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Impact of Corruption on Economic Welfare in Nigeria: An Empirical Investigation

Wasiu Omotayo Lawal[1], Zainab Abubakar[2] & Blessing Odeleke Odetokun[1]
[1]Department of Economics and Development Studies, Federal University Dustin-ma, Katsina State
[2]Department of Economics and Development Studies, Federal University Dutse, Jigawa State
Corresponding Email: suki4wisdom@yahoo.com

Abstract
This paper investigated the impact of corruption on the economic welfare; the paper adopts the VECM model as its empirical analysis using annual time series data for the period of 1984-2018. The variables include (CRP), economic welfare as per capital income (PCI), government expenditure (EXH) and inflation (INF) were source from CBN. The study tests the stationarity property of the variables using Augmented Dickey Fuller (ADF) and Philips-Perron (PP) test in order avoid obtaining a spurious regression. All the variables were stationary at first difference. Result from the co-integration analysis, shows that there is a long-run relationship between the variables employed, since the probability value (0.0119) was less than the conventional 0.05 level of significance. The result of the Vector Error Correction Model (VECM) indicates that in the short-run, A one unit increase in corruption level will result in decrease in the level of individuals 'welfare by 20% in the long-run and a one unit increase in the level of corruption reduces the welfare level of the citizens by 70% in the short-run. In the wake of these findings, the paper strongly recommended that, there is the need for value re-orientation at all levels of the institution and the Nigeria populace in general, since corruption now flows in the blood of an average Nigerian. Value re-orientation will go a long way to restore the lost dignity and conscience of the ordinary citizen, to reduce corruption to the barest minimum
Keywords: Corruption, Economic Welfare, VECM, Granger Causality Test

1.0 Introduction

Indeed Corruption is old as man in existence and a global phenomenon that has posed challenges to economists, as they undermine every culture, religion, tradition and political structures of society. The phenomenon of corruption is noticed in the first recorded laws (Bible). The laws viewed corruption as a serious fiend thus stipulated death penalty to persons adjudged corrupt. In Great Britain, corruption becomes a national issue capable of causing mass revolt especially from the poor masses that were often at the receiving end of private or public sector corruption; hence the government propounded the poor laws of 1776 a direct affront to corruption and exploitation of the less privilege (Oyebode, 1999).

The consequence of such massive misappropriation of found results to over 2 billion people living below poverty line in Africa (Umo, 2010). Global corruption barometer Africa in 2019 carried out a survey in Africa countries on the level of corruption

it was reported that 22 out of the 35 countries surveyed record perpetual increased in corruption. From the statistics, 55% of the people were of the opinion that corruption increased greatly between the year 2016 and 2018 (Global Corruption Barometer, Africa 2019). Most strikingly is the Democratic Republic of Congo, where 85% of all the citizens see corruption on the rise, which has a direct impact on the lives of the citizen. Due to the high level of corruption in each of these countries, citizens living in poverty are much more vulnerable to corruption than wealthy citizen. It was discovered that almost two in five of the poorest people in Africa paid bribes for access to public service, while only one in five of the wealthiest people paid bribes for public service.

Corruption generally is fiendish because it imping's negatively on most macroeconomic variables like economic growth and welfare of any citizen are dominates. Economic policies for social welfare and development have not been effective and properly implemented due to the increasing rate of corruption in many countries of the world (Kyarem, 2015). The private and the public sector are competitively corrupt. Institutional corruption is rated very high such as customs, immigration, police, the judiciary, and the political parties and among others (Jain, 2001). The massive corruption in Nigeria especially in 1984 to 2019 has become worrisome and demand serious investigation. Within this period, the notorious Abacha loot, the proceeds of corrupt transfer of national resources to banks abroad is estimated at $9.01billion (Kyarem and Samuel 2019). The countries socio-economic indices are degenerating continuously. In 2015, Nigeria ranked 136th most corrupt country in the world. The prevalence of corruption in Nigeria both in the public and private sector is quite high. While the endemic corruption pervades, there is consistent political instability and a degenerating welfare status and increased poverty.

Another disturbing situation is the socio-menace of terrorism, armed robbery, theft, rape and kidnapping in Nigeria, since 2016, the Kaduna-Abuja express way has become a zone of kidnapping. In July 2017, 20 persons were kidnapped on that road (Sahara reporter, 2017). Bandits have been slaughtering police officers and soldiers in place like Birinin-Gwari with uncanny regularity. In the year 1984, the corruption level of Nigeria was 90% (with transparency level of 1.00) (Transparency index, 1980.) while the welfare of Nigeria's was 0.32% human development index and 30% per capital income. This scenery degenerated to 65% in 1996 and 69% in 2013. The condition worsened by 2018 in spite of all the strategy that had been enforced to fight corruption in the country between 2015 to 2019 by the current administration, the corruption perception index worsened between 2016 and 2017, (according to the report in 2018 by transparency international.), the annual corruption perception index reported that Nigeria ranked 148 out of 180 countries assessed in 2017 on the perception of corruption, while the existing poverty well of 53% and a corresponding declined per capita income of 36%. It is obvious that the socio-economic indices of Nigeria with the study period are undesirable and possess serious problems as corruption continues unabated while the welfare of the people declines constantly.

It is therefore pertinent to ask if there is a strong relationship exists between corruption and economic welfare. The paper shall be centered on the objective to examine the impact of corruption on economic welfare in Nigeria. The significance of this study lies in its contribution to knowledge and uniqueness. The uniqueness of this paper is that, it integrates within a single framework a causality and impact analysis of corruption on welfare in Nigeria.

2.0 Literature Review and Theoretical Underpinning

The term corruption has no universally approved definition as observed by Jain (2001). The reason is that some activities and event that may be seen as corruption may not be seen as such in another country. And that which may be seen or deliberated upon as corruption depends on the nation concerned; Busola (2016) refers to corruption as bureaucratic inefficiency. Of course, the bureaucratic corruption prevalent especially in the civil service sector may be very high and predominant in most developing countries; it is however not the only area where corruption thrives in the society. It is in realization of this shortcoming that Al-Sadiq (1990) posits that corruption is synonymous to a general malfunctioning of institutions in the society. Ameh (2015), sees corruption as the exploitation of a position of trust, typically in the public sector, in order to receive a private gain, which may or may not be financial, the study further asserted that, corruption is not a simple issue of right and wrong, but there are conditions that encourage public officials to seek out or accept corruption. According to World Bank (2017), corruption is the abuse of public or corporate office for private gain.

The Transparency International (2018) explains corruption to mean the abuse of entrusted power for private benefit. Both organizations focused on corruption as coming from the operation action of those in public offices and other positions held in trust for the people that deviate from expectations. it is understood that naming acts of corruption in explicit terms cannot be depleted. Emerging from these definitional disputes, our working definition adheres with the Transparency International's opinion that corruption is "the abuse of entrusted power for private gain". An act is corrupt when the reason is to take undue advantage of the position of trust (which is limited to pecuniary issues in this work).

Classification of corruption

The classification that interest Economists most is the economic or money-metric classification of corruption (Umoh 2010). The parameters used here are the amount of money involved and the bribe pay per unit as described by Tignor (1993). Corruption in this light is classified into 2 types:

Petty corruption

This refers to a daily abuse of corrupt practices which has the lower and mid-levels of public and private office holders in their interactions with ordinary citizens who are trying to access basic goods or services in place like hospitals, schools, customs, immigration, police, and civil servants as the central actors.(Jain 2001). According to The African Centre for Economic Growth (2000), "petty corruption involves relatively minor amounts of money or gifts changing hands where one of the parties is themselves a relatively minor, low or middle level civil servant official in the organization or system within which the transaction takes place" In fact, the incidence of petty corruption is very harsh on the poor and the middle class citizens thus compounding the poverty status of the poor.

Grand Corruption

This involve acts committed by businessmen and senior high level of government officials which distort policies or central functioning of state, permitting leaders to benefit at the expense of the public's good. It also involves enormous monetary value. Examples are kickbacks paid to highly placed officials on government public works/contracts (Jain, 2001). Transparency International (2016) assert that grand corruption is the abuse of high

level civil servant power that profit the few at the cost of the many, causing serious and widespread harm to individuals and society.

An Overview of Corruption in Nigeria

It is interesting to note that pervasive corruption has been blamed on colonialism. During the first and second republics, government officials were in the habit of collecting 10 per cent from contract funds. The era witnessed unprecedented level of venality by high- ranking politicians. Corrupt practices were also manifested in the manipulation of the electoral process, politicization of the judiciary and resort to false accusation charges to intimidate political opponents of the government. Thus, pervading culture of corruption was one of the reasons given by the armed forces when they sacked elected governments in January 1966 and December 1983. (Tignor, 1993).

Abacha's regime witnessed the height of all corruption. UNIDC (United Nations Industrial Development) maintained that about $107 billion were kept in private accounts in Europe and the United States. He completely emptied the national treasury, about ₦400 million was purported to have been looted by him and his military goons. The civilian administration of former president Olusegun Obasanjo was received with much expectation following the bitter experience of the previous administration before it. The administration on its inception promised to fight corruption to a significant extent, to this end even though the move against corruption started late in the life of the administration; it however yielded results that supersedes those of previous administrations before it ("Standing Up Against Corruption," 2006).Furthermore, the Obansajo's government recovered more fund and had some of Abacha's private account frozen. It should be noted that Abacha's family also agreed in principle to surrender about $1.2 billion of the wealth under a new compromise with the government. This was considered a full and final settlement of what the government believe the late general Abacha looted from the treasury although the government reported in Nov 2003 that it had a reached an agreement with the Swiss authorities for the returned of close to $ 660 million traceable to Abacha, of recent, other evidences of corruption as well as stealing public fund in Nigeria are the NNPC scam and 20 billion missing money. (Weekly Trust. 2010, September 16).

Economic Welfare

Economic welfare according to Pesaran and Shin (2002) implies the welfare of a group or society comprising of all individuals. But unlike an individual, a society has no exclusive mind or consciousness. This is because, every person thinks and acts differently from one another in a society, this therefore implies that, no social choice expansion index properly reflect social welfare. Social welfare is the aggregate of the utilities or satisfaction of all individuals in a society. It is the well-being and interest of large number of people, including their social, physical, mental, emotional, economic and spiritual well-being. Social welfare can be measured in terms of Pareto improvement whereby when the society as a whole is better off without making any individual worse, we say social welfare has increased. When the distribution of welfare is better, making some persons in society better off than others so that the distribution of welfare is more equitable distributional improvement is said to have occurred.

Thus Economic welfare implies social welfare which is concerned primarily with policy that leads either to a pareto-improvement or a distributional improvement or both. The classical economists which consist of Adam Smith, Ricardo and J.S Mill did not develop any specific theory of economic welfare but only gives sketchy ideas of classical welfare economics on the ground of the working invisible hand, i.e the automatic working

of the market. Smith believes that every person maximizes his own welfare satisfaction due to the automatic working of the invisible hand. Sen (1992), On the other hand sees economic welfare as that part of general (social) welfare which can be brought directly or indirectly into relation with the measuring rod of money. It is the satisfaction of utility by an individual from the use of exchangeable goods and services. On the contrary, Heather (2011), did not agree with Sen, concept of economic welfare based on two reasons; First, he argued that money as a measure of welfare is neither accurate nor satisfactory because value and money changes with variations in the price level.

Second, economic welfare does not depend upon exchangeable goods and services because it is not possible to separate economic factors from non-economic factors, as far as the individual's state of mind is concerned on the basis of theory, the theory propounded by Klitgaard (1988), and was further developed by the United Nations Development Programme (UNDP). They believe that corruption exists because of the failure of state institutions to efficiently and effectively carry out their responsibilities. They averred that as long as the social, political, judicial and economic institutions neglect and fail to enforce the checks and balances which ensure general equilibrium, the resulting outcome will be corruption.

2.1 Theoretical Linkage

2.1.1 Klitgaard's Theory of Corruption

This theory was propounded by Klitgaard (1988), and was further developed by the United Nations Development Programme (UNDP). They believe that corruption exists because of the failure of state institutions to efficiently and effectively carry out their responsibilities. They averred that as long as the social, political, judicial and economic institutions neglect and fail to enforce the checks and balances which ensure general equilibrium, the resulting outcome will be corruption. The theory proposes that Corruption (C) is a function of monopoly (M), Discretionary power (D), and Accountability (A), which is the model stated above. Mathematical, we can say that C varies directly with M and D. and inversely with A. corruption survive when the monopolistic power is able to decide and dictate what to produce, how to produce and for whom to produce.

2.1.2 Pareto Optimality Theory of Economic Welfare

Pareto optimality theory of economic welfare was propounded by the Italian Engineer and Economist Vilfredo 1906 in his studies of economic efficiency and income distribution. The thrust of the theory is that the economic welfare is maximized at a point referred to as Pareto efficient or Pareto optimal which is a situation that cannot be modified so as to make any individual or preference criterion better off without making at least one individual worse-off. According to the theory, a Pareto improvement is a new situation which is weakly preferred by all agents, and strictly preferred by at least one agent. In a sense, it is unanimously agreed improvement: if we move to a new situation, some agents will gain, and no agents will lose. A situation is however, called Pareto dominated if it has a Pareto improvement. A situation is called Pareto optimal or Pareto efficient if it is not Pareto dominated. Hence this paper however adopts the Kiltgaard's theory of corruption that state one's welfare gain should be such that at least no one individual is made worse-off. This links directly to the Cobb-Douglas production function as the basis of the model and analysis of this paper.

2.2 Empirical Review

Hamid and Sakriu (2019) using panel date analysis from 1996 to 2016 for 59 countries examine the military spending, corruption and the welfare consequences. They take advantage of GMM method to do their analysis and were able to show that across different measures of military spending, which was discovered from the result that countries with higher levels of corruption tend to exhibit higher levels of military expenditure while countries with low levels of corruption exhibit lower levels of military expenditure. This expenditure on military affects welfare negatively. On the other hand Nurudeen, and Marcin (2019) analysis the determinants of corruption in Nigeria: evidence from various estimation techniques which employs the ARDL, CCR and FMOLS methods to assess between1984 to 2016. The result of the cointegration test indicate that corruption and its determinants (economic development, political rights, military expenditure, rents, civil liberties and openness) have a long-run relationship.

Kyarem, Sani and Lawal (2019) investigated empirically the impact of political Elites' Corruption, Political stability and Economic growth in Nigeria using ADRL bound test approximation. It adopts annual time series data for the period of 1996-2017. The result revealed that corruption exact negative impact on GDP both in the short and long run, while political stability exact positive impact on GDP in the short run but in the long run the impact is not significant. Dennis and Paul (2017) studied the empirically investigation relationship between political stability and economic growth for the period of 1999 to 2014 using ADRL model approach. It revealed that there is a significant relationship between political stability and economic growth in the long run and short run.

Kyarem (2015) investigated the impact of corruption on macroeconomic performance in Nigeria over the period of 1981 to 2012. The study found a significant negative relationship between corruption and macroeconomic performance through unemployment during the study period. Corruption was also found to account for a substantial portion of the variance decomposition of the variables.

Ezeanyeji and Rowland (2015) in their studies which adopted the ordinary least square model to examine corruption and development observed that corruption has a significant negative effect on economic development. Nageri, Umar and Abdul (2013) examined the impact of corruption and economic development in Nigeria. The findings revealed that corruption has a significant negative effect on economic growth and development. They argued that the welfare of any economy depends largely on the government expenditure. When the government expenditure on social amenities are properly allocated rightly and used wisely, it will certainly reflect on the welfare of its citizen. Ene, Jettery and Albert (2013) said that Nigeria has been the opposite of what it is in the developed countries. The study tries to see how corruption impacts on the development of Nigeria and Africa in general. From there assessment, it was notice that a negative impact of corruption on the social, political and economic lifestyle of Nigerians resulting in political instability, erosion of cherished cultural value, economic distortion and underdevelopment, that is, low welfare standard.

Muhammad, Malarvizhi, Mohammad and Zhan, (2014), tested the beneficial grease theory of corruption on the public sector of Nigeria. A Vector Auto-Retrogressive (VAR) methodology was employed to examine the nature of the relationships between public sector corruption and five developmental explanatory variables. The empirical results confirm the existence of co-integration between public sector corruption and the identified variables. The results of estimated regression among other things indicate that

there is a strong positive relationship between public sector corruption and capital expenditure. As corruption increases, so increases the budgetary allocation for capital development. This increased budgetary allocation does not translate to infrastructural development, but is corruptly siphoned through kickbacks and bribery on projects with long gestation period. The policy implication is that unless and until corruption is stamped out in Nigeria's public life, promoting the country's economic development would be a mirage.

Osimen, Adenegan and Balogun (2013) did a research work on an assessment of corruption in the public sector in Nigeria: A study of Akure south local government area, Ondo state, using questionnaires to generate data and it was observed that many factors such as lack of transparency, moral laxity, weak government institutions, unemployment and poverty were significant factors stimulating corruption in Nigeria. From the paper, poverty was noted to be among the factor stimulating corruption, which implies the low welfare of the people in such area encourage corruption and corruption behavior triggering poverty in such area. Fabayo (2011) in their study analyzed the consequence of corruption on investment in Nigeria using the ordinary least square technique. Their study revealed that low corruption perception index ranking in Nigeria implies high level of corruption which leads to low investment and ultimately low economic development. Likewise, Adewale, (2011) explained that corruption is an act of diverting the resources that should have been used for development purposes of society to private or personal use which have degenerated into poor development levels in the country and among the citizen.

Among the literatures reviewed so far, it was discovered that different researchers have focus majorly on either of the two topics which could be corruption and political stability or corruption and economic growth but this paper focused more on the impact of corruption on political instability as well as the economic welfare of its citizen. Similarly, Different researchers have adopted diverse methodologies with varied discoveries and recommendation, however none of the researchers has used VAR methodology to the best our knowledge to captured corruption on political instability and economic welfare variables covering the specifically period 1984-2019 in their investigation. In the same vein, from the reviewed, we discover two approaches to the analysis of the relationship between the impact of corruption on political instability and economic welfare. The first tries to seek the causality between variables, while the second approach attempts an impact analysis between those variables. This paper incorporates within a single framework the VAR and Granger causality, which tries to explain the impact analysis of corruption on political instability and economic welfare. Also, majority of the studies used simple regression which only established the nature of relationship between variables without examining any causal links. This paper therefore seeks to fill these identified gaps and contribute to the frontier of knowledge.

3.0 Methodology

3.1 Sources and Measurement of Data

Data for this study includes data on per capital income corruption, perception index, per capita income, expenditure on health, expenditure on education and general macroeconomic condition; all of which were obtained and compiled from the of the World Bank (2018), National Bureau of Statistics (NBS) and transparency international publications. Other sources of data for this work include business magazines and

newspapers, various textbooks, seminar papers, academic journals, websites, published and unpublished works from various authors and scholars.

3.2 Model specification

This study model is based on Cobb-Douglas model which was tested and based on the empirical study of manufacturing. It is a linear homogeneous production function of degree one which takes into account two inputs, labour and capital, for the entire output of the manufacturing industry. The Cobb-Douglas Production function is expressed as

$Q = AL^{\alpha}K^{1-\alpha}$---------- (1)

Where Q is output and Land K are inputs of labour and capital respectively. A, α, and $1 - \alpha$ are positives parameters. The equation tells that output depends directly on L and K, and that part of output which cannot be explained by L and K is explained by A which is the residual.

Since the Nigeria economy has been down with about 50% of its citizen living far below poverty line for about 2 decade using Constant Elasticity of Substitution (CES) principle. We assumed the exponents of the Cobb-Douglas production function constant, Hence the theory is modeled in the equation below as:

$Q = (LK)$---------- (2)

Base on free market, the labour (L) and capital (K) are assumed to be private sector. However in Nigeria, government is a major player in the market and output of the economy is a function of private Labour (L) and capital (K) and government (G) activities which implies that

$Q = LKG$---------- (3)

In order to obtain the contribution of every single variable in the modeled, we linearized equation 3 to be written as:

$Q = L + K + G - - - - -$ (4)

The government activity affects labour and capital which could be differentiated as government labour (G_L) and government capital (G_K) which expand equation (7) as:

$Q = L + K + G_L + G_K$---- (5)

With Q representing the total goods available to Nigeria (i.e, GDP), the research estimate the approximate output available to each Nigeria by using Human Development Index (HDI) of the people, which expands equation (8) to:

$HDI = L + K + G_l + G_k$--------- (6)

HDI representing the welfare of Nigeria is therefore a function of private Labour (L) activity, private Capital (K), Government labour (G_L) and Government capital (G_K).

In the midst of all economic activities in Nigeria, corruption is seen as pervasive affecting both the private and public sector, hence the welfare of the people is assumed to be negatively affected, which is expanded as:

$HDI = L + K + G_l + G_k - C$---------- (7)

Adopting the Cobb-Douglas model, we modify it to fit the Nigeria economy by identify the private sector contribution and the public sector and less the pervasive corruption in the economy to conform with Amartya Sen's theory of welfare to find out the causal linkage and nexus between corruption and economic welfare in the country. It must be emphasized that drawing from Cobb-Douglas function the draws strongly from the Sen's capability approach and the follows the specification of Rasheed and Elizabeth (2016). However, the specification differs from the afore-mentioned on the basis that the

effect of corruption and political instability were accounted for. The adapted equation above can be further normalized as;

$$LogPCI = \beta_0 + \beta_1 LogCRP + \beta_2 Log\ EXCH + \beta_3 + LogINF + \mu_t \text{-------} \quad (8)$$

All the variables were log cater for the problem of heteroskedacity, corruption affects the welfare level of her citizen and also impacts the stability of the economy. Alluding to PwC (2016) affirms that countries with higher corruption are associated with lower income per capita or standard of living. Corruption is measured by corruption perception index. Political instability will be represented by political instability index. Low economic welfare will be captured by per capita income for the study periods. The appropriateness of this proxy lies in the fact that economic welfare strictly consists of economic factors which directly impacts on welfare. Other non-economic factors which influences welfare such as life expectancy, social inclusion, gender equity, social cohesion, freedom, democratic participation and good governance; among others are not included Scan and Sereed (2018). Ceteris paribus, the higher the per capita income of any household the higher their standard of living.

However, the VAR specification for equation 2 is expressed below

$$PCI_t = \beta_1 + \sum_{i=1}^{k} \propto_{11i} PCI_{t-1} + \sum_{i=1}^{k} \propto_{12i} CRP_{t-1} + \sum_{i=1}^{k} \propto_{13i} PI_{t-1} + \sum_{i=1}^{k} \propto_{14i} STA_{t-1} \mu_{1t} \quad (9)$$

$$CRP_t = \beta_2 + \sum_{i=1}^{k} \propto_{21i} PCI_{t-1} + \sum_{i=1}^{k} \propto_{22i} CRP_{t-1} + \sum_{i=1}^{k} \propto_{23i} PI_{t-1} + \sum_{i=1}^{k} \propto_{24i} STA_{t-1} + \mu_{2t} \quad (10)$$

$$PI_t = \beta_3 + \sum_{i=1}^{k} \propto_{31i} PCI_{t-1} + \sum_{i=1}^{k} \propto_{32i} CRP_{t-1} + \sum_{i=1}^{k} \propto_{33i} PI_{t-1} + \sum_{i=1}^{k} \propto_{34i} STA_{t-1} + \mu_{3t} \quad (11)$$

$$STA_t = \beta_4 + \sum_{i=1}^{k} \propto_{41i} PCI_{t-1} + \sum_{i=1}^{k} \propto_{42i} CRP_{t-1} + \sum_{i=1}^{k} \propto_{43i} PI_{t-1} + \sum_{i=1}^{k} \propto_{44i} STA_{t-1} + \mu_{5t} \quad (12)$$

3.2 Post-Estimation Test

The estimated model is subjected to post-regression tests in order to ascertain the validity of the model and also ensure that reliable statistical inferences are drawn from the model. Following Nwankwo (2014), the most relevant post-estimation test for Multivariate Models is the Serial Correlation test (using the LM test)". The reason is traceable to the fact earlier noted, that results from VAR estimations are not to ends in-themselves, as they are conducted primarily so as to be able to test for causality and compute Impulse Response Functions and variance decompositions. In the light of this, the serial correlation test will be conducted before proceeding to causality test, Impulse response function and variance decomposition. The serial correlation test is used to check for the presence of correlation among the regressors error. The result obtained will determine whether or not OLS estimators are in the class of best linear unbiased estimators. The test is conducted using Breusch-Godfrey LM test. The null hypothesis for this test is that there is no serial correlation among the variables.

4.0 Results and Discussion

Table 1 Unit Root Test Results (@ first difference and @ levels)

Variable	ADF		PP	
	At levels	First difference	At levels	First difference
D(LPCI)	0.424091	3.548490**	0.450819	6.601807**
D(CRP)	2.630527	3.548490**	2.726671	5.780883**
D(LGEXH)	0.017880	-3.552973**	1.853008	20.89848**
D(INF)	3.536601	3.540328***	3.277817	10.65599***

*, ** and *** indicates statistical significance at the 1%, 5% and 10% levels respectively.

Sourced: Extraction from Output Using Eviews 9.0

Empirical results: Results revealed the absolute values of the variables, and on the application of the Augmented Dickey-Fuller Unit root test and Philip perron, the variables were non-stationary at level as the ADF value appears to be less than the 5% critical value and as such the series were differenced once and after the first differencing, the variables all became stationary as the ADF value for the variables all became greater than their various 5% critical value. The implication of this is that the variables are stationary and integrated of order 1, which is I(1). Philip-Perron Unit root test was employed to further validate the outcome from the Augmented Dickey-Full unit root. Variables were non-stationary at level as their Philip-Perron test values were less than the 5% critical value, this led to the variables been subjected to the first difference. On differencing the variables once, the values obtained show that they are stationary as the Philip-Perron test values became greater than the 5% critical value. This shows that the variables are stationary and integrated of order one or I(I). The output also affirms what was obtained from the Augmented Dickey-Fuller unit root test. The study therefore proceeds to test for the long-run relationship since the variables are integrated of the same order. In doing this the Johansen co-integration technique which is suitable for uniform order of integration was adopted. The result is presented below in table 2.

Table 2: Result of the Co-intergartion Test Result
VAR = (RGDP,DRBC,DLSE,AMTL BBSP), Lag = 1

		5%					1%		
Null	Alternative	Trace	Critical value	Maximum eigen value	Critical value	Trace statistics	Critical values	Maximum Eigenvalue	Critical value
r = 0	r≥1	49.58072**	47.85613	62.3038**	33.87687	32.19516*	27.58434	62.3038*	32.77342
r≤1	r≥2	17.38556	29.79707	25.4658	27.58434	9.699114	21.13162	25.4658	21.2433
r≤2	r≥3	11.686444	15.49471	20.6922	21.13162	7.650498	14.26460	20.6922	19.5222
r≤3	r≥4	7.44862	3.84146	0.01089	14.26460	0.035945	3.841466	0.001089	7.16344

R indicates the number of cointergarting vectors. *, ** indicate statistical significance at 1% and 5% respectively.

Sourced: Extraction from Output Using Eviews 9.0

The test was also embraced, the co-integration result for the Trace statistics which appears to show that the Trace Statistics is greater than the 0.05 critical value in one of the hypothesized equations; that is 49.58072 > 47.85613. The probability value (0.0341) was also less than the conventional 0.05 level of significance. Also, the maximum Eigen value shows that the Max-Eigen statistics was also greater than the 0.05 critical values in one of the hypothesized equations; that is 32.19516 > 27.58434. The probability value (0.0119) was also less than the conventional 0.05 level of significance. This shows that there is a long-run relationship between the variables employed for the study.

Table 3: Long Run Result of the Error Correction Model

Variables	Coefficient	Standard error	t-statistics	Comment
C	-25.27865			
CRP(-1)	-29..54730***	5.56830	-5.30634	Significant
LG EXCH(-1)	0.751505***	0.14974	5.01871	Significant
INF(-1)	-0.130417***	0.01964	-7.64170	Significant

*, ** and *** indicates statistical significance at the 1%, 5% and 10% levels respectively.
Sourced: Extraction from Output Using Eviews 9.0

In the long run, the result of the error correction model shows that Corruption level had a negative coefficient of -29.54730 but significant at 0.05 level, indicating that an increase in corruption level by 1% will result in a decrease in the level of individuals' welfare in the economy by 29%. This means that corruption has a high adverse effect on the welfare of Nigerians. Government Expenditure on Health on the other hand, had a positive coefficient of 0.751505, which shows that a unit increase in the level of government expenditure will result in an increase in the welfare level of nationals by 75%. This means if corruption is curtailed, individual's welfare will improve remarkably. The linkage between corruption and Nigerians low welfare profile is therefore inextricably profound. Finally, Inflation had a negative coefficient of -0.130417 which shows that an increase in the inflation level by 1% will increase the welfare level proxied by PCI by 13%. The values for the variables were all significant going by the rule of thumb that the t-statistics of 2 and above is significant at 0.05 levels.

Table 4: Short Run Error Correction Result

Dependent variable LPCI Coefficient	Standard error	t-statistics	F-value	Comment
0.031912	0.015909	2.005847	0.0550	Insignificant
0.059202	0.188983	0.313267	0.7565	Insignificant
-0.700604	0.238056	-2.943021	0.0065	Significant
0.114367	0.056145	2.036993	0.0429	Significant
0.015991	0.007170	2.231610	0.0305	Significant
-0.115340	0.046432	-2.484063	0.0128	Significant
31.96440			0.0000	Significant
0.850923				
1.845820				

*, ** and *** indicates statistical significance at the 1%, 5% and 10% levels respectively.
Sourced: Extraction from Output Using Eviews 9.0

In the short run on the other hand, corruption level had a negative coefficient of -0.700604, this means that an increase in the level of corruption by 1% will result in a decrease in the welfare level of the citizens by 70%. Government expenditure on Health had a positive coefficient of 0.114367 which shows that an increase in the level of health expenditure by 1% led to an increase in the welfare level of the citizens by 11%. Finally, Inflation had a positive coefficient of 0.015991, this shows that an increase in the level of inflation by 1% will result in an increase in the welfare level by 1%. The coefficients were

statistically significant as their p-values were less than the 0.05 level of significance. R^2 = 0.850923 which shows goodness of fit of the model and revealed that 85% of the fluctuations in the Per Capita Income are as a result of changes in the explanatory variables which are corruption level, government expenditure on health and inflation rate, the remaining 15% are accounted for by the variables not included in the model but captured by the error term. The F-statistics had a coefficient of 31.96440 with a p-value of 0.0000, this shows that the explanatory variables had a joint influence on the dependent variable (Per Capita Income) The Durbin-Watson was less than 2, revealing that there is no evidence of auto-correlation in the model, and this was also supported by the Breusch-Godfrey serial correlation test.

VECM Diagnostic Tests

For consistency, LM Serial Correlation Test was performed to test for the existence or absence of autocorrelation among the variables used in the analysis,

Table 5: Breusch-Godfrey Serial Correlation LM test

F- statistics	obs* squared
1.105797	2.682040
PROB.F (2,5)	Prob.chi-square (2)
0.3466	0.2616

Sourced: Extraction from Output Using Eviews 9.0

Lagrangian Multiplier (LM) test follows that the Chi-square and hence, the chi-square value will be employed in taking decisions. Table 9, shows that the Obs*R-squared have a coefficient of 2.682040 and a probability value of 0.2616 since the p-value is greater than the 0.05 level of significance, it shows that there is no evidence of serial correlation in the model.

Table 6: Breusch-Pagan-Godfrey Heteroskedacity test

F- statistics	Obs*R-squared	Scaled explained sss
1.003949	8.274413	13.54536
Prob.F (8,24)	Prob.Chi square (8)	0.4071
0.4586	0.4071	0.0944

Sourced: Extraction from Output Using Eviews 9.0

The Breusch-Pagan-Godfrey Heteroskedasticity Test revealed that the Obs*R-squared had a value of 8.274413 and a p-value of 0.4071 which is greater than the 0.05 level of significance. Also, the F-statistics had a value of 1.003949 and a p-value of 0.4586, which was also greater than the 5% level of significance. The study concludes that the model is free from the problem of heteroskedasticity. This shows that the standard error of the variables monitored over a specific period is equal.

5.0 Conclusion and Recommendations

The study empirically examined the impact of corruption on economic welfare in Nigeria spanning from 1984 to 2018. Findings revealed that there is a long-run relationship between the level of corruption and economic welfare in Nigeria. The outcome of the study corresponds to the study of Nageri, Umar and Abdul (2013) Corroborating with the study

of Hammid and Sakiru (2019) who examined the effect of political corruption in Nigeria. He noted that corruption from top-to-bottom has a significant long-run relationship in Nigeria and this has undermined the growth and development of the country. They attributed this to a lack of institutional good governance which they recommend should be put to reduce the level of corruption to the barest minimum. Corruption has a negative impact on economic growth in both the short-run and the long-run. This can be attributed to the high level of corruption at virtually every sector in Nigeria and at lower and strategic levels. The outcome of this analysis is in line with the findings of Adewale (2011) who investigated the impact of political corruption and social welfare in Nigeria, he discovered that corruption had a significant long-run and short-run impact on social welfare of Nigeria citizens and hence concludes that corruption is a fundamental factor the has led to a poor social welfare state that the majority of Nigerians are presently facing. Unidirectional causal relationship between the level of corruption in Nigeria and economic welfare, meaning corruption affects economic welfare but economic welfare does not influence corruption. The findings corroborated that of Nurudeen, and Marcin (2019) who carried out a study on the impact of corruption and shadow economy on the economic and sustainable development in Nigeria.

Conclusively, corruption has a negative influence on the economic welfare of Nigerian citizens. And as such the high poverty rate can be attributed to the prevalence of corruption at all levels of an institution present in Nigeria. Hence this study recommends that there is the need for value re-orientation at all levels of the institution and the Nigeria populace in general, since corruption now flows in the blood of an average Nigerian. Value re-orientation will go a long way to restore the lost dignity and conscience of the ordinary citizen, to reduce corruption to the barest minimum.

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