International Journal of Research Publication and Reviews

Determinants of Green Economy in Nigeria

Olufunke Bosede OLUFEMI

Department of Economics, School of Social Sciences, Bamidele Olumilua University of Education, Science and Technology, Ikere – Ekiti, Nigeria.
E-mail: olufemiolufunke12@gmail.com
DOI: https://doi.org/10.55248/gengpi.5.0224.0607

ABSTRACT

This study examines the determinants of green economy in Nigeria. The study employed primary data and six hundred questionnaires (600) were collected. This study adopted a multi-stage random sampling technique in the selection of the sample. The study employed OLS regression to analyse the determinants of green economy in Nigeria. The study revealed that the major determinants of the adoption of green economy in Nigeria during the study period are income level; marital status; age; educational level; type of occupation and family type. It was also confirmed that gender does not determine the adoption of green economy in Nigeria. Based on these findings, the study therefore recommended that government should enlighten citizen through Ministry of Information and National orientation agency about the benefits of adoption of gas (green economy) above other sources of energy.

Introduction

The link between poverty and green economy has remained a subject of debates but there appear to be a consensus that healthy human capital, clean and friendly environment which are the main attributes of green economy are very germane to achieving inclusiveness in growth process which will in turn lead to reduction in the level of poverty. Advocates of green economy held that increase attention to green economy would significantly reduce environmental hazards and promote human health, which will stimulate them to contribute more productively to the economy and improve their individual quality of lives in the long run (Klaus, Rainer and Holger, 2015). This is believed will translate to fall in poverty incidence in Nigeria.

According to the World Bank, 2016 Africa's poverty level grew from 28.1 percent in 1980 to 46.3 percent in 1985 to 65% in 1996 and 69 percent in 2010. For instance, Nigeria which is the largest economy in the Africa has one of the worst statistics on poverty in the whole world. In the 2000 it was officially recognized that about 60% of Nigeria population was living in relative poverty (UNCTAD, 2017). This rate was expected to drop to 21.35 percent by 2015 (UNCTAD,2017). After the implementation of the Millennium Development Goals in year 2000 MDGs and based on this 15-year projection, it was estimated that the Africa poverty rate would fall to 28.78% by 2007, being the midpoint of the programme's lifespan. Nevertheless, the actual proportion of people living in poverty in 2007 was reported to be 54.40%, showing a variance of about 25.62%. Projections for 2008 and 2009 were set at 52.4% and 51.58% respectively, representing a variance of 28.89% and 30.5%. Based on these new projections, it was estimated that by 2015 the incidence of poverty would possibly fall to 37.5% as against the original target of 21.35%. The obtained data indicated that poverty worsened after the implementation of the MDG the target was never achieved (AfDB, 2010, Abdu, 2015).

Notwithstanding, in the recent times some countries have started listening to the clarion call to embrace green economy in the Africa. This is evident in some steps taken by these countries within the last one decade. For instance, Ethiopia recently set out its strategy for a 'Climate-Resilient Green Economy (CRGE)' in 2018. This provides a national vision for economic development, with the goal of achieving middle-income country status by 2025 through green growth. Kenya also introduced feed in tariffs (FIT) for renewable energy in 2008, taken a range of steps to embed Green Growth within its economic development strategy. In 2017, it amended its constitution to include an article stressing the right to a healthy environment and sustainable natural resource management. South Africa is one of the strongest proponents of green growth in Africa and has one of the most developed approaches. National renewable energy and energy efficiency strategies were set out in 2003 and 2005, and Long Term Mitigation Scenarios were developed in 2007 which marked the first movements towards a Green Economy.

However, these efforts appear not to be yielding the expected result as the awareness about green economy is still abysmally low in Nigeria. Statistics have it that above 80% of energy generation in Nigeria are still dependent on fossil fuel that is, non-renewable energy which its production processes portend danger for human live. Again all other activities that contribute to greenhouse emission and environmental degradation are still very high in Nigeria and this are inimical to the achievement of sustainability as well as inclusiveness which green economy stands for. What we need to unknown is the level of awareness of green economy among Nigeria citizen and the factors that determines green economy adoption in Nigeria.

Literature

According to Hlahla, Goebel, & Hill, (2016), the transition to a Green Economy is frequently associated with or defined in terms of a process of 'Green Growth', which has also gained increasing international recognition as a way to reconcile the need for economic growth and social development while staying within environmental limits and maintaining healthy ecosystems. United Nations Conference on Sustainable Development (2012) further refined this definition of Green Growth as a process which "should contribute to eradicating poverty as well as [achieving] sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the earth's ecosystems". The social dimensions of economic growth, such as poverty reduction, reduced inequalities and improved social conditions are important, and can be complementary to sustained and greener economic growth. It is much more difficult to address the issue of environmental sustainability without at the same time actively addressing these social issues.

Despite the widespread use of the term 'green' but there is a broad consensus about what it means. It is very often treated as a synonym for or an aspect of sustainable development. For example, economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies"1. That brings to mind the in the Brundtland(1987) – development that "meets the needs of the present without compromising the ability of future generations meet their own needs".

World Bank (2015) regards 'green' growth as "growth in that it minimizes pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters". It adds the rider that "this growth needs to be inclusive", thus acknowledging the three pillars – economic, environmental and social – of sustainable development. And it argues that "inclusive green growth is not a new paradigm. Rather, it aims to operationalize sustainable development by reconciling developing countries' urgent need for rapid growth and poverty alleviation with the need to avoid irreversible and costly environmental damage". For some other development agencies, "Green growth is, in general terms, economic progress that fosters environmentally sustainable, low carbon and socially inclusive development", while for the Asian Development Bank, "Low-carbon green growth is a pattern of development that decouples economic growth from carbon emissions, pollution and resource use, and promotes growth through the creation of new environment friendly products, industries and business models that also improve people's quality of life".

While increased GDP can address poverty by raising per capita incomes, assuming economic growth is faster than population growth, the distribution of the benefits of economic growth remains important to reducing poverty and social inequality. Green economy not only targets economic growth and reduced environmental impacts, but it also targets social goals both directly and indirectly. Many green economy initiatives and actions are targeted at natural resources and agriculture, two predominantly rural sectors in which the great majority of people in SSA countries live and work (for example 80 % of people in Ethiopia work in agriculture) (World bank, 2010). This gives Green economy great scope to improve the lives of people in these areas and situations, addressing poverty in some of the places where it is most keenly felt. Initiatives that help to improve the efficiency of production provide greater access to modern technology and increased productivity can all change people's day-to-day costs and income, and the lives that they can lead, directly lifting many people out of poverty and reducing income inequality. When these impacts were modelled for Kenya it was shown that Green economy was significantly better at reducing poverty, reducing poverty rates by almost 2 percentage points more than a business as usual (BAU) scenario (UNEP 2018).

Pursuing a green economy strategy involves tailoring an approach appropriate to a country's development needs and situation, making best use of its natural assets in a sustainable manner. Green economy investments targeted in this way can help to open up new markets or lead to new and improved economic opportunities through specialization related to natural assets. Examples of this include the transformation of the timber sector in Gabon or the Bio trade initiative in Namibia which has identified the bio-sector as a key contributor to the economy with significant further growth potential. The Bio trade initiative is targeting further specialization and expansion of this sector to increase its share of GDP from 4.5 % to 7 %. In addition, the economic benefits of such an initiative arise in some of the least developed rural communities, helping to reduce overall poverty and inequality. Wider examples of Green economy opening up new markets for products and services include investments in energy efficiency, renewable energy or sustainable natural resource management, such as LED light bulbs, solar installers and agro forestry. For example, GIZ is also supporting the South African government to develop this new market through the implementation of green skills, such as solar installation, as part of a 'vocational training for climate and environment related occupations'(World Bank, 2018).

Goals of development are often strongly social in nature. Economic growth is not intended for its own sake, but to improve the quality of life and to address social challenges of poverty, inequality, exclusion, education and health which exist, to varying degrees, in every country. Some of the above mentioned economic benefits could equally be assigned to social benefits, such as reduced poverty and reduced social inequality, or increased employment, improved training and skills. To avoid duplication, these benefits have only been listed once.

Agbasi, Edoko and Ezeanolue (2018) examined the impact of economic growth on poverty reduction in Nigeria. This study was informed by the rising poverty level in the country. it was argued that despite concerted efforts made by successive government through one form of poverty reduction programme and the other to combat poverty still soars in the country. in order to address the conundrum the study modeled selected macroeconomic variables (poverty, unemployment, population, mortality rate, life expectancy rate, corruption, consumption, per capita income, illiteracy rate) and Gross Domestic Product (GDP) in Nigeria using an econometric regression model of the Ordinary Least Square (OLS) to ascertain the effect and relationship in the country's poverty-growth nexus. Findings revealed that there is significant effect and relationship between poverty, unemployment, mortality rate, consumption and Gross Domestic Product (GDP) in Nigeria. The following recommendations were made by them: Nigeria poverty reduction programmes

should be designed to be measurable and realistic, by targeting the felt need and occupational engagement of the people. Supervised capacity building before and after the implementation of the programmes is imperative. This will help address the challenge of unemployment occasioned by failures of businesses supported by the government. The leadership should cultivate a decisive spirit of patriotism and nationalism which will reinforces itself in high level trust, mutual coexistence, stability and development that will permit accountability, transparency and openness which in the long run would help increase economic growth and reduce poverty. Continued investment in human capital as in use of ICT to educate the poor, can boost the living standards of households by expanding opportunities, raising productivity, attracting capital investment, and increasing earning power. Also, holistic effort should be made by governments to improve basic human welfare in both health and social infrastructure that will eventually reduce the high rate of child mortality as well as improve standard of living.

Aderounmu, Azuh, Onanuga, Oluwatomisin, Ebenezer and Azuh (2021) investigated the impact of poverty drivers and Nigeria's development and their implications for policy intervention. They observed that several policies and programmes have been put in place to address the issue of poverty both in developing and developed countries of which Nigeria is not exempted. The study used data from World Development Indicators (WDI) for the period spanning between 1992 and 2016. They employed Autoregressive Distributed Lag (ARDL) model to examine the key principles influencing poverty rate in Nigeria and their implications for policy interventions. The result showed that unemployment increases poverty both in the short run and long run. The study also found that inflation, public resources devoted to austerity programmes and economic growth reduces poverty in the short run. The study recommends that adequate policies addressing the employment situation of the country should be enforced, such as providing enabling environment for private sector businesses to grow and boost employment opportunities by small and big industries. Also, policies on substantial public resources devoted to poverty alleviation should be implemented. Such a situation will facilitate the achievement of sustainable development goals particularly as it pertains to poverty, zero hunger, decent work and economic growth as well as industry innovation and infrastructure which are sustainable development goals.

Nwosa and Ehinomen (2020) examined the nexus among income inequality, poverty and economic growth in Nigeria from 1981 to 2018. The study specifically focused on examining: the impact of income inequality and poverty on economic growth; the role of poverty in the link between inequality and economic growth; and the interactive effect of income inequality and poverty on economic growth. The study employed Autoregressive Distributed Lag (ARDL) estimation technique. The result showed that inequality had positive and significant impact on economic growth while poverty had an insignificant impact on economic growth. More so, it was observed that poverty is insignificant in the relationship between income inequality and economic growth while income inequality played a significant role in the relationship between poverty and economic growth. Also, the study found that the interactive impact of inequality and poverty on economic growth is significant in Nigeria.

In addition, Ogundipe, Oduntan, Adebayo and Olagunju (2016) examined the nexus between agricultural productivity, poverty reduction and inclusive growth in Africa for the period between 1991 and 2015. Ordinary least square and generalized method of moment estimation techniques were employed in the study. The result of the study showed that food productivity index negatively and significantly affects poverty indicators. They concluded that development programmes targeted at enhancing agricultural productivity should encompass strategies for accessing credit in order to boost the asset base of rural farmer for a large scale commercial production. Also, appropriate macroeconomic policies and institutional quality needs to be enhanced to boost provision of social services, equitable land and credit access.

Also, Osabohien Matthew, Gershon, Ogunbiyi and Nwosu (2019) examined the potentials of agriculture to generate employment for the people, thereby reducing the level of poverty in West Africa for the period 2000 – 2016. The study used generalized method of moments for 15 West African countries examined agricultural development in Nigeria, in relationship with job creation and poverty alleviation. Results from the study showed that agriculture provides the opportunity for the poor to increase their earnings to escape the poverty trap, whether the poor can seize these agricultural opportunities depends on their human capital development. The study, therefore, concluded that effective policies (e.g. social protection) should be formulated in the agricultural development plans that will prioritize sustainable land and water management, access to markets, and the food security. To achieve this, the use of modern methods should be encouraged through farm incentives to boost agricultural production and increase farmer's income which is earned through the sale of agricultural commodities, and thus; in the long run, increase the revenue accruing to the government and reduce the rate of poverty.

Dada and Fanowopo (2020) examined the role of institutions in the nexus between economic growth and poverty reduction in Nigeria over the period 1984-2018, using the Autoregressive Distributed Lag (ARDL) co-integration technique. Two institutional quality variables were employed, namely; corruption control and political stability. Poverty was measured using per household consumption, while economic growth was proxy by per capita income. The study found that economic growth and institutions had positive effects on per household consumption in both the short and long run. This implied that as institutions and economic growth increased, per household consumption also increased, while poverty reduced. Furthermore, in the short run, the interactive effect of institutions and economic growth on per household consumption was negative, suggesting that the interaction of institutions and economic growth had a positive effect on poverty. This showed that institutions and economic growth played substitutive roles in poverty reduction in the short run. The interactive effect of institutions and economic growth in the long run was however positive on per household consumption, causing an increase in household consumption and a decrease in household poverty. This showed that institutions and economic growth played complementary roles in reducing poverty in Nigeria in the long run. The study concluded that strong institutions and sound economic growth are important in combating poverty.

In another development, Dercon (2012) examined whether green growth is good for the poor. The major aim of the study was to investigate the relationship between green growth, agriculture, trade, technology, infrastructure and urban development. It further examined if these relationship is consistent with the requirements of poverty reducing growth. The distributional changes in costs and benefits of moving towards greener growth are also investigated. The study which was more of a survey and report extracted data from some selected SSA. Findings showed that green growth will offer a rapid route out of poverty are not very plausible; there may well be less rapid an exit than with more conventional growth strategies. If not explicitly addressed green

growth may not be good for the poor. In particular, environmental pricing and regulation could affect the poor as both producers and consumers. Low carbon investments and climate resilience enhancing investments also offer lower chances of reducing poverty.

Also, Steve, Shannon, Tadele and Daniel (2013) assessed green economy and inclusiveness in Ethiopia. The aim of the study was to investigate the progress that Ethiopia has made in 'going green' and the next steps in realizing the ambitions of its green growth strategy. Data were extracted from the energy department of the country and were analyzed using percentages and ratios that cut across descriptive statistics. The study suggested that the green economy strategy component of Ethiopia's CRGE should be expanded to improve its effectiveness in the long term. This can be done by developing a focus on distributional issues, developing rigorous environmental criteria for all activities within the plan, and creating domestic incentives to guard against uncertain international climate finance. Other potential improvements can be identified, including demonstrating government leadership in policy coherence, providing incentives to all actors to be aware of the potential of green growth sectors, strengthening national research capacity and ensuring national green growth progress contributes to, and draws from, the international green growth debate.

Furthermore, Hickel and Kallis (2019) generally looked at the possibilities of green economy in the developing economies. According to the study, the notion of green growth has emerged as a dominant policy response to climate change and ecological breakdown. Green growth theory asserts that continued economic expansion is compatible with our planet's ecology, as technological change and substitution will allow us to absolutely decouple GDP growth from resource use and carbon emissions. This claim is now assumed in national and international policy, including in the Sustainable Development Goals. But empirical evidence on resource use and carbon emissions does not support green growth theory. Examining relevant studies on historical trends and model based projections, we find that: (1) there is no empirical evidence that absolute decoupling from resource use can be achieved on a global scale against a background of continued economic growth, and (2) absolute decoupling from carbon emissions is highly unlikely to be achieved at a rate rapid enough to prevent global warming over 1.5°C or 2°C, even under optimistic policy conditions. We conclude that green growth is likely to be a misguided objective, and that policymakers need to look toward alternative strategies.

Adeleke and Josue (2019) the study investigates the relationship between the green economy and poverty in South Africa from 1990 to 2017. Data on green economy indicators such as share of clean energy, CO2 emissions, human development index, secondary school enrolment, life expectancy at birth and access to electricity are extracted from United Nations Development Programme database, while data on per capita income and percentage of population living below the poverty line, which is used as the dependent variable, are collected from Statistics South Africa. Based on the statistical properties of the data, the Auto-Regressive Distributed Lags approach is used to analyse the short- and long-run influences of the green economy on poverty reduction in South Africa. The results show that the green economy has more of significant long-run impact than short run. It also shows that share of clean energy, CO2 emissions, human development index, secondary school enrolment, life expectancy at birth and access to electricity are the most important green economy indicators that have a significant impact on poverty reduction, while levels of income appear to have a weak impact. As a result, efforts should be more focused on improving the indicators of the green economy and sustainable development in South Africa if the increasing poverty level in the country is to be restrained.

Many of the studies reviewed remain largely on the green economy and how it affect poverty and failed to identify the determinant of green economy in Nigeria. Hence, the need for this research work. Therefore, this study will focus more on the determinant of green economy in Nigeria.

Methodology

This study will be conducted in Nigeria, the country is divided into six regions. Three regions shall be selected which includes Western, Eastern and North central region. Two state shall be selected from each selected region, this makes the selected state to be six.

Sampling Technique

This study adopted both descriptive and inferential statistical tools in analyzing the data collected. A multi-stage random sampling technique was adopted. The first stage was the purposive selection of the three regions which are north central region, south western region and south eastern region. The second stage involves the selection of two states from each selected region. Two local government shall be randomly selected from each selected state at the third stage. The final stage will be random selection of 50 people from town/village of the selected local governments, making a total of 600 people for the study. The study employed OLS regression to examine the relationship between green growth and poverty in Nigeria.

The model used in this study is:

$$GGU_i = \alpha_o + \beta_1 INCL_i + \beta_2 GED_i + \beta_3 MRG_i + \beta_4 AGE_i + \beta_5 EDU_i + \beta_6 OCPT_i + \beta_7 FAMT_i + \mu$$

Where:

GGU – Average monthly green energy used.

INCL – Income level.

GED – Gender.

MRG – Marriage status.

AGE – Age.

EDU – Educational level.

OCPT – Type of occupation.

FAMT – Type of family.

Result and Findings

Testing the Normality in the Distribution of the Data Set in the Study.

Table 1: Descriptive Statistics

	GED	MRG	AGE	EDU	INCL	OCPT	FAMT	GGU
Mean	1.680000	2.083333	41.04833	2.903333	1.878333	2.258333	1.335000	9.138333
Median	2.000000	2.000000	36.00000	3.000000	2.000000	2.000000	1.000000	8.000000
Maximum	2.000000	4.000000	69.00000	4.000000	3.000000	3.000000	2.000000	12.00000
Minimum	1.000000	1.000000	18.00000	1.000000	1.000000	1.000000	1.000000	6.000000
Std. Dev.	0.466865	0.794213	12.57536	0.917638	0.661508	0.579215	0.472384	1.689365
Skewness	-0.771744	1.031233	0.661482	-0.184196	0.137108	-0.095329	0.699167	0.366636
Kurtosis	1.595588	4.081717	3.167969	1.878987	2.263105	2.515591	1.488834	1.959264
Jarque-Bera	108.8681	135.5970	44.46118	34.80954	15.45521	6.775065	105.9740	40.52048
Probability	0.000000	0.000000	0.000000	0.000000	0.000440	0.033792	0.000000	0.000000
Sum	1008.000	1250.000	24629.00	1742.000	1127.000	1355.000	801.0000	5483.000
Sum Sq. Dev.	130.5600	377.8333	94725.60	504.3933	262.1183	200.9583	133.6650	1709.518
Observations	600	600	600	600	600	600	600	600

Source: Authors' Computation (2024)

Descriptive statistics results presented in table 1 show that marriage status (MRG), educational level (EDU), income level (INCL), type of occupation (OCPT) and family type (FAMT) are symmetrical while green energy use (GGU), age (AGE), and gender (GED) are asymmetrical in their distribution. Skewness results revealed that Age, income level, family type and green energy use are normal skewness, and gender, educational level and type of occupation are negatively skewed, while marriage status is positively skewed. It also revealed that age and marriage status are leptokurtic which depicts a peak curve while green energy use, educational level, income level, type of occupation, gender and family type are platykurtic which depicts a flatted curve. Jarque-Bera statistics confirmed that only occupational type is normally distributed while others are not normally distributed. The sample size used is fairly large and the issue of normality in data will not pose a problem.

Table 2: Regression Result

Dependent Variable: GGU

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.015736	0.075655	13.42590	0.0000
INCL	0.703080	0.097410	7.217736	0.0000
GED	0.097416	0.092110	1.057610	0.2907
MRG	0.592580	0.022656	26.15574	0.0000
AGE	0.407349	0.014652	27.80084	0.0000
EDU	0.257461	0.016268	15.82640	0.0000
OCPT	1.482797	0.129400	11.45901	0.0000
FAMT	0.204480	0.023389	8.742823	0.0000
R-squared	0.757948	Durbin-Watson stat		1.560099
Adjusted R-squared	0.755086			
F-statistic	264.8224			
Prob(F-statistic)	0.000000			

Source: Authors' Computation (2024)

The result in table 2 indicated that all the selected variables have significant effects on green energy use (GGU) except for the gender (GED). The coefficient of income level was positively significant. This indicates that 1% increase in income level will cause green energy use (GGU) to rise by about 0.7%. The coefficient of the type of marriage was significant even at 1% level of significant. This implies that a change in type of marriage will resulted

to an increase in the green energy use (GGU). The coefficient of age was positively significant. An increase of 1% in age will result to about 0.91% increase in green energy use (GGU). The occupational level has a strong significant impact on green energy use (GGU) even at 1% level of significant.

The coefficients of educational level and family type were positively significant. This implies that 1% increase in educational level and family type will increase green energy use by about 0.26%, and 0.2% respectively. The coefficient of age was positive but it is insignificant. This implies that age does not influence the use of green growth. The R^2 value of 0.76 implies that 76% of the variations in green energy use were explained by the selected variables. The value of F statistics shows that the overall model is statistically significant event at 1% significant level. The value of Durbin-Watson statistics indicated that there is no autocorrelation problem.

Table 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	27.03653	Prob. F(7,592)	0.0000
Obs*R-squared	145.3473	Prob. Chi-Square(7)	0.0000
Scaled explained SS	1486.065	Prob. Chi-Square(7)	0.0000

Source: Authors' Computation (2024)

Table 4: Serial Correlation Test: Breusch-Pagan-Godfrey

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	39.28353	Prob. F(2,590)	0.0000
Obs*R-squared	70.50937	Prob. Chi-Square(2)	0.0000

Source: Authors' Computation (2024)

Table 3 shows that there is no problem of heteroskedasticity. Also, table 4 indicates that there is no serial correlation problem which corroborate the result of Durbin-Watson statistics. Therefore, the result obtained can be used for effective prediction.

Conclusion

The study concluded that income level of an individual determines the adoption of green economy in Nigeria. Income level is related to poverty level, if the level of income is low, there is tendency for that person to be poor. Also, it was discovered that marital status has impact on the adoption of green economy in Nigeria. Married has high tendency to use more of gas than single. Since married has potential use more of equipment that will consume more gas than single. In addition, it was revealed that educational level determines the adoption of green economy in Nigeria. Educational level expose an individual to modern equipment, the higher an individual grows educationally determines explosion and income level which will invariably increase his/her consumption of more gas. Furthermore, type of occupation and family type determines the adoption of green economy in Nigeria. Moreover, gender revealed an insignificant impact on the adoption of green growth in Nigeria. This means that the gender does not determine the adoption of green economy in Nigeria.

The study however concluded that the major determinants of the adoption of green economy in Nigeria during the study period are income level; marital status; age; educational level; type of occupation and family type. It was also confirmed that gender does not determine the adoption of green economy in Nigeria. Based on these findings, the study therefore recommended that government should enlighten citizen through Ministry of Information and National orientation agency about the benefits of adoption of gas (green economy) above other sources of energy.

REFERENCE

Adeleke, O. & Josue, M. (2019). Poverty and Green Economy in South Africa: What is nexus? *Cogent Economics and finance*, 7(1),1646847.DOI:10.1080/23322039.2019.1646847.

Aderounmu, B; Azuh, D; Onanuga, O; Oluwatomisin, O; Ebenezer, B &Azuh, A. (2021) Poverty drivers and Nigeria's development: Implications for policy intervention, *Cogent Arts & Humanities*, 8(1).

AFDB (2010). Group Annual Report 2010-African Development Bank. www.afdb.org.

Agbasi, O. E; Edoko, T. D; &Ezeanolue, U. S. (2018). Economic Growth and Poverty Reduction in Nigeria. *Sumerianz Journal of Economics and Finance,* 1(1) 31-36

Asongu, S, and odhiambo, N. M. (2021). Inequality, finance and renewable energy consumption in sub-saharan Africa. *Renewable Energy*, 165(1), 678-688. *www.econpapers.repec,org.*

Aylward, C., Biscaye, P., Lawrence, A., Neidhardt, M., Anderson, C. L.,& Reynolds, T.(2016). Nigeria Economic Growth & Poverty, EPAR Technical Report #327, 1-36. https://evans.uw.edu/policy-impact/epar/research/nigeria-economic-growth-poverty.

Barbier, E. B. (2014). The Policy Challenges for Green Economy and Sustainable Economic Development. *Natural Resources Forum*, (35) 233 – 245. https://doi.org/10.1111/j.1477-8947.2011.01397.x

Bina, O. (2013). The Green Economy and Sustainable Development: An Uneasy Balance?.*Environment and Planning C,* 31(6), 1023-1047.

Brundtland (1987). Our common future in world commission on Environment and Development. Oxford: University Press.

Dada, J. T., &Fanowopo, O. (2020). Economic growth and poverty reduction in Nigeria: The role of institutions. *Ilorin Journal of Economic Policy*, 7(1), 1–15. https:// ideas.repec.org/a/ris/ilojep/0020.html

Dercon, S. (2012). Is green growth good for the poor? *Policy Research Working Paper*; No. 6231, World Bank, Washington, DC.

Hiahla, S., Goebel, A., & Hill, T.R. (2016). Green economy: A strategy to alleviate urban poverty and safeguard the environment? Kwazulu-Natal, South Africa. DOI: 10.1007/s12132-015-9263-7

Hickel, J., &Kallis, G. (2019). Is Green Growth possible? New Political Economy. DOI: 10.1080/13563467.2019.1598964.

Moshi, H. (2014). Climate Change: the challenges of adopting green economy model in Africa.www.semanticscholar.org/paper/climate-change%3A-challenges-of-adopting-green-in-Moshi/f702451319c14ae08806a354d4bb1773f34979can

Nwosa, P. I., &Ehinomen, C. (2020). Inequality, poverty and economic growth in Nigeria. *Euro Economica Special Issue*, 2(39), 1-9. https://dj.univ-danubius.ro/ index.php/EE/article/view/293.

Ogundipe, A., Oduntan, E. A., Adebayo, O., &Olagunju, K. (2016). Agricultural productivity, poverty reduction and inclusive growth in Africa: Linkages and pathways. *Asian Journal of Agricultural Extension, Economics & Sociology*, 18(1), 1–15. https://doi.org/ 10.9734/AJAEES/2017/32427.

Osabohien, R., Matthew, O., Gershon, O., Ogunbiyi, T., &Nwosu, E. (2019). Agriculture development, employment generation and poverty reduction in West Africa. *The Open Agriculture Journal*, 13(1), 82–89. https://doi.org/10.2174/1874331501913010082

Rodrik, D. (2013). Unconditional convergence in manufacturing. *The Quarterly Journal of Economics,* 128.

Son, H., and Kakwani, N. (2004). Economic growth and poverty reduction: Initial conditions matter. *Poverty Centre International United Nations Development Programme Working Paper* Number 2.

Steve, B. ,Shabbon,W.,Tadele,F.and Daniel, F. (2013). Making Growth Green and Inclusive: The Case of Ethiopia. OECD green growth papers, OECD. Retrieved from http://www.oecd.org/docserver/download

UNEP (2018). Green Economy and Trade:Trends,challenges and opportunities. http://www.unep.org/greeneconomy/portals/88/ GetReport/pdf/fullreport.pdf

UNEP (2018). Green Economy and Trade: Trends, challenges and opportunities. http://www.unep.org/greeneconomy/portals/88/ GetReport/pdf/fullreport.pdf

United Nation Commission on Sustainable Development (UNCSD)(2016). The future we want:zero draft of the outcome document (UNCSD, January 10, 2012, http://www.uncsd2012.o rg/futurewewant.html).

World Bank (2012). Inclusive green growth: The pathway to sustainable development. www.ft.dk/samling20111/almdel/uru/ bilag/209/1121957.pdf.

World Bank (2014). *Inclusive green growth: The Pathways to Sustainable Development.* Washington, DC.