



# **The Impact of Poverty, Corruption and Governance on Gross National Income Per Capita in Nigeria**

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## **ABSTRACT**

This study investigated the impact of poverty corruption and governance on gross national income per capita in Nigeria from 1996 to 2022. Corruption perception index, poverty rate and government effectiveness are the proxy for the independent variable while the dependent variable was proxy by gross national income per capita. Data were sourced from World Bank development indicators and Central Bank of Nigeria annual statistical bulletin. The Eview10 Statistical Software was used to empirically analyze the data. The ADF and Philips Peron was used to test the stationarity of series and the tests show that gross national income per capita variables evaluated are all stationary after first difference I(1) while government effectiveness and poverty rate were stationary at level I(0). The data were analyzed using the ARDL. The results of the Autoregressive distributed lag (ARDL) estimates indicate that corruption perception index and poverty rate coefficients are positively signed, while government effectiveness coefficient is negatively signed which is not in line with the a priori expectation. This indicates that in the long run, improvement in rating of corruption perception index, would increase gross national income per capita in Nigeria. The study recommends amongst others that Nigeria should step up her game in the fight against corruption so that as an independent nation which has the prospect to grow a well-off industrial economy would be able to defeat hunger, mass poverty, and create jobs for the jobless.

**Keywords:** Corruption, Gross National Income, Poverty Rate, Governance, Nigeria.

## **INTRODUCTION**

One of the most endemic issues affecting economic growth and development in Nigeria is corruption. President Muhammadu Buhari once stated that corruption was the major factor responsible for the suffering of millions of Nigerians (Bamidele, 2020). Nigeria like many under developed countries has continued to face many social and economic problems. These include poor public spending on education and healthcare, high unemployment, low incomes and high level of poverty, rising insecurity, kidnapping, cattle rustling, and cultism, to mention but a few. A major factor that has been blamed for the poor standards of living in Nigeria is the massive corruption in the public sector. For instance, Abu (2015), opined that corruption is deep-rooted in almost every segment/section of the Nigerian economy including the various arms of government (that is, executive, legislature and judiciary). The ruling All Progressive Congress (APC) won the 2015 and 2019 presidential elections on the promise that it would tackle corruption headlong, fight insecurity as well as develop the economy. In addition, the President (Muhammadu Buhari) has repeatedly said that ‘if Nigerians don’t kill corruption, corruption will kill Nigeria. It is not surprising therefore, that the government is investigating alleged embezzlement of over \$2billion that was meant to prosecute the war against insurgency and Boko-Haram by cabinet members and high-ranking government officials including political associates of the previous administration, the People’s Democratic Party (PDP). To this end, the former National Security Adviser (NSA) and

Spokesperson of the PDP were apprehended and are currently standing trial. Similarly, the former Chief Justice of Nigeria (CJN) was suspended and was prosecuted for failing to declare his assets (properties and cash running into millions of dollars).

According to the President, corruption at all levels was the biggest problem impeding Nigeria's economic growth and development. He urged Nigerians to always see corruption in its true colour as a gross violation of human rights. According to him corruption is the major reason why millions of our people are in hardship, sick and helpless. The fight against corruption is, in reality, a struggle for nation-building and the future. Corruption and impunity become widespread when accountability is disregarded. He also stated that disrespect for accountability strives when people get away with all manner of questionable things and accountants are unable to check them. Corruption is the major reason why many children cannot go to school, why we have a few equipment and doctors in our hospitals. Corruption diverts public resources thereby causing much suffering, deprivation and unnecessary death in the country, he concluded (Bamidele, 2020).

However, the impact of poverty, corruption and governance on gross national income per capita in Nigeria can be measured with several proxies. For this study, corruption perception index, poverty rate, government effectiveness and gross national income per capita were used as measures and dimension of the dependent and the independent variables. On this premise, this paper seeks to empirically investigate the impact of poverty, corruption and governance on gross national income per capita in Nigeria. Interestingly, no study has investigated the impact of poverty, corruption and governance on gross national income per capita in Nigeria using the above measures and dimension at the same time. These issues give credence to this study.

This article is organized as follows; the abstract, the introductory part, the literature reviewed which includes conceptual clarifications, theoretical framework and empirical review. The methodology, which contains the model design, model specification and empirical result explanations. This work was concluded with the conclusion and recommendations.

The aim of this study is to empirically investigate the impact of poverty, corruption and governance on gross national income per capita in Nigeria within the period 1996 to 2022. However, it set out to achieve the following specific objectives which are to;

- investigate the impact of poverty rate on gross national income per capita;
- find out the impact of corruption on gross national income per capita;
- evaluate the impact of government effectiveness on gross national income per capita

## **LITERATURE REVIEW**

### **Conceptual Clarification**

#### **Corruption**

Corruption has been defined by the World Bank as the abuse of public office for private gains. Public office has been abused through rent-seeking activities for private gain when an official accepts, solicits, or extorts a bribe. Public office is also abused when private agents actively offer bribes to circumvent public policies and processes for competitive advantage and profit. Public office can also be abused for personal benefit even if no bribery occurs, through patronage and nepotism, the theft of state assets or the diversion of state resources (Basu et al, 1992)

Corruption perception index is a measure that rates countries on the basis of their perceived level of corruption, on a scale from 0 (highly corrupt) to 100 (clean). The CPI was created and used by Transparency International, an international nongovernmental organization established in 1993 with the aim of bringing together business, civil society, and government structures to combat corruption. The index was first used in 1995, and it covers a growing number of countries in annual surveys.

#### **Poverty Rate**

Poverty has no clear cut or universal accepted definition. Poverty is a state where an individual is not able to cater adequately for his or her basic needs of food, clothing and shelter (Kpelai, 2013). However, Eboh & Uma (2010), view poverty as "a lack of command over basic consumption needs", which means that

there is an inadequate level of consumption giving rise to insufficient food, clothing or shelter, and moreover, the lack of certain capacities such as being able to participate with dignity in society. Genyi (2007), agrees that: Poverty has various manifestations including lack of income and productive resources sufficient to ensure sustainable livelihoods, hunger and malnutrition, ill-health, limited or lack of access to education and other basic services, increase morbidity from illness, homelessness and inadequate housing, unsafe environment, social discrimination and exclusion. It is also characterized by a lack of participation in decision and in civil, social and cultural life.

### **Government Effectiveness**

The Government Effectiveness rate captures the perceptions of the public services quality, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

Countries are evaluated on the following factors:

- competence of civil service; effective implementation of government decisions; and public service vulnerability to political pressure;
- ability to manage political alternations without drastic policy changes or interruptions in government services;
- flexibility, learning, and innovation within the political leadership; ability to coordinate conflicting objectives into coherent policies;
- the efficiency of revenue mobilization and budget management;
- the quality of transportation infrastructure, telecommunications, electricity supply, public health care provision, and public schools; the availability of online government services;
- policy consistency; the extent to which government commitments are honored by new governments;
- prevalence of red tape; the degree to which bureaucratic delays hinder business activity;
- existence of a taxpayer service and information program, and an efficient and effective appeals mechanism;
- the extent to which:

Countries with more effective governments tend to achieve higher levels of economic growth and development by obtaining better credit ratings and attracting more investment, offering higher quality public services and encouraging higher levels of human capital accumulation, putting foreign aid resources to better use, accelerating technological innovation, and increasing the productivity of government spending. Efficiency in the delivery of public services also has a direct impact on poverty. On average, countries with more effective governments have better educational systems and more efficient health care (Lewis, 2006).

### **Gross National Income per capita**

GNI per capita (formerly GNP per capita) is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. GNI, calculated in national currency, is usually converted to U.S. dollars at official exchange rates for comparisons across economies, although an alternative rate is used when the official exchange rate is judged to diverge by an exceptionally large margin from the rate actually applied in international transactions. To smooth fluctuations in prices and exchange rates, a special Atlas method of conversion is used by the World Bank (Index Mundi, 2019).

### **Theoretical Literature**

#### **Institutional Theory of Corruption by Luo Y. (2005)**

The institutional theory of corruption was propounded by Luo Y. in 2005. He opined that corruption may be the single most significant obstacle to both democratization and economic development (Banfield, 1958), explained that in the institutional model, the task environment and institutional environment will

affect individuals in an organization to perform fraudulent acts (malfeasant behaviour). Malfeasant behaviour could lead to the development of lack of focus and deterrent outcomes. This could result in the organization weak and unable to respond to environment change. Organizational anti-corruption became mechanism described by Luo (as a means to prevent corrupt practices) incorporates the elements of organizational culture, organizational structure and compliance system. Organizational culture is the tradition where decision-making is morality-based, while organizational structure is a structure that aims at detecting and correcting any fraudulent act occurs within the organization. Compliance systems, on the other hand, are built to prevent corrupt practices through the development of anti-corruption programs and codes of conduct within an organization.

**Empirical Review**

Mauro (1995), examined the effect of corruption on growth rates of per capita GDP of sixteen countries from 1960-1985. The result of this systematic study shows that one-standard deviation decline in the corruption index leads to an increase in annual growth rates of GDP per capita by 0.8 percent.

Kolstad and Wiig (2015), analyzed the effect of democracy on corruption in a cross-country study during the 1946–2008 period, using the Ordinary Least Squares (OLS) and Instrumental Variable (IV) techniques. The results confirm that democracy reduces corruption. Other factors that reduce corruption include income level (captured by log of GDP per capita), democracy duration and democracy in conflict.

Hoinaru, et al. (2020), used panel of 185 countries and data set for the period 2005 to 2015 to test the “Sand the Wheels” and “Grease the Wheels” hypotheses of corruption by examining the impact of corruption and shadow economy on the economic and sustainable development. They used correlation matrix and found that most of the variable used were strongly correlated. The fixed effect and the random effect estimation result showed that the relationship between corruption and economic development was not consistent. However, they found an inverse relationship between corruption and the shadow economy on one hand and the same inverse relationship between corruption and economic development. The result supports the ‘sands the wheel corruption hypothesis’.

**METHODOLOGY**

**Model Design**

The method that is used in this study is used is the quasi-experimental design called correlational research design.

**Model Specification**

**Gross National Income per capita**

The mathematical form of the model is expressed as

$$GNI = F(CPI, POVR, GOVEF) \tag{1}$$

Where GNI = Gross National Income per capita

GNI is the dependent variable

The regression model based on the above functional form is stated as:

$$GNI = \beta_0 + \beta_1CPI + \beta_2POVR + \beta_3GOVEF + U \tag{2}$$

$$\Delta GNI_t = \alpha_{0i} + \beta_{1i} GNI_{t-1} + \beta_{2i} CPI_{t-1} + \beta_{3i} POVR_{t-1} + \beta_{4i} GOVEF_{t-1} + \alpha_1 \Delta GNI_{t-1} + \sum_{i=1}^{p1} \alpha_2 \Delta CPI_{t-1} +$$

$$\sum_{i=1}^{p2} \alpha_3 \Delta POVR_{t-1} + \sum_{i=1}^{p3} \alpha_4 \Delta GOVEF_{t-1} + et \tag{3}$$

ECM

$$\Delta \text{GNI}_t = \alpha_{0i} + \sum_{i=1}^q \alpha_{1i} \Delta \text{GNI}_{t-1} + \sum_{i=1}^{p_1} \alpha_{2i} \Delta \text{CPI}_{t-1} + \sum_{i=1}^{p_2} \alpha_{3i} \Delta \text{POVR}_{t-1} + \sum_{i=1}^{p_3} \alpha_{4i} \Delta \text{GOVEF}_{t-1} + \lambda \text{ECT}_{t-1} + \epsilon_t$$

$$B_1 \geq 0, \beta_2 \geq 0, \beta_3 \geq 0, \beta_4 \geq 0, \beta_5 \geq 0$$

### EMPIRICAL RESULTS AND DISCUSSIONS

**Table 1: Augmented Dickey Fuller and Phillips Perron Unit Root Test for GNI Model**

Variable	ADF					PP				
	Level		1 <sup>st</sup> Diff		I(.)	Level		1 <sup>st</sup> Diff		I(.)
	Coeff.	5% CV	Coeff.	5% CV		Coeff.	5% CV	Coeff.	5% CV	
<b>CPI</b>	<b>-1.017</b>	<b>-2.986</b>	<b>-6.378</b>	<b>-2.986</b>	<b>I(1)</b>	<b>-2.434</b>	<b>-2.981</b>	<b>-6.580</b>	<b>-2.986</b>	<b>I(1)</b>
<b>GOVEF</b>	<b>-3.529</b>	<b>-2.981</b>	--	--	<b>I(0)</b>	<b>-3.472</b>	<b>-2.981</b>	--	--	<b>I(0)</b>
<b>POVR</b>	<b>-3.691</b>	<b>-2.981</b>	--	--	<b>I(0)</b>	<b>-3.691</b>	<b>-2.981</b>	--	--	<b>I(0)</b>
<b>GNI</b>	<b>-1.156</b>	<b>-3.021</b>	<b>-3.517</b>	<b>-3.021</b>	<b>I(1)</b>	<b>-1.187</b>	<b>-2.981</b>	<b>-2.188</b>	<b>-2.986</b>	<b>I(1)</b>

Table 1, shows the ADF and Phillips Peron Test. In order to get a robust result for the study, we stick with the result of Phillips Peron test as a result of its robust nature due to structural breaks. Going by the preposition of Jenkin and Box (1970), the Variables that are not stationary at levels shall be made stationary after first difference. Corruption perception index, gross national income per capita were stationary after first difference while poverty rate and government effectiveness were stationary at level.

**Table 2 Bound Test for LOG (GNI) Model**

ARDL Bounds Test

Date: 05/13/23 Time: 07:56

Sample: 2001 2022

Included observations: 22

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	10.00886	3

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: Computed from E-view

Table 2 shows that the upper bound critical value of 4.35 at 5 percent significant level is less than 10.00886 which is the calculated F-statistics. Going by this result, it therefore means that there is cointegration or long run relationship amongst the variables in the gross national income per capita model.

**Table 3 ARDL-ECM Short-run Results for LOG (GNI) model**

ARDL Cointegrating And Long Run Form

Dependent Variable: GNI

Selected Model: ARDL(2, 2, 0, 0)

Date: 05/13/23 Time: 08:00

Sample: 1996 2022

Included observations: 25

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GNI(-1))	0.774337	0.167874	4.612596	0.0002
D(CPI)	31.796467	12.240347	2.597677	0.0188
D(CPI(-1))	-20.56482...	11.634609	-1.767556	0.0951
D(GOVEF)	270.47242...	363.827332	0.743409	0.4674
D(POVR)	-2.863329	9.266698	-0.308991	0.7611
CointEq(-1)	-0.280760	0.090989	-3.085646	0.0067

Cointeq = GNI - (147.6805*CPI + 963.3588*GOVEF -10.1985*POVR + 219.3450 )				
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Source: Computed from E-view

**Explanation of estimated short run for LOG (GNI) model**

The result of the short run regression estimates for gross national income per capita model is presented in table 3. The regression estimates indicate that corruption perception index and government effectiveness coefficients are positively signed but it is only corruption perception index coefficient that is statistically significant at 5% level of significance. What this portend is, a one percent increase in corruption perception index (reduction in corruption) would lead to 31.796467 increase in gross national income per capita in Nigeria ceteris paribus. Poverty rate coefficient is negatively signed, it means a one percent increase in poverty rate would reduce gross national income per capita. Although the coefficient of poverty rate is not statistically significant. It thus means that poverty rate does not meaningfully affect GNI per capita in the short run, all things being. The implication of this finding is, in the short run, improvement in rating of corruption perception index, would increase gross national income per capita in Nigeria.

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	147.680507	21.659049	6.818421	0.0000
GOVEF	963.358842	1276.535267	0.754667	0.4608
POVR	-10.198499	33.564159	-0.303851	0.7649
C	219.345026	2548.403013	0.086072	0.9324

Source: Computed from E-view

**Explanation of the Estimated Long-run for LOG (GNI) Model**

The result of the long run regression estimates for gross national income per capita model is presented in table 4. The regression estimates indicate that corruption perception index and government effectiveness coefficients are positively signed, while poverty rate coefficient is negatively signed. A unit increase in corruption perception index would increase gross national income per capita by 147.680507. The coefficients of government effectiveness and poverty rate are not statistically significant at 5% level of significance. Therefore, we shall not waste time to interpret their coefficients since they are not statistically significant. The findings indicate that in the long run, improvement in rating of corruption perception index, would increase gross national income per capita in Nigeria. This may be attributed to the fact that in Nigeria governance is not effective because of the corrupt nature of Nigerian leaders. It is expected that good governance supposed to improve the living standards of the populace but reverse is the case in Nigeria. This findings are in line with that of Mauro (1995) and Shrabani & Rukmani (2009), who discovered that there is a positive relationship between improvement in the rating of corruption (reduction in corruption) and gross national income per capita.

**Tables 5a Residual Diagnostics Test for Log(GNI)**

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.248714	Prob. F(7,17)	0.3313
Obs*R-squared	8.489375	Prob. Chi-Square(7)	0.2914
Scaled explained SS	2.205599	Prob. Chi-Square(7)	0.9476

Source: Computed from E-view

The null hypothesis states that there is no heteroskedasticity. From our observation, each of the value of the F-statistics probability is higher than 5%. It thus means we have to accept the null hypothesis of there is no heteroskedasticity. From the foregoing, it is crystal clear that the result can be used for prediction.

Breusch-Godfrey Serial Correlation LM Test:

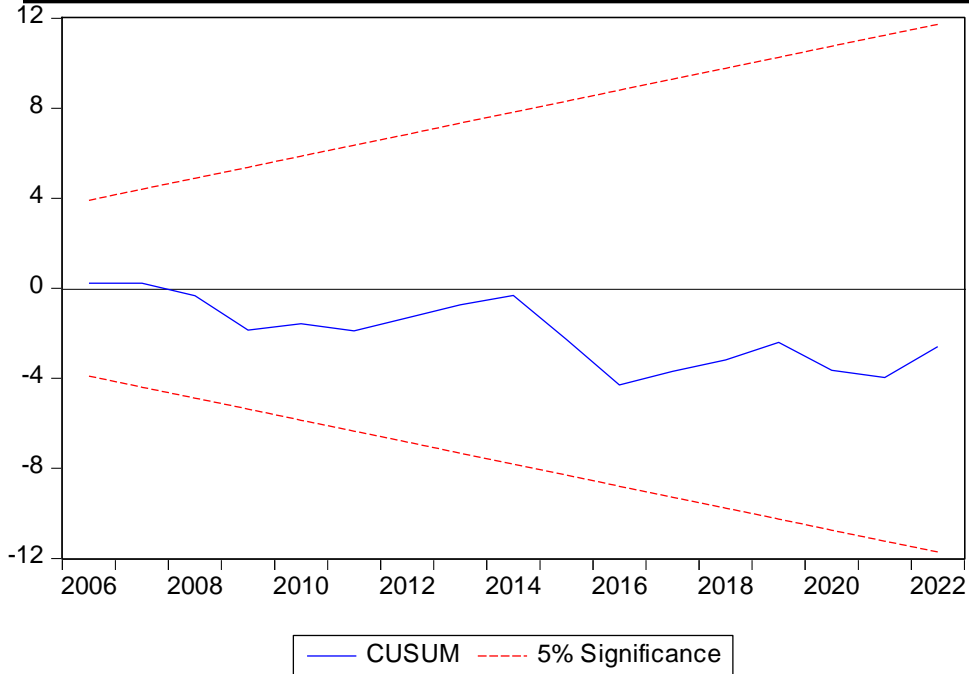
F-statistic	1.030418	Prob. F(2,15)	0.3808
Obs*R-squared	3.019836	Prob. Chi-Square(2)	0.2209

Source: Computed from E-view

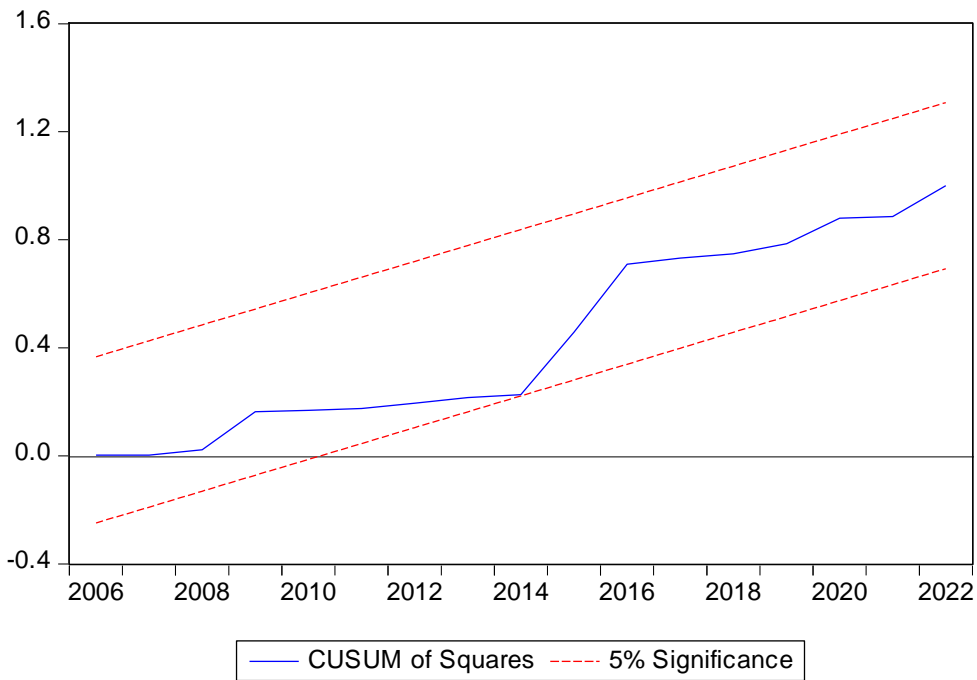
The null hypothesis states that there is no serial correlation. Since each of the F-statistics probability value is greater than five percentage we cannot reject the null hypothesis of no serial correlation. It thus means that the result is good and can be used for forecasting.

**Stability Tests for LOG (GNI)**

The stability test tests to know if the estimated ECM model is stable and appropriate. The test is important because it helps to check if the model coefficient is stable and can be used for forecast or prediction. The test for stability was carried out using the cumulative sum (CUSUM) and cumulative sum of square (CUSUMSQ) tests. If the line of the cumulative sum and cumulative sum of square of the model lie within the 5% critical bound it thus means that it is a stable model. From our observation, the model is very stable.



**Figure a: Cumulative sum for LOG(GNI) Model**



**Figure b: Cumulative sum of square for LOG (GNI) Model**



## **CONCLUSION/ RECOMMENDATIONS**

This paper examined the impact of poverty, corruption and governance on gross national income per capita in Nigeria from the period 1996 – 2022. The study investigated the long run and short run relationship between the variables by using Autoregressive distributed lag (ARDL). The empirical results show that gross national income per capita has a positive relationship with corruption perception index in both the long run and short run. The relationship is also statistically significant. The variables of government effectiveness and poverty rate are not statistically significant in both the long run and short run. Poverty rate has a negative relationship with gross national income per capita in both the long run and short run. Government effectiveness coefficient is not also statistically significant in both the long run and short run. Based on the findings, the study makes the following recommendations that; Nigeria should step up her game in the fight against corruption so that as an independent nation which has the prospect to grow a well-off industrial economy would be able to defeat hunger, mass poverty, and create jobs for the jobless which in turn would increase national income per capita. Our leaders in government should show exemplary conducts by practicing good governance through transparency and accountability. As for poverty alleviation, the study considered that it can only be achieved if corruption is squarely or at least minimized to its lowest level.

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