

## **Sustainable Development and Quality of Life in Developing Countries: The Nigerian Experience (1980-2012)**

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### **Abstract**

The paper examined the impact of sustainable development on quality of life in Nigeria from 1980-2012. It specifically examined the determinants and the relationship between sustainable development and its indicators on the welfare of Nigerians using Autoregressive Distributed Lag Model as estimation technique. The result revealed that there was positive relationship between sustainable development, investment, secondary school enrolment, inflation, political dummy, pattern of income distribution and lag variable of quality of life. The result also showed that there was negative relationship between corruption, life expectancy, unemployment and quality of life. The result further revealed that lag of value of life, sustainable development, poverty, corruption, investment, secondary school enrolment, unemployment, political dummy and pattern of income distribution became the determinants of quality of life in Nigeria. The paper therefore concluded that sustainable development greatly influenced quality of life in Nigeria. It was therefore recommended that corruption, poverty, unemployment and pattern of income distribution should be highly put under control to permit improved standard of living (quality of life) in Nigeria.

**Keywords:** Sustainable, Development, Quality, Life, Experience and Autoregressive.

### **Introduction**

The world environment is changing as the climate changes on yearly basis which meant that the changes in the climate will subsequently affect natural resources that are available to each state or nation all over the world. This will unavoidably have impact on future use of resources in African Countries where Nigeria is located among developing countries if the usage today is not somehow controlled or checked. It is therefore, necessary to consider future generation as the present generation uses available resources to their advantage in Nigeria but, not to become too costly to future generations since most of the resources are either renewable or non-renewable resources. Thus, over-usage of the resources may have consequences on the standard of living of future generations such that it may have adverse effect on their quality of life.

It is against this background, that sustainable development became prominent and began to feature on public policy agenda of states, nations and international organization since 1987

(WCED,1987). The World Commission on Environment and Development (WCED) meeting in Brundt and its subsequence report created awareness that many development activities most especially in developing countries where Africa is located (Nigeria Inclusive) made a greater number of people poorer and vulnerable. In addition, the report also stated that the people are also subjected to environmental degradation (Aluko, 2004). The emerging fact above made the commission's report to state that a new path to development must be developed to enhanced human progress in future in the world in terms of quality of life for a longer period of time as against short period (few years). This therefore suggested that there was the need to maintain better quality of life most especially for future generations which could only come through proper planning on how the society or Nigeria could maximally employ available productive natural resources to increase income, reduce poverty, improve human welfare through access to education, improved health, increased consumption and reduced unemployment rate. In addition, poverty reduction and closing the gap between the rich and the poor become necessary so that quality of life of Nigerians could be improved.

To achieve the objectives above, the Nigerian government introduced some policies and programmes to compensate the populace of the areas where oil is being explored and exploited for suffering deforestation and ecological degradation that was threatening the people, the renewable natural resources and the ecosystem services due to environmental problems that emanated from both water and air pollution caused by oil activities and industrial waste (Ejimudo and Nwador, 2014). To further improve the quality of life through sustainable development, the Nigerian government introduced several poverty alleviation programmes from the field of education, agriculture and finance to enable individuals make use of opportunities around them to improve their income levels, welfare in terms of quality of consumption such that the quality of life of the people may increased or improved (Oyeranti & Olayiwola, 2005 and Ijaiya, 2007).

In spite of all the policies and programmes, the Niger Delta areas are still agitating, greater proportion of Nigerians are still very poor and vulnerable, the gap between the rich and the poor grow wider on daily basis, standard of living remained very low when compared with other countries of the world. More importantly, Nigeria is still heavily indebted despite the \$18 billion debt forgiveness she received in 2006 (Ayandiji, 2006). This suggest that Nigeria is still living in a paradox of uncertainty due to the reckless and care-free attitudes of people in government in making frivolous policies and expenditures to favour personal aggrandizement at the expense of the Nigerian community and future generation not minding the consequences of their actions on future generation which points to a gap in knowledge.

This paper therefore seeks to examine the relationships between the components of sustainable development and welfare or standard of living of the people here referred to as quality of life. It also tried to investigate which of the variables are determinants of quality of life in Nigeria. The remaining part of the paper is divided into four sections. Section two deals with review of literature, section three consists of methodology, section four contains the discussion of the results while section five consists of conclusion and recommendations.

## **Review of Literature**

### **Conceptual Review**

The concept of sustainable development originally appeared in the report of World Conservation Union based in Swiss which saw development as a new concept that advanced the satisfaction of material wants of present generation to be carried out without jeopardizing or depriving future generations of the resources needed to satisfy their future need (Brundt Land, 1989 and Okibe, 2013). This therefore indicates that once the present satisfaction does not compromise future utility, it means that the welfare of future generations is guaranteed (Asaju and Ajayi, 2011).

In another development, Tietenberg (2009) defined sustainable development as the willingness and the ability of the present generation to device a means of using depleting resources in a manner in

which future generations would to the bearest minimum not left worse-off than current generation. This definition is conceptually the same with the first definition. However, Karpagan (2008) defined sustainable development as a vector of desirable social objectives which consists of real income per capita, improvement in health and nutrition, educational achievement, access to resources, a fairer distribution of income and increase in basic freedom (Ejimudo and Nwador, 2014). The Karpagan definition is adopted as conceptual framework in this paper because it indirectly put poverty into consideration while incorporating future generational cost into the computation of real per capita income. One striking fact that emerged from all the definitions was that sustainable development aimed at the creation of sustainable improvement in the quality of life of all the people in a bid that current resource use does not compromise future use by future generation such that today's costs are transferred to future generation so that development will be properly measured in terms of poverty reduction, improved hunger, welfare and quality of life.

It is worthy to note that sustainable development broadly encompasses three general policy areas which include; economic, environmental and social issues. In recent time, political sustainability has been added (Okibe, 2013). Sustainable development has also become important that the eight millennium development goals (MDGs) have been increased to seventeen to embrace the components of sustainable development. The goals include:

1. End poverty in all its forms everywhere.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote wellbeing for all at all ages.
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunity for all.
5. Achieve gender equality and empower all women and girls.
6. Ensure availability and sustainability management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. Reduce inequality within and among countries.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainable use of the oceans, seas and marine resources for sustainable development.
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reserves land degradation, and halt biodiversity loss.
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development (Robert, Thomas and Anthony, 2005).

The above sustainable development goals (SDGs) has been criticized on the basis that the goals are too many and that it should have been put at between ten or twelve goals maximally.

## **Rules of Sustainable Development**

The rules of sustainable development was that future generations should inherit stock of quality of life assets that was not less than what was bequeathed to the present generation. Thus, the rules could be

interpreted to mean that (i) the next generation should inherit a stock of quality of life that is not less than what present generation inherited from their predecessors. (ii) the components of the inherited stock should be man-made assets, natural assets and human assets.

## **Empirical Review**

Aluko (2004) investigated sustainable development, environmental degradation and the entrenchment of poverty in the Niger Delta of Nigeria using a combination of in-depth interview and observation as primary sources of data. He discovered that oil exploitation and environmental degradation were responsible for the impoverishment of the people and their poor livelihood (quality of life). In addition, lack of access to alternative vocations aggravated incidence and severity of poverty and impoverished the health of the people. He concluded that lack of adequate monitoring by Oil Mineral Producing Areas Development Commission (OMPADEC) and institutionalization of corruption worked against the success or enhancement of sustainable development in the Niger Delta area of Nigeria.

Ejumudo and Nwador (2014) studied environmental management and sustainable development in Niger Delta region of Nigeria using focus group discussion to interpret primary and secondary data obtained from relevant sources. The study concluded that environmental management policy gaps, poor commitment to the implementation of environmental policies, poor environmental management practices as well as weak development agenda served as constraining factors to sustainable development in Niger Delta. Other papers cited concentrated in the area of descriptive analysis in their discussions on the relationship between sustainable development and quality of life. The submission above shows that none of the papers cited employed reasonable methodology and estimation technique to show the relationship between sustainable development and quality of life in Nigeria or discussed the determinants. The present paper therefore, tries to fill this gap while relying on a better estimation technique of Autoregressive Distributed Lag Model.

## **Methodology**

This study adopted the theoretical framework used by Easterlin, (2007) in which he studied the nexus between sustainable development and quality of life in Ethiopia and Esubalew, (2013) who considered the relationship between economic growth and quality of life in Ethiopia.

## **Model Specification**

In formulating the model for this study, the author adopted the model of Esubalew, (2013) where he presented economic growth and other variables as a function of quality of life. The functional form of his model was given as:

$$QOL = f(C, UR, EDU, PCI) \dots \dots \dots (1)$$

QOL = Quality of Life

UR = Urbanization

EDU = Education

PCI = Polity Composite Index

However, this model is modified for use in the present circumstance to accommodate sustainable development and its components on quality of life. The functional form of the model is given as:

$$QUL = f(INV, POV, PCI, UMP, COR, LXP, GINI, INF, SSE, POD) \dots \dots \dots (2)$$

While the econometric form of the model become:

$$QUL_t = \delta_0 + \delta_1 INV_t + \delta_2 POV_t + \delta_3 PCI_t + \delta_4 UMP_t + \delta_5 COR_t + \delta_6 LXP_t + \delta_7 GINI_t + \delta_8 INF_t + \delta_9 SSE_t + \delta_{10} POD_t + U_{3t} \dots \dots \dots (3)$$

Where,

QUL<sub>t</sub> = Quality of Life (proxied by Aggregate Consumption Expenditure)

$PCI_t$  = Per Capita Income (proxy for Sustainable Development)  
 $INV_t$  = Domestic Investment Growths Rate (Proxied by Gross Capital Formation)  
 $POV_t$  = Poverty Index  
 $UMP_t$  = Unemployment Rate  
 $COR_t$  = Corruption Index  
 $LXP_t$  = Life Expectancy  
 $Gini_t$  = Gini-Coefficient (Proxy for income Distribution)  
 $INF_t$  = Inflation Rate  
 $SSE_t$  = Secondary School Enrolment (Proxy for Human Capital Development)  
 $POD$  = Political Dummy Variable (1 for democratic rule, 0 for military rule)  
 $\delta_0$  = Constant Term  
 $\delta_1 - \delta_{10}$  = Parameters to be estimated  
 $U_t$  = Error Term

The *a priori* expectation patterns of the behaviours of the independent variables in terms of their parameters to be estimated are:

$\delta_1 > 0$ ,  $\delta_2 < 0$ ,  $\delta_3 > 0$ ,  $\delta_4 < 0$ ,  $\delta_5 > 0$ ,  $\delta_6 > 0$ ,  $\delta_7 > 0$ ,  $\delta_8 < 0$ ,  $\delta_9 > 0$  and  $\delta_{10} > 0$

### Estimation Technique and Sources of Data

The model is estimated using Autoregressive Distributed Lag Model (ARDL) which stated the role of time in terms of relationship between the dependent variable and the independent variables. This is because the dependent variable responds to the independent variable(s) with a lapse of time. The data used were obtained from Central Bank of Nigeria (CBN) Statistical Bulletin for various years, Nigerian Bureau of Statistics (NBS), World Bank publications, Amnesty International and the Internet.

## Discussion of Results

**Table 1:** Augmented Dickey Fuller Test (Unit Root Test)

VARIABLES	LEVEL	1 <sup>ST</sup> DIFFERENCE	ORDER OF INTEGRATION
QUL	-2.144121	-4.212389***	I(1)
COR	-2.321426	-5.547187***	I(1)
GINI	-1.983214	-3.107770**	I(1)
INF	-2.916501	-	I(0)
INV	-1.761234	-2.785332*	I(1)
LXP	-4.725248***	-	I(0)
PCI	-2.425612	-4.012489***	I(1)
POD	-2.357814	-5.385165***	I(1)
POV	-2.5.11242	-5.326444***	I(1)
SSE	-2.425325	-9.431482***	I(1)
UMP	-2.267138	-4.811819***	I(1)

Test critical values:	1% (***)	-3.661661
	5% (**)	-2.960411
	10%(*)	-2.619160

Source: Author's Computation; E-View 9 (2015)

Table 1 above presents the stationarity or the unit root test which is used to test for the order of integration for the variables used in the model. The unit root test therefore shows that inflation (INF) and life expectancy (LXP) are stationary at level which meant that they are of order zero I(0) while all the other variables QUL, COR, GINI, INV, PCI, POD, POV, SSE and UMP are stationary at order one I(1). The stationarity status of the variables thus suggests that the Autoregressive Distributed Lag (ARDL) technique can be employed or used to carry out the analysis for the study in the case of Nigeria. Hence, the ARDL procedure is adopted for the study (Ahmad and Riaz, 2014).

**Table 2:** LAG length criteria

VAR Lag Order Selection Criteria						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-197.6115	NA	66526.38	13.90743	14.42120	14.07179
1	-192.3497	6.314140	50651.95	13.62331	14.18379*	13.80261
2	-183.6748	9.831535*	30794.65*	13.11165*	13.71884	13.30590*
3	-183.4153	0.276792	32906.02	13.16102	13.81491	13.37021
* indicates lag order selected by the criterion LR: sequential modified LR test statistic (each test at 5% level) FPE: Final prediction error AIC: Akaike information criterion SC: Schwarz information criterion HQ: Hannan-Quinn information criterion						

The ARDL model therefore becomes a recursive model that is used to search for the optimal number of lags through either Akaike Information Criterion (AIC) or Schwartz Bayesian Criterion (SBC). However, Pesaran and Smith (1998) cited in Ayalew (2013), mentioned that the Schwartz Bayesian Criteria (SBC) was preferable to other model specifications because it usually has more parsimonious specifications. In the present study, thirtythree (33) years annual observations of maximum lag order of one I(1) is used to permit the selection of a more parsimonious model which helps to obtain a more parsimonious result using the (SBC) criteria. To this end, the present study adopts the SC criteria to choose the maximum lag length for this study.

**Table 3:** ARDL Estimate for the Relationship between Quality of Life and Sustainable Development in Nigeria

Dependent Variable: QUL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.128828	3.944725	1.807180	0.0614
LOG(QUL(-1))	0.420794	0.142898	2.944717**	0.0114
PCI	1.232549	0.313586	3.930492***	
PCI(-1)	0.211032	0.208306	1.013087	0.3328
POV	0.014081	0.006949	2.026226*	0.0638
POV(-1)	-0.019486	0.010100	-1.929287*	0.0758
COR	0.190701	0.178909	1.065912	0.3059
COR(-1)	-0.718140	0.388215	-1.849851*	0.0882
LOG(INV)	0.247299	0.134490	1.838797*	0.0889
INV(-1)	2.962454	1.425575	2.078076**	0.0160
LX/P	0.045567	0.039887	1.142383	0.2739
LXP(-1)	-0.045567	0.039887	-1.041566	0.3166
SSE	0.001218	0.008651	0.140748	0.8902
SSE(-1)	3.620502	1.740551	2.080089**	0.0403
UMP	-2.546314	1.270592	-2.004037*	0.0624
UMP(-1)	-8.632256	2.857976	-3.020408**	0.0091
INF	-37.37296	45.73612	-0.817143	0.8108
INF(-1)	12.40873	18.65040	0.665333	0.6697
POD	0.094644	0.186312	0.507985	0.6200
POD(-1)	0.314788	0.169575	1.856330*	0.0862
GINI	3.109321	1.351714	2.300280**	0.0386
GINI(-1)	-1.671627	0.977171	-1.710681*	0.1109
R-squared	0.982118			
Adjusted R-squared	0.958733			
F-statistic	41.99845			
Prob(F-statistic)	0.000000			
Schwarz criterion	24.76702			
Durbin-Watson stat	2.363491			

1% = \*\*\*, 5% = \*\*, 10% = \*

Source: Author's Computation; E-View 9 (2015)

Table 3 above explains the relationships between sustainable development and other variables on the people's quality of life with a view to determining the relationship and determinants of quality of life or the standard of living of the people in Nigeria. The result revealed that there is positive relationship between LOG(QUL(-1)) which is the lag of the dependent variable, sustainable development (PCI), investment (INV), secondary school enrolment (SSE) as well as political dummy (POD) and the quality of life or standard of living of the people in Nigeria. On the other hand, unemployment (UMP) has negative relationship with quality of life in Nigeria. However, the relationship between poverty (POV), corruption (COR), life expectancy (LXP), inflation (INF) and pattern of income distribution (GINI) alternate in signs with quality of life in Nigeria. The variables are explained below.

The result shows that the lag of the dependent variable LOG(QUL(-1)) have positive relationship with people's quality of life or the standard of living in Nigeria which indicate that QUL(-1) have positive influence on people's welfare in Nigeria. This assertion was buttressed by the coefficient 0.420794 and the variable came up to be statistically significant with t-statistic -2.944717 at 5% level of significance. This shows that a 1% increase in LOG(QUL(-1)) may lead to 0.42% increase in the standard of living of the people in Nigeria during the period of the study. The implication of the result is that LOG(QUL(-1)) has encouraging impact on people's welfare or quality of life in Nigeria because an increase in it increases the standard of living of the people. It therefore becomes a determinant of quality of life in Nigeria because of the significance of the variable. The behaviour of the variable was in consonance with a priori expectation because it conforms to economic theory.

The result further revealed that sustainable development (PCI) have positive relationship with people's quality of life in Nigeria, hence, it has positive influence on people's standard of living. This outcome was confirmed by the coefficient of PCI at level and previous period which are 1.232549 at level and 0.211032 at lag(-1). The variable was statistically significant at level with t-statistic 3.930492 which indicate its significance at 1% level of significance. However, at lag(-1), it came up to be statistically insignificant with t-statistic 1.013087. The outcome revealed that 1% increase in sustainable development (PCI) may lead to 1.2% increase in quality of life (standard of living) in Nigeria while at previous period, a 1% increase in PCI may cause a proportional increase of 1% in quality of life. The reason for this outcome was that increase in income should normally lead to increase in consumption of goods of necessity (normal) such that the more the quantity and quality of goods consumed, the more improved the quality of life of the people. The implication of the result is that welfare or quality of life increases as income increases. Sustainable development (PCI) therefore becomes a determinant of welfare or quality of life in Nigeria. The behaviour of PCI also agrees with a priori expectation of having the potential to increase quality of life.

On the part of poverty, the result shows that it alternate in signs by having positive influence at level and negative relationship at POV(-1). This indicates that it has the potential to either improve people's welfare or quality of life and at the same time it could also deteriorate people's welfare, hence, it is a double edge knife. This outcome was supported by the coefficients of the variable and the t-statistic. The result revealed that poverty at level have the coefficient 0.014081 and came up with statistical significance at 10% level of significance with the t-statistic 2.026226 while POV(-1) have the coefficient -0.019486 and also came up with statistical significance at 10% level of significance with the t-statistic -1.929287. The result therefore shows that 1% increase in poverty (POV) at level may lead to over 0.014% increase in people's quality of life. This shows that increase in poverty may have marginal enhancing effects on people's welfare by improving people's quality of life. On the other hand, 1% increase in the previous level of poverty (POV(-1)) may deteriorate people's quality of life by about 0.02%. The implication of the result was that it could not be categorically stated whether poverty has actually deteriorated people's welfare or enhanced their quality of lives because of the alternating sign but what cannot be doubted was that poverty is a determinant of people's welfare or quality of life in Nigeria at both current and previous periods.

The result also shows that corruption (COR) equally alternate in signs by having a mixture of both positive and negative relationship with people's welfare or quality of life. However, it was not significant at level. This claim was supported by the coefficients and their t-statistic. At level, COR have the coefficient 0.190701 but turned to be statistically insignificant with the t-statistic 1.065912. At previous period, COR (-1) have the coefficient -0.718140 and became statistically significant at 10% level of significance with the t-statistic -1.849851. This indicates that 1% increase in COR at lag(-1) may reduce people's welfare or quality of life by about 0.72% in Nigeria. The result therefore shows that corruption is detrimental to people's quality of life or standard of living in Nigeria. The implication of the result is that the more corruption thrives in Nigeria, the lower the quality of people's standard of living or quality of life in Nigeria. The behaviour of the variable negates a priori expectation.

Investment LOG(INV) indicates positive relationship with people's welfare meaning that it enhanced standard of living or quality of life in Nigeria. The result indicates that it has positive coefficient of 0.247299 and 2.962454 at level and previous period. The variable was statistically significant at level with t-statistic 1.838797 at 10% level of significance. It was also statistically significant at 5% level of significance at previous period with the t-statistic 2.078076. The result therefore shows that 1% increase in investment at level may increase people's welfare or quality of life by 2% while 1% increase in lagged investment (INV(-1)) could as well lead to about 3% increase in people's quality of life. The outcome of this result may be due to the fact that investment creates income and boost the economy in such a way that more employment are created and profits made are re-invested into the economy which eventually may have greater multiplier effect on the economy and people's ability to consume more goods and services will subsequently increase the quality of life of the people.

Again, life expectancy (LXP) alternates in sign by having both positive and negative relationship with people's quality of life or welfare as it may either improve or reduce the living standard of the people. The result was also supported by the coefficient 0.045567 at level but came up to be statistically insignificant with the t-statistic 1.142383. This indicates that at level, a 1% increase in life expectancy may lead to an increase of about 0.05% in people's welfare or standard of living. On the other hand, the previous level of life expectancy came up with negative coefficient of -0.45567 but came up with insignificant t-statistic of -1.0441568. Despite the fact that a 1% increase in life expectancy (LXP) can lead to marginal increase of 0.05% in the quality of life of the people or welfare, its statistical insignificant nature made it irrelevant in terms of dependability. The result emerged the way it went because age is an important factor and it states that the older a man is, the more he has the ability to improve the standard of living in a country. However, the variable proved not to be a determinant of quality of life or welfare in Nigeria during the period of the study.

In the case of secondary school enrolment (SSE) which stands as proxy for human capital development, the result shows that there is positive relationship between human capital development and people's welfare or quality of life. This therefore revealed that SSE encourages or enhanced welfare or quality of life in Nigeria. To buttress this claim, the coefficient of the variable at level and previous period are 0.001218 and 3.620502. It came up to be statistically significant at 5% level of significance at previous period with the t-statistic 2.080089 but insignificant at current period with t-statistic value of 0.140748. The outcome shows that 1% increase in SSE may lead to an increase of over 0.0012% and 3.62% increase in quality of life or standard of living of the people. The performance of the variable shows that the level of secondary school enrolment may have affected the consumption pattern of the people positively so that the higher the level of education, the higher the income of the people which armed the individuals with more consumption power or purchasing power. Furthermore, the level of education may have increased the level of awareness and exposure of the people which further improved people's orientation towards their consumption which further determines the level of aggregate consumption expenditure in Nigeria. The variable came up with the expected a priori expectation. The variable therefore becomes a determinant of welfare in Nigeria.

Furthermore, unemployment show negative or inverse relationship with people's quality of life or standard of living of the people as attested to by the coefficient -2.546314 and -8.632256 at level and at



lag(-1) (previous period). The variable was statistically significant at 10% and 5% level of significance with t-statistic -2.004037 and -3.020408 at level and at lag(-1) (previous period). This shows that increase in unemployment (UMP) may lead to reduction in people's welfare or quality of life because unemployed people may not have access to income that could be used to buy commodities for consumption and they may likely become dependants on the workforce. At this level, it is possible to state that 1% increase in unemployment may lead to 2.55% reduction in welfare or quality of life in the current period and at previous period (lag (-1) ) it may lead to a reduction of over 8.6% in welfare or quality of life. The implication of the outcome is that unemployment (UMP) was detrimental to standard of living (welfare) as it reduced quality of life of the people in Nigeria during the period of the study. It is therefore, worthy to note that unemployment becomes an important factor which stands as one of the determinants of quality of life or standard of living in Nigeria. The variable equally behaved according to economic theory which is the acceptance of its behaviour with respect to a priori expectation.

Inflation alternate in signs by coming up with negative relationship with welfare at level while it has positive relationship at lag(-1) previous period. This indicates that inflation has the potential to either retard or reduce welfare or quality of life and at the same time it has the power to enhance or increase quality of life in Nigeria. For instance the negative and positive relationship was vividly shown by the coefficients of the variable which stood at -37.37296 at level and 12.40873 at the previous period (lag (-1)). However, inflation proved to be insignificant at both level and previous period (lag(-1)) as indicated by the t-statistic -0.817143 and 0.665333. This shows that 1% increase in inflation may lead to a reduction of 0.81% in welfare or quality of life at level while the same 1% increase in inflation may lead to about 0.67% increase in quality of life or standard of living in Nigeria during the period covered by the study. This situation may arise because workers usually respond to inflation to demand for increased wages which could match the increase in inflationary trend such that people's consumption increases and producers often produce more because of money illusion that usually accompany inflation in which investors usually think they are making additional profits and more inputs are usually demanded to expand production in response to increase in demand. Despite all this, inflation could not emerge as a determinant of welfare or quality of life in Nigeria because it proves to be insignificant.

Political dummy (POD) have positive relationship with quality of life or welfare meaning that it positively influenced quality of life in Nigeria with the coefficient 0.094644 and 0.314788 at current and previous period. The variable turned to be statistically insignificant with the t-statistic 0.507985 at current period but proved to be statistically significant at 10% level of significance with t-statistic value of 1.856330 in the previous period. This shows that POD is a dependable variable. It is possible to infer from the result that 1% increase in governance may improve welfare or quality of life by 0.09% at current period while a 1% increase in POD in the lagged period may lead to marginal increase of 0.3% in welfare or standard of living in Nigeria. The result therefore shows that governance is reliable in Nigeria because of the significance of the variable. Hence, POD has the potential to enhance or increase people's quality of life. The implication of the result is that government instituted programmes are capable of improving people's welfare or quality of life in Nigeria but could not successfully do so due to some bottlenecks which might have been experienced due to hijacks of some of the programmes which prevented 100% successful implementation of the programmes. The variable met its a priori expectation and become one of the determinants of quality of life or standard of living in Nigeria.

Lastly, pattern of income distribution proxied by Gini-coefficient (GINI) alternated in signs by having a mixture of positive and negative relationships with quality of life or welfare at level and previous period (lag(-1)) respectively. This shows that GINI has the potential to increase quality of life or welfare at level while it could also reduce quality of life at the previous period (lag(-1)). This shows that GINI enhanced welfare at level but retard quality of life at previous period. The result was supported by the coefficients 3.109321 at level and -1.671627 at previous and lagged period respectively.. However, the variable is statistically significant at 5% and 10% level of significance at current and previous period with t-statistic 2.300280 and -1.710681. The result shows that 1% increase

in the pattern of income distribution (GINI) may lead to increase of 3.1% in welfare or quality of life at level but at lag(-1) it may reduce quality of life by 1.67% in Nigeria. This therefore indicates that GINI may retard quality of life but the power to increase quality of life supersedes the detrimental factor. Hence, pattern of income distribution (GINI) has the influence to increase or enhance quality of life in Nigeria because of the significance of the variable at level. Thus, GINI becomes a determinant of quality of life or standard of living in Nigeria. It also agrees with a priori expectation.

The other statistics also confirm the reliability of the outcome of the Autoregressive Distributed Lag model as shown at the bottom line of table 3 above. The coefficient of determination ( $R^2$ ) 0.982118 shows that the explanatory variables in the model accounts for 98% of total variation in people's quality of life or welfare (the dependent variable). This shows that the result is robust and of good fit. The F-statistic 41.99845 also confirmed the joint significance of all the explanatory variables on the dependent variable. Finally, the Durbin Watson (DW) 2.363491 shows that the model is free of serial correlation or autocorrelation. The next table (table 4) discusses the bound test for the relationship or consequences of sustainable development on quality of life of the people in Nigeria.

**Table 4:** Long-run Bound Test for the relationship between Quality of Life and Sustainable Development in Nigeria

F- Statistic		2.921886
1%	Lower Bound	Upper Bound
	2.41	3.61
5%	1.98	3.04
10%	1.76	2.77

Source: Author's Computation; E-View 9 (2015)

Table 4 above revealed that the F-statistic 2.921886 is higher than the upper bound of 2.77 which implies that the null hypothesis is rejected showing that there is co-integration among the variables used in the study at 10% level of significance. Hence, there is long-run relationship among the variables used to test for the relationship between quality of life and sustainable development in Nigeria.

## Conclusion and Recommendation

### Conclusion

In conclusion, the study revealed that the lag of quality of life, sustainable development (PCI), investment, human capital development and political dummy enhanced quality of life in Nigeria. On the other hand, unemployment retarded or deteriorates the quality of life while poverty, corruption, life expectancy, inflation and pattern of income distribution alternate in signs meaning that they either deteriorates or enhanced or improved the quality of life in Nigeria. Finally, all the variables proved to be determinants of quality of life except life expectancy and inflation. Conclusively, the bound test showed that there was long-run relationship between sustainable development and quality of life in Nigeria.

### Recommendation

Based on the conclusion above, the following recommendations are suggested for policymakers.

The government should endeavour to implement the policy of sustainable development as it would further improve the quality of life of the people in Nigeria.

Government should introduce policy stance that will discourage the practice of corruption and introduce punitive penalty for people who engaged in the act so that government could improve the quality of life of the people due to the negative and significance of the variable.

Government should also fight against poverty and put in place measures that could lead to poverty reduction so that quality of life may be improved further and sustained.

Government should introduce policies that will improve employment such that the problem of unemployment could be reduced so that quality of life could further be improved in Nigeria. Alternatively, government should introduce unemployment allowance for the unemployed in Nigeria.

Government should try to re-address the pattern of income distribution in Nigeria by introducing policy that will further close the gap between the rich and the poor in Nigeria so that quality of life could be better strengthen to make life more worthwhile or valuable to the people in Nigeria.

Finally, government should improve on her efforts by showing more formidable impact in the area of improving the quality of life of the people at all times in Nigeria.

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