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EFFECTS OF POVERTY AND SECURITY THREATS ON NIGERIA'S ECONOMIC GROWTH

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ABSTRACT

This research study investigates the economic growth impact of poverty and security threats in Nigeria using an annual time series data spanning the years 1981–2020. It employs the Autoregressive Distributed Lag (ARDL) bound estimation method to look at the dynamic interactions between security threats, poverty rate, and economic growth. The research outcomes demonstrate that the short-term slow growth in output was influenced by the poverty rate. Also, long-term output growth and the poverty rate are, nonetheless, positively correlated. It implies that even if the number of people

Introduction

The rate of economic growth, unemployment, and poverty (reduction of income inequality) are three crucial macroeconomic variables that are essential components of the economic policies of many countries, particularly developing countries, and that determine the success of a country's socioeconomic performance (World Bank Report, 2014). The most important macroeconomic statistic taken into account by both developed and developing countries is economic growth. Depending on the rate of growth, countries have varying economic sizes; some are extremely wealthy, others are impoverished, and the vast majority fall somewhere in between. While some of these countries are growing quickly, others are either growing too slowly or not at all. This is why it has become important to investigate the causes of these disparities in growth between nations and the idea of economic growth (Soylu and Okur, 2018). The two main causes of low and sluggish economic growth in many emerging nations taken into account in this study are the rising levels of poverty and the serious security threats to people's lives and property.

The first and possibly most significant of the United Nations' Millennium Development Goals (MDGs) is the eradication of severe poverty and hunger. More than 1.2 billion people still live on less than US$1.25 per day, despite the world's extreme poverty rates having been cut in half by 2015, five years ahead of plan (United Nations, 2014). In terms of achieving the MDGs, several nations in Sub-Saharan Africa and Asia are falling behind. For instance, there hasn't been much of a drop in the percentage of the impoverished in Sub-Saharan Africa. In 2010, over 48% of people in developing nations continued to live below the international poverty line of US$1.25 per day. In comparison, 58% of the population in 1999 and 52% in 2005 were both considered to be below the poverty level (World Bank, 2014). The region has experienced positive growth rates recently, with an average annual GDP growth rate of about 4.9% since 2000. As a result, the poor's living standards have slowly improved (Nindi and Odhiambo, 2015).

living below poverty line rises, the economy still continues to grow. This is also true in the long run, showing that the economy has expanded despite a rise in the number of poor people over time. It implies that the Nigerian economy does not help the poor. Although security doesn't pose a threat to output growth in the short term, but it does pose a long-term threat to income growth. Thus, political terrorism and expropriation risk have an impact on economic growth. Intuitively, low poverty will lead to economic growth that is merely incremental rather than substantive development in the economy. This scenario can only be maintained and improved upon if specific policy measures, such as secured lives and properties as well as sound fiscal and monetary policies are implemented. These measures would create an enabling environment, draw private investment, and increase productivity.

Keywords: Poverty, security threats, inflation, unemployment and output growth.

On the second hand, through a variety of pathways, insecurity and violent extremism can have a detrimental effect on output growth in the short term. By destroying a nation's physical and human capital, terrorism lowers that nation's capital stock. Increased government expenditure on security to prevent terrorism may displace further growth-promoting public and private investments in social areas like health and education, impacting a nation's long-term growth (Micheal, Jelilov and Akanegbu, 2019). Furthermore, lack of security generates economic risks and uncertainties that affect people's savings, investment, and consumption decisions, which alters the equilibrium resource allocation within a nation. Additionally, it slows down economic growth by raising operating costs through higher labour costs, insurance premiums, and security costs. Lower profits as a result of these higher costs translate into a lower return on investment (Yusuf and Mohd, 2022).

According to the 2018–19 national monetary poverty line in Nigeria, 40.1% of the population lives in poverty, and the 2022 National Multidimensional Poverty Index (MPI) estimates that 63% of Nigerians are poor in multidimensionality (National Bureau of Statistics, 2022). Also, 72% of people live in rural areas, where multidimensional poverty is higher, compared to 42% of people in urban areas. More specifically, 35% (nearly 47 million) of the poor live in the South, while 65% (about 86 million) live in the North. The incidence of multidimensional poverty ranges from as low as 27% in Ondo to as high as 91% in Sokoto, showing the stark differences in poverty levels between States (National Bureau of Statistics, 2022). Insecurity has also wreaked havoc on the nation, making it unsafe for both local and foreign investors. Following Iraq and Afghanistan, Nigeria was ranked as the third country most affected by terrorism in the 2020 Global Terrorism Index (Global Terrorism Index, 2021). Due to the alarming level of insecurity, both domestic and international investors are reluctant to invest in Nigeria's economy because they fear losing their hard-earned money (Chukwu, Abang and Isip, 2019).

By examining the underlying effects of poverty and security threats on economic growth in Nigeria from 1981 to 2020, the current study contributes to the growing body of knowledge about output growth in developing countries. To examine these effects, the study applies the recently created autoregressive distributed lag bounds testing approach to co-integration. The study also takes into account other important variables, such as foreign direct investment, inflation, and unemployment, which have influences on economic growth, poverty and insecurity. According to our knowledge, this study may be the first to use contemporary time-series methods to examine in depth how poverty, security threats

and economic growth interact in Nigeria. The remainder of the essay is structured as follows: a review of pertinent literature is given in the second section. The estimation methods used in the analysis are covered in the third section, and the regression results are covered in the fourth. The study ends with the discussion of findings and conclusion in the fifth section.

Literature Review

Conceptual review

Poverty - Poverty is defined as a lack of a normal or socially acceptable amount of money or material belongings. Thus, it is explained as the lack of resources to meet an individual's basic necessities. Poverty has a wide range of social, economic, and political causes and consequences (United Nations, 2018). It is imperative to note that poverty is much more than simply not having enough money. According to the World Bank, poverty is defined as follows: "Poverty is hunger. Poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not having access to school and not knowing how to read. Poverty is not having a job, is fear for the future, living one day at a time. Poverty has many faces, changing from place to place and across time, and has been described in many ways. Most often, poverty is a situation people want to escape. So poverty is a call to action -- for the poor and the wealthy alike -- a call to change the world so that many more may have enough to eat, adequate shelter, access to education and health, protection from violence, and a voice in what happens in their communities" (Economic and Social Inclusion Corporation, 2020). There are two main measurements used in evaluating poverty in statistics and economics: (a) absolute poverty compares income to the amount required to cover basic personal requirements such as food, clothes, and shelter; and (b) relative poverty assesses when a person is unable to reach a minimum standard of living in comparison to others in the same period and place (United Nations Educational, Scientific and Cultural Organization, 2015). The definition of relative poverty differs from country to country or society to society.

Statistically speaking, the majority of the world's population is poor as of 2019: in PPP values, 85% of people live on less than $30 per day, two-thirds live on less than $10 per day, and 10% live on less than $1.90 per day (extreme poverty) (Hasell, Roser, Ortiz-Ospina, and Arriagada, 2022). The World Bank Group (2015) reported that more than 40% of the poor will be living in conflict-affected nations by 2020. Even when a country's economy grows, the poorest citizens of middle-income countries typically do not receive enough share of their country's new wealth to escape poverty (Milanovic, 2016). As a result, governments and non-governmental groups have experimented with a variety of poverty-relief policies and programs, such as electricity in rural areas and housing-first policies in urban areas. Also, the United Nations' international policy frameworks for poverty alleviation, adopted in 2015, are outlined in Sustainable Development with Goal 1 as "No Poverty".

Security threats

A security threat is defined as any action or inaction that endangers the safety and physical well-being of the populace or put at risk the steadiness and stability of a country's economy or institutional framework. Nigeria as a developing country is facing severe challenges in her national security. Armed bandits have been building killing fields for years, and known banditry hotspots are constantly recording new events. The identified causes of violent incidents in the country vary by region and location. Banditry, for example, is on the rise in the North-West and North-Central regions. The North-East is experiencing an increase in insurgency, while the South-East is experiencing violent secession agitation, and gang wars are visible in the South-West and South-South zones (Nextier Violent Conflict Database,

2020). Furthermore, the country has a history of extrajudicial killings and communal wars. A good example is the long-lived herdsmen-farmers crisis, which distorted the socioeconomic activities of the conflict areas. With new incidents and rising fatalities, the country's violent crisis worsens (Nextier Violent Conflict Database, 2020).

Economic growth

Economic growth is defined as a rise in collective production in an economy, which typically results in an increase in national income. It simply refers to an increase in the creation of economic goods and services in one period of time over another. Economic growth can be measured in nominal or real (inflation-adjusted) terms. Historically, aggregate economic growth has been measured in terms of gross national product (GNP) or gross domestic product (GDP), though other metrics are occasionally used. As a result, economic growth is commonly measured in terms of the increase in aggregated market value of additional goods and services produced, as measured by estimates such as GDP. Expansion, peak, contraction, and recession are the four stages of economic growth (Sen, 2021). Also, physical capital, human capital, labour force, and technology are commonly used to model economic growth. It means that increasing the quantity or quality of the working-age population, the tools with which they can work, and the recipes with which they can combine labour, capital, and raw materials will result in increased economic output (Sen, 2021).

Theoretical review

The section reviewed relevant theories relating to the links among poverty, security threats and economic growth. Following the theoretical links between poverty and economic growth, the *Traditional Economic View of Development* believed that progress has typically been defined as attaining sustained rates of growth in per capita income that allow a country to increase its output at a rate greater than that of its population growth since 1950. The overall economic well-being of a population is then determined by the levels and rates of growth of "real" per capita gross national income (GNI), which is calculated as the amount of real goods and services that the average citizen has access to for investment and consumption after deducting the rate of inflation. Therefore, up until the 1970s, development was thought of as an economic phenomenon whereby rapid increases in overall and per capita GNI growth would either "trickle-down" to the general population in the form of jobs and other economic opportunities or would create the conditions for a wider distribution of the economic and social benefits of growth, which were often associated with rapid industrialization at the expense of the agricultural and rural development sectors. To "get the growth job done", however, issues with poverty, discrimination, unemployment, and income distribution were of secondary significance. In fact, the emphasis is frequently on increasing output, measured by gross domestic product (Todaro and Smith, 2020).

The *Dualism View of Development* argued that the coexistence of two circumstances or phenomena (one desirable and the other not) that are mutually exclusive to different groups of society, such as extreme poverty and affluence, modern and traditional economic sectors, growth and stagnation, and higher education among a few amid widespread illiteracy (Todaro and Smith, 2020). In actuality, conventional neoclassical economic theories were created to hasten GDP growth, which is the main development indicator. Because of its dubious underlying presumptions and recent history of developing nations, they doubt the validity of Lewis-style two-sector models of modernization and industrialisation. The proponents disagree with the neoclassical viewpoint and propose the types of development that the

majority of developing nations ought to pursue. Todaro and Smith (2020) claim that dualism theorists should focus more on global power imbalances and the critical need for fundamental domestic and international economic, political, and institutional reforms.

Based on the theoretical links of security threats and economic growth, the *Relative Deprivation theory* by Gurr (1970) states that collective discontent brought on by a sense of economic and social deprivation is the root cause of insecurity. The idea that deprivation is likely to result in violence is supported by three theories, each of which focuses on a different aspect of deprivation. The idea of frustration and aggression is the first, and it holds that frustration leads to aggressive behaviour (Hogg, 2016). The *Expectation theory*, which asserts that violence will occur when an expected outcome is not realized, is the second (Özdamar, 2008). Third, the reactance thesis postulates that eliminating behavioural freedom, which arouses reactance, could result in violence (Baumeister, Catanese, and Wallace, 2002). These three concepts highlight the possibility that various levels of poverty in Nigeria may be the cause of various types of insecurity. Like Nigeria, many developing nations experience unusually poor material conditions as well as governance and economic issues. The political system is rife with ineffective, dishonest, and bad leadership. Others are poverty, inflation, unemployment, lack of access to social services and education, and deteriorating infrastructure and services (Evans and Kelikume, 2019). Similar to this, it is certain that significant socio-economic disparities could lead to conflict, particularly when the outlook for economic growth is bleak. People experience widespread disillusionment, outrage, and mistrust as a result of the pervasive hardship and environments that are tolerant of violence. This manifests as resistance to and undermining of social norms. Because of this, there will be a lot of angry people who are susceptible to various political, cultural, and other manipulations that could quickly incite them to violence. Many developing countries, like Nigeria, have unusually poor material conditions, as well as problems with governance and the economy. The political process is plagued with inept, corrupt administrations and bad leadership. Poverty, inflation, unemployment, access to education and to social services and decrepit services and infrastructures continue (Evans and Kelikume, 2019). Similarly, it is certain that significant socio-economic inequalities could generate conflict especially when the economic growth prospects are negative. The pervasive hardship and permissive settings for violence cause widespread disillusionment, outrage and public mistrust, which manifests as the people resist and undermine society's principles. As a result, there will be a significant number of furious people who are vulnerable to various political, cultural and other manipulations that can easily turn their rage and frustration into violence.

Empirical review

Poverty and economic growth

Odhiambo (2009) examined the causal relationship between financial development, economic growth, and poverty reduction in South Africa from 1960 to 2006 using the ardl-Bounds testing approach. In South Africa, the author discovered a unidirectional causal flow from economic growth to poverty reduction. Sala-i-Martin and Pinhovskiy (2010) estimated African countries' income distributions, poverty rates, inequality, and welfare indices from 1970 to 2006. They discovered that Africa's recent surge in growth was accompanied by a symmetrical and sustained reduction in poverty, resulting in a 'trickle-down' effect. Odhiambo (2011) used the ARDL-Bounds testing approach to investigate the dynamic relationship between economic growth, unemployment, and poverty reduction in South Africa from 1969 to 2006. In South Africa, the author found no evidence of a causal relationship between poverty reduction and economic growth.

Young (2012) investigates changes in poverty in 29 sub-Saharan and 27 other developing countries using estimates of the level and growth of real consumption. The author discovered that living standards in Sub-Saharan African countries have improved over the last two decades, implying a reduction in poverty. McKay (2013) examined the relationship between growth and poverty reduction in 25 of the largest Sub-Saharan African countries over the last two decades, using data from household surveys. The author discovered that poverty has decreased significantly in the majority of these countries. Non-monetary poverty, however, was reduced to a lesser extent than monetary poverty. Okoroafor and Chinweoke (2013) used the OLS technique to investigate the relationship between poverty and economic growth in Nigeria between 1990 and 2011. They discovered no evidence of a relationship between the two variables. They attributed this to the government's poor attitude toward human capital development.

Adelowokan, Maku, Babasanya, and Adesoye (2019) investigate the links between unemployment, poverty and economic growth in Nigeria between 1985 and 2015. The unit root test result revealed that the variables are stationary at first difference. The causality findings showed no causal relationship between unemployment, poverty and growth in Nigeria. Also, the result from the cointegration test revealed that there exist no long-run relationship among poverty, unemployment, and output growth in Nigeria. According to the short-run parameter estimates, unemployment has an indirect and significant impact on output growth. However, the interaction of unemployment and poverty has a positive and significant impact on growth. The results imply that the country will grow even if there are poor people in absolute terms. Even if the number of poor people increases, the economy will continue to grow. This is also true in the short run, indicating that the economy has grown despite the fact that the number of poor people has increased over time.

Bekele (2020) used annual time series data from 1980 to 2018 to investigate the dynamics of economic growth, unemployment, and poverty in Ethiopia. Using the ARDL approach, there is a long-run causal relationship in Ethiopia between economic growth, unemployment, poverty, and investment. Furthermore, at the 5% significance level, all of the estimated coefficients of the explanatory variables satisfied the hypothesized signs of trickle-down economic growth path preposition. The Granger causality test result confirmed the existence of unidirectional causality from economic growth to poverty, unemployment to economic growth, and investment to economic growth. There is bidirectional causality between investment and poverty and poverty and investment. In Ethiopia, however, there is no Granger causality between poverty (real per capita household consumption expenditure) and unemployment.

Bala, Ibrahim, and Hadith (2020) examined the impact of population growth, poverty and unemployment on economic growth in Nigeria. Using the ARDL estimator, the results of the cointegration test showed that there exist cointegrating equation between explanatory variables and economic growth. Also, the study found that population and FDI have a positive impact while poverty and unemployment has negative impact on GDP.

Okoye, Ngwu, and Ohaedeghasi (2021) investigated the connections between construction sector factors, poverty, and unemployment rates in Nigeria from 1981 to 2019. The findings of the ARDL test revealed that the variables affecting the construction sector and the poverty rate have both long-run and short-run dynamic relationships. The cointegration result, however, did not indicate a long-term link between factors in the construction sector and the unemployment rate. Additionally, the results showed that, with the exception of a negligible correlation between construction production and the poverty rate, there are strong and positive linear relationships among construction industry

characteristics, poverty, and unemployment rates. Except for a unidirectional causal relationship that flows from government capital expenditure to construction service recurrent expenditure and construction output, and from construction service recurrent expenditure to construction output, the relationships could not result in direct causal effect, according to the results of the Granger causality test.

Security threats and economic growth

The seminar paper by Blomberg, Broussard, and Hess (2004), which conducted an empirical investigation of the macroeconomic effects of international terrorism and its interactions with alternative forms of collective violence, served as the inspiration for much of the literature on the relationship between terrorism and the macro-economy. Their findings suggest that, generally speaking, terrorism may have a significant detrimental effect on economic growth. They also learn that, to varying degrees across various groups of countries, terrorism is linked to a shift in economic activity away from investment spending and toward government spending. Similar to this, Gassebner and Luechinger (2011) used extreme bounds testing to assess more than 70 prior terrorism studies and found that there was a strong and unfavourable correlation between economic activity and terrorism. Mehmood (2014) estimates that between 1973 and 2008, terrorism cost the Pakistani economy a total of 33.02% of its GDP.

In order to maximize utility in the present at the expense of the future, people are prompted to substitute future savings for current consumption, according to Eckstein and Tsiddon (2004), which is another reason for the decline in economic activity. Using various measures of the incidence of terrorism, government spending, and economic activity, Chuku, Abang, and Isip (2019) adopted the ARDL and Structural Vector Auto-Regressive (SVAR) technique to examine the growth and fiscal consequences of terrorism in Nigeria. According to the empirical findings, terrorism causes economic activity to shift from private investment spending to government counterterrorism spending, which has a negative impact on growth.

Yusuf and Mohd (2022) examined the fiscal and socioeconomic effects of insecurity on economic growth in Nigeria using annual time-series data from 1980 to 2019 and the ARDL methodology. The research found that a high unemployment rate, domestic capital formation, foreign direct investment, government spending on security, and education are all negatively impacted by an increase in levels of insecurity, which slows both long-term and short-term growth. On the other hand, enhanced health care, equitable income distribution, and efficient public borrowing were all positively correlated with security and, as a result, boosted both long-term and short-term growth. Long-term growth was accelerated by government revenue and inflation rates, but their short-term effects were negative.

Data, Methodology and Estimation Approach

This research analysis uses a time series secondary data that spanned from 1981 to 2020. The data were acquired from the World Development Indicators (2021) and the Central Bank of Nigeria statistical bulletin (2021). The decision on the time periods came from the need to expand the frontier of knowledge beyond the research and data that were already available. The annual growth of real gross domestic product, which measures the pace of output growth, serves as the primary dependent variable. The two main confounding factors are poverty rate measured by percentage of people living below US$1.90/day and security threats proxy by security threat index. Unemployment, inflation, and foreign direct investment are other confounding factors of economic growth in this research study.

The study adapts and modifies the model of previous studies, including Adelowokan, Maku, Babasanya, and Adesoye (2019), Ajide (2019), Bala, Ibrahim and Hadith (2020), Bekele (2020) and Okoye, Ngwu, and Ohaedeghasi (2021), among others, in order to specify the relationships among poverty security threats and economic growth in Nigeria. The growth model is defined as follows, adhering to the output productivity model that is widely used in literature:

$$egr_t = \phi_0 + \phi_1 por_t + \phi_2 sti_t + \phi_3 fdi_t + \phi_4 uemp_t + \phi_5 \inf_t + \mu_t \quad (1)$$

Where: *egr* denotes annual growth of output growth measured by gross domestic product; *por* denotes poverty rate; *sti* is security threat index; *fdi* represents foreign direct investment inflow; *uemp* is unemployment rate; *inf* is inflation rate measured by annual rate of consumer price index; ϕ_0, ϕ_{1-5} are parameters; *t* is time; and μ is disturbance term. Concerning the theoretical expectation, an indirect relationship is expected from poverty rate, security threat, unemployment rate and inflation to output growth. As for foreign direct investment, a positive relationship with output is presumed.

Autoregressive Distributed Lag(ARDL) is the estimation method used in this study. The following inherent merits led to the selection of this estimator: (a) The test is relatively straightforward and also uses the Ordinary Least Squares (OLS) technique to test the long-run relationship; (b) The existence of the co-integration is tested regardless of whether the unit root tests of the datasets are at level, first difference, or a combination of both; and (c) It is more effective for studies with small samples due to its inherent advantages (Alimi, 2017; Mesagan, Ogbuji, Alimi, and Odeleye, 2020).

Empirical Analysis and Discussion

Summary statistics, trend analysis and correlation analysis

Following the summary statistics presented in Table 1, it shows the preliminary analysis of the variables employed in examining the links among poverty, security threat and economic growth. To start with the descriptive statistics, the mean of economic growth rate, poverty and security threat, FDI, inflation and unemployment are depicted in the table. The average rate of output growth was 3.03% and it implies that the level of output grew at an average rate of 3.03% within the periods considered. For the average values of poverty rate and security threat index, their mean values stood at 53.28% and 4.92 respectively within the periods 1981 and 2020. It implies that poverty rate grew at a rate of 53.28% while the average index of security threat stood at 4.92. Concerning the mean of net inflow of foreign direct investment, inflation and unemployment, their mean values stood at US$2.55 billion, 18.99% and 4.87% respectively between 1981 and 2020. This means that the annual growth rate of FDI, inflation and unemployment grew at a rate of US$2.55 billion, 18.99% and 4.87% correspondingly.

Table 1: Summary Statistics

	egr	por	sti	fdi	inf	uemp
Mean	3.025600	53.27625	4.914750	2.551500	18.99850	4.871750
Maximum	15.33000	66.90000	9.900000	8.840000	72.84000	9.710000
Minimum	-13.13000	40.10000	0.750000	0.190000	5.390000	3.500000
Std. Dev.	5.451262	7.103274	3.400885	2.542188	16.86931	1.609931
Skewness	-0.802847	-0.064940	0.398742	1.170193	1.823621	1.595479
Kurtosis	4.503597	2.273298	1.398971	3.181180	5.159408	4.402563
Jarque-Bera	8.065095	0.908274	5.332124	9.183725	29.94237	20.24900

Probability	0.017729	0.634996	0.069525	0.010134	0.000000	0.000040
Observations	40	40	40	40	40	40

Source: Author's computation (2022).

Furthermore, the information available gathered form Table 1 indicates high dispersion of the variables' data points from their respective mean value. This is clearly revealed in the standard deviation values. In that order, the standard deviation of economic growth rate, poverty rate, security threat index, foreign direct investment, inflation and unemployment are 5.45%, 7.1%, 3.4%, 2.54%, 16.87% and 1.61%. Also, the values of skewness and Kurtosis indicate that the variables are not normally distributed. Besides, the trend analysis of variables used to analysis the interrelationship among poverty, security threat, economic growth and other control variables in Nigeria are presented in Figures 1 and 2. Figure 1 reveals the trend series of economic growth, poverty rate and security threat index in Nigeria while the trend analysis of cofounding variables such as foreign direct investment, inflation rates, and unemployment rate is presented in Figure 2.

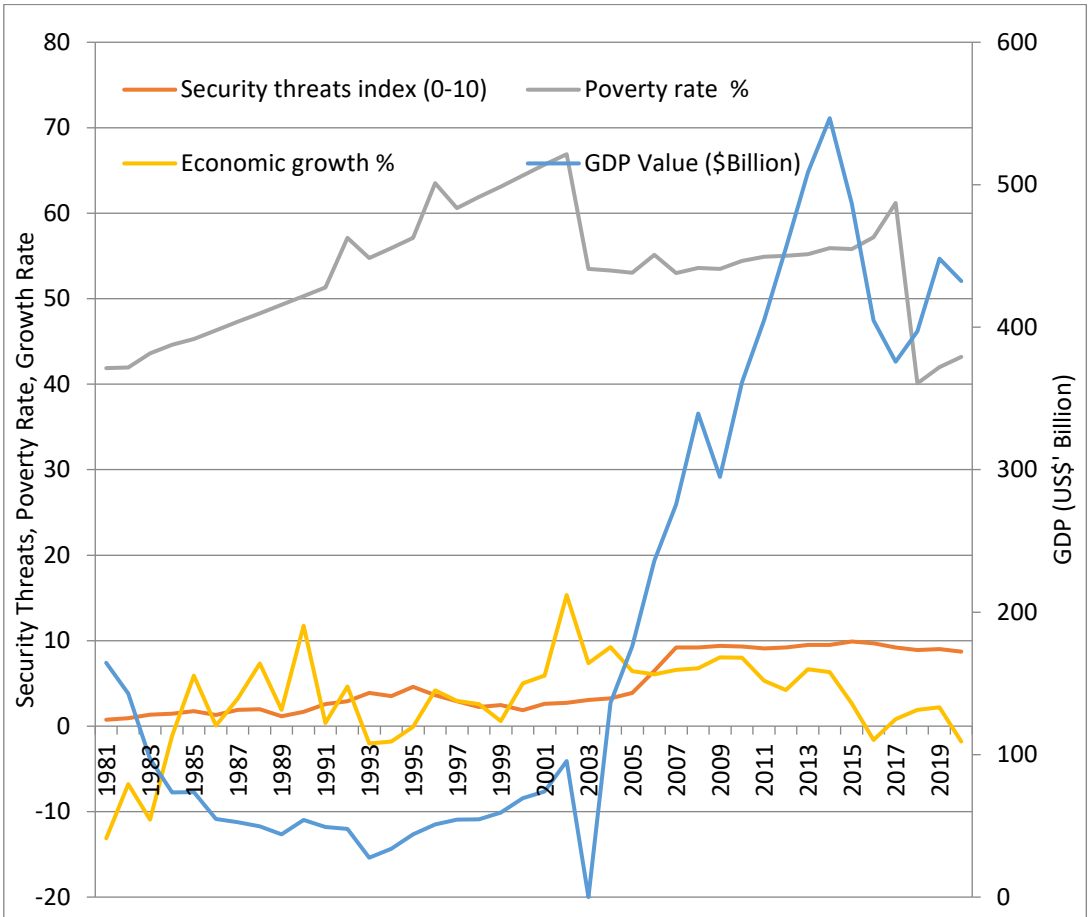

Figure 1: Trend Analysis of Poverty, Security and Economic Growth
Source: CBN Bulletin (2021), WDI (2021)

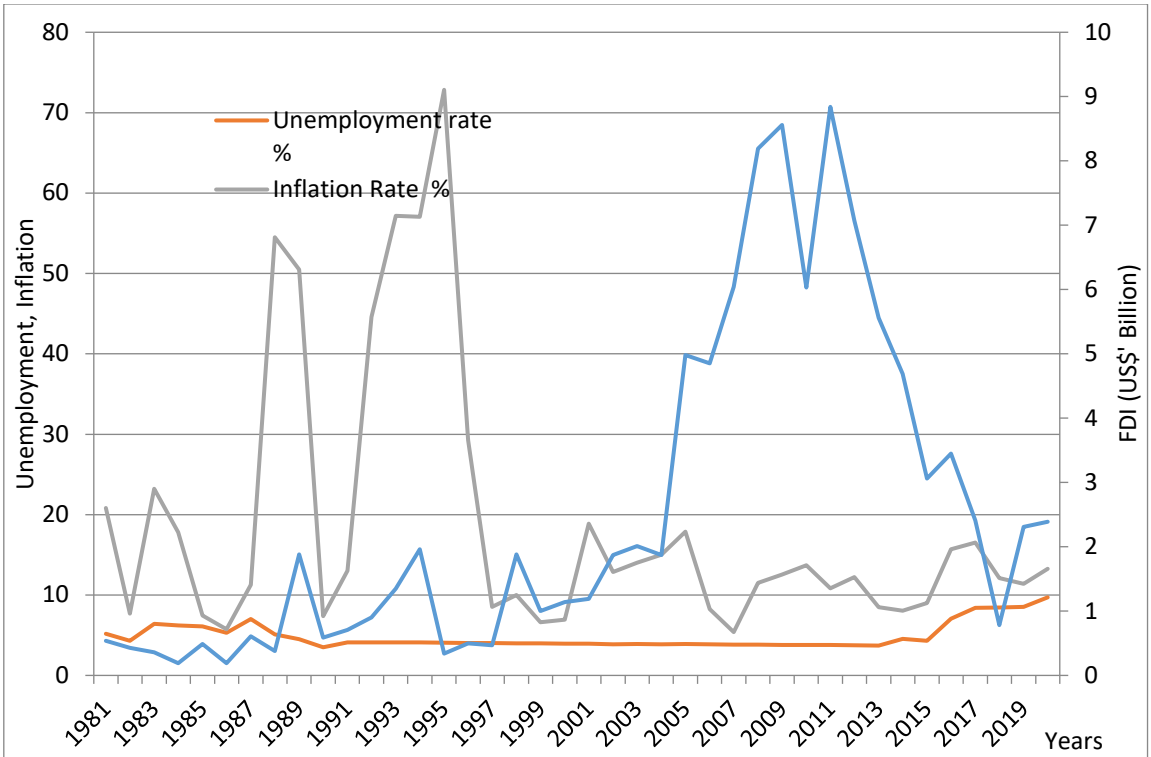

Figure 2: Trend Analysis of Inflation, Unemployment and FDI
Source: CBN Bulletin (2021), WDI (2021)

Table 2: Correlation matrix

	egr	*por*	*sti*	*Fdi*	*inf*	*uemp*
egr	1					
por	0.449327	1				
sti	0.2248	0.06475	1			
fdi	0.369751	0.155243	0.747834	1		
inf	-0.20714	0.042459	-0.2445	-0.2757	1	
uemp	-0.38262	-0.51881	0.198974	-0.26909	-0.09164	1

Source: Author's computation (2022).

The correlation analysis of the variables understudy is presented in Table 2. It was reported in the table that poverty rate and security threat index are positively correlated with output growth. It was equally shown in the table that the level of association between foreign direct investment and economic growth rate is positive. However, there was a negative correlation coefficient reported between economic growth and inflation. Similarly, unemployment is negatively correlated with economic growth. As well, the correlation analyses of the cofounding variables are reported in Table 2. It is imperative to note that these coefficients are moderate, therefore, indicating the absence of multicollinearity problem.

Unit root and cointegration tests

In this section, the study presents the stationarity and cointegration tests of the variables. The result of the unit root test was presented in levels and first difference. It is employed to examine the stationarity

of variables in macro economy before being used in regression. The reason for evaluating the unit root is to identify variables that are non-stationary which tend to have inconsistent estimates of standard errors that can lead to a false reference. In this study, the Augmented Dickey-Fuller (ADF) estimator is used and the results are presented in Table 3.

Table 3: Unit Root Test

Variables	ADF Stat at level	Critical value	ADF Stat at first difference	Critical value	Remarks
egr	-2.4708 (0.3399)	1%-4.2191 5%-3.5331 10%-3.1983	-10.4434 (0.0000)	1%-4.2191 5%-3.5331 10%-3.1983	Integrate of order 1
por	-1.7826 (0.6939)	1%-4.2119 5%-3.5298 10%-3.1964	-7.6863 (0.0000)	1%-4.2191 5%-3.5331 10%-3.1983	Integrate of order 1
sti	-2.1238 (0.5165)	1%-4.2191 5%-3.5331 10%-3.1983	-4.2773 (0.0086)	1%-4.2191 5%-3.5331 10%-3.1983	Integrate of order 0
fdi	-3.7194 (0.0349)	1%-4.2627 5%-3.5530 10%-3.2096	-	- - -	Integrate of order 0
inf	-4.0683 (0.0145)	1%-4.2191 5%-3.5331 10%-3.1983	-	- - -	Integrate of order 0
uemp	-0.3139 (0.9874)	1%-4.2191 5%-3.5331 10%-3.1983	-7.3254 (0.0000)	1%-4.2191 5%-3.5331 10%-3.1983	Integrate of order 1

Source: Author's computation (2022).

The estimated unit root results confirmed that foreign direct investment and inflation rate do not accept the null hypothesis of stationary at levels at 5% significance level. It therefore implies that foreign direct investment and inflation rate are stationary at levels i.e. I(0). However, economic growth rate, poverty rate, security threat index, and unemployment rate was found not to reject the null hypothesis at levels, implying non stationarity at levels. Afterwards, unit root estimations were conducted at first difference and the result was found to reject the null hypothesis at I(1). This result means that these variables (economic growth rate, poverty rate, security threat index, and unemployment rate) are integration of order one [I(1)].

Subsequently, noticing that majority of the series are integration of order one with two variables integrated of order one, the co-integration test is employed to examine the long-run relationship among poverty rate, security threat and economic growth using ARDL bound test. For data having the aforementioned qualities, the estimating approach is found to be appropriate. In conclusion, ARDL is utilized since it is appropriate for variables at various integration orders. In order to demonstrate whether there is a long-run link between the series, it is crucial to evaluate the model's convergence. The test demonstrates how poverty rate, security threat and economic growth are related over the long term. The cointegration result, which is shown as the F-statistics estimate, is shown in Table 4.

Table 4: Long-Run Relationship Using ARDL Bound Test (2, 3, 4, 4, 1, 4)

Test Statistic	Value	K
F-statistics (*egr | por sti fdi inf uemp*)	5.5153	5
Critical Value Bounds		
Significance (***egr | por sti fdi inf uemp***)	**Io Bound**	**I1 Bound**
10%	2.08	3.00
5%	2.39	3.38
2.5%	2.70	3.73
1%	3.06	4.15

Source: Author's computation (2022).

We discovered that the normalized equations' F-statistics, whose estimate at F-statistics = 5.5546 is higher than the lower and upper critical bounds at 1% significance level, indicate that the null hypothesis of no long-run relationship is rejected at 5% significance level. The implication of the aforementioned calculation is that poverty rate, security threat and economic growth in Nigeria have a long-term relationship.

Long-run and short-run estimates

The ARDL approach is used in this part to provide an answer to the research question about the signs and magnitudes of poverty rate, security threat and economic growth. A combination of short-run and long-run estimates of the interrelationship among the considered series makes up the estimated ARDL model. Table 5 provides clear evidence for the impact of our empirical estimates of poverty rate, security threat, FDI, inflation and unemployment on economic growth. As the model was set at four to ensure a suitable degree of freedom based on automatic selection of the Akaike Information Criterion, the estimator automatically selected the lag duration on all variables.

According to the short-term estimate, the current levels of economic growth at 5% are negatively and significantly impacted by the initial lag of gross domestic product growth. Poverty rate's short-run parameters at lags one and two were discovered to be negative and statistically significant at 5%, indicating that it has an adverse effect on changes in GDP growth. However, security threat at current, lag one, two and three have positive and significant outcomes, although the current level was discovered to be substantial statistically. Meanwhile, FDI at lags one and two have negative impact on short economic growth. Likewise, inflation rate negatively and significantly impacted on output growth in the short run. At 5% significance level, the coefficients of unemployment rate were negative and statistically significant. This implies that short-term GDP growth is negatively by unemployment rate.

Table 5: Results of Estimated ARDL Model

Dependent Variable: **Economic growth rate (egr)**				
Selected Model: **ARDL(2, 3, 4, 4, 1, 4)**				
Sample: **1981 2020**				
Short-run estimates				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Δ(egr(-1))	-0.186406	0.106032	-1.758015	0.1042
Δ(por)	0.197348	0.104060	1.896478	0.0822
Δ(por(-1))	-0.585743	0.151130	-3.875743	0.0022
Δ(por(-2))	-0.315062	0.107945	-2.918732	0.0129

Δ(sti)	0.914463	0.576277	1.586847	0.1385
Δ(sti(-1))	3.052936	0.778731	3.920401	0.0020
Δ(sti(-2))	2.363063	0.714086	3.309215	0.0062
Δ(sti(-3))	2.643398	0.727581	3.633133	0.0034
Δ(fdi)	0.111611	0.375211	0.297462	0.7712
Δ(fdi(-1))	-4.477413	0.745122	-6.008970	0.0001
Δ(fdi(-2))	-2.889654	0.684343	-4.222525	0.0012
Δ(fdi(-3))	-0.606615	0.435875	-1.391718	0.1893
Δ(inf)	-0.119961	0.029801	-4.025348	0.0017
Δ(uemp)	-0.977700	0.621917	-1.572074	0.1419
Δ(uemp(-1))	-3.535909	1.006151	-3.514292	0.0043
Δ(uemp(-2))	-2.951299	0.893412	-3.303402	0.0063
Δ(uemp(-3))	-2.212523	0.720351	-3.071453	0.0097
ECT(-1)	-0.111605	0.014666	-7.609910	0.0000
Long-run estimates				
por	0.863394	0.270904	3.187079	0.0078
sti	-3.136175	0.955703	-3.281538	0.0066
fdi	4.034738	1.149142	3.511086	0.0043
inf	-0.039845	0.038476	-1.035560	0.3208
uemp	5.796612	1.965781	2.948758	0.0122
C	-64.90305	22.62873	-2.868170	0.0141
R-squared	0.8807	**F-stat**	2.7746(0.0350)	
Adj. R-squared	0.7680	**D-Watson**	2.0109	

Source: Author's computation (2022).

The results of the short-run estimation also display the error-correction process, which gauges the rate or intensity of adjustment. This shows how GDP growth varies at the rate of adjustment as a result of modifications in the explanatory variables. At the conventional level, it is discovered that the error correction term (ECT)'s coefficient is negative and statistically significant. The ECT result (-0.1116) showed that the model would need to rectify its short-run disequilibrium by 11.16% speed of adjustment in order to reach the long-run equilibrium.

According to Table 5's long-run estimation results, changes in Nigeria's poverty rate, foreign direct investment, and unemployment all have a positive and significant effect on the country's output growth. The outcome demonstrates that only foreign direct investment coincided with the theoretical predictions while poverty and unemployment do not. The change in output growth increases by 0.86%, 4.04%, and 5.80%, respectively, for every 1% rise in poverty rate, foreign direct investment, and unemployment. However, contrary to a priori expectations, the table showed that changes in output growth respond indirectly to changes in security threat index and inflation. The results follow the theoretical expectations as it implies that low inflation and stable security would results to improved output growth. A 10% decrease in the security threat index and inflation would result in 3.14% and 0.04% increase in the output growth.

Furthermore, the Adjusted-R^2 is high (0.7680), meaning that the model's explanatory variables accounted for around 76.8% of all variations in output growth. The study also found that the model is well-defined and statistically significant following the overall test statistics (F-statistic) with 2.7746 is statistically significant at the 5% level. Further, serial autocorrelation is not present in the model, as evidenced by the Durbin Watson statistic of 2.0109.

Diagnostic Test

In terms of the diagnostic tests, the study looked for issues with the estimated model involving heteroskedasticity, serial correlation, functional form misspecification, parameter stability, and normality tests. Table 6 displays the outcomes of these examinations.

Table 6: Diagnostic Tests

Model	
Serial Correlation: **1.6547 [0.1893]**	**Normality Test:** 2.1524 [0.3409]
Functional Form: **1.2193 [0.2482]**	**Heteroskedasticity Test:** 1.4251 [0.2658]

Source: Author's computation (2022).

According to the estimated ARDL model, the models passed the serial correlation test, proving that they do not exhibit order 4 correlation in the error terms. The normality and heteroskedasticity tests' null hypothesis was accepted at the expected statistical rate of 5% level. It suggests that the error terms have the same variance and are regularly distributed. The Ramsey RESET test's functional form test, which demonstrated that the ARDL model is correctly stated and not mis-specified, was also successful. The cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) shown in Figures 3 and 4 respectively are also steady.

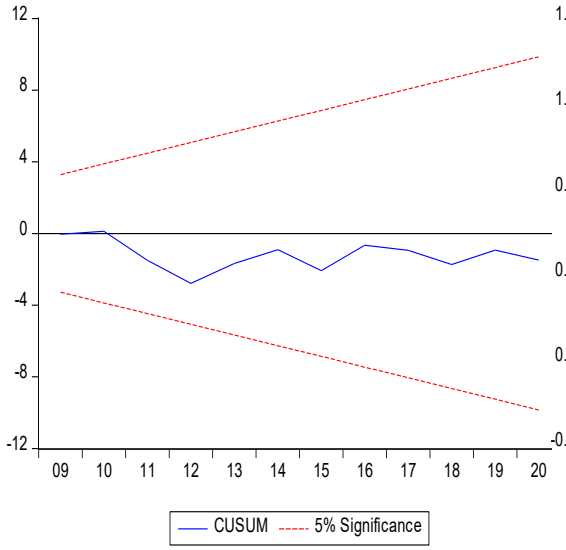

Figure 3: Cumulative Sum (CUSUM)

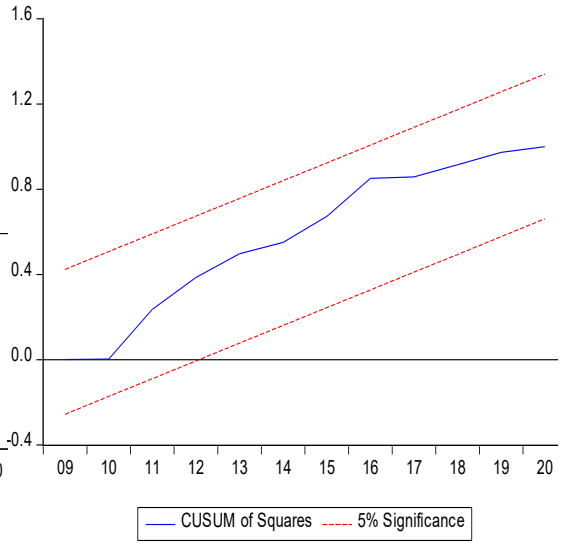

Figure 4: Cumulative Sum of Square (CUSUMQ)

Discussion of Findings and Conclusion

This study uses annual time series data covering the years 1981 to 2020 to analyze the growth effects of security threat and poverty rate in Nigeria. To examine the dynamic interactions among security threat, poverty rate, and economic growth, we used an ARDL bound estimation approach. The outcome

demonstrates that the short-term slow growth in output was influenced by the poverty rate. Long-term output growth and the poverty rate are, nonetheless, positively correlated. It means that even if the number of people living below poverty line rises, the economy still continues to grow. This is also true in the long run, showing that the economy has expanded despite a rise in the number of poor people over time. It implies that the Nigerian economy does not help the poor. This undermines Adelowokan, Maku, Babasanya, and Adesoye's (2019) findings, which only prove a short-term direct relationship between poverty and economic progress. Although security doesn't pose a threat to output growth in the short term, but it does pose a long-term threat to income growth. According to the findings of the Poirson (1998) study, political terrorism and expropriation risk have an impact on economic growth. While the unemployment rate had a negative impact on short-term output growth, it directly affected long-term income growth. This is demonstrated in a related study on poverty and youth unemployment in Nigeria between the years of 1987 and 2011 conducted by Aiyedogbon and Ohwofasa (2012). The impact was felt in the system following the significance of the variables. Intuitively, low poverty will lead to economic growth that is merely incremental rather than substantive development in the economy. This scenario can only be maintained and improved upon if specific policy measures, such as secured life and properties as well as sound fiscal and monetary policy, are implemented. These measures would create an enabling environment, draw private investment, and increase productivity. Additionally, solid policies are required to guarantee equal income distribution, allowing the underprivileged to share in the gains from the nation's expansion.

Furthermore, the results demonstrate that, while the impact of FDI is favorable and large over the long term output growth, it has a short-term negative and considerable impact on output growth. It suggests that, in the short term, foreign capital is invested in projects that pay off quickly and may profitably be returned to their home countries. These funds are heavily engaged in the stock market and in government securities. This supports Aremu (2005)'s argument from 2005 that "developing nations are poor because they have been intentionally mistreated through: majestic disregard; overdependence on necessary goods as fares to created nations; unfamiliar financial specialists' acts of neglect, especially through exchange of value mechanics; unfamiliar firm control of key monetary areas with swarming out impact of local firms; implantation of improper innovation". Government must make sure funds from foreign investors are directed to industries with long-term ties to the development of the nation. Equally, general price stability would ensure stable and improved output growth in the country.

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