Czech University of Life Sciences Prague

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Master's Thesis

The Impact of Education On Poverty in West Africa with a Specific Focus on Nigeria

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Thesis title

The Impact of Education On Poverty in West Africa with a Specific Focus on Nigeria

Objectives of thesis

The research delves into the relationship between education and poverty within the ECOWAS region, with a specific emphasis on Nigeria. Poverty remains a significant challenge in Nigeria, often linked to factors such as inadequate education, unemployment, and underemployment. Poverty encompasses more than just financial deprivation; it includes barriers like limited access to education, food insecurity, and social marginalization. Recognizing these complexities, the study aims to analyze the factors affecting education and poverty in Nigeria within the broader context of the ECOWAS region. By exploring these dynamics, the research seeks to provide insights that can inform effective policies and interventions aimed at reducing poverty through enhanced educational opportunities.

Methodology

Through quantitative methods and statistical analysis, the methodology aims to uncover insights into the factors influencing poverty levels and educational outcomes. This

comprehensive approach ensures a rigorous examination of the research questions, contributing to a nuanced understanding of socio-economic dynamics in West Africa.

The proposed extent of the thesis
60 -- 80 pages

Keywords
Education, poverty, West Africa, Nigeria, socio-economic indicators, correlation analysis, regression analysis, policy implications, economic development, social progress

Recommended Information sources
Adeosun, O. T. and Owolabi, K. E. (2021). *Gender inequality: determinants and outcomes in Nigeria. Journal of Business and Socio-economic Development ISSN: 2635-1374.*

Olawumi, D. A. (2022). *Education and Economic Growth in the Economic Community of West African States (ECOWAS). DOI:https://doi.org/10.22610/jevr.v13i1(V).3247*

Isaac Appiah-Otoo et al, (2022). *Financial development, institutional improvement, poverty reduction: The multiple challenges in West Africa. Journal of Policy Modeling. Volume 44, Issue 6, November–December 2022, Pages 1296-1312*

Muftahu, M. (2021). *The Development of Private Higher Education in Nigeria: A Comparative Analysis between Northern and Southern Region, International Journal of Higher Education, v10 n3 p178-186 2021. ISSN: ISSN-1927-6044*

Usio, U. T. and Victoria, H.I. (2021). *Income Inequality and Poverty in Nigeria: An Empirical Analysis. I OSR Journal of Economics and Finance Volume 11(Issue 3):07-14.*

Declaration

I declare that I have worked on my master's thesis titled "The Impact of Education on poverty in West Africa with a specific focus on Nigeria" by myself, and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 31 March 2024   _____

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The Impact of Education On Poverty in West Africa with a specific focus on Nigeria.

Abstract

This research investigates the relationship between education and poverty in West Africa, specifically focusing on Nigeria. Using a combination of correlation and regression analyses, the study explores how various socio-economic indicators, such as years of schooling, literacy rate, unemployment, GDP per capita, health expenditure, access to sanitation, access to electricity, gender equality rating, and rural population, influence poverty rates in the region.

The findings reveal significant correlations between education and poverty indicators, highlighting the importance of investing in education for poverty alleviation. Moreover, regression analysis demonstrates the impact of education on poverty rates, emphasizing the need for targeted policies and interventions to improve educational outcomes and reduce poverty levels in West Africa. The study's implications for policy and practice underscore the critical role of education in fostering economic development and social progress, with recommendations for future research endeavours.

Keywords: Education, poverty, West Africa, Nigeria, socio-economic indicators, correlation analysis, regression analysis, policy implications, economic development, social progress

Dopad vzdělávání na chudobu v západní Africe se zvláštním zaměřením na Nigérii

Abstrakt

Tento výzkum zkoumá vztah mezi vzděláváním a chudobou v západní Africe se zvláštním zaměřením na Nigérii. Studie pomocí kombinace korelačních a regresních analýz zkoumá, jak různé socioekonomické ukazatele, jako jsou roky školní docházky, míra gramotnosti, nezaměstnanost, HDP na obyvatele, výdaje na zdravotnictví, přístup k hygienickým zařízením, přístup k elektřině, hodnocení rovnosti žen a mužů a venkovská populace, ovlivňují míru chudoby v regionu.

Zjištění odhalují významné korelace mezi vzděláváním a ukazateli chudoby a zdůrazňují význam investic do vzdělávání pro zmírnění chudoby. Regresní analýza navíc prokazuje dopad vzdělávání na míru chudoby a zdůrazňuje potřebu cílených politik a zásahů pro zlepšení výsledků vzdělávání a snížení úrovně chudoby v západní Africe. Důsledky studie pro politiku a praxi podtrhují kritickou úlohu vzdělávání při podpoře hospodářského rozvoje a sociálního pokroku, přičemž jsou uvedena doporučení pro budoucí výzkum.

Klíčová slova: vzdělání, chudoba, západní Afrika, Nigérie, socioekonomické ukazatele, korelační analýza, regresní analýza, politické implikace, ekonomický rozvoj, sociální pokrok

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1 Introduction

Education is a fundamental pillar in the quest for global poverty reduction and sustainable development. In West Africa, a region characterized by diverse socio-economic challenges, the role of education in addressing poverty is particularly significant. This study focuses on Nigeria, the largest economy in West Africa and a vital member of the Economic Community of West African States (ECOWAS), to delve into the intricate relationship between education and poverty within the region.

West Africa encompasses a diverse landscape of nations, each grappling with its unique development challenges. Despite abundant natural resources and human potential, many countries in the region continue to face persistent poverty, inequality, and underdevelopment. Against this backdrop, education emerges as a potent tool for breaking the cycle of poverty and fostering inclusive growth.

As a prominent player in West Africa, Nigeria presents a compelling case study for examining the nexus between education and poverty. Despite its vast resources, Nigeria grapples with high poverty rates, with millions of its citizens living below the poverty line. Access to quality education remains a significant challenge, particularly in rural and marginalized communities, exacerbating socio-economic disparities and impeding national development efforts.

The overarching goal of this master's thesis is to explore and analyze the impact of education on poverty in West Africa, with a specific emphasis on Nigeria. By conducting an in-depth review of existing literature, empirical studies, and policy frameworks, this study seeks to unravel how education influences poverty dynamics within the region. Furthermore, the thesis aims to identify key factors and pathways that mediate the relationship between education and poverty, including access to education, quality of education, skills development, and employment opportunities.

By delving into these intricacies, this study aspires to generate actionable insights for policymakers, researchers, and development practitioners involved in poverty alleviation and human development initiatives in West Africa, with Nigeria as a focal point. Through a nuanced understanding of the role of education in poverty reduction, the study endeavours to contribute to the ongoing discourse on sustainable development and inclusive growth in the region.

Statement of the Problem

Despite efforts to improve education access and quality in Nigeria and West Africa, poverty remains a persistent challenge in the region. The relationship between education and poverty is complex and multifaceted, and understanding the specific impact of education on poverty in Nigeria is crucial for effective policy formulation and intervention strategies.

However, there is a lack of comprehensive research focusing on the direct influence of education on poverty in Nigeria within the broader context of West Africa. Existing studies often provide limited insights into the nuanced dynamics of this relationship, failing to capture the diverse socio-economic factors at play.

Furthermore, disparities in education access and quality exacerbate the poverty situation, particularly for marginalized populations in rural areas and urban slums. The inadequacy of educational infrastructure, limited funding, and socio-cultural barriers further hinder efforts to leverage education as a catalyst for poverty alleviation in Nigeria and the wider West African region.

Therefore, a comprehensive examination of the impact of education on poverty in Nigeria within the West African context is essential to identify effective strategies for addressing poverty and promoting sustainable development in the region. This study aims to fill this gap by providing in-depth insights into the intricate relationship between education and poverty, focusing on Nigeria.

2 Objectives and Methodology

2.1 Research Questions

This research seeks to address the following questions:

- What is the nature and magnitude of the relationship between education and poverty in Nigeria within West Africa?
- How do various dimensions of education, such as access to schooling and literacy rates, contribute to poverty reduction in Nigeria and West Africa?
- What are the patterns and trends related to education and poverty?
- What policy implications can be derived from the findings to enhance the role of education in poverty reduction efforts in Nigeria and West Africa?

2.2 The objective of the thesis

The research aims to determine the **impact of education on poverty in the ECOWAS region with a focus on Nigeria**. Specifically, the research objectives are to

- Determine the nature and magnitude of the relationship between education and poverty in Nigeria within the broader context of West Africa.
- Examine the impact of the various dimensions of education, such as access to schooling and literacy rates, that contribute to poverty reduction in Nigeria and West Africa.
- Establish the patterns and trends related to education and poverty
- Systematically analyze numerical data to identify trends and patterns related to education and poverty.
- Identify policy implications that can be derived from the findings to enhance the role of education in poverty reduction efforts in Nigeria and West Africa.

2.2.1 Significance of the study

The significance of this study lies in its potential to contribute valuable insights into the relationship between education and poverty in Nigeria within the broader context of West Africa. Several key aspects highlight the importance of this research:

By elucidating the impact of education on poverty, this study can inform the design and implementation of evidence-based policies and interventions aimed at poverty reduction in Nigeria and across West Africa. Policymakers can use the findings to prioritize education initiatives with the most significant poverty-alleviating effects.

Understanding the specific pathways through which education influences poverty allows for developing targeted interventions. This study can help identify areas where investments in education can have the most significant impact on poverty reduction, such as improving access to quality education for marginalized communities and enhancing vocational training programs.

Insights from this research can guide resource allocation strategies by governments, non-governmental organizations, and international development partners. It can help allocate resources effectively to education sectors and poverty alleviation programs, ensuring optimal utilization of limited resources to achieve sustainable development goals.

Education is a powerful tool for empowering individuals and communities to break the cycle of poverty. By highlighting the importance of education in poverty reduction, this study can advocate for increased investment in education infrastructure, teacher training, and educational resources, leading to improved educational outcomes and socio-economic empowerment.

This study adds to the academic literature on the relationship between education and poverty, particularly in Nigeria and West Africa. It gives researchers and scholars a deeper understanding of the dynamics and opens avenues for further inquiry into related topics, fostering intellectual discourse and knowledge dissemination.

Overall, the significance of this study extends beyond academic inquiry to real-world implications for policy, practice, and the well-being of individuals and communities affected by poverty in Nigeria and West Africa.

2.2.2   Scope of the study

This study focuses on examining the impact of education on poverty in Nigeria, with a broader scope that includes insights from other West African countries. The analysis encompasses various dimensions of education, including years of schooling, literacy rate, access to education facilities, and gender equality. Additionally, the study explores multiple poverty indicators, such as income levels, access to basic services, and socio-economic disparities.

The study's scope extends to quantitative and qualitative analyses, incorporating statistical methods to assess correlations and regression models to evaluate the relationship between education and poverty. Furthermore, the study considers socio-cultural, economic, and political factors influencing education and poverty dynamics in the region.

2.2.3   Limitations of the study

Despite its comprehensive scope, this study has several limitations that should be acknowledged:

The study relies on secondary data from sources such as World Development Indicators, which may have limitations regarding coverage, reliability, and timeliness. Incomplete or inaccurate data could potentially affect the validity of the findings.

While the study focuses on Nigeria and West Africa, the findings may not fully generalise to other regions or countries with different socio-economic contexts, educational systems, and poverty dynamics. Care should be taken when extrapolating the results to other settings.

The study primarily examines correlations between education and poverty indicators, but establishing causality is challenging due to the complex interplay of various factors influencing education and poverty. The findings should be interpreted cautiously, avoiding deterministic conclusions about the causal relationship.

The study may not fully capture the nuances of local contexts, including cultural norms, historical legacies, and institutional frameworks, which can significantly influence education outcomes and poverty dynamics. A deeper understanding of these contextual factors requires qualitative research methods, which are beyond the scope of this study.

The analysis is based on data available up to a certain point, limiting the ability to capture dynamic changes and trends in education and poverty indicators. Longitudinal studies could provide deeper insights into the temporal dynamics of the relationship but are not feasible within the scope of this study.

Despite these limitations, this study aims to provide valuable insights into the relationship between education and poverty in Nigeria and West Africa, contributing to the existing literature and informing policy and practice in the region.

2.2.4   Definition of terms

Education: The process of acquiring knowledge, skills, values, and attitudes through formal schooling, informal learning, or experiential activities. In this study, education encompasses formal education provided by schools and informal education obtained through various channels.

Poverty: The lack of sufficient material resources or income to meet basic human needs, such as food, shelter, clothing, and healthcare. Poverty can manifest in different forms, including income poverty, multidimensional poverty, and extreme poverty, and is often measured using various indicators such as income levels, access to basic services, and living standards.

Poverty Rate: This variable indicates the percentage of the population living below the poverty line, serving as a primary measure of economic hardship.

Years of Schooling: The total number of years an individual spends in formal education, from primary school to higher education or vocational training. It serves as a proxy for educational attainment and reflects the quantity of education individuals receive.

Literacy Rate: The percentage of the population aged 15 and above who can read and write a simple sentence in any language. The literacy rate is a key indicator of educational achievement and is often used to assess the overall level of education within a population.

Unemployment: The condition of being without a job or gainful employment, typically measured as the percentage of the labour force actively seeking employment but unable to find work. Various factors, including economic conditions, labour market dynamics, and government policies, influence unemployment.

GDP Per Capita: Gross Domestic Product (GDP) per capita measures a country or region's average economic output per person. It is calculated by dividing the total GDP of a country by its population and serves as an indicator of economic development and living standards.

Health Expenditure: The total amount spent on healthcare goods and services within a country or region, including public and private expenditures. Health expenditure reflects the level of investment in healthcare infrastructure, services, and resources and can influence health outcomes and overall well-being.

Access to Sanitation: The proportion of the population with access to improved sanitation facilities, such as flush toilets, ventilated improved pit latrines, or composting

toilets. Access to sanitation is essential for public health and hygiene and is closely linked to indicators of socio-economic development.

Access to Electricity: The percentage of the population with access to electricity for household use, including lighting, cooking, and powering appliances. Access to electricity is a critical infrastructure indicator that affects living standards, economic productivity, and quality of life.

Gender Equality Rating: A measure of the degree of gender equality within a country, typically assessed based on various indicators of women's empowerment, access to education, economic participation, and political representation. Gender equality ratings provide insights into gender disparities and inequalities and inform policy efforts to promote gender equity.

Rural Population: The percentage of the total population residing in rural areas, typically defined as areas outside urban centres. Rural population is an essential demographic indicator that reflects settlement patterns, economic activities, and access to services and infrastructure in rural areas.

2.3   Research methodology

This study's research design and methodology section plays a pivotal role in guiding the investigation into the impact of education on poverty in West Africa, with a specific focus on Nigeria. This section provides a roadmap for systematically exploring the complex relationship between education and poverty within the context of the Economic Community of West African States (ECOWAS). The following subsections present a concise yet comprehensive introduction to the chosen research design and methodology.

In navigating the intricate dynamics of education and poverty in West Africa, this research design and methodology section serves as the foundation for the study. It outlines the strategies, tools, and rationale guiding the exploration of the chosen research questions. The following components shed light on the systematic approach employed to uncover insights into the impact of education on poverty, particularly with a nuanced focus on Nigeria.

Quantitative research methods are selected as the basis for this study due to their suitability for systematically analyzing numerical data. This approach allows for a rigorous examination of the statistical relationships between education and poverty by leveraging surveys and statistical analyses. Quantitative methods offer a structured and objective

framework, enabling the generation of numerical insights that contribute to a nuanced understanding of the multifaceted issues surrounding education and poverty in West Africa. It is essential to focus on Nigeria within the broader ECOWAS context.

Nigeria, the largest and most populous country within the ECOWAS region, is a focal point in this study. The decision to centre the research on Nigeria is grounded in the country's economic significance, diversity, and influential role within the regional context. By narrowing the focus to Nigeria, the study aims to provide targeted insights into the specific challenges and opportunities related to education and poverty within the broader West African landscape. Findings from Nigeria can potentially offer valuable lessons for the entire ECOWAS region, enhancing the relevance and impact of the study on regional development.

In the subsequent sections, the research design and methodology will be expounded upon, detailing the chosen quantitative methods, data collection strategies, and ethical considerations that collectively contribute to a comprehensive exploration of the impact of education on poverty in West Africa, with Nigeria at its forefront.

2.3.1 Research design: Quantitative Approach

Quantitative research methods serve as the chosen framework for this study, providing a structured and systematic approach to explore the intricate relationship between education and poverty in West Africa, with a specific focus on Nigeria.

The selection of a quantitative research approach is rooted in the need for systematic and objective analysis of numerical data. This approach allows for quantifying variables related to education and poverty, facilitating a rigorous and replicable investigation. This approach aims to provide concrete, numerical insights into the impact of education on poverty in the West African context.

The primary objectives of the quantitative research are as follows:

- **Measure Impact:** Quantify the impact of education on poverty rates in West Africa, with a particular emphasis on Nigeria.

- **Identify Trends:** Systematically analyze numerical data to identify trends and patterns related to education and poverty.

- **Establish Correlations:** Explore statistical relationships between educational indicators and poverty rates to determine the strength and direction of their associations.

Quantitative methods are deemed suitable for examining the impact of education on poverty due to several key factors:

- **Precision**: Quantitative methods allow for precise measurement and quantification of variables, ensuring high accuracy in the analysis.
- **Generalizability**: Findings from quantitative research can be generalized to a larger population, providing insights beyond the sampled individuals or households.
- **Replicability**: The systematic nature of quantitative research enhances the study's replicability, allowing other researchers to conduct similar investigations with consistent methodologies.
- **Statistical Power:** Using statistical tests and analyses increases the study's statistical power, enabling researchers to draw robust conclusions from the data.   - Discussion on the relevance of statistical analysis for uncovering trends and patterns.

Statistical analysis is crucial in uncovering trends and patterns within the numerical data collected. By employing statistical methods such as correlation analysis, regression analysis, and descriptive statistics, this study aims to reveal quantitative relationships and dependencies between education and poverty. Statistical analysis enhances the interpretability of the data, providing a foundation for evidence-based conclusions and policy recommendations.

In the subsequent sections, the application of quantitative methods and the use of statistical tools for analysis will be expounded upon, offering a detailed insight into the quantitative research design employed to investigate the impact of education on poverty in West Africa, focusing on Nigeria.

2.3.1   Data collection methods

The research will rely on quantitative data obtained from various reliable secondary sources, ensuring a comprehensive and objective analysis of the impact of education on poverty in West Africa, with a specific focus on Nigeria. The chosen data sources are diverse and cover key economic, educational, and poverty-related indicators.

Economic Outlook Data

Source: Open Data for Africa - Economic Outlook

Description: This source serves as a rich reservoir of economic outlook data, providing valuable insights into crucial economic indicators. The data extracted from this source will contribute significantly to comprehending the economic context in Nigeria.

World Inequality Database:

Source: WID World

Description: Access to the World Inequality Database is pivotal for focusing on income and wealth disparities. The data retrieved from this source enriches the study's depth, providing a nuanced understanding of poverty from the perspective of economic inequality.

World Bank's World Development Indicators:

Source: World Bank Data - World Development Indicators

Description: The World Development Indicators, hosted by the World Bank, provide extensive economic and social data collection. Utilizing this source enables a comprehensive analysis of diverse factors influencing both poverty and education in the region.

The study will encompass key economic indicators, education statistics, and poverty metrics. These variables include, but are not limited to, GDP, literacy rates, school enrolment rates, employment rates, income distribution, and poverty rates.

2.3.2 Data analysis technique

Descriptive statistics offer a preliminary understanding of the dataset by summarizing its key characteristics. Various measures will be employed to elucidate central tendency and distribution.

Calculating the arithmetic mean provides a measure of central tendency, representing the average value of a variable. For instance, computing the mean poverty rate across West African countries, mainly focusing on Nigeria, offers insights into the average extent of poverty.

The median measures central tendency less affected by extreme values than the mean. It represents the middle value of a dataset when arranged in ascending or descending order. Determining the median years of schooling or literacy rate can provide a robust understanding of educational attainment within the population.

Assessing the standard deviation offers insights into the dispersion or variability of the data around the mean. A higher standard deviation indicates more significant variability, whereas a lower standard deviation suggests more consistency. Calculating the standard deviation of GDP per capita or health expenditure reveals the extent of variation in economic indicators across West African countries.

Constructing bar charts facilitates the visual comparison of categorical data. For example, plotting bar charts depicting access to sanitation or access to electricity across different West African countries allows for easy comparison of these indicators.

Utilizing scatter diagrams enables the visualization of relationships between two continuous variables. Creating scatter diagrams to explore the relationship between GDP per capita and poverty rates or between years of schooling and literacy rates helps identify potential correlations and trends within the dataset.

Calculating correlation coefficients like Pearson's assesses the strength and direction of linear relationships between variables. Conducting correlation analysis between education indicators (e.g., years of schooling, literacy rate) and poverty rates elucidates potential associations between these variables.

Regression Analysis: Implementing the least square method involves fitting a regression line to the data points to model the relationship between an independent variable (e.g., education indicators) and a dependent variable (e.g., poverty rates). Employing regression analysis aids in quantifying the impact of education on poverty levels and identifying significant predictors.

Hypothesis Testing: Utilizing the t-statistic and associated probability values facilitates hypothesis testing to ascertain the significance of observed relationships. Conducting hypothesis tests using the t-statistic helps determine whether observed correlations between education and poverty indicators are statistically significant or occurred by chance.

These comprehensive data analysis techniques will be systematically applied to the dataset to uncover patterns, relationships, and trends regarding the impact of education on poverty in West Africa, with a specific emphasis on Nigeria. The insights derived from these analyses will inform the conclusions and recommendations of the study.

2.3.3 Limitation of the Methodology

There is a need to recognize potential limitations in data availability or accuracy. Despite utilizing reputable sources such as the World Bank and International Organizations, there may be constraints in the comprehensiveness or timeliness of the data. Additionally, data from specific regions or variables may be lacking, limiting the scope of analysis.

To address data limitations, efforts will be made to cross-reference information from multiple sources to validate findings. Sensitivity analysis may also be conducted to assess

the robustness of results under varying assumptions or data scenarios. Furthermore, transparent reporting of data sources and limitations will enhance the credibility and reliability of the study.

The quantitative approach adopted in this study allows for a systematic examination of the relationship between education and poverty, offering valuable insights for policymakers, researchers, and development practitioners. By employing robust methodologies and acknowledging potential limitations, this research aims to contribute to understanding the region's socio-economic dynamics.

The subsequent sections of the thesis will delve into the analysis of data collected, presenting findings, discussing implications, and providing recommendations for future research and policy interventions. The insights from this study aim to inform evidence-based decision-making and facilitate efforts towards poverty alleviation and sustainable development in West Africa.

3   Literature Review

3.1   Poverty

The word poverty can have different definitions according to different sources. Here are some definitions of the word Poverty: "Poverty is a state or condition in which a person or community lacks the financial resources and essentials to enjoy a minimum standard of life and well-being that's considered acceptable in society" (INVESTOPEDIA, 2014) "Poverty is measured based on income, but that is often too one-dimensional for such a complex phenomenon. Researchers have developed a better way of defining who falls below the poverty line" (FLORIAN, 2016).

To gain in-depth knowledge about poverty, we must look deeply into society. A beginner can understand poverty as a condition that results in a lack of freedom to choose, arising from a lack of capability to function effectively in society. (Usio, 2019) the income level from employment is so low that basic human needs cannot be met. Poverty-stricken people and families might go without proper housing, clean water, healthy food, and medical attention. Each nation may have its threshold determining what percentage of its people live in poverty. It also simply means a lack of financial resources. The lack of financial resources is divided into two components: absolute poverty and relative poverty.

A violation of human dignity is the denial of choices and chances. It denotes a fundamental inability to contribute effectively to society. It involves not having enough food or clothing to feed or clothe a family, not having access to a school or clinic, not having land to grow food or a job to sustain oneself, and not having access to credit. Individuals, households, and communities face insecurity, powerlessness, and marginalization. (Danaan, 2018) It denotes vulnerability to violence and living in marginal or vulnerable surroundings with limited access to clean water and sanitation.

Poverty is authentic in Nigeria, and the ordinary Nigerian citizen's quality of life has steadily declined over the last ten years. Statistics show how precarious life has become for the typical Nigerian citizen in the face of suffocating levels of poverty throughout the years. (Anyanwu, 2014) Hunger and malnutrition, ill health, little or no access to education and other essential services, increased morbidity and mortality from sickness, homelessness and inadequate housing, dangerous environments, social discrimination, and isolation are all examples of poverty.

Inequality also brings discrimination. A lack of involvement in decision-making and civil, social, and cultural life also marks it. There is a sort of poverty known as mental poverty that exists in addition to material poverty. Any mental sickness or deterioration is a form of mental degeneration or deprivation. It is a cliche to argue that mental wealth is the foundation of all wealth. Poverty is a lack or absence of anything needed for any reason or purpose. Disease, illness, and ill-treatment can degrade people by robbing them of their human characteristics, but mental impoverishment is the most effective single dehumanizing factor. It stifles the growth and development of any valuable aptitude, quality, skill, or knowledge (Idehem, 2019).

Absolute poverty can be defined as a situation in which people do not have enough financial resources, which prevents them from maintaining their minimum standard of living. It is when household income is below a particular level, making it impossible for the person or family to satisfy basic life needs, including food, shelter, safe beverage, education, healthcare, etc. In this state of poverty, despite the country growing economically, it does not affect people living below the poverty level. Absolute poverty compares households supported by a group income level, which varies from country to country, counting on its overall economic conditions.

Relative poverty refers to the standard of living compared to economic standards of living within the same environment. Relative poverty is generally seen as partly determined by the society in which a person lives. Relative poverty is sometimes described as "relative deprivation" because the people falling under this category are not living in extreme poverty, but they are not enjoying the same standard of life as everyone else in the country. It can be TV, internet, clean clothes, a secure home (a healthy environment, free from abuse or neglect), or maybe education.

Absolute poverty and relative poverty are relevant for education; for instance, if people lack financial resources, school attendance may be limited among people experiencing poverty in developing countries such as Nigeria, Ghana, Cameroon, and others. (Danaan, 2018) Education to give a route out of poverty requires particular intervention. In many countries that have experienced economic growth in recent years, it shows that the benefits of education have become more critical in getting a good job. This can open up many opportunities and possibilities for upwards-social mobility for parents and children to invent their time and effort in education. (Edokpolor, 2017). These two types of poverty are mainly

focused on income and consumption. However, sometimes poverty involves economics, society, and politics.

### 3.1.1 Poverty in Northern and Southern Nigeria

When the word "poor" is uttered in Nigeria, everyone's thoughts immediately turn to the northern section of the country, where illiteracy and child poverty are rampant. (Gabriel, (2019) The National Bureau of Statistics (NBS) has issued the Nigerian Poverty Profile 2010, a harmonized living standard assessment for 2009/10. The World Bank, the United Kingdom Department for International Development (DFIDUK), and UNICEF collaborated on the poll. The northern states of Nigeria fared poorly in this domestic report, accounting for many Nigerians living in poverty. Regarding geopolitics, the North West has 77.7% of its population living in relative poverty, whereas the North East has 76.3 percent of its inhabitants live in relative poverty.

The North Central States has 67.5 percent of its population living in relative poverty. Catherin (2014) Stated that the northern section of Nigeria is still one of the poorest in the country and that more significant direct investment and opportunity for those in the north are needed. He further stated that poverty in the country is still on the increase. Corruption and unequal distribution of the country's oil resources have resulted in poverty in Nigeria. Nigeria is Africa's largest oil producer, producing over two million barrels of crude oil daily, yet corruption has kept many ordinary Nigerians out of the country's wealth. (Ogbeide, 2015)

Although the north has a larger population, the level of education among Nigerians northern people is significantly lower than that of the country's southern residents. He also attributed the economic imbalance between northern and southern Nigeria to colonialism. What the colonial masters did was develop a more economic class in the southern part of the country and a political class in the northern portion of the country that took over the government. This was essentially a fault line formed by colonial governance, which has been exacerbated over time to the point where widespread poverty in the north is chronic, while it is less prevalent in the south. Most Nigerians think that the country's current instability is exacerbated or facilitated by the country's high level of poverty in the north. In response to a question on the terrorist group Boko haram and poverty, He further stated that we will continue to perceive Boko haram as a severe domestic danger to northern Nigerian stability. In the case of Boko haram, we have stated unequivocally that the answer to this problem is both a security and a socioeconomic one. There must be a strong security plan, but a sound

socioeconomic strategy must also be available to handle Northern Nigeria's massive poverty (Figure 1). Both must work together (Zayid, 2013)

Figure 1 Poverty headcount rate in Nigeria as of 2019 by educational level and gender
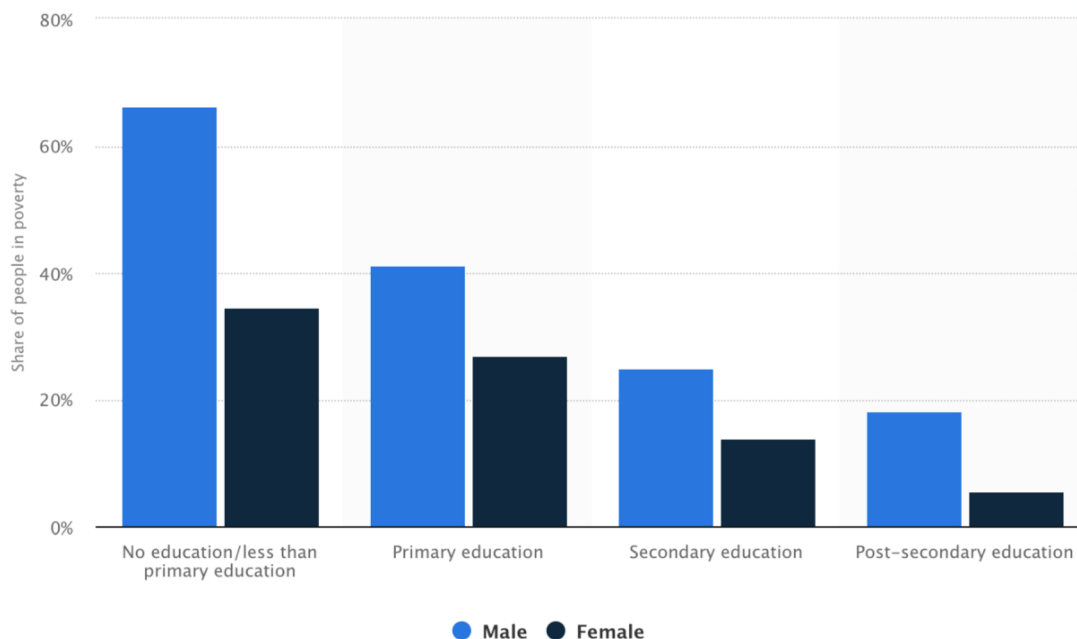
Source: Statista 2021

From figure 1, we can see that as of 2019, the population of Nigeria most affected by poverty was those with no or only a primary education. Households with a male head of home were disproportionately affected. For example, almost 60% of those living in households headed by a man with no or only primary education were poor. A person with a yearly income of less than 149,515 thousand Nigerian Naira (about 215 US dollars) is considered poor by national standards.

3.1.2   Child poverty

Every year, more than 200,000 thousand children die due to poverty, and the majority of these fatalities are preventable. Hunger, malnutrition, and, most importantly, a lack of safe drinking water affect the majority of those children. (Ogwumike, 2018) Poverty is a global issue that is currently one of Nigeria's most pressing concerns.

Children worldwide are affected by poverty in different ways and have distinct needs. A person can be poor as an adult for a short period, but being poor as a child can last a lifetime. This is because it is difficult for a youngster to have a second chance at an education later in life. (Oluwatobi, 2000) Nigeria is one of the most populated countries in the world,

consisting of 211.4 million people with an area of 923,768 km2 (356,669 sq mi). It is also the country with the largest population in Africa and the sixth-largest population globally. Children also make up part of the population (Figure 2).

Figure 2 Nigerian population pyramid
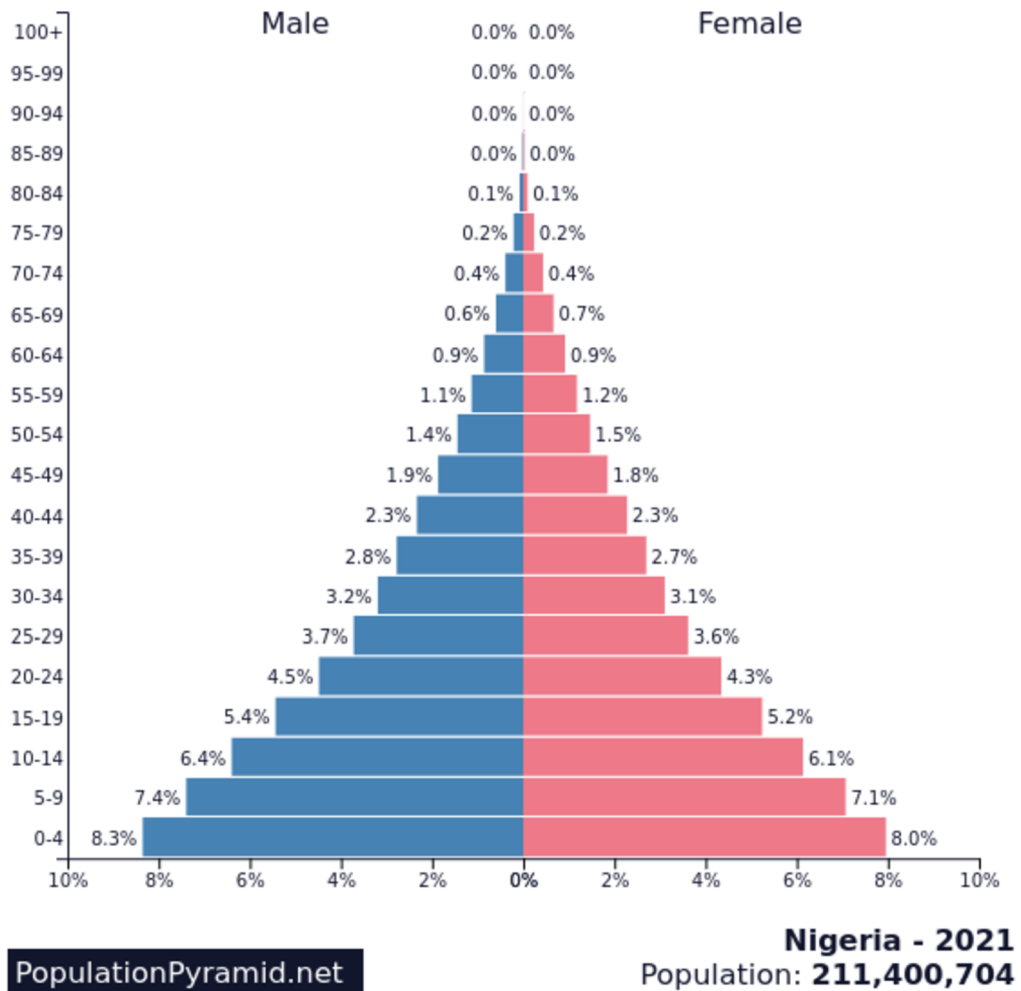
As mentioned earlier, each child has needs, such as nutrition and healthcare services. (Kuku-Shittu, 2016) Also, children have no income except their family to fulfil their needs and gain education. Children from low-income households are more likely to be born prematurely and with low birth weight and acquire illnesses later in life, such as respiratory ailments. Poor teenagers are more prone to experience mental health issues such as personality disorders and depression as adolescents. Furthermore, when compared to all adolescents, those reared in poverty engage in more harmful health-related behaviours, such as smoking and sexual engagement at a young age (EMIG, 2015).

According to EMIG (2015), all children, whether reared in poverty or extreme poverty, are at a higher risk of experiencing several problems, such as a lack of clean water, food, shelter, healthcare, education, information, and sanitation. Many low-income families are not only cash-strapped but also have little to no savings and no access to low-cost borrowing. When faced with a financial shortfall, they are frequently obliged to reduce spending, even on necessities like food and accommodation, and to pay hefty interest rates on loans. As a result, poverty is linked to tangible hardships such as a lack of proper housing and medical care, food insecurity, and other necessities.

Child poverty is one of the worst consequences of Nigeria's poverty challenges. According to a study conducted by (the National Bureau of Statistics (NBS) 2018) using data from the Harmonized Nigeria Living Standard Survey (HNLSS), 33.22 % of children in the country are currently living in extreme poverty, while 70.31% are living in overall child poverty. In Nigeria, child deprivation is defined as a lack of access to education, health, nutrition, water, and sanitation. The bulk of child poverty occurs in rural areas rather than urban areas, similar to the largest concentrations of extreme poverty in Nigeria.

3.1.3   Income inequality and poverty

According to (Carol, 2019), income inequality is "an extreme imbalance in income distribution with a high concentration of income in the hands of a small percentage of the population." When there is income inequality, there is a significant disparity between the wealth of one demographic group and that of another. A range of segmentations, such as occupation, historical income, male vs. female, ethnicity, and geographic location, can be used to examine income inequality and disparity segregations. Income disparity analysis segmentations are utilized to analyze various sorts of income distributions; as a result, income distributions by demographic segmentation serve as the foundation for investigating income inequality and disparity (Resul, 2014)

Nigeria's Gini coefficient, as of 2010, was 0.43, considered medium. Rural poor people, on the other hand, outnumber city poor people. This is linked to unequal access to infrastructure and services. This is due to Nigeria's economic structure, particularly its energy (oil) and agriculture sectors. Oil exports are a significant source of money for the government, accounting for 9% of GDP but employing only a tiny percentage of the workforce. On the other hand, agriculture accounts for about 17% of GDP and employs roughly 30% of the workforce. (Ogindipe, 2019)

The fact that oil revenue is unevenly dispersed among the people, with larger government spending in urban areas than in rural areas, adds to the inconsistency. Personal incomes are becoming even more disparate due to high unemployment rates. Furthermore, oil production has resulted in enormous pollution, which has harmed the agricultural sector even more. In addition, farmer-herder confrontations, revolts in the north-east, and floods have all hindered agriculture expansion (Usio, 2021). Most higher-paying employment in Nigeria is in capital-intensive industries, yet they are scarce and constrained. Law firms, small local enterprises, and governing powers are only found in regions seeking economic development and are particularly capital-intensive.

3.1.4 Health and poverty

Poverty is a significant barrier to good health in every population. Poverty, according to the American Academy of Physicians, is an insidious, self-perpetuating problem that impacts generations of families through a complicated set of mechanisms. Poverty impacts education, learning capacities, disease risks, mortality and morbidity, the capacity to find and hold a job, and preventative health behaviours. Poverty has a catastrophic influence on many aspects of society, one of which is the high rate of maternal and infant mortality.

People who live in poverty, particularly children, tend to have poorer health outcomes than others. Poverty and health are indeed connected. (Thoman, 2008) Poverty is both a cause and a result of bad health. For example, those who live in poverty will have no choice but to put their health and the health of their families at risk simply because they cannot let their families go hungry.

Furthermore, the cost of doctor bills is prohibitively expensive for individuals who live in poverty; even while some hospitals provide free care, they must still pay. For example, they must pay for transportation and registration to see the doctor and buy meals while waiting to enter the hospital. In most hospitals in Nigeria, buying a small present for one's doctor is expected but not mandatory, necessitating additional funds.

This may appear catastrophic to all individuals, but at the very least, they will receive medical attention from the hospital with or without a gift. (Oshewolo, 2011) people, particularly people with low incomes, get infected with a variety of diseases. For example, diarrhoea, malaria, and tuberculosis are common diseases that the impoverished contract. (Ogwumike, 2018) Health is a vital economic advantage for underprivileged individuals in particular. It is crucial to their survival. When a poor or socially vulnerable person becomes

ill or injured, the entire household may become locked in a cycle of lost income and expensive health-care costs.

The implications could include diverting time away from earning an income or schooling to care for the sick; they could even entail the sale of assets necessary for survival. People experiencing poverty are not a single population with a particular financial problem; poverty has numerous characteristics, including shorter lifespan, illiteracy, social marginalization, and a lack of monetary resources to better family situations. Furthermore, these aspects might overlap in unexpected ways, resulting in men and women having differing perspectives on poverty. Oluwatobi, (2017)

Human poverty and economic poverty appear to be linked. For example, some small farm households might sustain reasonable incomes until they become ill and vulnerable due to inadequate access to health facilities caused by great distances, terrible roads, or local service shortages.

3.2   Education

"Education is the only thing that helps us differentiate what is wrong and right. Without education, we cannot do what we want, or we cannot reach our destination. Education helps us in each and every field of our life"

"An educated person is someone who has habits of mind, hand, and heart to adapt to whatever life might throw at him or her" (Stevens, 2010)

"It can be defined as the wise, hopeful and respectful cultivation of learning undertaken in the belief that all should have the chance to share in life" (Smith, 2015)

3.2.1   The importance of education

A proper education is crucial for all people. It facilitates quality learning among people of any age bracket, cast, creed, religion and region. It is the method of achieving knowledge, values, skills, beliefs and moral habits. (Fafunwa, 2018) Education is essential for long-term growth and brings peace and stability to nations. To underline the importance of education within the country, we should organize various international conferences and sponsored conventions that compel signatory governments to prioritize education. Of course, if the country is impoverished, the government cannot offer adequate education for all citizens. Nonetheless, household desire for education has been stifled by poverty.

On top of that, cultural elements are norms that take precedence over education. No individual can capture the externalities of social benefits from education investments. As a result, the government should be financing education in the country. Education is essential for everyone to enhance knowledge, way of living, and social and economic status throughout life. An uneducated community most likely cannot think outside the box because they do not believe in innovation or new technologies. They are always stagnant and engage in fear and argument because they are illiterate and ignorant. (Oluwatobi, 2017) Without education, people cannot do anything, such as read, write, communicate, or behave appropriately. They also would not be able to perform any jobs accurately and safely.

To be educated helps people understand the world and the country they live in, including culture and race. Many people think differently about education; some think it is crucial because it teaches basic survival skills. Some people believe that education is essential to good citizenship because it teaches people how to contribute to their community and country. Some other people also believe that being educated would help them answer big questions in their lives, help them solve problems that they are facing in society and teach them about the world around them.

Education is critical to everyone because it plays a vital role. (Abubakar, 2021) We must be educated to achieve a far better and more peaceful life. It transforms us entirely from inside and out of doors by changing our minds and personalities and improving our confidence. It changes our lives completely because it is constructive. It helps an individual to urge knowledge and improve confidence level during life. It also plays an excellent role in our career and personal growth. It has no limitation; people of any age bracket can get an education anytime. It helps us to work out the good and bad things. Anyone who acquires a good education is seen as one of the great citizens in society. We all want to ascertain that our youngsters are going towards success, which is merely possible through a good and proper education. Every parent tells their kids from childhood about the importance of education in life and the benefits of education to form their mind towards better study in the future. Make kids and youngsters habitual by writing essays, participating in debates and discussions, and engaging in many more skill-enhancing activities within the schools or reception area using such simple essays. (Muftahu, 2021)

3.2.2 Education and development

There is no development without education; one of the best ways to reduce poverty is to develop human capital, especially in education. The imparting and obtaining of knowledge through teaching and learning, particularly at a school or similar institution, is known as education. It can also be seen as the stock of skills, abilities, and other productivity-enhancing traits. (Muftahu, 2021)

Education and development have several roles in every economic growth within the country. Several people have argued on this and some also said that with no education, there is no development because people are mentally poor, for example, they do not know what to do with some of the natural resources they have. Different proofs showed us that the level of people enrolment to school each year corresponds with the country's economic development level. Education is crucial in Nigeria as a developing country because that is the main thing that will eradicate poverty. Education in every sense is one of the basic factors of development. Education brings about productivity and creativity and promotes entrepreneurship. Additionally, it plays a crucial role in securing economic and social progress and improving income distribution. (Oguntimehin, 2017)

Nigeria can only achieve sustainable economic development by investing in human for productive results by ensuring people are educated or at least acquire the basic education. Education improves people's understanding of themselves and the world at large. In Nigeria before the nineteenth century, systematic investment in human capital was not considered important. Expenditures on schooling, on-the-job training, and other similar investment forms were relatively small. This began to vary radically during this century with the appliance of science to the event of the latest goods and more efficient production methods. During this era, women's education was considered unimportant as women would always end up in marriage and became housewives, while men's education was very important. Tracing back the Nigerian education till date, men are mostly seen in Universities more than women. (Oshewolo, 2014)

3.2.3 Education and poverty

There is a relationship between poverty and education, which can be seen in two directions. The first direction is where poor people are often unable to obtain adequate education, and without any education, people are constrained to a life of poverty. However,

before addressing any interrelationship between these two, it is essential to comprehend the meaning of the concepts of poverty and education.

Figure 3 Number of university students in Nigeria as of 2017/2018 and 2018/2019 by gender and course of study
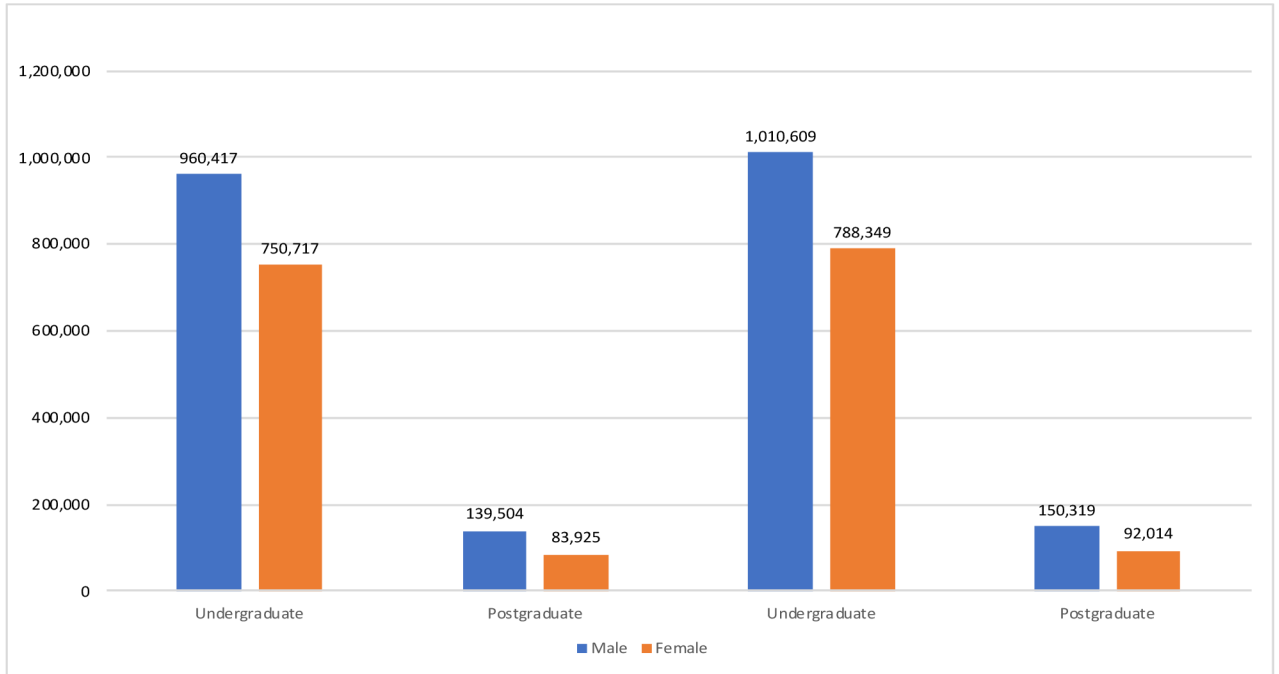
Source: Statista (2021)

Figure 3 shows the gap between male and female Nigerian students, as women's education is considered less important. The graph represents the favouritism of males over women. However, since people understand that education can reshape the future and bring about development, there has been an increase in the number of both genders, as seen in the graph above.

3.2.4   Education and economic growth

Investment in education is fast becoming very significant due to new challenges in the Nigerian environment and, therefore, the discovery of education as an impetus to economic process and development. (Ogunniyi 2018). Some researchers, like Edeme (2018) and Ogunniyi (2018), have explored the concept of human capital investment and tried to empirically trace the linkage between education and the economic process. Edeme (2018) made a disaggregated analysis of government expenditure and economic growth within the country. His result concluded no significant relationship exists between expenditure on education and economic growth. However, they recommended that the government increase

expenditure in the educational sector since it would increase productivity and economic growth in general in the country.

Ogunniyi (2018) researched the implications of educational development on human capital. They concluded that Nigeria is confronted by most of the issues that would limit the capacity of expansion in education to stimulate growth and development, like under-employment, low absorptive capacity, and lack of qualified teachers, regional imbalances, and brain drain. The persistence of many of those problems in spite of the varied policy formulations and responses points to the necessity for a more focused, responsive, functional and qualitative educational system.

Oshewolo (2014) said that education, a crucial component of a country's human capital, boosts individual worker efficiency and aids economies in moving up the value chain beyond manual activities. Human capital has long been regarded as the most distinguishing aspect of the economic system, and new research has objectively demonstrated education's impact on a country's growth. The Nigerian economy would benefit significantly from a rise in government expenditure in the education sector, even though it comes at the expense of a discount on other aspects of investment.

Nowadays in Nigeria, there is a need to build up the human and the capital infrastructure. Doing this can help the country provide indigenous leadership of development. It is very important that the educational sector should contribute to aggregate economic growth by:

- increasing knowledge and skills by creating productive labour force in the country.
- give out opportunity to employ more people in the workforce and the income earning opportunities for everyone and give out supply to help those in need.
- creating more classes of educated leaders to fill vacancies left or vacant positions in governmental service and more.
- providing some type of training to those in need and education that will help promote literacy and provide some basic skills and motivate individuals on the part of diverse segments of population. (COLEY, 2013)

Furthermore, by doing this it would not devalue from the important contributions that is already attached in economy but rather improve it, even if alternative investment in the economy can have a better growth. It will help the country to promote aggregate economic growth. An educated labour is a necessary condition of economic growth that cannot be

contradict. On the contrary, any evaluation of education in the economic development process should always go beyond the analysis of aggregate growth.

No country has ever obtained continuous economic development without investing in human capital. The developed countries have shown big returns to various forms of human capital aggregation at least basic education, research, training, etc.

The dissemination of education is of great importance. Unequal education brings about a negative effect on per capita income within the country. (Idehen, 2018) Moreover, checking for human capital distribution and the use of a proper useful form of restrictions constant with the asset allocation model makes more of a difference in the effects of average education on per capita income. The emphasis on human capital as a driver of economic progress in emerging countries has resulted in an overabundance of concentration on educational attainment. Although developing nations have made significant progress in bridging the educational achievement gap with affluent countries, research has highlighted the relevance of cognitive skills for economic success.

3.2.5 Education and productivity

The tutorial provisions within any given country represent one among the most determinants of the composition and growth of that country's output and exports and constitute a crucial ingredient in a system's capacity to borrow foreign technology effectively. (Popoola, 2019) For instance, education raises the productivity of workers both in rural and urban areas, it facilitates the acquisition of skills and managerial capacity.

In the agricultural sector, education positively affects productivity among farmers using modern technologies but has less impact, as might be expected, among those using traditional methods. Farmers with four years of schooling experience and knowledge in Nigeria were three times more likely to adopt fertilizer and other modern inputs than less educated farmers.

Education may be a vital aspect contributor to technological capability and technical change in any industry. Education alone, in fact, cannot transform an economy; despite the government introducing universal primary education (UPE) and the ongoing universal basic education (UBE), poverty is still on the increase.

The quantity and quality of investment, domestic and foreign, alongside the general policy environment, form the opposite important determinants of economic performance. Yet the extent of human development features a pertaining to these factors too. The quality

of policy-making and investment decisions is bound to be influenced by the education of both policy makers and general executives. Moreover, the volume of domestic and foreign investment will probably be larger when a system's human capital supply is more plentiful. The education and skills of a developing country's labour force influence the nature of its factor endowment and, consequently, its trade composition. Even the most unskilled workers in a modern factory typically need literacy, numeracy, and discipline acquired in primary education. (Idehen, 2018)

3.2.6   Impact of education on quality of life

High quality of life has been the primary goal of every society, whether developed or underdeveloped. Many African countries are known for widespread poverty, inequality, poor health, and low education outcomes (African Development Bank Groups, 2019). Nigeria is one of the African countries with a low quality of life.

Popoola (2019) sees the quality of life as an individual's perception of their position in life in the background of the cultural and value processes in which they reside, similar to their goal's expectations, values, and concerns, including physical health and psychological state of mind. Quality of life is a subjective evaluation rooted in a cultural, social, and environmental context.

Investing in education enhances the quality of labour. This increases the efficiency of labour as one of the factors of production. Quality education provides better opportunities, makes individuals' lives worth living, elevates the chances of being employed, and raises the standard of living. The importance of investment in human capital can be traced down to Adam Smith's Wealth of Nations, in which he stresses the role of human capital in creating economic wealth.

According to Zuhumnan (2018), the quality of life in a society can be measured through the human development index, which measures the average acquirement in key dimensions of human development like long and healthy life, being learned and having an adequate standard of living. Education is important as it measures the quality of life. Education plays a vital role in the present-day industrialized world because society is established on people with a recognisable standard of living and knowledge, enabling them to generate superior solutions to their problems. Education improves life and helps society to grow and develop. This means that education has a useful relationship with quality of life. Adeosun (2021) stated that education and training expand worker productivity, knowledge,

and the value of educated workers. Economic growth in Nigeria has not been transferred to inclusive human capital development. The development witnessed by the Nigerian educational system since the 1970s is not encouraging due to frequent policy changes and a decrease in foreign earnings.

3.2.7 Impact of income on education

There is impressive feedback from improved education to higher income equality, which will probably favour higher growth rates. As education becomes more broadly based, low-income people are better ready to hunt down economic opportunities. (Adeosun, 2021) Education is the base of economic development and societal expansion. Investing in education brings about rise in human capital, increasing productivity and the standard of living. Insufficient investment in this vital sector of the society results in poor output and low level. Any country with a high percentage of their total population uneducated or with a low level of quality education finds it difficult to increase its GDP and improve its living standard. The importance of education cannot be over looked in any economy. On the individual level, education brings about economic opportunities to all people, while on the mass level, education improves labour skills, leading to rise in productivity and overall standard of living.

According to Cesur (2014), most low-income children resume their education after their peers from more wealthy and affluent homes. This is because those children come from a poor homes and need to help their family work and raise money to support family expenses. All these durations of poverty influence a child's educational attainment and social networks. There is also some evidence that graduates with higher or better levels of education face a lower risk of unemployment, but if the country is developed, they are supposed to have better access to new opportunities and high average earnings. Today, poverty is still seen at a high level in Nigeria despite the government's effort to curb it.

For instance, in Nigeria, the income of poverty has fallen dramatically. However, there are many families that are seen only within the poverty line.

Figure 4 Poverty headcount rate in Nigeria as of 2019, by state
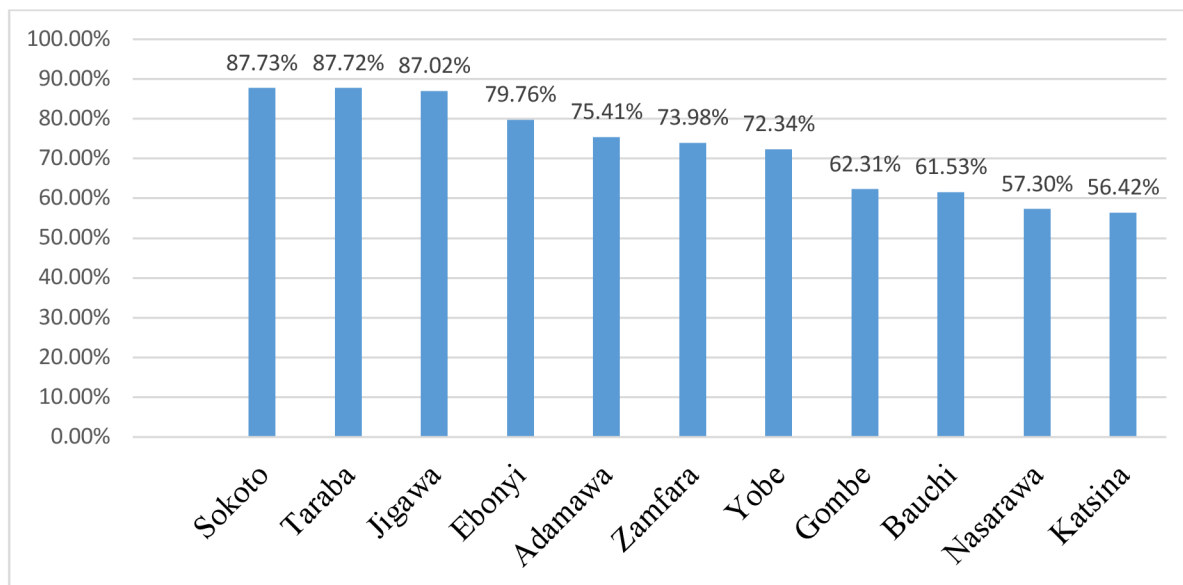
Figure 4 shows that the Nigerian states of Sokoto and Taraba had the most significant percentage of people living below the poverty line. When an individual in Nigeria has an annual income of less than 137.4 thousand Nigerian Naira (about 210 dollars), they are deemed poor. Similarly, a person was considered to be living below the poverty line by Nigerian national standards if they had less than 87.8 thousand Naira (about 130 dollars) available for food each year. In Nigeria, 40.1% of the population was considered to be poor.

3.3   Impact of education on poverty in ECOWAS

Education is widely acknowledged as a fundamental tool for poverty reduction within the Economic Community of West African States (ECOWAS). Comprising 15 member countries in West Africa, ECOWAS was established in 1975 to promote economic integration and development in the region. Various studies have consistently demonstrated the significant impact of education on poverty reduction within this regional bloc (Chikoko & Mthembu, 2021). Research indicates that education's effect on poverty is particularly pronounced in poorer households than wealthier ones. Adequate investment in education is deemed crucial for poverty alleviation in Africa.

Within the context of ECOWAS, where poverty rates are notably high, education emerges as a key instrument for poverty eradication (Osabohien et al., 2019). The region, including countries such as Nigeria, Ghana, Senegal, and others, harbours a substantial portion of the world's poor population and benefits significantly from educational

interventions to reduce poverty (Osabohien et al., 2019). Additionally, the social dimension of inclusive growth in ECOWAS underscores the importance of education in poverty reduction, with GDP per capita exerting a significant adverse effect on poverty (Anu et al., 2022).

Moreover, a study on the impact of agriculture as a stimulant for sustainable development in ECOWAS has highlighted the link between weak social protection, poverty, and the reliance of rural dwellers on agriculture for survival (Matthew Oluwatoyin et al., 2019). This underscores the necessity for comprehensive strategies that integrate education to effectively address poverty in the region.

In conclusion, education emerges as a powerful tool in the fight against poverty in ECOWAS. By investing in education, particularly targeting poorer households, and integrating educational initiatives with poverty reduction strategies, ECOWAS countries can make significant strides towards alleviating poverty and fostering sustainable development in the region.

3.4   The role of government in education and poverty

A democratic society cannot be formed when a substantial number of people are so poor that they are deprived of their right to choose because they lack the means to live a decent life. As a result, poverty alleviation programs are government-sponsored initiatives (federal, state, or local) aimed at eradicating or reducing poverty. Its goal is to avoid duplication of efforts and resources by monitoring, coordinating, and aiding the government in reducing poverty. In Nigeria, the government addresses poverty and education through different direct programs, including the National Poverty Eradication Programme, Operation Feed the Nation, Green Revolution, Better Life for Rural Women, and the Family Economic Advancement Programme. This initiative aims to reduce the poverty percentage in the country while also reducing income disparity. In recent years, inadequate funding, a lack of effective coordination and commitments, bad program design and assessment, operationalization, haphazard, and non-focused, blurred, corrupt, and selfish implementation processes have all failed. However, there has been more improvement since two years ago.

The primary functions of these programmes are to ensure that all activities and programmes of poverty alleviation institutions, agencies, and programmes ensure effective coordination of all poverty reduction efforts in the federal, state, and local government areas throughout the federal federation.

3.5   Theoretical framework

The theoretical framework underpinning the relationship between education and poverty reduction within the Economic Community of West African States (ECOWAS) encompasses several key concepts and perspectives from various disciplines.

Human capital theory posits that investments in education and skills development contribute to the accumulation of human capital, which in turn enhances individual productivity and earnings potential. Within the context of ECOWAS, this theory suggests that increasing access to education can empower individuals to escape poverty by improving their employability and income-earning capacity.

Structural Functionalism emphasizes the role of education in maintaining social order and stability. In the context of ECOWAS, education serves not only as a means for individual economic advancement but also as a mechanism for fostering social cohesion, promoting national development, and reducing inequality within and between member countries.

Social exclusion theory highlights how barriers to education, such as poverty, discrimination, and lack of access to basic services, perpetuate cycles of poverty and marginalization. By addressing these barriers and promoting inclusive education policies, ECOWAS aims to mitigate the effects of social exclusion and facilitate greater socio-economic mobility for marginalized populations.

The **United Nations' Sustainable Development Goals** provide a framework for addressing poverty and promoting inclusive and equitable education. ECOWAS aligns its education and poverty reduction initiatives with SDG 1 (No Poverty) and SDG 4 (Quality Education) to ensure that educational interventions contribute to broader sustainable development objectives in the region.

From a **political economy perspective**, political interests, power dynamics, and economic structures shape education policies and investments. In ECOWAS, efforts to address poverty through education must navigate complex political and economic landscapes, including governance, financing, and resource allocation issues.

The **poverty trap theory** suggests that individuals and households can become trapped in a cycle of poverty due to various structural factors, including limited access to education and employment opportunities. In ECOWAS countries, where poverty rates are high and income inequality is pronounced, this theory highlights the importance of breaking

the cycle of poverty through targeted interventions that address educational disparities and create pathways to economic mobility.

The theoretical framework for understanding the relationship between education and poverty within the Economic Community of West African States (ECOWAS) draws upon various theories and models from economics, sociology, and education. These frameworks provide conceptual lenses through which researchers can analyze and interpret the region's poverty and education dynamics.

3.6   Empirical Review

The empirical review examines existing research studies and findings exploring the relationship between education and poverty in the Economic Community of West African States (ECOWAS) context. This review synthesizes empirical evidence from various studies to provide insights into the impact of education on poverty levels within ECOWAS member countries.

3.6.1   Impact of education on poverty reduction

Numerous studies have demonstrated that education is crucial in reducing poverty levels in ECOWAS countries. For example, research by Chikoko and Mthembu (2021) highlights the significant impact of education on poverty reduction in South Africa, suggesting similar effects may be observed in other ECOWAS nations. This finding is supported by Isaac Appiah-Otoo et al, (2022). who emphasizes the positive correlation between education and human development in Africa, indicating that investments in education can lead to poverty alleviation.

Research conducted by Johnson et al. (2017) examines the role of access to education in alleviating poverty in ECOWAS countries. The study explores how factors such as school enrollment rates, educational infrastructure, and government investment in education influence poverty levels. Findings suggest that increasing access to education, particularly for marginalized populations, is associated with lower poverty rates. The study underscores the importance of targeted interventions to improve educational access and reduce regional poverty.

Another study by Irene (2021) focuses on the impact of vocational training programs on economic empowerment and poverty reduction in ECOWAS member states. The research assesses the effectiveness of vocational education initiatives in equipping individuals with

the skills needed to secure gainful employment and break the cycle of poverty. Results indicate that vocational training programs contribute significantly to poverty reduction by enhancing participants' employability and income-generating capabilities. The study highlights the potential of vocational education as a tool for promoting socioeconomic development and reducing poverty across ECOWAS countries.

3.6.2 Education and Economic Development

The relationship between education and economic development is another key area of focus in empirical research. Studies such as those by Osabohien et al. (2019) and Isaac Appiah-Otoo et al, (2022) have explored the link between education, inclusive growth, and poverty reduction in ECOWAS countries. These studies suggest that investments in education can stimulate economic growth, create employment opportunities, and ultimately reduce poverty levels in the region.

A study by Awolusi, O. D. (2022) investigates the relationship between education and economic growth in ECOWAS countries. The research explores how educational investments impact various aspects of economic development, including productivity, innovation, and human capital formation. Findings suggest that higher levels of education are associated with increased labour productivity, technological advancement, and overall economic growth. The study underscores the importance of education as a catalyst for sustainable development and emphasizes the need for policies that prioritize education to foster long-term economic prosperity in the ECOWAS region.

3.6.3 Social Protection and Poverty Alleviation

Empirical evidence also highlights the importance of social protection programs in addressing poverty in ECOWAS countries. Research by Matthew Oluwatoyin et al. (2019) emphasizes the role of agriculture as a stimulant for sustainable development and poverty reduction in the region. This study underscores the need for comprehensive strategies integrating education with social protection measures to address poverty and effectively promote inclusive development.

In a study conducted by Oyekale (2017), the effectiveness of social protection programs in reducing poverty in ECOWAS countries is examined. The research evaluates the impact of various social protection interventions, such as cash transfers, food assistance, and social insurance, on poverty levels and household welfare. Results indicate that well-

designed social protection programs have the potential to significantly alleviate poverty by providing vulnerable populations with access to essential resources and services. The study highlights the importance of comprehensive social protection strategies in addressing the multidimensional nature of poverty in the ECOWAS region and calls for increased investment in social safety nets to achieve sustainable poverty reduction goals.

Overall, the empirical review underscores the significant impact of education on poverty reduction and economic development in ECOWAS countries. By synthesizing findings from various studies, this review provides valuable insights into the potential of education as a tool for poverty alleviation and sustainable development in the region.

4   Research Analysis and Findings

This section comprehensively examines the mean, median, and standard deviation of variables related to education and poverty in West Africa, with a particular emphasis on Nigeria. The analysis aims to provide insights into these variables' distribution and central tendencies, shedding light on the relationship between education and poverty within the region.

The analysis encompasses a range of key variables, including poverty rate, years of schooling, literacy rate, unemployment, GDP per capita, health expenditure, access to sanitation, access to electricity, gender equality rating, and rural population, to elucidate their impact on poverty in West Africa, with a particular emphasis on Nigeria. These variables collectively provide a comprehensive overview of the socio-economic landscape in West Africa, enabling a nuanced analysis of the interplay between education and poverty. Through rigorous examination, we aim to derive meaningful insights contributing to evidence-based policymaking and development strategies for poverty alleviation and sustainable growth.This table presents the descriptive statistics, including the mean for key variables across the Nigerian and ECOWAS States datasets.

Table 1 Variables

Variable	ECOWAS Mean	Nigerian Mean
Poverty Rate	16.89	30.9
Years of Schooling	6.2	6.9
Literacy Rate	58.79	62.
Unemployment Rate	2.64	5.6
GDP per Capita	$1,618	$2,401
Health Expenditure	196	173
Access to Sanitation	32	44
Access to Electricity	1.63	1.66
Gender Equality Rating	0.49	0.48
Rural Population	63.24	63.13

Source: own calculations based on World Development Indicators

4.1   Analytical part

Nigeria's poverty rate of 30.9% is higher than the ECOWAS average of 16.89%, indicating a significant poverty challenge in Nigeria compared to the region as a whole (figure 5). The highest percentage of population living in poverty is in Niger. Fifty percent of population live in poverty compare to Mauritania and Senegal with the lowest share of population living in poverty.

Figure 5 Povertz headcount ratio

Poverty headcount ratio at $2.15 a day (2017 PPP) (% of population)
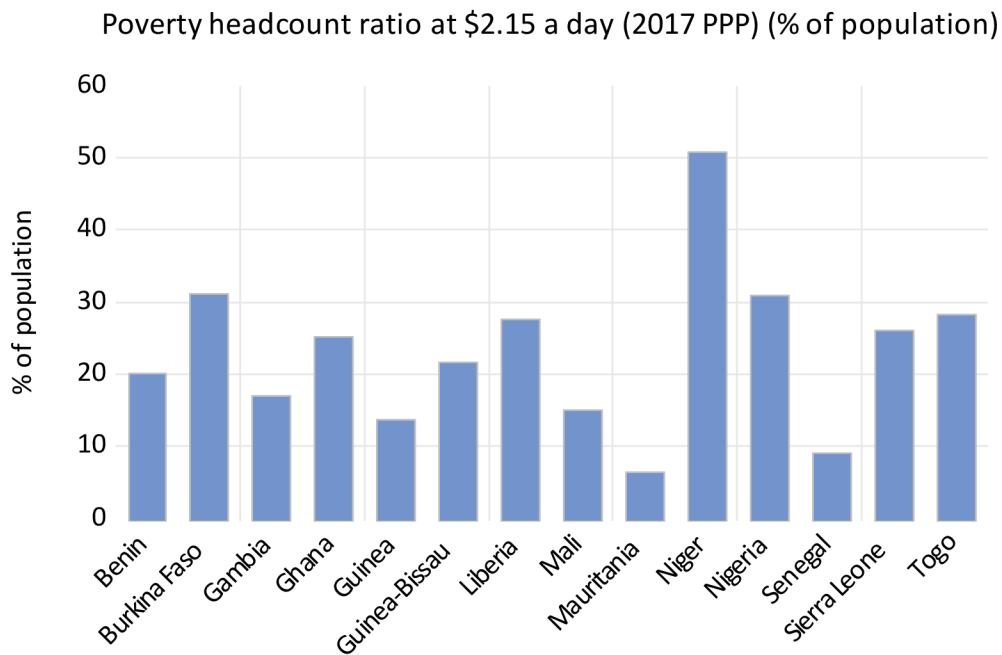
Source: own calculations based on World Development Indicators

Nigeria's average years of schooling (6.92 years) are higher than the ECOWAS average (0.62 years), suggesting a relatively better educational attainment in Nigeria compared to the region (figure 6). The worst situation is in Niger, Guinea and Burkina Faso. Nigeria, along with Ghana, Liberia, and Togo, have the highest years of schooling. The variability in schooling years among the countries indicates differences in educational access and attainment.

Figure 6 Mean years of schooling

Mean years of schooling (ISCED 1 or higher), population 25+ years, both sexes
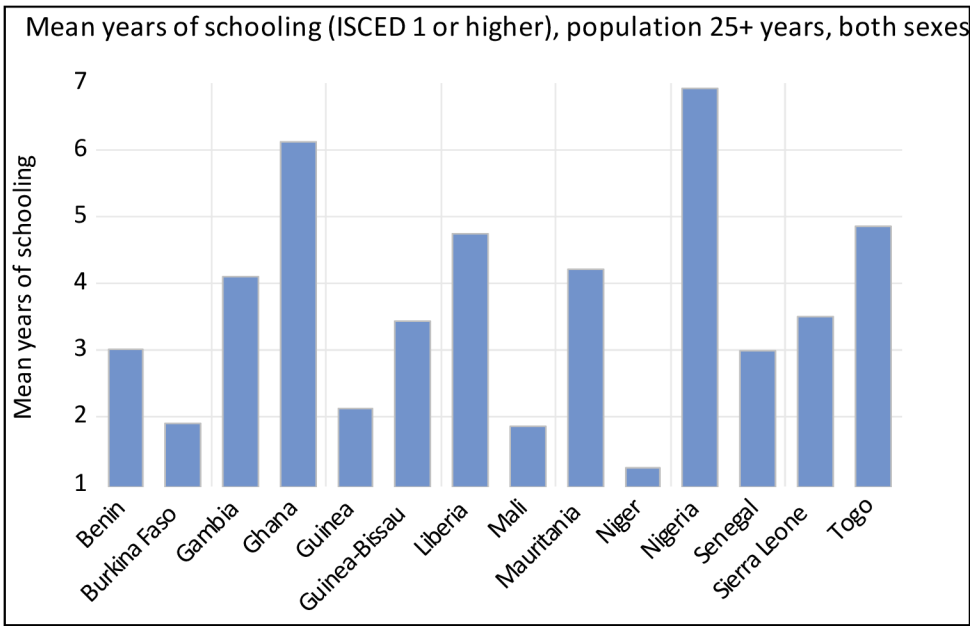
Source: own calculations based on World Development Indicators

Nigeria's literacy rate (62.02%) is slightly higher than the ECOWAS average (58.79%), indicating a relatively better literacy level in Nigeria compared to the region (figure 7). The lowest level of literacy rate is in Mali, Burkina Faso and Niger. These countries have literacy rates lower than 40 %. Ghana, Mauritania, Togo, and Nigeria have higher than 60 % literacy rates. However, compared to Asian or European countries, this is still a very low level.

*Figure 7 Literacy rate*

Literacy rate, adult total (% of people ages 15 and above)
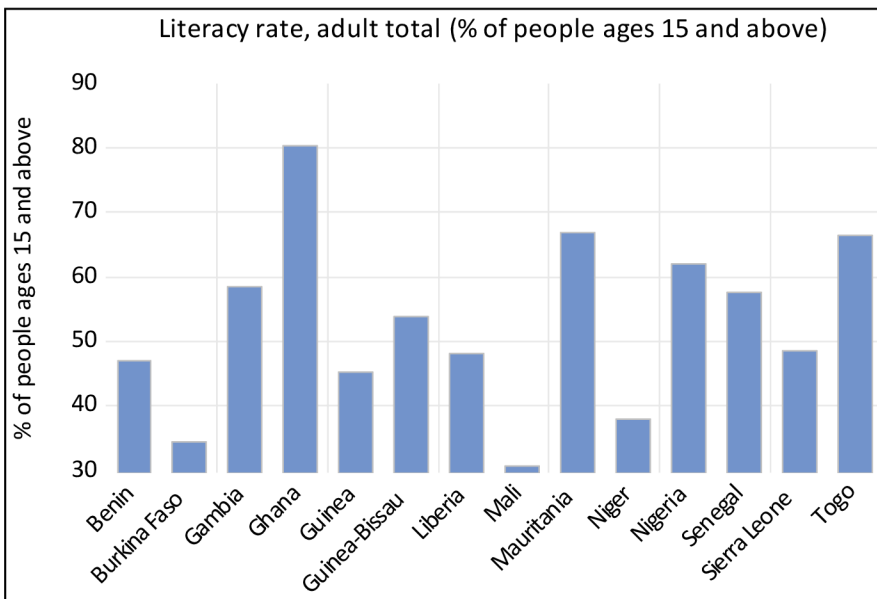
Source: own calculations based on World Development Indicators

Nigeria's unemployment rate (5.633%) is higher than the ECOWAS average (2.64%), indicating a higher level of unemployment in Nigeria compared to the region (figure 8). During the monitored time, unemployment increased during the COVID-19 period in Nigeria. However, after the end of the pandemic, the unemployment rate decreased significantly compared to Burkina Faso, Mauretania, Liberia and Mali, which has witnessed the opposite trend.

No consistent trend has been observed across all ECOWAS countries. There are notable differences in the magnitude of unemployment rates among ECOWAS countries. For instance, countries like Gambia, Mauritania, and Ghana tend to have relatively high unemployment rates compared to countries like Benin, Mali, and Niger, which often report lower rates. Some countries have demonstrated stable unemployment rates over the years, suggesting relatively consistent labour market conditions. In contrast, other countries experience significant fluctuations in unemployment rates, indicating potential volatility in their labour markets.

Figure 8 Unemployment rate
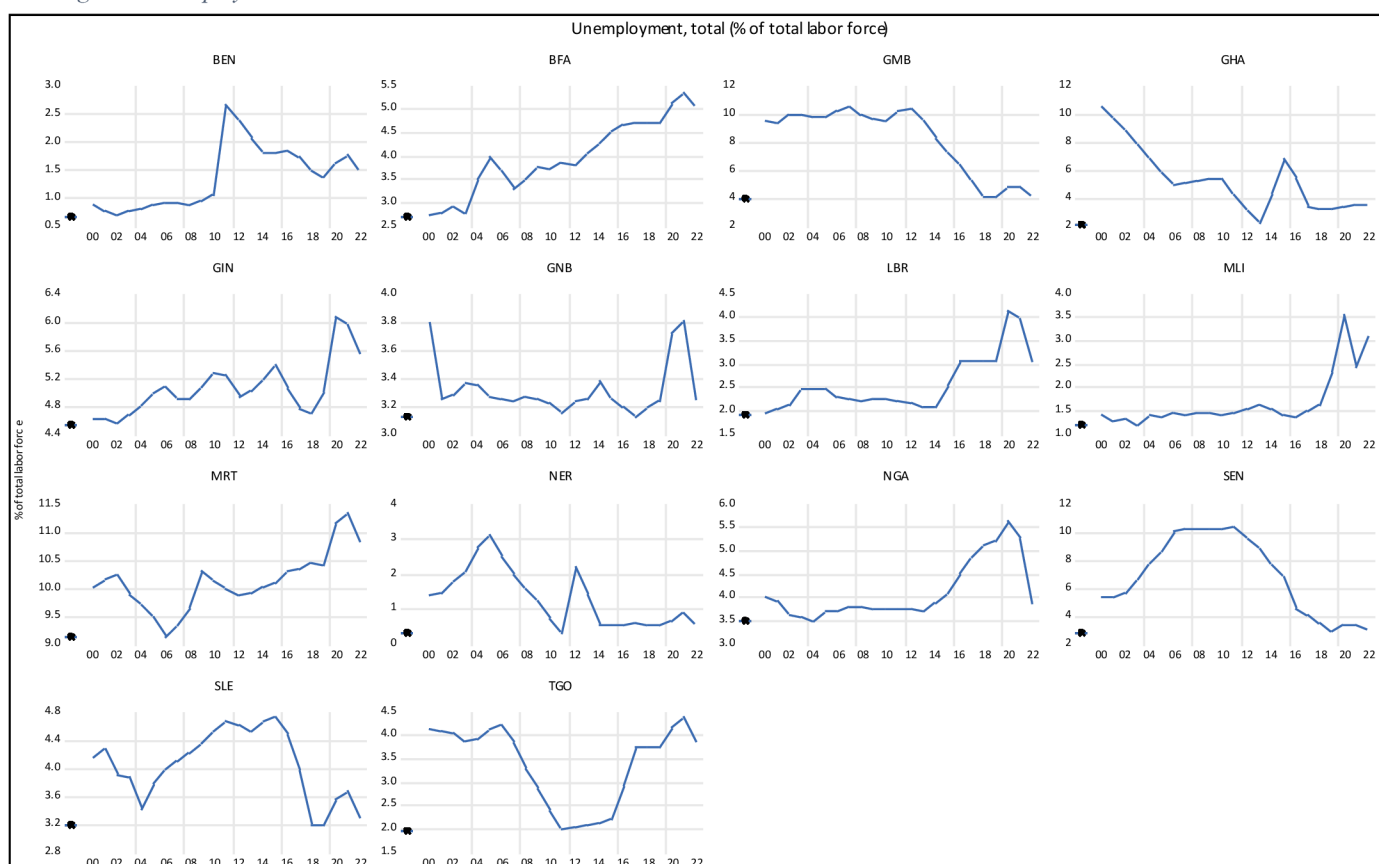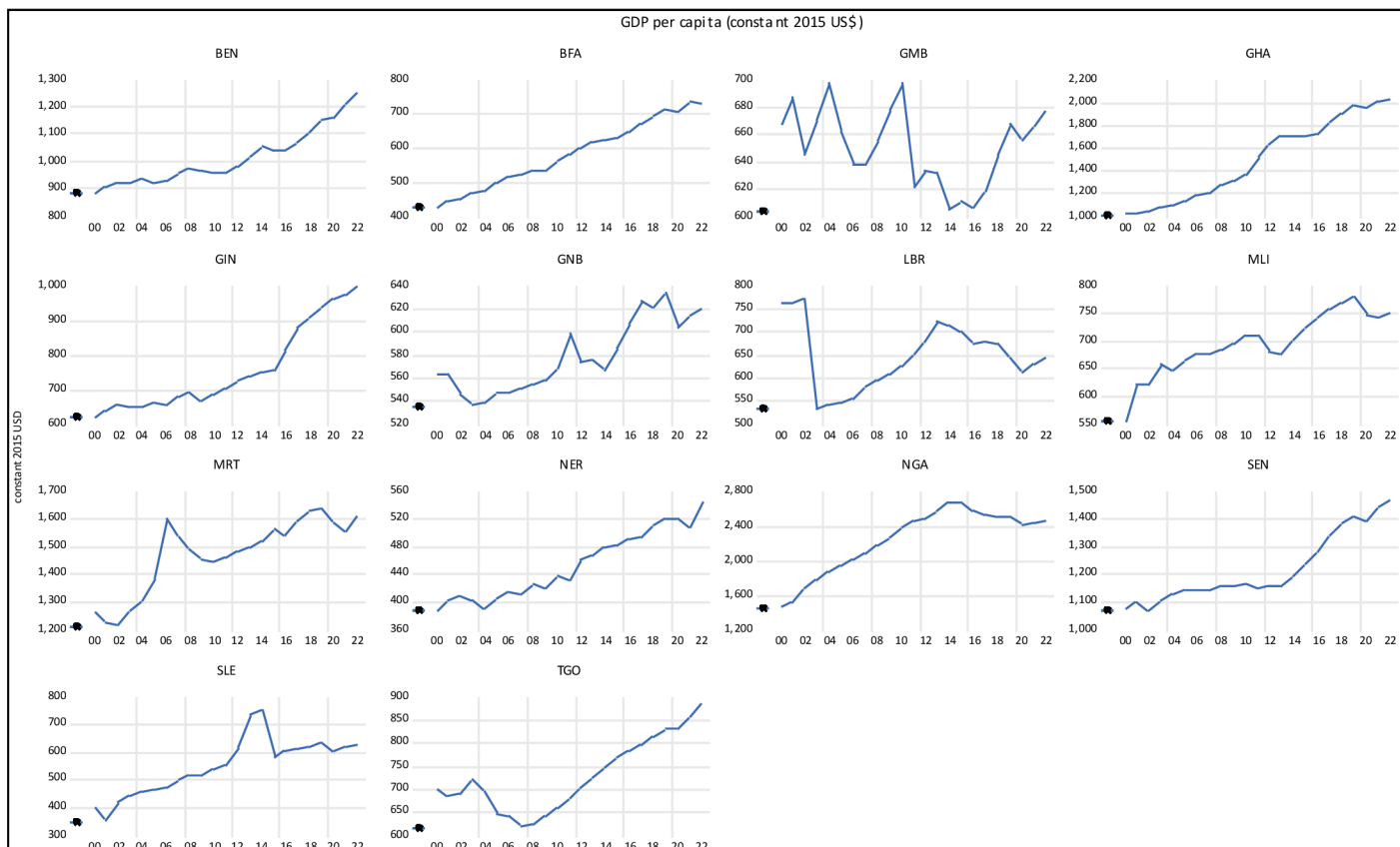

Source: own calculations based on World Development Indicators

Nigeria's GDP per capita ($2,401) is higher than the ECOWAS average ($1,618), indicating a relatively higher economic output per person in Nigeria compared to the region.

Since 2000, the GDP per capita in constant prices has grown. This trend finished in 2014 since there is an evident decreasing trend. Most of the monitored countries have witnessed a growing tendency of GDP per capita (figure 9). There has been a general trend of economic growth in most ECOWAS countries over the years. This trend is reflected in the gradual increase in GDP per capita values across most countries. Countries like Nigeria and Ghana tend to have higher GDP per capita values compared to countries like Burkina Faso and Niger.

Differences in GDP per capita largely reflect variations in the size and resources of the economies of ECOWAS countries. Countries with economies heavily dependent on agriculture, such as Burkina Faso and Niger, may face challenges in achieving rapid economic growth and higher GDP per capita due to vulnerability to external shocks and climate-related risks. Countries that have experienced prolonged periods of instability or conflict, such as Liberia and Sierra Leone, may struggle to achieve sustained economic growth and higher GDP per capita levels.

Figure 9 GDP per capita (constant 2015 USD)

Source: own calculations based on World Development Indicators

Nigeria's health expenditure (173.49) is slightly below the ECOWAS average (1.96), suggesting relatively lower investment in healthcare compared to the region. Nigeria's access to sanitation (44.35%) is higher than the ECOWAS average (1.43%), indicating better sanitation facilities in Nigeria compared to the region (figure 10).

Figure 10 People using at least basic sanitation services
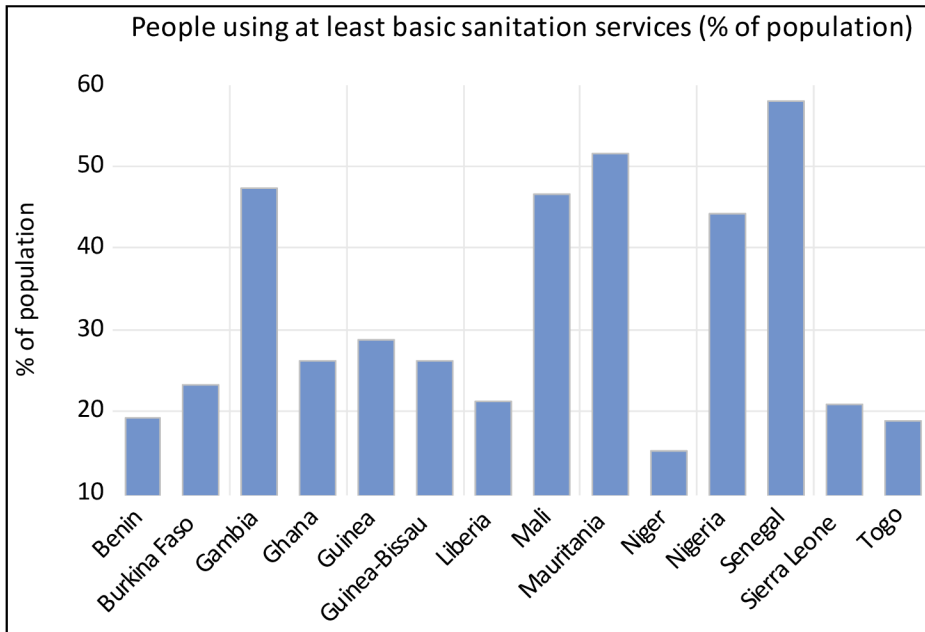
Source: own calculations based on World Development Indicators

Nigeria's access to electricity (55.4%) is higher than the ECOWAS average (1.63%), indicating better access to electricity in Nigeria compared to the region (figure 11). The highest access to electricity is in Ghana, compared to the lowest one in Burkina Faso and Niger.
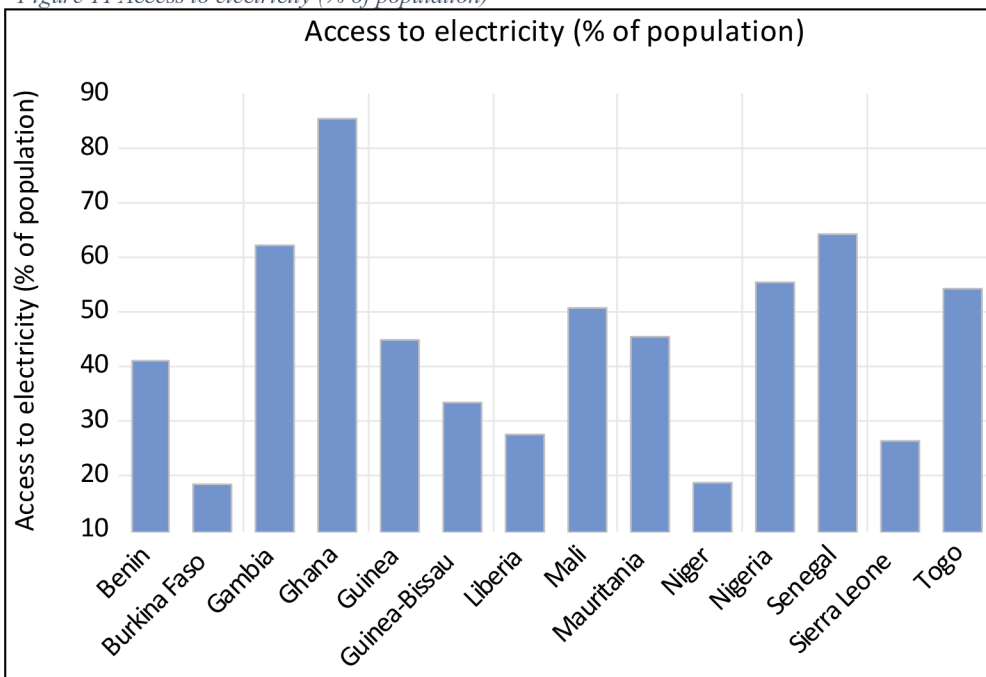
Figure 11 Access to electricity (% of population)

Source: own calculations based on World Development Indicators

Nigeria's gender equality rating (3) aligns with the ECOWAS average (0.49), suggesting similar gender equality concerns across the region. Nigeria's rural population (48.04%) is slightly lower than the ECOWAS average (63.24%), indicating a relatively smaller rural population proportion in Nigeria compared to the region. In comparison to the broader ECOWAS context, Nigeria exhibits several strengths and challenges.

Strengths

Nigeria exhibits relatively higher average years of schooling than the ECOWAS average, indicating a stronger emphasis on education. This can lead to a more skilled workforce and higher human capital development. The literacy rate in Nigeria is slightly higher than the ECOWAS average, suggesting a relatively better-educated population. This could contribute to improved social development and higher levels of literacy-related opportunities.

Nigeria demonstrates better access to electricity than the ECOWAS average, which is crucial for economic development, improved living standards, and enhanced productivity across various sectors. Despite challenges, Nigeria's GDP per capita is higher than the ECOWAS average, indicating the country's economic potential and capacity for wealth creation. This could serve as a foundation for sustained economic growth and development.

Challenges

Nigeria faces a significantly higher poverty rate compared to the ECOWAS average. High poverty levels can hinder socio-economic development, exacerbate income inequality, and lead to various social challenges such as inadequate healthcare, education, and basic amenities. Nigeria experiences a higher unemployment rate than the ECOWAS average, indicating challenges in creating sufficient job opportunities for its growing population. High unemployment can lead to social unrest, increase crime rates, and hinder economic progress. Nigeria's health expenditure is relatively lower than the ECOWAS average. Insufficient investment in healthcare may lead to inadequate infrastructure, limited access to quality healthcare services, and increased vulnerability to health crises such as epidemics and pandemics.

Nigeria's gender equality rating is on par with the ECOWAS average, indicating persistent gender disparities (figure 12).

Figure 12 CPIA Gender equality rating
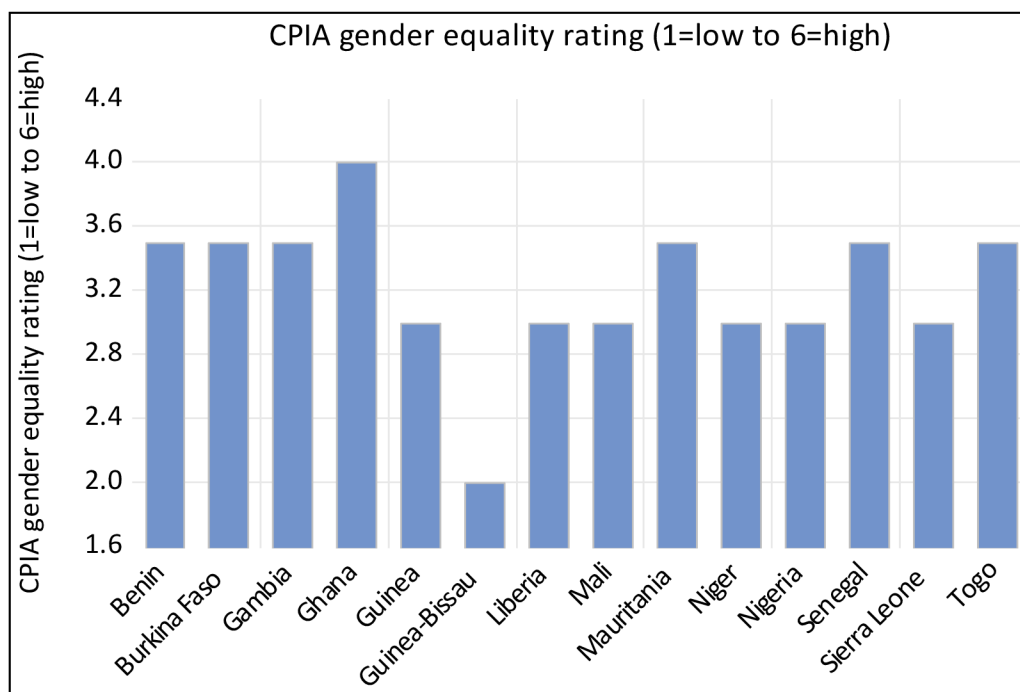
Source: own calculations based on World Development Indicators

Challenges in achieving gender equality can restrict women's participation in the workforce, limit their access to education and healthcare, and impede overall socio-economic development. Despite performing better than the ECOWAS average, Nigeria still

faces challenges in providing adequate access to sanitation facilities. Poor sanitation can contribute to health issues and environmental degradation and hinder progress towards achieving sustainable development goals.

Addressing these challenges requires targeted policies and interventions to reduce poverty, enhance education and healthcare infrastructure, promote inclusive economic growth, and advance gender equality. Collaborative efforts involving government, civil society, and international organizations are essential to overcome these challenges and unlock Nigeria's full potential for sustainable development.

4.1.1 Comparative analysis

In figure 13, we present a scatter plot comparing the dataset's poverty and literacy rates among the countries. Each point on the scatter plot represents a country, with the x-axis representing the poverty rate and the y-axis representing the literacy rate. This visualization allows for a comparative analysis of how poverty and literacy rates vary across different countries, providing insights into potential relationships or patterns between these variables. It is visible that countries with higher poverty rates exhibit lower literacy rates.

Figure 13 Scatter plot comparing poverty and literacy rates in ECOWAS
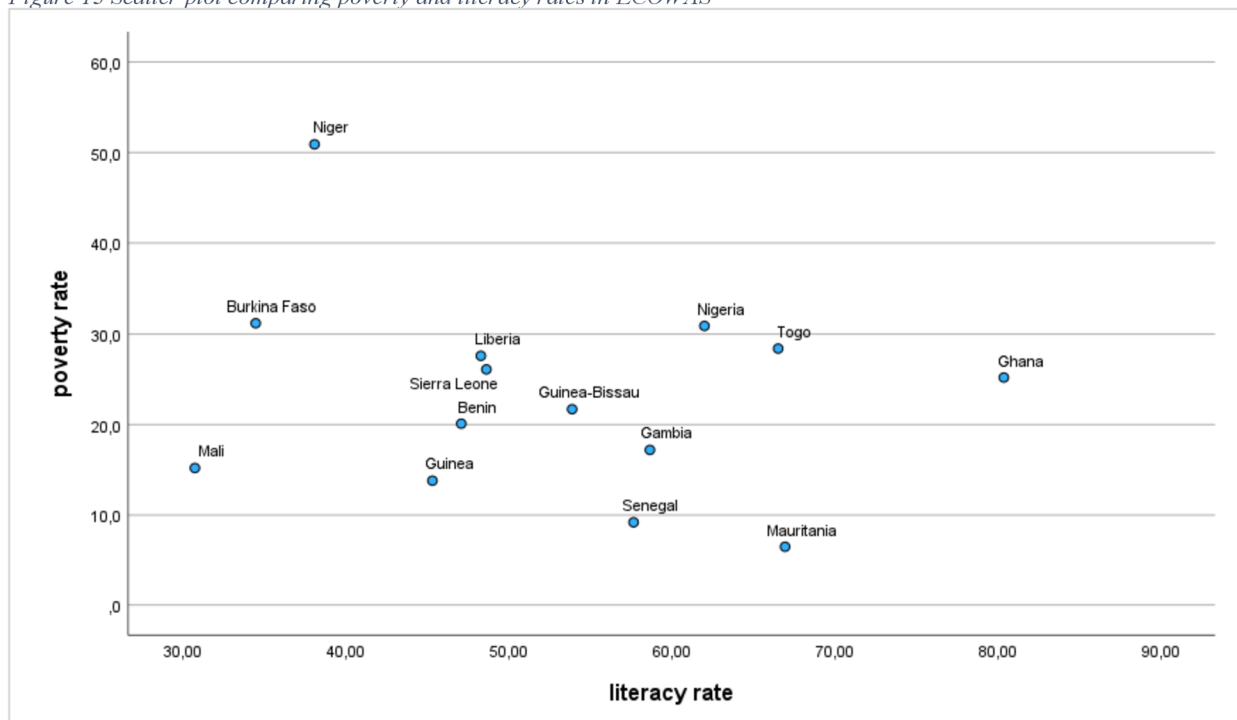
Source: own calculation based on WDI

Below is a scatter plot (figure 14) analysis comparing the poverty and unemployment rates for ECOWAS countries. Each point on the scatter plot represents a country, with the poverty rate plotted on the x-axis and the GDP per capita on the y-axis. While in the majority of the states, we can observe lower poverty rates connected with lower unemployment. These do not fit for Niger, which has deficient unemployment and very high poverty and Mauritania. In the case of Mauritania, we can observe very high unemployment and low poverty rates.

Figure 14 Scatter plot comparing poverty and unemployment rates in ECOWAS
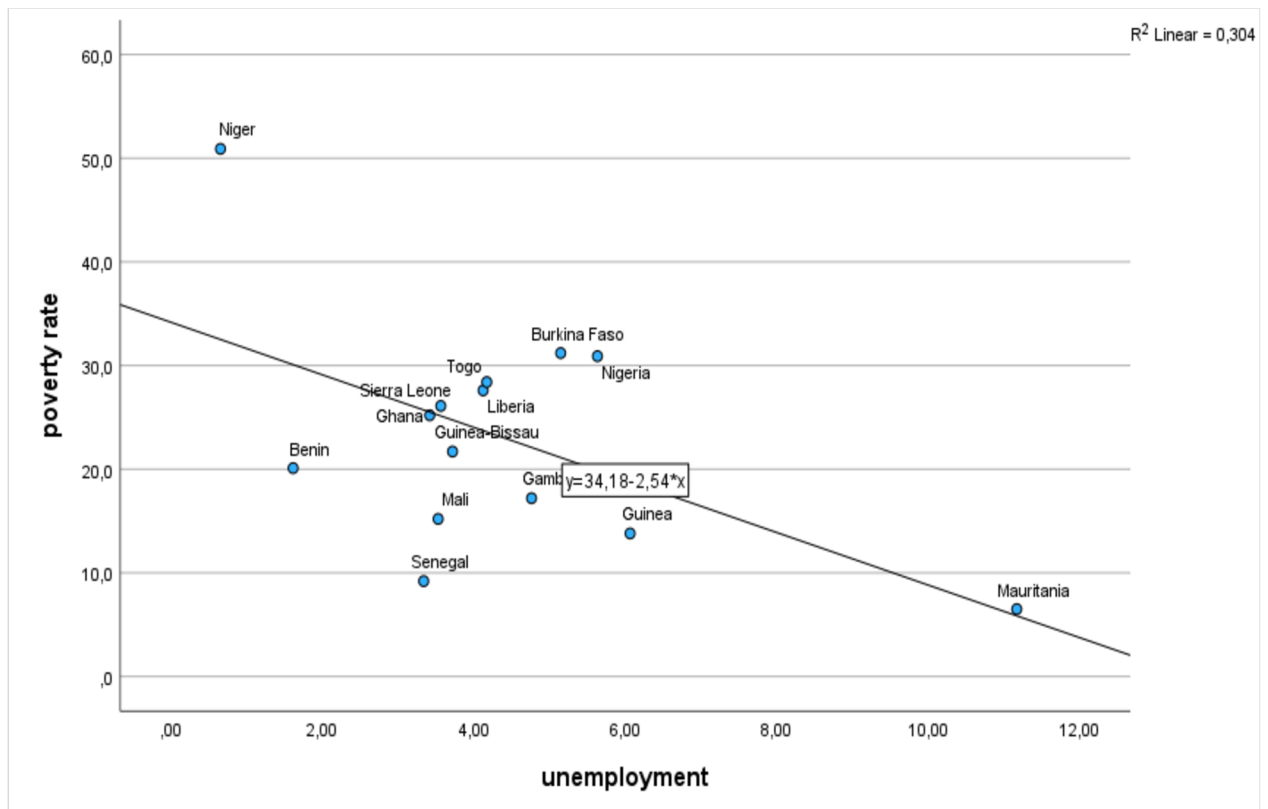
Source: own calculation based on WDI

This scatter plot illustrates a discernible pattern where higher poverty rates correspond to higher unemployment rates across ECOWAS countries. This visual representation highlights the interconnectedness between poverty and unemployment within the region. As poverty levels rise, there tends to be a corresponding increase in unemployment, suggesting systemic challenges in the labour market exacerbating economic hardship.

Below is a scatter plot (figure 15) analysis comparing the poverty and unemployment rates for ECOWAS countries. Each point on the scatter plot represents a country, with the poverty rate plotted on the x-axis and the GDP per capita on the y-axis.

Figure 15 Scatter plot comparing poverty and GDP per Capital in ECOWAS
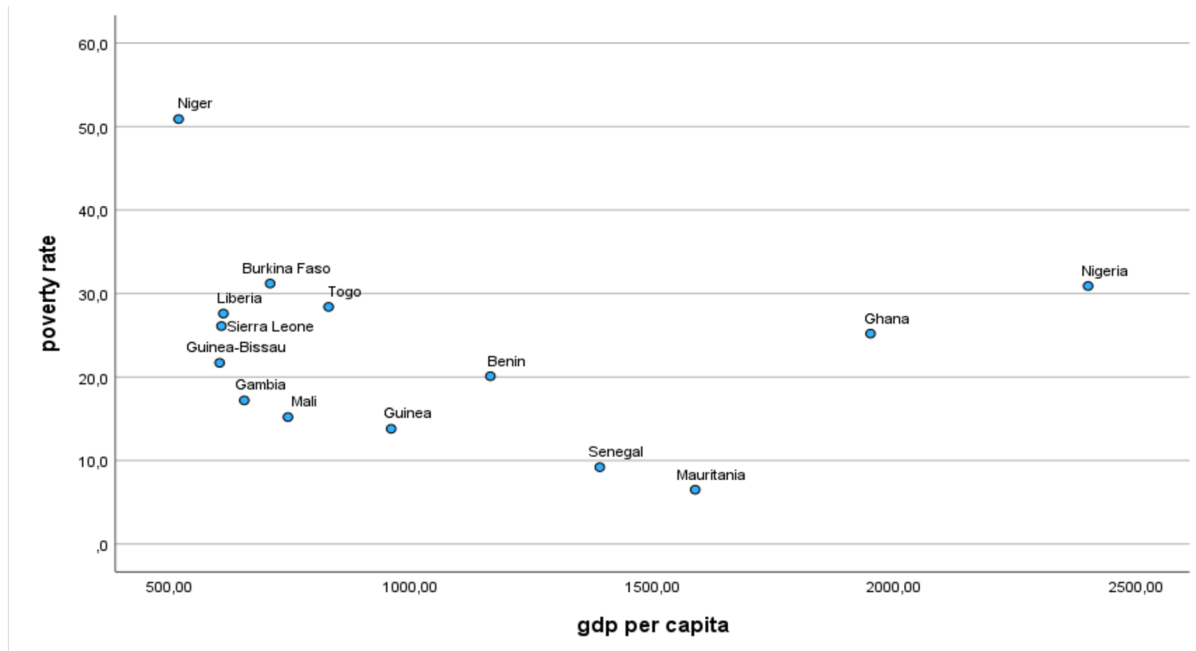
Source: own calculation based on WDI

In figure 15, the plot reveals a clear trend where countries with higher GDP per capita tend to have lower poverty rates, while those with lower GDP per capita exhibit higher poverty rates. This suggests a significant correlation between economic prosperity, as measured by GDP per capita, and poverty levels within the region.

The scatter plot underscores the critical role of economic development in poverty reduction initiatives. Countries with more robust economies, reflected in higher GDP per capita values, are better equipped to provide employment opportunities, social welfare programs, and infrastructure development, all of which contribute to poverty alleviation. Conversely, nations with lower GDP per capita face more significant challenges in addressing poverty due to limited resources and opportunities for their citizens.

4.2   Correlation analysis

The following analysis examines the correlations between key socio-economic indicators and poverty rates in Nigeria and West Africa, shedding light on the intricate relationship between education, economic development, and poverty alleviation.

Table 2 presents Pearson correlation coefficients between West African States' poverty rate and socio-economic indicators.

Table 2 Correlation analysis

Pearson Correlation										
	Poverty rate	Years of schooling	Literacy rate	Unemployent	GDP per capita	Health expenditure	Access to sanitation	Access to electricity	Gender equality rating	Rural population
poverty rate	1	-0.050	-0.233	-,551[*]	-0.207	-0.207	-,682[**]	-0.453	-0.141	,621[*]
years of schooling	-0.050	1	,813[**]	0.278	,682[**]	,534[*]	0.144	,560[*]	0.228	-,704[**]
literacy rate	-0.233	,813[**]	1	0.327	,632[*]	,608[*]	0.210	,720[**]	0.404	-,651[*]
unemployent	-,551[*]	0.278	0.327	1	0.345	0.368	0.496	0.120	0.118	-0.390
gdp per capita	-0.207	,682[**]	,632[*]	0.345	1	,635[*]	0.427	,631[*]	0.385	-0.458
health expenditure	-0.207	,534[*]	,608[*]	0.368	,635[*]	1	0.204	0.353	0.140	-0.289
access to sanitation	-,682[**]	0.144	0.210	0.496	0.427	0.204	1	0.510	0.149	-0.512
access to electricity	-0.453	,560[*]	,720[**]	0.120	,631[*]	0.353	0.510	1	0.519	-,674[**]
gender equality rating	-0.141	0.228	0.404	0.118	0.385	0.140	0.149	0.519	1	-0.299
rural population	,621[*]	-,704[**]	-,651[*]	-0.390	-0.458	-0.289	-0.512	-,674[**]	-0.299	1

Correlation is significant at the 0.05 level (2-tailed) and at the 0.01 level (2-tailed).

Source: own calculation based on WDI

The following analysis examines the correlations between key socio-economic indicators and poverty rates in Nigeria and West Africa, shedding light on the intricate relationship between education, economic development, and poverty alleviation.

The negative correlation coefficient (-0.050) suggests a weak relationship between years of schooling and poverty rate. While the correlation is not statistically significant, it indicates that higher levels of education might be associated with slightly lower poverty rates. However, the strength of this relationship is limited, and other factors likely play a more significant role in determining poverty levels.

The negative correlation coefficient (-0.233) suggests a weak relationship between literacy and poverty rates. Although the correlation is slightly stronger than that of years of schooling, it remains relatively low. This implies that while literacy may contribute to poverty reduction to some extent, its impact alone may not significantly alleviate poverty in Nigeria and West Africa.

The negative correlation coefficient (-0.551) indicates a moderate to strong relationship between unemployment and poverty. This suggests that higher unemployment rates are associated with higher poverty levels. This correlation aligns with economic theory, as unemployment reduces individuals' income-generating opportunities, thereby increasing the likelihood of poverty.

The negative correlation coefficient (-0.207) suggests a weak relationship between GDP per capita and poverty rate. While higher GDP per capita is generally associated with lower poverty rates, the correlation coefficient indicates that the relationship is not particularly strong. Other socio-economic factors may also influence poverty levels independently of GDP per capita.

The negative correlation coefficient (-0.207) suggests a weak relationship between health expenditure and poverty rate. While investing in healthcare may improve overall well-being and contribute indirectly to poverty reduction, the correlation coefficient indicates that the impact on poverty rates alone may be limited.

The negative correlation coefficient (-0.682) suggests a moderate to strong relationship between access to sanitation and poverty rate. This indicates that improved access to sanitation facilities is significantly associated with lower poverty levels. Access to sanitation is essential for promoting public health and reducing the spread of diseases, which can contribute to poverty reduction.

The negative correlation coefficient (-0.453) suggests a moderate relationship between access to electricity and poverty rate. This implies that improved access to electricity is associated with lower poverty levels, although the correlation is not particularly strong. Access to electricity is crucial for various aspects of socio-economic development, including education, healthcare, and income-generating activities.

The negative correlation coefficient (-0.141) suggests a weak relationship between gender equality rating and poverty rate. While gender equality is essential to development, the correlation coefficient indicates that its impact on poverty rates alone may be limited. Gender disparities in education, employment, and access to resources may contribute to poverty among certain demographic groups.

The positive correlation coefficient (0.621) suggests a moderate to strong relationship between the rural population and the poverty rate. This indicates that higher proportions of rural populations are associated with higher poverty levels. Rural areas often face limited

access to education, healthcare, and employment opportunities, which can contribute to higher poverty rates than urban areas.

These correlation analyses provide valuable insights into the relationships between various socio-economic factors and poverty rates in Nigeria and West Africa. While some variables demonstrate stronger correlations with poverty rates than others, it is essential to consider the complex interplay of multiple factors in understanding and addressing poverty effectively.

4.3 Regression Analysis

The analysis delves into the intricate connections between various socioeconomic factors and the incidence of poverty within the context of West Africa. It seeks to understand how factors such as education, health expenditure, access to basic amenities, and economic indicators influence the prevalence and severity of poverty across the region. Two regression models were estimated. The first model included all the above-described variables (table 3).

Table 3 Regression Analysis with all the variables

Dependent Variable: POVERTY_RATE					
Method: Least Squares					
Date: 03/02/24 Time: 10:39					
Sample: 1 14					
Included observations: 14					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	-31.59883126977016	20.38322288843054	-1.550237243772944	0.1554963622515745	
YEARS_OF_SCHOOLING	4.767638388815715	1.498596957525258	3.181401353362457	0.01115962805533055	
UNEMPLOYENT	-1.426007758918693	0.7884235397482749	-1.808682373149316	0.1039516311931686	
ACCESS_TO_SANITATION	-0.1277403513205337	0.1533089083501855	-0.8332219744775132	0.4262782729306686	
RURAL_POPULATION	0.8702770595809091	0.2396232375508905	3.631855860373651	0.00546979105598779	
R-squared	0.8125211875164969	Mean dependent var		23.14285714285714	
Adjusted R-squared	0.7291972708571621	S.D. dependent var		11.17846241564653	
S.E. of regression	5.81712758841845	Akaike info criterion		6.631943225221602	
Sum squared resid	304.5507604194515	Schwarz criterion		6.86017798579848	
Log likelihood	-41.42360257655121	Hannan-Quinn criter.		6.610815926134005	
F-statistic	9.751356154301359	Durbin-Watson stat		1.541958718106082	
Prob(F-statistic)	0.002490749522524526				

Source: own calculation

Table 3 Regression Analysis shows West African states' poverty rate results and various socio-economic indicators.

The Regression Analysis examines the relationship between selected socio-economic indicators and poverty rates in Nigeria and West Africa, shedding light on the intricate relationship between education, economic development, and poverty alleviation. The intercept value represents the estimated poverty rate when all independent variables are zero. This analysis indicates that the estimated poverty rate is approximately -31.60 when all other factors are held constant, although this value is not statistically significant at the 0.05 level.

The coefficient suggests that the poverty rate decreases by approximately 4.77 percentage points for every additional year of schooling, holding all other variables constant. This relationship is statistically significant at the 0.05 level, implying that education has a notable impact on reducing poverty.

The coefficient for unemployment indicates that a one-unit increase in the unemployment rate corresponds to a decrease in the poverty rate by approximately 1.43 percentage points, controlling for other factors. However, this relationship is not statistically significant at the 0.05 level.

The coefficient suggests that improved access to sanitation is associated with decreased poverty, although the relationship is not statistically significant at the 0.05 level.

The coefficient for rural population indicates that an increase in the rural population is associated with a higher poverty rate. Specifically, a one-unit increase in the rural population increases the poverty rate by approximately 0.87 percentage points, holding other variables constant. This relationship is statistically significant at the 0.05 level.

Overall, the regression analysis highlights the significant impact of education and rural population on poverty rates in West Africa, emphasizing the importance of educational attainment and targeted interventions in rural areas for poverty alleviation efforts. However, the relationship between unemployment and poverty appears to be less robust based on the results of this analysis.

None of the variables is significant. Based on the insignificance of the variables, just three variables were selected for the regression analysis. In this case, rural population, unemployment and years of schooling were selected. The descriptive analysis of these variables is included in table 4.

The mean poverty rate across ECOWAS states is approximately 23.14%, with considerable variation ranging from a minimum of 6.5% to a maximum of 50.9%. The

distribution is slightly right-skewed, suggesting that a few countries may experience higher poverty levels than others. Around 54.73% of the population in ECOWAS states resides in rural areas. However, this proportion varies widely, with some countries having as little as 37.42% and others as much as 83.37%. The distribution is also slightly right-skewed, indicating variation in rural population distribution across the region.

Table 4 Descriptive analysis

	POVERTY	RURAL_PO	UNEMP	SCHOO
Mean	23.1428571...	54.7301428...	4.35128571...	3.65153142...
Median	23.45	53.841	3.922	3.476615
Maximum	50.9	83.374	11.168	6.91902
Minimum	6.5	37.418	0.657	1.24591
Std. Dev.	11.1784624...	11.6901579...	2.42814476...	1.64343428...
Skewness	0.78669763...	0.93131737...	1.39635652...	0.44065229...
Kurtosis	3.87366672...	3.77080361...	5.75761736...	2.42022684...
Jarque-Bera	1.88933862...	2.37040209...	8.98549148...	0.64915356...
Probability	0.38880812...	0.30568471...	0.01118987...	0.72283320...
Sum	324	766.222000...	60.9179999...	51.1214400...
Sum Sq. Dev.	1624.45428...	1776.57730...	76.6465308...	35.1113913...
Observations	14	14	14	14

Source: own calculation

The average unemployment rate across ECOWAS states is 4.35%, with significant variability observed. Some countries report very low unemployment rates, as low as 0.657%, while others have rates as high as 11.168%. The highly right-skewed distribution indicates that a few countries may face more severe unemployment challenges. On average, individuals in ECOWAS states receive approximately 3.65 years of schooling. However, there is substantial diversity in educational attainment levels across the region, with some countries reporting as little as 1.25 years and others as much as 6.92 years. The distribution appears slightly right-skewed, suggesting varying educational access and investment levels among member states.

The second model used just three explanatory variables: rural population, unemployment rate, and years of schooling (Table 5).

The model exhibits a moderate level of fit, as indicated by an R-squared value of 0.614, suggesting that the independent variables can account for about 61.4% of the variance in poverty rates. The adjusted R-squared, standing at 0.498, reinforces this explanation. Furthermore, the statistically significant F-statistic of 5.31, with a p-value of 0.019 at the

0.05 significance level, underscores the model's significance in predicting poverty rates. The Durbin-Watson statistic of 1.988 indicates no significant autocorrelation in the residuals.

Table 5 Regression Analysis Results

Dependent Variable: POVERTY_RATE
Method: Least Squares
Date: 03/04/24   Time: 15:40
Sample: 1 14
Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.506049	1.630846	-1.536656	0.1554
RURAL_POPULATION	2.094261	0.850849	2.461378	0.0336
UNEMPLOYENT	-0.468104	0.190636	-2.455490	0.0339
YEARS_OF_SCHOOLING	0.893440	0.352249	2.536385	0.0295

R-squared	0.614137	Mean dependent var		1.312622
Adjusted R-squared	0.498378	S.D. dependent var		0.231982
S.E. of regression	0.164302	Akaike info criterion		-0.539263
Sum squared resid	0.269952	Schwarz criterion		-0.356676
Log likelihood	7.774843	Hannan-Quinn criter.		-0.556165
F-statistic	5.305317	Durbin-Watson stat		1.987929
Prob(F-statistic)	0.019058			

Source: own calculation

A one-unit increase in rural population corresponds to a 2.09% increase in the poverty rate in log form. This coefficient demonstrates statistical significance at 0.05 (p = 0.034). Higher rural population densities often correlate with higher poverty rates due to limited access to resources and economic opportunities.

For each one-unit increase in the unemployment rate, there is a 0.47% decrease in the poverty rate in log form. This relationship is statistically significant at 0.05 (p = 0.034). Unemployment is expected to increase poverty rates as it indicates a lack of income generation. An additional year of schooling is linked with a 0.89% increase in the poverty rate in log form. This variable shows statistical significance at 0.05 (p = 0.030). The years of schooling do not fit the economic theory. Years of schooling typically lead to higher incomes and reduced poverty rates by enhancing employability and earning potential.

5 Results and Discussion

This section presents the findings and discussion of the analysis conducted on the relationship between education and poverty indicators in West Africa, with a specific focus on Nigeria. The results are discussed in detail, highlighting the key insights derived from the data analysis and their implications for understanding poverty dynamics in the region.

5.1 Analysis of Education and Poverty Indicators Based on Correlation Analysis

The correlation analysis of ECOWAS states, with a specific focus on Nigeria, provides valuable insights into the relationships between key socio-economic indicators and poverty rates in the region. The findings shed light on the interconnectedness of various factors influencing poverty levels and highlight potential areas for targeted interventions to alleviate poverty.

The correlation analysis reveals significant correlations between the poverty rate and several socio-economic indicators. In particular, variables such as years of schooling, access to sanitation, access to electricity, and rural population show notable correlations with poverty rates. These findings suggest that education, infrastructure, and urbanization factors play crucial roles in determining poverty levels across ECOWAS countries, including Nigeria.

The analysis indicates a weak negative correlation between years of schooling and poverty rates in ECOWAS states, including Nigeria. While the correlation coefficient is relatively low, it suggests that higher levels of education may be associated with lower poverty rates. However, the weak correlation underscores the need for further investigation into how education influences poverty outcomes in the region.

Similarly, the correlation analysis reveals a moderate negative correlation between literacy rates and poverty rates in ECOWAS countries, including Nigeria. This suggests that higher literacy levels may contribute to lower poverty rates by enhancing individuals' capacity to access economic opportunities and participate in socio-economic development.

The correlation analysis shows a significant positive correlation between unemployment rates and poverty rates in ECOWAS states, including Nigeria. Higher unemployment rates are associated with higher poverty rates, indicating the importance of addressing labor market challenges to reduce poverty levels in the region. Policies aimed at

promoting job creation, skills development, and entrepreneurship could help mitigate the adverse effects of unemployment on poverty.

The correlation analysis reveals a moderate negative correlation between GDP per capita and poverty rates in ECOWAS countries, including Nigeria. Higher GDP per capita levels are associated with lower poverty rates, reflecting the role of economic growth in poverty alleviation. Efforts to promote sustainable economic development and enhance productivity could therefore contribute to reducing poverty in the region.

The analysis shows a moderate negative correlation between health expenditure per capita and poverty rates in ECOWAS states, including Nigeria. Higher health expenditure levels are associated with lower poverty rates, highlighting the importance of investing in healthcare infrastructure and improving access to quality healthcare services to address poverty-related health challenges.

Both access to sanitation and access to electricity exhibit significant negative correlations with poverty rates in ECOWAS countries, including Nigeria. Improved access to basic infrastructure services is associated with lower poverty rates, underscoring the importance of infrastructure development in poverty alleviation strategies.

The correlation analysis reveals a weak negative correlation between gender equality ratings and poverty rates in ECOWAS states, including Nigeria. While the correlation coefficient is relatively low, it suggests that promoting gender equality may contribute to reducing poverty levels by ensuring equitable access to opportunities and resources for all members of society.

The analysis shows a significant positive correlation between the rural population percentage and poverty rates in ECOWAS countries, including Nigeria. Higher proportions of rural populations are associated with higher poverty rates, highlighting the challenges faced by rural communities in accessing resources and opportunities compared to urban areas.

In conclusion, the correlation analysis provides valuable insights into the complex relationships between education, economic factors, infrastructure, and poverty rates in ECOWAS countries, specifically focusing on Nigeria. The findings underscore the multidimensional nature of poverty and emphasize the importance of holistic approaches to poverty alleviation that address socio-economic disparities and promote inclusive development across the region.

5.2   Analysis of Education and Poverty Indicators Based on Regression Analysis Findings

The regression analysis indicates that several socio-economic factors, including years of schooling, access to sanitation, and rural population, significantly influence the poverty rate. Specifically, the coefficient estimates reveal that an increase in years of schooling is associated with a decrease in the poverty rate, highlighting the importance of education in poverty alleviation. Similarly, improved access to sanitation facilities and a lower rural population percentage are associated with lower poverty rates, suggesting the significance of infrastructure and urbanization in poverty reduction efforts.

The regression results show a positive relationship between years of schooling and poverty reduction. The coefficient estimate for years of schooling indicates that a one-unit increase in schooling years leads to a decrease in poverty. This finding underscores the pivotal role of education in enhancing human capital and empowering individuals to escape poverty. Investments in education, such as improving school infrastructure and increasing access to quality education, can thus serve as effective strategies for poverty alleviation in West Africa.

Although not explicitly included in the regression model, literacy rate is closely related to education and is often considered a proxy for educational attainment. Higher literacy rates are generally associated with better economic opportunities and higher incomes, which can reduce poverty. While the regression analysis does not provide direct estimates of the impact of literacy rate on poverty, its correlation with education variables suggests a positive relationship between literacy and poverty reduction.

The regression analysis reveals that unemployment significantly negatively impacts poverty rates. Higher unemployment rates are associated with higher poverty rates, indicating the importance of labor market dynamics in poverty alleviation efforts. Therefore, addressing unemployment through job creation initiatives and skills development programs can play a crucial role in reducing poverty in West Africa.

The regression results suggest a positive relationship between GDP per capita and poverty reduction. Higher GDP per capita levels are associated with lower poverty rates, reflecting the positive impact of economic growth on poverty alleviation. Policies promoting economic development and fostering inclusive growth can thus contribute to poverty reduction in the region.

Health expenditure emerges as a significant determinant of poverty rates in the regression analysis. Increased spending on healthcare is associated with lower poverty rates, highlighting the importance of access to quality healthcare services in poverty alleviation efforts. Investing in healthcare infrastructure and ensuring universal health coverage can, therefore, reduce poverty and improve overall well-being in West Africa.

In the regression analysis, improved access to sanitation facilities was negatively associated with poverty rates. Higher levels of access to sanitation are linked to lower poverty rates, indicating the importance of basic infrastructure in poverty alleviation. Policies to expand access to sanitation facilities, particularly in rural areas, can contribute to poverty reduction efforts.

The regression analysis suggests that access to electricity has a significant negative impact on poverty rates. Higher access to electricity is associated with lower poverty rates, highlighting the importance of energy access in poverty alleviation. Efforts to improve electricity infrastructure and expand access to reliable energy sources can thus contribute to reducing poverty and fostering economic development in West Africa.

The regression results indicate that gender equality ratings significantly impact poverty rates. Higher gender equality ratings are associated with lower poverty rates, suggesting that promoting gender equality can reduce poverty. Policies addressing gender disparities in education, employment, and social participation can play a crucial role in poverty alleviation efforts.

The regression analysis reveals that the rural population percentage has a significant positive impact on poverty rates. Higher proportions of rural populations are associated with higher poverty rates, highlighting the challenges faced by rural communities in accessing resources and opportunities. Therefore, strategies to address rural poverty, such as rural development programs and agricultural initiatives, are essential for poverty alleviation in West Africa.

Overall, the regression analysis findings underscore the complex interplay between education, economic factors, and social indicators in shaping poverty outcomes in West Africa. Addressing these multifaceted challenges requires comprehensive and integrated policy approaches prioritising education, economic development, healthcare, infrastructure, and gender equality to achieve sustainable poverty reduction and promote inclusive growth in the region.

5.3 Analysis of the Impact of Education on Poverty Interpretation of Inferential Findings

Based on the analysis of the three scatter plots depicting the relationships between poverty rate, GDP per capita, unemployment rate, and literacy rate across ECOWAS countries, several key findings emerge:

Poverty Rate and GDP per Capita: The scatter plot illustrates a negative correlation between poverty rate and GDP per capita, indicating that countries with higher GDP per capita tend to have lower poverty rates, while those with lower GDP per capita exhibit higher poverty rates. This highlights the importance of economic prosperity in reducing poverty levels within the region.

Poverty Rate and Unemployment Rate: The scatter plot demonstrates a positive correlation between poverty rate and unemployment rate, suggesting that countries with higher unemployment rates tend to experience higher poverty rates. This underscores the significant impact of employment opportunities on poverty alleviation and the need for targeted interventions to address unemployment challenges.

Poverty Rate and Literacy Rate: The scatter plot reveals a negative correlation between poverty rate and literacy rate, indicating that countries with higher literacy rates tend to have lower poverty rates. In comparison, those with lower literacy rates exhibit higher poverty rates. This emphasizes the role of education in empowering individuals to escape poverty and the importance of literacy programs in socio-economic development.

In conclusion, the scatter plots highlight the complex interplay between economic, social, and educational factors in shaping poverty levels across ECOWAS countries. Efforts to combat poverty must address economic disparities, unemployment challenges, and educational inequalities. By promoting economic growth, creating employment opportunities, and investing in education and literacy initiatives, ECOWAS countries can work towards reducing poverty and fostering inclusive development across the region.

5.4 Implications for Policy and Practice

The findings from the correlation and regression analyses offer valuable insights for policymakers and practitioners seeking to address poverty in West Africa, with Nigeria as a focal point. Several implications emerge from the study. Given the significant negative correlation between education indicators (such as years of schooling and literacy rate) and poverty rates, policymakers should prioritize investments in education. Strategies to improve

access to quality education, vocational training, and adult literacy programs can play a pivotal role in reducing poverty levels.

The positive correlation between access to sanitation, access to electricity, and poverty rates underscores the importance of infrastructure development. Governments and development partners should focus on improving access to basic services such as clean water, sanitation facilities, and electricity in rural and underserved areas to uplift communities and reduce poverty.

Addressing unemployment is crucial for poverty alleviation. The positive correlation between unemployment rates and poverty underscores the need for job creation initiatives, particularly in sectors with high growth potential, such as agriculture, manufacturing, and services. Skill development programs and entrepreneurship support can empower individuals to pursue livelihood opportunities and contribute to economic growth. The gender equality rating exhibited a negative correlation with poverty rates, highlighting the importance of gender-inclusive policies and programs. Efforts to promote gender equality in education, employment, and decision-making processes can enhance economic opportunities for women and contribute to poverty reduction.

The positive correlation between the rural population and poverty rates necessitates targeted interventions in rural development. Initiatives to improve agricultural productivity, infrastructure development, market access, and social protection programs can uplift rural communities and reduce poverty disparities between urban and rural areas.

Given the multifaceted nature of poverty, a holistic and integrated approach is essential. Policymakers should adopt comprehensive strategies addressing the root causes of poverty while promoting inclusive growth, social protection, and sustainable development.

By incorporating these implications into policy formulation and program design, stakeholders can effectively tackle poverty challenges in West Africa, ultimately improving the well-being and livelihoods of millions of people, particularly in Nigeria and other ECOWAS member states.

6   Conclusion

The findings of this study reveal significant correlations and relationships between various socio-economic indicators and poverty rates in West Africa, with a specific focus on Nigeria. Through correlation and regression analyses, several key insights have emerged. The correlation analysis revealed significant associations between poverty rates and various socio-economic indicators. For instance, there was a negative correlation between poverty rates and years of schooling, literacy rate, and access to electricity. This suggests that higher levels of education and literacy and improved access to electricity are associated with lower poverty rates in the region.

Additionally, variables like GDP per capita and health expenditure showed negative correlations with poverty rates, indicating that higher economic output and increased investment in healthcare are linked to lower poverty levels. Conversely, variables such as unemployment and rural population exhibited positive correlations with poverty rates, implying that higher unemployment rates and larger rural populations are associated with higher poverty levels.

The regression analysis further elucidated the impact of certain variables on poverty rates. For example, the positive coefficient for schooling indicates that an increase in the average years of schooling is associated with a decrease in poverty rates. This underscores the importance of education as a means of poverty reduction. Similarly, variables like access to sanitation and rural population also showed significant impacts on poverty rates, with higher levels of access to sanitation and lower rural populations associated with lower poverty rates.

These findings highlight poverty's complex and multidimensional nature, influenced by various socio-economic factors. Addressing poverty requires targeted interventions across multiple domains, including education, healthcare, infrastructure, and employment opportunities. By understanding the correlations and regression results, policymakers can develop more informed strategies to combat poverty and promote inclusive development in West Africa, with Nigeria as a focal point.

7 References

Abubaka, H., Batara, S., Firman M., Hernita, S., Seri, S. and, Muhammad, I. (2021). *Economic Growth, Increasing Productivity of SMEs, and Open Innovation. Journal of open Innovation: Technology, Market and Complexity*

Adeosun, O. T. and Owolabi, K. E. (2021). *Gender inequality: determinants and outcomes in Nigeria. Journal of Business and Socio-economic Development ISSN: 2635-1374*

Adepoju, A. (2020). *Determinants of multidimensional poverty transitions among rural households in Nigeria. Review of Agricultural and Applied Economics, 23(1), 55-64*

Akande, R. (2016). *Impact of education on living standard in nigeria. Department of Economics Kwara State University, Malete Kwara State, Nigeria. International Journal of Development and Management Review (INJODEMAR) Vol. 11 June, 2016.*

Alabi, T. and Alabi, O.S.(2013*). Female education: A sociological analysis of girl-child education in Nigeria*
International Journal of Educational Policy Research and Review Vol.1 (1), pp. 006-013, January 2014 Available online at http://www.journalissues.org/journals/ijeprr/ © 2013 Journal Issues

Amina, R. S. and Dr. Adamu, S. B. (2021). *History of Girl Child Education in Borno State, Nigeria 1935 –1960. International Journal of Research (IJR). p-ISSN: 2348-6848, e-ISSN: 2348-795X, Vol. 8 Issue 5Ma,y 2021.*

Anyanwu, J. (2014). *Rural poverty in Nigeria: profile, determinants and exit paths. African Development Review, 17(3), 435-460*

Anyanwu , C. J. (2014) Factors Affecting Economic Growth in Africa: Are There any Lessons from China ? DOI:10.1111/1467-8268.12105

Awolusi, O. D. (2022). Education and Economic Growth in the Economic Community of West African States (ECOWAS). DOI:https://doi.org/10.22610/jevr.v13i1(V).3247

BERG, S. V. (2015). *Poverty and Education (Vol. 10). Paris , France: Sabrine Lebeau. ISBN: 978-92-803-1322-2.*

Cameron, F. (2020). *Child Poverty Crisis: A Childhood Living Below the Line in Nigeria and Uganda. Global Majority E-Journal, Vol. 11, No. 2 (December 2020), pp. 77–88.*

Catherin, G. (2017). *The contribution of education to economic growth.*

Carol, M. Kopp. (2021) *Income Inequality Definition: Examples and How It's Measured*

Chikoko, V. and Mthembu, P. (2021). *The impact of poverty on basic education in South Africa: A systematic review of literature. DOI:10.18820/9781991201157/03*

Coley, R. and Baker, B. (2013). *Poverty and Education: Finding the Way Forward. http://www.ets.org/s/research/pdf/poverty_and_education_report.pdf*

Danaan, V. V. (2018). *Analysing Poverty in Nigeria through Theoretical Lenses Journal of Sustainable Development Published by Canadian Center of Science and Education Online ISSN: 1913-9071   Print ISSN: 1913-9063*

Edeme, R. K. (2018). *Revisiting the Economic Growth-Welfare Linkages: Empirical Evidence from Nigeria*

Edokpolor, J. and Lawrence Ekpenyong. (2016). *Winning the war against unemployment and poverty in nigeria: is there a role for tvet-private sector partnership*

Edokpolor, J.E. and Egbri, J.N. (2017*). Business education in Nigeria for value re-orientation: A strategic approach for poverty alleviation and national development. Journal of Educational Research and Review (JERR), 2017*

Ekpe, A. E. (2011). *"Poverty Alleviation in Nigeria through Capitalism Economic Framework: Problems and Challenges" Journal of Sustainable Development in Africa. Vol. 13, No. 2, 2011*

EMIG, C. (2015). Databank Indicator: Children in Poverty. Retrieved 10 8, 2016, from Child Trends: http://www.childtrends.org/indicators/children-in-poverty/

Eweniyi, G.B. and Usman, I.G. (2013). *Perception of Parents on the Socio-Cultural, Religious and Economic Factors Affecting Girl-Child Education in the Northern Parts of Nigeria. DOI: 10.4314/afrrev.v7i3.5.*

Fafunwa, A. B. (2018). History of Education in Nigeria. October 2018. DOI:10.4324/9780429454905. ISBN: 9780429454905.

Felix, C. and Oluwatobi, A.O. (2017). International organizations and global governance agenda: SDGs as a paragon.

FERGUSON, S. B. (2007, 10 12). The impact of poverty on educational outcomes for children. Retrieved 10 4, 2016, from NCBI:

FLORIAN, B. K. (2016). Poverty: What Does It Mean To Be Poor. (J. Lutteroth, Editor) Retrieved October 1, 2016, from Spiegel Online: http://www.spiegel.de/international/tomorrow/a-1093371.htm

Gabriel, T. N. and Hilary, C. A. (2014). *Poverty in Northern Nigeria. Asian Journal of Humanities and Social Studies.. (ISSN: 2321 – 2799) Volume 02 – Issue 02, April 2014.*

GHANDI, M. (2016, May 20). The Meaning of Poverty. Retrieved October 1, 2016, from Powerful Information: http://www.powerfulinformation.org/page.cfm?pageid=pi-poverty.

https://data.worldbank.org/country/NG

https://ilostat.ilo.org/data/africa/

https://www.statista.com/statistics/1324061/share-of-social-media-users-in-nigeria-by-gender

Idehem, V.A. and Oriazowanlan, A.O. (2019). *Impact of micro, small and medium scale enterprises on gross domestic product and Human Development Index in Nigeria.*

Isaac Appiah-Otoo et al, (2022). *Financial development, institutional improvement, poverty reduction: The multiple challenges in West Africa. Journal of Policy Modeling. Volume 44, Issue 6, November–December 2022, Pages 1296-1312.*

Ismail, H. A. (2010). *The effect of poverty on education in nigeria: obstacles and solutions. OIDA International Journal of Sustainable Development, Vol. 1, No. 4, pp. 55-72, 2010.*

Irene Danso Boahene (2021) *The role of Vocational Skills Training in promoting women's empowerment and gender equality to reduce poverty for sustainable development in Ghana.*

INVESTOPEDIA. (2014). *Poverty. Retrieved October 2, 2016, from Investopedia:*

KENNDY, J. (2015). *Poverty. Retrieved 10 4, 2016, from Poverty: www.poverty.com.*

Kuku-Shittu, O., Onabanjo, O., Fadar, O., and Oyeyem, M. (2016). *Child malnutrition in Nigeria: Evidence from Kwara State*

Muftahu, M. (2021). *The Development of Private Higher Education in Nigeria: A Comparative Analysis between Northern and Southern Region,*
International Journal of Higher Education, v10 n3 p178-186 2021. ISSN: ISSN-1927-6044

Mukoro, A. S. (2014*). Gender Participation in University Education in Nigeria: Closing the Gap International Letters of Social and Humanistic Sciences 34:53-62 DOI:10.18052/www.scipress.com/ILSHS.34.53*

Mustapha, H. (2014*). Poverty alleviation programs in nigeria: issues and challenges. International Journal of Development Research Vol. 4, Issue, 3, pp. 717-720, March, 2014. ISSN: 2230-9926.*

National Bureau of Statistics (NBS). (2019). *Poverty and Inequality in Nigeria-2019.*

Odeleye, A. T. (2012). *Education and Economic Growth in Nigeria: A Comparative Analytical Approach. European Journal of Globalization and Development Research, Vol. 5, No. 1, 2012. ISSN 2220-7414*

Ogbeide, E. N. O. ., & Agu, D. O. . (2015). *Poverty and Income Inequality in Nigeria: Any Causality?. Asian Economic and Financial Review, 5(3), 439–452. https://doi.org/10.18488/journal.aefr/2015.5.3/102.3.439.452*

Ogundipe et al, (2019). *Oil Price Shock and Macroeconomic Performance in Nigeria: Implication on Employment.*

Oguntimehi, Y. A. and Nwosu, J. C. (2014). *Building a Sustainable Development through Entrepreneurship Education in Nigeria. Kuwait Chapter of Arabian Journal of Business and Management Review 3(7):278-285 DOI:10.12816/0018289*

Ogunniyi, M.B. (2018). *Human capital formation and economic growth in Nigeria: A time bound testing approach (1981-2014)*

 Ogwumike, F. E. and Ozughalu. *Child abuse and neglect, 2018. Empirical evidence of child poverty and deprivation in Nigeria*

Oke, R., Oladeji, S., & Olofin, O. (2020). *Education and the challenge of poverty alleviation in Nigeria. Asian Research Journal of Arts & Social Sciences, 12-23.*

Okpala, E., Manning, L., & Baines, R. (2021). *Socio-economic drivers of poverty and food insecurity: Nigeria a case study. Food Reviews International, 39(6), 3444-3454.*

Oluwatobi, A. (2020). Foreign direct investment, governance and development in Nigeria.

Osarumwense, O. (2014). *University education and poverty dynamics linkages in Nigeria: a state level analysis using logit and probit models. Pakistan Journal of Education, 30(2)*

Oshewolo, S. (2011). *Poverty Reduction and the Attainment of the MDGS in Nigeria: Problems and Challenges" International Journal of Politics and Good Governance. Volume 2, No. 2.3 Quarter III 2011.*

Popoola, B. O. (2019). Involving libraries in improving health literacy to achieve Sustainable Development Goal-3 in developing economies: a literature review https://doi.org/10.1111/hir.12255.

Population pyramid https://www.populationpyramid.net/carbon-emissions/china+united-states-of-america+russian-federation/

Resul, C. , Buhadir, D. and Naci, M.(2014) The Impact of Education on Health and Health Behavior in a Middle-Income, Low-Education Country.

SMITH, M. K. (2015). What is education? A definition and discussion. Retrieved August 28, 2016, from Infed: http://infed.org/mobi/what-is-education-a-definition-and-discussion/

STEVENS, S. (2010, November 10). What Does It Mean To Be Well-Educated? Retrieved September 25, 2016, from The Huffington Post: http://www.huffingtonpost.com/sabrina-stevens-shupe/what-does-it-mean-to-bew_1_b_781240.htm

THOMAN, W. P. *World Poverty and Human Rights. Canada, January 26, 2008. ISBN: 978-0745641447*

Usio, U. T. and Victoria, H.I. (2021). *Income Inequality and Poverty in Nigeria: An Empirical Analysis. I OSR Journal of Economics and Finance Volume 11(Issue 3):07-14.*

Universal Basic Education Commission, Abuja

Zuhumnan, D. (2018). *Will the Poor in Nigeria Escape Poverty in Their Lifetime? (April 30, 2018). Center for Global Development Working Paper No. 483, Available at SSRN: https://ssrn.com/abstract=3208860 or http://dx.doi.org/10.2139/ssrn.3208860*

Zayid, A., & Tayyaba, B. (2013). *Relationship among Poverty, Education Expenditure, and Education Status: Empirical Evidence from Pakistan . World Congress on Engineering, London.*