Security Threats, Poverty and Economic Growth in West African Countries

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Certification

This is to certify that Olufunmi Emmanuel FASHINA with matriculation number LCU/PG/002938 carried out this research work titled 'Security Threats, Poverty and Economic Growth in West African Countries' in the Department of Economics and Development Studies, Faculty of Management and Social Sciences, Lead City University, Ibadan, Oyo State, Nigeria, for the award of Doctor of Philosophy Degree in Economics and that this has not been previously submitted.

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Dedication

This research work is dedicated to Almighty God and my family.

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Acknowledgement

I would like to express my sincere gratitude to all the sources and libraries utilised throughout the research process for this thesis, whose invaluable contributions have enriched and strengthened the findings presented herein.

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“Even though the above institutions and persons have assisted in this research work, I alone stand responsible for the errors, if any found in this work”.

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Abstract

West Africa faces a dual developmental challenge where pervasive poverty, and escalating security threats create a vicious cycle that constrains economic progress. Despite significant natural resource wealth, the region exhibits some of the world's highest poverty rates, exacerbated by increasing incidents of terrorism, organized crime, and communal conflicts. These security challenges not only endanger human lives but also disrupt economic activities, destroy infrastructure, and divert scarce resources from development programs to security expenditures. Meanwhile, existing studies have typically examined poverty and security threats in isolation, neglecting their potential effects on economic growth. This study investigates the interrelationships among poverty, security threats, and economic growth across the sixteen West African countries from 2007 to 2023. It addresses these gaps through rigorous panel data analysis. The study tests for Cross-Sectional Dependence using Pesaran-CD, Pesaran-Scaled LM, and Power Enhanced CDw tests, establish stationarity through both first and secondary generation unit root tests, and verify cointegration relationships using the Westerlund ECM panel cointegration test. This comprehensive methodological approach ensures the robustness of empirical analysis by using the Fully Modified Ordinary Least Squares (FMOLS) estimator. The findings reveal significant heterogeneity in these relationships across linguistic blocs. The findings demonstrate that poverty constrains economic growth in Lusophone countries while showing a mild positive association in Francophone nations, reflecting patterns of "jobless growth." Security threats exhibit significant negative impacts on economic growth in both Lusophone and Anglophone blocs, yet relate with improved economic growth in Francophone countries. The study identifies a counterintuitive "reporting paradox" where higher poverty relates with reduced recorded security threats, suggesting significant underreporting in impoverished areas. Most notably, the analysis finds no interactive effects between poverty and security threats on economic growth, indicating these factors operate through distinct channels rather than reinforcing mechanisms. These results highlight the need for differentiated policy approaches that account for substantial variations across sub-regional contexts. Security interventions must be bloc-specific to address divergent security-growth relationships across West Africa. In Anglophone and Lusophone countries, policies should prioritize conflict prevention and protection of economic assets where security threats severely constrain growth. Conversely, Francophone nations require strategies that manage economic opportunities emerging alongside insecurity while addressing root conflict causes. Simultaneously, poverty reduction approaches must vary, with Lusophone countries needing direct poverty alleviation measures and Francophone nations requiring inclusive growth strategies to combat jobless growth patterns.

Keywords: Poverty, Security Threats, Economic Growth, West Africa, Panel Cointegration.

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Table of Contents

Content		Page
Title Page		i
Certification		ii
Dedication		iii
Acknowledgement		iv
Abstract		vi
Table of Contents		vii
List of Tables		xi
List of Figures		xii
List of Acronyms		xiii
Chapter One: Introduction:		
1.1	Background to the Study	1
1.2	Statement of the Problem	5
1.3	Research Question	11
1.4	Objectives of the Study	11
1.5	Hypotheses	12
1.6	Significance of the Study	12
1.7	Scope of the Study	15
1.8	Limitation of the Study	17
1.9	Operational Definition of Terms	17
Endnotes		20

Lead City University DO NOT COPY

Chapter Two: Literature Review

2.1	Conceptual Review	24
2.1.1	Poverty	24
2.1.2	Security Threats	27
2.1.3	Economic Growth	32
2.2	Theoretical Review	33
2.2.1	Resource Scarcity Theory	33
2.2.2.	Marxist Theory	35
2.2.3	Human Needs Theory	36
2.2.4	Economic Opportunity Theory	39
2.2.5.	Structural Violence Theory	42
2.2.6	Growth Theories	47
2.2.6.1	Neoclassical Growth Theory	47
2.2.6.2	Endogenous Growth Theory	49
2.3	Empirical Review	52
2.3.1	Poverty and Security Threats	52
2.3.2	Poverty and Economic Growth	57
2.3.3	Security Threats and Economic Growth	68
2.4	Conceptual Framework	76
2.5	Theoretical Framework	79
2.6	Summary of Gaps in Literature Reviewed	84
	Endnotes	87

Lead City University DO NOT COPY

Chapter Three: Methodology

3.1	Model Specification	97
3.1.1	Empirical Model of Poverty and Security Threats	97
3.1.2	Empirical Model of Poverty and Economic Growth	100
3.1.3	Empirical Model of Security Threats and Economic Growth	103
3.1.4	Model of the Interactive Effects of Security Threats and Poverty on Economic Growth	105
3.2	A priori Expectations	107
3.3	Estimation Techniques and Diagnostic Assessments	109
3.3.1	Panel Unit Root Tests	109
3.3.2	Panel Cointegration Tests	111
3.3.3	Panel Fully Modified Ordinary Least Square (FMOLS) Approach	113
3.4	Data Sources and Measurements	114
	Endnotes	117

Chapter Four: Results & Discussion of Findings

4.1	Presentation of Data	121
4.2	Summary Statistics, Trend Analysis, and Correlation Analysis	122
4.2.1	Summary Statistics	122
4.2.2	Trend Analysis	130
4.2.3	Correlation Analysis	140
4.3	Cross-Sectional Dependence and Stationary Tests	142
4.3.1	Cross-Sectional Dependence Test	142
4.3.2	Stationary Test	145
4.4	Empirical Results	147

Lead City University DO NOT COPY

4.4.1 Empirical Results of the Effects of Poverty on Security Threat in West Africa 147

4.4.2 Empirical Results of the Effects of Poverty on Economic Growth in West Africa 153

4.4.3 Empirical Results of the Effects of Security Threats on Economic Growth in West Africa 160

4.4.4 Empirical Results of the Links among Poverty, Security Threats, and Economic Growth in West Africa 167

4.5 Discussion of Findings 175

4.5.1 Poverty and Security Threats in West Africa 175

4.5.2 Poverty and Economic Growth in West Africa 177

4.5.3 Security Threats and Economic Growth in West Africa 178

4.5.4 Poverty, Security Threats and Economic Growth in West Africa 179

Endnotes 182

Chapter Five: Conclusion

5.1 Summary of Findings 185

5.2 Conclusion 187

5.3 Recommendations 189

5.4 Contribution to Knowledge 191

5.5 Suggestions for Further Studies 194

Bibliography 196

Appendix 212

Bio-data 245

The University Compliance Certification 250

Lead City University DO NOT COPY

List of Tables

Tables	Title	Page
1.1	Average of Economic Growth, Poverty and Security Indices within 2007-2022	8
3.1	Summary and Measurements of Data	115
3.2	Classification of Countries	116
4.1	Descriptive Statistics	123
4.2	Average of Security Threat, Poverty, and Economic Growth in West Africa (2007-2023)	126
4.3	Correlation Matrix	141
4.4	Cross-Sectional Dependence Test Results (d.f. = 120)	144
4.5	First- and Second-Generation Panel Unit Root Test Results	146
4.6	Westerlund ECM Panel Cointegration Test (Model with Intercept)	148
4.7	Panel FMOLS Estimates of Poverty and Security Threats in West Africa	150
4.8	Westerlund ECM Panel Cointegration Test (Model with Intercept)	155
4.9	Panel FMOLS Estimates of Poverty and Economic Growth in West Africa	157
4.10	Westerlund ECM Panel Cointegration Test (Model with Intercept)	162
4.11	Panel FMOLS Estimates of Security Threats and Economic Growth in West Africa	164
4.12	Westerlund ECM Panel Cointegration Test (Model with Intercept)	169
4.13	Panel FMOLS Estimates of Poverty, Security Threats and Economic Growth in West Africa	171

Lead City University DO NOT COPY

List of Figures

Figure	Title	Page
2.1	Conceptual Links between Security Threats, Poverty and Economic Growth	78
4.1	Plots of Security Threat, Poverty, and Economic Threat of West Africa Countries	133
4.2	Plots of Unemployment, Governance, Inequality, Investment, Education, and Health of West Africa	137

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List of Acronyms

Abbreviation	Meaning
SSA	Sub-Saharan Africa
ISWAP	Islamic State West Africa Province
UNECA	United Nations Economic Commission for Africa
WFP	World Food Programme
SDGs	Sustainable Development Goals
MDGs	Millennium Development Goals
PPP	Purchasing Power Parity
NAPEP	National Poverty Eradication Programme
NEED	National Economic Empowerment Development Strategy
ECOWAS	Economic Community of West African States
AU	African Union
UN	United Nations
GNP	Gross National Product
ARDL	Autoregressive Distributed Lag
ADF	Augmented Dickey-Fuller
EU	European Union
ECM	Error Correction Model
FMOLS	Fully Modified Ordinary Least Squares
CD	Cross-sectional Dependence
LM	Lagrange Multiplier
IPS	Im, Pesaran, and Shin
CADF	Cross-sectional Augmented Dickey-Fuller
CIPS	Cross-sectional Augmented IPS

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Chapter One

Introduction

1.1 Background to the Study

In recent years, global security threats have become a great concern for development economists, security experts, and policymakers due to their complex, interconnected nature and their impact on national and international stability. These threats have emerged from a variety of factors, including terrorism, banditry, farmers-herders conflict, militancy, organized crime, cyberattacks, environmental degradation, and political instability[1,2,3,4,5,6]. According to the Global Terrorism Index 2024, the number of deaths from terrorism increased by 22%, reaching 8,352, which is the highest level since 2017[7].

Sub-Saharan Africa (SSA), particularly the Sahel region of West Africa, remains the most impacted area, accounting for a significant share of global terrorism-related deaths[8]. The West African sub-region has faced a period of instability following recent coups d'état in Burkina Faso, Guinea, and Mali in 2023. These coups occurred amid continuous conflict in the Sahel region, where violence displaced more than 2.5 million people in 2022. Benin and Togo witnessed deadly attacks in 2021 and 2022, terrifying citizens and contributing to growing evidence of broadening violent activities in the region's coastal states[9].

The complexity and internationalization of the sub-region's insecurity was exemplified by the arrival of the Russia-backed Wagner group in Mali at the end of 2021 (together with a disinformation campaign) and the cessation of France's decade-long Operation Barkhane, which once saw 5,500 troops across the region by November 2022[9]. Regional stability has been deteriorating despite the presence of other external military forces, including the United Nations

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stabilization force in Mali, the European Union Task Force under the French command, and the combined Sahel states' "Joint Force."

The five recorded successful coups in the sub-region between 2020 and 2023 is more than what the region has experienced at any time in the last thirty years . Even though these five coups have occurred in just three countries (Burkina Faso, Guinea, and Mali), failed coups attempts were also recorded in Niger, Gambia and Guinea-Bissau [8,9]. Also, banditry has become a major security problem in Nigeria, especially in the North, destroying lives and livelihoods. For example, statistics showed that bandits killed about 115 people on Christmas Day in northern Nigeria and 400 in Plateau State in the fourth quarter of 2023[10]. Kidnapping, livestock rustling, extortion, and mass killings have displaced approximately 1.1 million rural northwestern Nigerians by 2022[10]. The number of bandits is estimated at around 30,000, distributed across various groups, some with over 1,000 members[10].

Likewise, the farmers-herders conflict had increased insecurity and violence with the loss of over 60,000 lives[11]. The violence led to about 2,539 deaths in 654 attacks between 2017 and 2020, mostly in the Middle Belt, and around 1.5 million people were projected to be displaced[11,12]. More so, the Global Organized Crime Index 2023 indicates that 83% of the world's population now lives in conditions of high criminality, highlighting a significant global challenge[13]. Ultimately, security threats have a profound impact on low economic growth, particularly in regions plagued by violence and instability. The interplay between insecurity and economic growth manifests in various ways, including reduced investment, agricultural output disruption, and community displacement.

Besides, the growth effects of security threats have been studied extensively due to the well-established link between insecurity and economic performance. Insecurity, particularly in the

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form of terrorism, civil unrest, and violent conflicts, had an adverse impact on economic growth by disrupting normal business activities, deterring investment, and diverting resources towards military and security expenditures[14,15,16,17,18]. When regions experience prolonged periods of insecurity, they face challenges such as reduced foreign direct investment, lower productivity, and the destruction of infrastructure, which cumulatively reduce growth potential. For instance, studies have demonstrated that countries suffering from internal conflicts or terrorism tend to allocate a significant portion of their budget to defence and security, which diminishes the resources available for economic development projects, social services, and infrastructural investments[19]. Thus, this security expenditure hinders long-term growth and exacerbates poverty. Additionally, insecurity increases the cost of doing business, as firms are forced to invest in private security, relocate to safer areas, or reduce their operations. Such disruptions have been observed in conflict-ridden regions like the Middle East, SSA, and parts of Asia.

Undeniably, numerous factors have been identified as critical drivers of output growth in the growth literature. These include capital accumulation, labour force growth, technological innovation, human capital development, institutional quality, trade openness, and research and development. Meanwhile, there is strong consensus that security threats have a significant adverse impact on economic growth, particularly in developing regions. The declining output growth in many developing countries, especially in Africa, is primarily attributed to severe and persistent security challenges such as terrorism, insurgency, and banditry[14,18]. While Africa, particularly West Africa, grapples with these intense security issues, other regions around the world have managed to mitigate such risks through focused policy interventions that enhance the security of life and property, contributing to stable and sustained economic growth. For instance, the rise of terrorism and insurgencies in Nigeria and other parts of West Africa has led to

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widespread disruption of agricultural and business activities, further hindering growth. In contrast, regions such as Europe and East Asia have demonstrated that through strategic security measures, economic stability can be restored even after experiencing security threats. This divide highlights the need for focused, context-specific interventions in regions most affected by insecurity like West Africa.

Furthermore, the link between security threats and economic growth shows empirical regularity but is often mediated by factors like poverty and social inequality. While security challenges directly disrupt productive activities, displace populations, and reduce investor confidence, their impact on economic growth can be less straightforward in practice, often influenced by these intervening variables. Unlike the developed economies which exhibit stronger resilience to security threats due to their robust social welfare systems and relatively low poverty rates thereby allowing for more consistent growth, developing nations, especially in Africa, face a different scenario, where the lack of economic opportunities and high poverty levels exacerbate the adverse impact of security threats on economic growth. The social welfare systems of developed nations have been instrumental in shaping their economies and providing a foundation for sustained economic growth. These systems, which include unemployment benefits, healthcare, education, and social safety nets, contribute to economic stability by reducing income inequality and poverty[22,23,24]. Thus, the availability of these support mechanisms reduce the economic vulnerabilities that often lead to insecurity, ensuring that citizens are less likely to resort to crime or conflict out of economic desperation.

However, the role of poverty as a key channel in exacerbating insecurity and hindering growth has not been sufficiently addressed. It is crucial to understand that effective security policies alone may not produce the desired economic benefits if social welfare systems are inadequate. A

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robust social welfare infrastructure, which reduces poverty and inequality, is necessary to amplify the positive effects of security measures on economic performance. Without addressing the underlying poverty, efforts to secure lives and property may fail to translate into meaningful economic outcomes.

1.2 Statement of the Problem

Recent events in West Africa have indeed brought renewed focus on the region's vulnerabilities to insecurity and conflict. The situation in Mali remains particularly a concern, as ongoing instability has allowed extremist groups to expand their influence, posing a significant threat to both local populations and neighbouring countries[27]. Nigeria grapples with multiple security challenges, including insurgency in the northeast, banditry in the northwest, and escalating communal violence, all of which contribute to a deteriorating security environment[28]. The coups in Burkina Faso and Guinea-Bissau underscore the fragility of governance in the region. In Burkina Faso, the military has taken control amid rising violence from jihadist groups, reflecting a broader trend of citizens losing faith in civilian governments to provide security and stability[29]. Guinea-Bissau's political turmoil further complicates efforts for peace and development, as entrenched corruption and instability hinder effective governance. Despite West Africa's growing economic and development aspirations, the region continues to face exceptionally severe and persistent security challenges. With a security threat index of 6.57 in 2022 higher than the Sub-Saharan African average and significantly above levels observed in the European Union and OECD countries, West Africa has emerged as one of the most insecure regions globally. The prevalence of insurgency, terrorism, banditry, kidnapping, communal violence, and maritime piracy, particularly involving groups such as Boko Haram and the Islamic State West Africa Province (ISWAP), has created an environment of chronic instability. While other regions such

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as Latin America and the Caribbean and the Middle East and North Africa also experience security threats, the intensity and persistence of insecurity in West Africa remain disproportionately higher[30]. This sustained insecurity poses a fundamental challenge to economic stability, investment, and development. However, there remains limited empirical understanding of the mechanisms through which these security threats affect macroeconomic outcomes and long-term development trajectories in the region. The absence of comprehensive, region-specific empirical evidence limits the effectiveness of policy responses aimed at addressing the security–development nexus in West Africa, thereby necessitating rigorous investigation.

The worsening economic situation in West Africa, exacerbated by the security threats, can also be traced to the severe consequences of the region's poverty levels. According to a report prepared in collaboration with the West Africa Sub-Regional Office for the United Nations Economic Commission for Africa (UNECA) and the United Nations World Food Programme (WFP), the proportion of people living on less than $1.90 a day rose from 2.3% in 2020 to 2.9% in 2021[31]. This trend underscores the region's deteriorating economic conditions, which have significantly impacted food security. Over 25 million people in West Africa are now unable to meet their basic food needs, a 34% increase compared to 2020[31]. This crisis is particularly acute in conflict zones such as the Lake Chad Basin, Liptako-Gourma, and the broader Sahel region. In these areas, people are often forced to sell their assets and livelihoods to buy food, further deepening their vulnerability and perpetuating cycles of poverty[31]. In Table 1.1, the poverty headcount ratio at $2.15 a day (2017 PPP) shows that 30.91% of the population in West Africa lives below this threshold, and the poverty gap is at 10.17% within 2007-2022, signifying the severity of income inequality and poverty[32]. This is starkly higher compared to regions like Latin America & the Caribbean, where only 4.98% of the population lives in extreme poverty[32]. This

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high poverty rate constrains the ability of households to invest in education, healthcare, and economic opportunities, perpetuating a cycle of low productivity and limiting the positive effects of GDP growth on broader economic and social welfare.

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Table 1.1: Average of Economic Growth, Poverty and Security Indices within 2007-2022

Country	GDP growth (annual %)	GDP per capita (constant 2015 US$)	Poverty gap at $2.15 a day (2017 PPP) (%)	Poverty headcount ratio at $2.15 a day (2017 PPP) (% of population)	Security threat index, 2022
Arab World	2.94	6109.61	n.a.	n.a.	
European Union	1.20	30848.56	n.a.	n.a.	1.85
Latin America & Caribbean	2.04	8474.27	1.78	4.98	5.32
Middle East & North Africa	3.00	7186.04	0.73	3.08	5.63
North America	1.79	55567.13	n.a.	n.a.	5.28
OECD members	1.58	35657.57	n.a.	n.a.	2.3
Sub-Saharan Africa	3.51	1584.32	14.95	40.12	6.25
West Africa	4.45	1191.48	10.17	30.92	6.57

Note: GDP -gross domestic product, n.a. – not available.
Source: Author's computation based on data from The Global Economy and World Development Indicators (2024).

Furthermore, the persistent and escalating security threats in West Africa, combined with high poverty levels, present a significant challenge to the region's economic growth and development. Despite relatively high GDP growth, averaging 4.45% between 2007 and 2022, compared to other regions like SSA (3.51%), Middle East & North Africa (3.00%), Arab (2.94%), Latin America & Caribbean (2.04%), North America (1.80%), OECD (1.58), and the European Union (1.20%), this growth has failed to translate into substantial improvements in human welfare[32]. West Africa's GDP per capita remains strikingly low at $1,191.48, well below regions like North America ($55,567.13), OECD members ($35,657.57), European Union ($30,848.56), even the Arab World ($6,109.61)[32]. Thus, these factors form a vicious cycle where poverty worsens insecurity, and security threats, in turn, creating a formidable barrier to sustainable economic progress. Also, the disparity in GDP growth and GDP per capita in West African countries highlights the region's challenges in distributing economic gains equitably and achieving substantial improvements in living standards. This is because the economic activities, particularly in rural areas, are stifled by ongoing violence, while displaced populations and

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destroyed infrastructure further hinder sustainable development. In contrast, regions like the European Union and OECD members, which experience relatively low security threats, are better positioned to translate economic growth into improved standards of living and overall human welfare[36,37,38] .

The West African region records one of the highest poverty rates globally, with a significant proportion of the population living below the international poverty line, limiting human capital development, productivity, and domestic demand. At the same time, West Africa has emerged as one of the most insecure regions in the world, with a security threat index of 6.57 in 2022, surpassing the Sub-Saharan African average and far exceeding those of more stable regions such as the European Union and OECD member countries[37]. The proliferation of insurgency, terrorism, banditry, kidnapping, communal violence, and maritime piracy has created an environment of chronic instability that undermines economic activity and investor confidence.

The interaction between insecurity and poverty creates a reinforcing cycle that further constrains economic growth in the region. Security threats disrupt agricultural production, trade, and industrial activities, particularly in conflict-prone areas, while increasing public expenditure on security at the expense of social and productive investments. Simultaneously, widespread poverty exacerbates vulnerability to insecurity by limiting access to education, employment, and social services, thereby creating conditions that foster recruitment into criminal and extremist groups.

Governments across West African countries have implemented various poverty-reduction initiatives, including social protection programmes, employment schemes, and investments in human capital and infrastructure, with the objective of improving livelihoods and promoting

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inclusive economic growth. Despite these efforts, poverty remains widespread and persistent across the region. A major factor undermining the effectiveness of these interventions is the escalating level of insecurity, characterized by insurgency, terrorism, banditry, kidnapping, communal violence, and maritime piracy. These security threats disrupt economic activities, displace populations, destroy productive assets, and divert public resources away from development-oriented spending toward security expenditures.

The coexistence of extensive poverty-reduction policies and worsening security conditions highlights a critical development challenge in West Africa. Persistent poverty and insecurity reinforce each other, constraining productivity, discouraging investment, and undermining sustainable economic growth. However, empirical evidence on the combined effect of government poverty-reduction efforts and security threats on economic performance in West African countries remains limited.

Despite the shared geographical space of West African countries, the region is far from homogeneous. Differences in colonial legacies (Anglophone, Francophone, and Lusophone systems) have resulted in varying institutional structures, governance frameworks, legal systems, monetary arrangements, and development trajectories. These structural differences may influence how poverty and security threats interact and how their combined effects translate into economic outcomes. However, much of the existing empirical literature treats West Africa as a uniform entity, thereby obscuring important heterogeneities across colonial blocs.

The lack of disaggregated analysis limits understanding of whether and how the poverty–security–growth nexus differs across Anglophone, Francophone, and Lusophone countries. This aggregation bias constrains the formulation of targeted and context-specific policy responses. By

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explicitly disaggregating West African countries along colonial lines, this study addresses a critical gap in the literature, offering nuanced empirical insights into the differential impacts of poverty and security threats on economic growth across the region. Such an approach enhances the relevance of policy recommendations and contributes to a more refined understanding of development challenges in West Africa.

1.3 Research Questions

The following research questions were addressed in this study:

i. To what extent has poverty contributed to the rise of security threats in West Africa?
ii. What effect does poverty have on the economic growth of West African countries?
iii. How do security threats influence economic growth in the West African region?
iv. What is the combined effect of security threats and poverty on economic growth in West African countries?

1.4 Objectives of the Study

The main objective of this study is to investigate the relationship among security threats, poverty, and economic growth in West Africa. The specific objectives were to:

1. examine the extent to which poverty contributes to security threats in West Africa;
2. analyse the effect of poverty on economic growth of West African countries;
3. ascertain the extent to which security threats affect economic growth in West Africa;
4. determine the joint effect of security threats and poverty on economic growth in West African countries.

1.5 Hypotheses

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The following null hypotheses will be tested in the study:

H_0 1: There is no significant relationship between poverty and security threats in West Africa.

H_0 2: Poverty has no significant effect on economic growth in West Africa.

H_0 3: Security threats do not significantly affect economic growth in West Africa.

H_0 4: The integration of poverty and security threats does not significantly impact economic growth in West Africa.

1.6 Significance of the Study

The significance of this study on security threats, poverty, and economic growth in West Africa is crucial for understanding the intricate relationship between these critical factors and their overall impact on regional development. West Africa, one of the poorest regions globally, faces ongoing security challenges, including terrorism, banditry, and insurgency, which exacerbate poverty levels and inhibit economic growth. This study aims to shed light on how persistent insecurity not only disrupts economic activities but also deepens poverty by displacing populations, and disrupting livelihoods.

This study will direct its contribution to several key Sustainable Development Goals (SDGs) within the context of West African countries. It particularly will address SDG 2, which aims to eradicate hunger and ensure food security, improve nutrition, and promote sustainable agriculture. This goal extends from the Millennium Development Goals (MDGs) and aligns closely with the region's growing food insecurity, as highlighted by the 34% increase in people unable to meet their basic food needs due to poverty and insecurity, especially in conflict-affected areas like the Sahel region of West Africa.

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Moreover, the study targets SDG 8, which promotes inclusive economic growth, decent work, and productive employment, directly addressing the lack of economic opportunities exacerbated by persistent security challenges in the region. Also, SDG 16, which focuses on promoting peaceful, accountable, and inclusive institutions, is particularly relevant as weak institutional frameworks have been identified as a significant barrier to addressing security threats and fostering economic development in West Africa.

By addressing these goals, this study seeks to provide a strategic framework that aligns with the region's efforts to mitigate poverty through more stable and secure environments. Despite international interventions, the region still faces unpredictable and disjointed actions, leading to under-performance in its sectors. This study's findings are expected to offer critical insights for formulating effective and integrated policies to improve security of life and property, economic growth, and eradicate extreme poverty, thereby enhancing the overall achievement of the SDG targets by 2030.

Scholars present divergent perspectives on the relationship between poverty and insecurity. One school of thought suggests that poverty both causes and is caused by insecurity, creating a vicious cycle in which impoverished individuals are more vulnerable to violence and instability, while ongoing insecurity further entrenches poverty by disrupting livelihoods and limiting access to resources and opportunities. Proponents of this view argue that the lack of economic opportunities and basic necessities compels people to engage in criminal activities or violent conflicts as a survival mechanism. A second perspective posits that poverty primarily induces insecurity by exacerbating social tensions, driving individuals toward desperate measures, and creating fertile ground for the recruitment of marginalized groups into insurgent movements or criminal organizations. In this framework, poverty is seen as a key driver of insecurity, especially

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in areas where government presence is weak, and law enforcement is unable to maintain order. A third faction holds that poverty is a byproduct of conflicts and insecurity rather than a direct cause. In this view, conflict, violence, and instability disrupt economic activities, destroy infrastructure, and displace populations, resulting in widespread poverty. These scholars argue that insecurity has a more direct causal relationship with poverty, as ongoing conflicts reduce the capacity of individuals and nations to sustain economic growth and development. These varying perspectives highlight the complex and multi-directional nature of the poverty-insecurity nexus, where each factor can influence the other under different circumstances. The policy implications of each perspective differ significantly, informing strategies that either focus on poverty alleviation to reduce insecurity or prioritize security measures to address poverty more effectively.

Despite a theoretical consensus regarding the interplay between security threats, poverty, and economic growth, there remains a notable lack of empirical studies that specifically validate or challenge this proposition in the context of West Africa. Also, a review of the literature reveals a wealth of studies addressing the interplay between poverty and insecurity, as well as poverty and economic growth[39,40,41,42,43,44,45,46]. Similarly, extensive research has explored the effects of security threats on economic growth[47,48,49,50,51].

However, a significant gap in the literature remains: there is little to no research that examines the integrated effects of poverty and security threats on economic growth in West Africa. This gap is critical given the region's persistent struggles with poverty and insecurity, and the potential synergistic impact that well-coordinated policies in these areas could have on fostering economic growth. The absence of such studies highlights the need for in-depth analysis to

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understand how targeted interventions in both poverty reduction and security enforcement could unlock economic potential and ensure stability in West Africa[52,53,54].

1.7 Scope of the Study

This study will utilize secondary panel data for sixteen West African countries spanning from 2007 to 2023, with a focus on understanding the interrelations among security threats, poverty, and economic growth in the region. The choice of this period is based on data availability and different episodes of security threats witnessed by West African countries. The security threat index, sourced from The Global Economy, begins in 2007, providing insights into how regional instability has affected socio-economic outcomes over time. The choice of West Africa presents a particularly compelling case for analysis due to several critical factors.

First, despite experiencing a notable increase in GDP growth rates over the period, the region continues to suffer from low GDP per capita, indicating that the economic gains have not translated into improved living standards[32]. This gap highlights structural deficiencies that inhibit inclusive economic growth. Second, the region is predominantly composed of low-middle-income (Benin, Cape Verde, Côte d'Ivoire, Ghana, Mauritania, Nigeria, and Senegal) and lower-income countries (Burkina Faso, Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Sierra Leone, and Togo). These income disparities within the region make it particularly vulnerable to economic shocks, poverty, and security challenges.

Although the divergence between GDP growth and GDP per capita is observable across several African sub-regions, West Africa presents a particularly compelling case for focused empirical investigation. Unlike Southern Africa, where higher GDP per capita and upper-middle-income status prevail despite inequality concerns, and East Africa, where sustained growth has translated

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into relatively stronger poverty reduction outcomes, West Africa combines moderate aggregate growth with persistently low per capita income, widespread poverty, and weak structural transformation. The region is predominantly composed of low-income and lower-middle-income economies, making it especially vulnerable to economic shocks and external disruptions.

What further distinguishes West Africa is the intensity and regional spread of security threats, including insurgency, terrorism, banditry, kidnapping, and maritime piracy, which interact with poverty and weak institutions in a mutually reinforcing manner. While other African regions experience insecurity, the transnational and systemic nature of security challenges in West Africa alongside rapid population growth, limited industrialization, and high informality creates a uniquely fragile development environment. These characteristics amplify the gap between economic growth and living standards and constrain the effectiveness of policy interventions.

Consequently, West Africa offers a distinct and policy-relevant context for examining development challenges that cannot be fully captured through continent-wide or cross-regional analyses. Focusing on West Africa allows for a more nuanced understanding of how structural vulnerabilities, poverty, and security threats interact to shape economic outcomes, thereby justifying the regional focus of this study and enhancing the relevance of its empirical and policy contributions[32]. These challenges undermine efforts to achieve SDGs, particularly those related to economic growth, poverty eradication, and ensuring communal security. In conclusion, the persistent insecurity, compounded by high poverty levels, creates a fragile environment where growth is slow and uneven. Previous studies have confirmed the detrimental effects of this fragility on the security of life and property, thus requiring an integrated approach that addresses both security and economic policies for sustainable development[39,40,41,42.]

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1.8 Limitation of the Study

One significant limitation of this study is the issue of data irregularities commonly encountered when using secondary sources like the World Bank's World Development Indicators (WDI) and The Global Economy's indices. These datasets often show inconsistencies or fluctuations over a few years before stabilizing. For instance, the World Bank updates historical GDP growth figures based on revised methodologies or newly available data, which could alter trend analyses conducted previously. Similarly, indices such as the Security Threat Index or Poverty Headcount Ratio sometimes undergo changes due to updates in definitions or adjustments to reflect new geopolitical or economic realities.

Moreover, these organizations employ varying methodologies when collecting and reporting data points, further complicating analysis. For example, the World Bank may report poverty levels but use distinct criteria to define what constitutes extreme poverty or differences in the income levels at purchasing power parity (PPP). The Global Economy might use a more regional focus in its methodology for West Africa, while the World Bank takes a more global standardized approach, potentially leading to variations in the indicators. These differences can create interpretational challenges, especially when comparing or combining datasets from different sources.

1.9 Operational Definition of Terms

The following are the operational definitions of the key terms encountered in this study. These definitions provide detailed explanations of the technical terms and measurements used during data collection. Each term is defined according to its use in this research:

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Insecurity: It refers to the prevalence of threats such as armed conflict, terrorism, and organized crime, which disrupt the stability and functioning of societies, severely impeding economic activities and growth in West Africa.

Poverty: This is the widespread condition where individuals and households lack the necessary resources to meet basic needs, creating a cycle of vulnerability that exacerbates insecurity and undermines development efforts.

Security Threat Index: The security threat index measures the severity of security challenges, including terrorism, armed conflict, and organized crime, faced by a country or region. In this study, the index quantifies how security risks impact economic growth and poverty by disrupting daily life, investments, and development processes.

Poverty Headcount Ratio: This ratio represents the proportion of the population living below a specified poverty line, such as $2.15 per day (2017 PPP). It serves as a key indicator of the level of extreme poverty in the region and is critical to understanding how poverty exacerbates insecurity and stifles economic development.

GDP Growth: The annual GDP growth rate indicates the year-on-year percentage change in the economic output of a country. While it captures overall economic performance, the study focuses on how growth in West African countries has failed to significantly improve human welfare and living standards.

GDP per Capita: This is a measure of the average economic output per person, calculated by dividing a country's GDP by its total population. This study uses GDP per capita to assess the disparity between overall economic growth and individual income levels in West Africa compared to other regions, highlighting the challenges of poverty despite economic progress.

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Poverty Gap: The poverty gap is a measure of the average income shortfall of the poor relative to the poverty line. It provides insights into the depth of poverty and is useful for assessing the severity of poverty within the region, beyond just the number of people affected.

Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs): The MDGs and SDGs are global frameworks aimed at improving social, economic, and environmental outcomes. This study references these goals, particularly those related to poverty reduction, economic growth, and peacebuilding, to assess the progress and challenges faced by West African nations.

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Endnotes

1. M. U. Nnam, C. O. Ugwuoke, V. C. Njemanze, & F. A. Akwara. *Boko Haram Terrorism and Human Security in Nigeria: Matters Arising*. **Journal of Aggression, Maltreatment & Trauma**, 29(10), 2020, 1257-1278.

2. C. E. Madubuegwu, U. K. Ibekaku, & O. E. Dominic. *Terrorism in West Africa and National Security of States. A Critical Analysis*. **Nigerian Journal of Social Development**, 10(1), 2021, 11-33.

3. P. A. Spadaro. *Climate Change, Environmental Terrorism, Eco-Terrorism and Emerging Threats*. **Journal of Strategic Security**, 13(4), 2020, 58-80.

4. J. Sebastian, & P. Sakthivel. *Cyber Terrorism: A Potential Threat to Global Security*. **Pearson Journal**, 5(6), 2020, 334-341.

5. E. C. Viano. *Unholy Alliances and Their Threat: The Convergence of Terrorism, Organized Crime and Corruption*. **International Annals of Criminology**, 58(1), 2020, 91-110.

6. O. Ukaeje. *Political Instability and Insecurity in Africa: Implications for African Union Agenda 2063*. **Journal of Contemporary International Relations and Diplomacy**, 3(1), 2022, 443-466.

7. V. Andreescu. *Global Terrorism Index*. In Encyclopedia of Religious Psychology and Behavior. Cham: Springer Nature Switzerland, 2024, 1-3.

8. R. Debrah, *An Assessment of the Socio-Economic Effects of Terrorism in the Sahel Region of West Africa* (Doctoral Dissertation, University of Ghana) 2021.

9. Vision of Humanity. *Key Findings from the Global Terrorism Index 2024 Report*. Vision of Humanity, 2024. Available at https://www.visionofhumanity.org/maps/global-terrorism-index/#/

10. Africa Defence Forum. *Nigeria Strives to Contain Banditry Problem*. Africa Defence Forum, Aug 27, 2024. Available at https://adf-magazine.com/2024/08/nigeria-strives-to-contain-banditry-problem/

11. B. Nwosu & N. Nwokolo. *The Massacre in Plateau State: A Litmus Test on the Security Approach of Tinubu's Regime*. Nextier SPD Policy Weekly, 9(10), 2024, 1-5.

12. Vanguard News. *Insecurity: 60,000 Lives Lost in Farmers/Herders Clashes – Nextier*. Vanguard News, 2024. Available at https://www.vanguardngr.com/2024/01/insecurity-60000-lives-lost-in-farmers-herders-clashes-nextier/

13. Global Initiative against Transnational Organized Crime (GI-TOC). *The Global Organized Crime Index 2023: A Global X-Ray of Organized Crime*. Geneva: GI_TOC, 2024. Available at

Lead City University DO NOT COPY

https://globalinitiative.net/wp-content/uploads/2023/09/Global-organized-crime-index-2023-web-compressed-compressed.pdf

14. A. Yusuf, & S. Mohd. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.

15. H. Rjoub, C. U. Ifediora, J. A. Odugbesan, B. C. Iloka, J. Xavier Rita, R. M. Dantas, M. N. Mata, & J. M. Martins. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

16. M. A. K. Gasura, A. Abbas, & A. A. Chaichi. *Impact of Non-Traditional Security Threats on Human Development Index: A Case Study of Pakistan*. **Annals of Human and Social Sciences**, 4(2), 2023, 273-278.

17. K. Khan, A. Khurshid, & J. Cifuentes-Faura. *Investigating the Relationship between Geopolitical Risks and Economic Security: Empirical Evidence from Central and Eastern European Countries*. **Resources Policy**, 85, 2023, 103872.

18. C. Chuku, D. Abang, & I. A. Isip. *Growth and Fiscal Consequences of Terrorism in Nigeria*. **Defence and Peace Economics**, 30(5), 2019, 549-569.

19. T. Sandler, & W. Enders. *Economic Consequences of Terrorism in Developed and Developing Countries: An Overview*. **Terrorism, Economic Development, and Political Openness**, 17, 2008, 1-43.

20. E. Kirchner, & J. Sperling. *The New Security Threats in Europe: Theory and Evidence*. **Eur. Foreign Aff. Rev.**, 7, 2002, 423.

21. K. Khan, A. Khurshid, & J. Cifuentes-Faura. *Investigating the Relationship between Geopolitical Risks and Economic Security: Empirical Evidence from Central and Eastern European Countries*. **Resources Policy**, 85, 2023, 103872.

22. G. Standing. *Social Protection in Central and Eastern Europe: A Tale of Slipping Anchors and Torn Safety Nets*. In **Welfare States in Transition: National Adaptations in Global Economies**, 1996, 225-255.

23. C. Noelke. *Social Protection, Inequality and Labour Market Risks in Central and Eastern Europe*. In **Europe enlarged**. Policy Press, 2008 (pp. 63-96).

24. S. Devereux. *Can Social Safety Nets Reduce Chronic Poverty*? **Development Policy Review**, 20(5), 2002, 657-675.

25. Ezeoha, A., Igwe, A., Okoyeuzu, C., & Uche, C. The fiscal effects of armed conflicts in Africa. *African Development Review*, *35*(4), 2023, 444-456.

26. P. N. Ngwoke, & G. N. Akabike. *Insecurity and its Implication for Sustainable Development in Nigeria: The Role of Religion*. **HTS Teologiese Studies/Theological Studies**, 78(1), 2022.

Logo city University DO NOT COPY

27. Center for Preventive Action. *Violent Extremism in the Sahel*. Center for Preventive Action, February 14, 2024. Available at https://www.cfr.org/global-conflict-tracker/conflict/violent-extremism-sahel

28. O. Ojewale. *Rising Insecurity in Northwest Nigeria: Terrorism Thinly Disguised as Banditry*. Washington D. C.: The Brookings Institution, February 18, 2021. Available at https://www.brookings.edu/articles/rising-insecurity-in-northwest-nigeria-terrorism-thinly-disguised-as-banditry/

29. Bertelsmann Stiftung. *BTI 2024 Country Report — Burkina Faso*. Gütersloh: Bertelsmann Stiftung, 2024. Available at https://bti-project.org/en/reports/country-report/BFA

30. The Global Economy. *Security Threats Index: Country Rankings*. The Global Economy, 2024. Available at https://www.theglobaleconomy.com/rankings/security_threats_index/OECD/

31. United Nations (UN). *West Africa: Extreme Poverty Rises Nearly 3 Per Cent Due to COVID-19*. UN News, 20 January 2022. Available at https://news.un.org/en/story/2022/01/1110192

32. World Bank. *World Development Indicators*. World Bank, 2024. Available at https://databank.worldbank.org/source/world-development-indicators

33. H. Leander, & J. A. Robinson. *Colonialism and Economic Development in Africa*. No. w18566. National Bureau of Economic Research, 2012.

34. L L. Mbulle-Nziege & N. Cheesema. *Niger Coup: Is France to Blame for Instability in West Africa?* www.bbc.com/news.

35. S. Hussein. "*African Solutions to Africa's Problems? African Approaches to Peace, Security and Stability*." **Scientia Militaria: South African Journal of Military Studies** 43(1), 2015, 45-76.

36.O. Okpe, I. Jibrin, V. U. Ijirshar, A. S. Ibrahim, & S. I. Ogoda. "*Impact of Security Threats on Investment in Nigeria.*" **CECCAR Business Review** 5(1), 2024, 59-72.

37.Y. Abdulkarim, & S. Mohd. "*Growth and Fiscal Effects of Insecurity on the Nigerian Economy*." **The European Journal of Development Research** 35(4), 2023, 743-769.

38.M. Joshua & S. Sufis, *The Contest for the Future of African Islam*. The Heritage Foundation, 30, 2021.

39.A. Ajodo-Adebanjoko, & U. O. Walter. *Poverty and the Challenges of Insecurity to Development*. **European Scientific Journal**, 10(14), 2014, 361-372.

40.O. M. Ojeifo, & I. A. Osawe. *Analysis of the Future Trends of Urbanization, Poverty, and Security in Nigeria*. In Nuhu, M. B. & Kuma, S. S. (Eds.) Land Policy Governance and Sustainable Development in Nigeria (A Book of Readings). Centre for Human Settlements and Urban Development (CHSUD), Federal University of Technology, Minna, Niger State, Nigeria, 2019, 93-107.

Lead City University DO NOT COPY

41.U. C. Okolie, A. O. Onyema, & U. S. Basey. *Poverty and Insecurity in Nigeria: An Empirical Study*. **International Journal of Legal Studies**, 2(6), 2019, 247-261.

42.A. E. Orhero. *Poverty, Unemployment, and National Insecurity in Nigeria's Fourth Republic*. **International Journal of Legal Studies**, 2(6), 2019, 89-98. https://doi.org/10.5604/01.3001.0013.7410

43.S. I. Odoh, F. C. Nnaji, & A. P. Ashondi. *Mass Poverty and Declining Human Security in Nigeria: A Critical Perspective*. **EBSU Journal of Social Sciences and Humanities**, 10(2), 2020, 51-62.

44.S. A. Asongu, & J. H. Eita. *The Conditional Influence of Poverty, Inequality, and Severity of Poverty on Economic Growth in Sub-Saharan Africa*. **Journal of Applied Social Science**, 17(3), 2023, 372-384.

45. Y. Zhu, S. Bashir, & M. Marie. *Assessing the Relationship between Poverty and Economic Growth: Does Sustainable Development Goal Can Be Achieved*? **Environmental Science and Pollution Research**, 29(19), 2022, 27613-27623.

46. E. Olamide, K. K. Ogujiuba, A. Maredza, & P. Semosa. *Poverty, ICT and Economic Growth in SADC Region: A Panel Cointegration Evaluation*. **Sustainability**, 14(15), 2022, 9091.

47. A. S. Olabisi, M. A. Orisadare, & A. M. Olamide. *The Nexus between Poverty,Iinequality and Economic Growth in Nigeria (1980-2018)*. **Journal of Economics and Finance**, 11(5), 2020, 53-61.

48.M. Zakaria, W. Jun, & H. Ahmed. *Effect of Terrorism on Economic Growth in Pakistan: An Empirical Analysis*. **Economic research-Ekonomska istraživanja**, 32(1), 2019, 1794-1812.

49.A. Yusuf, & S. Mohd. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.

50.A. Kolagar, & A. Sanaei. *The Effect of Security Threats on Human Development*. **International Journal of New Political Economy**, 3(1), 2022, 107-128.

51.G. B. Andornino. *Economic–Security Nexus in the AIIB: China's Quest for Security through Eurasian Connectivity*. **Global Policy**, 10(4), 2019, 604-613.

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Chapter Two

Literature Review

This chapter provides an extensive review on the existing literature concerning the interplay between poverty, security threats, and economic growth. This chapter is organized into several distinct sections: conceptual review, theoretical review, empirical review, conceptual framework, theoretical framework, and a summary of gaps identified in the literature.

2.1 Conceptual Review

2.1.1 Security Threats

Security threats refer to any potential or actual circumstance that could compromise the safety, stability, or functionality of individuals, organizations, or states. In a broad sense, a security threat can take various forms, such as physical dangers (like armed conflict, terrorism, or natural disasters), cyber-threats (like hacking, data breaches, or malware), economic risks (such as financial instability or resource scarcity), or even social threats (such as organized crime or political unrest). At the national level, a security threat can endanger a country's sovereignty or its citizens, leading to policies aimed at protecting against espionage, terrorism, and external aggression. On an organizational level, security threats might involve cyber-attacks, unauthorized access to sensitive data, or internal vulnerabilities like employee sabotage[1]. Meanwhile, at the personal level, security threats could range from physical harm to identity theft[1].

A security threat is characterized as any action or omission that jeopardizes the safety and physical welfare of the population or endangers the stability and integrity of a nation’s economic or institutional structure. Nigeria, as a growing nation, is confronting significant issues with its

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national security. Armed bandits have been constructing killing fields for years, and recognized banditry hot-spots consistently document fresh incidents[1].

Insecurity is a condition characterized by vulnerability to risk or threat. Many academic writings regarding insecurity during the Cold War predominantly emphasized a state-centric approach to security. Insecurity was thus perceived as threats to the state and the necessity to protect the state from such threats, which justified the pursuit of weaponry and nuclear weapons. The preservation of the state as an entity, rather than that of people, was typically the primary concern. The security landscape has evolved, and in the post-Cold War era, scholars now prioritize individual protection. Consequently, security challenges encompass political, strategic, economic, social, or ecological dimensions.

Following the conclusion of the Cold War, a series of violent occurrences, such as deadly civil wars, sectarian strife, coup d'états, and separatist uprisings, have significantly obstructed West Africa's progress towards democratization and enduring socioeconomic advancement. While the ECOWAS has successfully navigated certain conflicts through its interventions, the region continues to grapple with emerging security threats. Notably, the resurgence of terrorism jeopardizes the territorial integrity and legitimacy of several member states, with Nigeria and Mali serving as particularly poignant examples[2].

For example, there was a notable presence of terrorist activity in northeastern Nigeria, which served as the origin of lethal bomb attacks deliberately aimed at various public and religious locations[3]. Furthermore, this group has executed precise assassinations of elected officials, common citizens, and both traditional and religious leaders. This group perceives itself as engaged in a sacred endeavour to implement Sharia Islamic principles across Nigeria, aiming to eradicate corruption and poor governance from the nation. The remaining leadership and

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surviving sect members are said to have sought refuge in neighbouring Niger, Chad, and Cameroon to reorganize, enlist additional followers, and prepare for forthcoming offensives following a severe intervention by Nigerian authorities, which resulted in the death of the group's founder and leader[2].

Mali is facing a comparable circumstance. A coalition of radical Islamist factions, comprising the Tuareg separatists from the National Movement for the Liberation of Azawad (MNLA), the Islamist combatants of Ansar Dine (Defenders of the Faith), and the Movement for Oneness and Jihad in West Africa (MUJAO), seized control of the northern region of the country with the assistance of Al-Qaeda in the Islamic Maghreb (AQIM), roughly six months following the regrettable coup that resulted in the ousting of President Amadou Toumani Touré by the Malian Army. The aim of the radical Islamists in Mali is to establish a cohesive nation governed by Sharia law, akin to the objectives of Boko Haram in Nigeria. Before the collaborative military intervention by French and West African forces in the region, the inhabitants of the northern areas endured harsh dress and conduct regulations, alongside the amputation and death of numerous individuals, all in adherence to a notably rigid interpretation of Sharia law[4]. Alongside the military coup, Lacher and Tull attribute the increasing terrorist activity in northern Mali and the escalation of the situation in January 2012 to the insufficient regional security collaboration among West African nations. Furthermore, it is posited that although there have been regional efforts to address the issue, the fundamental causes of this absence of collaboration remain overlooked[5].

The objective of economic integration set forth by ECOWAS in 1975 has encountered significant obstacles due to these crises and revolutions. West Africa remains in a state of unrest, despite the partial interventions by ECOWAS, the African Union (AU), or the United Nations (UN) in some

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of these disputes. This is due to the persistent emergence of opportunistic threats in the region. The gravest of these concerns is the surge of terrorism that is engulfing numerous member states, manifesting in more pronounced and dire consequences in specific nations[6].

2.1.2. Poverty

The notion of poverty has been articulated by several authors from diverse perspectives, as there is no singular 'right' or widely acknowledged definition of poverty. Poverty is commonly perceived as a condition of financial deprivation. During the pre-industrial period, poverty was commonly perceived as 'God-given,' however over time it came to be regarded because of an individual's inaction, indolence, or lack of intelligence[7,8]. The concept of poverty is more effectively defined and comprehended when integrated with its causes. The universally accepted definition of poverty is the traditional perspective that it arises from inadequate income to get essential goods and services. The term "manage" commonly refers to the populace's desire to optimize limited income or available funds to procure adequate resources. The outcome is only the acquisition of inferior commodities and services that are inadequate to satisfy the requisite needs. Poverty signifies a deficiency in the efficacy of education, healthcare, and life expectancy[9, 10].

Poverty poses a threat to global prosperity, with reasons including resource scarcity, high income inequality, and violence, among others. The definition of poverty is contentious, and the discourse surrounding its constituents, measurement, and resolution continues unabated. The challenge in defining poverty stems from the existence of various definitions that encompass diverse areas of concern, many of which are not readily quantifiable. Secondly, the issue of the universality of the poverty definition arises. Definitions and measurement indicators utilized in one community may pose challenges for transfer to other communities without significant

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alterations[11]. Various poverty frameworks that aid in comprehending and quantifying poverty, include material poverty, monetary measurement methodologies, and multidimensional poverty notions[12]. Scholars employing material and physiological frameworks perceive poverty as an insufficiency of income, expenditure, or consumption. In recent years, poverty has been perceived more comprehensively, partly due to the heightened recognition of the perspectives of impoverished individuals[10,11,12]. This is predicated on the notion that poverty manifests in multiple dimensions, not solely in terms of financial resources.

An individual is considered impoverished when they possess both a diminished standard of life and a low income[13]. This definition is corroborated by the European Commission's Joint Report on Social Inclusion, which asserts that: "Individuals are deemed to be living in poverty if their income and resources are insufficient to afford a standard of living deemed acceptable within their society"[14]. Their poverty may result in various difficulties, including unemployment, low income, substandard housing, insufficient healthcare, and obstacles to lifelong learning, culture, sports, and entertainment. They are frequently excluded and marginalized from engaging in activities (economic, social, and cultural) that are standard for others, and their access to fundamental rights may be limited. Similarly, Peter Townsend characterizes poverty as a condition when an individual's resources are significantly inferior to those possessed by the average person or family, resulting in their effective exclusion from conventional living standards, customs, and activities[15].

Poverty constitutes a sort of dis-empowerment that may be analysed through socioeconomic, political, and psychological lenses[16]. Socioeconomic dis-empowerment denotes a relative deficiency in access to resources necessary for self-sustenance; political dis-empowerment signifies the absence of a definitive political agenda and representation, while psychological dis-

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empowerment pertains to an internalized sense of inadequacy and passive acquiescence to authority. According to the World Bank, about 700 million individuals currently exist in extreme poverty, surviving on less than $2.15 daily, which constitutes the extreme poverty threshold[17,18]. Following several decades of persistent global poverty alleviation, a series of substantial crises and disruptions led to three years of regressed progress from 2020 to 2022. Low-income nations, which experienced a rise in poverty throughout this time, have yet to recuperate. In 2022, 712 million individuals worldwide were residing in extreme poverty, marking an increase of 23 million since 2019[18].

Poverty is a condition in which individuals are incapable of fulfilling essential physical needs, including food, healthcare, education, and shelter[18]. Additionally, non-physical factors, such as exclusion from various human development programs aimed at enhancing the living standards of impoverished populations, contribute to this state. However, these are frequently mere platitudes disseminated through media outlets, fostering hope among the populace, while ultimately resulting in their exclusion. They are excluded from participation in such programs, and their efforts are deemed unnecessary. They may remain unaware of when such developments intended for them may commence or conclude. In other words, they are not engaged in decisions regarding socio-economic conditions.

Poverty is typically defined as the absence of essential requirements and services or the failure to meet a minimum level of living. Although poverty universally entails individuals facing tangible material and other deprivations, the term ‘poverty’ encompasses a broad spectrum of interconnected life opportunities that differ in significance and valuation across various cultures and subcultures globally[18]. Consequently, the definition of ‘basic necessities’ has broadened to include not only food, water, housing, and clothes, but also access to additional resources such as

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education, fundamental healthcare, credit, political participation, security, and dignity[17]. The 1995 Copenhagen Social Summit was the inaugural significant international assembly that expanded the definitions of poverty and well-being. By 2000, the World Bank characterized poverty as material deprivation, inadequate education and health, susceptibility to vulnerability and risk, as well as 'voicelessness' and 'powerlessness[19.] Multi-dimensional techniques encompass the entirety of deprivations that define poverty and can empower the impoverished by providing them with a 'voice'; yet, they lack the precision and comparability found in income or consumption metrics.

The United Nations Development Programme (UNDP) defines poverty as an intrinsic impairment of life quality. It is not merely the absence of basic necessities, but the deprivation of opportunity for a decent existence. Poverty arises from the interplay of economic, political, social, and environmental dynamics that often reinforce each other, intensifying the hardship experienced by impoverished individuals. Poverty is generally viewed from two primary perspectives: relative poverty and absolute poverty.

Strategies for Alleviating Poverty in Nigeria

The Poverty Alleviation Programme, like other poverty reduction initiatives, has not succeeded in meeting its established objectives. The deteriorating poverty situation in Nigeria prompted the government to initiate a comprehensive anti-poverty campaign called the National Poverty Eradication Programme (NAPEP) in 2001. NAPEP was established to eradicate absolute poverty in Nigeria by streamlining and rationalizing existing poverty alleviation institutions and coordinating the implementation of pertinent initiatives and programs. Twelve ministries were incorporated into NAPEP to enhance the institution's efficacy and strength. NAPEP was established with the following objectives:

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i. To mitigate social unrest caused by unemployed youth.
ii. To enhance the productivity of the private sector.
iii. To generate opportunities for empowerment and wealth creation.
iv. To invest in education and provide social programs for the vulnerable.

The above objectives of NAPEP were reinforced by the implementation of a new development effort termed the National Economic Empowerment Development Strategy (NEEDS). NEEDS is designed as a nationally led policy program aimed at addressing Nigeria's long-term objectives of poverty alleviation, wealth generation, employment creation, and value orientation. NEEDS is closely associated with the Millennium Development Goals (MDGs). The Millennium Development Goals are eight time-bound objectives aimed at addressing poverty, education, gender equality, health, and environmental challenges. The government led by Musa Yar'Adua exhibited its support and dedication to the Millennium Development Goals by implementing the Seven Point Agenda.

The aim of this program was to enable the attainment of the MDG targets. One of the explicit objectives of the MDGs is to:

i. reduce by 50% the percentage of individuals living on less than one US dollar per day between 2000 and 2015.
ii. Decrease by 50% the percentage of those experiencing hunger between 2000 and 2015.

Efforts to eliminate poverty in Nigeria have consistently shown no favourable outcomes. The disparity between the affluent and the impoverished is exceedingly vast and concerning. This circumstance is inequitable given the nation's resource allocation. The ineffectual leadership, characterized by its inability to equitably allocate the nation's resources among the many social strata, is accountable for the impoverishment of Nigeria's populace.

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2.1.3 Economic Growth

Economic growth is defined as an enhancement in the overall production within an economy, which generally leads to a rise in national income. It denotes a rise in the production of economic goods and services within one time frame compared to another. Economic growth may be assessed in either nominal or real (inflation-adjusted) terms. Throughout history, the measurement of aggregate economic growth has predominantly relied on gross national product (GNP) or gross domestic product (GDP), although alternative metrics are sometimes employed. Consequently, economic growth is typically assessed through the rise in the total market value of newly produced goods and services, often quantified by metrics like GDP.

In addition, economic growth refers to the rise in the output of economic goods and services during a specific timeframe when compared to an earlier timeframe. It also signifies a rise in real GDP, reflecting an enhancement in the value of national output, income, and expenditure. The primary advantage of economic growth lies in the improvement of living standards, which translates to increased real incomes and the capacity to allocate more resources towards sectors such as health care and education. Output growth is typically represented as a function of physical capital, human capital, labour force, and technology. Enhancing the number or caliber of the working-age population, the resources at their disposal, and the methods available for integrating labour, capital, and raw materials will result in greater economic output. The four phases of economic growth are expansion, peak, contraction, and recession[20].

Expansion: In this phase, there is an increase in employment, income, industrial production, and sales, accompanied by a rising real GDP.

Peak: This represents the point at which an economic expansion reaches its maximum limit. This represents a significant juncture.

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Contraction: In this phase, all components of an expansion start to decline. A recession occurs when there is a notable decrease in economic activity that affects the entire economy.

Recession: This represents the point at which an economic contraction reaches its lowest level.

Furthermore, the components of physical capital, human capital, labour force, and technology are frequently employed in the modelling of economic growth. The augmentation of either the quantity or quality of the working-age populace, alongside the enhancement of the instruments at their disposal and the methodologies employed to amalgamate labour, capital, and raw materials, will yield a rise in economic productivity[20]. A growing economy means businesses produce more, leading to higher income for workers and increased spending by consumers. This results in a positive cycle where demand drives more production, investment, and employment, further fueling growth. Economic growth can be long-term or short-term, but sustained growth over time is what leads to development. However, growth is not always uniform or equitable. While it can improve overall wealth and reduce poverty, it may not benefit all sectors of society equally, and unchecked growth can lead to environmental degradation or social inequality.

2.2 Theoretical Review

2.2.1 Resource Scarcity Theory

This theory is most closely associated with the work of Thomas Homer-Dixon, a Canadian political scientist, who is credited with significantly developing and popularizing the theory in the 1990s. The theory posits that as essential natural and economic resources become scarce, whether due to environmental degradation, population growth, climate change, or poor governance, competition over these resources intensifies, often resulting in social instability, economic stagnation, or violent conflict. In the context of West Africa, where many countries

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grapple with fragile institutions, high population pressure, and environmental vulnerabilities, resource scarcity can exacerbate poverty and hinder economic growth, while simultaneously fueling security threats such as communal violence, insurgency, or forced migration[21].

This theory is particularly relevant in explaining how localized scarcities (e.g., arable land, water, or employment opportunities) may translate into broader national or regional insecurity. The theory assumes that critical natural and economic resources (e.g., land, water, employment) are limited and can become insufficient to meet the demands of a growing or competing population. It also presumes that scarcity heightens competition, which in turn creates tension and can escalate into violence, especially in settings with pre-existing social or political grievances.

The theory tends to posit a direct causal link between scarcity and conflict, suggesting that as resources become scarcer, the likelihood of conflict increases. However, in governance-centered applications, the theory assumes that the ability (or failure) of governments to manage resource distribution, mediate disputes, and enforce laws influences whether scarcity results in peace or conflict[22].

Resource scarcity and security are deeply interconnected in West Africa, where recurrent environmental degradation significantly contributes to social and economic instability. In the Sahelian region, the rapid depletion of arable land driven by climate change, unsustainable agricultural practices, and overuse has intensified competition over dwindling natural resources. This environmental stress interacts with economic pressures and political fragility to exacerbate social tensions. As livelihoods are threatened, particularly among pastoralists and farmers, disputes over land ownership and usage rights have become increasingly common. These dynamics have fueled recurring conflicts in the southern Sahel and offer critical insight into how resource-driven crises in West Africa may inform similar conflict trajectories in other fragile

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regions globally[23].

Critics argue that the theory oversimplifies complex socio-political dynamics by reducing conflict causation to resource scarcity, neglecting cultural, ideological, and historical factors. The theory has also been criticised to often overlook the fact that resource abundance (e.g., oil, minerals) can also fuel conflict (as in the "resource curse" or "greed vs. grievance" debates), complicating the scarcity–conflict narrative[22, 23]. It assumes that scarcity is a fixed or objective condition, whereas scarcity can be socially constructed (e.g., through exclusionary policies, poor distribution, or elite capture).

2.2.2. Marxist Theory

The theory was propounded by Karl Marx and is a framework for analyzing the society through the lens of class struggle, modes of production, and the conflict between the bourgeoisie (owners of the means of production) and the proletariat (working class). It holds that historical development is driven by material economic forces and that political, legal, and cultural institutions are shaped by economic interests[24].

The theory assumes that economic structures determine social, political, and ideological structures and societal change occurs through conflict between classes over control of productive resources. Central to Marxism is the idea that the society is divided into classes with inherently antagonistic interests. This conflict is the engine of historical and social transformation. The ruling class maintains dominance by exploiting the labor of the working class, appropriating surplus value (profits) generated by labor[24.]

Marxist theory offers a structural explanation for conflict and insecurity by highlighting how economic inequalities and class struggles create conditions for social unrest, violence, and systemic instability. The theory posits that material deprivation and economic exploitation are

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fundamental causes of conflict. Security threats, such as insurgencies, revolts, or crime, often stem from the marginalization of the working class or rural poor[24, 25]. In many developing countries, including those in West Africa, stark inequalities in wealth and access to resources create grievances that fuel political instability and violent resistance.

According to Marxist theory, the state is not a neutral arbiter but a tool of the ruling class used to maintain capitalist dominance and suppress dissent. Therefore, state repression of protests or uprisings is seen not merely as a security response but as a class-based mechanism to protect elite interests. Marxist thinkers like Lenin also argued that capitalist countries engage in imperialism and war to access new markets and resources, leading to global insecurity and colonial domination. This is particularly relevant to Africa's colonial and post-colonial experience, where global capitalist interests contributed to resource extraction, underdevelopment, and enduring conflict[25].

In the Marxist view, land grabs, corporate mining, and environmental degradation by capitalist enterprises are seen as new forms of primitive accumulation. Resistance from local communities is interpreted as class struggle. For example, farmer–herder clashes or community resistance to oil extraction in the Niger Delta can be framed as conflicts over control and ownership of productive resources[24]. The Marxist theory helps explain how political elites and multinational corporations extract rents from natural resources while excluding local populations, leading to insurgency and instability (e.g., Boko Haram, Niger Delta militancy).

2.2.3. Human Needs Theory

The human needs theory suggests that all human beings have fundamental needs, and when these needs are unmet or obstructed, conflict is likely to arise. The theory argues that these basic needs are non-negotiable, meaning they are intrinsic to human existence and must be satisfied for

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individuals and societies to thrive[26]. The theory is often applied in peace studies and conflict resolution to understand the root causes of conflicts, arguing that many of them stem from the deprivation of essential human needs. This theory emphasizes the importance of fulfilling basic human needs (such as food, security, and self-esteem) for societal stability. When these needs are unmet due to poverty, individuals may turn to crime or violence as a means to secure resources or express their dissatisfaction. Unmet needs also increase the likelihood of people joining armed groups or criminal organizations, seeing these as avenues for survival. This theory suggests that poverty undermines human security, pushing individuals toward actions that threaten broader societal security[27].

Human needs theory was initially developed by psychologists such as Abraham Maslow, John Burton, and later scholars in the fields of conflict resolution[26]. Maslow's hierarchy of needs is often referenced in this context, but the theory was expanded beyond psychological well-being to include a sociopolitical dimension, focusing on how unmet needs can fuel social unrest, violence, and international conflict. According to the theory, the needs that every human being requires is divided into several categories, which include[28]:

Physical or Survival Needs: The most basic of needs include food, water, shelter, and health. These are necessary for the physical survival of individuals. If these needs are not met, conflict can arise at the most basic level, as people fight over scarce resources or territory to secure their physical well-being.

Security Needs: Beyond physical survival, individuals need a sense of safety and protection from harm. This involves both personal security (freedom from violence and threats) and societal security (political stability and rule of law). When people live in fear of violence, whether from

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the state, crime, or external threats, they may resort to aggressive behaviour or conflict to protect themselves and their communities.

Belongingness or Social Needs: Humans are social creatures, and we have a fundamental need for love, belonging, and social acceptance. This includes relationships with family, friends, and larger social groups such as communities or nations. If people feel isolated, marginalized, or rejected by society, they may experience psychological distress and act out through conflict or join groups that offer them a sense of belonging, even if those groups are violent or extremist.

Identity and Recognition Needs: Closely related to social needs, identity refers to a person's sense of self and their place in society. People need to feel recognized and respected for who they are, including their cultural, religious, and ethnic identities. When groups of people feel that their identity is under threat, suppressed, or disrespected, they are likely to respond with anger and resistance. Many ethnic conflicts, for example, are driven by the need for recognition and respect for a group's unique identity.

Autonomy and Freedom Needs: This category refers to the need for individuals or groups to control their own lives and make independent decisions without undue external interference. People value freedom, both personal and collective, and when they feel constrained or oppressed by political or social structures, it can lead to unrest. For instance, colonialism, dictatorship, and other forms of authoritarian rule often trigger revolts as they limit the autonomy of individuals and nations.

Self-Actualization or Personal Fulfilment Needs: At the top of Maslow's hierarchy, but equally significant in Human Needs Theory, is the need for self-actualization. This refers to the fulfillment of personal potential, creativity, and the pursuit of life goals. When people are unable

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to achieve their full potential or are prevented from pursuing meaningful life goals, it can lead to frustration and dissatisfaction, which may spill over into conflict or unrest.

The central claim of human needs theory is that unmet needs are often the underlying cause of protracted social conflicts, whether within nations or between them. When people are deprived of essential needs such as security, identity, or autonomy, the tensions and grievances created can escalate into violent conflict[26,28]. Importantly, the theory posits that because these needs are non-negotiable, conflict cannot be resolved through superficial or temporary measures, such as political compromises or material concessions alone. Instead, sustainable peace requires addressing these fundamental needs in a way that satisfies all parties involved. The human needs theory is also useful in explaining why some peace processes fail. Traditional approaches to conflict resolution often focus on political or economic solutions, such as dividing territory or redistributing resources. While these solutions may address immediate grievances, they may fail to address deeper, underlying needs like identity or recognition. For example, while a ceasefire may stop active fighting, if the groups involved do not feel their identity or autonomy is respected, the conflict is likely to resurface[29]. A more holistic approach, as advocated by human needs theory, involve addressing the deeper needs driving the conflict, such as ensuring that all groups feel respected, recognized, and secure.

2.2.4 Economic Opportunity Theory

This theory suggests that poverty reduces legitimate economic opportunities for individuals, making illicit activities like crime, theft, or joining violent groups more attractive. In situations where legal avenues for income are limited or non-existent, people, especially the youth, may resort to illegal or violent activities as an alternative means of livelihood. This lack of economic opportunities leads to organized crime, gang violence, and even terrorism, where people are

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drawn into illegal or violent networks as a survival strategy[30]. The economic opportunity theory, often discussed in the context of crime, conflict, and poverty, posits that the availability or lack of legitimate economic opportunities plays a significant role in shaping individual or group behaviors. The theory suggests that when people perceive a lack of access to economic opportunities, such as jobs, wealth creation, or social mobility, they turn to illegitimate means (like crime or rebellion) to achieve their goals or improve their socio-economic status[31]. This theory is used to explain not only individual behaviours but also societal patterns of inequality, crime, and violence.

The economic opportunity theory suggests that individuals engage in crime and violence when legitimate opportunities for economic advancement are limited or unavailable. In this context, poverty becomes a significant driver of insecurity because it reduces access to resources, education, and employment opportunities, pushing individuals, especially in impoverished communities, toward illicit activities to survive or improve their socio-economic conditions[32]. This theory is grounded in the idea that when people lack access to legitimate means of achieving financial stability, they may resort to illegal or violent alternatives, fostering insecurity in society. At the core of the economic opportunity theory is the assumption that humans are rational actors who will generally choose legitimate paths to improve their lives if those paths are accessible and achievable[33]. However, when legitimate economic pathways are obstructed or unavailable, people resort to alternative means, some of which involve illegal activities, rebellion, or other forms of conflict.

Poverty creates conditions where individuals feel trapped in their circumstances, with little hope of improving their situation through legal means. As economic opportunities diminish, frustration and hopelessness grow, making some individuals more likely to engage in criminal

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behaviors or join violent groups[34]. This is particularly true in areas where government institutions are weak, corruption is rampant, or law enforcement is ineffective, as the lack of a functioning system to ensure fairness and justice further exacerbates the sense of deprivation. In many cases, poverty also undermines social cohesion, which is a critical factor in maintaining security. When large segments of the population are excluded from economic participation and struggle to meet basic needs like food, shelter, and healthcare, tensions rise within communities. Economic inequalities, exacerbated by poverty, create feelings of resentment, especially when there are visible disparities between the rich and the poor[32]. These social divisions can lead to an increase in violence, crime, and even the formation of insurgent or militant groups, as people seek alternative means to address their grievances.

The economic opportunity theory is often applied to understand the links between poverty and insecurity in regions with high unemployment rates and limited access to education and vocational training. In these settings, individuals may perceive that the cost of engaging in illegal activities, such as theft, drug trafficking, or violent crime, is outweighed by the potential financial benefits[33,34]. For instance, in many impoverished areas, organized criminal groups or militant factions offer more immediate financial rewards and protection than legitimate employment opportunities, making them attractive alternatives for individuals with limited economic prospects. Additionally, poverty increases vulnerability to recruitment by extremist groups or criminal organizations that thrive in unstable environments. These groups often exploit economic desperation by offering financial incentives, food, shelter, or social status to those willing to join their ranks[31]. For example, in regions affected by civil conflict, terrorist organizations may provide social services or income to individuals in exchange for loyalty or participation in violent acts. This creates a feedback loop where poverty breeds insecurity, which

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in turn exacerbates poverty as conflict disrupts economic activities, further limiting opportunities for legitimate income generation.

Another aspect of the Economic Opportunity Theory is that poverty and economic deprivation lead to increased political unrest and instability, as marginalized groups demand better living conditions and more equitable access to resources. In situations where governments fail to address these demands, protests can escalate into violent confrontations, contributing to wider insecurity[31,32]. Governments that are unable or unwilling to provide economic opportunities for their populations risk creating an environment where political violence and civil unrest become prevalent, further destabilizing society. In addition, poverty also undermines the capacity of communities to invest in education, healthcare, and other social services that are essential for long-term security and development[34]. Children growing up in poverty are less likely to attend school, which reduces their future economic prospects and perpetuates the cycle of poverty. A lack of education limits individuals' ability to acquire the skills necessary for well-paying jobs, pushing them toward informal or illegal economies. The resulting economic insecurity fosters environments where crime and violence become normalized, creating a self-reinforcing cycle of poverty and insecurity[33,34].

2.2.5. Structural Violence Theory

Structural violence theory, introduced by Johan Galtung in the 1960s, refers to a form of violence where social structures or institutions harm individuals by preventing them from meeting their basic needs or achieving their full potential[35]. Unlike direct violence, which is visible and involves physical harm, structural violence is embedded in societal systems and manifests in inequalities and injustices. These systems can be economic, political, social, or cultural, and they create unequal access to resources, opportunities, and rights, disproportionately affecting

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marginalized groups. Poverty is viewed as a form of structural violence in this theory. Structural violence refers to the systemic ways in which social structures harm or disadvantage individuals by preventing them from meeting their basic needs[36]. Poverty, as a result of unequal social, political, and economic structures, keeps individuals in a state of chronic insecurity, where the lack of access to resources leads to poor health, reduced education, and limited opportunities. The result is a cycle of poverty and insecurity, where those trapped in poverty are more vulnerable to exploitation, crime, and violence.

Structural violence is a systemic issue, deeply rooted in the fabric of society. It is often invisible or normalized, making it difficult to recognize and challenge. Its harm is indirect, but pervasive, and can be measured through social indicators such as poverty, inequality, illiteracy, malnutrition, and limited access to healthcare or education[37]. These conditions, while not the result of any overt physical violence, can still lead to significant suffering, reduced life expectancy, and limited life chances. The concept of structural violence is grounded in the idea that violence is not just about physical harm but also about the denial of rights and opportunities. It expands the traditional understanding of violence to include the ways in which societal structures and institutions systematically disadvantage certain populations. For example, when certain groups in society are denied access to education, healthcare, or economic opportunities, they experience a form of violence because their ability to live a fulfilling and healthy life is compromised.

One of the key aspects of structural violence is its relationship to inequality. Structural violence is often perpetuated by unequal power dynamics within a society. Those in positions of power, whether political, economic, or social, can create and maintain systems that benefit them while disadvantaging others[38]. This results in unequal distributions of wealth, health, and opportunities,

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which in turn lead to social stratification. Marginalized groups, including racial or ethnic minorities, women, the poor, and other vulnerable populations, are often the ones most affected by structural violence. Poverty is a primary example of structural violence. When economic systems are designed in a way that keeps certain populations in perpetual poverty, these individuals are unable to access basic necessities like food, shelter, and healthcare[35]. The result is a lower quality of life and higher mortality rates, even though no direct physical violence is involved. The economic structures in place, such as unequal labour markets, limited access to education, and exploitative practices, contribute to this form of violence. This perpetuates a cycle where the poor are unable to escape their situation, as the system is designed to keep them in it.

Healthcare inequity also exemplifies structural violence. In many societies, access to quality healthcare is determined by social class, race, or geographic location. This means that marginalized populations often receive substandard medical care or have limited access to healthcare services altogether. The consequences of this inequity can be deadly, as preventable diseases or conditions go untreated. For example, high rates of maternal and child mortality in impoverished areas can be attributed to the lack of adequate healthcare infrastructure, which reflects a form of structural violence. The system's failure to provide equal access to life-saving medical care disproportionately harms certain groups[39].

Structural violence also intersects with issues of race and ethnicity. Racial and ethnic minorities often experience systemic discrimination that limits their access to education, employment, and political representation[35,39]. These social structures create environments where minorities are economically disadvantaged, socially marginalized, and politically disenfranchised. This creates a cycle of exclusion that reinforces inequality. The long-term effects of structural racism, for example, manifest in disparities in income, education, and health outcomes. Although not a

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direct form of violence, the consequences are profound and result in significant suffering and diminished life opportunities. Gender inequality is another dimension of structural violence. In many societies, women are systematically disadvantaged through social and cultural norms that limit their opportunities and rights[37]. Structural violence against women can be seen in practices such as unequal pay, limited access to education and healthcare, and legal systems that fail to protect women from violence or discrimination. This form of violence not only harms individual women but also perpetuates broader social inequalities that disadvantage women collectively. In this way, structural violence against women contributes to the ongoing marginalization and oppression of half the population[38].

2.2.6. Relative Deprivation Theory

The Relative Deprivation Theory provides a useful framework for understanding how perceived inequality or unmet expectations can lead to dissatisfaction, social tension, or collective action. The theory originated was developed and popularized by Ted Robert Gurr (1970) in his seminal book “Why Men Rebel”. According to the theory, individuals or groups experience feelings of deprivation not necessarily because they lack basic needs, but because they perceive a gap between their current conditions and the standards, they believe they deserve in comparison to others. Thus, deprivation is seen as relative, not absolute; it depends on subjective evaluations of fairness and justice within a social context[37].

In essence, the theory posits that dissatisfaction and frustration arise when people compare themselves to a reference group and find their situation wanting. This feeling of inequity can exist even when material conditions are improving, particularly if others appear to be advancing more rapidly. A scholar emphasized that such perceptions of relative deprivation often translate into political discontent and, in extreme cases, collective violence or rebellion. Relative

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deprivation therefore explains why individuals or social groups may react aggressively to perceived social, political, or economic inequalities[38].

The theory rests on several assumptions. First, it assumes that individuals and groups constantly engage in social comparison and evaluate their situation relative to others. Second, it assumes that perceived inequality rather than objective poverty drives frustration and unrest. Third, it posits that the wider the gap between expectations and actual achievements, the stronger the feelings of deprivation and the greater the likelihood of collective action. Fourth, it assumes that these emotional reactions particularly resentment and frustration can motivate individuals to challenge existing social or political structures. Lastly, the theory emphasizes that deprivation is inherently comparative; individuals may feel deprived even when their absolute living conditions are improving, as long as others are perceived to be progressing faster.

Despite its wide application, the Relative Deprivation Theory has been subject to several criticisms. One major critique is that it places excessive emphasis on psychological factors while neglecting the structural and institutional dimensions of inequality. The theory also faces methodological challenges, as perceptions of deprivation are highly subjective and difficult to measure empirically. Moreover, the theory's predictive power has been questioned, since not all individuals or groups who experience deprivation engage in protest or rebellion. Critics further argue that it underestimates the role of rational choice and organized leadership in collective action. Additionally, the concept of deprivation may vary across cultures and time, making it context-dependent and difficult to generalize. Empirical evidence also suggests that some societies with high levels of inequality remain stable, while others with lesser inequality experience unrest, implying that additional economic, political, and cultural factors interact with deprivation to shape outcomes[36, 38]. Nevertheless, the theory remains highly relevant in

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contemporary analyses of social behavior, especially in explaining the persistence of unrest and inequality in modern societies.

2.2.6 Growth Theories

2.2.6.1 Neoclassical Growth Theory

The neoclassical growth theory, pioneered by Robert Solow in the 1950s, emphasizes the role of capital accumulation, labour, and technological progress in driving economic growth. The model suggests that while capital and labour explain short-term growth, long-term sustainable growth can only be achieved through technological progress, which is considered exogenous, meaning it comes from outside the model and is not influenced by economic policies or conditions[40]. According to the theory, economies grow by increasing the capital available to workers (capital deepening) and by expanding the labour force. However, due to diminishing returns to capital, there comes a point where simply increasing capital or labour will not sustain growth, and technological advancement becomes the key factor that drives productivity and long-term growth. This results in the economy reaching a steady state where growth rates level off unless technology improves. In this framework, poorer economies are expected to grow faster than richer ones, leading to "convergence," as capital has higher returns in less developed countries[40,41]. However, the Neoclassical Growth Model has faced criticism for its limited explanation of the sources of technological progress, treating it as an external factor. The model assumes that all countries have equal access to technology and can efficiently adopt it, overlooking barriers such as poor institutions, insufficient human capital, and political instability that may hinder technological diffusion[42]. In the context of poverty and insecurity, the neoclassical growth theorists provide a framework for understanding how these conditions negatively affect capital accumulation, labour growth, and ultimately, economic progress.

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Poverty severely restricts the ability of individuals and economies to accumulate capital, which is essential for growth in the neoclassical framework. In poor economies, savings rates are typically low because people have limited disposable income. With low savings, there is less capital available for investment in both physical infrastructure and human capital. For example, households in poverty may not be able to afford education for their children or invest in healthcare, reducing the potential for labour productivity growth. Physical capital, such as machinery, factories, and infrastructure, is also underfunded in impoverished societies, further limiting productivity and slowing down economic growth. According to the theory, this lack of investment means that poor economies are less likely to experience the capital deepening required to boost growth and reach a steady state[43].

Insecurity, on the other hand, further compounds the problem by discouraging investment and increasing the risk associated with economic activities. In regions experiencing high levels of insecurity, such as political instability, violence, or terrorism, both domestic and foreign investors are reluctant to invest in long-term capital projects. The threat of asset destruction, supply chain disruptions, and the unpredictability of future returns makes investing in such environments risky. In addition, governments in insecure regions may divert resources away from productive investments and toward military or security-related expenditures, reducing the amount of public investment in essential infrastructure like roads, schools, and healthcare. This shift in public spending further hinders capital accumulation, slowing down the economy's growth potential[44].

Moreover, insecurity leads to disruptions in labour force growth, another key component of the neoclassical growth model. High levels of violence or conflict may lead to the displacement of populations, reducing the available labour force. Skilled workers may flee to more stable countries, resulting in brain drain, which weakens the labour market. Additionally, insecurity

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discourages parents from sending their children to school, leading to lower educational attainment and reducing the potential for labour productivity growth. In the long run, the lack of a skilled labour force undermines the economy's ability to grow, as human capital is a critical factor in increasing productivity and driving economic expansion. Without labour force growth or improvements in labour quality, the economy struggles to maintain positive growth rates, especially as the returns on capital investments diminish over time[45].

In addition, poverty and insecurity together also negatively affect technological progress, even though it is considered exogenous in the neoclassical model. Poor and insecure economies are less likely to attract technological transfers or innovations from more advanced economies. For example, foreign firms may be unwilling to introduce new technologies in regions where there is significant political instability, reducing the pace at which new innovations spread to less developed economies. This technology gap means that poor and insecure countries fall behind in terms of productivity improvements, further exacerbating their economic challenges. In the neoclassical growth theory, economies are expected to converge to a steady state, where poorer countries should grow faster than richer ones due to higher returns on capital in the early stages of development. However, poverty and insecurity prevent this convergence from occurring. In impoverished and insecure environments, the factors that should drive faster growth, such as capital accumulation, labour force improvements, and technological adoption, are severely constrained. As a result, these economies fail to converge with wealthier nations and remain trapped in a cycle of low growth, underdevelopment, and persistent poverty.

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2.2.6.2 Endogenous Growth Theory

Endogenous growth theory, developed by economists such as Paul Romer and Robert Lucas, challenges the neoclassical view that technological progress is exogenous by arguing that

economic growth is primarily driven by factors within the economy itself. This theory emphasizes the role of human capital, innovation, and knowledge in fostering long-term growth. According to the endogenous growth model, investments in education, research and development (R&D), and the accumulation of knowledge are key drivers of sustained growth[46]. Unlike the neoclassical model, which posits diminishing returns to capital, endogenous growth theory suggests that knowledge and innovation can generate increasing returns, meaning that as an economy becomes more advanced, the effects of human capital and technological improvements become more significant, leading to continuous growth[47]. The theory also emphasizes the idea of knowledge spillovers, where the benefits of new ideas and innovations extend beyond individual firms or sectors, positively influencing the entire economy. Public policy plays a significant role in endogenous growth theory, as government investment in education, infrastructure, and innovation can stimulate growth by creating a more favourable environment for knowledge creation and diffusion. Unlike the neoclassical model, which assumes that poorer countries will automatically catch up to richer ones, endogenous growth theory highlights that without proper investments in human capital and technology, poor countries may remain stuck in low-growth traps. The theory also acknowledges the importance of institutions and incentives in shaping long-term growth prospects, suggesting that economies can influence their growth rates through deliberate strategies aimed at enhancing innovation and human capital[47,48]. However, the model also highlights how poverty and insecurity can negatively affect these drivers, thereby stunting economic growth.

Poverty directly limits the accumulation of human capital, which is a cornerstone of the endogenous growth theory. In impoverished societies, individuals and families often lack the financial means to access quality education, healthcare, and training. This prevents the

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development of a highly skilled workforce capable of driving innovation and technological progress. The lower levels of education and skill development lead to reduced productivity, which in turn hampers economic growth. Moreover, poverty tends to create a vicious cycle, as poorly educated populations are less likely to engage in research and innovation, further limiting opportunities for economic expansion. For example, a country where large portions of the population are unable to complete basic education will struggle to produce engineers, scientists, or entrepreneurs capable of generating the innovations that drive economic growth[49].

Insecurity further exacerbates this situation by creating an unstable environment that discourages investment in human capital and innovation. Insecure environments, characterized by violence, political instability, or conflict, discourage both domestic and foreign investments. Investors are less likely to fund projects in regions where the rule of law is weak, infrastructure is vulnerable to destruction, and there is uncertainty about the future. In these contexts, businesses avoid making long-term investments, and governments may prioritize military spending over critical areas such as education, health, and infrastructure development. This diverts resources away from the sectors that are essential for sustained economic growth under the endogenous model[50].

Moreover, insecurity often leads to brain drain, where the most talented and educated individuals flee to more stable regions or countries in search of safety and better opportunities. This exodus of human capital weakens the economy's ability to innovate and grow. The loss of talent reduces the potential for technological advancements, which are central to the endogenous growth model's argument that knowledge and innovation are the primary engines of growth. In countries where insecurity prevails, schools and universities may be disrupted, research facilities underfunded, and skilled professionals may be unable to work effectively, all of which result in a stagnation of innovation and growth[49,50]. Poverty and insecurity also prevent the creation of

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knowledge spillovers, a critical element in the endogenous model. Knowledge spillovers occur when one firm's or individual's innovation or productivity gains benefit others in the economy, leading to widespread technological advancements and growth[51]. However, in poor and insecure economies, the channels through which these spillovers occur, such as educational institutions, research centers, and collaborative networks, are either weak or non-existent. The lack of collaboration and the inability to freely share ideas in an unstable environment further undermine the economy's growth prospects.

2.3 Empirical Review

2.3.1 Poverty and Security Threats

Two scholars investigate the socio-economic conditions that perpetuate poverty and its impact on the security landscape in Bulgaria[52]. The study's method includes a combination of qualitative analysis of existing literature and empirical data sourced from governmental reports and security studies. Their findings suggest that poverty significantly undermines national security by creating conditions conducive to crime, social unrest, and political instability. The study argues that high levels of unemployment, lack of access to education, and poor governance contribute to a cycle of poverty that destabilizes the region. A scholar provides a strategic overview of the regional security threats to the China-Pakistan Economic Corridor (CPEC), focusing on Pakistan[53]. The study identified the key security risks that impede CPEC's success, particularly the insurgency in Balochistan, tensions with India, and instability in Afghanistan. Using a qualitative methodology, the study analyses secondary data from reports, articles, and government documents to assess the security challenges. The findings reveal that the Baloch insurgency, motivated by grievances over resource control, poses an existential threat to CPEC. Additionally, India's hostility towards CPEC, given its passage through contested territories,

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further complicates the security landscape. The rise of ISIS in Afghanistan is another concern, potentially destabilizing the entire region.

A study critically examines the relationship between violence and poverty in Colombia, by exploring how multidimensional poverty contributes to insecurity, and how violence impacts marginalized groups[54]. The study analyses the historical and socio-economic aspects of violence, utilizing secondary data from government and international reports, as well as academic literature. The methodology involves a qualitative analysis of Colombia's multidimensional poverty index and its relation to human security and development. The findings highlight that violence in Colombia is a persistent phenomenon, particularly affecting rural and indigenous communities. Poverty, lack of access to education, employment, and services, combined with weak institutions, perpetuate cycles of violence. Also, another study assesses the role of social security expenditure in narrowing the urban-rural income gap and alleviating rural poverty in China using data from 1978 to 2018[55]. The study employs error correction model, causality, impulse response and variance decomposition analyses. The findings reveal that while social security expenditure has a limited impact on reducing the income gap between urban and rural residents, it significantly contributes to reducing rural poverty. The elasticity of rural poverty to social security expenditure is found to be -0.226, indicating that an increase in spending leads to a decrease in poverty. However, nearly 99% of the changes in the urban-rural income gap are attributed to other factors, highlighting the limitations of social security in addressing income inequality. The study emphasizes the need for a more equitable social security system to effectively combat poverty. Some authors investigate the importance of resource security in eradicating poverty, focusing on the global scale with an emphasis on low-income countries[56]. They explore how the unequal access to biological resources and ecological overshoot impact

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poverty eradication efforts. Using a combination of ecological footprint and biocapacity accounting methodologies, they examine national-level data to assess countries' resource demands and biological productivity. The findings reveal that low-income countries with biocapacity deficits face significant challenges in eradicating poverty due to their limited ability to compete for global resources. The study identifies that 72% of the global population lives in countries with both biocapacity deficits and below-average incomes, a situation the authors call an "ecological poverty trap."

Two researchers analyse the intertwined relationship between poverty and insecurity, particularly in Nigeria, and assess how these factors hinder sustainable development[57]. The study focuses on Nigeria, especially conflict-prone areas like the North-East, South-South, and Middle-Belt, regions characterized by high poverty and insecurity levels. The researchers rely on secondary data sourced from the National Bureau of Statistics and employ the Human Security framework to explore the link between poverty, conflict, and insecurity. Their findings reveal that poverty exacerbates insecurity, creating a vicious cycle where conflict worsens economic deprivation, and in turn, poverty fosters further unrest. The authors highlight that despite economic growth, the benefits have not reached the poor, leading to increased violence, conflict, and underdevelopment in affected areas. A scholar analyses how rural banditry threatens socio-economic stability and regional cooperation within the Economic Community of West African States (ECOWAS), particularly focusing on Nigeria[58]. Utilizing a qualitative methodology, the study relies on secondary data from reports, scholarly articles, and government documents to outline the causes and consequences of rural banditry. The findings reveal that rural banditry, driven by factors such as poverty, elite conspiracy, and poor governance, has evolved into a regional security threat. This phenomenon has led to increased violence, youth radicalization,

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illicit trade in arms and narcotics, and a collapse in agricultural development. Moreover, rural banditry has negatively affected regional integration efforts by exacerbating ethnic tensions, contributing to the proliferation of insurgency groups, and hampering ECOWAS initiatives aimed at promoting peace and development.

Three scholars examine the alarming rate of child poverty in Northern Nigeria and its implications for national security[59]. The study is set in Northern Nigeria and assesses how poverty impacts children in this region, where the poverty rate is significantly higher than in other parts of the country. The authors employed both primary and secondary data collection methods, using questionnaires and interviews with key informants from communities, agencies, and groups in North-Central, North-West, and North-East Nigeria. Their findings indicate that corruption, poor leadership, and economic deprivation contribute to child poverty, which in turn exacerbates issues such as illiteracy, child labour, and social exclusion. The research concludes that the high rate of child poverty is a critical threat to national security due to its role in fostering instability, crime, and the recruitment of vulnerable children into extremist groups. A study conducts an analysis aimed at forecasting the future trends of urbanization, poverty, and security in Nigeria[60]. Their primary aim is to understand how urbanization affects poverty and security within the Nigerian context, specifically focusing on the social and economic consequences of rapid urban growth in Nigeria. The authors employ a mixed-methods approach, combining qualitative analysis with data from government reports and expert interviews, to assess these emerging trends. The findings highlight that unchecked urbanization has exacerbated poverty levels, particularly in urban slums, and has intensified security risks due to the lack of infrastructure and basic services. The study noted that Nigerian cities are rapidly urbanizing due to rural populations moving to cities for jobs, better health care, housing,

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education, water, transportation, and other amenities. Because many migrants cannot find work, housing, food, healthcare, and other critical services, many urban people live in poverty, thereby resulting to high crime rates such as rape, robbery, kidnapping, and cybercrime. They argue that poor urban planning, coupled with inadequate government interventions, has created a volatile environment where poverty and insecurity are deeply intertwined.

Scholars conduct an empirical study examining the relationship between poverty and insecurity in Nigeria[61]. They assess how poverty exacerbates insecurity across the nation, focusing on the various socio-economic factors contributing to this linkage. The research covers all six geopolitical zones in Nigeria and uses a survey method, gathering data from 600 respondents, including religious leaders, civil society members, and youth leaders. The method includes descriptive analysis, correlation and regression techniques. The findings reveal a strong positive correlation between poverty and insecurity ($r = 0.883$), with poverty accounting for 78.5% of the variance in insecurity levels in Nigeria. A scholar critically examines the relationship between poverty, unemployment, and national insecurity in Nigeria's Fourth Republic, focusing on how economic deprivation drives instability[62]. The research uses a descriptive methodology that relies on secondary data from journals, reports, and statistical sources to establish causal links between unemployment, poverty, and national security issues. The study found that widespread poverty and joblessness have contributed to the rise of violent crimes, political unrest, and terrorism. Unemployed youth are often exploited by political elites, which exacerbates insecurity. Furthermore, the lack of basic social services and poor governance are highlighted as critical factors intensifying these challenges.

Another study critically assesses the intertwined issues of poverty, unemployment, and national security challenges in Nigeria[63]. They argued that poverty and unemployment are directly

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responsible for the rising security challenges, including kidnapping and armed robbery. Using a descriptive methodology based on secondary data such as reports and academic articles, the study found that poverty increases the likelihood of criminal activities, as people facing severe economic deprivation are more likely to engage in violence and theft. Furthermore, high unemployment rates fuel political instability, with unemployed youths often being exploited for violent political activities. A study explores the interrelationship among insecurity, poverty, and unemployment in North-Eastern Nigeria, focusing on the context of the Boko Haram insurgency[64]. It evaluates how these three interrelated factors contribute to the persistence of violence and instability in the region. Using a qualitative methodology based on thematic reviews of secondary sources such as government reports and scholarly articles, the study adopts the Frustration-Aggression theory as a framework for analysis. The findings reveal a strong association between high unemployment rates, widespread poverty, and increased insecurity, with Boko Haram exploiting these vulnerabilities to recruit members, particularly among impoverished and unemployed youths. The study concludes that the socio-economic deprivation in the region has created a cycle of violence, where poverty fuels insecurity, and insecurity worsens poverty.

A researcher examines how widespread poverty, exacerbated by poor governance, corruption, and failed economic policies, contributes to Nigeria's deteriorating human security situation[65]. The study uses a qualitative methodology, sourcing data from secondary materials such as government reports, academic journals, and other publications. The study adopts the Relative Deprivation theory, emphasizing that the growing sense of deprivation and inequality fuels insecurity in the country. Findings indicate that mass poverty has led to an increase in crime, insurgency, and violence, as poverty-stricken populations are driven to acts such as armed

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robbery, militancy, and banditry. Another researcher examines how poverty contributes to the nation's security challenges and evaluate the effectiveness of various poverty alleviation programs implemented by successive Nigerian administrations[66]. Using secondary data sources, it relies on the frustration-aggression theory to explain how poverty exacerbates insecurity by fostering frustration, which lead to aggressive behaviours. The findings indicate that despite numerous poverty alleviation programs, such as the National Poverty Eradication Program (NAPEP), only a small percentage of the population has benefited from these initiatives. The research highlights inefficiencies in policy implementation, poor governance, and corruption as key factors undermining poverty reduction efforts.

Two scholars analyze the various dimensions of poverty and how they undermine human security, including economic, food, health, environmental, personal, community, and political aspects in Nigeria[67]. The research employs a qualitative methodology using secondary sources such as library research and content analysis to establish this link. Their findings reveal that poverty, driven by factors such as unemployment, corruption, environmental degradation, and poor education, directly threatens human security. The study concludes that unless these underlying issues are tackled, poverty will continue to undermine Nigeria's security and development. Further, a study explores the relationship between poverty, cybercrime, and national security in Nigeria, highlighting how economic deprivation contributes to rising cybercrime activities and, in turn, undermines national security[68]. The study further examines how cybercrime has become a coping mechanism for many unemployed youths. It employs a qualitative analytic approach, utilizing secondary data from government reports, cybersecurity literature, and relevant academic sources. The findings reveal that poverty, unemployment, and

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inequality drive youth towards cybercrime, which exacerbates national security threats through cyberterrorism, cyberespionage, and financial fraud.

Also, a study investigates the interrelationship between poverty, unemployment, and insecurity in Nigeria using data from 1990 to 2017[69]. The study used the Granger causality tests and variance decomposition techniques to explore how these variables influence each other. The findings showed that as poverty rises, unemployment also increases, leading to greater government spending on security. Furthermore, insecurity is found to account for significant shocks in both poverty and unemployment, with both variables responding positively to shocks from insecurity. The findings highlight the cyclical and reinforcing nature of these socio-economic challenges. A scholar analyzes how poverty contributes to the rise of insurgency, specifically Boko Haram in the North-East region of Nigeria from 2015 to 2019 and also examines the security implications of this relationship on national development[70]. Utilizing an ex-post facto research design, the study relies on secondary data from government reports and scholarly articles, analysing the content through qualitative methods. The findings highlight that poverty is a significant driver of insurgency, as Boko Haram exploits economic deprivation to recruit members, particularly among the youth. The study also finds that insurgency exacerbates poverty, creating a vicious cycle of underdevelopment, unemployment, and insecurity in the region.

Two researchers explore the nexus between poverty and insecurity in Nigeria by assessing how these twin challenges hinder the country's sustainable development[71]. Employing a qualitative content analysis methodology, the study relies on secondary data from academic journals, conference papers, and official reports. Their findings reveal that poverty and insecurity in Nigeria are interconnected, largely driven by factors such as corruption, poor governance, and policy inconsistencies. These issues lead to increased unemployment, social unrest, and violent

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crimes, exacerbating the nation's security challenges. In addition, three scholars investigate the impact of poverty and insecurity on sustainable development in Nigeria, focusing on Katsina State from 2015 to 2022[72]. The authors utilize a mixed-methods approach, combining primary data collected through questionnaires and secondary data sourced from books, journals, and reports. The study employs descriptive statistics for data analysis, revealing that poverty is a significant factor contributing to Nigeria's escalating insecurity, though it is not the sole cause. Insecurity is exacerbated by socio-political factors like poor governance, leading to economic stagnation and underdevelopment. The findings emphasize that good governance and economic revitalization are essential for mitigating both poverty and insecurity, which are intertwined and severely hinder sustainable development in the country. More so, a study examines how poverty contributes to the escalation of banditry and its impact on Nigeria's socio-economic development[73]. The study employs a descriptive methodology based on secondary data from existing literature, reports, and case studies. The findings reveal that poverty is a significant driver of banditry, although other factors such as religious extremism and illiteracy also play a role. Banditry has led to the destruction of property, displacement of people, decreased foreign investment, food insecurity, and educational disruptions. The study highlights that insecurity exacerbates poverty by undermining economic stability and social institutions.

There are some existing studies that focused on other related security challenges like terrorism, feminization of poverty, digital security, and climate change. A study investigates whether poverty rates increase terrorism, focusing on global data from 1970 to 2019[74]. The study explores the link between poverty and terrorism, particularly examining how economic conditions contribute to the prevalence of terror activities. The study focuses on various countries across different regions, analysing the long-term global trends. Utilizing data from the quality of

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government index and the global terrorism database, they conduct a regression analysis using negative binomial and Prais-Winsten models to assess the relationships between poverty, GDP per capita, state fragility, and terrorism. Their findings suggest a negative relationship between poverty rates and terrorism, indicating that terrorism is more likely in wealthier nations with low poverty rates due to their susceptibility to high-profile attacks. They also highlight that other variable, such as state fragility and unemployment, play a more significant role than poverty in explaining terrorism, especially in recent years with heightened security measures. The study challenges the conventional belief that poverty is a primary driver of terrorism, pointing instead to more complex socio-economic factors.

Some researchers examine the feminization of poverty in Nigeria and its impact on sustainable development and national security[75]. They further analyse how the increasing poverty rate among women contributes to national security challenges and hinders Nigeria's sustainable development. Focusing on Nigeria, the paper explores the systemic and structural factors that exacerbate poverty among women, particularly in rural areas. The methodology is primarily qualitative, drawing on secondary data from government reports, poverty studies, and existing literature. The authors find that poverty among women is driven by limited access to education, healthcare, and economic opportunities, alongside cultural and societal barriers that marginalize women. These conditions have far-reaching implications for Nigeria's development, as the exclusion of women from economic participation reduces the nation's overall productivity. Moreover, the feminization of poverty poses a significant threat to national security by fuelling unrest, increasing dependency on social support systems, and contributing to instability in regions with high poverty rates.

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Another study explores the intersection of digital security, privacy, and relative poverty in Germany[76]. They seek to understand how people living in relative poverty manage their security and privacy practices in the context of their technological limitations. The study focuses on Germany as a case study for high-income countries in the Global North, examining the challenges low-income users face in protecting their data. The authors conducted a qualitative study through 28 in-depth interviews with individuals living below 60% of Germany's median income. Findings reveal that although low-income users possess basic knowledge of digital security and privacy, their practices are compromised by economic constraints, such as reliance on outdated or second-hand hardware and the necessity of using free but insecure cloud services. Moreover, there is a false sense of security among users due to their belief that their financial status makes them less attractive targets for cyberattacks. The paper emphasizes the need for more inclusive digital security solutions that cater to marginalized communities.

A group of researchers critically assess how climate change exacerbates poverty and threatens livelihoods, particularly in vulnerable communities worldwide[77]. The scope includes global regions with significant poverty rates and vulnerability to climate change impacts. The authors employ both qualitative and quantitative data analysis from climate change reports and socio-economic studies. Their findings demonstrate that climate change disproportionately affects impoverished populations, limiting their adaptive capacities and worsening inequalities. The research highlights the need for inclusive climate-resilient development strategies that prioritize marginalized groups, advocating for pro-poor adaptation measures. They argue that without comprehensive, equity-focused policies, the impacts of climate change will continue to deepen poverty traps and undermine global development goals.

2.3.2 Poverty and Economic Growth

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There exists a plethora of studies on the relationship between poverty and economic growth across various countries. A study employed various econometric estimations to measure the effect of inequality and poverty on economic development between 1990 to 2016 in Vietnam. Results confirmed the presence of a long-run association between inequality and poverty, and economic growth is the matter of poverty headcount ratio in Vietnam. Results also verify the findings that inequality and poverty show a negative impact on economic growth[78].

A similar study examined the relationship among income inequality, poverty and economic growth in Nigeria over the period 1981 to 2018. Using the Autoregressive Distributed Lag technique, the study observed that inequality had positive and significant impact on economic growth while poverty had an insignificant impact on economic growth. More so, it was observed that poverty is insignificant in the relationship between income inequality and economic growth while income inequality played a significant role in the relationship between poverty and economic growth[79].

This study examined the effect of economic growth on poverty reduction in Ghana using monetary measurement approach. The data was analysed using autoregressive distributed lags (ARDL) regression model and augmented Dickey-Fuller (ADF) for unit root test. The findings showed that economic growth and government spending have an inverse but significant interrelationship with reduction of poverty. Also per capita GDP has a significant positive relationship with poverty reduction. The annual inflation levels have an inverse insignificant impact on poverty reduction[80].

A study appraised the relationship between poverty, economic growth and income inequality in Nigeria and the interaction effect of growth and income inequality on Nigeria's poverty level. The study applied Auto-Regressive Distributed Lag (ARDL) model on annual data between 1980

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and 2018. The study established that per-capita economic growth has a positive but insignificant relationship with poverty in the long run. The result also showed that inequality had a positive relationship with poverty, while the interaction of growth and inequality had a negative relationship with poverty. The Toda-Yamamoto test of causality reveals a bidirectional connection between economic growth and poverty, a unidirectional relationship from inequality to poverty, and a bidirectional relationship between growth-inequality interaction and poverty[81].

A similar study estimated the growth elasticity of multidimensional poverty using a dataset of 91 low and middle-income countries between 1990 and 2018. While employing two novel, individual multidimensional poverty indices, which include three important dimensions: education, work, and health, empirical analysis indicates that a 10% increase in GDP decreases multidimensional poverty by approximately 4–5%[82].

A study examined the interplay of economic growth and employment in the reduction of poverty amongst West African Countries. Cross sectional country level data between 1991 and 2010 was used to examine the relationship existent between these variables within the West African region. The empirical result of the study supports a positive effect between economic growth and poverty reduction in West Africa. In terms of the influence of employment on poverty reduction, it can observed that there exists a positive relationship; however, this relationship tends to be statistically insignificant[83].

Another study for ECOWAS examined the causal relationship among trade openness, economic growth and poverty in ECOWAS countries between 1986 and 2015 by employing descriptive statistics and Panel Error Correction Model (PECM). The findings that emerge from the analysis revealed that there exists a bi-directional causality between trade openness and poverty proxied by per capita consumption expenditure and a uni-directional causality between economic growth

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and poverty proxied by per capital consumption expenditure in ECOWAS countries in the short run. In the long run, per capita consumption expenditure, economic growth and government expenditure granger-cause trade openness within the study periods[84].

In a study that examined the relationship between the income inequality, gross domestic product, risk of poverty threshold and median equivalized net income for a panel of 28 countries of European Union (EU) over the period 2005-2016, empirical estimations, using panel data techniques on three different data panels, confirm the Kuznets hypothesis that income inequality tends to increase with early economic development and tends to decrease when a country reaches a certain level of development. The study found that for emerging EU countries, income inequality has a growing tendency with a positive economic growth and maybe reduced by increasing risk of poverty threshold or median equivalized net income. For highly developed EU countries the situation is completely opposite. At EU level, the influence of gross domestic product on income inequality is strongly determined by its trend in the highly developed EU countries, while the influence of risk of poverty threshold and median equivalized net income on income inequality is strongly determined by their trend in the emerging EU countries[85].

Another study examined how Nigeria's economic growth over the past two decades has contributed to poverty reduction. The study adopted the both qualitative and quantitative data and established that the Nigerian economy has experienced significant growth over the last two decades, but poverty rates in the country remain high. The study also discovered that the Nigerian economy's high level of inequality, corruption, jobless growth, and monocity are issues that have hindered the translation of economic growth into significant poverty reduction[86].

A study investigated the role of economic growth and income inequality in poverty reduction in ASEAN countries The study employed the dynamic panel data approach and used the data of 13

years from the period starting from 2004 to 2017. The empirical analysis established that poverty levels reduce through economic growth in the emerging world[87].

An econometric analysis using time series data from 1980 to 2021 was done to examine the relationship between some macroeconomic variables and poverty in Nigeria. The study employed both short-run and long-run estimates through the Non-Linear Autoregressive Distributive Lag (NARDL) approach. The findings suggest that in the short run, inflation, unemployment (positive and negative shocks), and population significantly influence poverty rates in Nigeria. However, these effects are not statistically significant at conventional levels. In the long run, population growth, unemployment, and inflation (negative shock) do not have a substantial impact on poverty. On the other hand, economic growth, as measured by GDP growth, demonstrates a positive relationship with poverty reduction. The analysis indicates that sustained economic growth leads to lower poverty rates over the long term[88].

A study investigated the causality between economic growth and poverty incidence in Nigeria and further determined empirically, any evidence of Kuznets hypothesis in Nigeria between 1980 and 2018. Data collected were analysed using Autoregressive Distribution Lag (ARDL) model (ECM). TPair-wise Granger Causality was used to check the direction of causality. The econometric analysis shows a unidirectional causal relationship, running from economic growth to poverty while the trickle-down effects of the Kuznet's hypothesis were not supported by Nigeria's data[89].

The effect of economic growth on poverty reduction in Ghana was analysed by a scholar using monetary measurement approach. The data span from 1990 to 2021 and was analysed using autoregressive distributed lags (ARDL) regression model and augmented Dickey-Fuller (ADF) for unit root test. The findings showed that economic growth and government spending have an

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inverse but significant interrelationship with reduction of poverty. Also per capita GDP has a significant positive relationship with poverty reduction. The annual inflation levels have an inverse insignificant impact on poverty reduction. The relationship between unemployment and poverty alleviation is positive though insignificant[90].

Another study examined public perception of the effects of poverty on economic growth in Ghana. It specifically examined public perception on the relationship between poverty and economic growth in Ghana using a combination of descriptive statistics and Logit Model to analyse the primary data collected. The result of the Logit model showed that unemployment, corruption, secondary school enrolment, government policy, life-expectancy and poverty retarded economic growth while investment, aggregate consumption expenditure, pattern of income distribution and inflation, enhanced economic growth in Ghana. The result further revealed that only investment, aggregate consumption expenditure and inflation are the determinants of economic growth in Ghana[91]. A similar study examined the relationship between economic growth and poverty in Benin Republic, using data from the 2006 and 2011 Benin Demographic and Health Surveys and computed a multidimensional poverty index using multiple correspondence analysis. The distribution of growth pro-poorness was analysed using the Growth Incidence Curves and Non-Income Growth Incidence Curve. Average multidimensional poverty rate was estimated to be about 55.3 percent. The findings show that while growth has generally been pro-poor in Benin, there exist disparities across rural and urban households, and for women as well as the elderly[92].

Another study for Benin examined the determinants of poverty and the persistence of poverty in Benin using a longitudinal data for the years 2006-2011. The study estimated logit and probit models of poverty. In addition to households' characteristics as explanatory variables, the models

control for the previous years' poverty status to test for the hypothesis of persistence in poverty. The study finds that households' demographic and socio-economic characteristics are strongly correlated with their poverty status. It also found strong evidence of persistence of poverty: being poor in a year increases the likelihood of remaining poor in the following years. The analysis of the dynamic of poverty reveals that there is a large and rapid change in poverty with households moving in and out of poverty[93].

2.3.3 Security Threats and Economic Growth

There exists a plethora of studies on the effect of security threats on economic growth for developing countries, while a few studies have been conducted in this regard for developed countries. Most of these studies are however restricted to terrorism as the major source of security threat without considering other forms of security threats. A scholar investigated the effect of insecurity on economic growth from 2008 to 2015 for both developed and developing countries. The findings revealed a positive effect of terrorism on economic growth in both developed and developing countries across the entire sample. However, a negative relationship was observed between economic growth and terrorism for the total sample and developing countries[94]. Similarly, a scholar assessed the impact of terrorism on Pakistan's economic growth using the Solow growth model. Their analysis of secondary data from 1981 to 2012 indicated that terrorism had a negative effect on economic growth in Pakistan[95].

A study focused on Nepal as a case study to analyse the interplay between economic determinants and national security risks. The findings indicate that the expansion of trade, financial services, FDI, migration, and remittances both positively and negatively influences national security concerns, whereas growth in poverty and inequality, foreign aid and loans,

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crises, corruption, critical ICT infrastructures, and cyber risks heighten threats to Nepal's security[96].

Sub-Saharan African countries are known to be bedevilled with some challenges hindering the economic development. In this regard, a study investigated the implications of government effectiveness, availability of natural resources, and security threats on the regions' economic development from 2007 to 2020. Data analysis was conducted using Dynamic heterogeneous panel level estimators (PMG and CS-ARDL). Findings show that while PMG estimator confirms a long-run causal effect of governance, natural resources, and security threats on economic development, only natural resources show a short-run causal effect with economic development, while the CS-ARDL confirms the significance of all the variables both in the long and short-run[97].

While analysing poverty and terrorism as allies in hindering economic growth in African countries, a study employed data for 22 African countries from 1970 to 2013. Panel cointegration techniques of dynamic fixed effect, mean group and pooled mean group were applied to quantify the long-run impact of terrorism and poverty on macroeconomic performance. Empirical findings reveal that both poverty and terrorism have a long-run negative impact the macroeconomic performance[98].

A study examined the response of international tourism, foreign aid inflow, international trade and economic growth to terrorism in Sub-Saharan Africa (SSA), and how institutions moderate these interactions. The study examined a panel of 40 SSA countries for the period 2010–2020 based on the system generalised method of moments framework. Results revealed that while terrorism impacts adversely on tourism, foreign aid inflow, trade and overall economic growth in

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SSA; institutional quality has not been effective in mitigating the adverse effects of terrorism on tourism, foreign aid inflow, trade and economic growth in SSA[99].

Another study examined the economic consequence of terrorism in Sub-Saharan Africa (SSA) with a panel of 38 countries between 2010 and 2020. Specifically, the study examined the impact of terrorism on economic growth, international tourism demand, income inequality, unemployment rate, and inflation rate. The study employed the two-step system GMM and quantile regression for the estimation. The results show that terrorism has had a significant negative impact on economic growth in SSA. Similarly, the study results indicate that terrorism impacts negatively on international tourism demand, widens the income gap, and increases the rate of unemployment and inflation in SSA[100].

The association among terrorism and economic growth is crucial from macroeconomics perspective. Therefore, a study analysed the influence of terrorism on economic growth in Pakistan, incorporating trade, foreign aid and capital for the period of 1981-2016. The study applied ARDL bounds testing to inquire the problem and found a co-integration nexus among the used macroeconomic indicators. The evidence shows that terrorism has an inverse relationship with economic growth that is statistically significant[101].

A study analysed the impact of terrorism on the sustainability of the development of West African countries, highlighting the role and interactions of income inequality and the level of education in this relationship for the period 2000–2019. The study employed the dynamic ordinary least squares (DOLS) model and results showed a negative effect of terrorism on economic development[102].

A study investigating the role of military expenditure on the relationship between terrorism and economic growth in Africa utilised a dataset comprising 24 African countries for which terrorism

activities have increased substantially in the last decades. While employing the Fixed Effects model with standard errors that account for cross-sectional dependence, serial correlation and group-wise heteroskedasticity, the study revealed that terrorism has a detrimental effect on economic growth in the selected African countries. Similarly, the interactive effect of military expenditure and terrorism on economic growth is significantly positive[103].

A study empirically analysed the effect of terrorism on financial development and how globalisation and governance modulate the incidence of terrorism on financial development in Africa. Two terrorism indicators were adopted for this study, namely, the: number of terrorism incidences and number of terrorism deaths. The methodology involves the pooled data technique running from 1996-2018 for 34 African countries. The results from the POLS, Driscoll-Kraay and the Newey-West standard error corrections show that terrorism is detrimental to financial development. From the interactive regressions, three major tendencies are apparent. First, terrorism dynamics consistently have an unconditional negative effect on financial development. Second, the globalization and government dynamics modulate the terrorism dynamics to broadly induce a negative net effect on financial development[104].

The impact of globalization on economic growth of Asian and African countries with a particular focus on the moderating role of terrorism for the time period 1984- 2013 was analysed applying System Generalized Method of Moments. Finding from the multidimensional aspect of globalization suggest overall positive effect of globalization on economic growth but its marginal effect tends to revert in the presence of terrorism. Specifically, the insurgence of terrorism at high percentiles depresses the growth effect of globalization profoundly[105].

While country-specific studies on the effect of security threats on economic growth in Nigeria is abundant, literature in this regard is sparse for other West African countries. A study employed

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annual time-series data from 1980 to 2019 and the ARDL methodology to analyses the fiscal and socio-economic consequences of insecurity on economic growth in Nigeria. The empirical findings demonstrated that high unemployment rate, domestic capital formation, foreign direct investment, government spending on education and security are negatively affected by the growing level of insecurity and consequently retarded growth in the long and short run[106].

Another study investigated the relationship between government recurrent expenditure on internal security and economic growth in Nigeria from 1980 to 2022. The Autoregressive Distributed Lag (ARDL) model was employed as the main analytical tool. The results showed that in the long run, government recurrent expenditure on internal security has a positive and insignificant relationship with economic growth in Nigeria. At the same time, exchange rate has a positive and significant relationship with economic growth in Nigeria. Also, interest rate has a negative and significant relationship with economic growth in Nigeria. In the short run, government recurrent expenditure on internal security has a negative and significant relationship with economic growth in Nigeria. The exchange rate and interest rate have a positive and significant relationship with economic growth in Nigeria. The study concluded that the relationship between government recurrent expenditure on internal security and economic growth in Nigeria varies, as it could be positive (in the long run) or negative (in the short run)[107].

In analysing insecurity challenges and its implications on business activities, economic growth and economic development in Nigeria, a study employed secondary data spanning from 2009 to 2022. Data was broken into pre-high insecurity period (2009- 2015) and high insecurity period (2016- 2022) and the t-test, f-test; and Cho-test was used to test the variance between the two time periods under study. The study found that insecurity hampers Business Activities (BA) but does not have significant influence on Economic Growth (EG) and Economic Development (ED)

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of Nigeria; and concluded that national insecurity must be of high consideration as business activities blossom in a secure environment, which ultimately ensures sustainable economic growth and development[108].

In another study, a group of scholars adopted the ARDL and Structural Vector Auto-regressive (SVAR) technique to examine the growth and fiscal consequences of terrorism in Nigeria using different measures of terror incidence, government expenditure and economic activity. The empirical results indicated that terrorism leads to the reallocation of economic activity away from private investment spending to government counter-terrorism spending thereby impacting negatively on growth[109].

While emphasizing that terrorism in Nigeria is on the increase despite government counter-terrorism efforts and expenditure, a group of scholars examined the impact of terrorism on economic growth and human capital development in Nigeria from 1981 – 2019. The Generalized Method of Moments (GMM) estimator was employed in analysing the data. A negative and insignificant impact of terrorism on economic growth and human capital development was found. Internal and external conflict also had a negative and insignificant impact on economic growth and human capital development[110].

A study was conducted to explore the impact of insecurity on the Nigerian Economy from 1980 to 2019. Using the ARDL method, the study found that increasing insecurity negatively affected high unemployment rates, domestic capital formation, foreign direct investment, and government spending on education and security, thus hindering growth in both the short and long run[111].

Another study examined the influence of insecurity on economic growth in Nigeria from 2000 to 2019. The study revealed that national insecurity not only hindered the achievement of sustainable economic growth but also significantly reduced economic activities across all geo-

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political zones in the country[112]. On the other hand, another study analysed the impact of insecurity on economic growth in Nigeria from 2009Q1 to 2016Q4. Surprisingly, the study found that economic growth and investment activities tended to increase during periods of insecurity. They also observed a reduction in the unemployment rate over the study period, suggesting that insecurity only posed a threat to specific economic activities without exerting a negative effect on the overall economy[113].

Another study examined the influence of insurgency on Nigeria's economic growth from 1991 to 2017. Utilizing ordinary least square regression, the study found a negative impact of insecurity on economic performance[114]. A study assessed the moderating effects of security threats on investment-economic growth nexus in Nigeria from 1986 to 2021 using the Vector Error Correction Model approach. Domestic investment and FDI were found to have a positive impact on Nigeria's long-term economic growth. The study also found that security threats have a strong negative effect on economic growth in Nigeria, and that the presence of security threats significantly reduced the positive influence of investment on economic growth in Nigeria[115].

To examine how funds expended on security have affected economic growth in Nigeria, a study employed the Autoregressive distributed lag (ARDL) model. The results show that security expenditure (external and internal) stimulated real economic growth significantly in the long run and in the short run at lags levels. However, at level in the short run, security expenditure retarded economic growth significantly. This implies that security expenditure has serious implications on the growth of Nigeria's economy[116].

A study on the relationship between security threats and investment in Nigeria employed the vector error correction model method to examine the association between security threats and investment in Nigeria from 1986 to 2021. The analysis of the long-term perspective revealed an

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adverse relationship between security threats and domestic investment and between security threats and foreign direct investment in Nigeria. Additionally, the study revealed that although security threats do not substantially influence domestic investment in the short run, they exhibit a pronounced adverse impact on economic growth in the long run. Consequently, security threats significantly affect domestic investment and foreign direct investment in Nigeria in the long run[117].

An empirical study investigated the relationship between terrorism and economic growth in Nigeria. The study focused on the impact of terrorism on productivity in Nigeria from 1980 to 2021, examining various aspects including economic growth, trade, foreign direct investment (FDI), manufacturing output, and other key indicators but with specific focus on economic growth. The study employed a Structural Vector Autoregression (SVAR) approach to analyze the impact of terrorism on economic variables in Nigeria. The result shows that GDP negatively and significantly responds to one structural standard deviation innovation in terrorism shocks. Although, contrary expectation, the GDP growth rate initially rose up to period 2 before it begins to decline gradually, and this continues until period 10 before it slowly begins to rise. This indicates that positive variation in terrorism leads to negative change in GDP growth[118].

While employing simultaneous equations to analyse the impact of terrorism on Nigeria's economic growth, findings from a study infer that the more forms terrorism takes, the slower the rate of economic growth[119]. Similarly, a study investigated the impact of increasing insecurity on the Nigerian economy from 1981 to 2017. The Error Correction Model results showed that insecurity negatively affected economic growth and food security in Nigeria during the reviewed period[120.] Another study investigated the effects of terrorism on peace and national development in Nigeria using a mixed approach of qualitative and quantitative methods. Utilizing secondary

and primary data from a survey of 300 respondents with non-probability sampling techniques, the study used simple percentages, Pearson's coefficient of correlation, and linear regression analysis to show that terrorism affected peace and was a key factor influencing economic growth and development in Nigeria[121].

2.4 Conceptual Framework

The conceptual framework illustrates how poverty and security threats interact to influence economic growth through their effects on key economic variables. The relationships between these variables are explained through the lens of the endogenous Growth Theory, emphasizing the critical role of internal factors in shaping long-term growth trajectories. The conceptual framework in Figure 2.1 shows the interconnected effects of poverty and security threats on economic growth, as it addresses the intervention programmes to reduce poverty, enhance human capital, and improve security.

Poverty is conceptualized as a primary determinant of human capital. High levels of poverty limit access to education and healthcare, reducing the overall stock of human capital. As human capital diminishes, the productive capacity of the workforce declines, which negatively impacts economic growth. The framework captures this relationship by linking poverty directly to changes in human capital, highlighting its role as a key constraint on productivity and development.

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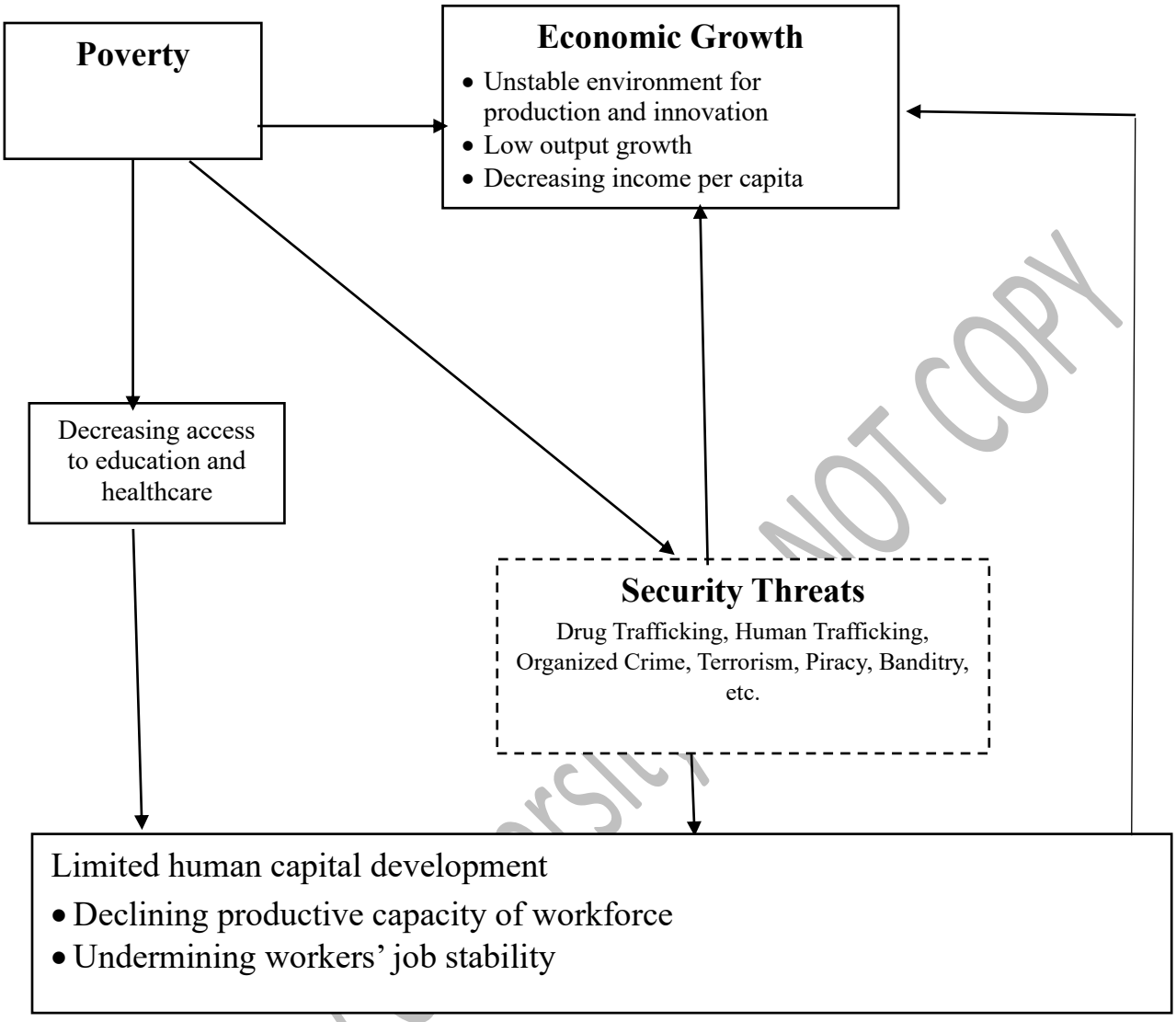


Figure 2.1: Conceptual links between security threats, poverty and economic growth
Source: Author's conceptualization

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More so, security threats exacerbate poverty by displacing people, disrupting livelihoods, and limiting access to basic services such as healthcare, education, and markets. Vulnerable populations in conflict-affected regions are often left in extreme poverty. Thus, poverty fosters insecurity by creating a fertile ground for recruitment into extremist groups, militias, or criminal networks. Populations facing economic despair are more susceptible to participating in or supporting violent activities as a means of survival or as a response to perceived injustice. High poverty levels limit human capital development, reducing the productivity of the workforce and lowering the potential for sustainable economic growth. Poverty also reduces consumer demand, which stifles domestic markets and industrial growth.

Security threats are inversely related to security, which is essential for stable economic activity. Rising security threats erode the baseline level of security ($S_0 - \delta ST$), disrupting investment, reducing business confidence, and increasing the cost of economic transactions. This decline in security further hampers economic growth by creating an unstable environment for production and innovation. The model accounts for the role of security in maintaining the stability necessary for sustained economic progress. In addition, security threats can affect economic growth by reducing the capital stock of a country by destroying human and physical capital[109,110]. Similarly, in an attempt to combat terrorism, increased government spending on security may crowd out more growth-enhancing public and private investments in social sectors such as health and education, thereby affecting a country's long-term growth[111].

2.5 Theoretical Framework

The endogenous growth theory hinges as the theoretical framework to analyse the impact of poverty and security threats on economic growth. Endogenous growth theory emphasizes the role of internal factors such as human capital, innovation, and knowledge in driving long-term

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economic growth[47,49]. It contrasts with the neoclassical growth theory, which focuses primarily on external factors like capital accumulation and labour. In the context of poverty and security threats, endogenous growth theory provides a more comprehensive explanation by considering how social instability (such as increased insecurity) and underinvestment in human capital (due to poverty) directly impede economic growth.

The endogenous growth theory posits that factors like education, innovation, and security, which improve productivity and human capital, are critical for sustained growth[48,50]. High poverty levels reduce the population's access to education and healthcare, thus limiting the accumulation of human capital and innovation. On the other hand, security threats disrupt economic activities by discouraging investment and eroding institutional capacity. These internal dynamics create a feedback loop where poverty and insecurity reinforce each other, thereby stifling growth.

The Endogenous growth theory provides a robust theoretical framework for analysing the impact of poverty and security threats on economic growth, particularly in developing regions such as West Africa. Unlike the neoclassical growth model, which attributes long-run growth primarily to exogenous technological progress, endogenous growth theory emphasizes the role of internal factors such as human capital accumulation, innovation, institutional quality, and knowledge spillovers in driving sustained economic growth. Within this framework, economic growth is not automatic but depends on deliberate investments in people, ideas, and productive capacity.

Insecurity fits intuitively into endogenous growth theory as a factor that directly undermines the internal mechanisms of growth. Persistent security threats such as terrorism, insurgency, banditry, and communal violence erode the foundations of human capital development by disrupting access to education and healthcare, displacing populations, and reducing labour productivity.

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Insecure environments discourage both domestic and foreign investment, weaken institutions, and divert public resources from growth-enhancing investments toward security expenditures. As a result, innovation, learning-by-doing, and knowledge accumulation, central channels of endogenous growth are severely constrained. In this sense, insecurity functions as a negative productivity shock that operates from within the economy rather than as an external disturbance, making it particularly relevant within an endogenous growth framework[49, 50].

The theory further explains how poverty and insecurity interact in a self-reinforcing manner to impede long-term growth. High levels of poverty limit households' ability to invest in education, skills acquisition, and health, thereby reducing the quality of human capital and innovation capacity. Simultaneously, widespread poverty increases vulnerability to insecurity by fostering unemployment, social exclusion, and grievances that can fuel criminal and extremist activities. This feedback loop weakens institutional effectiveness and lowers the economy's growth potential, consistent with the endogenous growth argument that internal socio-economic conditions determine long-run growth trajectories.

Endogenous growth theory rests on several key assumptions. First, it assumes that investments in human capital, research and development, and institutional quality generate positive spillover effects that sustain growth over time. Second, it presumes that economic agents respond rationally to incentives, such that stable and secure environments encourage investment in education and innovation. Third, the theory assumes that diminishing returns to capital can be offset by continuous improvements in knowledge, productivity, and technology, allowing economies to maintain long-run growth without relying on exogenous technological change.

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Implicit in these assumptions is the notion that social stability and security are prerequisites for effective investment in growth-enhancing activities[50].

In this growth model, the key assumption is that economic growth is a result of human capital *H*, technology *A*, and security conditions *S*. The production function can be modelled as:

$$Y = AH^{\beta}S^{\gamma}K^{\alpha} \quad (2.1)$$

Where: *Y* represents the output (economic growth), *A* is the level of technology or innovation, *H* represents human capital, which is negatively impacted by poverty, *S* represents security or the level of security in the economy, with higher *S* implying more stability and lower security threats, *K* is the physical capital, α, β, γ are the output elasticities of capital, human capital, and security, respectively.

This model suggests that economic growth *Y* is driven by the interaction between human capital *H*, security *S*, and physical capital *K*, with technology *A* acting as a multiplier.

In high poverty environments, limited access to education and health services lowers human capital *H*. This can be expressed as a function of poverty *P*:

$$H = H_0 - \theta P \quad (2.2)$$

Where: H_0 is the initial human capital stock, and θ is the sensitivity of human capital to poverty. As poverty increases, *H* declines, which negatively affects output *Y*.

Security threats *ST* reduce economic productivity by disrupting business activities, reducing investor confidence, and increasing the costs of doing business. Security *S* is inversely related to security threats *ST*:

$$S = S_0 - \theta ST \quad (2.3)$$

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Where: S_0 is the baseline security level, and δ is the degree to which security threats diminish stability. As *ST* increases, *S* declines, leading to lower economic output.

Substituting the expressions for *H* and *S* into the production function yields:

$$Y = A\left(H_0 - \theta P\right)^{\beta}\left(S_0 - \delta ST\right)^{\lambda} K^{\alpha} \tag{2.4}$$

This equation shows how poverty *P* and security threats *ST* directly reduce economic output *Y* through their negative effects on human capital *H* and security *S*. Taking the natural logarithm of both sides:

$$lnY = \ln A + \beta \ln\left(H_0 - \theta P\right) + \gamma \ln\left(S_0 - \delta ST\right) + \alpha \ln K \tag{2.5}$$

To simplify the equation, the study assumes that the baseline security level S_0 is constant and proportional to the economy's productivity *A*. Specifically, let $S_0 = A$. This implies that security threats *ST* alone determine the net security impact. Substituting $S_0 = A$ into the equation simplifies the security component, as *A* will cancel out in the logarithmic term. The equation is rewritten as:

$$lnY = \ln A + \beta \ln\left(H_0 - \theta P\right) + \gamma \ln\left(A - \delta ST\right) + \alpha \ln K \tag{2.6}$$

Separating the terms involving A, the model becomes:

$$lnY = \ln A + \gamma \ln A + \beta \ln\left(H_0 - \theta P\right) - \gamma \ln\left(\delta ST\right) + \alpha \ln K \tag{2.7}$$

Simplifying the equation

$$lnY = (1-\gamma) \ln A + \beta \ln\left(H_0 - \theta P\right) - \gamma \ln\left(\delta ST\right) + \alpha \ln K \tag{2.8}$$

The theoretical equation of this study is stated as follows:

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$$lnY = C + \beta \ln\left(H_0 - \theta P\right) - \gamma \ln\left(ST\right) + \alpha \ln K \quad (2.9)$$

Note: $C = (1+\gamma)\ln A - \gamma \ln \delta$ is a constant capturing baseline productivity and security assumptions.

This theoretical equation highlights the interconnected impacts of poverty and security threats on economic growth, providing a framework for empirical testing using data on *P*, *ST*, and *K*. As poverty *P* increases, ($H_0 - \theta P$) decreases, reducing the growth rate ln*Y*. The elasticity of growth with respect to poverty is captured by β. Higher security threats *ST* directly reduce growth, as indicated by the negative term ($-\gamma \ln ST$). The magnitude of γ determines how strongly security threats affect growth. Physical capital *K* continues to have a positive impact on growth through the term $\alpha \ln K$.

Despite its strengths, the endogenous growth theory has attracted several criticisms. One major critique is that it tends to overemphasize the role of internal factors while underestimating the influence of external shocks, global economic conditions, and historical constraints; factors that are particularly relevant for developing economies. Additionally, the theory often assumes institutional capacity and policy effectiveness that may not exist in fragile and conflict-affected states, thereby overstating the ability of governments to influence growth outcomes through human capital and innovation policies. Critics also argue that endogenous growth models may be difficult to test empirically due to measurement challenges associated with variables such as knowledge, innovation, and institutional quality. Furthermore, the theory may underestimate the persistence of poverty and insecurity traps, where structural constraints prevent economies from initiating the growth processes assumed by the model.

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In spite of these criticisms, endogenous growth theory remains particularly suitable for examining the growth implications of poverty and security threats. Its emphasis on internal dynamics, feedback mechanisms, and long-term structural conditions provides a coherent framework for understanding how poverty and insecurity jointly constrain economic growth, especially in regions where these challenges are deeply embedded in the development process.

2.6 Summary of Gaps in Literature Reviewed

The literature examining the relationship between security threats, poverty and economic growth has yielded mixed and inconclusive findings, indicating a significant gap in our understanding of this complex interaction. While some studies suggest a direct and positive relationship between security threats and economic growth, others find contradictory evidence. Similarly, the effect of poverty on economic growth remains a subject of debate, with divergent views on the effectiveness of various policy instruments and transmission mechanisms. This lack of consensus highlights the need for further research to elucidate the relationships among security threats, poverty and economic growth.

A major gap in the literature arises from the different approaches to measuring and analysing security threats. While most studies have employed terrorism as a proxy for security threats, this study employs the security threat index which extends the scope to other aspects of security threats such as bombings, attacks and battle-related deaths, rebel movements, mutinies, coups and other serious criminal factors, such as organized crime and homicides. This is relevant, given the high incidence of poverty and poor performance of West African economies, which can be attributed to the increasing cases of insecurity that have led to thousands of deaths and kept thousands homeless.

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A notable contribution of this study lies in its contextualization of the security–growth–poverty nexus by introducing colonial origin as a key dimension of analysis. While some studies have explored the relationship between security threats, economic growth, and poverty in West Africa, many of these studies treat the region as a homogenous unit, failing to account for structural and institutional heterogeneities across countries. This study addresses this gap by disaggregating West African countries based on their colonial blocs (Anglophone, Francophone, and Lusophone), recognizing that colonial blocs has historically shaped governance systems, institutional quality, economic structures, legal traditions, and even language policies, all of which may influence the dynamics of development outcomes.

By employing this classification, the study aligns with the growing consensus in empirical econometrics that regional panels composed of structurally diverse countries may suffer from heterogeneity bias if such differences are not adequately modeled. The colonial blocs serves as a proxy for deeper, country-specific institutional and administrative characteristics, offering a more nuanced understanding of how historical pathways continue to shape contemporary economic and social vulnerabilities. Thus, this approach not only enriches the analytical depth of the study but also provides empirical justification for the use of subgroup analysis in panel data estimation to account for cross-country heterogeneity in development trajectories. Finally, this study advances the literature of security threats, poverty and economic growth through the introduction of an interactive term of security threat and poverty on economic growth in West African countries.

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Endnotes

1. A. Nayak, & R. Biswal. *Poverty: By Chance or by Choice: "The Hidden Forces that Shape the Poor and the Poverty***"**. Notion Press, 2020.

2. A. R. Romeiro. *Why the Industrial Revolution was a Civilizational Path Dependent Phenomenon*. Instituto de Economia, UNICAMP, 2020.

3. F. Siddiqui, R. A. Salam, Z. S. Lassi, & J. K. Das. *The Intertwined Relationship between Malnutrition and Poverty*. **Frontiers in Public Health**, 8, 2020, 453.

4. D. Bloom, & D. Canning. *The Health and Poverty of Nations: From Theory to Practice*. **Journal of Human Development**, 4(1), 2003, 47-71.

5. Y. Yang, A. de Sherbinin, & Y. Liu. *China's Poverty Alleviation Resettlement: Progress, Problems and Solutions*. **Habitat International**, 98, 2020, 102135.

6. E. Kovářová, & T. Váňa. *Reduction of Poverty and Material Deprivation in the EU Countries: What Matters the Most*? **Economic Studies**, 32(2), 2023, 3-23.

7. M. Buheji, K. da Costa Cunha, G. Beka, B. Mavric, Y. L. De Souza, S. da Costa Silva, M. Hanafi, & T. C. Yein. *The Extent of Covid-19 Pandemic Socio-Economic Impact on Global Poverty. A Global Integrative Multidisciplinary Review*. **American Journal of Economics**, 10(4), 2020, 213-224.

8. M. Ridley, G. Rao, F. Schilbach, & V. Patel. *Poverty, Depression, and Anxiety: Causal Evidence and Mechanisms*. **Science**, 370(6522), 2020, 0214.

9. R. Bray, M. de Laat, X. Godinot, A. Ugarte, & R. Walker. *Realising Poverty in all its Dimensions: A Six-Country Participatory Study*. **World Development**, 134, 2020, 105025.

10. E. Richards. *Poverty: The Social Problem of All Time*? In Contemporary Social Problems in the UK. Routledge, 2022, 33-57.

11. World Bank. *Poverty: Overview*. World Bank 2024. Available at https://www.worldbank.org/en/topic/poverty/overview

12. J. C. Anyanwu. *Poverty in Nigeria: Concepts, Measurement and Determinants*. In proceedings of the Nigerian Economic Society Annual Conference on "Poverty Alleviation in Nigeria", Nigerian Economic Society, Ibadan, 1997, 93-120.

13. O. J. Adeyemi. *Re-Assessing the Relationship between Tax Revenue and Economic Growth in Nigeria (1980-2020)*. **World Scientific News**, 176, 2023, 1-26.

Lead City University DO NOT COPY

14. N. Violent, Conflict Database. *Nigeria Security Situation Analysis Report - An 18 Months Report of Violent Conflicts in Nigeria from the Nextier Violent Conflict Database (January 2021 – December 2021) and (January 2022 – June 2022)*. ReliefWeb, 2022.

15. Y. A. Gawi, & A. Abdullahi. *Regional Security Challenges in West Africa and the Imperative for the ECOWAS Military Intervention*. **Journal of Global Economics and Business**, *5*(17), 2024, 70-83.

16. R. Bereketeab. *Peacebuilding in Africa: Popular Progressive Versus Neoliberal Peacebuilding*. In V. Adetula, R. Bereketeab, & C. Obi (Eds.) **Regional Economic Communities and Peacebuilding in Africa: Lesson from ECOWAS and IGAD**. Routledge, 2021, 35-54.

17. R. Bereketeab. *Understanding Peacebuilding and State Building: Post-conflict African Challenges*. **International Journal of African Studies**, 1(3), 2021, 16-30.

18. O. Jaiyebo, & V. Adetula. *Regional Economic Communities and Peacebuilding in Africa: Analysis of Legal Framework and Concerns for International Law*. In V. Adetula, R. Bereketeab, & C. Obi (Eds.) **Regional Economic Communities and Peacebuilding in Africa: Lesson from ECOWAS and IGAD**. Routledge, 2021, 20-34.

19. O. O. Oshita, & W. O. Alli. *Nigeria's Role in the ECOWAS Peace and Security Agenda for West Africa*. In V. Adetula, R. Bereketeab, & C. Obi (Eds.) **Regional Economic Communities and Peacebuilding in Africa: Lesson from ECOWAS and IGAD**. Routledge, 2021, 109-122.

20. K. Sen. *Why Should I Care About Economic Growth*? United Nations University World Institute for Development Economics Research (UNU-WISER) Blog Post, 12th January, 2021.

21. B.M. Wiriranai., Environment-Conflict Nexus: T*he Relevance of Thomas Homer-Dixons Environmental Conflict Theory in Africa*. **African Journal of Empirical Research, 2**(1), 2021, 191-205

22. R.A. Matthew., *Resource Scarcity: Responding to the Security Challenge*. **International Peace Institute.**, 2008.

23.A.N. Onyekuru & M. Rob., *Resource Use Conflict in West Africa: Developing a Framework for Resilience Building Among Farmers and Pastoralists*. **African Journal of Agricultural Research 9(**52), 2014, 3825-3837.

24. R.J. Rummel., *Understanding Conflict and War: Vol. 3: Conflict in Perspective*. Beverly Hills**,** 1977.

25. A. AL Khodor., *Marxist Implications in" a Tale of Two Cities" and" 1984": Examining the Impact of Societal Injustices on Developing Countries.* Masters Thesis Submitted to the Department of English Language and Literature, Near East University, 2024.

26. S. L. Navy. *Theory of Human Motivation—Abraham Maslow.* **Science Education in Theory and Practice: An Introductory Guide to Learning Theory**, 2020, 17-28.

Lead City University DO NOT COPY

27. D. Genkova. *Modeling of the Human Needs: An Economic Interpretation of Maslow's Theory of Motivation*. **WSEAS Transactions on Business and Economics**, 18(26), 2021, 253-264.

28. W. T. Sheikh, & J. van Ameijde. *Promoting Livability Through Urban Planning: A Comprehensive Framework Based on the "Theory of Human Needs"*. **Cities**, 131, 2022, 103972.

29. I. Gough. *Defining Floors and Ceilings: The Contribution of Human Needs Theory*. **Sustainability: Science, Practice and Policy**, 16(1), 2020, 208-219.

30. S. Aiyar, & C. Ebeke. *Inequality of Opportunity, Inequality of Income and Economic Growth*. **World Development**, 136, 2020, 105115.

31. D. Rodrigues, & A. Ac Teixeira. *Opportunity and Necessity Entrepreneurship and Economic Growth: The Moderating Effect of Human Capital*. **Journal of Developmental Entrepreneurship**, 25(04), 2020, 2050025.

32. P. C. Chen, W. C. Chan, S. W. Hung, & D. Z. Lin. *How Entrepreneurs Recognize Entrepreneurial Opportunity and its Gaps: A Cognitive Theory Perspective*. **Technology Analysis & Strategic Management**, 32(2), 2020, 223-238.

33. A. McKelvie, J. Wiklund, J. S. McMullen, & A. P. Palubinskas. *A Dynamic Model of Entrepreneurial Opportunity: Integrating Kirzner's and Mises's Approaches to Entrepreneurial Action*. **Quarterly Journal of Austrian Economics**, 23(3-4), 2020, 499-541.

34. M. T. Aceytuno, C. Sánchez-López, & M. A. de Paz-Báñez. *Rising Inequality and Entrepreneurship During Economic Downturn: An Analysis of Opportunity and Necessity Entrepreneurship in Spain*. **Sustainability**, 12(11), 2020, 4540.

35. B. Jackson, & L. S. Sadler. *Structural Violence: An Evolutionary Concept Analysis*. **Journal of Advanced Nursing**, 78(11), 2022, 3495-3516.

36. S. Mari, D. Bentrovato, F. Durante, & J. Wassermann. *Collective Victimhood Resulting from Structural Violence*. **The Social Psychology of Collective Victimhood**, 2020, 231-251.

37. G. Macassa, C. McGrath, M. Rashid, & J. Soares. *Structural Violence and Health-Related Outcomes in Europe: A Descriptive Systematic Review*. **International Journal of Environmental Research and Public Health**, 18(13), 2021, 6998.

38. S. Guillot-Wright, E. Cherryhomes, L. Wang, & M. Overcash. *Systems and Subversion: A Review of Structural Violence and Immigrant Health*. **Current Opinion in Psychology**, 47, 2022, 101431.

39. A. E. Pfister, & M. Encinosa. *Anthropology in the World: Studying Current Events of 2020 through the Lens of Structural Violence and Embodiment*. **Teaching and Learning Anthropology**, 4(1), 2021, 104-110.

Lead City University DO NOT COPY

40. A. Haller. *From Classical and Neoclassical Economic Growth to Degrowth in Europe. Challenges for Public Administration*. **Revista» Administratie si Management Public «(RAMP)**, 34, 2020, 150-170.

41. B. Kleinman, E. Liu, S. J. Redding, & M. Yogo. *Neoclassical Growth in an Interdependent World* (No. w31951). National Bureau of Economic Research, 2023.

42. D. Villanueva. *Toward a General Neoclassical Theory of Economic Growth*. **Philippine Review of Economics**, 60(2), 2023, 64-80.

43. A. Yusuf, & S. Mohd. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.

44. K. C. Aghaulor. *Growth Impact of Insecurity on the Nigerian Economy*. **UJAH: Unizik Journal of Arts and Humanities**, 21(3), 2020, 147-171.

45. D. Mhlanga. *The Impact of Financial Inclusion on Poverty from the Neoclassical Theory in the Fourth Industrial Revolution*. In Digital Financial Inclusion: Revisiting Poverty Theories in the Context of the Fourth Industrial Revolution. Cham: Springer International Publishing, 2022, 227-247.

46. F. Yuan, & P. Zhang. *Are Natural Resources, Sustainable Growth and Entrepreneurship Matter Endogenous Growth Theory? The Strategic Role of Technical Progress*. **Resources Policy**, 96, 2024, 105189.

47. C. I. Jones. *The Past and Future of Economic Growth: A Semi-Endogenous Perspective*. **Annual Review of Economics**, 14(1), 2022, 125-152.

48. N. N. Thach. *Endogenous Economic Growth: The Arrow-Domer Theory and a Test on Vietnamese Economy*. **WSEAS Transactions on Business and Economics**, 17(1), 2020, 374-386.

49. M. Dizaji, & A. K. Badri. *Human Development, Social Security Costs and Poverty with a VAR Approach*. **Asian Journal of Sociological Research**, 2020, 5-18.

50. V. Cerra, R. Lama, & N. V. Loayza. *Links between Growth, Inequality, and Poverty*. **International Monetary Fund**, 68, 2021, 1-54.

51. S. Amar, & I. Pratama. *Exploring the Link between Income Inequality, Poverty Reduction and Economic Growth: An ASEAN Perspective*. **International Journal of Innovation, Creativity and Change**, 11(2), 2020, 24-41.

52. Y. Georgiev, & N. V. Vlaeva. *Poverty: The Social Factor Destabilizing National Security*. In 3rd International e-Conference on Studies in Humanities and Social Sciences, 2019.

53. H. U. Khan. *Regional Security Threats to CPEC: A Strategic Overview*. **Journal of the Research Society of Pakistan**, 56(1), 2019, 181-189.

Iqbal City University DO NOT COPY

54. Á. Deák. *Violence as a Dimension of Poverty: The Case of Colombia*. **AARMS, 20(Special Edition)**, 2021, 33-51.

55. L. Yu, & X. Li. *The effects of social security expenditure on reducing income inequality and rural poverty in China*. **Journal of Integrative Agriculture**, 20(4), 2021, 1060-1067.

56. M. Wackernagel, L. Hanscom, P. Jayasinghe, D. Lin, A. Murthy, E. Neill, & P. Raven. *The Importance of Resource Security for Poverty Eradication*. **Nature Sustainability**, 4(8), 2021, 731-738.

57. A. Ajodo-Adebanjoko, & U. O. Walter. *Poverty and the Challenges of Insecurity to Development*. **European Scientific Journal**, 10(14), 2014, 361-372.

58. A. Abdullahi. *Rural Banditry, Regional Security, and Integration in West Africa*. **Journal of Social and Political Sciences**, 2(3), 2019, 644-654.

59. T. F. Abiodun, O. Onafowora, & I. Ayo-Adeyekun. *Alarming Rate of Child Poverty in Northern Nigeria: Implications for National Security*. **American Research Journal of Humanities and Social Science (ARJHSS)**, 2(1), 2019, 1-10.

60. O. M. Ojeifo, & I. A. Osawe. *Analysis of the Future Trends of Urbanization, Poverty, and Security in Nigeria*. In Nuhu, M. B. & Kuma, S. S. (Eds.) **Land Policy Governance and Sustainable Development in Nigeria (A Book of Readings)**. Centre for Human Settlements and Urban Development (CHSUD), Federal University of Technology, Minna, Niger State, Nigeria, 2019, 93-107.

61. U. C. Okolie, A. O. Onyema, & U. S. Basey. *Poverty and Insecurity in Nigeria: An Empirical Study*. **International Journal of Legal Studies**, 2(6), 2019, 247-261.

62. A. E. Orhero. *Poverty, Unemployment, and National Insecurity in Nigeria's Fourth Republic*. **International Journal of Legal Studies**, 2(6), 2019, 89-98.

63. J. B. Ayodele, A. A. Odunlami, & O. M. Okere. *Poverty, Unemployment, and National Security Challenges in Nigeria*. **EKSU Journal of Education**, 9(1), 2019, 43-49.

64. M. W. Apikins. *Interrogating the Nexus between Insecurity, Poverty, and Unemployment in North Eastern Nigeria: Contextualizing the Boko-Haram Insurgency*. **International Journal of Operational Research in Management, Social Sciences & Education**, 6(1), 2020, 308-322.

65. S. I. Odoh, F. C. Nnaji, & A. P. Ashondi. *Mass Poverty and Declining Human Security in Nigeria: A Critical Perspective*. **EBSU Journal of Social Sciences and Humanities**, 10(2), 2020, 51-62.

66. Y. A. Zoaka. *Poverty and National Security: Government Initiative in Perspective*. **International Journal of Operational Research in Management, Social Sciences & Education**, 6(1), 2020, 242-254.

Lead City University DO NOT COPY

67. S. E. Amila, & B. V. Luka. *Poverty as a Threat to Human Security in Nigeria*. **International Journal of Research and Innovation in Social Science (IJRISS)**, 4(1), 2020, 157-161.

68. T. S. Akinyetun. *Poverty, Cybercrime, and National Security in Nigeria*. **Journal of Contemporary Sociological Issues**, 1(2), 2021, 86-109.

69. T. A. Egunjobi. *Poverty, Unemployment, and Insecurity Challenges in Nigeria*. **Tanzanian Economic Review**, 11(1), 2021, 115-136.

70. C. O. Omodu. *Insurgency and Poverty in Africa: The case of North-East Region of Nigeria (2015–2019)*. **Ulysses International Journal of Humanities and Contemporary Studies**, 4(1), 2023, 194-213.

71. P. L. Oyigebe, & Z. R. Meshach. *Poverty-insecurity Nexus: An Albatross to National Development in Nigeria*. **Kashere Journal of Politics and International Relations**, 1(1), 2023, 157-168.

72. M. M. Abga, S. Magaji, & K. Z. Gambo. *The Impact of Poverty and Insecurity on Sustainable Development in Nigeria*. **Kashere Journal of Politics and International Relations**, 1(2), 2023, 1-12.

73. A. M. Oladoyin, G. U. Osimen, I. Adi, & O. Dada. *The Rising Insecurity in Nigeria: Interrogating the Linkage between Poverty and Banditry*. **Educational Administration: Theory and Practice**, 30(5), 2024, 11406-11415.

74. S. E. DiStefano, & M. Placek. *Does Poverty Rate Increase Terrorism in a Country? An Analysis from 1970-2019*. **University of South Carolina Upstate Student Research Journal**, 13(1), 2020, 1-11.

75. Z. Aminu, I. G. Aminu, & P. U. Mudiare. *Feminization of Poverty in Nigeria and Challenges to Sustainable Development (Chapter Six)*. In M. M. Maishanu, D. O. Abdulsalam, Y. T. Baba, I. M. Dankani, J. E. Acheoah, & A. Y. Abbani (Eds.), **Sustainable Development in Africa: The Journey So Far**. Faculty of Arts, Social and Management Sciences, Federal University Birnin Kebbi, 2019, 57-67.

76. A. Kostan, S. Olschar, L. Simko, & Y. Acar. *Exploring Digital Security and Privacy in Relative Poverty in Germany*. In the Proceedings of the 33rd USENIX Security Symposium. USENIX Security 24, 2022, 2029-2046.

77. J. Birkmann, E. Liwenga, R. Pandey, E. Boyd, R. Djalante, F. Gemenne, W. Leal Filho, P. F. Pinho, L. Stringer, & D. Wrathall. *Poverty, Livelihoods, and Sustainable Development*. In H.-O. Pörtner, D. C. Roberts, M. Tignor, E. S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, & B. Rama (Eds.), *Climate Change 2022: Impacts, adaptation, and vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2022, 1171–1274. Cambridge University Press.

Lead City University DO NOT COPY

78. Y. Zhu, S. Bashir & M. Marie. *Assessing the Relationship between Poverty and Economic Growth: Does Sustainable Development Goal can be Achieved?* **Environmental Science and Pollution Research**, 29(19), 2022, 27613-27623.

79. P. I. Nwosa & C. Ehinomen. *Inequality, Poverty and Economic Growth in Nigeria*. **EuroEconomica** 39(2), 2020.

80. O. F. Henneh. *Impact of Economic Growth on Poverty Reduction: Evidence from Ghana*. **Texila International Journal of Management**, 9(2), 2023, 1-17.

81. G. E. Nzeribe, Uju R. Ezenekwe, M.C. Uzonwanne, Amaka G. Metu & Chekwube V. Madichie. *Poverty-Growth-Inequality Triangle: Empirical Evidence from Nigeria*. **Toruńskie Studia Międzynarodowe**, 2(16), 2022, 85-102.

82. P. Balasubramanian, F. Burchi & D. Malerba. *Does Economic Growth Reduce Multidimensional Poverty*? *Evidence from Low-And Middle-Income Countries*. **World Development**, 161, 2023, 106119.

83. G.Dursun & B. Ogunleye. *Economic Growth, Employment and Poverty Reduction: The Case of West African Countries*. **American Journal of Economics**, 6(1), 2016, 50-60.

84. K. M. Bello & T. O. Akinbobola. *Trade Openness, Economic Growth and Poverty Reduction in ECOWAS Countries: (A Panel Causality)*. A Paper Presented at the "Institutional Framework for the Practice of SDGs: Actions, Challenges and Implementation" Conference at Obafemi Awolowo University. Ile -Ife. Nigeria, 2020.

85. G. Soava, Georgeta, A. Mehedintu & A. Sterpu. *Relations between Income Inequality, Economic Growth and Poverty Threshold: New Evidences from EU Countries Panels*. **Technological and Economic Development of Economy**, 26(2), 2020, 290-310.

86. T. Olasode, C. Eke & O.O. Olaleye. *Has Economic Growth Reduced Poverty in Nigeria? A Critical Analysis of the Last Two Decades*. **Journal of Enterprise and Development**, 4(2), 2022, 232-256.

87. S. Amar & I. Pratama. *Exploring the Link between Income Inequality, Poverty Reduction and Economic Growth: An ASEAN Perspective*. **International Journal of Innovation, Creativity and Change**, 11(2), 2020, 24-41.

88. P. Ekpeyong. *Econometric Analysis of the Impact of Inflation, Unemployment, and Economic Growth on Poverty Reduction: A Novel Application of Asymmetric Technique*. **Asian Journal of Economics and Empirical Research**, 10(1), 2023.

89. G. O. Ajike & S. I. Oladeji. *Evidence of Kuznets Hypothesis in Economic Growth on Poverty Reduction in Nigeria*. **Sapientia Global Journal of Arts, Humanities and Development Studies**, 4(1), 2021.

90. O. F. Henneh. *Impact of Economic Growth on Poverty Reduction: Evidence from Ghana*. **Texila International Journal of Management**, 9(2), 2023, 1-17.

Leadcity University DO NOT COPY

91. B. Omoniyi, O. O. Ogunwole & S. O. Owolabi. *Public Perception of the Effects of Poverty on Economic Growth in Ghana*. **Advances in Social Sciences Research Journal**, 8(5), 2021, 172-194.

92. D. G. Nadege, G. Q. Kane, & J. Novignon. *Is Growth Pro-Poor in Benin? Evidence using a Multidimensional Measure of Poverty*. **Poverty & Public Policy**, 9(4), 2017, 426-443.

93. A. D. Yelognisse, K. A. J. Alia, & E. R. Fiamohe. *On Poverty and the Persistence of Poverty in Benin*. **Journal of Economic Studies**, 43(4), 2016, 661-676.

94. T. Muhammad, U. Burki, & T. Azid. *Terrorism and Environmental Sustainability: Empirical Evidence from the MENA Region*. **Resources, Environment and Sustainability**, 8, 2022, 100056.

95. N. L. Sevitenyi, & H. A. Nathaniel. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, 69-69.

96. A. L. Dhar. *Exploring the Relationship between National Security Risks and Economic Factors: A Nepalese Perspective*. **Journal of Political Science**, 2024, 39-56.

97. R. Husam, C. U. Ifediora, J. A. Odugbesan, B. C. Iloka, J. X. Rita, R. M. Dantas, M. N. Mata, & J. M. Martins. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

98. I. Saddam, B. Mehmood, & R. Aslam. *Terrorism and Poverty: Double Trouble for Macroeconomic Performance in African Countries*. **African Journal of Economic Review**, 5(1), 2017, 1-13.

99. A. Christian, J. E. Ogbuabor, & B. U. Onah. *How is Institutional Quality Moderating the Effect of Terrorism on International Tourism, Trade, Foreign aid Inflow and Economic Growth in Sub-Saharan Africa*? **Foreign Trade Review**, 2024.

100. A. Christian, A. J. Mbah, & C. S. Agu. *Investigating the Economic Consequence of Terrorism in Sub-Saharan Africa: Evidence from a Dynamic Panel Model*. **Statistics, Politics and Policy**, 14(2), 2023, 125-149.

101. S. Qasim, S. Sidra, A. Rauf, & H. M. A. Siddique. *Impact of Terrorism on Economic Growth in South Asian Country*. **International Journal of Economics and Financial Issues**, 10(4), 2020, 185.

102. A. K. Ametowoyo. *Is Terrorism a Spoilsport for the Sustainability of Economic Development?: Evidence from the Economic Community of West African States*. **International Journal of Social Economics**, 50(7), 2023, 956-968.

103. O. I. Chimere, & H. E. Ichoku. *Terrorism and Economic Growth in Africa: Understanding the Role of Military Expenditure*. **Behavioral Sciences of Terrorism and Political Aggression**, 15(4), 2023, 448-462.

Edo City University DO NOT COPY

104. A. Simplice, & T. N. Nchofoung. *The Terrorism-Finance Nexus Contingent on Globalisation and Governance Dynamics in Africa*. No. WP/21/016. AGDI Working Paper, 2021.

105. B. Sana, M. W. Zafar, M. N. A. Talib, Z. Nawaz, & M. Fatima. *Impact of Terrorism on Economic Development of South Asian Economies*. In International Conference on Management Science and Engineering Management,. Cham: Springer International Publishing, 2022, 536-551.

106. Y. Abdulkarim, & S. Mohd. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.

107. C. G. Chioma, & E. E. Inimino. *Recurrent Expenditure on Internal Security and Economic Growth in Nigeria*. **European Journal of Social Sciences Studies**, 9(4), 2024.

108. A. S. Ndubisi, C. D. Mgbatogu, & U. C. Nzewi. *Impact of Insecurity on Nigerian Economic Growth and Development*. **International Journal of Development and Economic Sustainability**, 10(5), 2022, 1-13.

109. C. Chuku, D. Abang, & I. Isip. *Growth and Fiscal Consequences of Terrorism in Nigeria*. **Defence and Peace Economics**, 30(5), 2019, 549-569.

110. A. B. Oluwaseun, M. B. A. Ifeoma, E. B. Aduku, & C. A. Ameh. *Terrorism, Human Capital Development and Economic Growth in Nigeria*. **International Journal of Economics Development Research (IJEDR)**, 2(2), 2021, 142-155.

111. Y. Abdulkarim, & S. Mohd. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.

112. P. Ebipre, G. Wilson, B. Boro, & K. Ajuru. *The Impact of National Insecurity on Economic growth: The Case of Nigeria*. **International Journal of Innovative Legal and Political Studies**, 8(2), 2020, 13-21.

113. N. L. Sevitenyi, & H. A. Nathaniel. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, 69-69.

114. M. O. Mukolu, & B. N. Ogodor. *Insurgency and its Implication on Nigeria Economic Growth*. **International Journal of Development and Sustainability**, 7(2), 2018, 492-501.

115. U. I. Victor, O. I. Jibrin, I. A. Shehu, & G. Solomon. *Investment and Economic Growth Nexus in Nigeria: A Moderation Analysis of Security Threats*. Editorial Board, 2023, 250.

116. N. Alwell. *Security Expenditure: Implications on Economic Growth in Nigeria*. **International Journal of Economics, Business and Management Studies**, 7(2), 2020, 234-246.

117. O. I. Jibrin, V. U. Ijirshar, A. S. Ibrahim, & S. I. Ogoda. *Impact of Security Threats on Investment in Nigeria*. **CECCAR Business Review**, 5(1), 2024, 59-72.

Lead City University DO NOT COPY

118. R. E. Mathew, J. W. Naphtali, & D. Irefin. *Terrorism and Economic Growth in Nigeria*. **ABUAD Journal of Social and Management Sciences,** 5(2), 2024, 358-381.

119. E. R. Kojo, & C. N. Nkalu. *Growth and Fiscal Effects of Terrorism in Nigeria*. In The Impact of Global Terrorism on Economic and Political Development, Emerald Publishing Limited, 2019, 293-306.

120. A. K. Cletus. *Growth Impact of Insecurity on the Nigerian Economy*. **Unizik Journal of Arts and Humanities**, 21(3), 2020, 147-171.

121. D. I. Ikechukwu. *The Effects of Terrorism on Peace and National Development in Nigeria*. **Journal of Public Administration, Finance and Law**, 10(22), 2021, 315-338.

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Chapter Three

Methodology

This chapter of the study concentrated on the methodology utilized to investigate the relationship among security threats, poverty, and economic growth in West Africa. This delineated the specifications of empirical models, *a priori* expectations, estimating methodologies and diagnostic assessments, and data sources and measurements.

3.1 Model Specification

3.1.1 Empirical Model of Poverty and Security Threats

Few empirical studies examine the impact of poverty on security threats. Most prior investigations constructed their analytical framework based on the principle of relative deprivation. Based on the relative deprivation theory and the conceptual framework presented in the previous chapter, they serve as a foundation for understanding how poverty rates impact the security challenges encountered by West African nations. This theory suggests that individuals or groups perceive themselves to be deprived of resources or conditions they believe they are entitled to, relative to others in society[1,2]. The perception of this deprivation often leads to frustration, resentment, and aggression, which can manifest as social unrest, crime, or other forms of insecurity. Poverty exacerbates this sense of deprivation, especially when individuals compare their conditions to more affluent members of society, potentially leading to violent behaviour or a rise in security threats[4,5,6]. In the context of West Africa, where the numbers of people below the poverty line are prevalent, the relative deprivation theory provides a comprehensive lens through which to analyse the complexities of the security threats.

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In a theoretical model examining the influence of poverty rate on security threats, it posits that higher poverty rates are intrinsically linked to increased vulnerability and social unrest. Poverty often leads to a lack of access to basic needs such as food, shelter, education, and healthcare, which can create a sense of desperation among affected populations. This desperation manifest in various forms of crime, civil unrest, or even organized violence, as individuals or groups seek to address their grievances through illegal or aggressive means[3].

Moreover, poverty can exacerbate inequalities within a society, leading to feelings of marginalization and disenfranchisement among the poor. When segments of the population perceive themselves as excluded from economic opportunities and political power, they resort to radicalization to express their discontent or seek change. This radicalization manifest as support for extremist groups that promise to address their grievances, further escalating security threats[4].

In addition to fostering criminal behaviour and radicalization, poverty weaken social institutions that are critical for maintaining security and stability. High poverty rates often correlate with underfunded education systems and diminished law enforcement capabilities, reducing the effectiveness of crime prevention and community policing efforts. As a result, communities become less cohesive, leading to an erosion of trust among residents and between the community and law enforcement, which can heighten the risk of violence and unrest[5]. The empirical model linking poverty and security threats is presented as:

$$st_{i,t} = \theta_0 + \phi pov_{i,t} + e_{i,t} \quad (3.1)$$

Where: *st* represents the security threats; *pov* is poverty headcount ratio at $2.15 per day; θ_0, ϕ are parameters; *e* denotes stochastic term; *i* is country; and *t* represents time. The study further considered the influence of other key variables such as unemployment rate, governance

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measured by average government effectiveness and political stability, income per capita, income inequality measured by Gini coefficient, and education proxy by primary school enrolment.

High unemployment can create a sense of hopelessness and frustration, particularly among youth. When individuals lack economic opportunities, they turn to crime or join extremist groups as a means of survival or expression of discontent. This disillusionment leads to increased social unrest, as unemployed individuals may feel marginalized and excluded from the benefits of society[6,7]. As to governance, the capacity of a government to implement policies effectively and provide essential services directly influences societal stability. Effective governance fosters trust and cooperation among citizens, enhancing social cohesion. Conversely, ineffective governance leads to corruption, neglect of public needs, and inadequate law enforcement, creating an environment ripe for insecurity. When citizens perceive that their government is failing to protect their rights or improve their living conditions, it can escalate tensions and lead to violence[8]. Regarding political stability, a stable political environment typically promotes social order and security. Conversely, political instability marked by conflict, protests, or abrupt changes in leadership can erode public trust in institutions and increase vulnerability to violence. In unstable contexts, extremist groups exploit the chaos to gain influence, further threatening security[9].

For income per capita, higher GDP per capita generally indicates better economic conditions and a higher standard of living. Economies that thrive typically invest more in public services, including education and health, which can mitigate security threats. Conversely, low GDP per capita often correlates with high poverty rates, limited access to resources, and increased desperation, all which fuel crime and unrest[10]. Concerning income inequality (Gini coefficient), high levels of income inequality breeds resentment and social divisions, undermining social cohesion. When wealth is concentrated in the hands of a few, marginalized groups may feel

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disenfranchised, leading to tensions and potential conflict. Societies with high income inequality often experience higher crime rates and social unrest, as those on the lower end of the economic spectrum seek to address their grievances[11,12,13]. Also, education plays a pivotal role in shaping societal outcomes. Higher primary school enrolment generally leads to better educational attainment and improved job prospects. An educated populace is often more engaged in civic activities and less likely to resort to violence. Conversely, low enrolment rates perpetuate cycles of poverty and unemployment, leaving individuals more susceptible to recruitment by extremist groups or involvement in crime[13,14]. The study also considers empirical analysis for each of the colonial origin of the region such as Anglophone, Francophone, and Lusophone countries. Differences in colonial legacies (Anglophone, Francophone, and Lusophone systems) have resulted in varying institutional structures, governance frameworks, legal systems, monetary arrangements, and development trajectories. These structural differences may influence how poverty and security threats interact and how their combined effects translate into economic outcomes. Incorporating the variables into model (3.1), the empirical model is represented as:

$$st_{i,t} = \theta_0 + \phi_1 pov_{i,t} + \phi_2 uemp_{i,t} + \phi_3 gov_{i,t} + \phi_4 ipc_{i,t} + \phi_5 ineq_{i,t} + \phi_6 edu_{i,t} + e_{i,t} \quad (3.2)$$

Where: *st* represents the security threats; *pov* is poverty headcount ratio at $2.15 per day; *unemp* is unemployment rate; *gov* denotes governance measured by average of government effectiveness and political stability; *ipc* represents GDP per capita; *ineq* is income inequality measured by Gini coefficient; *edu* is education proxy by primary school enrolment; θ_0, ϕ_{1-6} are parameters; *e* denotes stochastic term; *i* is country; and *t* represents time (where: $i = 1, 2, 3, ..., N$).

3.1.2 Empirical Model of Poverty and Economic Growth

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Based on the endogenous growth paradigm and prior empirical studies, the empirical model delineating the relationship between poverty and economic growth is articulated as follows[15,16,17]:

$$ipc_{i,t} = \theta_0 + \theta_1 pov_{i,t} + v_{i,t} \quad (3.3)$$

Where: *ipc* denotes the economic growth measured by GDP per capita growth; and *pov* is poverty headcount ratio at $2.15 per day. The disturbance term is represented by v; i and t denote country and time respectively (where $i = 1,2,3,\ldots n$); and θ_o, θ_1 are parameters.

Following existing empirics and theory, other key factors of economic growth considered in this study are capital investment, human capital development measured by primary school enrolment and life expectancy, income inequality measured by Gini coefficient, governance measured by average of government effectiveness and political stability. Regarding capital investment, it directly enhances the production capacity of an economy by improving labour productivity, reducing costs, and encouraging innovation. With more capital, businesses can produce goods and services more efficiently, contributing to higher output. Additionally, capital investments in infrastructure such as roads, ports, and electricity improve the connectivity of markets and boost trade and commerce, further accelerating economic growth[18,19]. As for human capital development (measured by primary school enrolment and life expectancy), when more children receive basic education, they are better prepared to contribute to the workforce, driving productivity and innovation in the future. A more educated workforce can adapt to new technologies and engage in more skilled labour, which in turn boosts overall productivity[20,21]. In addition, a higher life expectancy reflects better healthcare systems and healthier workforces, which are critical for maintaining high productivity levels. A healthier population has fewer sick

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days, greater efficiency, and a longer working lifespan, all of which contribute positively to economic growth[20,21].

Concerning income inequality captured by Gini coefficient, high inequality can limit the opportunities for lower-income individuals to access education, healthcare, and employment, thus restricting overall human capital development. Moreover, inequality can lead to social unrest, weaken political stability, and reduce public trust in institutions, which discourages investment. This can slow economic growth, as businesses are less likely to invest in unstable environments. Lower inequality generally ensures more equitable access to resources, fostering inclusive growth[22,23]. For governance measured by average of government effectiveness and political stability, government effectiveness refers to the quality of public services, the capacity of the government to implement sound policies, and the absence of corruption. A well-functioning government promotes efficient allocation of resources, supports innovation, and ensures that infrastructure projects are successfully completed, all of which are critical for sustainable growth. As to political stability, investors are more likely to commit to long-term projects in stable political environments, while effective governments ensure that policies promoting innovation, education, and health are effectively implemented. Together, these governance factors create a conducive environment for sustained economic growth by ensuring that both public and private sectors function efficiently[24,25]. The study also estimate the model for each of the colonial origin of the region such as Anglophone, Francophone, and Lusophone countries. Incorporating these variables, equation (3.3) becomes:

$$ipc_{i,t} = \theta_0 + \theta_1 pov_{i,t} + \theta_2 inv_{i,t} + \theta_3 edu_{i,t} + \theta_4 hlt_{i,t} + \theta_5 ineq_{i,t} + \theta_6 gov_{i,t} + v_{i,t} \quad (3.4)$$

Where: *ipc* denotes the economic growth measured by GDP per capita growth; *pov* is poverty headcount ratio at $2.15 per day; *inv* denote capital investment; *edu* is education measured by

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primary school enrolment; *hlt* represents health captured by life expectancy; *ineq* is income inequality measured by Gini coefficient; and *gov* is governance measured by average of government effectiveness and political stability. The disturbance term is represented by v; i and t denote country and time respectively (where $i = 1,2,3,...n$); and θ_o, θ_{1-6} are parameters.

3.1.3 Empirical Model of Security Threats and Economic Growth

According to the theoretical framework and prior research, the empirical model delineating the link between security threats and economic growth is articulated as follows[26,27,28]:

$$ipc_{i,t} = \pi_0 + \pi_1 st_{i,t} + \mu_{i,t} \quad (3.5)$$

Where: *ipc* denotes the economic growth measured by GDP per capita growth; and *st* represents the security threats. The disturbance term is represented by μ; i and t denote country and time respectively; π_0, π_1 are parameters; where $i = 1,2,3,...n$.

The research examines several critical aspects that influence economic growth, grounded in established empirical evidence and theoretical models. The criteria encompass capital investment, human capital development assessed through primary school enrolment and life expectancy, income inequality evaluated by the Gini coefficient, and governance gauged by the average of government performance and political stability. Capital investment directly augments an economy's output capacity by enhancing labour productivity, lowering costs, and fostering innovation. Increased capital enables enterprises to create goods and services more efficiently, resulting in elevated output. Moreover, capital investments in infrastructure, like roads, ports, and energy, enhance market connection and stimulate trade and commerce, hence expediting

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economic expansion[18,19]. Human capital development, indicated by primary school enrolment and life expectancy, suggests that increased access to basic education equips children to enhance worker productivity and foster innovation in the future. An educated workforce can adapt to new technologies and participate in more skilled jobs, hence enhancing overall output[20,21]. Moreover, an increased life expectancy signifies superior healthcare systems and healthier labour forces, which are essential for sustaining elevated production levels. A healthier populace has fewer sick days, enhanced productivity, and an extended working lifespan, all of which favourably influence economic growth[20,21].

The Gini coefficient indicates that significant income disparity might hinder lower-income individuals' access to education, healthcare, and employment, hence constraining overall human capital development. Furthermore, inequality may incite social unrest, undermine political stability, and diminish public confidence in institutions, so deterring investment. This may impede economic growth, as enterprises are less inclined to invest in volatile conditions. Reduced inequality typically guarantees more equitable resource access, promoting inclusive growth[22,23]. Governance, assessed by the average of government effectiveness and political stability, defines government effectiveness as the quality of public services, the government's ability to implement solid policies, and the lack of corruption. An effective government facilitates optimal resource allocation, fosters innovation, and guarantees the successful execution of infrastructure projects, all of which are essential for sustainable growth. Investors are more inclined to engage in long-term projects under stable political contexts, while competent governments guarantee the successful execution of policies that foster innovation, education, and health. Collectively, these governance variables establish a direct environment for sustainable economic growth by assuring the efficient operation of both public and private

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sectors[24,25]. The study also estimate the model for each of the colonial origin of the region such as Anglophone, Francophone, and Lusophone countries. By including these variables, equation (3.5) is transformed:

$$ipc_{i,t} = \pi_0 + \pi_1 st_{i,t} + \pi_2 inv_{i,t} + \pi_3 edu_{i,t} + \pi_4 hlt_{i,t} + \pi_5 ineq_{i,t} + \pi_6 gov_{i,t} + v_{i,t} \quad (3.6)$$

Where: *ipc* denotes the economic growth measured by GDP per capita growth; *st* is security threats; *inv* denote capital investment; *edu* is education measured by primary school enrolment; *hlt* represents health captured by life expectancy; *ineq* is income inequality measured by Gini coefficient; and *gov* is governance measured by average of government effectiveness and political stability. The disturbance term is represented by v; i and t denote country and time respectively (where $i = 1,2,3,\ldots n$); and π_o, π_{1-6} are parameters.

3.1.4 Model of the Interactive Effects of Security Threats and Poverty on Economic Growth

In accordance with the theoretical model and prior research, the model delineates the relationship among security threats, poverty, and economic growth as follows[15,16,17,26,27,28]:

$$ipc_{i,t} = \vartheta_0 + \vartheta_1 st_{i,t} + \vartheta_2 pov_{i,t} + \vartheta_3 \left(st \times pov\right)_{i,t} + e_{i,t} \quad (3.7)$$

Where: *ipc* denotes the economic growth measured by GDP per capita growth; *st* is security threats; and *pov* is poverty headcount ratio at $2.15 per day. The interactive term of security threats and poverty rates is denoted by *st*×*pov*. The disturbance term is represented by e; i and t denote country and time respectively; $\vartheta_0, \vartheta_{1-3}$ are parameters; where $i = 1,2,3,\ldots n$.

The study uses existing empirical studies and theoretical frameworks to examine a number of factors that affect economic growth. These determinants include capital investment, governance

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as determined by the average of political stability and government effectiveness, income inequality as determined by the Gini coefficient, and human capital development as determined by life expectancy and primary school enrolment. By raising worker productivity, cutting expenses, and promoting innovation, capital investment directly increases an economy's potential for production. Businesses can increase output by producing goods and services more efficiently when they have more capital. Economic growth is further accelerated by capital expenditures in infrastructure, such as ports, roads, and power, which increase trade and commerce and improve market connectivity[18,19]. In terms of human capital development (as indicated by life expectancy and primary school enrolment), more children who acquire a basic education are better equipped to contribute to the workforce, which will spur future innovation and productivity. A workforce with higher levels of education is better equipped to use new technology and do more skilled labour, both of which increase overall productivity[20,21]. A longer life expectancy also indicates healthier workforces and improved healthcare systems, both of which are essential for sustaining high levels of productivity. People who are in better health use fewer sick days, are more productive, and work longer, all of which boost economic growth[20,21].

In terms of economic inequality as measured by the Gini coefficient, high inequality can hinder lower-income people's access to jobs, healthcare, and education, which in turn can impede the development of human capital. Furthermore, inequality can erode political stability, cause social unrest, and erode public confidence in institutions, all of which deter investment. Because companies are less inclined to invest in insecure conditions, this can impede economic progress. More fair access to resources is typically ensured by lower inequality, which promotes inclusive growth[22,23]. In terms of governance as determined by the average of political stability and government effectiveness, government effectiveness is defined as the standard of public services,

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the ability of the government to carry out sensible policies, and the lack of corruption. An effective government encourages resource allocation, fosters innovation, and guarantees the successful completion of infrastructure projects, all of which are essential for long-term, sustainable growth. In terms of political stability, stable political settings encourage investors to commit to long-term projects, and successful governments make sure that laws supporting innovation, health, and education are carried out. When combined, these governance elements guarantee that the public and private sectors operate effectively, fostering an atmosphere that supports long-term economic progress[24,25]. The study also estimate the model for each of the colonial origin of the region such as Anglophone, Francophone, and Lusophone countries. By incorporating these variables, equation (3.7) is modified.

$$ipc_{i,t} = \vartheta_0 + \vartheta_1 st_{i,t} + \vartheta_2 pov_{i,t} + \vartheta_3 \left(st \times pov\right)_{i,t} + \vartheta_4 inv_{i,t} + \vartheta_5 edu_{i,t} + \vartheta_6 hlt_{i,t} + \vartheta_7 ineq_{i,t} + \vartheta_8 gov_{i,t} + e_{i,t} \quad (3.8)$$

Where: *ipc* denotes the economic growth measured by GDP per capita growth; *st* is security threats; *pov* is poverty headcount ratio at $2.15 per day; *edu* is education measured by primary school enrolment; *hlt* represents health captured by life expectancy; *ineq* is income inequality measured by Gini coefficient; *gov* is governance measured by average of government effectiveness and political stability; and *DUM* is a vector of dummy of colonial origins of countries in the region. The interactive term of security threats and poverty rates is denoted by *st*×*pov*. The disturbance term is represented by e; i and t denote country and time respectively; and $\vartheta_0, \vartheta_{1-7}$ are parameters; where $i = 1,2,3,\ldots n$.

3.2 A priori Expectations

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Concerning the security threat model, poverty exacerbates security threats by increasing frustration and social unrest, as individuals struggle to meet basic needs. People in poverty are more likely to engage in crime or be recruited by extremist groups as a means of survival. The unemployment rate similarly fuels security threats, as lack of employment opportunities leads to desperation and the potential for increased criminal behaviour. Poor governance weakens state institutions, allowing corruption and lawlessness to thrive, which in turn fosters insecurity. Conversely, strong governance can mitigate security threats by maintaining law and order and providing public services. Income per capita represents the average income of a population; lower income per capita often correlates with higher levels of deprivation, which can lead to crime and social instability. High income inequality (measured by the Gini coefficient) can cause resentment between socioeconomic classes, leading to tension and violence, as the less affluent feel marginalized. Finally, education plays a critical role in reducing security threats. Higher levels of education provide individuals with better job opportunities, reducing the likelihood of resorting to criminal activities. Moreover, educated individuals are more likely to engage in civic processes and contribute to political stability, thus diminishing the risk of insecurity.

As to economic growth model, security threats negatively impact economic growth by disrupting economic activities, discouraging investment, and increasing the cost of doing business. Insecure environments reduce productivity and deter foreign and domestic investments, leading to slower growth. Poverty similarly hampers growth by limiting access to education, healthcare, and productive resources, trapping individuals in low productivity and reducing human capital development. Capital investment boosts growth by enhancing the production capacity of an economy, improving infrastructure, and increasing efficiency. Without sufficient capital investment, economies struggle to expand and innovate. Human capital development (through

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education and health) is critical for long-term growth, as a more educated and healthier workforce is more productive and capable of adopting new technologies. Income inequality can inhibit growth by limiting the opportunities for large segments of the population to participate in the economy, creating social unrest and reducing overall economic efficiency. Lastly, effective governance promotes growth by providing stable and predictable political and legal environments, ensuring efficient resource allocation, reducing corruption, and encouraging investment, while poor governance leads to inefficiencies and instability that undermine growth.

3.3 Estimation Techniques and Diagnostic Assessments

3.3.1 Panel Unit Root Tests

Before proceeding to cointegration techniques, it is crucial to confirm that all variables are integrated at the same level. To achieve this, the study will utilize two primary tests: the first-generation panel unit root test by Im, Pesaran, and Shin (IPS), and the second-generation test developed by Pesaran[29,30]. These tests are favoured over others such as those by Levin, Lin, and Chu, and Breitung[31,32,33]. The reason for this preference is that IPS tests can accommodate heterogeneity in the autoregressive coefficient, a feature missing in other tests. IPS tests address the serial correlation problem observed in Levin and Lin's approach by incorporating heterogeneity between units in a dynamic panel framework. This approach allows a more accurate assessment of unit root characteristics across the studied variables, thereby improving the robustness of the analysis. The basic equation for the IPS panel unit root tests is:

$$\Delta y_{i.t} = \beta_i + \varphi_i y_{i,t-1} + \sum_{j=1}^{p} \theta_{ij} \Delta y_{i,t-j} + v_{i,t} \qquad i = 1,2,...,N\,; \quad t = 1,2,...,T \tag{3.9}$$

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Where $y_{i.t}$ represents each variable in the model, β_i denotes the individual fixed effect, and p is selected to ensure that the residuals are uncorrelated over time. The null hypothesis states that $\varphi_i = 0$ for all i, versus the alternative hypothesis, which asserts that $\varphi_i < 0$ for some $i = 1,...,N_1$ and $\varphi_i = 0$ for $i = N_1 + 1,...,N$.

The IPS statistic is calculated by averaging the individual Augmented Dickey–Fuller (ADF) test statistics, which is expressed as follows:

$$t_{IPS} = \frac{1}{N}\sum_{i=1}^{N} t_{iT} \tag{3.10}$$

Where t_{iT} is the ADF t-statistic for country iii based on the ADF regression for that country, as seen in the previous equation (3.9). Under the null hypothesis (H_0), the IPS statistic follows a normal distribution, with critical values provided for specific sample sizes N and T[29].

The IPS test assumes that cross-sections in the panel data are independent, which is a limitation found in all first-generation panel unit root tests. However, research has shown that cross-sectional dependence can emerge from multiple factors such as shared unobserved influences, externalities, regional economic connections, and macroeconomic linkages. Recently, second-generation panel unit root tests have been developed to handle this issue of cross-sectional dependence and interdependence, recognizing the widespread impact of macroeconomic dynamics and interconnected systems. One widely acknowledged second-generation test that addresses this challenge is the Cross-Sectional Augmented IPS (CIPS) test, introduced by Pesaran. To account for cross-sectional dependence, Pesaran proposed the Cross-Sectional Augmented Dickey-Fuller (CADF) regression, which is estimated using the Ordinary Least Squares (OLS) method for each individual cross-section in the panel[30]. This approach

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incorporates cross-sectional averages to mitigate the dependence issue and provide a more reliable test for unit roots[30].

$$\Delta y_{i.t} = \beta_i + \varphi_i y_{i,t-1} + \vartheta_i \bar{y}_{t-1} + \sum_{j=0}^{k} \vartheta_{ij} \Delta \bar{y}_{i,t-j} + \sum_{j=0}^{k} \Delta y_{i,t-j} + v_{i,t} \tag{3.11}$$

where, $\bar{y}_{t-1} = \left(\frac{1}{N}\right)\sum_{i=1}^{N} y_{i,t-1}, \Delta\bar{y}_t = \left(\frac{1}{N}\right)\sum_{i=1}^{N} y_{i,t}$, and $t_i(N,T)$ is the t-statistic of the coefficient of φ_i in equation (3.11), employed for estimating the cross-section ADF statistics. More specifically, Pesaran introduced the Cross-Sectional Augmented IPS (CIPS) test statistic, which is calculated as the average of the individual Cross-Sectional Augmented Dickey-Fuller (CADF) statistics. This method accounts for cross-sectional dependence, making it a more robust approach in panel data settings where interdependence between units may exist.

$$CIPS = \left(\frac{1}{N}\right)\sum_{i=1}^{N} t_i(N,T) \tag{3.12}$$

Pesaran has compiled a set of critical values for the CIPS test, covering a range of deterministic components. These values are essential for interpreting the results of the test, as they allow for the evaluation of the null hypothesis concerning the presence of unit roots, based on different model specifications. The critical values correspond to various sample sizes and combinations of deterministic terms, providing a comprehensive reference for applying the CIPS test in empirical research[30].

3.3.2 Panel Cointegration Tests

Given the panel structure of the data, it was necessary to investigate whether the variables under consideration share a long-run equilibrium relationship despite potential short-run deviations. Traditional panel cointegration tests, such as those proposed by Pedroni and Kao, rely heavily on

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residual-based approaches that assume cross-sectional independence among units[34,35,36]. However, economic and social realities, such as poverty, security threats, inequality, unemployment, and government expenditures, are likely to be influenced by common global or regional shocks. This violates the assumption of independence and makes second-generation cointegration tests more appropriate[37].

As a result, the study employed the Westerlund Error Correction Model (ECM) panel cointegration test developed by Westerlund[38]. Unlike residual-based tests, the Westerlund test directly examines the existence of error correction in the panel system. Specifically, it tests the null hypothesis of no cointegration by determining whether the error correction term is significantly different from zero, which would indicate adjustment towards a long-run equilibrium.

The Westerlund ECM test is advantageous for several reasons. First, it allows for heterogeneity across cross-sectional units, acknowledging that the speed of adjustment to long-run equilibrium can differ among countries or regions. Second, it accounts for cross-sectional dependence through bootstrapping methods, which improves the reliability of test statistics in the presence of common factors affecting all panel units[39]. Third, it provides both group-mean statistics (Gt and Ga) and panel statistics (Pt and Pa), allowing for the distinction between cointegration that is present in at least one panel unit versus cointegration that is common to the panel as a whole.

Mathematically, the ECM representation can be written as:

$$\Delta y_{it} = \alpha_i + \delta_i t + \phi_i \hat{y}_{i,t-1} + \sum_{j=1}^{p} \tau_{ij} \Delta y_{i.t-j} + \sum_{j=0}^{q} \beta_{ij} \Delta x_{i.t-j} + \varepsilon_{it} \quad (3.13)$$

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where y_{it} is the dependent variable, x_{it} represents the set of regressors, ϕ_i is the error correction coefficient that captures the speed of adjustment to equilibrium, and ε_{it} is the disturbance term. The null hypothesis is $H_0 : \phi_i = 0 \forall i$ indicating no error correction (and thus no cointegration), while the alternative hypothesis allows for $\phi_i < 0$ for at least some cross-sectional units.

The Westerlund test was conducted with the inclusion of deterministic components (constant and trend) and a specified lag structure to account for serial correlation in the residuals. Bootstrapped p-values were computed to ensure robustness of inference in the presence of cross-sectional dependence.

3.3.3 Panel Fully Modified Ordinary Least Square (FMOLS) Approach

The Panel FMOLS is a semi-parametric estimator that corrects ordinary least squares for two problems that routinely bias long-run parameter estimates in cointegrated systems: (a) endogeneity of regressors caused by feedback from the cointegrating error, and (b) serial correlation in the errors. The fully-modified correction (originally developed in the time-series context by Phillips and Hansen) removes the long-run bias by using nonparametric estimates of the long-run covariance matrix and one-sided corrections; Pedroni extended this idea to heterogeneous panels so that one can estimate long-run relations allowing for heterogeneity across cross-section units (group-specific short-run dynamics and allowing the long-run relation to be pooled or group-mean)[40].

Panel FMOLS is therefore well suited when: (a) variables are integrated (typically I(1)) but cointegrated, (b) for consistent estimates of the long-run coefficients that are robust to endogeneity and serial correlation, and (c) to allow for heterogeneity across panel units

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(countries, regions, firms)[41]. The long-run cointegrating relationship in levels (single-equation form):

$$y_{it} = \alpha_i + \beta_i' x_{it} + u_{it} \qquad i = 1,...,N; t = 1,...,T \tag{3.14}$$

where y_{it} is the dependent variable, x_{it} is the vector of regressors, α_i are individual intercepts, and u_{it} is the idiosyncratic error. FMOLS provides consistent estimates of the long-run slope(s) β by modifying the OLS estimator to remove the asymptotic bias produced by the correlation between Δx_{it} and u_{it}, and by serial correlation in u_{it}. The estimator uses semi-parametric estimators of the long-run covariance matrix to compute the correction terms (one-sided correction for endogeneity and a correction for serial correlation)[40]. Pedroni discusses implementations that (a) pool the long-run parameters (pooled FMOLS) and (b) compute group-mean FMOLS (estimate each cross-section separately then average), the group-mean variant is attractive when cross-section units have heterogeneous dynamics but share a common long-run relation in expectation[41].

3.4 Data Sources and Measurements

The study covers the duration from 2007 to 2023. Additionally, the sample includes 16 countries in West Africa, considering the availability of data on key variables of relevance. The necessary data was obtained from the Global Economy (2025) and the World Bank database, notably the World Development Indicators (WDI, 2025), and World Governance Indicators (WGI, 2025). Table 3.1 presents the measurement of variables, their explanations, and the corresponding sources.

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Table 3.1: Summary and Measurements of Variables

Signs	Variables	Measurements	Sources
ipc	Economic growth	Annual rate of GDP per capita growth on annual basis	WDI (2025)
st	Security threats	Insecurity index	Global Economy (2025)
pov	Poverty	Poverty headcount ratio at $2.15 a day	WDI (2025)
uemp	Unemployment	Total unemployment (% of total labour force)	Heritage Foundation (2025)
gov	Governance	Average of government effectiveness and political stability indexes	WGI (2025)
ineq	Income inequality	Gini coefficient	WDI (2025)
edu	Education	Primary school enrolment (% of gross)	WDI (2025)
hlt	Health	Average life expectancy after birth	WDI (2025)
inv	Capital investment	Gross fixed capital formation (% of GDP)	WDI (2025)

Source: Author's Compilation, 2025.

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Table 3.2. Classification of Countries

All West African Countries	Anglophone Countries	Francophone Countries	Lusophone Countries
Benin	Nigeria	Benin	Cape Verde (Cabo Verde)
Burkina Faso	Ghana	Burkina Faso	Guinea-Bissau
Cape Verde (Cabo Verde)	Sierra Leone	Côte d'Ivoire (Ivory Coast)	
Côte d'Ivoire (Ivory Coast)	Liberia	Mali	
The Gambia	The Gambia	Niger	
Ghana		Senegal	
Guinea		Togo	
Guinea-Bissau		Guinea	
Liberia		Mauritania	
Mali			
Mauritania			
Niger			
Nigeria			
Senegal			
Sierra Leone			
Togo			

Source: Author's Compilation, 2025.

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Endnotes

1. J. R. Kunst, & M. Obaidi. *Understanding Violent Extremism in the 21st Century: The (Re) Emerging Role of Relative Deprivation*. **Current Opinion in Psychology**, 35, 2020, 55-59.

2. S. A Power, T. Madsen, & T. A. Morton. *Relative Deprivation and Revolt: Current and Future Directions*. **Current Opinion in Psychology**, 35, 2020, 119-124.

3. B. Meuleman, K. Abts, P. Schmidt, T. F. Pettigrew, & E. Davidov. *Economic Conditions, Group Relative Deprivation and Ethnic Threat Perceptions: A Cross-National Perspective*. **Journal of Ethnic and Migration Studies**, 46(3), 2020, 593-611.

4. Z. Leviston, J. Dandy, J. Jetten, & I. Walker. *The Role of Relative Deprivation in Majority-Culture Support for Multiculturalism*. **Journal of Applied Social Psychology**, 50(4), 2020, 228-239.

5. D. Liu, S. Shen, R. Shillair, F. Li, & Z. Chen. *How Does Home Ownership Affect Migrants' Sense of Relative Deprivation? An Investigation Based on Field Theory*. **Social Science & Medicine**, 306, 2022, 115097.

6. E. P. Ogele. *Unemployment Crisis and Human Security Threat in Port Harcourt City, Nigeria, 2010-2019*. **Journal of Humanities and Social Sciences Studies**, *2*(4), 2020, 23-36.

7. E. S. Uchechukwu, A. F. Amechi, C. C. Okoye, & N. M. Okeke. *Youth Unemployment and Security Challenges in Anambra State, Nigeria*. **Scholars Journal of Arts, Humanities and Social Sciences**, 11(4), 2023, 81-91.

8. H. Rjoub, C. U. Ifediora, J. A. Odugbesan, B. C. Iloka, J. Xavier Rita, R. M. Dantas, M. N. Mata, & J. M. Martins. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

9. I. Brass, & J. H. Sowell. *Adaptive Governance for the Internet of Things: Coping with Emerging Security Risks*. **Regulation & Governance**, 15(4), 2021, 1092-1110.

10. M. B. Hossain, M. A. Long, & P. B. Stretesky. *Welfare State Spending, Income Inequality and Food Insecurity in Affluent Nations: A Cross-National Examination of OECD Countries*. **Sustainability**, 13(1), 2020, 324.

11. K. B. Ajide, & O. Y. Alimi. *Does Disparity in Income and Consumption Ever Incite Terrorism in Africa*? **World Affairs**, 184(3), 2021, 339-380.

12. C. Holleman, & V. Conti. *Role of Income Inequality in Shaping Outcomes on Individual Food Insecurity: Background Paper for the State of Food Security and Nutrition in the World 2019-FAO Agricultural Development Economics Working Paper 19-06*. Food & Agriculture Organization (FAO) Agricultural Development Economics Working Paper, 2020, 19-06.

Lead City University DO NOT COPY

13. K. B. Ajide, & O. Y. Alimi. *Income Inequality, Human Capital and Terrorism in Africa: Beyond Exploratory Analytics*. **International Economics**, 165, 2021, 218-240.

14. A. D. Garba, N. J. Ogunode, A. Musa, & I. Ahmed. *Effects of Insecurity on Tertiary Education in North-East Nigeria and Way Forward*. **Spanish Journal of Society and Sustainability**, 2, 2022, 10-17.

15. C. M. Madueke, A. O. Oladipo, J. N. Ozoh, N. F. Ezenwobi, & E. M. Ogodimma, *Evaluating the Effectiveness of Poverty Alleviation on Economic Growth in Nigeria*. **NAU Eco Journals**, 22(1), 2025, 73-90.

16. P. Balasubramanian, F. Burchi & D. Malerba. *Does Economic Growth Reduce Multidimensional Poverty? Evidence From Low-And Middle-Income Countries*. **World Development**, 161, 2023, 106119.

17. S. Amar & I. Pratama. *Exploring the Link between Income Inequality, Poverty Reduction and Economic Growth: An ASEAN Perspective*. **International Journal of Innovation, Creativity and Change**, 11(2), 2020, 24-41.

18. C. Sun, H. S. M. Abbas, X. Xu, S. Gillani, S. Ullah, & M. A. A. Raza. *Role of Capital Investment, Investment Risks, and Globalization in Economic Growth*. **International Journal of Finance & Economics**, 28(2), 2023, 1883-1898.

19. L. Zomchak, & M. Nehrey. *Economic Growth and Capital Investment: The Empirical Evidence*. In the International Conference on Artificial Intelligence and Logistics Engineering, Cham: Springer International Publishing, 2022, 645-652.

20. I. Chugunov, V. Makohon, T. Kaneva, & I. Adamenko. *Influence of Financial Support of Human Capital Development on Economic Growth*. **Problems and Perspectives in Management**, 20(2), 2022, 269-280.

21. M. S. Islam, & F. Alam. *Influence of Human Capital Formation on the Economic Growth in Bangladesh during 1990–2019: An ARDL Approach*. **Journal of the Knowledge Economy**, 14(3), 2023, 3010-3027.

22. S. Aiyar, & C. Ebeke. *Inequality of Opportunity, Inequality of Income and Economic Growth*. **World Development**, 136, 2020, 105115.

23. M. L. Dorofeev. *Interrelations between Income Inequality and Sustainable Economic Growth: Contradictions of Empirical Research and New Results*. **Economies**, 10(2), 2022, 44.

24. M. S. I. AlShiab, H. A. N. Al-Malkawi, & A. Lahrech. *Revisiting the Relationship between Governance Quality and Economic Growth*. **International Journal of Economics and Financial Issues**, 10(4), 2020, 54-63.

25. M. Azam. *Governance and Economic Growth: Evidence from 14 Latin America and Caribbean Countries*. **Journal of the Knowledge Economy**, 13(2), 2022, 1470-1495.

Lead City University DO NOT COPY

26. L. S. Nkwatoh, & H. A. Nathaniel. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, 69-69.

27. H. Rjoub, C. U. Ifediora, J. A. Odugbesan, B. C. Iloka, J. R. Xavier, R. M. Dantas, M. N. Mata, & J. M. Martins. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

28. C. Agu, A. J. Mbah, & C. S. Agu. *Investigating the Economic Consequence of Terrorism in Sub-Saharan Africa: Evidence from a Dynamic Panel Model*. **Statistics, Politics and Policy**, 14(2), 2023, 125-149.

29. K. S. Im, M. H. Pesaran, &Y. C. Shin. *Testing for Units Roots in Heterogeneous Panels*. **Journal of Econometrics**, 115, 2003, 53–74.

30. M. H. Pesaran. *A Simple Panel Unit Root Test in Presence of Cross Section Dependence*. Cambridge University Working Paper, 2005.

31. A. Levin, & C. F. Lin. *Unit Root Tests in Panel Data: New Results*. Discussion Paper, Department of Economics, UC-San Diego, 1993.

32. A. Levin, C. Lin, & C. Chu. *Unit Root Test in Panel Data: Asymptotic and Finite Sample Properties*. **Journal of Econometrics**, 108(1), 2002, 1–24.

33. J. Breitung. *The Local Power of Some Unit Root Tests for Panel Data*. In: Baltagi, B. (Ed.), Nonstationary Panels, Panel Cointegration, and Dynamic Panels. In: Advances in Econometrics, vol. 15. JAI, Amsterdam, 2000, 161–178.

34. P. Pedroni. *Critical Values for Cointegration Tests in Heterogeneous Panels with Multiple Regressors*. **Oxford Bulletin of Economics and Statistics**, 61(S1), 1999, 653-670.

35. P. Pedroni. *Panel Cointegration: Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to the PPP Hypothesis*. **Econometric Theory**, 20(3), 2004, 597-625.

36. C. Kao. *Spurious Regression and Residual-Based Tests for Cointegration in Panel Data*. **Journal of Econometrics**, 90(1), 1999, 1-44.

37. A. Banerjee, & J. L. Carrion-i-Silvestre. *Cointegration in Panel Data with Structural Breaks and Cross-Section Dependence*. **Journal of Applied Econometrics**, 30(1), 2015, 1–23.

38. J. Westerlund. *Testing for Error Correction in Panel Data*. **Oxford Bulletin of Economics and Statistics**, 69(6), 2007, 709-748.

39. J. Westerlund, & D. L. Edgerton. *A Simple Test for Cointegration in Dependent Panels with Structural Breaks*. **Oxford Bulletin of Economics and Statistics**, 70(5), 2008, 665-704.

LeadCity University DO NOT COPY

40. P. C. Phillips, & B. E. Hansen. *Statistical Inference in Instrumental Variables Regression with I (1) Processes*. **The Review of Economic Studies**, 57(1), 1990, 99-125.

41. P. Pedroni. *Fully Modified OLS for Heterogeneous Cointegrated Panels*. In Nonstationary Panels, Panel Cointegration, and Dynamic Panels. Emerald Group Publishing Limited, 2001, 93-130.

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Chapter Four

Results and Discussion of Findings

This chapter of the study covers the empirical and econometric assessments of security threats, poverty, and economic growth in West African countries from 2007 to 2023. These analyses were carried out within the context of the millennium development goals (MDGs) and sustainable development goals (SDGs). The analysis was conducted using the theoretical framework and empirical models outlined in the previous chapter. The subsequent portions in this chapter are categorized into five sections. The first part of the discussion focuses on the presentation of data, while the second section presents summary statistics, trend analysis, correlation analysis of the variables. The presentation of the pre-estimation tests such as cross-sectional dependency and stationarity test were presented in the third section. The fourth section presents the empirical results based on the specified objectives into sub-sections, while the cointegration test were estimated prior to the fully modified OLS estimation findings. Finally, the last section discusses the findings.

4.1 Presentation of Data

The data utilized for examining the relationship among security threats, poverty, and economic growth in West Africa from 2007 to 2023 is provided in the Appendix. The comprehensive and precise approximated results for the complete estimation conducted in this study are also presented in the appendix, categorized into distinct sections.

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4.2 Summary Statistics, Trend Analysis, and Correlation Analysis

4.2.1 Summary Statistics

The summary statistics of the variables used to analyse the relationship among security threats, poverty and economic growth in West Africa is presented in this section. In Table 4.1, the average GDP per capita growth across West African countries between 2007 and 2023 is 1.86%. When compared to this regional average presented in Table 4.2, several countries record higher values, suggesting stronger performance in sustaining economic growth at the individual level. Notably, Ghana (3.43%), Cabo Verde (2.96%), and Cote d'Ivoire (2.87%) stand out with the highest GDP per capita growth rates. These countries not only exceed the West African average but also demonstrate greater resilience and expansion, possibly linked to more diversified economies, stronger governance frameworks, or significant foreign investments. Similarly, Guinea (2.81%), Sierra Leone (2.47%), Burkina Faso (2.21%), and Togo (2.13%) also surpass the subregional average, reflecting relatively stronger performances in translating national income growth into per capita terms.

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Table 4.1: Descriptive Statistics

Signs	Variable measurements	Mean	Std Dev.	Max.	Min.	Kurtosis	Skewness
Outcome variable							
ipc	GDP per capita growth (annual %)	1.864	3.740	18.14	-22.31	12.76	-1.406
Main explanatory variables							
st	Security threats index	6.954	1.688	9.9	2.4	-0.504	-0.338
pov	Poverty headcount ratio at $3.00 a day (2021 PPP) (% of population)	43.75	19.45	82.9	10.2	-1.119	-0.020
Control variables							
uemp	Unemployment, total (% of total labour force) (modelled ILO estimate)	4.537	3.157	14.69	0.316	0.857	1.271
gov	Governance	-0.703	0.532	0.587	-1.934	-0.172	0.231
ineq	Inequality, Gini index	38.59	4.789	50.6	29.6	-0.345	0.514
inv	Investment, gross fixed capital formation (% of GDP)	21.84	7.216	52.42	5.656	1.804	1.001
edu	Education, basic school enrolment (% gross)	94.22	18.383	156.80	50.23	0.192	0.487
hlt	Health, life expectancy at birth in years	60.57	5.232	76.06	50.02	0.843	0.753

Note: Std Dev. – standard deviation; Observation is 272.
Source: Author's computation 2025.

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Conversely, countries such as Mauritania (0.01%), Mali (0.75%), Gambia (0.86%), Liberia (1.06%), and Nigeria (1.31%) fall significantly below the regional average. These comparatively lower figures suggest weak or volatile economic performance, possibly linked to political instability, structural vulnerabilities, reliance on primary commodities, or demographic pressures that offset growth gains. For example, Nigeria, despite its large economy, records modest per capita growth, highlighting the challenges of population growth outpacing economic expansion. Other countries such as Niger (1.83%), Senegal (1.61%), and Guinea-Bissau (1.51%) hover closer to the regional average. Their values suggest steady, though not exceptional, progress in per capita income, indicating economies where growth is present but still constrained by structural or institutional challenges.

Also, the average security threat index across West African countries between 2007 and 2023 is 6.95. Notably, Nigeria (9.21), Guinea (8.85), and Guinea-Bissau (8.52) have the highest security threat indices, suggesting persistent issues such as political instability, insurgency, or cross-border conflicts. Similarly, Niger (8.26), Mali (8.21), and Cote d'Ivoire (8.05) also exceed the West Africa average, underscoring the extent to which insecurity remains a central challenge in these economies, potentially hindering economic activities, investment, and social stability. On the other hand, countries such as Ghana (3.67), Sierra Leone (4.99), and Cabo Verde (5.36) fall significantly below the regional average, indicating relatively lower levels of insecurity. Ghana's particularly low figure highlights its comparatively stable political and security environment, which may have contributed to stronger investor confidence and economic performance during the period. Similarly, Sierra Leone's and Cabo Verde's lower indices suggest some degree of stability, with Cabo Verde benefiting from its insular geography and greater reliance on tourism and services. Other ECOWAS countries, such as Benin (5.68), Gambia (5.91), Senegal (5.80),

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and Liberia (6.78) hover around or slightly below the regional average. Their values indicate moderate security challenges, where risks are present but less severe compared to the highly affected countries.

Furthermore, the mean of the poverty headcount ratio at $3.00/day across West African countries stands at 43.75%. Several countries record poverty levels substantially higher than the West Africa average, highlighting widespread deprivation and limited access to basic needs. Niger (66.92%), Guinea-Bissau (61.25%), Burkina Faso (56.74%), Benin (55.66%), Togo (54.56%), and Sierra Leone (53.79%) all exceed the average by large margins. These figures underscore heavy dependence on subsistence agriculture, weak industrial bases, and recurring vulnerabilities such as political instability, conflict, or climatic shocks, which exacerbate poverty conditions. Mali (52.60%) also falls within this group, reinforcing the concentration of high poverty levels in Sahelian and fragile states. On the other hand, some countries report poverty rates significantly below the regional average, suggesting relatively better living conditions. Mauritania (14.89%), Cabo Verde (20.06%), and Guinea (24.59%) have the lowest poverty headcount ratios, reflecting either smaller population sizes with stronger service-driven economies (as in Cabo Verde), natural resource endowments, or relatively stronger poverty alleviation policies. These countries' lower figures indicate comparatively reduced vulnerability to extreme poverty. Other countries fall closer to the regional means, indicating moderate poverty levels. Cote d'Ivoire (38.43%), Nigeria (38.54%), and Senegal (41.09%) all fall below the West Africa average, suggesting economies with relatively more diversified income sources and stronger growth potential, though poverty remains a persistent challenge. Liberia (44.70%) and Ghana (46.10%) hover around the mean, highlighting situations where improvements have been made but significant sections of the population still live below the poverty line.

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Table 4.2: Average of Security Threat, Poverty, and Economic Growth in West Africa (2007-2023)

Country	GDP per capita growth (%)	Security threats index	Poverty headcount ratio at $3.00/day	Unemployment, total (% of total labour force)	Governance	Gini index	Investment (% of GDP)	Primary school enrolment (% gross)	Life expectancy at birth (years)
Benin	2.029	5.682	55.659	1.607	-0.236	40.453	22.852	116.626	59.202
Burkina Faso	2.214	7.918	56.735	4.371	-0.754	39.294	19.318	82.143	58.375
Cabo Verde	2.955	5.359	20.059	12.318	0.452	44.659	33.004	101.967	73.834
Cote d'Ivoire	2.873	8.053	38.429	4.149	-0.979	40.335	20.918	84.092	57.967
Gambia	0.860	5.912	30.006	7.674	-0.366	40.859	20.434	81.209	62.834
Ghana	3.432	3.665	46.100	4.093	-0.074	43.035	18.121	98.802	62.964
Guinea	2.808	8.853	24.588	5.116	-1.120	33.929	22.963	93.359	57.987
Guinea-Bissau	1.508	8.524	61.247	3.021	-1.003	42.129	19.224	114.659	59.652
Liberia	1.056	6.782	44.700	2.716	-0.926	35.506	19.763	82.918	60.178
Mali	0.745	8.212	52.600	1.974	-1.236	34.700	19.162	75.355	57.668
Mauritania	0.007	7.065	14.894	10.237	-0.801	33.965	32.144	92.781	66.512
Niger	1.827	8.259	66.924	0.877	-0.960	34.794	28.384	67.559	58.561
Nigeria	1.308	9.206	38.535	4.239	-1.517	36.265	14.022	85.543	52.220
Senegal	1.605	5.800	41.088	3.702	-0.240	38.965	25.581	84.463	65.977
Sierra Leone	2.469	4.994	53.794	3.979	-0.676	36.059	13.728	123.870	55.874
Togo	2.126	6.982	54.559	2.523	-0.809	42.529	19.872	122.144	59.295

Source: Author's computation 2025.

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Concerning other control variables, the average unemployment rate is 4.54%. Cabo Verde (12.32%) and Mauritania (10.24%) have the highest unemployment rates, suggesting persistent structural weaknesses, limited absorptive capacity of the labour market, and higher dependence on external shocks. Similarly, Gambia (7.67%) and Guinea (5.12%) also exceed the regional average, pointing to vulnerabilities in creating sufficient jobs relative to labour force growth. Conversely, a number of countries fall well below the West Africa average, suggesting relatively lower measured unemployment. Niger (0.88%), Benin (1.61%), and Mali (1.97%) have the lowest unemployment rates in the region. These figures, however, should be interpreted cautiously, as low unemployment in these contexts often masks underemployment, informal sector dominance, and disguised unemployment in subsistence agriculture. Togo (2.52%), Liberia (2.72%), and Guinea-Bissau (3.02%) also report unemployment below the average, reflecting similar structural labour force dynamics. Other countries hover around the regional average, suggesting more moderate unemployment conditions. Nigeria (4.24%), Burkina Faso (4.37%), Cote d'Ivoire (4.15%), and Ghana (4.09%) record rates close to the average, indicating that while unemployment is present, labour absorption is relatively stronger compared to the highly affected economies. Senegal (3.70%) and Sierra Leone (3.98%) also fall within this middle range.

The mean governance score across the region is -0.70, indicating generally weak institutional quality and governance performance across the region. A few countries perform better than the regional average, suggesting relatively stronger governance structures. Cabo Verde (0.45) stands out with the highest governance score, reflecting comparatively stronger institutions, rule of law, and political stability, which have contributed to its reputation as one of the most stable

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democracies in Africa. Ghana (-0.07) also performs close to neutral, suggesting institutional frameworks stronger than most of its regional peers. Benin (-0.24) and Senegal (-0.24) similarly record values above the West Africa average, reflecting moderate governance performance that may support more inclusive growth and development. In contrast, several countries fall significantly below the regional average, highlighting persistent institutional weaknesses and governance challenges. Nigeria (-1.52), Mali (-1.24), Guinea (-1.12), and Guinea-Bissau (-1.00) record some of the lowest scores, underscoring issues such as political instability, corruption, weak rule of law, and conflict that constrain development. Niger (-0.96) and Liberia (-0.93) also reflect poor governance conditions, consistent with their fragility and limited institutional effectiveness. Other countries such as Burkina Faso (-0.75), Mauritania (-0.80), Togo (-0.81), and Sierra Leone (-0.68) hover close to the regional mean. These values suggest governance challenges remain prominent, even if not as severe as in the lowest-performing countries.

Furthermore, the average Gini index for the West African countries is 38.59, reflecting moderate levels of income inequality in the region. Several countries record inequality levels higher than the regional mean, suggesting wider income disparities. Cabo Verde (44.66), Ghana (43.04), Togo (42.53), and Guinea-Bissau (42.13) have the highest Gini indices, indicating more unequal societies where wealth and income are concentrated among fewer groups. Gambia (40.86), Benin (40.45), and Cote d'Ivoire (40.34) also exceed the West African average, further pointing to structural inequalities that may hinder inclusive growth. In contrast, some countries record Gini indices below the regional mean, suggesting relatively more equitable income distribution. Guinea (33.93), Mauritania (33.97), Mali (34.70), and Niger (34.79) represent the most equal societies in the subregion according to this metric, though their low inequality often coincides with generally low income levels and widespread poverty. Liberia (35.51), Sierra Leone (36.06),

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and Nigeria (36.27) also fall below the ECOWAS average, reflecting moderately more balanced income distribution compared to their peers. Other countries such as Senegal (38.97) fall almost exactly on the regional average, reflecting a middle-ground where inequality is neither extreme nor minimal.

The average investment expenditure across the region stands at 21.84% of GDP. Several countries record investment levels well above the ECOWAS average, reflecting stronger commitments to capital accumulation and infrastructure expansion. Cabo Verde (33.00%), Mauritania (32.14%), and Niger (28.38%) stand out with the highest shares of investment, suggesting significant allocation of resources towards physical capital, possibly driven by public investment programs, donor support, or natural resource–related projects. Senegal (25.58%) and Guinea (22.96%) also exceed the regional average, indicating consistent investment activity to support economic growth and development. Conversely, some countries fall significantly below the regional average, reflecting weaker capital formation. Sierra Leone (13.73%) and Nigeria (14.02%) record the lowest investment shares in the region, suggesting structural challenges, fiscal constraints, or reliance on consumption rather than productive investment. Ghana (18.12%), Mali (19.16%), Burkina Faso (19.32%), and Guinea-Bissau (19.22%) also remain below the ECOWAS average, reflecting more modest investment performance relative to their peers. Other countries, including Benin (22.85%), Cote d'Ivoire (20.92%), Gambia (20.43%), Liberia (19.76%), and Togo (19.87%), hover close to the regional average, suggesting moderate investment levels consistent with regional patterns.

More so, the overall mean of primary school enrolment across West African countries stands at 94.22%, suggesting relatively high participation in basic education within the region. Sierra Leone (123.87%), Togo (122.14%), Benin (116.63%), Guinea-Bissau (114.66%), and Cabo

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Verde (101.97%) stand out with the highest enrolment ratios. These high values (above 100%) suggest not only strong enrolment efforts but also the presence of over-aged or under-aged children in schools, a common feature in developing education systems where late school entry or grade repetition occurs. Conversely, some countries fall significantly below the West Africa average, reflecting persistent barriers to universal basic education. Niger (67.56%) has the lowest enrolment rate, underscoring challenges such as limited education infrastructure, high population growth, and socio-cultural constraints that hinder school participation. Mali (75.36%), Gambia (81.21%), Burkina Faso (82.14%), and Liberia (82.92%) also report relatively low enrolment, suggesting limited progress toward universal access to education. Other countries, including Nigeria (85.54%), Senegal (84.46%), Cote d'Ivoire (84.09%), Guinea (93.36%), and Ghana (98.80%), hover closer to the regional mean. Their figures indicate steady progress in education access, though challenges such as quality of instruction, retention, and completion rates remain important considerations.

In Table 4.1, the summary statistics further include Kurtosis and skewness. The skewness results reveal that GDP per capita, security threats, and poverty are negatively skewed, while the other control variables are positively skewed. Regarding Kurtosis, none of the variables are normally distributed, as they exhibit either flatness or peakedness. Given the extensive data and the heterogeneity of the regressors across samples, along with the potential for nonlinearities among the regressors, the study proceeds to test for common factor restrictions. This leads to the verification of the presence of cross-sectional dependence, unit root, and cointegration.

4.2.2 Trend Analysis

Figures 4.1 and 4.2 show the time-series plots of security threats, poverty, economic growth, and control variables (unemployment, governance, inequality, investment, education, and health) of

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West Africa. Over the period 2007–2023, GDP per capita growth in West Africa displays pronounced cross-country volatility with distinct shock–recovery cycles rather than a uniform trend. Benin moved from mixed growth in the late 2000s to a steadier upswing after 2016, remaining positive even in 2020 and accelerating in 2021–2023. Burkina Faso shows moderate gains through the mid-2010s, a dip in 2020, a sharp rebound in 2021, and renewed weakness thereafter. Cabo Verde is the archetype of volatility: strong expansions (2016–2019) followed by a deep collapse in 2020 and a powerful rebound in 2022–2023, consistent with tourism exposure. Côte d'Ivoire shifted from contraction in 2011 to a sustained high-growth phase from 2012, softening around 2020 before stabilizing. The Gambia alternates between small contractions and moderate expansions, improving after 2017 but dipping in 2020 and recovering gradually. Ghana's per capita growth peaked with the 2011–2012 resource-led surge, then decelerated, turned mildly negative in 2020, and recovered only modestly by 2023.

Also, Guinea's path is cyclical: contractions in 2009 and resilience from 2016, with mid-single-digit gains resuming by 2023. Guinea-Bissau oscillates around low positive growth, with contractions in 2012 and 2014, followed by modest, steadier gains post-2019. Liberia experienced a prolonged contraction (2014–2020) before a tentative recovery in 2021–2023. Mali shows small positives punctuated by downturns in 2012 and 2020, then a gradual return to low growth. Mauritania moved from early-period contractions to modest positives after 2015, slipping again in 2020 and rebounding by 2022–2023. Niger is notably volatile, with strong positives in 2012 and 2022 but setbacks in 2009, 2011, 2021, and 2023. Nigeria shifted from solid positives pre-2014 to recession in 2016 and weak per capita gains, thereafter, including a 2020 contraction and only mild recovery through 2023. Senegal accelerated in the mid-2010s, dipped in 2020, and returned to moderate growth by 2021–2023. Sierra Leone's dramatic boom

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in 2012–2013 was followed by a deep 2015 collapse, then a gradual recovery into the early 2020s. Togo transitioned from early contraction to broadly positive, mid-single-digit growth post-2012, absorbing the 2020 shock and strengthening into 2021–2023.

In Figure 4.1, security-threats dynamics across West Africa from 2007 to 2023 show a mixed picture of gradual easing in several coastal states alongside sharp escalations in parts of the Sahel. Cabo Verde, Senegal, Sierra Leone, Mauritania, and Togo all exhibit steady declines, e.g., Cabo Verde falls from 6.1 to 4.2, Senegal from 5.3 to 4.5, Sierra Leone from 6.5 to 3.6, Mauritania from 7.4 to 5.4, and Togo from 7.8 to 5.8, signalling improving security environments. Côte d'Ivoire also trends down from very high levels (9.6 in 2007) to 6.6 by 2023, while Liberia edges lower and stabilizes around the mid-6s. By contrast, Burkina Faso records a marked deterioration (7.7 to 9.3, peaking around 2021), with Mali and Niger remaining elevated and generally rising through the 2010s (Mali from 4.8 to 9.6; Niger from 6.7 to 8.9 in 2021, easing to 8.3). Nigeria stays persistently high near 9 throughout, with only modest fluctuations, and Guinea and Guinea-Bissau remain elevated despite some late-period easing. Benin and The Gambia show mild U-shaped or oscillating paths, small rises through the late 2010s followed by partial retrenchment post-2020.

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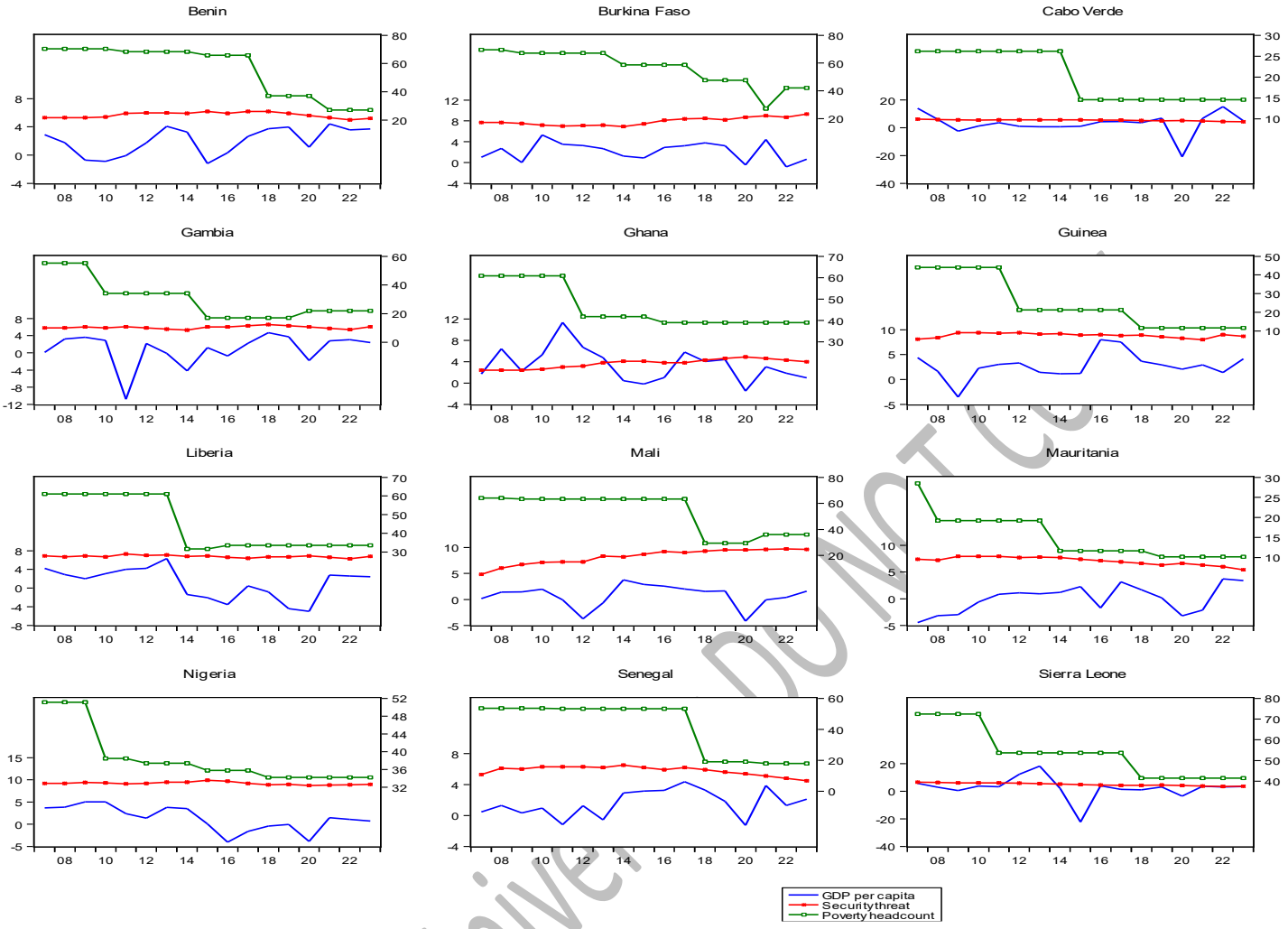


Figure 4.1: Plots of Security Threats, Poverty, and Economic Growth of West Africa Countries

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Also, poverty at the $3.00/day line generally trends downward across West Africa, though with notable step-changes and a few reversals for the periods understudy. Several countries register sharp, sustained declines: Benin falls from about 70–66% through 2017 to 37.2% in 2018 and 27.2% by 2021–2023; Côte d'Ivoire eases from roughly 48% in the 2008–2017 period to 22.7% in 2018 and 20.9% by 2021–2023; Senegal drops from 53% to 19.1% in 2018 and 17.9% from 2021 onward; Togo declines from 68% to 35.3% by 2018 and 34.7% thereafter; Guinea moves from 44% to 11.7% from 2018 onward; and Cabo Verde improves to 14.6% by 2015, holding steady thereafter. Others show gradual improvement with later plateaus: Nigeria declines from 51% in 2007–2009 to 34.2% from 2018 onward, and Liberia halves poverty around 2014–2015 to the low-30s thereafter. Some Sahelian and fragile states record mixed progress or partial reversals: Burkina Faso trends down to 27.2% in 2021 but rises to 42.1% by 2022–2023; Niger falls from 82.9% to about 59–60% by the late 2010s but edges up to 60.5% in 2021–2023; Mali slides to 29.4% in 2018 before ticking up to 36.1% from 2021 onward; and Guinea-Bissau drops to 37.1% in 2018 then nudges higher to 39.9% by 2021–2023.

In Figure 4.2, unemployment across West Africa shows three broad patterns: (i) structurally high with COVID spikes and partial easing, Cabo Verde remains the highest (13% pre-2020), surges in 2020 (14.7%) and gradually recedes to 12.0% by 2023; Mauritania hovers near 9.5–10% with a 2020–2021 rise above 11% before easing. (ii) Mid-range trending down after mid-2010s or post-COVID, Côte d'Ivoire falls sharply from 6–7% pre-2012 to 2–3% since 2014; Ghana declines from 5% to 3% with a 2015 spike; Senegal rises to a 2015 peak (6.8%) then steadily declines to 2.8% by 2023; Gambia drops from double-digits to 4.1% in 2018, rebounds during/after COVID (to 6.5% in 2023); Nigeria climbs to 5.7% in 2020 then falls to 3.1% by 2023; Liberia edges up to 4.1% in 2020 then back under 3% by 2023; Guinea stays near 5% with

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a temporary 2020 rise. (iii) Very low measured unemployment with mild movements, Niger trends down toward 0.5% (small uptick in 2021), Benin slips from 1.0–2.6% early to 1.7% by 2023, Mali stays 1.4–1.6% until a step-up to 3–4% in 2019–2021 before easing, Guinea-Bissau holds near 3% and dips to 2.4% in 2019, Togo declines from 3.8% to 2.0% with a brief rise in 2016–2017, and Burkina Faso trends up steadily from 3.3% to 5.3% by 2023.

Governance across the region within 2007–2023 trends divergently, with several coastal economies improving toward neutrality while parts of the Sahel deteriorate markedly. Cabo Verde remains a clear out-performer, sustaining positive scores throughout (0.58 in 2007; 0.46 in 2023), while Senegal improves steadily from −0.37 (2007) toward near-neutral (−0.03 in 2023). Ghana hovers close to zero with mild oscillations (from 0.01 in 2007 to −0.06 in 2023), and Côte d'Ivoire shows a substantial recovery from deep negative territory (−1.53 in 2007) to −0.46/−0.50 by 2022–2023. Among lower performers, Nigeria remains persistently weak (around −1.5 through the period) with only modest late improvements (−1.31 in 2023), while Burkina Faso records a pronounced slide from −0.23 (2007) to −1.43 (2023). Mali deteriorates even more sharply (−0.26 to −1.93), and Niger also weakens overall despite brief respite in 2021–2022 (down to −1.15 in 2023). Several states exhibit gradual but incomplete gains: Liberia rises from −1.25 to −0.74, Benin worsens to a 2019 trough (−0.46) then edges up to −0.28, and Guinea improves from −1.83 to the −0.8/−0.9 range by 2023, still firmly negative. Guinea-Bissau stays around −1.0 with slight late movement (to −0.88), Mauritania improves from −1.03 (2010) to −0.63 (2023), and Togo oscillates, initial improvement to −0.65 (2016), a dip to −1.02 (2017), then partial recovery to −0.77 (2023).

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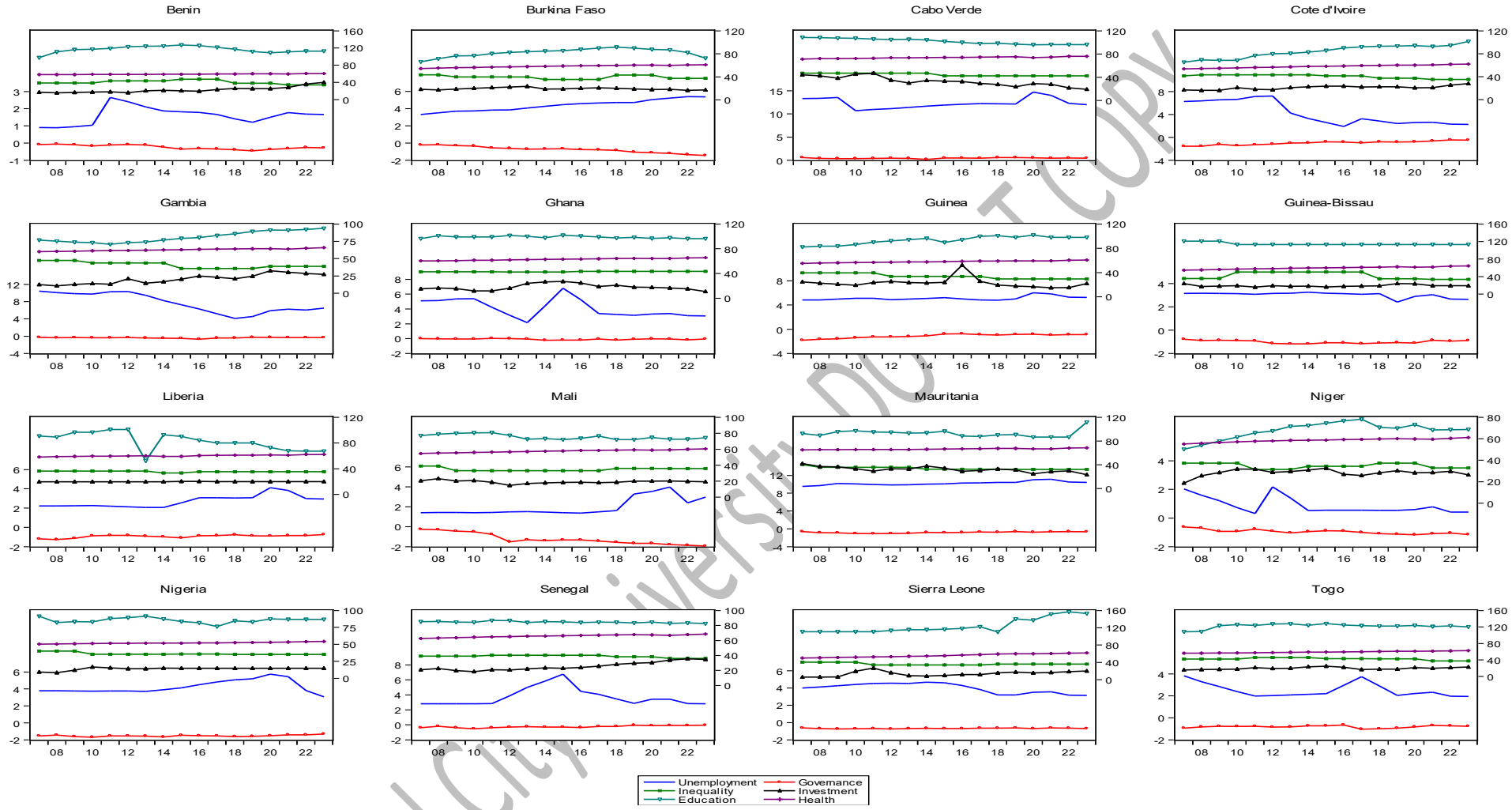


Figure 4.2: Plots of Unemployment, Governance, Inequality, Investment, Education, and Health of West Africa

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Over the period, income inequality (Gini) across the region generally trends downward, though many countries experience step-changes and a few reversals. Marked improvements include Benin, which rose to a peak (47.6 in 2015) before falling to 34.4 from 2021 onward; Côte d'Ivoire, easing from the low-40s to 35.3 by 2021–2023; and Guinea, dropping from 39 to 29.6 from 2018 onward. Guinea-Bissau shifts from very high inequality (50.6 through 2017) to 33.4 by 2021–2023, while Mauritania declines from 40 to 32 (2019 onward). Nigeria moderates from 40 to a stable 35.1 from 2018, and Senegal edges down from 39 to 36.2 by 2021. Some countries improve then partially rebound: Burkina Faso falls to 35.3 by 2014, jumps back to 43.0 in 2018–2020, then settles near 37.4 by 2021–2023; The Gambia declines to 35.9 by 2015 but upticks to 38.8 from 2020; Sierra Leone moves from 40 to 34 (2011–2017) before rising to 35.7 from 2018. Others remain comparatively elevated but stable: Cabo Verde improves to 42.4 by 2015 and holds there, and Ghana stays around 42–44 throughout. Niger oscillates, improving to 31.5 (2011–2013), returning to 37.3 (2018–2020), then easing to 32.9 (2021+). Mali sits low-to-mid 30s for most of the period, inching up to 35.7 by 2021.

More so, gross fixed capital formation (% of GDP) across the region shows clear divergence: some countries deepen investment while others retrench or remain flat. Benin accelerates markedly after 2017, climbing from 23–26% to 40.1% (2023). Côte d'Ivoire also trends up from mid-teens to the mid-20s, reaching 27.8% (2023), and Senegal rises persistently from 21% to a peak 35.5% (2022) (slightly easing in 2023). Niger and The Gambia record high, volatile paths, Niger peaking near 32.6% (2015) before easing to 26.4% (2023), and Gambia surging to 32.3% (2020) then settling around 27.3% (2023). By contrast, Cabo Verde decelerates from exceptionally high levels (46–47% in 2010–2011) to 19.4% (2023), and Ghana rises to 27.0% (2015) but slides to 10.7% (2023). Mauritania trends down from 42.2% (2007) to 23.5% (2023),

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while Nigeria remains low and stable in the mid-teens (14–16% since 2012). Guinea is highly volatile, spiking to 52.4% (2016), then normalizing to mid-teens/low-20s (21.9% in 2023). Guinea-Bissau, Mali, and Togo hover in the high-teens/low-20s with modest fluctuations, and Liberia is remarkably flat around 20% throughout.

Over the period 2007–2023, primary school enrolment (% gross) in West Africa shows broad gains or sustained high participation, with several countries persistently above 100% (reflecting late entry and repetition), alongside a few plateaus and recent pullbacks. Benin climbs to a peak around 2015 (127%) before easing yet remains high (113% in 2022–2023). Côte d'Ivoire rises steadily from mid-60s in 2007 to surpass 100% by 2023 (101.7%). The Gambia trends up almost monotonically from the mid-70s to the mid-90s by 2023. Ghana hovers near 100% with mild drift down to the mid-90s by 2023, while Nigeria dips through the mid-2010s (76% in 2017) but rebounds to the mid-80s by 2020–2023. Cabo Verde gradually edges down from 109% to a stable 96%. Several Sahelian states improve early then soften: Burkina Faso rises to 92% (2018) before slipping back to the low-70s by 2023; Niger climbs from 50% to a high 78% (2017) then recedes to 68% by 2021–2023; Mali oscillates in the low-to-mid-70s. Guinea increases from the low-80s to 100–102% around 2018–2020 and then stabilizes just under 100%; Guinea-Bissau drops from 121% to a flat 113% from 2010 onward. Liberia is volatile, near 100% in 2011–2012, a sharp one-off drop in 2013, and a gradual decline to the high-60s by 2023. Senegal stays broadly stable in the low-to-mid-80s. Two standouts remain very high: Togo consistently above 120% (easing to 120% in 2023) and Sierra Leone surging from 111% to exceptionally high levels after 2018 (peaking above 150% in 2021–2022, then 153% in 2023).

For the periods understudy 2007–2023, life expectancy in West Africa rises steadily almost everywhere, with a visible pandemic dip around 2020–2021 followed by recovery. Coastal

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performers lead the pack: Cabo Verde climbs from 71.5 to 76.1 years (brief fall in 2020), Senegal from 62.7 to 68.7, and Mauritania from 64.9 to 68.5. Several countries move from mid-50s into the low 60s: Gambia (60.0 – 65.9), Ghana (60.3 – 65.5), Guinea-Bissau (54.9 – 64.1), Guinea (55.2 – 60.7), Liberia (58.1 – 62.2), and Togo (56.4 – 62.7). Post-conflict Côte d'Ivoire improves from 53.5 to 61.9, and Benin edges past 60 (to 60.8). The Sahel shows slower but clear gains: Mali (54.8 – 60.4) and Niger (55.1 – 61.2). Nigeria remains the regional laggard despite progress (from 50.4 to 54.5).

4.2.3 Correlation Analysis

The partial correlation coefficients of the series are presented in Table 4.3. The correlation analysis indicates that income per capital is directly associated with poverty but indirectly correlated with income per capita. As regards other co-variates, investment, health, governance, and education have a positive level of association with income per capita, while unemployment has a negative correlation. Also, investment co-moves with health (0.588) and governance (0.328) and is inversely related to poverty (−0.399), suggesting that stronger institutions and better social outcomes align with deeper capital formation and lower deprivation. Life expectancy itself sits at the center of these favourable dynamics, positively tied to investment (0.588) and unemployment (0.605) and negatively to poverty (−0.553) and security threats (−0.471). The positive unemployment–health and unemployment–governance links, 0.605 and 0.373, likely reflect measurement realities in the region: where institutions and health are stronger, "open" unemployment is recorded more clearly, while in poorer settings underemployment and informality suppress measured unemployment, hence the poverty–unemployment correlation of −0.575.)

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Table 4.3: Correlation Matrix

	ipc	*ineq*	*Inv*	*hlt*	*gov*	*pov*	*edu*	*st*
ineq	0.054	1						
inv	0.037	-0.058	1					
hlt	0.019	0.188	0.588	1				
gov	0.123	0.379	0.328	0.672	1			
pov	0.037	0.316	-0.399	-0.553	-0.153	1		
edu	0.101	0.241	-0.065	0.087	0.254	0.033	1	
st	-0.077	-0.223	-0.060	-0.471	-0.794	0.098	-0.350	1
uemp	-0.067	0.197	0.322	0.605	0.373	-0.575	-0.024	-0.192

Note: ipc - GDP per capita growth (annual %); st - Security threats index; pov - Poverty headcount ratio at $3.00 a day (2021 PPP) (% of population); uemp - Unemployment, total (% of total labor force) (modeled ILO estimate); gov - Governance; ineq - Inequality, Gini index; inv - Investment, gross fixed capital formation (% of GDP); edu - Education, basic school enrollment (% gross); and hlt - Health, life expectancy at birth in years.
Source: Author's computation 2025.

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Distributionally, poverty rises with inequality (0.316) and falls with health (−0.553) and investment (−0.399); inequality itself shows small correlations with most real-sector variables (e.g., near-zero with income per capita and investment), though it is modestly negative with security threats (−0.223) and positive with governance (0.379), relationships that can be sample-specific and should be interpreted cautiously. Institutional quality (**gov**) is positively associated with life expectancy (0.672), investment (0.328), education (0.254) and, to a lesser extent, GDP per capita growth (0.123), while showing a strong inverse link with the security-threat index (−0.794) and a weakly negative link with poverty (−0.153). Mirroring this, security threats correlate negatively with health (−0.471), education (−0.350) and governance (−0.794), and only weakly with growth (−0.077) and poverty (0.098), consistent with the idea that insecurity erodes human capital and institutional quality. Thus, GDP per capita growth is only weakly related to the structural indicators at this frequency, underscoring that short-run growth fluctuations are noisy and can be driven by idiosyncratic shocks even when institutions, human capital, and security conditions are improving.

The correlation matrix table shows that the correlation coefficients between other factors that affect growth indices differ in magnitude and degree. The values of these coefficients indicate that multicollinearity is not an issue, confirming that it does not affect the empirical study. These correlation results are preliminary and will be further validated in section 4.4, which examines additional factors of growth.

4.3 Cross-Sectional Dependence and Stationary Tests

4.3.1 Cross-Sectional Dependence Test

The results of the cross-sectional dependence tests are presented in Table 4.4. Using the Pesaran CD test, evidence of significant cross-sectional dependence was detected for *poverty (pov)*,

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security threat (st), *income per capita (ipc)*, and *inequality (ineq)*, all with highly significant test statistics ($p < 0.01$)[1,2]. In contrast, the CD tests did not find significant dependence for *unemployment (uemp)*, *governance (gov)*, *education (edu)*, investment (inv), and health (hlt) suggesting that shocks in these variables may not be strongly correlated across countries. The Pesaran scaled LM test produced more conservative results[3]. Significant dependence was confirmed for *pov*, *st*, *ipc*, and hlt ($p < 0.05$), while no significant dependence was found for *uemp*, *gov*, *ineq*, *edu and inv*. These mixed outcomes highlight that the presence and strength of cross-sectional dependence vary by variable, with some indicators exhibiting stronger inter-country correlations than others.

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Table 4.4: Cross-Sectional Dependence Test Results (d.f. = 120)

Variables	Pesaran-CD		Pesaran-Scaled LM		Power Enhanced CDw test	
	Statistic	**p-value**	**Statistic**	**p-value**	**Statistic**	**p-value**
Poverty (pov)	34.03	0.000	23.086	0.000	370.63	0.000
Security threat (st)	4.75	0.000	2.374	0.018	235.99	0.000
Unemployment (unem)	0.56	0.576	-0.042	0.966	194.81	0.000
Governance (gov)	-0.03	0.977	-0.756	0.450	172.51	0.000
Income per capita (ipc)	6.24	0.000	5.856	0.000	90.68	0.000
Inequality (ineq)	9.30	0.000	-0.999	0.318	203.71	0.000
Education (edu)	-0.74	0.459	0.141	0.888	192.45	0.000
Investment (inv)	1.34	0.180	-1.564	0.118	162.08	0.000
Health (hlt)	43.79	0.000	28.350	0.000	476.72	0.000

Source: Author's computation 2025.

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Furthermore, the Power Enhanced CDw test, which is known for its higher power in detecting even weak cross-sectional dependence, consistently rejected the null hypothesis across all variables at the 1% level[4]. This finding implies that even when traditional CD tests fail to capture dependence (as in cases of unemployment, government expenditure, health, and education), there exist underlying cross-sectional linkages that warrant further econometric consideration. Thus, the convergence of results across the different testing approaches suggests that pov, st, ipc, and ineq are particularly prone to cross-sectional dependence, while the evidence is weaker and less consistent for *uemp*, *gov*, and *edu*. Given that the Power Enhanced CDw test systematically indicates dependence for all variables, subsequent empirical analysis should adopt econometric techniques that are robust to cross-sectional dependence, such as common correlated effects (CCE) estimators or second-generation panel unit root and cointegration tests.

4.3.2 Stationary Test

Table 4.5 shows the first- and second-generation panel unit root test results. The table shows the results of the first-generation panel unit root tests, which were done using the Levin, Lin, and Chu (LLC) and Im, Pesaran, and Shin (IPS) methods[5,6]. It shows that both methodologies showed that unemployment, governance, income per capita, and investment were stationary at levels i.e. I(0). However, the findings demonstrate that poverty, security threats, inequality, education, and health are interconnected at the first difference, I(1). Consequently, variables exhibit stationarity at both the levels and first difference, and no variable demonstrates stationarity at the second difference.

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Table 4.5: First- and Second-Generation Panel Unit Root Test Results

Variables	First-generation tests					Second-generation test		
	LLC		IPS		Decision	CIPS		Decision
	Levels	1st Diff.	Levels	1st Diff.		Levels	1st Diff.	
Poverty (pov)	-2.6383***	-	0.8313	-8.9301***	I(1)	-1.584	-3.906***	I(1)
Security threat (st)	-1.4831*	-9.4076***	0.0549	-7.7291***	I(1)	-2.500	-3.390***	I(1)
Unemployment (unem)	-3.9365***	-	-4.1959***	-	I(0)	-1.644	-2.868**	I(1)
Governance (gov)	-5.8208***	-	-4.0217***	-	I(0)	-2.355	-3.890***	I(1)
Income per capita (ipc)	-8.2721***	-	-7.1315***	-	I(0)	-2.341	-4.543***	I(1)
Inequality (ineq)	-2.9824***	-	0.3122	-8.3196***	I(1)	-2.195	-3.729***	I(1)
Education (edu)	-2.6535***	-	-1.2814	-7.0702***	I(1)	-2.509	-3.722***	I(1)
Investment (inv)	-6.7291***	-	-4.0391***	-	I(0)	-2.268	-3.476***	I(1)
Health (hlt)	-1.2247	-7.1710***	1.6520	-7.4320***	I(1)	-2.968***	-	I(0)

Note: LL denotes Levin, Lin & Chin (2002); IPS is Im, Pesaran and Shin (2003); CIPS is Cross-sectionally augmented IPS test – Pesaran (2007); ***, ** & * denote 1%, 5% & 10% significance levels.
Source: Author's Computation 2025.

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Also, Table 4.5 presents the results of the second-generation panel unit root test, using the Cross-sectionally augmented Im, Pesaran, Shin (CIPS) test by Pesaran[7]. This test evaluates the cross-sectional dependence among the variables, revealing that they exhibit a mixed order of stationarity at both the level and first difference, with none being stationary at the second difference. Specifically, only health remained fixed at its levels, whilst the others are stationary at their first differences.

4.4 Empirical Results

4.4.1 Empirical Results of the Effects of Poverty on Security Threat in West Africa

Before the FMOLS estimation of the link between poverty and security threat in the region, the study presents the long-run relationships using the Westerlund ECM panel cointegration framework in Table 4.6. The method is superior to the Pedroni panel cointegration test because it ignores heteroskedasticity, serial correlation, structural breaks, and cross-sectional dependence features that are common in West Africa data, thereby making the results misleading. The Westerlund ECM panel cointegration result found a long-run relationship between poverty and security across West Africa. For the full West Africa panel, all four statistics, group tests (Gt = −4.893, Ga = −17.179) and panel tests (Pt = −14.943, Pa = −10.344), have p-values = 0.000, decisively rejecting the null of no cointegration. Since Westerlund's tests allow for heterogeneity and (via their design/implementation) are robust to common issues like serial correlation, heteroskedasticity, and cross-sectional dependence, these rejections provide reliable evidence that poverty and security have a long-run equilibrium.

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Table 4.6: Westerlund ECM Panel Cointegration Test (Model with Intercept)

	H_0: no cointegration	**Values**	**P-values**
All countries	Gt	-4.893	0.000
	Ga	-17.179	0.000
	Pt	-14.943	0.000
	Pa	-10.344	0.000
Lusophone countries	Gt	-17.177	0.000
	Ga	-37.123	0.000
	Pt	-15.085	0.000
	Pa	-25.450	0.000
Anglophone countries	Gt	-14.925	0.000
	Ga	-39.302	0.000
	Pt	-12.430	0.000
	Pa	-23.544	0.000
Francophone countries	Gt	-3.695	0.004
	Ga	-41.194	0.000
	Pt	-15.304	0.000
	Pa	-30.993	0.000

Source: Author's computation 2025.

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Disaggregating the region by colonial blocs confirms the existence of long-run relationship between poverty and security threats. For Lusophone and Anglophone countries, the evidence is especially strong: all four statistics are large in magnitude (e.g., Lusophone Gt = −17.177, Anglophone Gt = −14.925) with p = 0.000, indicating robust long-run linkage even when allowing member-specific dynamics (group tests) and common panel behaviour (panel tests). Francophone countries also reject the null across all statistics; even the weakest of the four, Gt = −3.695, remains significant at 1% (p = 0.004), while Ga, Pt, Pa are overwhelmingly significant (p = 0.000). Thus, the findings point to a common long-run equilibrium tying poverty dynamics to security conditions across West Africa, despite short-run shocks, implying that improvements in one domain (e.g., reductions in insecurity) are co-sustaining with gains in the other (poverty reduction).

The empirical findings of the FMOLS estimator of the effects of poverty on security threat in West Africa is presented in Table 4.7. The coefficients of poverty headcount are statistically significant at conventional levels for two of the four panels, Lusophone (−0.0471, p < 0.05) and Anglophone (−0.0270, $p < 0.01$), with the exception of the pooled West Africa sample (0.0018, p> 0.05) and the Francophone panel (0.0084, p> 0.05). This suggests that, conditional on the other controls in your FMOLS model, higher measured poverty is associated with lower recorded security threats in the Lusophone and Anglophone blocs. Intuitively, where poverty rates are higher in these subgroups, the results indicate a dampening in the long-run security-threat index rather than an escalation.

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Table 4.7: Panel FMOLS Estimates of Poverty and Security Threats in West Africa

Variables	**Dependent Variable:** Security threat			
	All West African Countries	**Lusophone Countries**	**Anglophone Countries**	**Francophone Countries**
Poverty headcount	0.0018	-0.0471**	-0.0270***	0.0084
	(0.0048)	(0.0196)	(0.0081)	(0.0083)
Unemployment	-0.0971*	2.1412**	0.0444	0.0901*
	(0.0536)	(0.7839)	(0.0583)	(0.0512)
Governance	-1.8629***	2.7958	-4.0352***	-3.1745***
	(0.2364)	(1.6756)	(0.1798)	(0.2588)
Income per capita	0.0155	-0.2772***	0.0292	0.1418***
	(0.0145)	(0.0672)	(0.0213)	(0.0464)
Inequality	0.0516***	0.1302**	0.1428***	0.1048***
	(0.0189)	(0.0466)	(0.0166)	(0.0272)
Education	-0.0146**	0.0233	-0.0145***	-0.0010
	(0.0066)	(0.0194)	(0.0047)	(0.0073)
R-squared	0.9169	0.5511	0.8832	0.5243
Adj. R-squared	0.9089	0.4766	0.8753	0.5070
Obs.	240	32	80	144

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.
Source: Author's computation (2025).

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Also, the magnitude of impacts appears stronger (in absolute terms) for the Lusophone countries compared with the Anglophone group. Using the coefficients as elasticities on levels, a 10-percentage point rise in poverty headcount is associated with about a 0.47-point decline in the threat index among Lusophone countries, compared with roughly a 0.27-point decline in Anglophone countries. While both effects are statistically significant on a 3–10 index scale, the Lusophone relationship is notably larger, indicating a more pronounced conditional association between poverty and lower recorded threat levels in that subgroup.

However, the coefficients of poverty in the pooled West Africa and Francophone models are not significant and even positive sign. The implication is that, once governance, unemployment, income per capita, inequality, and education are controlled for, poverty does not systematically raise or reduce long-run security threats across the region as a whole, and the direction is not stable across linguistic blocs. This inconsistency can be associated with several factors: (i) measurement/reporting differences, poorer, rural areas may under-record incidents; (ii) target and opportunity effects, areas with lower incomes may present fewer high-value targets; and (iii) conditioning by institutions, since governance and inequality are strongly related to threats in the results, the residual variation in poverty after conditioning on these may capture communities with tighter social cohesion or different exposure to organized violence.

Unemployment has a negative long-run association with security threats (−0.0971, $p < 0.1$) across the full West Africa panel, while the sign changes across blocs. It was positive and significant in Francophone economies (0.0901, $p > 0.1$) and significantly positive in Lusophone countries (2.1412, $p < 0.05$), but insignificant for Anglophone countries (0.0444, 0.0583). This means that higher joblessness is not uniformly destabilizing; where the coefficient is positive, more unemployment aligns with more recorded threats, but where it is negative or insignificant,

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other factors (governance capacity, inequality, urbanization/recording intensity) likely dominate the translation of labour market slack into insecurity.

Also, governance is the most significant predictor in the security model specifications. A negative and highly significant effect is observed in the full sample (−1.8629, $p < 0.05$), the Anglophone bloc (−4.0352, $p < 0.05$), and the Francophone bloc (−3.1745, $p < 0.05$). Only the Lusophone estimate is positive and not statistically significant (2.7958, $p > 0.05$). Substantively, better governance is consistently linked to lower long-run security threats, with effect sizes that are meaningful on the 3–10 threat scale, underscoring that institutional quality (government effectiveness and political stability and absence of violence/terrorism) is a first-order lever for reducing insecurity, even when poverty, inequality, education, and macro conditions are held constant.

As regards income per capita, the results are heterogeneous. Income per capita has no significant effect on security threat in the pooled West Africa model (0.0155, $p > 0.05$) and Anglophone bloc (0.0292, $p > 0.05$). Meanwhile, a negative and significant coefficient was reported for Lusophone countries (−0.2772, $p < 0.05$), and a positive and significant coefficient for Francophone countries (0.1418, $p < 0.05$). This difference implies that higher average incomes do not guarantee lower threat levels. In some contexts, rising incomes likely coincides with higher target density, distributional tensions, or urban exposure for the positive sign, while in others they align with state capacity and opportunity costs that damp violence for the negative sign.

Inequality has significant and positive coefficients across the model specifications. The parameter is significant in the full sample (0.0516, $p < 0.01$), Lusophone bloc (0.1302, $p < 0.05$), Anglophone bloc (0.1428, $p < 0.01$), and Francophone bloc (0.1048, $p < 0.01$). Substantively, higher income inequality levels are associated with higher long-run security threats, suggesting

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that distributional tensions, perceived injustice, and grievance formation scale with inequality. The effect sizes are statistically significant on a 3–10 threat scale, and the robustness across blocs underscores inequality as a core structural risk factor for insecurity, even after holding constant poverty, unemployment, governance, education, and income per capita.

Furthermore, education (primary school enrolment) shows a mitigating association where it is statistically significant at 5%. The coefficient is negative and significant in the pooled West Africa model (−0.0146, $p < 0.05$) and the Anglophone bloc (−0.0145, $p < 0.01$), but insignificant in the Lusophone bloc (0.0233, $p > 0.05$) and Francophone bloc (−0.0010, $p > 0.05$). Where significant, greater school enrolment aligns with lower long-run security threats, consistent with channels of human-capital accumulation, opportunity costs to violence, and social cohesion. The lack of significance in Lusophone and Francophone likely reflects heterogeneity in education quality, labour market absorption, or conflict exposure, implying that education's security dividend is contingent on context and complementary institutions.

4.4.2 Empirical Results of the Effects of Poverty on Economic Growth in West Africa

Prior to the FMOLS evaluation of the relationship between poverty and economic growth in the region, the study delineates the long-run associations utilising the Westerlund ECM panel cointegration framework in Table 4.8. This method surpasses the Pedroni panel cointegration test as it disregards heteroskedasticity, serial correlation, structural fractures, and cross-sectional dependence prevalent in West Africa data, thereby preventing misleading results. The Westerlund ECM panel cointegration analysis identified a long-term association between poverty and economic growth in West Africa. In the comprehensive West Africa panel, all four statistics, group tests (Gt = −5.665, Ga = −21.123) and panel tests (Pt = −12.170, Pa = −15.632), exhibit p-values of 0.000, so unequivocally rejecting the null hypothesis of no cointegration. Westerlund's

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tests accommodate heterogeneity and are resilient to prevalent concerns such as serial correlation, heteroskedasticity, and cross-sectional dependence, therefore rendering these rejections as credible evidence of a long-run equilibrium between poverty and economic growth.

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Table 4.8: Westerlund ECM Panel Cointegration Test (Model with Intercept)

	H_0: no cointegration	**Values**	**P-values**
All countries	Gt	-5.665	0.000
	Ga	-21.123	0.000
	Pt	-12.170	0.000
	Pa	-15.632	0.000
Lusophone countries	Gt	-27.033	0.000
	Ga	-34.592	0.000
	Pt	-24.189	0.000
	Pa	-23.805	0.000
Anglophone countries	Gt	-14.268	0.000
	Ga	-36.246	0.000
	Pt	-10.911	0.000
	Pa	-29.771	0.000
Francophone countries	Gt	-4.965	0.000
	Ga	-42.037	0.000
	Pt	-13.043	0.000
	Pa	-31.604	0.000

Source: Author's computation 2025.

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Disaggregating the region by linguistic blocs affirms the enduring relationship between poverty and economic growth. In Lusophone and Anglophone nations, the evidence is particularly compelling: all four statistics exhibit substantial magnitudes (e.g., Lusophone Gt = −27.033, Anglophone Gt = −14.268) with p = 0.000, signifying a strong long-term connection despite accommodating member-specific dynamics (group tests) and common panel behaviour (panel tests). Francophone nations consistently reject the null hypothesis across all statistical measures; even the least robust statistic, Gt = −4.965, retains significance at the 1% level (p = 0.000), while Ga, Pt, and Pa exhibit overwhelming significance (p = 0.000). The findings indicate a persistent long-term equilibrium linking poverty dynamics to economic growth conditions throughout West Africa, notwithstanding short-term shocks, suggesting that advancements in one area (e.g., economic growth) are mutually reinforcing with progress in the other (poverty reduction).

The empirical findings of the panel fully modified OLS (FMOLS) estimator of the effects of poverty on economic growth in West Africa are presented in Table 4.9. The coefficients of poverty headcount are statistically significant at conventional levels for two of the four panels, the pooled West Africa sample (0.1429, $p < 0.05$) and the Anglophone bloc (0.3830, $p < 0.01$), with the exception of the Lusophone (−0.2852, $p > 0.05$) and Francophone (0.6281, $p > 0.05$) panels. This suggests that, conditional on the other controls in the FMOLS model, higher measured poverty is associated with faster long-run income per-capita growth in the aggregate and within Anglophone countries. Intuitively, in these samples the results indicate a strengthening in income dynamics where poverty rates are higher, rather than a uniform growth slowdown.

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Table 4.9: Panel FMOLS Estimates of Poverty and Economic Growth in West Africa

Variables	**Dependent Variable:** Economic growth (income per capita)			
	All West African Countries	**Lusophone Countries**	**Anglophone Countries**	**Francophone Countries**
Poverty headcount	0.1429**	-0.2852	0.3830***	0.6281
	(0.0690)	(0.3368)	(0.1151)	(1.3802)
Investment	0.0120	-1.1975*	0.2286**	0.3271***
	(0.0771)	(0.6309)	(0.1035)	(0.0698)
Education	0.0856	0.1698	0.1294**	-0.1309**
	(0.0668)	(0.3444)	(0.0646)	(0.0574)
Health	2.0579***	-0.2609**	-0.0554*	1.0948***
	(0.0730)	(0.1065)	(0.0298)	(0.3623)
Inequality	-0.0474	0.5162**	-0.4304***	-1.3201
	(0.0645)	(0.2148)	(0.0382)	(3.3371)
Governance	3.9645***	2.9520***	4.1362***	1.9227
	(0.0716)	(0.2512)	(0.0598)	(1.3862)
R-squared	0.1461	0.1680	-0.0498	0.5851
Adj. R-squared	-0.0103	0.1015	-0.2020	0.3494
Obs.	240	32	80	144

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.
Source: Author's computation 2025.

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Also, the magnitude of impacts appears stronger (in absolute terms) for Anglophone countries compared with the pooled West Africa group. Using the coefficients as semi-elasticities on levels, a 10-percentage point rise in poverty headcount is associated with roughly a 3.83-point increase in income per capita for Anglophone countries, compared with about a 1.43-point increase in the full sample. While both effects are statistically significant, the Anglophone relationship is notably larger, indicating a more pronounced conditional association between poverty and higher recorded growth in that subgroup.

However, the coefficients of poverty in the Lusophone and Francophone models are not significant (and of mixed sign). The implication is that, once governance, investment, education, health, and inequality are controlled for, poverty does not systematically raise or reduce long-run income per-capita growth across these blocs, and the direction is not stable across linguistic groups. This inconsistency can be associated with several factors: (i) measurement/reporting differences, as poorer or more rural economies may under-capture output gains or structural shifts; (ii) sectoral/compositional effects, where lower initial income coincides with catch-up growth spurts independent of poverty rates; and (iii) conditioning by institutions and distribution, since governance and inequality strongly relate to growth in the results, the residual variation in poverty after conditioning on these may capture settings with targeted programs, aid inflows, or investment surges.

Concerning the co-variates, investment shows a heterogeneous long-run association with economic growth. It is insignificant in the pooled sample (0.0120, $p > 0.05$), significantly negative in Lusophone economies (−1.1975, $p < 0.10$), and significantly positive in both Anglophone (0.2286, $p < 0.05$) and Francophone (0.3271, $p < 0.01$) panels. This means higher capital formation is not uniformly growth enhancing across blocs; where the coefficient is

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positive, greater investment aligns with stronger long-run income gains, but where it is negative or insignificant, issues such as project selection, absorptive capacity, and macro instability likely mediate the translation of spending into growth.

Also, governance is one of the most powerful predictors in the growth specifications. A positive and highly significant effect is observed in the full sample (3.9645, $p < 0.01$), the Lusophone bloc (2.9520, $p < 0.01$), and the Anglophone bloc (4.1362, $p < 0.01$). Only the Francophone estimate is positive but not statistically significant (1.9227, $p > 0.05$). Substantively, better governance is consistently linked to higher long-run income per-capita growth, with effect sizes that are economically meaningful, underscoring that institutional quality (government effectiveness, rule of law, and policy credibility) is a first-order lever for accelerating growth, even when poverty, inequality, education, health, and investment are held constant.

As regards health, the results are heterogeneous. Health (life expectancy) has a positive and significant association with growth in the pooled West Africa model (2.0579, $p < 0.01$) and in the Francophone bloc (1.0948, $p < 0.01$). Meanwhile, negative and significant coefficients are reported for Lusophone countries (−0.2609, $p < 0.05$) and (more modestly) for Anglophone countries (−0.0554, $p < 0.10$). This difference implies that improvements in population health do not guarantee faster growth in all contexts: in some settings, longer lives coincide with higher dependency or delayed structural change (yielding a negative long-run association), while in others they align with human-capital deepening and productivity gains that raise income.

Inequality displays mixed but often meaningful associations with growth. It is insignificant in the full sample (−0.0474, $p > 0.05$), significantly positive in the Lusophone bloc (0.5162, $p < 0.05$), significantly negative in the Anglophone bloc (−0.4304, $p < 0.01$), and statistically indistinct in the Francophone bloc (−1.3201, $p > 0.05$). Substantively, the Anglophone result suggests that

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higher inequality is associated with weaker long-run income growth, consistent with distributional tensions, low social mobility, and constrained aggregate demand, whereas the positive Lusophone estimate may reflect transitional dynamics where rising top-end incomes coincide with investment booms or enclave sectors that lift measured output despite unequal distribution.

Furthermore, education (primary school enrolment) shows a bloc-dependent association with growth. The coefficient is insignificant in the pooled West Africa model (0.0856, $p > 0.05$) and the Lusophone bloc (0.1698, $p > 0.05$), significantly positive in the Anglophone bloc (0.1294, $p < 0.05$), and significantly negative in the Francophone bloc (−0.1309, $p < 0.05$). Where significant and positive, greater enrolment aligns with higher long-run income per-capita growth, consistent with channels of human-capital accumulation and productivity. The negative Francophone estimate likely reflects heterogeneity in education quality, skill mismatches, or limited labour-market absorption, implying that education's growth dividend is contingent on context and complementary reforms that translate schooling into productive employment.

4.4.3 Empirical Results of the Effects of Security Threats on Economic Growth in West Africa

Before doing the FMOLS assessment of the correlation between security threats and economic growth in the region, the study outlines the long-term relationships using the Westerlund ECM panel cointegration framework in Table 4.10. This method outperforms the Pedroni panel cointegration test by accounting for heteroskedasticity, serial correlation, structural breaks, and cross-sectional dependence common in West African data, thus avoiding erroneous conclusions. The Westerlund ECM panel cointegration study revealed a long-term relationship between security threats and economic growth in West Africa. In the extensive West Africa panel, all four

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statistics, group tests (Gt = −5.490, Ga = −19.539) and panel tests (Pt = −15.609, Pa = −18.442), demonstrate p-values of 0.000, so conclusively rejecting the null hypothesis of no cointegration. Westerlund's tests account for heterogeneity and are robust against common issues such as serial correlation, heteroskedasticity, and cross-sectional dependence, thereby providing reliable evidence of a long-run equilibrium between security threats and economic growth.

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Table 4.10: Westerlund ECM Panel Cointegration Test (Model with Intercept)

	H_0: no cointegration	**Values**	**P-values**
All countries	Gt	-5.490	0.000
	Ga	-19.539	0.000
	Pt	-15.609	0.000
	Pa	-18.442	0.000
Lusophone countries	Gt	-10.776	0.000
	Ga	-41.363	0.000
	Pt	-25.858	0.000
	Pa	-25.852	0.000
Anglophone countries	Gt	-9.870	0.000
	Ga	-47.455	0.000
	Pt	-11.279	0.000
	Pa	-23.510	0.000
Francophone countries	Gt	-6.059	0.000
	Ga	-41.807	0.000
	Pt	-11.255	0.001
	Pa	-31.684	0.000

Source: Author's computation 2025.

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Disaggregating the region by language blocs confirms the persistent relationship between security challenges and economic growth. In Lusophone and Anglophone countries, the evidence is particularly persuasive: all four statistics demonstrate significant magnitudes (e.g., Lusophone Gt = −10.776, Anglophone Gt = −9.870) with p = 0.000, indicating a robust long-term relationship despite accommodating member-specific dynamics (group tests) and common panel behaviour (panel tests). Francophone countries consistently refute the null hypothesis across all statistical metrics; even the least resilient statistic, Gt = −6.059, maintains significance at the 1% level (p = 0.000), while Ga, Pt, and Pa demonstrate substantial significance (p = 0.00). The findings reveal a sustained long-term equilibrium connecting the dynamics of security threats to economic growth conditions across West Africa, despite short-term disruptions, indicating that improvements in one domain (e.g., economic growth) are mutually reinforcing with advancements in the other (diminution of security threats).

The empirical findings of the FMOLS estimator of the effects of security threats on economic growth in West Africa are presented in Table 4.11. The coefficients on the security-threat index are statistically significant across all four panels, but their signs differ: positive in the pooled West Africa sample (0.3889, $p < 0.01$), Anglophone bloc (0.3909, $p < 0.01$), and Francophone bloc (0.4692, $p < 0.01$), and negative for the Lusophone bloc (−1.3629, $p < 0.01$). Conditional on controls, this pattern implies that higher recorded security threats are associated with faster income per capita growth for West Africa overall and for Anglophone and Francophone groups, but slower growth in Lusophone economies. That asymmetry is counterintuitive; it cautions against simple causal stories and points to heterogeneity in how “threat” is measured, reported, and transmitted into macro-outcomes across subregions.

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Table 4.11: Panel FMOLS Estimates of Security Threats and Economic Growth in West Africa

Variables	**Dependent Variable:** Economic growth (income per capita)			
	All West African Countries	**Lusophone Countries**	**Anglophone Countries**	**Francophone Countries**
Security Threats	0.3889***	-1.3629***	0.3909***	0.4692***
	(0.0345)	(0.1619)	(0.0784)	(0.0724)
Investment	0.0341	-0.1735	-0.0814	0.1512***
	(0.0431)	(0.2706)	(0.1114)	(0.0532)
Education	-0.0704**	0.9631***	0.2476***	-0.0410
	(0.0280)	(0.0945)	(0.0800)	(0.0577)
Health	0.0112	1.6586***	-0.6436***	0.2423***
	(0.0124)	(0.0951)	(0.0231)	(0.0178)
Inequality	0.0043	0.8337***	-0.1017*	-0.0436
	(0.0281)	(0.2129)	(0.0541)	(0.0587)
Governance	1.9480***	17.3124***	4.7068***	1.7000***
	(0.0187)	(0.2249)	(0.0691)	(0.0288)
R-squared	0.0418	-0.1283	-0.0225	0.2276
Adj. R-squared	-0.0442	-0.4574	-0.1706	0.1437
Obs.	256	32	80	144

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.
Source: Author's computation 2025.

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Also, the magnitude of impacts varies substantially, with the Lusophone coefficient notably larger in absolute terms. Interpreting coefficients on the 3–10 threat scale, a one-point rise in the security threat index is associated with roughly a 0.39–0.47 increase in income per capita growth in the pooled, Anglophone, and Francophone panels, versus a 1.36 decline in the Lusophone panel. While all are precisely estimated, the Lusophone response is not only opposite in sign but materially stronger, indicating that where the threat–growth link is adverse, it can be macro-economically meaningful. Conversely, the positive coefficients elsewhere may be picking up contexts in which rising growth coincides with better reporting of incidents, expansion into riskier frontiers, or resource booms that both elevate targets and raise measured income.

However, the coexistence of positive and negative signs across panels underscores identification limits and potential mechanisms that work in opposite directions. On the one hand, faster growth can bring denser economic activity, higher-value targets, and improved surveillance, mechanically increasing recorded threats even if underlying risk is stable. On the other, sustained insecurity can deter investment, disrupt supply chains, and depress productivity, threatening growth, as the Lusophone estimate suggests. Endogeneity (reverse causality), measurement differences (under-reporting where state capacity is weak), and composition effects (resource extraction, border shocks) are all plausible channels. Thus, while the estimates reveal robust long-run association, they should not be read as reduced-form causal effects without additional instruments or design.

Concerning the covariates, investment does not exhibit a uniform long-run association with growth across panels. It is insignificant in the pooled West Africa model (0.0341, $p > 0.10$), and also statistically insignificant for Lusophone (−0.1735, $p > 0.10$) and Anglophone economies

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(−0.0814, $p > 0.10$). By contrast, investment is positive and significant in the Francophone bloc (0.1512, $p < 0.01$), consistent with capital deepening translating more directly into income gains there. The divergence suggests differences in the efficiency of capital allocation, sectoral composition (public vs. private; extractives vs. tradables), and project execution quality. It also hints that, where governance and complementary human capital are weaker, headline investment ratios may not yield proportional growth.

Also, governance is the most consistent predictor in growth specifications. The effects are positive and highly significant in the pooled sample (1.9480, $p < 0.01$), Lusophone bloc (17.3124, $p < 0.01$), Anglophone bloc (4.7068, $p < 0.01$), and Francophone bloc (1.7000, $p < 0.01$). Substantively, improvements in government effectiveness and political stability scale strongly with higher income-per-capita growth, with especially large elasticities in the Lusophone and Anglophone panels. This reinforces the view that institutional quality is a first-order input for growth, shaping investor expectations, contract enforcement, and the state's capacity to deliver core public goods that raise productivity and crowd in private capital.

As regards health, the results are heterogeneous. Health is insignificant in the pooled model (0.0112, $p > 0.10$), strongly positive in Lusophone (1.6586, $p < 0.01$) and Francophone panels (0.2423, $p < 0.01$), and negative in the Anglophone bloc (−0.6436, $p < 0.01$). The positive coefficients align with the idea that better population health (or higher effective health spending) boosts labour productivity and growth. The negative Anglophone estimate may reflect measurement (health outlays rising countercyclically), budget crowding-out, or disease shocks coinciding with expenditure surges. The absence of a pooled effect suggests that health–growth payoffs are context-dependent, likely mediated by efficiency of spending, disease burden, and labour-market absorption.

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Inequality shows weak aggregate association but significant heterogeneity. It is statistically insignificant in the pooled West Africa model (0.0043, $p > 0.10$), positive and significant in Lusophone economies (0.8337, $p < 0.01$), negative and marginally significant in Anglophone countries (−0.1017, $p < 0.10$), and insignificant in the Francophone bloc (−0.0436, $p > 0.10$). These contrasts suggest that distributional structure can either support growth (e.g., via savings/investment by high-income segments) or hinder it (through underinvestment in broad-based human capital and social cohesion). Where inequality appears growth-reducing, inclusive policies that expand opportunity and reduce horizontal grievances could yield macro dividends.

Furthermore, education displays mixed but often growth-enhancing associations. The pooled estimate is negative (−0.0704, $p < 0.05$), while the Lusophone (0.9631, $p < 0.01$) and Anglophone (0.2476, $p < 0.01$) coefficients are positive and significant; the Francophone coefficient is small and insignificant (−0.0410, $p > 0.10$). Positive bloc-level effects align with human-capital accumulation lifting productivity and innovation. The negative pooled coefficient likely reflects timing (enrolment surges precede labour-market payoffs), quality gaps, or reallocation effects during education expansions. Taken together, the results imply that education's growth dividend is contingent on system quality and on complementary factors, especially governance and the investment climate, that convert schooling into skills and productive employment.

4.4.4 Empirical Results of the Links among Poverty, Security Threats, and Economic Growth in West Africa

Prior to conducting the FMOLS evaluation of the interrelationship between poverty, security threats, and economic growth in the region, the study delineates the long-term linkages utilising the Westerlund ECM panel cointegration framework as presented in Table 4.12. This approach

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surpasses the Pedroni panel cointegration test by addressing heteroskedasticity, serial correlation, structural breaks, and cross-sectional dependence prevalent in West African data, hence preventing inaccurate conclusions. The Westerlund ECM panel cointegration analysis demonstrated a long-term association among poverty, security risks, and economic growth in West Africa. In the comprehensive West Africa panel, all four statistics, group tests (Gt = −4.862, Ga = −23.022) and panel tests (Pt = −14.901, Pa = −17.402), exhibit p-values of 0.000, so decisively rejecting the null hypothesis of no cointegration. Westerlund's tests address heterogeneity and are resilient to prevalent problems such as serial correlation, heteroskedasticity, and cross-sectional dependence, thereby offering credible evidence of a long-term equilibrium among poverty, security risks, and economic growth.

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Table 4.12: Westerlund ECM Panel Cointegration Test (Model with Intercept)

	H_0: no cointegration	**Values**	**P-values**
All countries	Gt	-4.862	0.000
	Ga	-23.022	0.000
	Pt	-14.901	0.000
	Pa	-17.402	0.000
Lusophone countries	Gt	-26.540	0.000
	Ga	-39.495	0.000
	Pt	-43.784	0.000
	Pa	-27.001	0.000
Anglophone countries	Gt	-7.540	0.000
	Ga	-38.088	0.000
	Pt	-10.235	0.007
	Pa	-26.165	0.000
Francophone countries	Gt	-5.877	0.000
	Ga	-35.066	0.000
	Pt	-15.456	0.000
	Pa	-24.494	0.000

Source: Author's computation 2025.

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Analysing the region by linguistic groups substantiates the enduring relationship between poverty, security risks, and economic development. In Lusophone and Anglophone nations, the evidence is notably compelling: all four statistics exhibit substantial magnitudes (e.g., Lusophone Gt = −26.540, Anglophone Gt = −7.540) with p = 0.000, signifying a strong long-term relationship while accounting for member-specific dynamics (group tests) and common panel behaviour (panel tests). Francophone nations significantly reject the null hypothesis across all statistical measures; even the least robust statistic, Gt = −5.877, retains significance at the 1% level (p = 0.000), while Ga, Pt, and Pa exhibit considerable significance (p = 0.00). The findings demonstrate a persistent long-term equilibrium linking the interplay of poverty and security threats to economic growth conditions in West Africa, notwithstanding short-term disruptions, suggesting that enhancements in one area (e.g., economic growth) mutually reinforce progress in the other (reduction of poverty and security threats).

The empirical findings of the FMOLS estimator of the effects of poverty, security threats, and their interaction on economic growth in West Africa are presented in Table 4.13. For poverty, the coefficients are statistically significant in two of the four panels but with opposite signs: negative for the Lusophone bloc (−2.0492, $p < 0.01$) and positive (though weaker) for the Francophone bloc (0.1796, $p < 0.10$). By contrast, the pooled West Africa estimate (0.0819, $p > 0.05$) and the Anglophone coefficient (−0.1520, $p > 0.10$) are not statistically different from zero. Conditional on controls, this pattern suggests that higher measured poverty is associated with slower long-run income-per-capita performance in the Lusophone group, a mild growth-enhancing association in the Francophone sample, and no systematic relationship in the pooled and Anglophone panels.

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Table 4.13: Panel FMOLS Estimates of Poverty, Security Threats and Economic Growth in West Africa

Variables	**Dependent Variable:** Economic growth (income per capita)			
	All West African Countries	**Lusophone Countries**	**Anglophone Countries**	**Francophone Countries**
Poverty	0.0819	-2.0492***	-0.1520	0.1796*
	(0.0553)	(0.4494)	(0.1407)	(0.0940)
Security Threat	0.3324***	-12.3425***	-2.8358***	0.7930***
	(0.0288)	(0.5335)	(0.1346)	(0.0947)
Poverty × Security Threat	0.0517	0.0026	0.0675	-0.0245
	(0.0409)	(0.4913)	(0.1113)	(0.0715)
Investment	0.0887*	-0.0233	0.1855	0.1115
	(0.0470)	(0.8048)	(0.1397)	(0.0972)
Education	0.0613*	2.4557***	0.2818**	0.0105
	(0.0318)	(0.5365)	(0.1392)	(0.0956)
Health	0.2607***	1.3750***	1.0058***	1.0774***
	(0.0146)	(0.2434)	(0.1330)	(0.1075)
Inequality	-0.1474***	1.0312	-1.0665***	-0.0729
	(0.0189)	(0.6072)	(0.1163)	(0.0927)
Governance	1.8260***	17.6616***	3.7770***	0.9623***
	(0.0157)	(0.4479)	(0.1451)	(0.1024)
R-squared	0.2883	0.2384	0.1204	0.2614
Adj. R-squared	0.265	0.0261	0.022	0.2176
Obs.	240	32	80	144

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.
Source: Author's computation 2025.

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Also, the magnitude of impacts appears stronger (in absolute terms) for the Lusophone countries compared with the Francophone group. Using the coefficients as semi-elasticities, a 10-percentage-point rise in poverty headcount aligns with about a 20.5-unit decline in the long-run income-per-capita metric among Lusophone countries, compared with roughly a 1.8-unit increase in the Francophone group. While both effects are statistically significant (at 1% and 10%, respectively), the Lusophone relationship is notably larger, indicating a more pronounced conditional association between poverty and weaker income dynamics in that subgroup.

However, the coefficients of poverty in the pooled West Africa and Anglophone models are not significant and even switch signs. The implication is that, once security threats, investment, education, health, inequality, and governance are controlled for, poverty does not uniformly raise or reduce long-run income per capita across the region as a whole, and the direction is not stable across linguistic blocs. This inconsistency can be associated with several factors: (i) measurement/reporting differences—surveys may understate living-standard variation or miss informal incomes; (ii) target and opportunity effects—very poor settings can exhibit low monetized activity yet strong subsistence buffers; and (iii) conditioning by institutions, since governance and human capital are strongly related to income in the results, the residual variation in poverty after conditioning on these may capture communities with tight social networks or different exposure to sectoral booms.

Turning to security threats, the coefficients are highly significant across all panels but differ sharply in sign: positive for the pooled West Africa sample (0.3324, $p < 0.01$) and the Francophone bloc (0.7930, $p < 0.01$), and strongly negative for both Lusophone (−12.3425, $p < 0.01$) and Anglophone (−2.8358, $p < 0.01$) groups. Interpreted conditionally, higher

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recorded security threats coincide with faster long-run income-per-capita gains in the pooled and Francophone samples, but with markedly slower gains in Lusophone and Anglophone panels.

Also, the magnitude of impacts is far stronger (in absolute value) for the Lusophone countries compared with the other groups. A one-point increase in the security-threat index aligns with a 12.3-unit decline in the long-run income metric for Lusophone countries and a 2.84-unit decline for Anglophone economies, versus increases of 0.33 and 0.79 units in the pooled and Francophone panels. While all effects are precisely estimated, the Lusophone response is not only opposite in sign to the pooled/Francophone association but also an order of magnitude larger, indicating a more pronounced conditional link between insecurity and weaker income dynamics in that subgroup.

However, the coexistence of positive and negative signs across panels underscores identification limits and mechanisms that can operate in opposite directions. In some contexts, stronger growth may co-move with better incident reporting, resource-sector expansion into riskier frontiers, or urbanization that both elevates targets and boosts measured income, yielding a positive association. In others, sustained insecurity plausibly deters investment, disrupts trade corridors, and depresses productivity, producing the large negative Lusophone and Anglophone estimates. Endogeneity (reverse causality), reporting heterogeneity, and composition effects (e.g., extractives vs. agriculture; coastal vs. inland states) are all credible channels.

Regarding the interaction term (poverty × security threat), none of the panels report statistical significance: pooled (0.0517, $p > 0.10$), Lusophone (0.0026, $p > 0.10$), Anglophone (0.0675, $p > 0.10$), and Francophone (-0.0245, $p > 0.10$). Substantively, this implies that, conditional

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on the included controls, the marginal effect of security threats on income does not vary significantly with the level of poverty (and vice versa) in the long run. The absence of an interaction effect is informative: the poverty–growth and threat–growth channels appear to operate largely in parallel rather than multiplicatively at the regional scale captured by these panels.

Concerning the co-variates, investment shows limited and uneven long-run association with income per capita. It is weakly positive in the pooled model (0.0887, $p < 0.10$) and statistically indistinguishable from zero in the Lusophone (−0.0233, $p > 0.10$), Anglophone (0.1855, $p > 0.10$), and Francophone (0.1115, $p > 0.10$) samples. This means that higher gross fixed capital formation is not uniformly growth-enhancing across West Africa; where the coefficient is small or insignificant, capital deepening likely depends on complementary governance, sectoral mix, and project execution quality to translate into income gains.

Also, governance is among the most powerful predictors in the income specifications. A positive and highly significant effect is observed in the pooled sample (1.826, $p < 0.01$), the Lusophone bloc (17.662, $p < 0.01$), the Anglophone bloc (3.777, $p < 0.01$), and the Francophone bloc (0.962, $p < 0.01$). Substantively, better governance is consistently linked to higher long-run income per capita, with effect sizes that are meaningful, underscoring that institutional quality (state capability and political stability) is a first-order lever for raising living standards even when poverty, security, human capital, inequality, and investment are held constant.

As regards education, the results are generally growth-enhancing when the coefficients are significant. The pooled coefficient is positive (0.0613, $p < 0.10$), with larger positive and significant effects in the Lusophone (2.4557, $p < 0.01$) and Anglophone (0.2818, $p < 0.05$)

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blocs, and no detectable effect in the Francophone group (0.0105, $p > 0.10$). This difference implies that expansions in primary enrolment do not guarantee uniform income gains; in some contexts, the returns likely reflect improvements in quality, skill absorption by labor markets, and alignment with sectoral demand, while in others the short-run metric may capture enrolment surges ahead of productivity payoffs.

Health exhibits a robust, positive long-run association with income in every panel: pooled (0.2607, $p < 0.01$), Lusophone (1.3750, $p < 0.01$), Anglophone (1.0058, $p < 0.01$), and Francophone (1.0774, $p < 0.01$). Where significant, better health status (higher life expectancy) aligns with higher income per capita, consistent with channels of labor productivity, human-capital accumulation, and reduced disease burden. The comparatively larger bloc-level coefficients suggest that health improvements can yield sizable macro returns when embedded in supportive institutional and economic environments.

Inequality is growth-reducing where significant and otherwise imprecisely estimated. It is negative and highly significant in the pooled sample (−0.1474, $p < 0.01$) and the Anglophone bloc (−1.0665, $p < 0.01$), but statistically indistinguishable from zero in the Lusophone (1.0312, $p > 0.10$) and Francophone (−0.0729, $p > 0.10$) groups. Substantively, higher income inequality is associated with lower long-run income per capita where effects are detected, suggesting distributional tensions and underinvestment in broad human capital can weigh on growth. The absence of significance elsewhere may reflect countervailing savings/investment channels or measurement issues that dilute the average effect.

4.5 Discussion of Findings

4.5.1 Poverty and Security Threats in West Africa

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Based on the estimated outcomes on the relationship between poverty and security threats in West Africa, poverty has contrasting outcomes on the security threat index across different blocs. As higher poverty is associated with a reduction in the security threat index in Lusophone and Anglophone countries on the one hand, it shows no significant systematic relationship for the Francophone panel and the entire region on the other hand. In composite terms, the effect of poverty on security is not uniform across West Africa. This finding is in tandem with the fact that the relationship is complex and often indirect, a complexity that is well-documented in existing studies[8,9,9,10,11,12,13,14,15,16,17,18].

The outcomes are further explained in the following ways. The negative association found in the Lusophone and Anglophone panels aligns with the notion of significant underreporting of security incidents in impoverished and rural areas, which often suffer from illiteracy and a lack of state presence, meaning the true scale of insecurity is not captured in official databases[8,9,9,10,11,12]. Furthermore, the concept of "opportunity effects" is reflected in the literature, where poverty drives criminal activity, but the targets of violence are often strategic higher-value assets located in more affluent areas rather than the immediate impoverished local environment[13,14,15,18]. This results in a statistical scenario where the poorest areas are not the primary loci of recorded high-impact security events. Conversely, the insignificant result for the entire region underscores a central theme from the global review that poverty alone is an insufficient predictor of security threats. This is consistent with a study which found that other variables play a more significant role than poverty in explaining terrorism[19]. The mixed results across linguistic blocs highlight that the mechanisms linking poverty and security, such as underreporting and the selectivity of targeting, vary significantly across different contexts.

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4.5.2 Poverty and Economic Growth in West Africa

Based on the estimated outcomes on the relationship between poverty and economic growth in West Africa, poverty has contrasting outcomes on economic growth across different blocs. As higher poverty is associated with an increase in income per-capita growth in the pooled West Africa sample and the Anglophone bloc on the one hand, it shows no significant systematic relationship for the Francophone and Lusophone panels on the other hand. In comparison, the effect of poverty on growth is not uniform across West Africa. This finding is in tandem with the fact that the relationship is complex and often contradictory, a complexity that is well-documented in existing studies[19,20,21,22,23,24,25,26,27].

The outcomes can be further explained as follows: the positive association found in the Anglophone panel and the full sample aligns with the concept of "jobless growth" identified in the literature, where significant macroeconomic expansion can occur alongside high poverty rates, indicating that growth can proceed without immediately translating into poverty reduction[25]. This finding is also consistent with studies that observed an insignificant impact of poverty on growth or even a positive though insignificant long-run relationship, suggesting the absence of a strong negative relationship[20,21]. Furthermore, evidence of bidirectional causality between growth and poverty measures supports the interpretation that in the regional context, the two variables may move in tandem in the long run under certain conditions[23].

Conversely, the insignificant result for the Francophone and Lusophone panels underscores a critical theme from the literature: the poverty-growth nexus is highly context-specific. This finding is consistent with studies that showed the relationship is not universal but depend on other structural factors[24,28]. The mixed results across linguistic blocs highlight that the

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mechanisms linking poverty and growth, such as the sectoral composition of growth or the prevalence of informal economic activity, vary significantly across different economic environments[22,26]. This variability is also be associated with measurement issues, where poorer or more rural economies may under-capture output gains from informal sectors or subsistence activities, thereby distorting the measured relationship between official poverty metrics and recorded economic growth.

4.5.3 Security Threats and Economic Growth in West Africa

Based on the estimated outcomes on the relationship between security threats and economic growth in West Africa, security threats have contrasting outcomes on economic growth across different blocs. As a higher security threat index is associated with an increase in income per-capita growth in the pooled West Africa sample, Anglophone, and Francophone blocs on the one hand, it is associated with a decrease in economic growth for the Lusophone bloc on the other hand. In comparison, the effect of security threats on growth is not uniform across West Africa. This finding is in tandem with the fact that the relationship is complex and exhibits significant variation across different contexts, a complexity that is well-documented in existing studies[29,30,31,32,33,34,35,36,37].

The outcomes can be further explained as follows: the positive association found in three panels aligns with some country-specific evidence suggesting that economic growth and investment activities can persist or even increase during periods of insecurity, particularly in contexts where economic activity expands into riskier frontiers or resource booms elevate both targets and measured income[37]. This finding also resonates with research indicating that government security expenditure can stimulate economic growth in the long run, despite short-term negative effects[34,38,39]. Furthermore, improved reporting of incidents in faster-

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growing economies may mechanically increase recorded threats even if underlying risk remains stable.

Conversely, the significant negative relationship observed in the Lusophone panel supports the broader consensus in the literature that security threats generally deter investment, disrupt supply chains, and depress productivity, ultimately threatening economic growth[33,34,35,36,37,38,39,40,41,42]. This finding is consistent with studies showing that terrorism and insecurity negatively affect key growth drivers including foreign direct investment, domestic capital formation, and government spending on productive sectors. The mixed results across linguistic blocs highlight that the mechanisms linking security threats and growth, including measurement differences in threat reporting, varying state capacity, and composition effects of economic activity, vary significantly across different sub-regional contexts. This variability underscores the profound heterogeneity in how security threats are transmitted into macroeconomic outcomes across West Africa.

4.5.4 Poverty, Security Threats and Economic Growth in West Africa

- Based on the estimated outcomes on the relationship between poverty, security threats, and economic growth in West Africa, both poverty and security threats demonstrate contrasting outcomes on economic growth across different blocs. Higher poverty is associated with slower economic growth in the Lusophone bloc while showing a mild growth-enhancing association in the Francophone sample, with no systematic relationship in the pooled and Anglophone panels. Similarly, security threats coincide with faster economic growth in the pooled and Francophone samples but show markedly negative effects in Lusophone and Anglophone panels. In comparison, the effects of both poverty and security threats on growth are not

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uniform across West Africa. These findings are in tandem with the complex and often contradictory relationships documented in existing studies[15,16,17,20,23,25,26,27,29,31,32,34,35,36,37,40,41,42].

The outcomes can be further explained as follows: The negative association between poverty and growth in the Lusophone bloc supports studies showing that poverty can have detrimental effects on economic performance[19]. Conversely, the positive association in the Francophone sample aligns with evidence of "jobless growth" patterns where economic expansion occurs alongside high poverty rates, and with research showing insignificant or context-dependent relationships between poverty and growth[20,21,23,37]. The varying directions across blocs highlight the importance of contextual factors and measurement issues, where different economic structures and reporting capabilities may influence the observed relationships.

For security threats, the negative effects in Lusophone and Anglophone panels support the broad consensus that insecurity deteriorates investment, disrupts economic activities, and undermines growth[31,32,33,35,36,38,40,41,42]. The positive associations in the pooled and Francophone samples, however, align with studies suggesting that economic activity may persist or even increase during periods of insecurity, particularly in contexts where resource booms or expansion into riskier frontiers occur, or where improved incident reporting in growing economies mechanically raises threat recordings[37].

The absence of a significant interaction effect between poverty and security threats across all panels indicates that these factors operate largely independently in their influence on economic growth within the region. This finding suggests that the channels through which

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poverty and security affect economic performance may be distinct rather than multiplicative, operating in parallel rather than through interactive amplification. The mixed results across linguistic blocs highlight that the mechanisms linking poverty, security, and growth, including measurement differences, varying economic structures, and diverse institutional contexts, vary significantly across different sub-regional environments. This variability underscores the profound heterogeneity in how these fundamental development challenges manifest across West Africa's diverse economic landscape.

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Endnotes

1. M. H. Pesaran. *Testing Weak Cross-Sectional Dependence in Large Panels*. **Econometric Reviews**, 34(6-10), 2015, 1089-1117.
2. M. H. Pesaran. *General Diagnostic Tests for Cross-Sectional Dependence in Panels*. **Empirical Economics**, 60, 2021, 13-50.
3. M. H. Pesaran. *General Diagnostic Tests for Cross Section Dependence in Panels*. CESifo Working Papers No. 1233, 2004, 255-60.
4. J. Fan, Y. Liao & J. Yao. *Power Enhancement in High-Dimensional Cross-Sectional Tests*. **Econometrica**, 83, 2015, 1497–1541.
5. A. Levin, C. F. Lin, & C. S. J. Chu. *Unit Root Tests in Panel Data: Asymptotic and Finite-Sample Properties*. **Journal of Econometrics**, 108(1), 2002, 1-24.
6. K. S. Im, M. H. Pesaran, & Y. Shin. *Testing for Unit Roots in Heterogeneous Panels*. **Journal of Econometrics**, 115(1), 2003, 53-74.
7. M. H. Pesaran. *A Simple Panel Unit Root Test in the Presence of Cross-Section Dependence*. **Journal of Applied Econometrics**, 22(2), 2007, 265-312.
8. Á. Deák. *Violence as a Dimension of Poverty: The Case of Colombia*. **AARMS, 20(Special Edition)**, 2021, 33-51.
9. A. Ajodo-Adebanjoko, & U. O. Walter. *Poverty and the Challenges of Insecurity to Development*. **European Scientific Journal**, 10(14), 2014, 361-372.
10. O. M. Ojeifo, & I. A. Osawe. *Analysis of the Future Trends of Urbanization, Poverty, and Security in Nigeria*. In Nuhu, M. B. & Kuma, S. S. (Eds.) Land Policy Governance and Sustainable Development in Nigeria (A Book of Readings). Centre for Human Settlements and Urban Development (CHSUD), Federal University of Technology, Minna, Niger State, Nigeria, 2019, 93-107.
11. M. W. Apikins. *Interrogating the Nexus between Insecurity, Poverty, and Unemployment in North Eastern Nigeria: Contextualizing the Boko-Haram Insurgency*. **International Journal of Operational Research in Management, Social Sciences & Education**, 6(1), 2020, 308-322.
12. S. E. Amila, & B. V. Luka. *Poverty as a Threat to Human Security in Nigeria*. **International Journal of Research and Innovation in Social Science (IJRISS)**, 4(1), 2020, 157-161.
13. T. S. Akinyetun. *Poverty, Cybercrime, and National Security in Nigeria*. **Journal of Contemporary Sociological Issues**, 1(2), 2021, 86-109.
14. A. Abdullahi. *Rural Banditry, Regional Security, and Integration in West Africa*. **Journal of Social and Political Sciences**, 2(3), 2019, 644-654.
15. C. O. Omodu. *Insurgency and Poverty in Africa: The Case of North-East Region of Nigeria (2015–2019)*. **Ulysses International Journal of Humanities and Contemporary Studies**, 4(1), 2023, 194-213.
16. P. L. Oyigebe, & Z. R. Meshach. *Poverty-Insecurity Nexus: An Albatross to National Development in Nigeria*. **Kashere Journal of Politics and International Relations**, 1(1), 2023, 157-168.

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17. M. M. Abga, S. Magaji, & K. Z. Gambo. *The Impact of Poverty and Insecurity on Sustainable Development in Nigeria*. **Kashere Journal of Politics and International Relations**, 1(2), 2023, 1-12.
18. A. M. Oladoyin, G. U. Osimen, I. Adi, & O. Dada. *The Rising Insecurity in Nigeria: Interrogating the Linkage between Poverty and Banditry*. **Educational Administration: Theory and Practice**, 30(5), 2024, 11406-11415.
19. Y. Zhu, S. Bashir & M. Marie. *Assessing the Relationship between Poverty and Economic Growth: Does Sustainable Development Goal can be Achieved?* **Environmental Science and Pollution Research**, 29(19), 2022, 27613-27623.
20. P. I. Nwosa & C. Ehinomen. *Inequality, Poverty and Economic Growth in Nigeria*. **EuroEconomica** 39(2), 2020.
21. G. E. Nzeribe, Uju R. Ezenekwe, M.C. Uzonwanne, Amaka G. Metu & Chekwube V. Madichie. *Poverty-Growth-Inequality Triangle: Empirical Evidence from Nigeria*. **Toruńskie Studia Międzynarodowe**, 2(16), 2022, 85-102.
22. G. Dursun & B. Ogunleye. *Economic Growth, Employment and Poverty Reduction: The Case of West African Countries*. **American Journal of Economics**, 6(1), 2016, 50-60.
23. K. M. Bello & T. O. Akinbobola. *Trade Openness, Economic Growth and Poverty Reduction in ECOWAS Countries: (A Panel Causality)*. A Paper Presented at the "Institutional Framework for the Practice of SDGs: Actions, Challenges and Implementation" Conference at Obafemi Awolowo University. Ile -Ife. Nigeria, 2020.
24. G. Soava, Georgeta, A. Mehedintu & A. Sterpu. *Relations between Income Inequality, Economic Growth and Poverty Threshold: New Evidences from EU Countries Panels*. **Technological and Economic Development of Economy**, 26(2), 2020, 290-310.
25. T. Olasode, C. Eke& O.O. Olaleye. *Has Economic Growth Reduced Poverty in Nigeria? A Critical Analysis of the Last Two Decades*. **Journal of Enterprise and Development**, 4(2), 2022, 232-256.
26. P. Ekpeyong. *Econometric Analysis of the Impact of Inflation, Unemployment, and Economic Growth on Poverty Reduction: A Novel Application of Asymmetric Technique*. **Asian Journal of Economics and Empirical Research**, 10(1), 2023.
27. G. O. Ajike & S. I. Oladeji. *Evidence of Kuznets Hypothesis in Economic Growth on Poverty Reduction in Nigeria*. **Sapientia Global Journal of Arts, Humanities and Development Studies**, 4(1), 2021.
28. G, N. Djossou, G. Q. Kane, & J. Novignon. *Is Growth Pro-Poor in Benin? Evidence using a Multidimensional Measure of Poverty*. **Poverty & Public Policy**, 9(4), 2017, 426-443.
29. M. Tahir, U. Burki, & T. Azid. *Terrorism and Environmental Sustainability: Empirical Evidence from the MENA Region*. **Resources, Environment and Sustainability**, 8, 2022, 100056.
30. L. S. Nkwatoh, & H. A. Nathaniel. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, p69-p69.
31. H. Rjoub, C. U. Ifediora, J. A. Odugbesan, B. C. Iloka, J. Xavier Rita, R. M. Dantas, M. N. Mata, & J. M. Martins. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan*

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Africa. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.
32. C. Agu, A. J. Mbah, & C. S. Agu. *Investigating the Economic Consequence of Terrorism in Sub-Saharan Africa: Evidence from a Dynamic Panel Model*. **Statistics, Politics and Policy**, 14(2), 2023, 125-149.
33. C. O. Iheonu, & H. E. Ichoku. *Terrorism and Economic Growth in Africa: Understanding the Role of Military Expenditure*. **Behavioral Sciences of Terrorism and Political Aggression**, 15(4), 2023, 448-462.
34. G.-A. C. Chidinma, & E. E. Inimino. *Recurrent Expenditure on Internal Security and Economic Growth in Nigeria*. **European Journal of Social Sciences Studies**, 9(4), 2024.
35. C. Chuku, D. Abang, & I.-A. Isip. *Growth and Fiscal Consequences of Terrorism in Nigeria*. **Defence and Peace Economics**, 30(5), 2019, 549-569.
36. A. Yusuf, & S. Mohd. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.
37. L. S. Nkwatoh, & H. A. Nathaniel. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, p69-p69.
38. I. V. Ushahemba, O. I. Jibrin, I. A. Shehu, & G. Solomon. *Investment and Economic Growth Nexus in Nigeria: A Moderation Analysis of Security Threats*. **Editorial Board**, 2023, 250.
39. A. Nteegah. *Security Expenditure: Implications on Economic Growth in Nigeria*. **International Journal of Economics, Business and Management Studies**, 7(2), 2020, 234-246.
40. M. E. Rotimi, J. W. Naphtali, & D. Irefin. *Terrorism and Economic Growth in Nigeria*. **ABUAD Journal of Social and Management Sciences,** 5(2), 2024, 358-381.
41. K. C. Aghaulor. *Growth Impact of Insecurity on the Nigerian Economy*. **Unizik Journal of Arts and Humanities**, 21(3), 2020, 147-171.
42. I. I. Dibia. *The Effects of Terrorism on Peace and National Development in Nigeria*. **Journal of Public Administration, Finance and Law**, 10(22), 2021, 315-338.

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Chapter Five

Conclusion

In this chapter, the summary of findings is presented in the first section. Afterward, the concluding remarks and recommendation are presented in the second and third sections. The last two sections accordingly are contributions to knowledge, and suggestions for further studies.

5.1 Summary of Findings

This study was motivated by the persistent challenges of poverty, security threats, and their implications for economic growth in West Africa, with the primary objective of investigating the individual and interactive effects of poverty and security threats on economic growth across the region. The analysis focused on key macroeconomic indicators, utilizing datasets spanning 17 years from 2007 to 2023. By examining these relationships across different linguistic blocs, Anglophone, Francophone, and Lusophone countries, the study offers distinctive insights compared to existing research. The empirical findings and discussions are based on parameters estimated through the Fully Modified Ordinary Least Squares (FMOLS) methodology. This section presents a summary of the findings and explores their economic implications, drawing from the empirical results detailed in the previous chapter. The summary of findings is as follows.

On the relationship between poverty and security threats, the analysis reveals a complex and counterintuitive dynamic. Conditional on other economic controls, higher poverty levels are associated with a *reduction* in the recorded security threat index within the Lusophone and

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Anglophone blocs. This finding aligns with empirical studies that highlight significant underreporting of security incidents in impoverished and rural areas due to weak state presence and limited institutional capacity. Furthermore, it supports the concept of "opportunity effects," where economic deprivation may drive insecurity, but the actual targets of violence are often higher-value assets located in more affluent areas, meaning the poorest regions may not be the primary loci of officially recorded high-impact security events. For the Francophone panel and the pooled West Africa sample, no statistically significant relationship was found, underscoring that the poverty-insecurity nexus is not uniform and is mediated by bloc-specific factors.

On the impact of poverty on economic growth, the empirical analysis reveals significant heterogeneity across linguistic blocs. In the Lusophone bloc, higher poverty levels are associated with substantially slower long-run economic growth, supporting conventional theories that economic deprivation constrains development potential. Conversely, in the Francophone bloc, poverty shows a mild but statistically significant positive association with growth, aligning with patterns of “jobless growth” where macroeconomic expansion occurs without immediate poverty reduction. For the pooled West Africa sample and Anglophone countries, no statistically significant relationship between poverty and growth is observed, indicating that the poverty-growth nexus is highly context-dependent and influenced by bloc-specific factors such as economic structure and informality levels.

Regarding security threats, the findings demonstrate even more pronounced divergence across sub-regional groupings. Security threats show a strong negative association with economic growth in both Lusophone and Anglophone blocs, confirming that insecurity deters investment, disrupts economic activities, and undermines long-term development. However,

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in the Francophone bloc and the pooled West Africa sample, security threats paradoxically correlate with improved economic performance, potentially reflecting better incident reporting in growing economies, resource booms in unstable regions, or economic activity persisting despite security challenges. The magnitude of these effects varies considerably, with the Lusophone countries experiencing the most severe negative impacts from insecurity.

Most notably, the analysis finds no statistically significant interactive effects between poverty and security threats on economic growth across all panels. This indicates that these two factors operate largely independently in their influence on economic performance within the region. The absence of multiplicative effects suggests that the channels through which poverty and security affect economic growth are distinct rather than reinforcing, operating in parallel rather than through interactive amplification.

The findings highlight the profound heterogeneity in how fundamental development challenges manifest across West Africa's diverse economic landscape. The contrasting results across linguistic blocs underscore the importance of considering sub-regional specificities when designing poverty reduction and security enhancement policies. The study demonstrates that the relationships between poverty, security, and growth are not uniform across West Africa, necessitating tailored policy approaches that account for the unique characteristics and mechanisms operating within different sub-regional contexts.

5.2 Conclusion

This study examined the complex interrelationships between poverty, security threats, and economic growth in West Africa during the period 2007 to 2023. First, the study concludes that the relationship between poverty and economic growth is not uniform across the region

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but demonstrates significant heterogeneity across linguistic blocs. While poverty constrains economic growth in Lusophone countries, it shows a mild positive association in Francophone nations, reflecting patterns of "jobless growth" where macroeconomic expansion occurs without immediate poverty reduction. In Anglophone countries and the broader West African sample, no statistically significant relationship was found, indicating that the poverty-growth nexus is highly context-dependent and influenced by bloc-specific economic structures and measurement approaches.

Second, the findings reveal equally divergent relationships between security threats and economic growth across sub-regional groupings. Security threats exhibit a strong negative association with economic development in both Lusophone and Anglophone blocs, confirming that insecurity deters investment and disrupts economic activities. However, in the Francophone bloc and pooled regional sample, security threats paradoxically correlate with improved economic performance, potentially reflecting better incident reporting in growing economies or resource booms in unstable regions. Most significantly, the analysis finds no interactive effects between poverty and security threats on economic growth, indicating these factors operate through distinct rather than reinforcing channels.

Third, the study identifies a counterintuitive relationship between poverty and recorded security threats, where higher poverty levels are associated with reduced security threat indices in Lusophone and Anglophone countries. This finding aligns with empirical evidence suggesting significant underreporting of security incidents in impoverished areas due to weak state presence and limited institutional capacity. It also supports the concept of "opportunity effects," where economic deprivation may drive insecurity, but the actual targets of violence are often higher-value assets located in more affluent areas rather than the poorest regions.

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Finally, the findings highlight the critical need for differentiated policy approaches that account for the substantial variations in how poverty and security challenges manifest across West Africa's diverse economic landscape. The absence of uniform relationships underscores that one size fits all solutions are unlikely to be effective. Instead, policymakers must develop targeted interventions that address the specific mechanisms operating within different sub-regional contexts, whether through improving security incident reporting systems, addressing the structural drivers of jobless growth, or implementing context-specific poverty reduction strategies that account for each bloc's unique economic and institutional characteristics.

5.3 Recommendations

To address the complex challenges of poverty, security threats, and economic growth in West Africa, the following policy measures are recommended, based on the empirical findings from the period 2007 to 2023:

a) Given the significant heterogeneity in the poverty-growth relationship across linguistic blocs, policymakers should adopt differentiated and context-specific poverty reduction strategies. In Lusophone countries, where poverty strongly constrains growth, interventions should focus on direct poverty alleviation through social protection programs, agricultural productivity enhancements, and rural infrastructure development. In Francophone nations, where jobless growth patterns prevail, policies should prioritize inclusive growth strategies that ensure economic expansion translates into tangible poverty reduction through job creation and equitable resource distribution.

b) To address the counterintuitive finding that higher poverty relates with reduced recorded security threats, West African governments should invest significantly in

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improving security incident reporting systems, particularly in impoverished and rural areas. This would involve strengthening local governance institutions, enhancing police presence and responsiveness in remote regions, and implementing community-based security monitoring systems. More accurate data collection is essential for formulating effective security policies that reflect ground realities rather than reporting biases.

c) The study recommends that regional organizations like ECOWAS develop bloc-specific security interventions that account for the divergent relationships between security threats and economic growth. In Anglophone and Lusophone countries, where security threats severely constrain growth, policies should prioritize conflict prevention, counter-terrorism measures, and protection of economic assets. In Francophone nations, where the relationship is paradoxical, focus should be on managing the economic opportunities that emerge alongside insecurity while addressing root causes of conflict.

d) Policymakers should implement targeted economic diversification strategies that reduce vulnerability to both poverty and security challenges. This includes promoting sectors with high employment potential, supporting small and medium enterprises in secure environments, and developing alternative livelihoods in conflict-prone regions. Investment in human capital through education and skills development is crucial for creating economic opportunities that are less susceptible to both poverty traps and security disruptions.

e) The study recommends enhanced regional cooperation mechanisms to address the transborder nature of security threats and their economic impacts. ECOWAS should

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strengthen early warning systems, intelligence sharing, and joint military operations to combat cross-border security challenges. Additionally, regional economic integration should be accelerated to create larger markets that can sustain growth even amid localized security challenges, allowing for economic resilience through diversified trade and investment patterns.

f) Finally, given the absence of interactive effects between poverty and security threats on growth, policymakers should address these challenges through separate but coordinated interventions. Poverty reduction programmes should be designed to withstand security challenges, while security initiatives should be sensitive to their potential impacts on poverty dynamics. This requires integrated policy planning that brings together security, economic, and social development experts to design comprehensive strategies that simultaneously address both challenges without assuming automatic spillover effects.

5.4 Contribution to Knowledge

This study makes several key contributions to the existing literature on poverty, security threats, and economic growth in West Africa:

a) Unlike previous research that has typically examined poverty and security threats in isolation, this study develops and validates an integrated conceptual framework that elucidates their complex interrelationships and combined effects on economic growth. By simultaneously analysing both phenomena within a unified analytical framework, this research addresses a significant gap in the literature and provides a more comprehensive understanding of how these development challenges interact within

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the West African context. The conceptual approach moves beyond siloed analyses to capture the multidimensional nature of development constraints in the region.

b) Whereas most prior studies have relied on aggregated regional analyses that mask important sub-regional variations, this study breaks new ground by conducting bloc-specific analyses across Anglophone, Francophone, and Lusophone countries. This methodological innovation reveals significant heterogeneity in the poverty-security-growth nexus that has been overlooked in previous research. The finding that relationships vary substantially across linguistic blocs represents a novel contribution to literature, challenging conventional assumptions about uniform regional dynamics and providing a more nuanced understanding of development challenges in West Africa.

c) This study makes a unique methodological contribution through its identification and analysis of the "reporting paradox" - the counterintuitive finding that higher poverty correlates with reduced recorded security threats in certain blocs. This phenomenon, which reflects systematic underreporting of security incidents in impoverished areas, has not been adequately addressed in previous literature. By documenting and explaining this paradox, the study enhances our understanding of measurement challenges in conflict-affected developing regions and provides important methodological insights for future research on security and development.

d) The research provides groundbreaking empirical evidence on the absence of interactive effects between poverty and security threats on economic growth, a finding that challenges prevailing assumptions about their multiplicative impacts.

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This contribution advances theoretical understanding by demonstrating that these factors operate through distinct rather than reinforcing channels, suggesting the need for more nuanced theoretical frameworks that account for their independent effects. The study thus offers significant theoretical and empirical contributions to the literature on the economics of conflict and development in Africa.

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5.5 Suggestions for Further Studies

The limitations in the scope and methodology encountered in this study have influenced the interpretation and generalization of empirical findings. Despite these limitations, the study offers valuable insights into the interrelationships between poverty, security threats, and economic growth in West Africa. Future research should build upon this work in the following directions:

a) First, subsequent studies could employ non-linear estimation approaches and more advanced econometric techniques to further investigate the relationships identified in this research. Methods such as asymmetric cointegration tests, threshold regression models, or quantile regression approaches would help capture potential non-linearities and heterogeneous effects across different poverty and security conditions. These approaches would provide more insights into the dynamics underpinning the poverty-security-growth nexus in the region.

b) Second, future investigations should conduct in-depth country case studies using a unified analytical framework to complement the regional analysis presented here. Detailed examination of specific country contexts would help identify unique institutional, historical, and structural factors that moderate the relationships between poverty, security, and growth. These case studies would provide valuable insights into why certain relationships vary across linguistic blocs and help identify context-specific policy solutions.

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c) Third, further research is needed to explore the methodological challenges of security incident reporting in impoverished regions. Studies specifically designed to measure and correct for reporting biases would significantly advance our understanding of the true relationship between poverty and security threats.

d) Finally, future studies should investigate the specific channels through which poverty and security threats independently affect economic growth, given the absence of interactive effects found in this research. Examining particular transmission mechanisms, such as impacts on human capital formation, physical infrastructure development, foreign direct investment patterns, or agricultural productivity, would provide a more granular understanding of these complex relationships and inform more targeted policy interventions.

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Bibliography

Book

Africa Defence Forum. *Nigeria Strives to Contain Banditry Problem*. Africa Defence Forum, Aug 27, 2024. Available at https://adf-magazine.com/2024/08/nigeria-strives-to-contain-banditry-problem/

Andreescu V. *Global Terrorism Index*. In Encyclopedia of Religious Psychology and Behavior. Cham: Springer Nature Switzerland, 2024, 1-3.

Bertelsmann Stiftung. *BTI 2024 Country Report — Burkina Faso*. Gütersloh: Bertelsmann Stiftung, 2024. Available at https://bti-project.org/en/reports/country-report/BFA

Global Initiative against Transnational Organized Crime (GI-TOC). *The Global Organized Crime Index 2023: A Global X-Ray of Organized Crime*. Geneva: GI_TOC, 2024. Available at https://globalinitiative.net/wp-content/uploads/2023/09/Global-organized-crime-index-2023-web-compressed-compressed.pdf

Joshua M. & Sufis S. *The Contest for the Future of African Islam*. The Heritage Foundation, 30, 2021.

Kleinman B., Liu E., Redding S. J., & Yogo M. *Neoclassical Growth in an Interdependent World* (No. w31951). National Bureau of Economic Research, 2023.

Kojo E. R., & Nkalu C. N. *Growth and Fiscal Effects of Terrorism in Nigeria*. In The Impact of Global Terrorism on Economic and Political Development, Emerald Publishing Limited, 2019, 293-306.

Leander H., & Robinson J. A. *Colonialism and Economic Development in Africa*. No. w18566. National Bureau of Economic Research, 2012.

Mbulle-Nziege L. L. & Cheesema N. *Niger Coup: Is France to Blame for Instability in West Africa?* www.bbc.com/news.

Mhlanga D. *The Impact of Financial Inclusion on Poverty from the Neoclassical Theory in the Fourth Industrial Revolution*. In Digital Financial Inclusion: Revisiting Poverty Theories in the Context of the Fourth Industrial Revolution. Cham: Springer International Publishing, 2022, 227-247.

Nayak A., & Biswal R. *Poverty: By Chance or by Choice: "The Hidden Forces that Shape the Poor and the Poverty***"**. Notion Press, 2020.

Ojeifo O. M., & Osawe I. A. *Analysis of the Future Trends of Urbanization, Poverty, and Security in Nigeria*. In Nuhu, M. B. & Kuma, S. S. (Eds.) Land Policy Governance and Sustainable Development in Nigeria (A Book of Readings). Centre for Human Settlements and Urban

Lead City University DO NOT COPY

Development (CHSUD), Federal University of Technology, Minna, Niger State, Nigeria, 2019, 93-107.

Ojewale O. *Rising Insecurity in Northwest Nigeria: Terrorism Thinly Disguised as Banditry*. Washington D. C.: The Brookings Institution, February 18, 2021. Available at https://www.brookings.edu/articles/rising-insecurity-in-northwest-nigeria-terrorism-thinly-disguised-as-banditry/

Pedroni P. *Fully Modified OLS for Heterogeneous Cointegrated Panels*. In Nonstationary Panels, Panel Cointegration, and Dynamic Panels. Emerald Group Publishing Limited, 2001, 93-130.

Richards E. *Poverty: The Social Problem of All Time*? In Contemporary Social Problems in the UK. Routledge, 2022, 33-57.

Romeiro A. R. *Why the Industrial Revolution was a Civilizational Path Dependent Phenomenon*. Instituto de Economia, UNICAMP, 2020.

Rummel R.J. *Understanding Conflict and War: Vol. 3: Conflict in Perspective*. Beverly Hills**,** 1977.

Sen K. *Why Should I Care About Economic Growth*? United Nations University World Institute for Development Economics Research (UNU-WISER) Blog Post, 12th January, 2021.

The Global Economy. *Security Threats Index: Country Rankings*. The Global Economy, 2024. Available at https://www.theglobaleconomy.com/rankings/security_threats_index/OECD/

Violent N. Conflict Database. *Nigeria Security Situation Analysis Report - An 18 Months Report of Violent Conflicts in Nigeria from the Nextier Violent Conflict Database (January 2021 – December 2021) and (January 2022 – June 2022)*. ReliefWeb, 2022.

Conference

Anyanwu J. C. *Poverty in Nigeria: Concepts, Measurement and Determinants*. In proceedings of the Nigerian Economic Society Annual Conference on "Poverty Alleviation in Nigeria", Nigerian Economic Society, Ibadan, 1997, 93-120.

Bello K. M., & Akinbobola T. O. *Trade Openness, Economic Growth and Poverty Reduction in ECOWAS Countries: (A Panel Causality)*. A Paper Presented at the "Institutional Framework for the Practice of SDGs: Actions, Challenges and Implementation" Conference at Obafemi Awolowo University. Ile -Ife. Nigeria, 2020.

Bello K. M., & Akinbobola T. O. *Trade Openness, Economic Growth and Poverty Reduction in ECOWAS Countries: (A Panel Causality)*. A Paper Presented at the "Institutional Framework for the Practice of SDGs: Actions, Challenges and Implementation" Conference at Obafemi Awolowo University. Ile -Ife. Nigeria, 2020.

Lead City University DO NOT COPY

Holleman C., & Conti V. *Role of Income Inequality in Shaping Outcomes on Individual Food Insecurity: Background Paper for the State of Food Security and Nutrition in the World 2019-FAO Agricultural Development Economics Working Paper 19-06*. Food & Agriculture Organization (FAO) Agricultural Development Economics Working Paper, 2020, 19-06.

Kostan A., Olschar S., Simko L., & Acar Y. *Exploring Digital Security and Privacy in Relative Poverty in Germany*. In the Proceedings of the 33rd USENIX Security Symposium. USENIX Security 24, 2022, 2029-2046.

Sana B., Zafar M. W., Talib M. N. A., Nawaz Z., & Fatima M. *Impact of Terrorism on Economic Development of South Asian Economies*. In International Conference on Management Science and Engineering Management,. Cham: Springer International Publishing, 2022, 536-551.

Zomchak L., & Nehrey M. *Economic Growth and Capital Investment: The Empirical Evidence*. In the International Conference on Artificial Intelligence and Logistics Engineering, Cham: Springer International Publishing, 2022, 645-652.

Journal

Abdulkarim Y., & Mohd S. "*Growth and Fiscal Effects of Insecurity on the Nigerian Economy*." **The European Journal of Development Research** 35(4), 2023, 743-769.

Abdullahi A. *Rural Banditry, Regional Security, and Integration in West Africa*. **Journal of Social and Political Sciences**, 2(3), 2019, 644-654.

Abga M. M., Magaji S., & Gambo K. Z. *The Impact of Poverty and Insecurity on Sustainable Development in Nigeria*. **Kashere Journal of Politics and International Relations**, 1(2), 2023, 1-12.

Abiodun T. F., Onafowora O., & Ayo-Adeyekun I. *Alarming Rate of Child Poverty in Northern Nigeria: Implications for National Security*. **American Research Journal of Humanities and Social Science (ARJHSS)**, 2(1), 2019, 1-10.

Aceytuno M. T., Sánchez-López C., & de Paz-Báñez M. A. *Rising Inequality and Entrepreneurship During Economic Downturn: An Analysis of Opportunity and Necessity Entrepreneurship in Spain*. **Sustainability**, 12(11), 2020, 4540.

Adeyemi O. J. *Re-Assessing the Relationship between Tax Revenue and Economic Growth in Nigeria (1980-2020)*. **World Scientific News**, 176, 2023, 1-26.

Aghaulor K. C. *Growth Impact of Insecurity on the Nigerian Economy*. **UJAH: Unizik Journal of Arts and Humanities**, 21(3), 2020, 147-171.

Load City University DO NOT COPY

Agu C., Mbah A. J., & Agu C. S. *Investigating the Economic Consequence of Terrorism in Sub-Saharan Africa: Evidence from a Dynamic Panel Model*. **Statistics, Politics and Policy**, 14(2), 2023, 125-149.

Aiyar S., & Ebeke C. *Inequality of Opportunity, Inequality of Income and Economic Growth*. **World Development**, 136, 2020, 105115.

Ajide K. B., & Alimi O. Y. *Does Disparity in Income and Consumption Ever Incite Terrorism in Africa*? **World Affairs**, 184(3), 2021, 339-380.

Ajide K. B., & Alimi O. Y. *Income Inequality, Human Capital and Terrorism in Africa: Beyond Exploratory Analytics*. **International Economics**, 165, 2021, 218-240.

Ajike G. O. & Oladeji S. I. *Evidence of Kuznets Hypothesis in Economic Growth on Poverty Reduction in Nigeria*. **Sapientia Global Journal of Arts, Humanities and Development Studies**, 4(1), 2021.

Ajodo-Adebanjoko A., & Walter U. O. *Poverty and the Challenges of Insecurity to Development*. **European Scientific Journal**, 10(14), 2014, 361-372.

Akinyetun T. S. *Poverty, Cybercrime, and National Security in Nigeria*. **Journal of Contemporary Sociological Issues**, 1(2), 2021, 86-109.

AlShiab M. S. I., Al-Malkawi H. A. N., & Lahrech A. *Revisiting the Relationship between Governance Quality and Economic Growth*. **International Journal of Economics and Financial Issues**, 10(4), 2020, 54-63.

Alwell N. *Security Expenditure: Implications on Economic Growth in Nigeria*. **International Journal of Economics, Business and Management Studies**, 7(2), 2020, 234-246.

Amar S. & Pratama I. *Exploring the Link between Income Inequality, Poverty Reduction and Economic Growth: An ASEAN Perspective*. **International Journal of Innovation, Creativity and Change**, 11(2), 2020, 24-41.

Ametowoyo A. K. *Is Terrorism a Spoilsport for the Sustainability of Economic Development?: Evidence from the Economic Community of West African States*. **International Journal of Social Economics**, 50(7), 2023, 956-968.

Amila S. E., & Luka B. V. *Poverty as a Threat to Human Security in Nigeria*. **International Journal of Research and Innovation in Social Science (IJRISS)**, 4(1), 2020, 157-161.

Aminu Z., Aminu I. G., & Mudiare P. U. *Feminization of Poverty in Nigeria and Challenges to Sustainable Development (Chapter Six)*. In Maishanu M. M., Abdulsalam D. O., Baba Y. T., Dankani I. M., Acheoah J. E., & Abbani A. Y. (Eds.), **Sustainable Development in Africa: The Journey So Far**. Faculty of Arts, Social and Management Sciences, Federal University Birnin Kebbi, 2019, 57-67.

Lead City University DO NOT COPY

Andornino G. B. *Economic–Security Nexus in the AIIB: China's Quest for Security through Eurasian Connectivity*. **Global Policy**, 10(4), 2019, 604-613.

Apikins M. W. *Interrogating the Nexus between Insecurity, Poverty, and Unemployment in North Eastern Nigeria: Contextualizing the Boko-Haram Insurgency*. **International Journal of Operational Research in Management, Social Sciences & Education**, 6(1), 2020, 308-322.

Asongu S. A., & Eita J. H. *The Conditional Influence of Poverty, Inequality, and Severity of Poverty on Economic Growth in Sub-Saharan Africa*. **Journal of Applied Social Science**, 17(3), 2023, 372-384.

Ayodele J. B., Odunlami A. A., & Okere O. M. *Poverty, Unemployment, and National Security Challenges in Nigeria*. **EKSU Journal of Education**, 9(1), 2019, 43-49.

Azam M. *Governance and Economic Growth: Evidence from 14 Latin America and Caribbean Countries*. **Journal of the Knowledge Economy**, 13(2), 2022, 1470-1495.

Balasubramanian P., Burchi F., & Malerba D. *Does Economic Growth Reduce Multidimensional Poverty*? *Evidence from Low-And Middle-Income Countries*. **World Development**, 161, 2023, 106119.

Banerjee A., & Carrion-i-Silvestre J. L. *Cointegration in Panel Data with Structural Breaks and Cross-Section Dependence*. **Journal of Applied Econometrics**, 30(1), 2015, 1–23.

Bereketeab R. *Peacebuilding in Africa: Popular Progressive Versus Neoliberal Peacebuilding*. In Adetula V., Bereketeab R., & Obi C. (Eds.) **Regional Economic Communities and Peacebuilding in Africa: Lesson from ECOWAS and IGAD**. Routledge, 2021, 35-54.

Bereketeab R. *Understanding Peacebuilding and State Building: Post-conflict African Challenges*. **International Journal of African Studies**, 1(3), 2021, 16-30.

Bloom D., & Canning D. *The Health and Poverty of Nations: From Theory to Practice*. **Journal of Human Development**, 4(1), 2003, 47-71.

Brass I., & Sowell J. H. *Adaptive Governance for the Internet of Things: Coping with Emerging Security Risks*. **Regulation & Governance**, 15(4), 2021, 1092-1110.

Bray R., de Laat M., Godinot X., Ugarte A., & Walker R. *Realising Poverty in all its Dimensions: A Six-Country Participatory Study*. **World Development**, 134, 2020, 105025.

Buheji M., da Costa Cunha K., Beka G., Mavric B., De Souza Y. L., da Costa Silva S., Hanafi M., & Yein T. C. *The Extent of Covid-19 Pandemic Socio-Economic Impact on Global Poverty. A Global Integrative Multidisciplinary Review*. **American Journal of Economics**, 10(4), 2020, 213-224.

Cerra V., Lama R., & Loayza N. V. *Links between Growth, Inequality, and Poverty*. **International Monetary Fund**, 68, 2021, 1-54.

Lead City University DO NOT COPY

Chen P. C., Chan W. C., Hung S. W., & Lin D. Z. *How Entrepreneurs Recognize Entrepreneurial Opportunity and its Gaps: A Cognitive Theory Perspective*. **Technology Analysis & Strategic Management**, 32(2), 2020, 223-238.

Chidinma G.-A. C., & Inimino E. E. *Recurrent Expenditure on Internal Security and Economic Growth in Nigeria*. **European Journal of Social Sciences Studies**, 9(4), 2024.

Chimere O. I., & Ichoku H. E. *Terrorism and Economic Growth in Africa: Understanding the Role of Military Expenditure*. **Behavioral Sciences of Terrorism and Political Aggression**, 15(4), 2023, 448-462.

Chioma C. G., & Inimino E. E. *Recurrent Expenditure on Internal Security and Economic Growth in Nigeria*. **European Journal of Social Sciences Studies**, 9(4), 2024.

Christian A., Mbah A. J., & Agu C. S. *Investigating the Economic Consequence of Terrorism in Sub-Saharan Africa: Evidence from a Dynamic Panel Model*. **Statistics, Politics and Policy**, 14(2), 2023, 125-149.

Christian A., Ogbuabor J. E., & Onah B. U. *How is Institutional Quality Moderating the Effect of Terrorism on International Tourism, Trade, Foreign aid Inflow and Economic Growth in Sub-Saharan Africa*? **Foreign Trade Review**, 2024.

Chugunov I., Makohon V., Kaneva T., & Adamenko I. *Influence of Financial Support of Human Capital Development on Economic Growth*. **Problems and Perspectives in Management**, 20(2), 2022, 269-280.

Chuku C., Abang D., & Isip I. A. *Growth and Fiscal Consequences of Terrorism in Nigeria*. **Defence and Peace Economics**, 30(5), 2019, 549-569.

Cletus A. K. *Growth Impact of Insecurity on the Nigerian Economy*. **Unizik Journal of Arts and Humanities**, 21(3), 2020, 147-171.

Deák Á. *Violence as a Dimension of Poverty: The Case of Colombia*. **AARMS, 20(Special Edition)**, 2021, 33-51.

Devereux S. *Can Social Safety Nets Reduce Chronic Poverty*? **Development Policy Review**, 20(5), 2002, 657-675.

Dhar A. L. *Exploring the Relationship between National Security Risks and Economic Factors: A Nepalese Perspective*. **Journal of Political Science**, 2024, 39-56.

Dibia I. I. *The Effects of Terrorism on Peace and National Development in Nigeria*. **Journal of Public Administration, Finance and Law**, 10(22), 2021, 315-338.

DiStefano S. E., & Placek M. *Does Poverty Rate Increase Terrorism in a Country? An Analysis from 1970-2019*. **University of South Carolina Upstate Student Research Journal**, 13(1), 2020, 1-11.

Lead City University DO NOT COPY

Dizaji M., & Badri A. K. *Human Development, Social Security Costs and Poverty with a VAR Approach*. **Asian Journal of Sociological Research**, 2020, 5-18.

Djossou G, N., Kane G. Q., & Novignon J. *Is Growth Pro-Poor in Benin? Evidence using a Multidimensional Measure of Poverty*. **Poverty & Public Policy**, 9(4), 2017, 426-443.

Dorofeev M. L. *Interrelations between Income Inequality and Sustainable Economic Growth: Contradictions of Empirical Research and New Results*. **Economies**, 10(2), 2022, 44.

Dursun G. & Ogunleye B. *Economic Growth, Employment and Poverty Reduction: The Case of West African Countries*. **American Journal of Economics**, 6(1), 2016, 50-60.

Ebipre P., Wilson G., Boro B., & Ajuru K. *The Impact of National Insecurity on Economic growth: The Case of Nigeria*. **International Journal of Innovative Legal and Political Studies**, 8(2), 2020, 13-21.

Egunjobi T. A. *Poverty, Unemployment, and Insecurity Challenges in Nigeria*. **Tanzanian Economic Review**, 11(1), 2021, 115-136.

Ekpeyong P. *Econometric Analysis of the Impact of Inflation, Unemployment, and Economic Growth on Poverty Reduction: A Novel Application of Asymmetric Technique*. **Asian Journal of Economics and Empirical Research**, 10(1), 2023.

Ezeoha, A., Igwe, A., Okoyeuzu, C., & Uche, C. The fiscal effects of armed conflicts in Africa. **African Development Review**, 35(4), 2023, 444-456.

Fan J., Liao Y., & Yao J. *Power Enhancement in High-Dimensional Cross-Sectional Tests*. **Econometrica**, 83, 2015, 1497–1541.

Garba A. D., Ogunode N. J., Musa A., & Ahmed I. *Effects of Insecurity on Tertiary Education in North-East Nigeria and Way Forward*. **Spanish Journal of Society and Sustainability**, 2, 2022, 10-17.

Gasura M. A. K., Abbas A., & Chaichi A. A. *Impact of Non-Traditional Security Threats on Human Development Index: A Case Study of Pakistan*. **Annals of Human and Social Sciences**, 4(2), 2023, 273-278.

Gawi Y. A., & Abdullahi A. *Regional Security Challenges in West Africa and the Imperative for the ECOWAS Military Intervention*. **Journal of Global Economics and Business**, *5*(17), 2024, 70-83.

Genkova D. *Modeling of the Human Needs: An Economic Interpretation of Maslow's Theory of Motivation*. **WSEAS Transactions on Business and Economics**, 18(26), 2021, 253-264.

Gough I. *Defining Floors and Ceilings: The Contribution of Human Needs Theory*. **Sustainability: Science, Practice and Policy**, 16(1), 2020, 208-219.

Lead City University DO NOT COPY

Guillot-Wright S., Cherryhomes E., Wang L., & Overcash M. *Systems and Subversion: A Review of Structural Violence and Immigrant Health*. **Current Opinion in Psychology**, 47, 2022, 101431.

Haller A. *From Classical and Neoclassical Economic Growth to Degrowth in Europe. Challenges for Public Administration*. **Revista» Administratie si Management Public «(RAMP)**, 34, 2020, 150-170.

Henneh O. F. *Impact of Economic Growth on Poverty Reduction: Evidence from Ghana*. **Texila International Journal of Management**, 9(2), 2023, 1-17.

Hossain M. B., Long M. A., & Stretesky P. B. *Welfare State Spending, Income Inequality and Food Insecurity in Affluent Nations: A Cross-National Examination of OECD Countries*. **Sustainability**, 13(1), 2020, 324.

Husam R., Ifediora C. U., Odugbesan J. A., Iloka B. C., Rita J. X., Dantas R. M., Mata M. N., & Martins J. M. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

Hussein S. "*African Solutions to Africa's Problems? African Approaches to Peace, Security and Stability*." **Scientia Militaria: South African Journal of Military Studies** 43(1), 2015, 45-76.

Iheonu C. O., & Ichoku H. E. *Terrorism and Economic Growth in Africa: Understanding the Role of Military Expenditure*. **Behavioral Sciences of Terrorism and Political Aggression**, 15(4), 2023, 448-462.

Ikechukwu D. I. *The Effects of Terrorism on Peace and National Development in Nigeria*. **Journal of Public Administration, Finance and Law**, 10(22), 2021, 315-338.

Im K. S., Pesaran M. H., & Shin Y. C. *Testing for Units Roots in Heterogeneous Panels*. **Journal of Econometrics**, 115, 2003, 53–74.

Islam M. S., & Alam F. *Influence of Human Capital Formation on the Economic Growth in Bangladesh during 1990–2019: An ARDL Approach*. **Journal of the Knowledge Economy**, 14(3), 2023, 3010-3027.

Jackson B., & Sadler L. S. *Structural Violence: An Evolutionary Concept Analysis*. **Journal of Advanced Nursing**, 78(11), 2022, 3495-3516.

Jaiyebo O., & Adetula V. *Regional Economic Communities and Peacebuilding in Africa: Analysis of Legal Framework and Concerns for International Law*. In Adetula V., Bereketeab R., & Obi C. (Eds.) **Regional Economic Communities and Peacebuilding in Africa: Lesson from ECOWAS and IGAD**. Routledge, 2021, 20-34.

Jibrin O. I., Ijirshar V. U., Ibrahim A. S., & Ogoda S. I. *Impact of Security Threats on Investment in Nigeria*. **CECCAR Business Review**, 5(1), 2024, 59-72.

Lead City University DO NOT COPY

Jones C. I. *The Past and Future of Economic Growth: A Semi-Endogenous Perspective*. **Annual Review of Economics**, 14(1), 2022, 125-152.

Kao C. *Spurious Regression and Residual-Based Tests for Cointegration in Panel Data*. **Journal of Econometrics**, 90(1), 1999, 1-44.

Khan H. U. *Regional Security Threats to CPEC: A Strategic Overview*. **Journal of the Research Society of Pakistan**, 56(1), 2019, 181-189.

Khan K., Khurshid A., & Cifuentes-Faura J. *Investigating the Relationship between Geopolitical Risks and Economic Security: Empirical Evidence from Central and Eastern European Countries*. **Resources Policy**, 85, 2023, 103872.

Kirchner E., & Sperling J. *The New Security Threats in Europe: Theory and Evidence*. **Eur. Foreign Aff. Rev.**, 7, 2002, 423.

Kolagar A., & Sanaei A. *The Effect of Security Threats on Human Development*. **International Journal of New Political Economy**, 3(1), 2022, 107-128.

Kovářová E., & Váňa T. *Reduction of Poverty and Material Deprivation in the EU Countries: What Matters the Most*? **Economic Studies**, 32(2), 2023, 3-23.

Kunst J. R., & Obaidi M. *Understanding Violent Extremism in the 21st Century: The (Re) Emerging Role of Relative Deprivation*. **Current Opinion in Psychology**, 35, 2020, 55-59.

Levin A., Lin C. F., & Chu C. S. J. *Unit Root Tests in Panel Data: Asymptotic and Finite-Sample Properties*. **Journal of Econometrics**, 108(1), 2002, 1-24.

Leviston Z., Dandy J., Jetten J., & Walker I. *The Role of Relative Deprivation in Majority-Culture Support for Multiculturalism*. **Journal of Applied Social Psychology**, 50(4), 2020, 228-239.

Liu D., Shen S., Shillair R., Li F., & Chen Z. *How Does Home Ownership Affect Migrants' Sense of Relative Deprivation? An Investigation Based on Field Theory*. **Social Science & Medicine**, 306, 2022, 115097.

Macassa G., McGrath C., Rashid M., & Soares J. *Structural Violence and Health-Related Outcomes in Europe: A Descriptive Systematic Review*. **International Journal of Environmental Research and Public Health**, 18(13), 2021, 6998.

Madubuegwu C. E., Ibekaku U. K., & Dominic O. E. *Terrorism in West Africa and National Security of States. A Critical Analysis*. **Nigerian Journal of Social Development**, 10(1), 2021, 11-33.

Madueke C. M., Oladipo A. O., Ozoh J. N., Ezenwobi N. F., & Ogodimma E. M. *Evaluating the Effectiveness of Poverty Alleviation on Economic Growth in Nigeria*. **NAU Eco Journals**, 22(1), 2025, 73-90.

Mari S., Bentrovato D., Durante F., & Wassermann J. *Collective Victimhood Resulting from Structural Violence*. **The Social Psychology of Collective Victimhood**, 2020, 231-251.

Lead City University DO NOT COPY

Mathew R. E., Naphtali J. W., & Irefin D. *Terrorism and Economic Growth in Nigeria*. **ABUAD Journal of Social and Management Sciences,** 5(2), 2024, 358-381.

Matthew R.A. *Resource Scarcity: Responding to the Security Challenge*. **International Peace Institute.**, 2008.

McKelvie A., Wiklund J., McMullen J. S., & Palubinskas A. P. *A Dynamic Model of Entrepreneurial Opportunity: Integrating Kirzner's and Mises's Approaches to Entrepreneurial Action*. **Quarterly Journal of Austrian Economics**, 23(3-4), 2020, 499-541.

Meuleman B., Abts K., Schmidt P., Pettigrew T. F., & Davidov E. *Economic Conditions, Group Relative Deprivation and Ethnic Threat Perceptions: A Cross-National Perspective*. **Journal of Ethnic and Migration Studies**, 46(3), 2020, 593-611.

Muhammad T., Burki U., & Azid T. *Terrorism and Environmental Sustainability: Empirical Evidence from the MENA Region*. **Resources, Environment and Sustainability**, 8, 2022, 100056.

Mukolu M. O., & Ogodor B. N. *Insurgency and its Implication on Nigeria Economic Growth*. **International Journal of Development and Sustainability**, 7(2), 2018, 492-501.

Nadege D. G., Kane G. Q., & Novignon J. *Is Growth Pro-Poor in Benin? Evidence using a Multidimensional Measure of Poverty*. **Poverty & Public Policy**, 9(4), 2017, 426-443.

Navy S. L. *Theory of Human Motivation—Abraham Maslow.* **Science Education in Theory and Practice: An Introductory Guide to Learning Theory**, 2020, 17-28.

Ndubisi A. S., Mgbatogu C. D., & Nzewi U. C. *Impact of Insecurity on Nigerian Economic Growth and Development*. **International Journal of Development and Economic Sustainability**, 10(5), 2022, 1-13.

Ngwoke P. N., & Akabike G. N. *Insecurity and its Implication for Sustainable Development in Nigeria: The Role of Religion*. **HTS Teologiese Studies/Theological Studies**, 78(1), 2022.

Nkwatoh L. S., & Nathaniel H. A. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, 69-69.

Nnam M. U., Ugwuoke C. O., Njemanze V. C., & Akwara F. A. *Boko Haram Terrorism and Human Security in Nigeria: Matters Arising*. **Journal of Aggression, Maltreatment & Trauma**, 29(10), 2020, 1257-1278.

Noelke C. *Social Protection, Inequality and Labour Market Risks in Central and Eastern Europe*. In **Europe Enlarged**. Policy Press, 2008 63-96.

Nteegah A. *Security Expenditure: Implications on Economic Growth in Nigeria*. **International Journal of Economics, Business and Management Studies**, 7(2), 2020, 234-246.

Lead City University DO NOT COPY

Nwosa P. I. & Ehinomen C. *Inequality, Poverty and Economic Growth in Nigeria*. **EuroEconomica** 39(2), 2020.

Nwosu B. & Nwokolo N. *The Massacre in Plateau State: A Litmus Test on the Security Approach of Tinubu's Regime*. **Nextier SPD Policy Weekly**, 9(10), 2024, 1-5.

Nzeribe G. E., Uju Ezenekwe R., Uzonwanne M.C., Amaka Metu G., & Chekwube Madichie V. *Poverty-Growth-Inequality Triangle: Empirical Evidence from Nigeria*. **Toruńskie Studia Międzynarodowe**, 2(16), 2022, 85-102.

Odoh S. I., Nnaji F. C., & Ashondi A. P. *Mass Poverty and Declining Human Security in Nigeria: A Critical Perspective*. **EBSU Journal of Social Sciences and Humanities**, 10(2), 2020, 51-62.

Ogele E. P. *Unemployment Crisis and Human Security Threat in Port Harcourt City, Nigeria, 2010-2019*. **Journal of Humanities and Social Sciences Studies**, *2*(4), 2020, 23-36.

Ojeifo O. M., & Osawe I. A. *Analysis of the Future Trends of Urbanization, Poverty, and Security in Nigeria*. In Nuhu, M. B. & Kuma, S. S. (Eds.) **Land Policy Governance and Sustainable Development in Nigeria (A Book of Readings)**. Centre for Human Settlements and Urban Development (CHSUD), Federal University of Technology, Minna, Niger State, Nigeria, 2019, 93-107.

Okolie U. C., Onyema A. O., & Basey U. S. *Poverty and Insecurity in Nigeria: An Empirical Study*. **International Journal of Legal Studies**, 2(6), 2019, 247-261.

Okpe O., Jibrin I., Ijirshar V. U., Ibrahim A. S., & Ogoda S. I. "*Impact of Security Threats on Investment in Nigeria.*" **CECCAR Business Review** 5(1), 2024, 59-72.

Olabisi A. S., Orisadare M. A., & Olamide A. M. *The Nexus between Poverty, Iinequality and Economic Growth in Nigeria (1980-2018)*. **Journal of Economics and Finance**, 11(5), 2020, 53-61.

Oladoyin A. M., Osimen G. U., Adi I., & Dada O. *The Rising Insecurity in Nigeria: Interrogating the Linkage between Poverty and Banditry*. **Educational Administration: Theory and Practice**, 30(5), 2024, 11406-11415.

Olamide E., Ogujiuba K. K., Maredza A., & Semosa P. *Poverty, ICT and Economic Growth in SADC Region: A Panel Cointegration Evaluation*. **Sustainability**, 14(15), 2022, 9091.

Olasode T., Eke C. & Olaleye O.O. *Has Economic Growth Reduced Poverty in Nigeria? A Critical Analysis of the Last Two Decades*. **Journal of Enterprise and Development**, 4(2), 2022, 232-256.

Oluwaseun A. B., Ifeoma M. B. A., Aduku E. B., & Ameh C. A. *Terrorism, Human Capital Development and Economic Growth in Nigeria*. **International Journal of Economics Development Research (IJEDR)**, 2(2), 2021, 142-155.

Landmark University DO NOT COPY

Omodu C. O. *Insurgency and Poverty in Africa: The case of North-East Region of Nigeria (2015–2019)*. **Ulysses International Journal of Humanities and Contemporary Studies**, 4(1), 2023, 194-213.

Omoniyi B., Ogunwole O. O. & Owolabi S. O. *Public Perception of the Effects of Poverty on Economic Growth in Ghana*. **Advances in Social Sciences Research Journal**, 8(5), 2021, 172-194.

Onyekuru A.N., & Rob M. *Resource Use Conflict in West Africa: Developing a Framework for Resilience Building Among Farmers and Pastoralists*. **African Journal of Agricultural Research 9(**52), 2014, 3825-3837.

Orhero A. E. *Poverty, Unemployment, and National Insecurity in Nigeria's Fourth Republic*. **International Journal of Legal Studies**, 2(6), 2019, 89-98. https://doi.org/10.5604/01.3001.0013.7410

Orhero A. E. *Poverty, Unemployment, and National Insecurity in Nigeria's Fourth Republic*. **International Journal of Legal Studies**, 2(6), 2019, 89-98.

Oshita O. O., & Alli W. O. *Nigeria's Role in the ECOWAS Peace and Security Agenda for West Africa*. In V. Adetula, R. Bereketeab, & C. Obi (Eds.) **Regional Economic Communities and Peacebuilding in Africa: Lesson from ECOWAS and IGAD**. Routledge, 2021, 109-122.

Oyigebe P. L., & Meshach Z. R. *Poverty-insecurity Nexus: An Albatross to National Development in Nigeria*. **Kashere Journal of Politics and International Relations**, 1(1), 2023, 157-168.

Pedroni P. *Critical Values for Cointegration Tests in Heterogeneous Panels with Multiple Regressors*. **Oxford Bulletin of Economics and Statistics**, 61(S1), 1999, 653-670.

Pedroni P. *Panel Cointegration: Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to the PPP Hypothesis*. **Econometric Theory**, 20(3), 2004, 597-625.

Pesaran M. H. *A Simple Panel Unit Root Test in the Presence of Cross-Section Dependence*. **Journal of Applied Econometrics**, 22(2), 2007, 265-312.

Pesaran M. H. *General Diagnostic Tests for Cross-Sectional Dependence in Panels*. **Empirical Economics**, 60, 2021, 13-50.

Pesaran M. H. *Testing Weak Cross-Sectional Dependence in Large Panels*. **Econometric Reviews**, 34(6-10), 2015, 1089-1117.

Pfister A. E., & Encinosa M. *Anthropology in the World: Studying Current Events of 2020 through the Lens of Structural Violence and Embodiment*. **Teaching and Learning Anthropology**, 4(1), 2021, 104-110.

Lead City University DO NOT COPY

Phillips P. C., & Hansen B. E. *Statistical Inference in Instrumental Variables Regression with I (1) Processes*. **The Review of Economic Studies**, 57(1), 1990, 99-125.

Power S. A., Madsen T., & Morton T. A. *Relative Deprivation and Revolt: Current and Future Directions*. **Current Opinion in Psychology**, 35, 2020, 119-124.

Qasim S., Sidra S., Rauf A., & Siddique H. M. A. *Impact of Terrorism on Economic Growth in South Asian Country*. **International Journal of Economics and Financial Issues**, 10(4), 2020, 185.

Ridley M., Rao G., Schilbach F., & Patel V. *Poverty, Depression, and Anxiety: Causal Evidence and Mechanisms*. **Science**, 370(6522), 2020, 0214.

Rjoub H., Ifediora C. U., Odugbesan J. A., Iloka B. C., Xavier J. R., Dantas R. M., Mata M. N., & Martins J. M. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

Rjoub H., Ifediora C. U., Odugbesan J. A., Iloka B. C., Xavier Rita J., Dantas R. M., Mata M. N., & Martins J. M. *Implications of Governance, Natural Resources, and Security Threats on Economic Development: Evidence from Sub-Saharan Africa*. **International Journal of Environmental Research and Public Health**, 18(12), 2021, 6236.

Rodrigues D., & Ac Teixeira A. *Opportunity and Necessity Entrepreneurship and Economic Growth: The Moderating Effect of Human Capital*. **Journal of Developmental Entrepreneurship**, 25(04), 2020, 2050025.

Rotimi M. E., Naphtali, & Irefin D. *Terrorism and Economic Growth in Nigeria*. **ABUAD Journal of Social and Management Sciences,** 5(2), 2024, 358-381.

Saddam I., Mehmood B., & Aslam R. *Terrorism and Poverty: Double Trouble for Macroeconomic Performance in African Countries*. **African Journal of Economic Review**, 5(1), 2017, 1-13.

Sandler T., & Enders W. *Economic Consequences of Terrorism in Developed and Developing Countries: An Overview*. **Terrorism, Economic Development, and Political Openness**, 17, 2008, 1-43.

Sebastian J., & Sakthivel P. *Cyber Terrorism: A Potential Threat to Global Security*. **Pearson Journal**, 5(6), 2020, 334-341.

Sevitenyi N. L., & Nathaniel H. A. *Effect of Insecurity on Economic Growth in Nigeria*. **Journal of Economics and Management Sciences**, 1(2), 2018, 69-69.

Sheikh W. T., & van Ameijde J. *Promoting Livability Through Urban Planning: A Comprehensive Framework Based on the "Theory of Human Needs"*. **Cities**, 131, 2022, 103972.

Siddiqui F., Salam R. A., Lassi Z. S., & Das J. K. *The Intertwined Relationship between Malnutrition and Poverty*. **Frontiers in Public Health**, 8, 2020, 453.

Iloilo City University DO NOT COPY

Soava G., Georgeta, Mehedintu A. & Sterpu A. *Relations between Income Inequality, Economic Growth and Poverty Threshold: New Evidences from EU Countries Panels*. **Technological and Economic Development of Economy**, 26(2), 2020, 290-310.

Soava G., Georgeta, Mehedintu A., & Sterpu A. *Relations between Income Inequality, Economic Growth and Poverty Threshold: New Evidences from EU Countries Panels*. **Technological and Economic Development of Economy**, 26(2), 2020, 290-310.

Spadaro P. A. *Climate Change, Environmental Terrorism, Eco-Terrorism and Emerging Threats*. **Journal of Strategic Security**, 13(4), 2020, 58-80.

Standing G. *Social Protection in Central and Eastern Europe: A Tale of Slipping Anchors and Torn Safety Nets*. In **Welfare States in Transition: National Adaptations in Global Economies**, 1996, 225-255.

Sun C., Abbas H. S. M., Xu X., Gillani S., Ullah S., & Raza M. A. A. *Role of Capital Investment, Investment Risks, and Globalization in Economic Growth*. **International Journal of Finance & Economics**, 28(2), 2023, 1883-1898.

Tahir M., Burki U., & Azid T. *Terrorism and Environmental Sustainability: Empirical Evidence from the MENA Region*. **Resources, Environment and Sustainability**, 8, 2022, 100056.

Thach N. N. *Endogenous Economic Growth: The Arrow-Domer Theory and a Test on Vietnamese Economy*. **WSEAS Transactions on Business and Economics**, 17(1), 2020, 374-386.

Uchechukwu E. S., Amechi A. F., Okoye C. C., & Okeke N. M. *Youth Unemployment and Security Challenges in Anambra State, Nigeria*. **Scholars Journal of Arts, Humanities and Social Sciences**, 11(4), 2023, 81-91.

Ukaeje O. *Political Instability and Insecurity in Africa: Implications for African Union Agenda 2063*. **Journal of Contemporary International Relations and Diplomacy**, 3(1), 2022, 443-466.

Ushahemba I. V., Jibrin O. I., Shehu I. A., & Solomon G. *Investment and Economic Growth Nexus in Nigeria: A Moderation Analysis of Security Threats*. **Editorial Board**, 2023, 250.

Viano E. C. *Unholy Alliances and Their Threat: The Convergence of Terrorism, Organized Crime and Corruption*. **International Annals of Criminology**, 58(1), 2020, 91-110.

Victor U. I., Jibrin O. I., Shehu I. A., & Solomon G. *Investment and Economic Growth Nexus in Nigeria: A Moderation Analysis of Security Threats*. Editorial Board, 2023, 250.

Villanueva D. *Toward a General Neoclassical Theory of Economic Growth*. **Philippine Review of Economics**, 60(2), 2023, 64-80.

Wackernagel M., Hanscom L., Jayasinghe P., Lin D., Murthy A., Neill E., & Raven P. *The Importance of Resource Security for Poverty Eradication*. **Nature Sustainability**, 4(8), 2021, 731-738.

Lead City University DO NOT COPY

Westerlund J. *Testing for Error Correction in Panel Data*. **Oxford Bulletin of Economics and Statistics**, 69(6), 2007, 709-748.

Westerlund J., & Edgerton D. L. *A Simple Test for Cointegration in Dependent Panels with Structural Breaks*. **Oxford Bulletin of Economics and Statistics**, 70(5), 2008, 665-704.

Wiriranai B.M. Environment-Conflict Nexus: T*he Relevance of Thomas Homer-Dixons Environmental Conflict Theory in Africa*. **African Journal of Empirical Research, 2**(1), 2021, 191-205

Yang Y., de Sherbinin A., & Liu Y. *China's Poverty Alleviation Resettlement: Progress, Problems and Solutions*. **Habitat International**, 98, 2020, 102135.

Yelognisse A. D., Alia K. A. J., & Fiamohe E. R. *On Poverty and the Persistence of Poverty in Benin*. **Journal of Economic Studies**, 43(4), 2016, 661-676.

Yu L., & Li X. *The effects of social security expenditure on reducing income inequality and rural poverty in China*. **Journal of Integrative Agriculture**, 20(4), 2021, 1060-1067.

Yuan F., & Zhang P. *Are Natural Resources, Sustainable Growth and Entrepreneurship Matter Endogenous Growth Theory? The Strategic Role of Technical Progress*. **Resources Policy**, 96, 2024, 105189.

Yusuf A., & Mohd S. *Growth and Fiscal Effects of Insecurity on the Nigerian Economy*. **The European Journal of Development Research**, 35(4), 2023, 743-769.

Zakaria M., Jun W., & Ahmed H. *Effect of Terrorism on Economic Growth in Pakistan: An Empirical Analysis*. **Economic research-Ekonomska istraživanja**, 32(1), 2019, 1794-1812.

Zhu Y., Bashir S., & Marie M. *Assessing the Relationship between Poverty and Economic Growth: Does Sustainable Development Goal Can Be Achieved*? **Environmental Science and Pollution Research**, 29(19), 2022, 27613-27623.

Zoaka Y. A. *Poverty and National Security: Government Initiative in Perspective*. **International Journal of Operational Research in Management, Social Sciences & Education**, 6(1), 2020, 242-254.

Paper

Levin A., & Lin C. F. *Unit Root Tests in Panel Data: New Results*. Discussion Paper, Department of Economics, UC-San Diego, 1993.

Pesaran M. H. *A Simple Panel Unit Root Test in Presence of Cross Section Dependence*. Cambridge University Working Paper, 2005.

Pesaran M. H. *General Diagnostic Tests for Cross Section Dependence in Panels*. CESifo Working Papers No. 1233, 2004, 255-60.

Lead City University DO NOT COPY

Simplice A., & Nchofoung T. N. *The Terrorism-Finance Nexus Contingent on Globalisation and Governance Dynamics in Africa*. No. WP/21/016. AGDI Working Paper, 2021.

Vision of Humanity. *Key Findings from the Global Terrorism Index 2024 Report*. Vision of Humanity, 2024. Available at https://www.visionofhumanity.org/maps/global-terrorism-index/#/

Report

World Bank. *World Development Indicators*. World Bank, 2024. Available at https://databank.worldbank.org/source/world-development-indicators

World Bank. *Poverty: Overview*. World Bank 2024. Available at https://www.worldbank.org/en/topic/poverty/overview

Thesis/Dissertation

AL Khodor A. *Marxist Implications in" a Tale of Two Cities" and" 1984": Examining the Impact of Societal Injustices on Developing Countries.* Masters Thesis Submitted to the Department of English Language and Literature, Near East University, 2024.

Debrah R., *An Assessment of the Socio-Economic Effects of Terrorism in the Sahel Region of West Africa* (Doctoral Dissertation, University of Ghana) 2021.

Lead City University DO NOT COPY

Appendix

S/N	Country	Year	GDP per capita growth (annual %) (ipc)	Security threats index (st)	Poverty headcount ratio at $3.00 a day (2021 PPP) (% of population) (pov)	Unemployment, total (% of total labor force) (modeled ILO estimate) (uemp)	Governance (gov)	Gini index (ineq)	Gross fixed capital formation (% of GDP) (inv)	School enrollment, primary (% gross) (edu)	Life expectancy at birth, total (years) (hlt)
1	Benin	2007	2.90018	5.3	70.5	0.902	-0.07877	38.6	17.0575	97.9188	58.249
1	Benin	2008	1.77647	5.3	70.5	0.894	-0.05824	38.6	15.845	110.888	58.099
1	Benin	2009	-0.70374	5.3	70.5	0.949	-0.0957	38.6	16.5655	116.083	58.258
1	Benin	2010	-0.88825	5.4	70.5	1.04	-0.17432	38.6	17.65	117.384	58.387
1	Benin	2011	-0.05712	5.9	68.4	2.647	-0.11439	43.4	18.2263	119.24	58.462
1	Benin	2012	1.74648	6	68.4	2.406	-0.08119	43.4	16.204	123.163	58.559
1	Benin	2013	4.07667	6	68.4	2.099	-0.10385	43.4	20.7083	124.061	58.863
1	Benin	2014	3.26077	5.9	68.4	1.872	-0.22914	43.4	21.6377	124.522	59.008
1	Benin	2015	-1.18432	6.2	65.8	1.82	-0.3514	47.6	20.4957	127.121	59.123
1	Benin	2016	0.361166	5.9	65.8	1.784	-0.31722	47.6	19.7225	125.555	59.283
1	Benin	2017	2.67042	6.2	65.8	1.659	-0.33555	47.6	23.4384	121.606	59.528
1	Benin	2018	3.73702	6.2	37.2	1.41	-0.38925	37.9	25.9006	117.117	59.71
1	Benin	2019	3.98211	5.9	37.2	1.214	-0.4553	37.9	25.1733	112.03	59.888
1	Benin	2020	1.1202	5.6	37.2	1.502	-0.36699	37.9	25.2065	109.149	60.154
1	Benin	2021	4.41335	5.3	27.2	1.779	-0.31696	34.4	28.4474	110.706	59.61
1	Benin	2022	3.58072	5	27.2	1.685	-0.2569	34.4	36.133	113.049	60.475
1	Benin	2023	3.70337	5.2	27.2	1.657	-0.28277	34.4	40.0731	113.049	60.774
2	Burkina Faso	2007	1.00131	7.7	69.6	3.3	-0.2315	43.3	18.1832	66.1943	54.377
2	Burkina Faso	2008	2.73664	7.7	69.6	3.496	-0.20578	43.3	17.3019	71.7466	55.199
2	Burkina Faso	2009	-0.00023	7.5	67.2	3.711	-0.29172	39.8	18.7916	76.2458	55.791
2	Burkina Faso	2010	5.31935	7.2	67.2	3.723	-0.35337	39.8	20.1228	76.8966	56.343
2	Burkina Faso	2011	3.51634	7	67.2	3.827	-0.56181	39.8	21.1138	80.1961	57.001

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2	Burkina Faso	2012	3.28878	7.1	67.2	3.856	-0.60275	39.8	22.1551	82.4148	57.457
2	Burkina Faso	2013	2.66508	7.2	67.2	4.055	-0.71679	39.8	23.4826	83.6841	57.903
2	Burkina Faso	2014	1.27048	6.9	58.7	4.251	-0.68983	35.3	18.6613	84.8978	58.331
2	Burkina Faso	2015	0.88826	7.4	58.7	4.461	-0.65063	35.3	19.1472	85.447	58.778
2	Burkina Faso	2016	2.90351	8.1	58.7	4.587	-0.75385	35.3	20.2452	87.6475	59.173
2	Burkina Faso	2017	3.21641	8.4	58.7	4.656	-0.78319	35.3	20.8835	89.7315	59.578
2	Burkina Faso	2018	3.76773	8.5	47.7	4.695	-0.85216	43	20.1523	91.7204	59.972
2	Burkina Faso	2019	3.24392	8.2	47.7	4.71	-1.04019	43	18.8402	89.9551	60.184
2	Burkina Faso	2020	-0.44342	8.7	47.7	5.04	-1.12304	43	17.7569	87.8472	60.454
2	Burkina Faso	2021	4.43101	9	27.2	5.2	-1.20398	37.4	18.1079	87.125	60.046
2	Burkina Faso	2022	-0.81955	8.7	42.1	5.389	-1.33426	37.4	16.2902	82.3568	60.7
2	Burkina Faso	2023	0.649578	9.3	42.1	5.348	-1.43073	37.4	17.1786	72.3236	61.092
3	Cabo Verde	2007	13.9029	6.1	26.2	13.323	0.581557	47.2	44.2258	108.703	71.487
3	Cabo Verde	2008	5.93629	5.8	26.2	13.335	0.392121	47.2	42.5285	108.344	71.888
3	Cabo Verde	2009	-2.43496	5.7	26.2	13.517	0.367563	47.2	38.5171	107.644	72.142
3	Cabo Verde	2010	1.10868	5.5	26.2	10.67	0.370115	47.2	45.1942	107.247	72.507
3	Cabo Verde	2011	3.5868	5.7	26.2	10.948	0.400934	47.2	46.7322	105.803	72.913
3	Cabo Verde	2012	0.983346	5.7	26.2	11.142	0.431271	47.2	35.1473	105.173	73.315
3	Cabo Verde	2013	0.579092	5.7	26.2	11.392	0.409841	47.2	30.143	105.532	73.481
3	Cabo Verde	2014	0.676816	5.7	26.2	11.674	0.194122	47.2	34.5237	104.337	73.788
3	Cabo Verde	2015	0.922631	5.7	14.6	11.907	0.512047	42.4	33.2714	101.818	74.096
3	Cabo Verde	2016	4.24816	5.4	14.6	12.077	0.492447	42.4	32.646	99.7519	74.35
3	Cabo Verde	2017	4.48221	5.4	14.6	12.24	0.453	42.4	29.28	98.2432	74.71
3	Cabo Verde	2018	3.60152	5.1	14.6	12.17	0.587086	42.4	27.49	98.6433	74.84
3	Cabo Verde	2019	6.8045	5	14.6	12.128	0.569215	42.4	23.43	96.9894	75.449
3	Cabo Verde	2020	-20.8938	5.1	14.6	14.69	0.536768	42.4	28.96	95.9992	73.818
3	Cabo Verde	2021	6.62541	4.8	14.6	13.976	0.448032	42.4	27.75	96.4021	74.424
3	Cabo Verde	2022	15.1545	4.5	14.6	12.246	0.473953	42.4	21.88	96.4021	75.907
3	Cabo Verde	2023	4.95243	4.2	14.6	11.971	0.458462	42.4	19.35	96.4021	76.059
4	Cote d'Ivoire	2007	-1.22416	9.6	44.7	6.272	-1.52924	41.3	16.6971	65.3321	53.452
4	Cote d'Ivoire	2008	2.426	9.1	47.9	6.379	-1.5284	43.2	16.1178	69.1642	54.179

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4	Cote d'Ivoire	2009	1.32619	8.5	47.9	6.571	-1.22369	43.2	16.1082	68.6352	54.744
4	Cote d'Ivoire	2010	4.51931	8.2	47.9	6.618	-1.44067	43.2	20.7032	68.6352	55.282
4	Cote d'Ivoire	2011	-7.40425	8.5	47.9	7.135	-1.29329	43.2	17.8471	77.1076	55.972
4	Cote d'Ivoire	2012	5.39584	8.7	47.9	7.223	-1.18581	43.2	17.1123	79.7438	56.57
4	Cote d'Ivoire	2013	8.57322	9	47.9	4.255	-0.99347	43.2	20.7312	80.6249	57.057
4	Cote d'Ivoire	2014	6.7517	8.7	47.9	3.285	-0.94723	43.2	22.4761	82.8493	57.772
4	Cote d'Ivoire	2015	4.14233	8.3	47.5	2.579	-0.79131	41.5	23.5617	85.8923	58.281
4	Cote d'Ivoire	2016	4.10858	7.7	47.5	1.896	-0.82281	41.5	23.2965	90.1342	58.814
4	Cote d'Ivoire	2017	4.42161	7.7	47.5	3.272	-0.95167	41.5	21.9109	91.8171	59.315
4	Cote d'Ivoire	2018	2.05335	7.7	22.7	2.85	-0.77273	37.2	22.4666	92.9019	59.795
4	Cote d'Ivoire	2019	3.96245	7.4	22.7	2.401	-0.79784	37.2	22.1766	93.5452	60.274
4	Cote d'Ivoire	2020	-1.81621	7.1	22.7	2.584	-0.78618	37.2	20.3448	94.1609	60.14
4	Cote d'Ivoire	2021	4.44709	7.2	20.9	2.63	-0.62598	35.3	21.0572	92.7194	60.29
4	Cote d'Ivoire	2022	3.57851	6.9	20.9	2.306	-0.46052	35.3	25.1924	94.6489	61.562
4	Cote d'Ivoire	2023	3.57393	6.6	20.9	2.27	-0.49565	35.3	27.8068	101.65	61.944
5	Gambia, The	2007	0.096337	5.8	55.2	10.428	-0.28374	47.3	12.5665	76.6583	60.001
5	Gambia, The	2008	3.21188	5.8	55.2	10.092	-0.35202	47.3	10.5224	75.1558	60.473
5	Gambia, The	2009	3.61239	6	55.2	9.823	-0.31056	47.3	12.8914	73.8663	60.735
5	Gambia, The	2010	2.87351	5.8	34.2	9.723	-0.34084	43.6	13.8767	73.2022	61.167
5	Gambia, The	2011	-10.7773	6.1	34.2	10.283	-0.33696	43.6	12.8962	70.6535	61.561
5	Gambia, The	2012	2.18646	5.8	34.2	10.346	-0.28803	43.6	20.8772	73.043	61.9
5	Gambia, The	2013	-0.09662	5.5	34.2	9.454	-0.39439	43.6	14.7115	74.0878	62.252
5	Gambia, The	2014	-4.17259	5.3	34.2	8.218	-0.4357	43.6	16.6526	76.7958	62.576
5	Gambia, The	2015	1.25137	6	17.1	7.26	-0.48718	35.9	20.3498	79.205	62.971
5	Gambia, The	2016	-0.70101	6	17.1	6.285	-0.6897	35.9	24.9199	80.5158	63.386
5	Gambia, The	2017	2.20808	6.3	17.1	5.157	-0.41996	35.9	22.9597	83.3724	63.708
5	Gambia, The	2018	4.66787	6.6	17.1	4.127	-0.41943	35.9	20.8784	85.9553	64.034
5	Gambia, The	2019	3.74848	6.3	17.1	4.538	-0.27537	35.9	24.6538	89.3657	64.427
5	Gambia, The	2020	-1.76319	6	22	5.892	-0.26909	38.8	32.3421	91.4118	64.418
5	Gambia, The	2021	2.79305	5.7	22	6.269	-0.32039	38.8	30.3708	91.2067	63.847
5	Gambia, The	2022	3.07381	5.4	22	6.076	-0.3048	38.8	28.6236	92.3204	64.859
5	Gambia, The	2023	2.4134	6.1	22	6.479	-0.30131	38.8	27.2873	93.7452	65.86

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6	Ghana	2007	1.69172	2.4	60.9	5.092	0.006607	42.8	15.3845	96.5305	60.282
6	Ghana	2008	6.41467	2.4	60.9	5.144	-0.03001	42.8	16.492	101.164	60.578
6	Ghana	2009	2.26069	2.4	60.9	5.348	-0.04852	42.8	15.4788	99.1572	60.928
6	Ghana	2010	5.30618	2.6	60.9	5.384	-0.03834	42.8	11.7641	99.1572	61.297
6	Ghana	2011	11.337	3	60.9	4.227	0.038479	42.8	11.9769	99.0466	61.617
6	Ghana	2012	6.67975	3.2	41.8	3.141	0.020343	42.4	16.1099	101.384	61.995
6	Ghana	2013	4.75796	3.8	41.8	2.173	-0.0369	42.4	24.039	100.279	62.397
6	Ghana	2014	0.452244	4.1	41.8	4.415	-0.20738	42.4	26.4229	97.8936	62.832
6	Ghana	2015	-0.20833	4.1	41.8	6.806	-0.17901	42.4	27.0126	102.016	63.175
6	Ghana	2016	1.04704	3.8	39	5.232	-0.19648	43.5	24.8262	100.416	63.522
6	Ghana	2017	5.78095	3.8	39	3.369	-0.05256	43.5	18.8864	99.0501	63.829
6	Ghana	2018	4.01895	4.3	39	3.253	-0.1783	43.5	21.1991	97.3151	64.138
6	Ghana	2019	4.39063	4.6	39	3.16	-0.08572	43.5	18.0382	98.3772	64.455
6	Ghana	2020	-1.46831	4.9	39	3.313	-0.01354	43.5	17.6607	96.8718	64.309
6	Ghana	2021	3.038	4.6	39	3.384	-0.05533	43.5	16.7537	97.9046	64.286
6	Ghana	2022	1.84293	4.3	39	3.084	-0.15072	43.5	15.3184	96.5332	65.246
6	Ghana	2023	0.99861	4	39	3.063	-0.05714	43.5	10.692	96.5332	65.498
7	Guinea	2007	4.37308	8.1	44	4.818	-1.8303	39.4	24.67	82.1204	55.233
7	Guinea	2008	1.64417	8.4	44	4.829	-1.64035	39.4	22.5895	83.5213	55.703
7	Guinea	2009	-3.50758	9.4	44	4.967	-1.57916	39.4	20.9356	83.64	56.052
7	Guinea	2010	2.26713	9.4	44	5.097	-1.40444	39.4	19.1372	86.3007	56.431
7	Guinea	2011	3.02826	9.3	44	5.094	-1.26549	39.4	23.6022	90.0735	56.778
7	Guinea	2012	3.34759	9.4	21.3	4.884	-1.27259	33.7	25.1178	92.2287	57.117
7	Guinea	2013	1.43532	9.1	21.3	4.967	-1.20018	33.7	23.4294	94.3821	57.459
7	Guinea	2014	1.15631	9.2	21.3	5.09	-1.09666	33.7	22.7114	96.1611	57.581
7	Guinea	2015	1.23053	8.9	21.3	5.224	-0.78596	33.7	23.9692	89.7454	57.899
7	Guinea	2016	8.01216	9	21.3	5.013	-0.731	33.7	52.4183	94.3622	58.49
7	Guinea	2017	7.5159	8.8	21.3	4.826	-0.89228	33.7	25.7658	99.8954	58.715
7	Guinea	2018	3.68701	8.9	11.7	4.787	-0.95305	29.6	19.4674	100.92	59.043
7	Guinea	2019	2.9464	8.6	11.7	5.018	-0.84918	29.6	17.7992	98.1418	59.379
7	Guinea	2020	2.06695	8.3	11.7	6.018	-0.81919	29.6	16.5754	101.726	59.35
7	Guinea	2021	2.96921	8	11.7	5.827	-0.94618	29.6	15.0225	97.9626	59.373

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7	Guinea	2022	1.42306	9	11.7	5.267	-0.87645	29.6	15.2175	97.9626	60.432
7	Guinea	2023	4.14897	8.7	11.7	5.244	-0.89291	29.6	21.9452	97.9626	60.74
8	Guinea-Bissau	2007	0.03765	7.9	68.2	3.149	-0.78274	35.6	24.1481	121.14	54.87
8	Guinea-Bissau	2008	1.92083	8.3	68.2	3.164	-0.88686	35.6	17.2308	121.14	55.3
8	Guinea-Bissau	2009	-0.12423	8.4	68.2	3.152	-0.85866	35.6	18.2574	121.14	56.297
8	Guinea-Bissau	2010	2.91053	8.9	75.7	3.137	-0.88065	50.6	19.3665	113.27	56.999
8	Guinea-Bissau	2011	5.28027	9.3	75.7	3.08	-0.91465	50.6	15.7247	113.27	57.663
8	Guinea-Bissau	2012	-4.29239	9.4	75.7	3.143	-1.1287	50.6	19.2098	113.27	58.27
8	Guinea-Bissau	2013	0.543365	9.5	75.7	3.162	-1.17848	50.6	17.6494	113.27	58.879
8	Guinea-Bissau	2014	-1.65358	8.5	75.7	3.254	-1.17565	50.6	18.4361	113.27	59.476
8	Guinea-Bissau	2015	3.44072	8.8	75.7	3.157	-1.08551	50.6	16.1944	113.27	60.071
8	Guinea-Bissau	2016	2.6947	9.1	75.7	3.123	-1.07629	50.6	17.971	113.27	60.619
8	Guinea-Bissau	2017	2.26684	8.9	75.7	3.066	-1.15208	50.6	17.9786	113.27	61.148
8	Guinea-Bissau	2018	1.32711	8.6	37.1	3.127	-1.10338	34.8	18.9049	113.27	61.652
8	Guinea-Bissau	2019	3.10826	8.3	37.1	2.413	-1.06088	34.8	24.0195	113.27	62.161
8	Guinea-Bissau	2020	-0.80152	8	37.1	2.89	-1.09364	34.8	23.5575	113.27	61.343
8	Guinea-Bissau	2021	3.83162	7.7	39.9	3.031	-0.86414	33.4	19.3342	113.27	61.653
8	Guinea-Bissau	2022	2.2863	7.4	39.9	2.666	-0.93644	33.4	19.4172	113.27	63.605
8	Guinea-Bissau	2023	2.86356	7.9	39.9	2.65	-0.88012	33.4	19.4017	113.27	64.085
9	Liberia	2007	4.21344	6.9	61.1	2.235	-1.20279	36.4	19.4545	90.7918	58.147
9	Liberia	2008	2.88474	6.7	61.1	2.222	-1.25059	36.4	19.5016	89.3079	58.675
9	Liberia	2009	2.0418	6.9	61.1	2.242	-1.12074	36.4	19.4545	96.6229	59.106
9	Liberia	2010	3.07118	6.7	61.1	2.266	-0.86028	36.4	19.4545	96.6229	59.358
9	Liberia	2011	4.04087	7.3	61.1	2.211	-0.82416	36.4	19.4545	100.919	59.486
9	Liberia	2012	4.24346	7	61.1	2.146	-0.82149	36.4	19.4545	100.919	59.785
9	Liberia	2013	6.32411	7.1	61.1	2.08	-0.92007	36.4	19.4545	52.2451	59.992
9	Liberia	2014	-1.37371	6.8	31.7	2.079	-0.97677	33.2	19.4932	92.674	59.21
9	Liberia	2015	-2.06002	6.9	31.7	2.557	-1.09571	33.2	20.1573	90.183	59.248
9	Liberia	2016	-3.5459	6.6	33.6	3.081	-0.8792	35.3	20.0857	84.1511	60.483
9	Liberia	2017	0.483418	6.4	33.6	3.066	-0.842	35.3	19.9121	79.9273	60.777
9	Liberia	2018	-0.80229	6.7	33.6	3.056	-0.76366	35.3	20.0517	79.9273	60.999
9	Liberia	2019	-4.38161	6.7	33.6	3.068	-0.86799	35.3	20.0165	79.9273	61.232

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9	Liberia	2020	-4.9747	6.9	33.6	4.109	-0.88412	35.3	19.9934	72.9199	61.267
9	Liberia	2021	2.79369	6.6	33.6	3.845	-0.84797	35.3	20.0205	68.0121	61.166
9	Liberia	2022	2.58506	6.3	33.6	2.977	-0.84918	35.3	20.0101	67.2318	61.934
9	Liberia	2023	2.40186	6.8	33.6	2.933	-0.73578	35.3	20.008	67.2318	62.163
10	Mali	2007	0.146121	4.8	64	1.405	-0.26497	38.9	20.4982	76.9792	54.756
10	Mali	2008	1.38603	6	64	1.424	-0.28751	38.9	23.0329	78.8654	55.187
10	Mali	2009	1.44695	6.7	63.3	1.423	-0.43654	33	20.2113	80.0612	55.588
10	Mali	2010	1.94777	7.1	63.3	1.405	-0.51517	33	20.7745	80.4464	55.993
10	Mali	2011	-0.06989	7.2	63.3	1.422	-0.75244	33	18.6566	80.751	56.367
10	Mali	2012	-3.69042	7.2	63.3	1.482	-1.50869	33	14.8187	77.2598	56.696
10	Mali	2013	-0.64954	8.3	63.3	1.516	-1.31097	33	17.1275	72.5381	57.052
10	Mali	2014	3.75303	8.2	63.3	1.474	-1.39976	33	17.9102	73.4566	57.482
10	Mali	2015	2.9012	8.7	63.3	1.401	-1.32157	33	18.3557	72.1444	57.852
10	Mali	2016	2.55247	9.2	63.3	1.367	-1.32024	33	18.5853	73.5641	58.286
10	Mali	2017	2.00103	9	63.3	1.494	-1.43388	33	18.2499	76.4468	58.562
10	Mali	2018	1.52334	9.3	29.4	1.62	-1.55535	36	18.6979	72.0947	58.873
10	Mali	2019	1.6417	9.5	29.4	3.29	-1.65675	36	20.0426	72.0947	59.217
10	Mali	2020	-4.17117	9.5	29.4	3.528	-1.66638	36	19.8635	74.6229	58.858
10	Mali	2021	-0.0534	9.6	36.1	3.966	-1.7922	35.7	20.1467	72.6489	59.116
10	Mali	2022	0.40734	9.7	36.1	2.387	-1.85485	35.7	19.6084	72.6489	60.035
10	Mali	2023	1.59011	9.6	36.1	2.956	-1.93387	35.7	19.1744	74.417	60.439
11	Mauritania	2007	-4.48587	7.4	28.5	9.524	-0.60204	40.2	42.2075	92.4876	64.885
11	Mauritania	2008	-3.15558	7.2	19.2	9.735	-0.82359	35.7	37.2008	89.486	65.233
11	Mauritania	2009	-2.98569	7.9	19.2	10.186	-0.90427	35.7	36.3942	95.7915	65.485
11	Mauritania	2010	-0.60328	7.9	19.2	10.075	-1.0308	35.7	33.2789	97.249	65.661
11	Mauritania	2011	0.846509	7.9	19.2	9.968	-1.06756	35.7	29.4261	95.2699	65.754
11	Mauritania	2012	1.11502	7.7	19.2	9.864	-1.02418	35.7	33.2348	94.8015	65.808
11	Mauritania	2013	0.935521	7.8	19.2	9.929	-1.00455	35.7	32.7208	93.1958	65.89
11	Mauritania	2014	1.1807	7.7	11.7	10.028	-0.79073	32.6	37.9643	93.5206	66.207
11	Mauritania	2015	2.2558	7.4	11.7	10.108	-0.85181	32.6	34.3025	96.382	66.498
11	Mauritania	2016	-1.7298	7.1	11.7	10.283	-0.80152	32.6	29.0015	88.4654	66.823
11	Mauritania	2017	3.14237	6.9	11.7	10.336	-0.71637	32.6	30.274	87.7418	67.088

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11	Mauritania	2018	1.70257	6.6	11.7	10.407	-0.72892	32.6	32.9273	90.3254	67.419
11	Mauritania	2019	0.139309	6.3	10.2	10.416	-0.58623	32	31.2428	90.719	67.64
11	Mauritania	2020	-3.22895	6.6	10.2	11.054	-0.77006	32	24.7092	86.6899	66.794
11	Mauritania	2021	-2.12418	6.3	10.2	11.144	-0.66583	32	28.3276	86.6899	66.762
11	Mauritania	2022	3.71273	6	10.2	10.531	-0.62101	32	29.7828	86.6899	68.281
11	Mauritania	2023	3.39402	5.4	10.2	10.446	-0.63351	32	23.4609	111.769	68.484
12	Niger	2007	-0.58504	6.7	82.9	2.032	-0.62995	37.3	18.8051	50.2298	55.063
12	Niger	2008	3.81608	7.7	82.9	1.592	-0.70254	37.3	25.5219	54.0345	55.852
12	Niger	2009	-1.75786	7.6	82.9	1.209	-0.92752	37.3	28.4299	57.9058	56.487
12	Niger	2010	4.60767	7.5	82.9	0.722	-0.93226	37.3	31.8705	61.6604	57.08
12	Niger	2011	-1.38136	8	68.8	0.316	-0.76545	31.5	31.5628	65.4003	57.6
12	Niger	2012	6.45538	8.2	68.8	2.177	-0.92177	31.5	28.8051	67.3207	57.987
12	Niger	2013	1.43045	8.3	68.8	1.397	-1.02707	31.5	29.5949	71.6495	58.364
12	Niger	2014	2.7795	8.4	60.3	0.524	-0.94466	34.3	30.7843	72.266	58.693
12	Niger	2015	0.60432	8.7	60.3	0.553	-0.89117	34.3	32.607	74.5725	58.85
12	Niger	2016	1.92621	8.9	60.3	0.548	-0.89744	34.3	27.0109	76.6502	59.228
12	Niger	2017	1.33286	8.7	60.3	0.554	-1.00709	34.3	25.795	78.1794	59.524
12	Niger	2018	3.57479	8.4	59	0.535	-1.09299	37.3	28.4269	70.6375	59.765
12	Niger	2019	2.4327	8.7	59	0.531	-1.12264	37.3	30.3783	69.7782	60.031
12	Niger	2020	0.189465	8.8	59	0.594	-1.16404	37.3	28.3266	73.0443	59.89
12	Niger	2021	-1.86258	8.9	60.5	0.78	-1.09126	32.9	28.5386	68.3099	59.542
12	Niger	2022	8.31986	8.6	60.5	0.418	-1.04599	32.9	29.6208	68.3314	60.398
12	Niger	2023	-0.82223	8.3	60.5	0.425	-1.15489	32.9	26.4468	68.526	61.183
13	Nigeria	2007	3.67721	9.2	51.1	3.799	-1.52306	40.1	9.24964	91.4314	50.381
13	Nigeria	2008	3.83259	9.2	51.1	3.795	-1.4241	40.1	8.32348	82.3805	50.748
13	Nigeria	2009	5.06718	9.4	51.1	3.766	-1.59752	40.1	12.0882	83.4957	51.08
13	Nigeria	2010	5.02854	9.3	38.5	3.746	-1.68817	35.7	16.5552	83.0166	51.315
13	Nigeria	2011	2.39735	9.1	38.5	3.77	-1.52934	35.7	15.5339	88.0855	51.49
13	Nigeria	2012	1.37822	9.2	37.4	3.76	-1.52153	35.5	14.1625	89.4	51.688
13	Nigeria	2013	3.81449	9.5	37.4	3.711	-1.54338	35.5	14.1687	91.372	51.827
13	Nigeria	2014	3.53757	9.5	37.4	3.902	-1.66006	35.5	15.0835	87.4456	51.94
13	Nigeria	2015	0.08198	9.9	35.8	4.135	-1.45913	35.9	14.8272	83.7498	51.939

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13	Nigeria	2016	-4.01893	9.7	35.8	4.499	-1.49713	35.9	14.6983	81.9162	52.189
13	Nigeria	2017	-1.61586	9.2	35.8	4.828	-1.51896	35.9	14.8697	76.4631	52.397
13	Nigeria	2018	-0.40684	8.9	34.2	5.067	-1.60787	35.1	14.7984	84.6761	52.669
13	Nigeria	2019	-0.01001	9	34.2	5.206	-1.57315	35.1	14.7888	83.2574	53.009
13	Nigeria	2020	-3.8642	8.7	34.2	5.742	-1.5179	35.1	14.8189	87.3721	53.072
13	Nigeria	2021	1.49716	8.8	34.2	5.45	-1.40717	35.1	14.802	86.7234	53.455
13	Nigeria	2022	1.11327	8.9	34.2	3.821	-1.41021	35.1	14.8032	86.7234	54.079
13	Nigeria	2023	0.724296	9	34.2	3.074	-1.30817	35.1	14.8081	86.7234	54.462
14	Senegal	2007	0.466183	5.3	53.6	2.808	-0.36705	39.2	21.0585	85.0945	62.653
14	Senegal	2008	1.30518	6.1	53.6	2.822	-0.18205	39.2	22.5827	85.2545	63.201
14	Senegal	2009	0.349911	6	53.6	2.814	-0.37896	39.2	19.8922	84.6335	63.751
14	Senegal	2010	0.95227	6.3	53.6	2.803	-0.50575	39.2	18.5166	84.3055	64.221
14	Senegal	2011	-1.19544	6.3	53.3	2.853	-0.38847	40.3	21.016	86.8277	64.799
14	Senegal	2012	1.25575	6.3	53.3	3.888	-0.29101	40.3	20.7024	86.3721	65.229
14	Senegal	2013	-0.57804	6.2	53.3	4.986	-0.2433	40.3	22.1689	83.9905	65.638
14	Senegal	2014	2.91208	6.5	53.3	5.841	-0.30141	40.3	23.4797	85.1261	66.001
14	Senegal	2015	3.15104	6.2	53.3	6.757	-0.30179	40.3	23.0173	84.8737	66.451
14	Senegal	2016	3.23504	5.9	53.3	4.455	-0.36433	40.3	23.9281	83.9003	66.724
14	Senegal	2017	4.35024	6.2	53.3	4.078	-0.21052	40.3	25.8257	84.4605	67.059
14	Senegal	2018	3.27616	5.9	19.1	3.455	-0.21841	38.3	28.3218	84.3079	67.379
14	Senegal	2019	1.80892	5.6	19.1	2.863	-0.04837	38.3	29.6564	83.3581	67.668
14	Senegal	2020	-1.29148	5.4	19.1	3.437	-0.10147	38.3	30.4532	84.5763	67.496
14	Senegal	2021	3.87343	5.1	17.9	3.44	-0.07757	36.2	33.9687	82.9254	66.868
14	Senegal	2022	1.29516	4.8	17.9	2.837	-0.05891	36.2	35.5395	83.2787	67.788
14	Senegal	2023	2.11681	4.5	17.9	2.8	-0.03446	36.2	34.7541	82.591	68.683
15	Sierra Leone	2007	5.63112	6.5	72.4	4.007	-0.60701	40.2	5.84775	110.747	50.024
15	Sierra Leone	2008	2.83573	6.4	72.4	4.128	-0.69692	40.2	5.65564	110.747	50.693
15	Sierra Leone	2009	0.466723	6.1	72.4	4.269	-0.74149	40.2	6.11533	110.747	51.312
15	Sierra Leone	2010	3.77448	6	72.4	4.413	-0.7224	40.2	19.634	110.747	51.927
15	Sierra Leone	2011	3.27899	6.1	53.7	4.54	-0.67898	34	26.6461	110.747	52.594
15	Sierra Leone	2012	12.3208	5.8	53.7	4.552	-0.75003	34	15.8559	113.63	53.159
15	Sierra Leone	2013	18.14	5.5	53.7	4.538	-0.69704	34	9.23666	115.527	54.051

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15	Sierra Leone	2014	2.09087	5.2	53.7	4.678	-0.67629	34	8.38034	115.527	54.281
15	Sierra Leone	2015	-22.313	4.8	53.7	4.606	-0.69514	34	9.87323	116.402	55.454
15	Sierra Leone	2016	3.87197	4.5	53.7	4.294	-0.6963	34	11.5065	118.64	56.937
15	Sierra Leone	2017	1.30775	4.3	53.7	3.834	-0.62978	34	11.5569	122.321	57.761
15	Sierra Leone	2018	1.07236	4.3	41.5	3.192	-0.63998	35.7	15.3862	110.482	59.059
15	Sierra Leone	2019	3.08171	4.4	41.5	3.203	-0.61566	35.7	17.397	140.368	59.593
15	Sierra Leone	2020	-3.50678	4.1	41.5	3.508	-0.68283	35.7	15.5139	137.541	59.694
15	Sierra Leone	2021	3.51528	3.8	41.5	3.556	-0.62476	35.7	16.284	151.726	60.26
15	Sierra Leone	2022	2.99519	3.5	41.5	3.175	-0.63232	35.7	18.6749	156.802	61.275
15	Sierra Leone	2023	3.41472	3.6	41.5	3.153	-0.69713	35.7	19.814	153.092	61.786
16	Togo	2007	-4.01252	7.8	67.6	3.817	-0.93301	42.2	15.9306	108.529	56.382
16	Togo	2008	1.08767	7.8	67.6	3.283	-0.82526	42.2	16.7468	109.117	56.651
16	Togo	2009	2.50754	7.4	67.6	2.849	-0.76108	42.2	17.2538	123.092	56.927
16	Togo	2010	3.01287	7.6	67.6	2.383	-0.78167	42.2	17.8932	125.679	57.227
16	Togo	2011	3.0098	7.3	65.5	1.982	-0.76736	46	21.5934	123.724	57.612
16	Togo	2012	3.54417	7.3	65.5	2.03	-0.84166	46	19.55	126.963	57.94
16	Togo	2013	3.14133	7.4	65.5	2.085	-0.82168	46	19.9519	127.723	58.345
16	Togo	2014	2.98963	7.1	65.5	2.142	-0.71698	46	23.3302	124.293	58.766
16	Togo	2015	2.84282	7	61.7	2.204	-0.72922	43	25.103	128.252	59.22
16	Togo	2016	1.6276	6.7	61.7	2.968	-0.64687	43	22.3469	124.69	59.669
16	Togo	2017	1.4412	6.5	61.7	3.744	-1.02007	43	16.9689	123.164	60.135
16	Togo	2018	2.23649	6.8	35.3	2.898	-0.98994	42.5	17.8155	121.915	60.601
16	Togo	2019	2.39019	7	35.3	2.036	-0.94047	42.5	17.7721	121.971	61.055
16	Togo	2020	-0.43894	6.7	35.3	2.225	-0.81043	42.5	21.3309	123.535	61.123
16	Togo	2021	3.49989	6.4	34.7	2.333	-0.69099	37.9	19.8641	121.075	61.328
16	Togo	2022	3.30037	6.1	34.7	1.965	-0.71684	37.9	21.4193	122.478	62.29
16	Togo	2023	3.95369	5.8	34.7	1.948	-0.76612	37.9	22.9545	120.249	62.739

Source: WDI (2025), Global Economy (2025), Heritage Foundation (2025).

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Cross-sectional dependency tests

```
xtcd pov
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: pov
                        Group variable: c_id
                      Number of groups: 16
                Average # of observations: 18.13
                        Panel is: unbalanced
-------------------------------------------------------
   Variable |   CD-test  p-value     corr  abs(corr)
------------+------------------------------------------
        pov |     34.03    0.000    0.753    0.753
-------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
       independence CD ~ N(0,1)

. xtcd st
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: st
                        Group variable: c_id
                      Number of groups: 16
                Average # of observations: 18.13
                        Panel is: unbalanced
-------------------------------------------------------
   Variable |   CD-test  p-value     corr  abs(corr)
------------+------------------------------------------
         st |      4.75    0.000    0.105    0.498
-------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
       independence CD ~ N(0,1)

. xtcd uemp
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: uemp
                        Group variable: c_id
                      Number of groups: 16
                Average # of observations: 18.13
                        Panel is: unbalanced
-------------------------------------------------------
   Variable |   CD-test  p-value     corr  abs(corr)
------------+------------------------------------------
       uemp |      0.56    0.576    0.012    0.414
-------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
       independence CD ~ N(0,1)
```

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```
. xtcd gov
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: gov
                        Group variable: c_id
                      Number of groups: 16
                Average # of observations: 18.13
                          Panel is: unbalanced
-------------------------------------------------------
   Variable |   CD-test  p-value     corr  abs(corr)
------------+------------------------------------------
        gov |     -0.03    0.977    -0.001   0.380
-------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
        independence CD ~ N(0,1)

. xtcd ipc
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: ipc
                        Group variable: c_id
                      Number of groups: 16
                Average # of observations: 18.13
                          Panel is: unbalanced
-------------------------------------------------------
   Variable |   CD-test  p-value     corr  abs(corr)
------------+------------------------------------------
        ipc |      6.24    0.000    0.138    0.225
-------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
        independence CD ~ N(0,1)
.
. xtcd ineq
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: ineq
                        Group variable: c_id
                      Number of groups: 16
                Average # of observations: 18.13
                          Panel is: unbalanced
-------------------------------------------------------
   Variable |   CD-test  p-value     corr  abs(corr)
------------+------------------------------------------
       ineq |      9.30    0.000    0.206    0.429
-------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
        independence CD ~ N(0,1)
```

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```
. xtcd edu
Average correlation coefficients & Pesaran (2004) CD test
 Variables series tested: edu
                         Group variable: c_id
                       Number of groups: 16
                 Average # of observations: 18.13
                           Panel is: unbalanced
-------------------------------------------------------------
   Variable |    CD-test  p-value     corr  abs(corr)
------------+------------------------------------------------
        edu |     -0.74    0.459    -0.016   0.417
-------------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
        independence CD ~ N(0,1)

. xtcd inv
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: inv
                         Group variable: c_id
                       Number of groups: 16
                 Average # of observations: 18.13
                           Panel is: unbalanced
-------------------------------------------------------------
   Variable |    CD-test  p-value     corr  abs(corr)
------------+------------------------------------------------
        inv |      1.34    0.180    0.030    0.354
-------------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
        independence CD ~ N(0,1)

. xtcd hlt
Average correlation coefficients & Pesaran (2004) CD test
Variables series tested: hlt
                         Group variable: c_id
                       Number of groups: 16
                 Average # of observations: 18.13
                           Panel is: unbalanced
-------------------------------------------------------------
   Variable |    CD-test  p-value     corr  abs(corr)
------------+------------------------------------------------
        hlt |     43.79    0.000    0.970    0.970
-------------------------------------------------------------
 Notes: Under the null hypothesis of cross-section
        independence CD ~ N(0,1).
```

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Pesaran scaled LM

```
 quietly xtreg pov st uemp gov ipc ineq edu, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =    23.086, Pr = 0.0000
Average absolute value of the off-diagonal elements =     0.547

quietly xtreg st pov uemp gov ipc ineq edu, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =     2.374, Pr = 0.0176
Average absolute value of the off-diagonal elements =     0.341

quietly xtreg uemp pov st gov ipc ineq edu, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =    -0.042, Pr = 0.9662
Average absolute value of the off-diagonal elements =     0.322

quietly xtreg gov pov st uemp ipc ineq edu, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =    -0.756, Pr = 0.4495
Average absolute value of the off-diagonal elements =     0.381

quietly xtreg ipc pov st uemp gov ineq edu, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =     5.856, Pr = 0.0000
Average absolute value of the off-diagonal elements =     0.238

quietly xtreg ineq pov st uemp gov ipc edu, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =    -0.999, Pr = 0.3178
Average absolute value of the off-diagonal elements =     0.405

. quietly xtreg edu pov st uemp gov ipc ineq, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =     0.141, Pr = 0.8879
Average absolute value of the off-diagonal elements =     0.350

quietly xtreg inv ipc st edu hlt ineq gov, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =    -1.564, Pr = 0.1177
Average absolute value of the off-diagonal elements =     0.286

quietly xtreg hlt inv ipc st edu ineq gov, fe
. xtcsd, pesaran abs
Pesaran's test of cross sectional independence =    28.350, Pr = 0.0000
Average absolute value of the off-diagonal elements =     0.634
```

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```
. xtcd2 pov
Testing for weak cross-sectional dependence (CSD)
  H0: weak cross-section dependence
  H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw        CDw+        CD*
-------------+----------------------------------------------------------------
pov          |  34.03      -2.10      370.63       -1.04
             | (0.000)    (0.036)     (0.000)     (0.298)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

. xtcd2 st
Testing for weak cross-sectional dependence (CSD)
  H0: weak cross-section dependence
  H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw        CDw+        CD*
-------------+----------------------------------------------------------------
st           |   4.75      -0.68      235.99       -0.89
             | (0.000)    (0.498)     (0.000)     (0.375)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

. xtcd2 uemp
Testing for weak cross-sectional dependence (CSD)
  H0: weak cross-section dependence
  H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw        CDw+        CD*
-------------+----------------------------------------------------------------
uemp         |   0.56      -0.88      194.81        0.01
             | (0.576)    (0.378)     (0.000)     (0.994)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
```

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```
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

. xtcd2 gov
Testing for weak cross-sectional dependence (CSD)
   H0: weak cross-section dependence
   H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw         CDw+        CD*
-------------+----------------------------------------------------------------
gov          |   -0.03      -0.70       172.51      -1.88
             |  (0.977)    (0.481)     (0.000)     (0.061)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

. xtcd2 ipc
Testing for weak cross-sectional dependence (CSD)
   H0: weak cross-section dependence
   H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw         CDw+        CD*
-------------+----------------------------------------------------------------
ipc          |    6.24      -0.09       90.68       -0.62
             |  (0.000)    (0.929)     (0.000)     (0.534)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

. xtcd2 ineq
Testing for weak cross-sectional dependence (CSD)
   H0: weak cross-section dependence
   H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw         CDw+        CD*
-------------+----------------------------------------------------------------
ineq         |    9.30       1.61       203.71      -0.62
             |  (0.000)    (0.108)     (0.000)     (0.534)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
```

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```
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

. xtcd2 edu
Testing for weak cross-sectional dependence (CSD)
   H0: weak cross-section dependence
   H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw         CDw+        CD*
-------------+----------------------------------------------------------------
edu          |   -0.74       0.98       192.45       -0.29
             |  (0.459)    (0.329)     (0.000)     (0.775)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

.  xtcd2 inv
Testing for weak cross-sectional dependence (CSD)
   H0: weak cross-section dependence
   H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw         CDw+        CD*
-------------+----------------------------------------------------------------
inv          |    1.34      -1.11       162.08       0.02
             |  (0.180)    (0.268)     (0.000)     (0.987)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
  CDw+:     CDw with power enhancement from Fan et al. (2015)
  CD*:      Pesaran, Xie (2021) with 4 PC(s)

.  xtcd2 hlt
Testing for weak cross-sectional dependence (CSD)
   H0: weak cross-section dependence
   H1: strong cross-section dependence
------------------------------------------------------------------------------
             |   CD         CDw         CDw+        CD*
-------------+----------------------------------------------------------------
hlt          |   43.79      -2.97       476.72       0.60
             |  (0.000)    (0.003)     (0.000)     (0.548)
------------------------------------------------------------------------------
p-values in parenthesis.
References
  CD:       Pesaran (2015, 2021)
  CDw:      Juodis, Reese (2021)
```

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CDw+: CDw with power enhancement from Fan et al. (2015)
CD*: Pesaran, Xie (2021) with 4 PC(s)

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Objective One

Dependent Variable: ST
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/01/25 Time: 16:26
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 2
Total panel (balanced) observations: 32
Panel method: Pooled estimation
Coefficient covariance computed using default method
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)
Warning: one more more cross-sections have been dropped due to estimation errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	-0.047114	0.019649	-2.397816	0.0375
UEMP	2.141186	0.783919	2.731387	0.0211
GOV	2.795781	1.675574	1.668551	0.1262
IPC	-0.277175	0.067245	-4.121893	0.0021
INEQ	0.130212	0.046619	2.793140	0.0190
EDU	0.023315	0.019443	1.199122	0.2581

R-squared	0.551057	Mean dependent var	8.562500
Adjusted R-squared	0.476586	S.D. dependent var	0.617387
S.E. of regression	0.910847	Sum squared resid	8.296420
Long-run variance	0.138679		

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Dependent Variable: ST
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/01/25 Time: 16:18
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 5
Total panel (balanced) observations: 80
Panel method: Pooled estimation
Coefficient covariance computed using default method
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	-0.027032	0.008091	-3.341021	0.0013
UEMP	0.044428	0.058287	0.762221	0.4484
GOV	-4.035232	0.179839	-22.43807	0.0000
IPC	0.029176	0.021301	1.369721	0.1749
INEQ	0.142785	0.016590	8.606662	0.0000
EDU	-0.014480	0.004673	-3.098659	0.0027

R-squared	0.883230	Mean dependent var	6.108750
Adjusted R-squared	0.875340	S.D. dependent var	1.955725
S.E. of regression	0.690512	Sum squared resid	35.28367
Long-run variance	0.660808		

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Dependent Variable: ST
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/01/25 Time: 16:17
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 9
Total panel (balanced) observations: 144
Panel method: Pooled estimation
Coefficient covariance computed using default method
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.008445	0.008270	1.021146	0.3090
UEMP	0.090062	0.051209	1.758718	0.0808
GOV	-3.174519	0.258821	-12.26531	0.0000
IPC	0.141818	0.046405	3.056079	0.0027
INEQ	0.104812	0.027221	3.850363	0.0002
EDU	-0.001028	0.007323	-0.140434	0.8885

R-squared	0.524256	Mean dependent var	7.453472
Adjusted R-squared	0.507019	S.D. dependent var	1.280675
S.E. of regression	0.899195	Sum squared resid	111.5801
Long-run variance	1.687495		

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Dependent Variable: ST
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/01/25 Time: 16:38
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 15
Total panel (balanced) observations: 240
Panel method: Pooled estimation
Cointegrating equation deterministics: C
Coefficient covariance computed using default method
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)
Warning: one more more cross-sections have been dropped due to estimation errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.001758	0.004788	0.367074	0.7139
UEMP	-0.097092	0.053580	-1.812096	0.0713
IPC	0.015468	0.014466	1.069261	0.2861
GOV	-1.862929	0.236371	-7.881385	0.0000
INEQ	0.051573	0.018933	2.723981	0.0070
EDU	-0.014598	0.006618	-2.205688	0.0285

R-squared	0.916892	Mean dependent var	7.079167
Adjusted R-squared	0.908887	S.D. dependent var	1.678234
S.E. of regression	0.506575	Sum squared resid	55.94273
Long-run variance	0.457112		

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Objective 2

Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 09:28
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 15
Total panel (balanced) observations: 240
Panel method: Weighted estimation
Cointegrating equation deterministics: C @TREND
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)
Warning: one more more cross-sections have been dropped due to estimation errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.142911	0.068954	2.072572	0.0395
INV	0.011971	0.077096	0.155279	0.8768
EDU	0.085639	0.066810	1.281828	0.2014
HLT	2.057932	0.073003	28.18967	0.0000
INEQ	-0.047419	0.064492	-0.735278	0.4630
GOV	3.964495	0.071556	55.40388	0.0000

R-squared	0.146086	Mean dependent var	1.844996
Adjusted R-squared	-0.010324	S.D. dependent var	3.363363
S.E. of regression	3.380681	Sum squared resid	2308.658
Long-run variance	6.090133		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 09:30
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 5
Total panel (balanced) observations: 80
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.383048	0.115125	3.327247	0.0014
INV	0.228563	0.103455	2.209306	0.0305
EDU	0.129422	0.064554	2.004852	0.0489
HLT	-0.055444	0.029831	-1.858592	0.0674
INEQ	-0.430442	0.038244	-11.25512	0.0000
GOV	4.136229	0.059766	69.20695	0.0000

R-squared	-0.049826	Mean dependent var	1.747677
Adjusted R-squared	-0.201975	S.D. dependent var	4.717352
S.E. of regression	5.171850	Sum squared resid	1845.614
Long-run variance	13.89885		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 12:41
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 2
Total panel (balanced) observations: 32
Panel method: Weighted estimation
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)
Warning: one more more cross-sections have been dropped due to estimation errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	-0.285157	0.336847	-0.846546	0.4170
INV	-1.197460	0.630910	-1.897988	0.0869
EDU	0.169778	0.344395	0.492975	0.6327
HLT	-0.260850	0.106483	-2.449677	0.0343
INEQ	0.516162	0.214773	2.403295	0.0371
GOV	2.951959	0.251189	11.75193	0.0000

R-squared	0.167994	Mean dependent var	1.600150
Adjusted R-squared	0.101491	S.D. dependent var	2.379858
S.E. of regression	24.07548	Sum squared resid	5796.285
Long-run variance	2.457915		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 14:36
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 9
Total panel (balanced) observations: 144
Panel method: Grouped estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.628080	1.380179	0.455071	0.6498
INV	0.327116	0.069795	4.686810	0.0000
EDU	-0.130901	0.057407	-2.280213	0.0242
HLT	1.094819	0.362332	3.021593	0.0030
INEQ	-1.320131	3.337145	-0.395587	0.6931
GOV	1.922710	1.386211	1.387025	0.1678

R-squared	0.585105	Mean dependent var	1.926267
Adjusted R-squared	0.349409	S.D. dependent var	2.449455
S.E. of regression	62.45694	Sum squared resid	503212.1
Long-run variance	1.231990		

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Objective 3

Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:17
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 16
Total panel (balanced) observations: 256
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ST	0.388903	0.034471	11.28205	0.0000
INV	0.034108	0.043070	0.791905	0.4292
EDU	-0.070373	0.027985	-2.514648	0.0126
HLT	0.011163	0.012351	0.903827	0.3670
INEQ	0.004347	0.028085	0.154763	0.8771
GOV	1.948030	0.018662	104.3847	0.0000

R-squared	0.041754	Mean dependent var	1.871612
Adjusted R-squared	-0.044242	S.D. dependent var	3.712061
S.E. of regression	3.793287	Sum squared resid	3367.032
Long-run variance	5.978129		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:18
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 2
Total panel (balanced) observations: 32
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ST	-1.362903	0.161860	-8.420276	0.0000
INV	-0.173505	0.270594	-0.641200	0.5275
EDU	0.963144	0.094506	10.19131	0.0000
HLT	1.658602	0.095131	17.43497	0.0000
INEQ	0.833746	0.212918	3.915802	0.0007
GOV	17.31242	0.224887	76.98264	0.0000

R-squared	-0.128326	Mean dependent var	1.935501
Adjusted R-squared	-0.457421	S.D. dependent var	5.376059
S.E. of regression	6.490176	Sum squared resid	1010.937
Long-run variance	3.969226		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 15:28
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 5
Total panel (balanced) observations: 80
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ST	0.390928	0.078438	4.983895	0.0000
INV	-0.081373	0.111372	-0.730640	0.4675
EDU	0.247647	0.080022	3.094729	0.0028
HLT	-0.643557	0.023127	-27.82733	0.0000
INEQ	-0.101746	0.054069	-1.881774	0.0641
GOV	4.706792	0.069094	68.12177	0.0000

R-squared	-0.022451	Mean dependent var	1.747677
Adjusted R-squared	-0.170632	S.D. dependent var	4.717352
S.E. of regression	5.103973	Sum squared resid	1797.487
Long-run variance	11.93697		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:20
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 9
Total panel (balanced) observations: 144
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ST	0.469186	0.072351	6.484828	0.0000
INV	0.151153	0.053174	2.842622	0.0052
EDU	-0.041004	0.057686	-0.710803	0.4785
HLT	0.242300	0.017771	13.63494	0.0000
INEQ	-0.043561	0.058745	-0.741527	0.4597
GOV	1.700041	0.028807	59.01406	0.0000

R-squared	0.227567	Mean dependent var	1.926267
Adjusted R-squared	0.143737	S.D. dependent var	2.449455
S.E. of regression	2.266591	Sum squared resid	662.7289
Long-run variance	2.360468		

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Objective 4

Present a tabular presentation of the regression outcomes in a column by reporting the coefficients, standard errors, and statistical significance using *** for 1%, ** for 5%, and * for 10% levels respectively.

Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:22
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 15
Total panel (balanced) observations: 240
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)
Warning: one more more cross-sections have been dropped due to estimation errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.081936	0.055315	1.481271	0.1400
ST	0.332402	0.028789	11.54628	0.0000
POV*ST	0.051685	0.040939	1.262500	0.2081
INV	0.088736	0.047023	1.887094	0.0605
EDU	0.061286	0.031754	1.930011	0.0549
HLT	0.260749	0.014641	17.80914	0.0000
INEQ	-0.147389	0.018903	-7.797094	0.0000
GOV	1.825983	0.015689	116.3876	0.0000

R-squared	-2.211435	Mean dependent var	1.844996
Adjusted R-squared	-2.553393	S.D. dependent var	3.363363
S.E. of regression	6.340089	Sum squared resid	8682.494
Long-run variance	5.081771		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:28
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 2
Total panel (balanced) observations: 32
Panel method: Weighted estimation
Cointegrating equation deterministics: C
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)
Warning: one more more cross-section have been dropped due to estimation errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	-2.049159	0.449423	-4.559531	0.0039
ST	-12.34253	0.533465	-23.13656	0.0000
POV*ST	0.002625	0.491344	0.005343	0.9959
INV	-0.023255	0.804836	-0.028894	0.9779
EDU	2.455726	0.536541	4.576962	0.0038
HLT	1.375035	0.243407	5.649116	0.0013
INEQ	1.031238	0.607203	1.698341	0.1404
GOV	17.66158	0.447916	39.43052	0.0000

R-squared	-239.606851	Mean dependent var	1.600150
Adjusted R-squared	-600.517127	S.D. dependent var	2.379858
S.E. of regression	58.36804	Sum squared resid	20440.97
Long-run variance	1.855966		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:29
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 5
Total panel (balanced) observations: 80
Panel method: Weighted estimation
Cointegrating equation deterministics: C @TREND
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	-0.152034	0.140711	-1.080463	0.2841
ST	-2.835846	0.134621	-21.06538	0.0000
POV*ST	0.067523	0.111331	0.606511	0.5464
INV	0.185537	0.139665	1.328450	0.1889
EDU	0.281792	0.139194	2.024446	0.0472
HLT	1.005801	0.132987	7.563145	0.0000
INEQ	-1.066477	0.116254	-9.173691	0.0000
GOV	3.776988	0.145111	26.02824	0.0000

R-squared	0.120448	Mean dependent var	1.747677
Adjusted R-squared	-0.120720	S.D. dependent var	4.717352
S.E. of regression	4.993979	Sum squared resid	1546.269
Long-run variance	10.65324		

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Dependent Variable: IPC
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 09/04/25 Time: 17:31
Sample (adjusted): 2008 2023
Periods included: 16
Cross-sections included: 9
Total panel (balanced) observations: 144
Panel method: Weighted estimation
Cointegrating equation deterministics: C @TREND
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POV	0.179629	0.093964	1.911675	0.0583
ST	0.793023	0.094704	8.373670	0.0000
POV*ST	-0.024513	0.071479	-0.342941	0.7323
INV	0.111465	0.097200	1.146755	0.2538
EDU	0.010521	0.095581	0.110074	0.9125
HLT	1.077368	0.107489	10.02309	0.0000
INEQ	-0.072929	0.092667	-0.787003	0.4329
GOV	0.962328	0.102379	9.399636	0.0000

R-squared	0.261375	Mean dependent var	1.926267
Adjusted R-squared	0.104887	S.D. dependent var	2.449455
S.E. of regression	2.317439	Sum squared resid	633.7219
Long-run variance	1.631733		

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Biodata

A. Personal Data

- Name: Olufunmi Emmanuel FASHINA
- Date and place of birth: 20th September,1963
- State of Origin: Ondo State
- Nationality: Nigerian
- Marital Status: Married
- Permanent Address: 1, Rock of Ages Street, Estate 11, Redemption City, Mowe, Ogun State, Nigeria.
- Telephone: 08051067783
- Email: olufashina@yahoo.com

B. Educational Institutions Attended/ Qualifications (With Dates):

University of Lagos Master Degree (M.Sc.) Economics	1989- 1990
University of Lagos Bachelor of Science (B.Sc.) Economics	1985-1988
Yaba College of Technology	1983-1985
Ekamarun Anglican Grammar School, Ifon	1975-1980
L.A. Primary School, Ifon, Ondo State	1973-1974
Saint Paul Anglican Primary School, Ifon	1969-1973

C. Work Experience:

Ekamarun Anglican Grammar School, Ifon, Ondo State

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Designation: Auxiliary Teacher, 1980-1982

Yaba College of Technology, Yaba, Lagos State

Designation: Asst. Lecturer, 1989 - 1991

Wema Bank PLC, Akure , Ondo State

Designation: Bank Supervisor, June - December 1991-

Union Bank of Nigeria PLC, Lagos

Designation: Bank Officer, 1992 - 1993

Lagos State Polytechnic (Now Lagos State University of Science and Technology)

Designation: Lecturer II, 1998-2001; Lecturer I, 2002-2007; Senior Lecturer, 2008-2012; Principal Lecturer, 2013-2018; Chief Lecturer, 2019-2022; LASUSTECH – Senior Lecturer, 2022-2025

D. Awards and Fellowship: 10th year service award; 20th year service award

E. Membership of Academic Professional Bodies

Member, INEN; 2010

F. Publications:

Thesis/Dissertation

Journal publications

Fashina, O.E. (2023) Effects of poverty and security threats on Nigeria's economic growth. International Journal of Financial Research and management science, August, 2023, Vol. 14, No. 7, ISSN: 2773-1040.

Fashina, O.E, et al (2023) The relationship among poverty, inequality and economic in Nigeria. International Journal of financial research and management science.

Fashina, O.E. (2023) Interest rate liberalization and financial savings in Nigeria. International Journal of social science research and anthropology

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Fashina, O.E. (2022) Kleptocracy and National insecurity: Effects on Nigeria's economic growth and development. Journal of Economic Growth & Transformation. Vol.3 No.3, 2022. ISSN: 2250-9283

Fashina, O.E & Akpokhio Daniel (2018) Economic growth and transformation in Nigeria: From the pre-colonial to post-colonial eras. Journal of Economic Growth & Transformation. Vol.3 No.1, 2018. ISSN: 2250-9283

Fashina,O.E. (2017) The effects of corruption and general insecurity on Nigeria's socio-economic development Journal of Economic Growth & Transformation Vol.2 No.5 October 2017. ISSN: 2250-9283

Fashina, O.E (2017) Tackling unemployment, inequality and poverty in economic recession: a case of Nigerian economy. International Journal of Business and Management Invention (IJBMI). Accepted for publication

Fashina, O.E. (2017) Nigeria's economic woes: The role of war, terrorism and general insecurity. Journal of Economic Growth & Transformation Vol.2 No.5 October 2017. ISSN: 2250-9283

Fashina, O.E, Oguntuase Adeniyi & Otalu John (2016) An assessment of the impact of globalization on economic growth in Africa. Journal of Economic Growth & Transformation Vol. 2 No. 4.October, 2016

Fashina, O.E.(2016) Unlocking Nigeria's potentials: getting out of economic quagmire without oil. Journal of Economic Growth & Transformation ISSN: 2250-9283. Vol. 2 No. 4. October, 2016

Fashina,O.E. (2016) The economic growth process, Foreign Direct Investment and Poverty eradication: A case study of the Nigerian economy. International journal of communication and liberal studies, Vol. 1 (1), August, 2016. Accepted for publication.

Fashina, O.E, Bernard,O.A, & Adenuga Oludare (2013) Impact of economic reforms on the performance of the manufacturing sector of Nigeria in Journal of Economic Growth & Transformation Vol.1 No. 3. october, 2013 ISSN: 2250-9283

Fashina, O.E & Olawole A Samson (2013) Improving the quality of tertiary institutions' students/graduates through the implementation of Total Quality Management principles. Journal of Economic Growth & Transformation. Vol. 1 No. 3. 2013. ISSN: 2250-9283

Fashina, O.E (2011) The structure of income, output and employment in Sub-Sahara Africa: Nigerian experience. Journal of Economic Growth & Transformation, Vol.1 No. 2 October, 2011, ISSN: 2250-9283

Fashina,O.E (1988) The impact of increase in the price of bread on its consumption by students: A case study of UNILAG students. Published in University of Lagos Economics (ULECONS) Journal Vol.1 No.3, 1988

Book Publications

Fashina, O.E,.Okunnu,M.A, and Jenrola, O.A. (2012) Managerial Economics, FEF Education Publishers Ltd; Lagos, Nigeria. ISBN978-978-924-851-3

Fashina, O.E (2002) Lectures in Monetary Economics, Fetmang Education Consult Ltd; Lagos, Nigeria. ISBN 978-36439-1-8

Fashina, O.E, et al (2002) Principles and Practice of Economics (Macro Approach), Samuelson Publishers, Lagos, Nigeria, ISBN 978-35124-0-4

Fashina, O.E. (2002) Introductory Econometrics F.E.F Education Publishers, Lagos, Nigeria ISBN 978-36439-1-6

Fashina, O.E. (2000) Foundations of Economic Analysis (Macro theories), F.E.F Education Publishers, Lagos. ISBN 978-044-826-6

Fashina, O.E. (2000) Foundations of Economic Analysis (Micro theories), F.E.F Education Publishers, Lagos. ISBN 978-028-726-4

Fashina, O.E (2000) Foundations of Economics (Micro & Macro Theories), Fetmang Education Consult Ltd; Lagos, Nigeria. ISBN 978-044-826-8

Book of proceedings

Fashina, O.E.(2012) Nigeria's economic growth process, foreign direct investment and poverty eradication. Paper published in the book of proceedings of the school of management and business studies (SM&BS) International conference on 10th September 2012.

Thesis/Dissertation

Fashina, O.E. (1990) Debt Capacity and Nigerian Economy: An Econometric Analysis (M.Sc Thesis), 1990

Fashina, O.E. (1988) Import Demand Model: An Econometric and Statistical Analysis of Nigeria|'s import Demand (1970-1985), 1988

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DECEMBER, 2025

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University Compliance Certification

This is to certify that this Thesis written by Olufunmi Emmanuel FASHINA with Matriculation No. LCU/PG/002938 in the Department of Economics and Development studies of the Faculty of Management and Social Sciences, Lead City University, Ibadan is in full compliance with the approved University format and style.

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