

Effect of Cost of Conflict on Nigeria's Economy (1986-2017)

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ABSTRACT

The study ascertained the effect of cost of conflict and insecurity challenges that has ravaged the growth process of Nigeria's economic well-being from 1986-2017. The thrust was to examine the effect of the cost of conflict on Nigeria's Gross Domestic Product (GDP) and inflation rate. Data were collected from the publication of Central Bank of Nigeria (CBN) statistical Bulletin for various years and World Bank Indicators. Ex-post facto research design was employed and 1986-2017 were the periods covered. The data collected were subjected to both descriptive and inferential statistics. Descriptive statistics was used to describe the variable set of the study and the result showed that Nigeria spent more resources in peacekeeping and internal security in recent times, correlation test indicated there was multicollinearity among the variables, Variance Inflation Factor (VIF) test showed there was no multicollinearity among the variables, the Shapiro-Wilk W normality test revealed that the errors were not normally distributed, Ramsey regression specification test indicated that the model for the study was well specified, and Breusch-Pagan/Cook-Weisberg test revealed no heteroskedasticity problem in the model. Finally, multiple regression test analysis was employed to test the hypotheses. It was discovered that the cost of conflict has significant effect on GDP but has insignificant effect on inflation rate. Based on these findings, it was recommended that the Government should have strengthened security and encourage more Foreign Direct Investment (FDI) into the country to boost economic growth, adequate attention should be placed on increasing productivity and revenue base of the country to reduce the inflation rate in Nigeria.

Keywords: Cost of conflict, Gross Domestic Product, Inflation rate, cost of peacekeeping, internal security expenditure.

INTRODUCTION

The perceived growth in Nigeria's economy is believed to have been impaired by various forms of violence and conflicts that have ravaged the growth process of the country. According to the United States Institute of Peace (2014) instances of violence and conflicts that Nigeria has experienced hinged on political and social-economic agitations, and are mainly motivated by ethnicity and religious driven factors. Before now, Transparency International (2010) had argued that the problem of the share of *National Cake* (oil revenue), which has failed to meet the demands and yearnings of the citizenry, surfaced when Nigeria abandoned other revenue sources in favour of mono-economy with oil as the mainstay of the economy from the 1970s; and this according to the report has plugged the nation into conflict and crisis.

The government turning a deaf ear to the citizenry demand and agitations may be partly responsible for the exacerbated conflicts among various interest groups in the country which has caused much damage to the nation. This view was in line with that expressed by the Technical Committee on the Niger-Delta (2009) when it observes that the undeveloped state of the nation has caused serious restiveness and agitation by aggrieved parties, especially the Niger-Delta region who felt neglected by the government and the multi-national oil Companies for not giving them their due compensation for degrading their ecological system and farm lands. It was in view of this assertion that the Human Development Index (2014) reports that aside increasing poverty, progress towards a number of other Millennium Development Goals(MDGs) in Nigeria has also been disappointing as Nigeria was ranked 153 out of 186 countries, where unemployment rate has been steadily increasing with younger Nigerians encountering increasing difficulty in finding gainful employment.

Statement of Problem

The Strategic Foresight Group (2011) states that cost of Conflict takes into account different costs a conflict generates, which include economic, military, environmental, social and political costs. It puts the costs into two perspectives: The direct costs of conflict, for instance human deaths, destruction of land and physical infrastructure; as well as indirect costs which have been impacted on the society, for instance migration, humiliation, growth of extremism and lack of civil society. It equally examines the neighboring countries involved and assesses the impact on them as well as on the international community. In the same vein, World Bank (2014) notes that Conflict manifests differently and in several forms; from strikes, demonstrations and riots to guerrilla warfare, terrorism and civil war and these forms of conflict have economic, social, psychological and other type of costs imbedded in them.

Conflict is one factor believed to be responsible for dwindling economic growth in Nigeria. The Research Institute of Peace (2012) also had a similar view when

it posits that conflicts and wars are one of the main reasons many developing countries and regions around the world are currently still unable to develop at the same rate as developed nations and also millions of people are currently experiencing starvation and running away from their homes.

According to the Audit Committee on Niger-Delta Affairs (2009), the current state of insecurity poses serious challenges and threat to the stability of Nigeria's macroeconomic environment. The country had suffered colossal loss in terms of infrastructures, properties, Foreign Direct Investment, oil revenue and valuable human lives especially in the North Eastern part of Nigeria.

A good number of researchers are divided and inconclusive in their finding on cost of conflict. Some are of the opinion that cost of conflict has economic benefits which can triggers up economic growth. Others argued that cost of conflict is detrimental to economic growth of a country. Economic Intelligent Unit (2015) in the same vein asserts that the threat of war or the demands of war can lead to taking better economic decision; which may translate to getting some basic decisions right and which may mean investing in science or infrastructure. Dunne (2012) concurring opines that many modern states owe their forms to some conflict or others. Conflict and war according to him, can have positive economic effects in removing bad leaders or leading to the introduction of structures and governance needed for modernization.

On the other hand, some other researchers argued that conflict has detrimental effects on economic growth of a country. Cranna (2011) asserts that the opportunity cost of conflict is the economic benefits that could have been accrued to a country, had there not been conflicts.

It is against this backdrop that this research work seeks to ascertain the effect of cost of conflict on Nigeria's economy from 1986-2017.

Objectives of the study

The main objective of this study is to ascertain the effect of cost of conflict on Nigeria's economy. The specific objectives are to:

1. Evaluate the effect of cost of conflict on Nigerian Gross Domestic Product(GDP).
2. Ascertain the effect of cost of conflict on inflation rate in Nigeria.

Hypotheses of the Study

1. Cost of conflict has no significant effect on Nigeria's Gross Domestic Product(GDP).
2. Cost of conflict has no significant effect on inflation rate in Nigeria.

Review of related literature

The study reviewed extent literature on effect of cost of conflict countries economic well-being.

Dunne (2000) examines the economic effect of military spending in developing countries using

survey method and comparative analysis test. The variable tested was military spending and economic growth indices. He found that military expenditure had negative impact on economic growth in developing countries and recommended improvement of security in developing countries.

Alberto (2002), investigates the economic effects of conflict in the Basque country using descriptive statistics and simple regression method. The variables considered were defense spending on GDP. It was discovered that after the outbreak of conflict in Basque, led to about 10% per capita income declined on GDP. The recommendation was to incorporate policies that will stamp out conflicts in the country.

Addison, Abdurand & Murshed (2002) examine the relationship between conflict and financial development. A sample of 79 countries was used. Cross-sectional research design and OLS regression analysis was employed. The considered variables are conflict on demand for domestic currency and conflict on store of value. They discovered that conflict reduces the demand for domestic currency as a medium of exchange and a store of value and recommended devaluation of currencies.

Beriwan (2015) states that the wars of Iraq's invasion of Kuwait 1990-1991 and U.S invasion of Iraq in 2003 shows that these conflicts resulted in weakened financial systems, lower levels of GDP per capita and higher inflation. These conflicts have also had significant consequences in terms of population loss, debilitated education and great damages to production capacity. In the same vein, Tadele (2014) opines that the impact of inflation on economic growth between Ethiopia and Uganda shows the existence of a positive significant bi-directional relationship between inflation and economic growth for Ethiopia both in the short and long run. But for Uganda there exists only a unidirectional negative relationship between inflation and growth that runs from GDP growth to inflation. Likukela (2007) notes that the determinants of cost of conflict on inflation in Namibia and South African Price index as well as the United States price index, showed that in the short run, domestic prices are influenced by the level of economic growth and foreign prices.

Materials and Methods

The Ex- post facto research design was employed in this study to enable the researcher ascertain the effect internal and defense security expenditure on Nigeria's GDP in a time series data, using multiple regression analysis. The ex- post facto research design is a quasi-experimental study which examines how independent variables affect the behaviour of a dependent variable. Research design is the blueprint that enables the investigator to come up with solutions to the problems and guide the researcher in the various stages of the research. In fact, research design is the conceptual structure within which research is conducted, it constitutes the blueprint for the collection, measurement and analysis of data. This study is an empirical and analytical research study of aggregate

level using secondary data to evaluate the effect of cost of conflict and its effect on the economy of Nigeria. Costs of conflict variables of both direct and indirect costs were arrived at following intensive literature search. Costs of conflict variables were used in this study as predictor variables (independent variables) to model economic growth indices (dependent variable) in Nigeria in a Multiple Regression framework. The study will cover the period 1986 - 2017; a period of 32 years.

Ordinary Least Squares (OLS) estimation technique was employed in the analysis of data. All hypotheses were tested at 0.05 level of significance. For each hypothesis, a multiple regression model was formulated based on the respective variable (dependent and independent variables). The dependent variables of interest which were economic indices used in gauging Nigeria's economy were Gross Domestic Product (GDP), Inflation Rate (INFL), while the independent variables (cost of peace keeping data) were Nigeria's total Budget for Defense (COPK) and Total Internal Security Expenditure (INTSECX).

The specified models were developed using the multiple regression approach and were estimated for each dependent variable. The models for the study were specified in line with the specific objectives and hypotheses of the study as indicated below:

Model for Hypothesis 1

$$GDP = f (COPK, INTSECX) \dots\dots\dots (i)$$

Equation-(i) is Functional notation of cost of conflict effect on Nigeria's GDP.

$$GDP = \beta_0 + \beta_1COPK_t + \beta_2INTSECX_t \dots\dots\dots (ii)$$

Equation-(ii) is mathematical or deterministic model. We introduced the error term (ξ).

$$GDP = \beta_0 + \beta_1COPK_t + \beta_2INTSECX_t + \xi_t \dots\dots\dots (iii)$$

Equation-(iii) is multiple linear regression models for the test of Hypothesis 1

Model for Hypothesis 2

$$INF = f (COPK, INTSECX) \dots\dots\dots (iv)$$

Equation-(iv) is Functional notation of cost of conflict effect on economic growth.

$$INF = \beta_0 + \beta_1COPK_t + \beta_2INTSECX_t \dots\dots\dots (v)$$

Equation-(v) is mathematical or deterministic model. We introduced the error term (ξ).

$$INF = \beta_0 + \beta_1COPK_t + \beta_2INTSECX_t + \xi_t \dots\dots\dots (vi)$$

Equation-(vi) is multiple linear regression model for the test of Hypothesis 2

Where:

- COPK = Cost of conflict (Proxy - Defense security vote expenditure)
- INTSECX=Internal Security (Proxy – Expenditure on Internal Security).
- GDP = Gross Domestic Product
- INFL = Inflation rate

Results and Discussion

The test results for the descriptive and inferential statistics

Table 1: Descriptive Statistics of the Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
gdp	32	21016.12	28535.71	134.59	89043.62
infl	32	.197875	.1868311	.054	.728
copk	23	157.6474	214.0523	4.21	826.7
intsecx	23	166.77	206.6795	4.4	956.92

The result of the descriptive statistic above showed that gdp recorded the highest means value of (21016.1), Std. Dev. 28535.71, Min. value of (134.59), and Max value of 89043.62. This is followed by intsecx of mean (166.77) Std. Dev. 206.6795 Min 4.4 and Max value of 956.92 and copk had the Mean value of (157.6474), Std. Dev. of 214.0523, Min (4.21) and Max value of 826.7. The implication is that Nigeria spent more resources in copk. and intsecx in recent times.

Table 2: Correlation Results for the Variables

gdp	1.0000		
infl	-0.3384		
copk	0.7809	0.4776	1.000
intsecx	0.7165	0.8434	1.0000

The correlation matrix above has the coefficient of 0.8434 which was found between the independent variable copk. and intsecx. Independent variable with coefficient above 0.80 is suspected to exhibit multicollinearity hence there was the need to conduct Variance Inflation Factor (VIF) test to ascertain the present or otherwise of multicollinearity in the variable set.

Table 3: Variance Inflation Factor Result for The Independent Variables

Variable	VIF	1/VIF
copk	3.46	0.288662
intsecx	3.46	0.288662
Mean	VIF	3.46

The table 3 above showed a mean VIF for all the independent variables copk. and intsecx which did not exceed the standardized VIF level ($3.46 < 10.0$), suggesting absent of multicollinearity among the variables

Table 4: Shapiro - Wilk W Test For Normal Data

Variable	Obs	W	V	Z	Prob>z
gdp	32	0.72491	9.176	4.602	0.00000
infl	32	0.69733	10.096	4.800	0.00000
copk	23	0.67988	8.373	4.321	0.00001
intsecx	23	0.70980	7.591	4.122	0.00002

The result of the Shapiro- Wilk W test for normal data above indicated no evidence of serial correlation in the residuals which showed the errors were not normally distributed.

Table 5: Ramsey Regression Specification Test Result

Ramsey RESET test using powers of the fitted values of Inf	
Ho: model has no omitted variables	
F (3,17) =	30.74
Prob> F =	0.0000

The result of the Ramsey Regression Specification Test indicated a prob. of 0.0000 which is less than the critical value of 0.05; showing that the model for the study was well specified.

Table 6: Breuch-pagan/Cook-Weisbergtest for Heteroscedasticity Result

Ho: Constant Variance	
Variables: fitted values of Inf	
chi2 (1) =	9.06
Prob> chi =	0.0026

Lastly for the inferential statistics, the Breuch-pagan/Cook-Weisberg test for heteroscedasticity indicated a prob. Of 0.0026 which is also less than the critical value of 0.05; showing there was no heteroscedasticity problem in the model.

Test Results for the Hypotheses

H₀₁: Cost of conflict has no significant effect on Nigeria's Gross Domestic Product

Source	SS	df	MS			
Model	1.2396e+10	2	6.1981e+09	Number of obs = 23		
Residual	7.5520e+09	20	377597929	F(2, 20) = 16.41		
Total	1.9948e+10	22	906730912	Prob > F = 0.0001		
				R-squared = 0.6214		
				Adj R-squared = 0.5836		
				Root MSE = 19432		

gdp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
copk	86.0736	36.02372	2.39	0.027	10.92944	161.2178
intsecx	29.20296	37.30878	0.78	0.443	-48.6218	107.0277
_cons	10622.48	5270.522	2.02	0.057	-371.635	21616.6

Source: Researcher's Computation with data extracted from appendix11 using STATA 13.0

From the above Table, we found that R² was .6214 which suggests 62.14% explanatory ability of the estimation for the systematic variation in the dependent variable (gdp) with an adjusted value of .5836. The unexplained variation is 37.86% (1-.6214). The evaluation of the slope coefficients of the explanatory variables revealed the existence of positive relationship between cost of conflict measures (copk=86.0736 & intsecx=29.20296) reaction to economic growth (gdp=10622.48) in Nigeria. This implied that gdp was positively influenced by cost of conflict (copk&intsecx). However, the relationship was significant at 5% level (p=0.0001<0.05). The result above was further supported by the computed t-value for copk (2.39), which was greater than the t-tabulated

(1.725), suggesting that copk was a major determinant of gdp. Contrarily, the computed t-value for intsecx of (0.78) was less than the t-tabulated (1.725), suggesting that intsecx was not a major determinant of gdp.

Decision: The result from the above table invalidates the null hypothesis. This led to the rejection of the null hypothesis and acceptance of the alternative hypothesis that cost of conflict has significant effect on Nigeria's gross domestic product as evident in the f-ratio (16.41) with Prob.>F(0.0001).

H₀₂: Cost of conflict has no significant effect on inflation rate in Nigeria

Test Results for Hypothesis II

Source	SS	df	MS			
Model	.046024576	2	.023012288	Number of obs = 23		
Residual	.533857231	20	.026692862	F(2, 20) = 0.86		
Total	.579881807	22	.026358264	Prob > F = 0.4374		
				R-squared = 0.0794		
				Adj R-squared = -0.0127		
				Root MSE = .16338		

infl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
copk	-.0000602	.0003029	-0.20	0.844	-.000692	.0005716
intsecx	-.0001662	.0003137	-0.53	0.602	-.0008205	.0004882
_cons	.2031153	.0443135	4.58	0.000	.1106789	.2955517

Source: Researcher's Computation with data extracted from appendix11 using STATA 13.0

From the table above, we found that R^2 is .0794 which suggests 7.94% explanatory ability of the estimation for the systematic variation in the dependent variable (inf) with an adjusted value of -.0127. The unexplained variation is 92.06% (1-.0127). The evaluation of the slope coefficients of the explanatory variables revealed the existence of negative relationship between cost of conflict measures (copk=-0.000602 & intsecx=0.001662) reaction to inflation level (inf=.2031153) in Nigeria. This implies that inf. is negatively influenced by cost of conflict (copk & intsecx). However, the relationship is not statistically significant at 5% level ($p=0.4374 < 0.05$). The result above is further supported by the computed t-value for copk (-0.20) and intsecx (-0.53) which is less than the t-tabulated (1.725), suggesting that copk and intsecx are not major determinants of inf.

Decision: The result in the above table validates the null hypothesis. This led to the rejection of the alternative hypothesis and acceptance of the null hypothesis that cost of conflict has no significant effect on inflation in Nigeria as evident in the f-ratio (0.86) with Prob.<F (0.4374).

Findings

Based on the analysis of the data, the following findings emerged, that:

1. Cost of conflict has significant effect on Nigeria's gross domestic product as evident in the f-ratio (16.41) with Prob.>F (0.0001).
2. Cost of conflict has no significant effect on inflation rate in Nigeria as evident in the f-ratio (0.86) with Prob.<F (0.4374).

Conclusion

The Strategic Foresight Group (2011) defined cost of conflict as a tool which attempts to calculate the price of conflict to the human race and which could be examined not only in terms of the deaths and casualties and the economic costs borne by the people involved, but also the social, developmental, environmental and strategic costs of conflict. In the same vein, World Bank (2014) noted that conflict manifests in several forms, from strikes, demonstrations and riots to guerrilla warfare, terrorism and civil war. In turn, these forms of conflict have economic, social, psychological and other type

of costs.

In this study, attempt was made to determine the effect of cost of conflict on economic growth in Nigeria using certain cost of conflict measures (cost of peacekeeping and internal security expenditure) and economic growth parameters (Gross Domestic Product and inflation rate) during the period 1986-2017. On the overall, we discovered that cost of conflict significantly affect economic growth in Nigeria, especially Gross Domestic Product.

Recommendations

Based on the findings of the study, the following recommendations were proffered:

1. The Government should strengthened security and encourage more Foreign Direct Investment (FDI) into the country to boost economic growth
2. Adequate attention should be placed on increasing productivity and revenue base of the country to reduce the inflation rate in Nigeria.

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