51.80	67.76	77.08	2.45	2.35	0.71
60	27.14	24.95	18.26	66.42	66.87	81.35	2.87	3.99	0.38
70	18.74	25.65	21.65	77.41	73.26	78.07	2.17	0.61	0.27
80	25.15	22.12	22.31	69.58	77.19	77.50	0.90	0.41	0.18
90	28.69	37.35	20.42	67.78	62.44	77.72	0.55	0.14	1.8
100	19.33	30.97	15.98	76.46	68.87	83.82	0.43	0.09	0.18
<b>Opportunity Index</b>	21.26	32.83	16.30	72.69	66.33	82.77	0.42	0.11	0.25
<b>Equity Index of Opportunity</b>	1.10	1.06	1.02	0.95	0.96	0.99	0.98	1.25	1.37

*Source: Authors Calculation based on 2012-2013 2015-2016 and 2018-19 GHS Survey*

The EIO of 1.1, 1.06 and 1.02 for the three periods indicated that the distribution of utilisation of government hospitals was skewed towards the lower income groups. The OI declined from 32.8 percent in 2015-16 to 16.3 in 2018-19. These estimates suggest that inclusive growth was not achieved in access to health care from government health institutions by the poor when sick. Average access to health care from private health institutions declined from 76.5 percent to 68.9 percent in 2012-13 and 2015-16, and increased to 83.8 percent in 2018-19 period. The



value of the EIO for the three periods (0.95) (0.96) and (0.99) indicated that the utilisation of private health services was unequally distributed and prevalent among the wealthy income group.

The average opportunity in the access to rural health facilities was rather low. An estimated 0.43 percent, 0.09 percent and 0.18 percent of the sick population utilised rural health facilities for the three periods. In 2012-13, the EIO (0.98) which was less than 1, suggested that the rural clinic was utilised primarily by the non-poor. The estimates of the EIO (1.25 and 1.37) in both the second and third periods, were greater than 1 indicating that the utilisation of rural health facilities was hugely skewed towards the poor. The OI declined from 0.42 to 0.25 in the third period.

### **Access to Education in Nigeria.**

Presented in Table 5.3 are results for determining if inclusive growth has been achieved at primary, secondary and tertiary education in Nigeria. Findings revealed that less than half the population of children 40.3 percent and 47.6 percent aged between 6 and 11 years attended primary school during the periods 2012-13 and 2015-16. This estimate increased to 54.10 percent in 2018-19. The average primary school attendance figure though minimal for the three periods was equitably distributed in favour of children from poor households. This finding was confirmed by the EIO (1.02) (1.01) and (1.03) in 2012-13 2015-16 and 2018-19 respectively. The opportunity index improved from 48.08 percent to 55.72 in 2012-13 and 2018-19 respectively. This suggests that inclusiveness had been achieved in the opportunities available for children to attend primary school.

The number of children who attended secondary school aged between 12 to 17 years declined from 45.0 percent to 39.14 percent in 2012-13 and 2018-19 respectively. This revealed that less than half the number of children in the population had access to secondary education. The decline in secondary school attendance was confirmed by the opportunity index that declined from 43.9 percent to 38.5 percent and 37.2 percent over the three-year period. The EIO (0.97) (0.99) and (0.95) indicated that educational opportunity at secondary level was not equitable although there was a moderate improvement in the equity index of opportunity in the second period, this declined in the third period. Furthermore, findings suggest that poor children with families at the bottom half of the income distribution have limited access to secondary education in Nigeria

**Table 5.3: Opportunity for Access to Education in Nigeria 2012-2019**

Population Share (percent)	Primary 6-11 years Attending School			Secondary 12 -17 years Attending School			Tertiary		
	2012- 2013	2015- 2016	2018- 2019	2012- 2013	2015- 2016	2018- 2019	2012- 2013	2015- 2016	2018- 2019
<b>10</b>	48.51	62.66	64.84	36.65	29.37	26.41	6.20	4.59	5.57
<b>20</b>	49.14	62.62	53.60	37.00	30.13	29.63	8.28	3.88	10.88
<b>30</b>	52.62	53.66	61.60	30.69	37.94	33.19	11.90	7.51	1.66
<b>40</b>	45.43	53.40	67.97	38.29	33.22	28.00	10.85	8.22	1.37
<b>50</b>	56.90	48.40	60.17	29.65	39.71	26.40	9.33	10.80	4.29
<b>60</b>	56.12	55.17	58.36	31.98	34.17	28.87	7.99	9.76	7.59
<b>70</b>	55.84	59.70	56.43	31.00	33.20	30.13	11.22	6.54	8.48
<b>80</b>	42.53	62.33	50.91	37.78	34.35	33.76	17.39	3.02	7.49
<b>90</b>	49.52	61.11	57.41	34.86	28.88	32.34	13.54	9.72	9.41
<b>100</b>	40.32	47.60	54.10	45.03	38.88	39.14	13.65	13.36	4.83
<b>Opportunity Index (<math>\bar{y}^*</math>)</b>	41.12	48.08	55.72	43.86	38.49	37.18	12.07	11.86	4.59
<b>Equity Index of Opportunity (<math>\phi</math>)</b>	1.02	1.01	1.03	0.97	0.99	0.95	0.88	0.89	0.95

*Source: Authors Calculation based on 2012-2013 2015-2016 and 2018-19 GHS Survey.*

The average opportunity for the population in tertiary level of education declined from 13.7 percent to 13.4 percent in 2012-13 and 2015-16 periods respectively. The estimate plummeted significantly to 4.59 percent in the 2018-19 period. The OI declined from 11.9 percent to 4.59 percent from 2015-16 to 2018-19 indicating a significant reduction in the opportunities available for attending tertiary institutions within the country. The EIO improved slightly from (0.89) to (0.95) between 2015-16 and 2018-19 indicating an uneven distribution of opportunities for tertiary education skewed in favour of the wealthy.

## DISCUSSION OF FINDINGS AND POLICY IMPLICATIONS

Approximately 43 percent of the population had access to employment opportunities. These estimates were greater for the female than the male population. The high rate of female employment could be attributed to the increasing education of women and the shift from the more traditional roles of full-time housewives and caregivers to taking up jobs both in the formal and informal sectors of the economy. Overall, the findings suggest that although there was an increase in the access to job opportunities, the distribution of job opportunities was concentrated among the wealthy particularly in the 2018-19 period. The findings confirm that inclusive growth had not been achieved in regards to employment opportunities within the country. These results were contrary to that of Saima and Sajid et al. (2011) who noted an increase in the average employment opportunities which was equitably distributed in Pakistan.



To achieve increased access to employment opportunities, there must be increased human capital investment. Workers must be trained and equipped with relevant skills which would enhance their opportunity of being absorbed into dynamic sectors of the economy, especially information communication and technology (ICT), agricultural and industrial sectors. Investment in the agricultural and manufacturing sectors must be encouraged through granting of credit to industries, small and medium scale enterprises (SMEs) and farmers to increase their production capacity. This will deepen the links of the industrial sector with the agriculture and service sectors consequently increasing the employment opportunities within the country.

Significant progress was made in the utilisation of government hospitals by the poor. Approximately 22 percent of the population utilised government hospitals, while over 70 percent of the population utilised private health facilities. This finding is similar to the study for the Philippines where Son (2011) observed an increased in the utilisation of government health facilities among those in the lower income group. The distribution of access to medical care provided by private health facilities was not equitable with the wealthy having access to health care services provided in these facilities. Unfortunately, less than one percent of those living in the rural areas have access to health care services. This could be attributed to the decline in the average opportunities available in the rural areas for the sick to utilise health facilities. The decline in access to health care in the country is inimical to achieving universal health care especially for the vulnerable groups. A healthy population is a prerequisite for achieving economic prosperity for the nation but a decline in the health status of the population due to lack of access to basic health care services could result in increased morbidity, mortality, decline in labour productivity, a drop in the standard of living of the populace and ultimately perpetuate the vicious cycle of poverty. To address these problems, trained and qualified health workers and medical personnel should be employed in the rural clinics as this will decrease the utilisation of private hospitals by the poor who are unable to afford them. The government needs to target resources towards the provision and equipping of rural health facilities and government hospitals because this will create increased opportunities for the poorer segment of the population who face a greater disease burden to utilise health care. Financial subsidies and exemptions must be effectively implemented in public hospitals such that they are targeted towards the poor.

The overall performance of the education sector has been appalling. Although primary school enrolment is equitably distributed, less than 50 percent of children were enrolled for the three periods. Similarly, average access to secondary and tertiary education remained very low and are not equitably distributed across the population. This finding is similar to that of the Philippines where declining access to secondary and tertiary education was accompanied by increased attendance among those in the higher income group (Son, 2011). Divergent results were obtained for other African countries such as Cameroon, Ghana and Mozambique where there was an improved equity in access to education and an increased attendance on the average in primary and secondary education (Adedeji et al., 2013).

These findings indicate that the poor may not advance to higher levels of education after primary schooling. This is inimical to the human resource development of the country. Public-private partnership should be encouraged to tackle the inequalities prevalent in the educational sector. This will ensure the provision of education at all levels to meet the pedagogic needs of the less advantaged such as provisions of low-cost schooling, scholarships and bursaries that increase the educational opportunities available to the poor. The sustainable development goal 4 (SDGs) which focuses on quality education can be effectively achieved when quality and





equitable education is made available for all irrespective of their socioeconomic status. This sentiment is also shared in the national policy on education which also advocates for equal access to qualitative educational opportunities (Afolayan, 2020). Efforts geared towards eliminating inequalities in access to education will serve as an avenue for the lower income group in seeking greater economic opportunities and improved livelihood.

## CONCLUSION

This paper adopted the concept of social opportunity curve which is analogous to the social welfare function in measuring inclusive growth. The social opportunity function focuses on two concepts: the average opportunities available and how these opportunities are distributed across the population. This study identified that inclusive growth has not been achieved for the period of the study, especially in the area of employment, provisions of health care in the private and rural health institutions, secondary and tertiary education. This finding is confirmed by the decline of their respective opportunity index over the three-year period. Crucial aspects of intervention in the aspects of education, health and employment in Nigeria should not be overlooked if inclusive growth is to be achieved. Growth without access to the requisite human capital needed to engage in income generating activities will not ensure inclusiveness because improved health and education have direct benefits on labour productivity.

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