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Income Inequality, Economic Growth, and the Roles of Human Capital, Labour Market, and Institutional Dynamics in Nigeria (1994–2023)

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Abstract
This paper has discussed the interplay between income inequality and economic growth, human capital and labour market condition and institutional dynamics in Nigeria during the years 1994-2023. This would be driven by the fact that there has always been income inequality in Nigeria regardless of the economic reforms and growth spurts. The paper used the Autoregressive Distributed Lag (ARDL) estimation model to analyse both short-run and long-run relationship between the variables and used time-series data available in the appropriate national and international databases. Empirical evidence indicated that the human capital variables, especially access to secondary education and healthcare are important in decreasing income disparities in Nigeria. Increases in education levels and health status were linked with reduction in the income inequality with time. On the other hand, labour market, and in particular unemployment, were also identified to contribute greatly to the income inequality, which was a consequence of the distribution nature of the limited creation of jobs and the low absorption power of labour. Institutional dynamics, which were measured based on the efficiency and quality of governance in the public sector also revealed that inefficiencies in the distribution of public resources also lead to increase of income inequality. The ARDL bounds test proved the presence of long-run relationship between income inequality and economic growth and the development of human capital, labour market results, and institutional factors. Moreover, the findings suggested that income inequality and economic growth have a complex relationship in which income inequality might be linked to short-term growth effects, but in the long-term, such inequality has a limiting effect on growth that can be sustained and inclusive of all. The research concludes that to reduce income inequality in Nigeria, improvements must be made in human capital development, performance of the labour market and effectiveness of the institutions to promote inclusive economic growth.

Keywords: Income inequality, Economic growth, human capital, labour market, institutional dynamics, Nigeria, ARDL

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Introduction

One of the most long-standing development challenges in Nigeria is income inequality in spite of decades of policy interventions to achieve redistributive growth. Intervention over the years, by successive Nigerian governments, has seen a vast array of programmes being undertaken to curb inequality and better the distribution of welfare. They are Operation Feed the Nation (OFN) (1976), Free and Compulsory Primary Education (FCPE) (1977), Agricultural Credit Guarantee Scheme (ACGS) (1978), the Green Revolution Programme (1980), Low-Cost Housing schemes, the National Directorate of Employment (NDE) (1986), Better Life Programme (BLP) (Regardless of these interventions, inequality has continued to be deeply entrenched in the Nigerian economy, which can be seen in the continued inequality in the distribution of income and welfare delivery (National Bureau of Statistics, 2024). It has been demonstrated that the top 10% of Nigerians still managed to take an unequal portion of the national revenue, and the bottom half of the population is in extreme poverty (Uzochukwu, 2022).

Such an increasing disparity has a major economic growth and social stability consequences. Research indicates that excessive inequality may diminish the social cohesion, investment in human capital, and the long-term economic performance (Maduka and Anyanwu, 2024). Theoretically, the

linkage between inequality and growth has been much contested especially in Kuznets framework, which postulates that inequality might experience an increase in the initial stages of development and thereafter reduce in the later stages of development. Nonetheless, the results of the empirical investigation of Nigeria are rather inconsistent, as some researchers report a negative correlation between inequality and growth, whereas other sources point to context-specific impacts based on the state of structures (Adams et al., 2023; Akinwale and Ojo, 2023).

The reasons and effects of income inequality in the developing economies have been largely discussed in empirical literature. Previous research points out poverty, inflation, financial development, exchange rate instability, and unemployment as the key factors influencing inequality (Nwosa, 2019; Almeida and Branco, 2020). Unemployment in Nigeria has been also associated with the increasing income gap as the unemployed people are not involved in the productive economic activity (Abubakar and Bala, 2022; Gado, 2025). On the same note, real incomes have been observed to be eroded by inflation and macroeconomic instability thus exacerbating inequality (Umaru & Zubairu, 2020).

Later sources have turned their focus to a more recent literature on structural and institutional factors determining the outcomes of inequality. Both the World Bank (2017) and the International Monetary Fund (2018) point to globalization, technological change, the state of the labour market, and institutional quality as now playing an increasingly significant role in determining inequality in the contemporary economy. Specifically, factors like unemployment and underemployment in the labour market have a substantial impact on income distribution due to the inability to access stable incomes (Fields, 2019; Ibrahim and Umar, 2022). Also, the institutional weaknesses (poor governance, corruption, and weak policy implementation) have been reported to contribute to inequality, the lack of equitable access to economic opportunities (Akinwale and Grobler, 2019; Oluwatobi et al., 2022).

Development of human capital, especially via education and health has also been found to be a key mechanism that drives inequality. When education is equitable, it improves productivity and income-earning power and, therefore, inequality is decreased (Abdullah et al., 2015; Kim and Lee, 2020). Nevertheless, it can, in a situation where disparities in access to education are present, at first increase income differences (Akinmoladun & Olorunsola, 2020). Equally, such health outcomes as life expectancy and access to healthcare services have a great impact on productivity and long-term economic inclusion (Abubakar and Bala, 2020). The low-income groups are the most poorly impacted by poor health systems, which further sustain poverty and inequality (Adeleye et al., 2020). Although there is an increasing literature, a significant gap in the incorporation of human capital variables (education, health), labour market (unemployment) and institutional processes in a cohesive analysis of Nigeria can be identified. Most of the studies that are available concentrate on isolated determinants or short term effects and hence do not provide a comprehendive insight into how the structural relationships would be in the long run. Moreover, the most recent global shocks, such as economic reforms and post-pandemic changes have not been adequately integrated into empirical models of inequality in Nigeria (World Bank, 2025; IMF, 2025).

Hence, a holistic study that will analyse the interaction of human capital, labour market situation and institutional quality in determining the level of income inequality and economic growth in Nigeria over a very long period (1994-2023) is needed. This is a critical way of appreciating direct and indirect channels through which inequality is developed and influencing the macroeconomic performance. It also offers a better basis of policy development that targets inclusive and sustainable economic growth in accordance with the developmental agenda of the world like the Sustainable Development Goals (SDGs).

2. Methodology

The research design employed was a quantitative ex post facto research design suitable in studying the existing relationships between macroeconomic and socioeconomic variables over time without influencing the data. The choice of design was due to the historical time-series data on the past spanning 1994 to 2023 as the study aimed at examining the relationship between education,

healthcare, unemployment, and other macroeconomic variables and how they affect income disparity in Nigeria. The ex post facto method enabled observation of the economic trends and the result of policy as observed in secondary data.

The study data was obtained by consulting the valid sources of secondary data such as World Bank, African Development Bank and other official sources of statistics. Income inequality (measured by the Gini coefficient) was the most important dependent variable. Education indicators (secondary school enrolment and government expenditure on education), healthcare indicators (life expectancy at birth and maternal mortality ratio) and the unemployment rate were chosen as the explanatory variables. Other control variables were the growth of gross domestic product, foreign direct investment, inflation rate, real exchange rate, trade openness, oil price, credit to the private sector, population growth, the index of institutional quality, and government recurrent expenditure on health and education. These variables were chosen on theoretical grounds including the Kuznets hypothesis and empirical evidence to show the relationship between the development of human capital and macroeconomic stability and the outcome of income distribution.

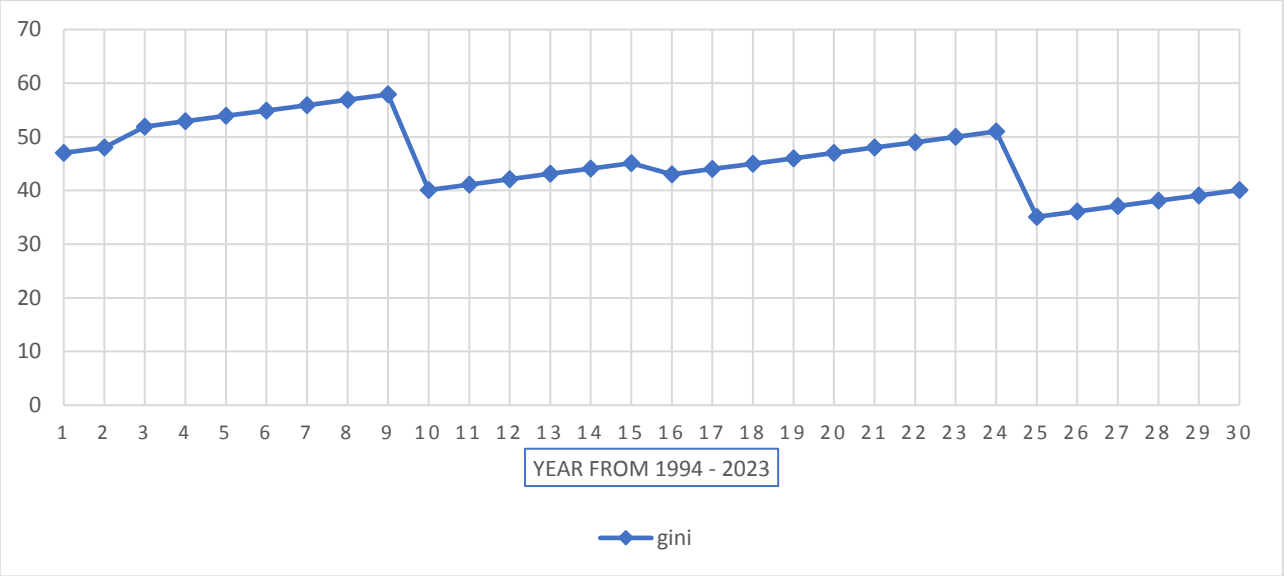
The analysis was started with descriptive statistics in order to summarize the features of the data. To describe the central tendency, the variability, and the distributional characteristics of each variable, measures of central tendency (mean, minimum, maximum, and standard deviation), skewness, kurtosis, and Jarque-Bra statistics were calculated. This step gave an initial realization of the data structure and assisted in the realization of the possible outliers and distributional anomalies that may influence the estimation outcome. In order to be certain that the econometric modelling is valid, unit root tests were run based on both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. The aim of these tests was to ascertain the stationarity properties of the variables as well as to eliminate the issue of spurious regression. Each of the tests had the null hypothesis that the variable has a unit root and is non-stationary. The findings indicated that there was a mixed order of integration in the sense that some of the variables were stationary at level I(0) and others at first difference I(1) and hence the application of the Autoregressive Distributed Lag (ARDL) modelling technique.

After the stationarity tests, the ARDL bounds testing method was used to test whether a long-run relationship existed between the variables or not. Three ARDL models were estimated to estimate the impacts of education and healthcare, and unemployment on income inequality, adjusting macroeconomic factors. This method enabled the analysis to be able to estimate both the short-run relationships and long-run equilibrium relationships in one framework. Prior to the final estimation, diagnostic tests, which included multicollinearity tests, serial correlation tests, heteroscedasticity tests, and model stability tests were carried out in order to determine the reliability and robustness of the estimated models.

3. Results

As shown in Fig. 1, Nigeria has experienced an increase in income inequality over the past few decades. The Gini coefficient for Nigeria was reported at 48 in 2014 and decreased to 39.1 in 2022, indicating a closing gap in income distribution within the country (World Bank, 2024). Today, as the global community is realigning to meet the 2030 Sustainable Development Goal (SDG) agenda of leaving no one behind, inequality constitutes a major challenge that must be addressed. According to Power et al (2016), reducing inequality may result in more robust and durable growth, social cohesiveness, economic advancement, and harmonious cohabitation. Nigeria has significant levels of income inequality, according to the Gini coefficient, a widely used indicator of inequality that runs from 0 (perfect equality) to 1 (perfect inequality).

As seen in Table 1, income inequality in Nigeria is increasing. The income disparity between the top 10% and the bottom 50% is 1 to 14. Accordingly, the expenses of fourteen people in the lowest 50% of the population can be covered by the income of one person in the top 10%. The income of one person in the top 1% of the population, however, neatly covers the expenses of 37 persons in the bottom 50%.



Source: World Bank (2024)

Figure 1: GINI Coefficient for Nigeria 1994-2023

Table 1: Income and Wealth Distribution by Population Group

Population Group	Average Income (€PPP)	Share of Total Income (%)	Average Wealth (€PPP)	Share of Total Wealth (%)
Full Population	7,600	100.0	26,600	100.0
Bottom 50%	2,400	15.5	3,000	5.7
Middle 40%	8,000	41.8	156,300	58.1
Top 10%	32,700	42.7	154,300	58.1
Top 1%	88,600	11.6	669,500	25.2

Source: World Bank (2022)

There is a 1:37 income gap between the richest 1% and the lowest 50% (World Bank, 2022). The widening wealth disparity between the rich and the poor, along with the disproportionately large quantity of wealth controlled by a small percentage of the population, are the hallmarks of Nigeria's income inequality problem. This may lead to social unrest, restrict the access of the poor to essential services, and impede the expansion and advancement of the economy as a whole. This has further resulted in Nigeria having restricted access to high-quality healthcare and education. Lower-income people are unable to advance their education or obtain proper medical care due to a lack of accessible, cheap education and healthcare options, which feeds the cycle of poverty and income inequality.

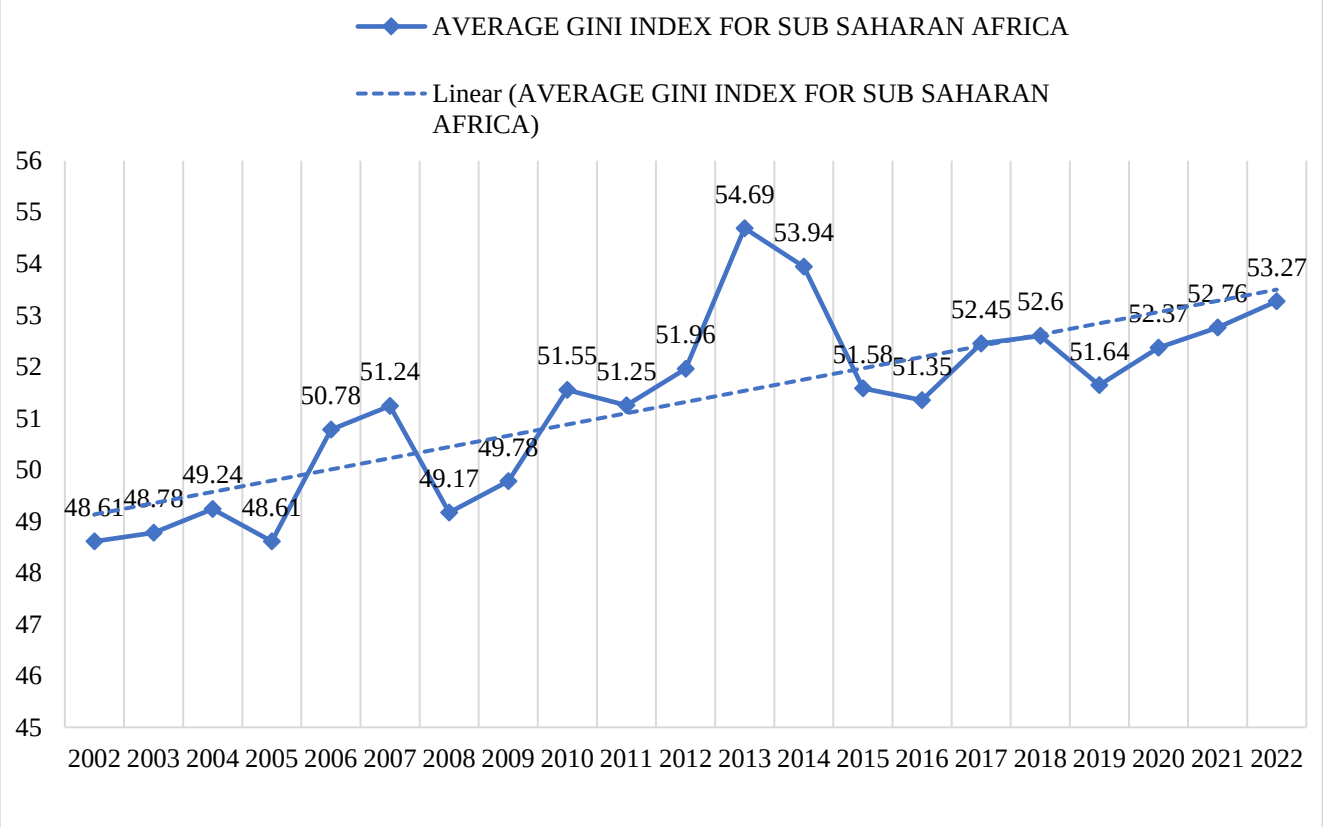
3.1 Stylized Facts on Income Inequality in Nigeria

Income disparity within Sub-Saharan Africa pertains to the imbalanced allocation of earnings among people and families across the area. This dilemma has raised considerable alarm due to its repercussions on economic growth, societal cohesion, and initiatives aimed at diminishing poverty. Various elements play a role in the income disparity found in Sub-Saharan Africa, such as the enduring effects of colonial rule, restricted access to education and health services, political unrest, and the disproportionate distribution of natural assets.

The enduring influence of colonialism stands out as a primary factor contributing to income inequality in Sub-Saharan Africa. The exploitation of labor and resources throughout the period of colonial governance resulted in persistent economic disparities. In numerous nations within the region, the imbalanced distribution of land and assets during colonial times has left a lasting imprint on income allocation. Furthermore, the restricted availability of healthcare and education in Sub-Saharan Africa is another essential contributor to the region's income inequality. Educational attainment plays a crucial role in determining earning capacity, with individuals who achieve higher levels of education significantly more likely to secure lucrative jobs. However, many individuals in Sub-Saharan Africa lack access to quality education, perpetuating the cycle of income inequality.

Similarly, inadequate access to quality healthcare can lead to increased medical expenses and reduced productivity, further intensifying the divide in wealth.

Political instability and corruption are additional factors that contribute to income inequality in Sub-Saharan Africa. Weak governance structures and widespread corruption can result in the misallocation of resources, favoritism towards certain groups or individuals, and limited opportunities for economic advancement for the broader population.



Source: African Development Bank (AfDB) 2022

Figure 2: Average GINI Index for Sub-Saharan Africa

Furthermore, the unequal distribution of natural resources in Sub-Saharan Africa has also played a significant role in income inequality. While some countries in the region are rich in natural resources such as oil, minerals, and agricultural land, the benefits of these resources are often concentrated in the hands of a few elites or foreign entities. This uneven distribution perpetuates income inequality and hinders broader economic development.

The divide between the affluent and the impoverished has expanded in both developed and emerging countries over the last four decades, with Nigeria being particularly affected. In 2015, the wealthiest 1% possessed more assets than the entire population of the planet, with a mere 62 individuals holding wealth equivalent to that of the bottom half of the world's population. At the same time, those at the bottom of the economic ladder are not receiving their equitable portion; since 2000, the lowest half of the global population has claimed only 1% of the total increase in wealth worldwide (Oxfam, 2022). Despite over 152 million individuals living in poverty in 2020, it would take the wealthiest individual in Nigeria 42 years to completely exhaust his fortune if he spent 1 million daily.

Oxfam's analysis indicates that the annual income generated from the wealth of the richest man in Nigeria could enable 2 million individuals to escape poverty for a year. To provide all Nigerians living below the extreme poverty threshold of $1.90 with support to escape poverty for a year would require approximately $24 billion. This figure is slightly less than the cumulative wealth of the five wealthiest Nigerians in 2020, which amounted to $29.9 billion.

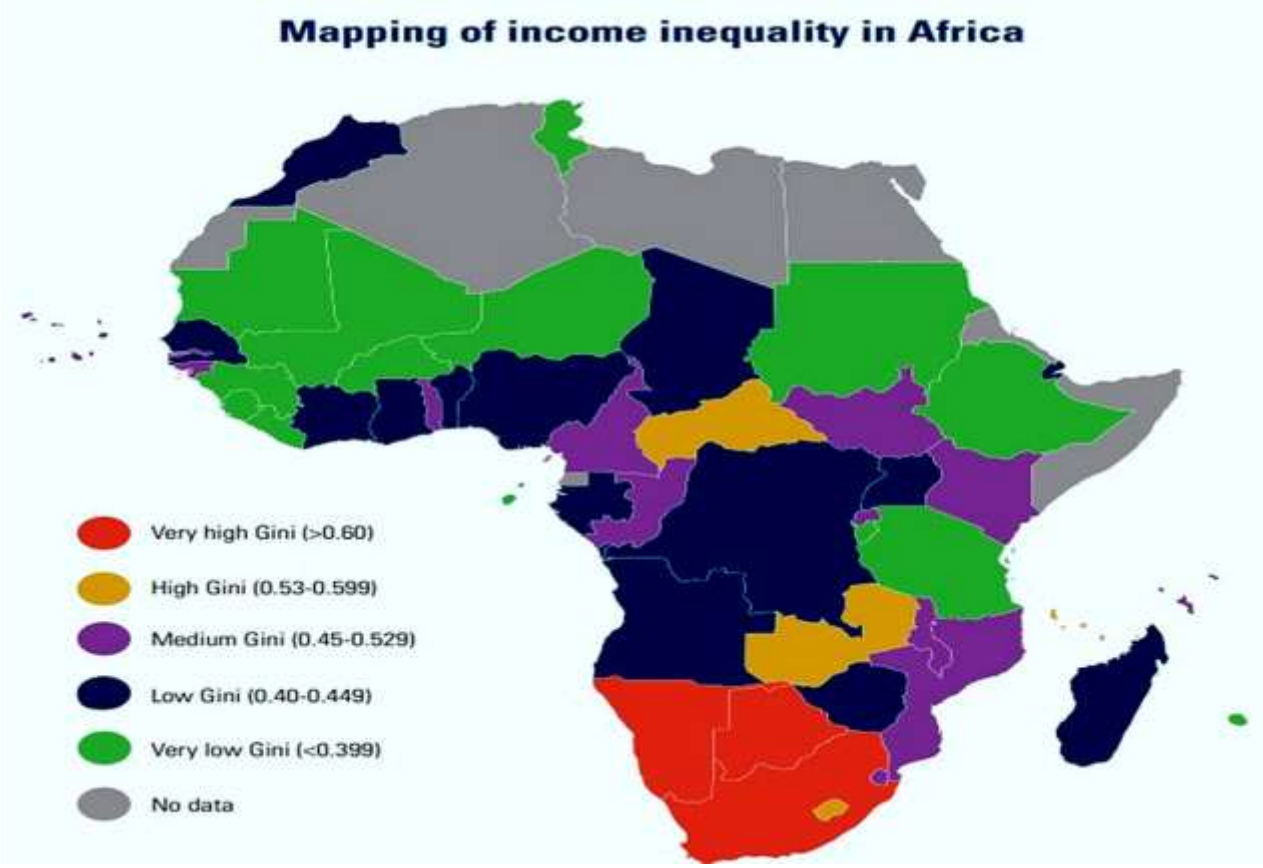


Figure 3: Mapping of income inequality in Africa

3.2 Data Presentation

This study analyzed three models and all the variables used as presented in the models are education (proxied with secondary school enrolment (SSRT)), healthcare (proxy with life expectancy at birth (LER) and maternal mortality ratio (MMR)), and unemployment as % of the total labour force (UNEP), real gross domestic product growth (GDPG), and income inequality (proxied by Gini co-efficient (GINI)). Foreign direct investment (FDI), inflation rate (INFL), real exchange rate (RER), government recurrent expenditure (proxy with government recurrent expenditure on health (GREH) and education (GREE)), population growth (POPG), trade openness (proxy with total merchandise (TRD)), crude oil price (OILP), monetary sector credit to private sector (CPS), and institutional quality index (proxy with the six indicators) are additional variables included in the models. Regression estimate using the autoregressive distributed lag for the three models was conducted after the pre-estimation test (descriptive statistics, multi-collinearity, and the unit root test) was completed. Finally, diagnostic tests were performed to assess the forecasting model's dependability.

3.2.1 Descriptive statistics

A summary statistic that quantitatively characterizes or condenses a dataset's attributes is called a descriptive statistic. The summary of the descriptive statistics, from the mean to the measures of dispersion, is shown in Table 2. These comprise each of the variables of relevance in this study, such as the mean, median, skewness, kurtosis, Jarque-Bera, etc.

The variables that are the focus of the research's analysis are listed in Table 2. This serves as a preliminary analysis before performing more in-depth inferential statistics. The mean values can provide a snapshot of the overall conditions or performance in the various areas under consideration in the study. For instance, the mean value for GDPG (4.3208) reflects the average annual growth rate in the country, while the mean value for GINI (46.1167) indicates the average level of income inequality across the observed period.

Each variable's range is displayed by its minimum and maximum values. The GINI, for example, illustrates the variation in income inequality with a minimum value of 35.1000 and a maximum value of 57.9000. Understanding the degree of variation or fluctuation in the data and

spotting any extreme values that might point to outliers or unusual observations depends heavily on the lowest and maximum values. Each variable's dispersion or spread around its mean is measured by the standard deviation. A smaller standard deviation, like that of MMR (22.3575), shows greater consistency in the values, whereas a higher standard deviation, like that of GREE (230.9788), indicates a greater fluctuation in the data. This measure is essential for understanding how much variability exists in the data and whether the variables exhibit significant fluctuations over time.

Table 2: Summary of Descriptive Statistics

Variables	Obs.	Mean	Minimum	Maximum	Std. Dev.	Jarque-Bera	Skewness	Kurtosis
GINI	30	46.1167	35.1000	57.9000	6.3891	1.1467	0.1418	2.0852
SSRT	30	37.3627	21.5219	54.8830	10.1966	1.9907	-0.0300	1.7394
LER	30	49.8968	45.4870	53.8035	2.6895	2.4633	-0.3574	1.7918
UNEP	30	4.0857	3.0740	5.7420	0.5966	11.2681	1.3642	4.2531
GDPG	30	4.3208	-1.8149	15.3292	3.6755	2.8304	0.5371	4.0538
OILP	30	56.6000	13.1300	112.0100	31.9633	2.0464	0.2801	1.8497
GREE	30	253.0197	14.05000	752.9800	230.9792	3.5623	0.7740	2.3267
GREH	30	152.9320	2.3700	468.6400	150.1105	3.6388	0.7770	2.2956
INFL	30	16.6443	5.3880	72.8355	14.2797	119.6169	2.8738	10.9157
FDI	30	1.2551	-0.0391	2.9002	0.8711	1.9874	0.2445	1.8378
MMR	30	1103.284	1047.0000	1148.0000	22.3575	0.4001	-0.2828	3.0101
CPS	30	11.0292	6.1744	19.6256	3.3677	2.5566	0.7133	3.0994
POPG	30	2.5790	2.0928	2.8028	0.2379	6.0178	-1.0913	2.7746
TRD	30	49182.70	9415.0000	116000.00	31557.14	2.0724	0.5735	2.4150
INSQX	30	0.1039	-2.6250	-2.6250	1.9529	3.7580	-0.6560	1.8687
RER	30	116.2599	69.19527	273.0017	47.1333	34.9562	1.9657	6.5369

Source: Author, E-Views 10

Additionally, the data distribution's normality is examined using the Jarque-Bera test statistic. Values near zero (such as SSRT with 1.9907) imply that the data are more likely to follow a normal distribution, whereas significant Jarque-Bera statistics (such as UNEP with 11.2681) show that the variable's distribution deviates significantly from normality. This test aids in determining whether the analysis satisfies the normalcy assumptions, which is crucial for further statistical testing. Skewness quantifies the data distribution's asymmetry. A GINI score of 0.1418, which is near zero, indicates a symmetric distribution. Positive numbers (like UNEP, which has 1.3642) show right-skewed distributions, whereas negative values (like RLW, which has -0.3697) show left-skewed distributions. Skewness is an essential measure for identifying the direction of the distribution’s tail, which may impact the interpretation of the data and the choice of statistical techniques.

In contrast to a normal distribution, kurtosis shows the "tailedness" of the data distribution, indicating whether the data has heavy or light tails. A normal distribution is indicated by a kurtosis value of 3. Kurtosis values larger than 3 are found for variables such as GDPG (4.0538) and UNEP (4.2531), indicating leptokurtic distributions with heavy tails, which may indicate a greater probability of extreme values. Conversely, variables like PSRT (1.7394) that have kurtosis values less than three suggest platykurtic distributions with lighter tails. Grasping the risk of outliers in the data requires a grasp of kurtosis. Nigeria's institutional quality is generally low, which reflects the predominance of weak institutions in the nation, according to the study's government institutional quality indicators, all of which had negative mean values.

3.2.2 Unit Root (Stationarity Test)

To determine whether the variables are stationary, the unit root test is used. It is crucial to establish stationarity because otherwise, data processing could produce skewed results. Untrustworthy interpretations and conclusions follow from this. When statistical features inside a time series, such as parameters like mean, variance, and autocorrelation, stay constant across time, this is referred to as stationarity. In order to guarantee the robustness of the results under the following

null hypothesis, this study assessed stationarity using Augmented Dickey-Fuller (ADF) tests applied to the data.

H_0: The variable is non-stationary because it contains a unit root. Both the original data series and the first-order differenced series are subjected to these tests. If the ADF test statistic values are greater than the critical value at a selected significance level (in absolute terms), the null hypothesis is rejected as the decision criterion. The result of the ADFunit root test can be found in the Appendix section, and a summary is presented in Table 3 below.

Table 3: Summary of ADF Unit Root Test Results

Variables	Test Statistics	5% Critical Value	Test Statistics	5% Critical Value	Order of Integration
	ADF Unit Root Test		Phillips-Perron Unit Root Test		
GINI	-5.409272	-3.580623	-5.589787	-3.580623	1(1)
GDPG	-3.000379	2.967767	-2.992070	2.967767	1(0)
LER	6.552401	-1.952910	6.252316	-1.952910	1(0)
MMR	-3.634333	-3.574244	-3.603902	-3.574244	1(0)
SSRT	-7.497994	-3.580623	-7.675935	-3.580623	1(1)
UNEP	-3.159431	-1.955681	-2.547429	-1.955681	1(1)
GREE	-3.239189	-1.952910	4.006492	-2.967767	1(0)
GREH	2.116632	-1.952910	3.431553	-1.952910	1(0)
INFL	-6.562969	-3.644963	-6.032745	-3.580623	1(1)
INSQX	-4.586683	-1.953381	-5.119973	-3.580623	1(1)
POPG	-3.001396	-2.991878	-1.960240	-1.952910	1(0)
RER	-5.455930	-3.580623	-11.09503	-3.580623	1(1)
CPS	-3.719067	3.580623	-5.056406	-3.580623	1(0)
FDI	-8.328103	-3.580623	-9.297491	-3.580623	1(1)
OILP	-4.805201	-3.580623	-4.867622	-3.580623	1(1)
TRD	-5.267576	--3.580623	-5.324639	-3.580623	1(1)

Source: Author's Computation, E-Views 10

According to summary table 3, a number of variables, including primary school enrollment, unemployment, GDP growth, gross fixed capital formation, labor force participation rate, government recurrent expenditure on education, government recurrent expenditure on health, real interest rate, and others, are stationary at level 1 (0). At first difference, however, the Gini coefficient, life expectancy rate, secondary school enrollment, foreign direct investment, trade, political stability, absence of violence or terrorism, and personal remittances received are all determined to be stationary (1). Thus, using the ARDL estimation technique is justified by having a mixture of even (11) 1(0) and nine (9) 1(1) orders of integration.

3.2.3 Discussion

The results indicates that income inequality in Nigeria has a long-term trend of fluctuation but has recently decreased with a Gini coefficient of 48 in 2014 to 39.1 in 2022. This shows that there is the gradual reduction of income distribution gaps. However, as Odozi (2023) claims, inequality in Nigeria has long been structural and only slightly reactive to the short-term policy changes, implying that the benefits in recent years can be easily undone. Nonetheless, this result was consistent with that of Oxfam (2024) which noted that the recent fiscal reforms and social intervention programmes have been able to bring slight changes in income distribution, despite high levels of inequality. In a similar investigation, Aderemi and Alabi (2023) discovered that Nigeria inequality panel has been driven by structural elements like labour market polarisation and ineffective redistributive policies, albeit in the short run. This would back up the finding of Table 1 in which the top 10% of the population owns a

disproportionate amount of income relative to the bottom 50% income, which indicates a 1:14 income inequality. In a parallel study, Oyekale (2020) proved that rural–urban inequalities and unequal access to productive resources are the most influential factors in income inequality in Nigeria.

In relative terms, this result was similar to that of Alvaredo et al. (2022) who indicated that the largest portion of the world wealth continues to be concentrated in the hands of the top 1 percent, which is reflected by the extreme concentration of wealth in Nigeria where the top 1 percent is able to absorb the consumption of dozens of people in the bottom half of the population. However, Chancel et al (2022) pointed out that the reduction in inequality is more severe in those economies that have stronger redistributive taxation, which is lacking in Nigeria. Moreover, the simplified facts about Sub-Saharan Africa show that inequality is fueled by historical, institutional and structural impediments. Similarly, in a related research, Asongu and Odhiambo (2020) discovered that colonial histories, as well as poor governance regimes, are important contributors to poor income distribution in African economies. This observation was in line with Bhattacharyya and Saha (2017), who highlighted that low institutional quality enhances inequality by facilitating the misappropriation of resources and seizure of elites.

Conversely, Duflo and Kremer (2015) claimed that quality of education can be used to alleviate inequality by a long way by making human capital develop. Nonetheless, the view that low access to quality education and healthcare persists in Sub-Saharan Africa as seen in this study, implies that this potential gains are yet to be maximized. This is in line with Hanushek and Wossmann (2007) who established that the amount of education without quality does not have many effects in enhancing the reduction of inequality. Moreover, in a similar research, Ataguba (2021) has shown that the lack of equal access to healthcare services is directly related to income differences in developing nations, which supports the established connection between a lack of healthcare services and poverty cycles in Nigeria. Conversely, Babones and Asafu-Adjaye (2021) discovered that with the aid of inclusive financing of public health, inequality can be significantly decreased through health improvements. The trends of global inequality indicated by Oxfam (2024) support the situation in Nigeria, where the accumulation of wealth among a small elite reflects the trends of extremely high levels of disparity worldwide. This observation was consistent with that of Blanchet, Saez, and Zucman (2022) who reported on rising real-time inequality due to asset gains of the richest groups in the world.

3.2.4 Implications of Findings

The implication of the results of this research are complex and can be applied to policy, governance, and development strategy. The outcome that human capital variables including education and healthcare lower income inequality suggests that the long-term growth in human capital development is critical in achieving inclusive growth. The result is consistent with Mbuba (2022), who stressed that the development of human capital greatly boosts the productivity of employees, thus decreasing income inequalities. It also corroborates Chukwurah et al. (2020), who discovered that capacity building enhances productivity in the public sector, and Onyiorah (2021) who emphasized that innovative teaching techniques reinforce the learning outcomes and economic engagement. Taken together, these studies support the implication that to decrease structural inequality in Nigeria, it is critical to enhance education quality and healthcare access.

The research also found out that unemployment exacerbates the income inequality, thus a weak and consumptive labour market. This poses a great implication to the job creation policies and skills development. Oguejiofor et al. (2022) also found entrepreneurship education to increase employability and global competitiveness, indicating that results in the labour market could be enhanced with the help of acquiring skills and education focused on innovation. Okoro et al. (2025) also highlight that digital and marketing skills increase self-employment, which justifies the idea of labour market reforms to promote self-reliance and diversification of employment. The institutional forces were also identified to have a significant effect on inequality and this means that poor governance institutions increase income inequalities. This aligns with Mbuba (2016), Mbuba (2018), and Mbuba (2021) who point out that institutional inefficiency, laxity in regulatory enforcement and inadequate ethics in the public service are obstructions to equitable development. Equally, Muogbo

et al. (2025) stress that good institutional structures promote sustainability and economic performance.

The paper also discovered a long term relationship between inequality, economic growth, human capital, labour market and institutional variables, which means that the variables are structurally related in the long term. It aligns with Ezeogidi et al. (2020), who state that insecurity and systemic instability have an impact on the development outcomes in Nigeria. Molokwu et al. (2023) also affirm the latter by demonstrating how historical and structural circumstances influence socio-economic patterns over a long period of time. Lastly, the multifaceted nature of the inequality-economic growth relationship suggests that although inequality and growth can be somewhat compatible in the short-run, long-term differences can undermine sustainable growth. This supports Iwuno and Odum (2025), Iwuno (2025), and Obikeze et al. (2022) who highlight that insecurity, governance issues, and inefficient work of the public sector have an adverse impact on inclusive development. On the whole, the results suggest that to attain inclusive economic growth in Nigeria, it is necessary to implement a set of actions that will enhance the development of human capital, efficiency of the labour market, and institutional quality.

4. Conclusion

This paper has explored the Income Inequality, Economic Growth, and the Roles of Human Capital, Labour Market as well as Institutional Dynamics in Nigeria between 1994 and 2023 through the ARDL estimation model. The empirical findings indicated that human capital variables, especially access to secondary education and healthcare are important factors in determining income inequality in Nigeria. In particular, the enhancement of secondary education enrolment and access to healthcare was observed to decrease income inequality, which implies the relevance of human capital growth in enhancing distributional equity. Conversely, the labour market situation (especially unemployment) greatly contributed to income inequality, which underscores the negative distributive impact of poor employment creation in the Nigerian economy. The results also indicated that ineffectiveness in state expenditures and institutional failures were also found to increase incomes inequalities throughout the study. The ARDL bounds test showed that there was a long-run relationship between income inequality, economic growth, human capital, labour market and institutional variables implying that the variables collectively determine distributional outcomes in Nigeria. Moreover, the findings revealed that there is a complex connection between income inequality and economic growth where inequality can provide growth effects in the short run but restrict growth in the long run in an inclusive way.

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