AN ASSESSMENT OF THE TRENDS OF INCOME GROWTH, POVERTY, INEQUALITY AND HUMAN WELFARE IN AFRICA: NEW EVIDENCE FROM SELECTED SUB-SAHARAN AFRICAN COUNTRIES

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ABSTRACT

Despite the recent decent performance in income growth, Africa remains one continent that has continued to be severely riddled by deep-seethed endemic poverty and excruciating income inequality thereby causing sharp deterioration in all indices of human welfare. This paper is an attempt to assess the income growth, poverty, inequality, and human welfare experience in Africa using recent empirical socio-economic metrics in selected Sub-Saharan African countries. The period under review is 2012 – 2021 and the study utilizes a quantitative research technique to assess how income growth, poverty, and inequality interact to influence human welfare in the selected countries. Evidence shows that income growth in African countries benefits the already well-off and that poverty, in fact, is severe and widespread and has a negative impact not only on the prospects of growth but also on even income distribution which is crucial for inclusive growth and sustained human welfare. It was further confirmed that poverty and poverty and inequality have risen and human welfare condition in Sub-Sahara Africa has plummeted over the decade across the region and when compared to the other regions and the world average. We found that within Africa and beyond most poverty is concentrated in the Sub-Saharan Africa region. We, therefore, recommend the following policy applications to stem the tides of poverty and income inequality in Sub-Saharan African countries, amongst others: shifting the focus of poverty-alleviation policies from income/economic growth as the primary driver of poverty reduction to policies targeted at decelerating inequality, placing greater focus on human development strategies to improve the quality of life and providing the appropriate institutional and macroeconomic framework to increase access to markets for the poor.

Keywords: Income growth, Poverty, Inequality, Gini Coefficient, Human Development Index.

INTRODUCTION

Fundamentally. the UN Sustainable Development Goals (SDGs) aim to end poverty, protect the planet, and ensure prosperity for everyone by 2030. Apart from the goals of "No Poverty" and "Zero Hunger" which occupy the first and second positions respectively in the array of the 17 life-changing goals, "Reduced Inequalities" and "Good Health and Well-being" are the other major goals outlined by the UN in 2015 to improve the planet and the lives of its citizens by 2030. However, over seven years down the lane, evidence from many empirical studies in African economies has established that the living conditions are fast deteriorating as indicated by the inconsistent income growth which has exacerbated the rate and level of poverty and made inequalities more pronounced between socio-economic strata with the attendant consequence of low indices of life satisfaction across different regions and countries in Africa. Poverty and inequality triggered by fluctuations in household income and other socio-economic factors are not only widespread but also severe and deep.

Even though Africa made impressive economic progress in the 2000s, several countries sustained double-digit growth. Good macroeconomic performance provides an opportunity on the one hand, to reduce poverty and on the other hand, to reconcile the differences between revenues by strengthening a strong middle class. However, Africa remains overwhelmed by unequal income and wealth distribution. The poor performances, in terms of reducing inequality, are not specific to resource-poor countries only, but also a feature of resource-rich countries such as the Congo, Nigeria, Angola, and South Africa (AEO, 2011). Yet, there seems to be no respite as Begashaw (2019) noted that "Despite the widespread adoption of and progress towards the Sustainable Development Goals, African countries continue to lag behind most of the world when it comes to socioeconomic development. In fact, a recent report by the Sustainable Development Goals Centre for Africa…reveals that minimal progress has been made, and in some instances, there is complete stagnation. More than half of the global poor (those who are under $1.90 per day) are found in Africa. One in three Africans is at risk of food insecurity."

In a similar vein, Ibi-Ajayi (2002) notes that "empirical evidence shows that countries that have reduced poverty rates are the ones that have grown fastest, while poverty has grown fastest in countries that have stagnated economically". We can hypothesize here that sustained efforts to alleviate poverty and bridge inequality gaps are critical and sufficient conditions for countries to experience and sustain income growth for an extended number of years while, in a similar manner, a sustained income growth with the right social, economic, and institutional conditions is a sine qua non for poverty and inequality reduction and the attainment of high-level human welfare. The Growth-Inequality-Poverty (GIP) model sheds further light on the inextricable nexus between the three concepts by theorizing that a country's change in absolute poverty can be fully determined by its change in income growth and reduction in income inequality and those development strategists must focus on a combination of policies focusing on improving income growth and on reducing inequalities in order not to miss the opportunity of reducing absolute poverty – a pre-condition for the attainment of human welfare.

A comprehensive appreciation of the growth-poverty-inequality nexus provides a deep understanding of how to operationalize the goal of leaving 'no one behind' as articulated in the 2030 Agenda for Sustainable Development (SDGs). The SDG strategy of reaching the furthest behind first has brought to the fore a greater realization that national and global progress has not benefitted people and groups equally. The rising trend of people and groups experiencing multiple and overlapping inequalities (e.g. females, rural dwellers, and ethnic

minorities) further intensifies the need to promote inclusive development (Odusola, 2019). Thus, the objective of this paper is to assess the trends and dimensions of income growth, poverty and inequality, and human welfare in twelve (12) selected Sub-Saharan African countries between 2012 to 2021 by analyzing empirical data from World Bank Indicators to assess the empirical realities in those countries and situating it within the context of stylized facts from previous empirical evidence. It is now possible for economists to measure and quantify some economic variables to determine their roles in the development process and allow for inter-countries comparison of their trends and impact on the macroeconomy in different countries. Indeed, the countries regarded as "growth miracles" are not just a place where more goods and services, but where there are better health and greater happiness for millions of people; that is, as the countries grow, their citizens often end up with longer, healthier, and happier lives thereby creating an enabling atmosphere for the growth process to be sustainable over a long period.

The rest of the paper is structured as follows: **Section 2** centers on the conceptualization, measurement dimensions, and determinants of the variables of interest as well as their theoretical and empirical nexuses in order to gain deeper insights into their relationships and situate the study in a proper perspective. **Section 3** reviews the empirical literature to identify the previous research contributions to the subject matter and situate the research gap to be filled by the present study. **Section 4** discusses the methodological approach to the study, while the focus of **Section 5** is on the assessment of the present pattern of income growth, inequality, poverty, and human welfare in the selected countries vis a vis the world average through a descriptive analysis to identify the association among the variables of the basis of the empirical data for the period between 2015 and 2021. **Section 6**concludes the paper with some salient recommendations.

1.0   CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1   CONCEPTUAL FRAMEWORK

2.1.1   Definition and Classification of Income

According to the Income Consumption and Wealth (ICW) Framework of the Organization of Economic Cooperation and Development (OECD), income is defined as "income consists of all receipts, whether monetary or in-kind (goods and services), that are received by the household or by individual members of the household at annual or more frequent intervals, but excludes windfall gains and other such irregular and typically one-time receipts. Household income receipts are available for current consumption and do not reduce the net worth of the household through a reduction of its cash, the disposal of its other financial or non-financial assets or an increase in its liabilities. Household income covers i) income from employment (both paid and self-employment); ii) property income; iii) income from the production of household services for own consumption; iv) current transfers received (other than social transfers in kind); and v) social transfers in kind.

The table below presents the classification of the income components based on the summary of the detailed Income, Consumption, and Wages (ICW) Framework:

Table 1: Income Components

S/N	Element	Component	
1	Income from employment	(i)	Employment income, (ii) cash wages and salaries, (iii) cash commission and piece-work payment, (iv) cash tips and gratuities, (v) directors' fees, (vi) shares offered as part of employee remuneration, (vii) profit-sharing business and other forms of profit-related pay, (viii) other cash bonuses, (ix) free or subsidized goods and services from employers, (x) severances and termination pay, (xi) employer social insurance contribution, (xii) income from self-employment, (xiii) profit/loss from own unincorporated enterprise, (xiv) goods or services produced for barter less cost of inputs and (xv) goods produced for own use less cost of inputs.
2	Property Income	(i)	Income from financial assets net of expenses, (ii) rent from real estate other than owner-occupied dwellings net of expenses and (iii) royalties and other income from other non-financial assets net of expenses
3	Income from household production of services for own consumption	(i)	Net value of housing services provided by owner-occupied dwellings, (ii) value of unpaid domestic services, and (iii) net value of services from household consumer durables
4	Current transfers received excluding STIK	(I)	pension and other cash benefits from social security, (ii) pension and other benefits from employment-related social insurance, (iii) social assistance benefits in cash from the Government, (iv) current transfer received from other households, (v) current transfer received in cash from non-profit organizations, and (vi) other current transfer received excluding social transfer in kind
5	Income from production	Sum of 1 and 3	
6	Primary income	Sum of 1, 2 and 3	
7	Total income	Sum of 1 – 4	
8	Current Transfer Paid	(i)	direct taxes (net of refunds), (ii) compulsory fees and fines, (iii) employees and employers social insurance contributions, (iv) current transfers paid to other households, (v) current transfers paid to non-profit organizations, and (vi) other current transfers paid
9	Disposable income	1 minus 8	
10	STIK	Social transfer in kind	
11	Adjusted Disposable income	9 minus 10	

Source: Computed by the Author based on the ICW Framework of OECD

- **Income from production**: This concept is the sum of income from employment and income from household production of services for own consumption.
- **Primary income**: Primary income adds property income to income from production.
- **Total income**: Total income is defined as the sum of current transfers received and primary income.
- **Current transfers paid**: This category includes payments such as direct taxes, fees or fines paid, employer and employee contributions to social insurance schemes, current transfers to non-profit organizations, and current transfers to other households, such as

child support or alimony payments. These payments are current expenditures by the household that do not directly support the current consumption of the household.

- **Disposable income**: Disposable income refers to total income (TI) minus current transfers paid (CTP).
- **Social transfers in kind (STIK)**: Social transfers in kind (STIK) are defined as goods and services provided by the government and non-profit institutions that benefit individuals but are provided free or at subsidized prices, e.g. food, housing, education, and health care.
- **Adjusted disposable income**: This is the sum of disposable income (ID) plus social transfers in kind. Exclusions from income Household income exclude several types of receipts. These include receipts that are large and not received on a regular ongoing basis, and changes in the value of assets over time. For example, windfall gains and other such irregular and one-time receipts include large lottery prizes, large gambling winnings, non-life insurance claims, inheritances, and lump-sum retirement.

- **Equivalized Household Income**: Equivalization is the standard methodology in economics in which household income is modified to account for the different financial needs of different household sizes and compositions. Equivalised income is the total household income that has been recalculated to take into consideration differences in household demographic composition and size. If households show identical equivalised incomes, their standard of living can be said to be equal. The equivalised income is calculated by dividing the household's total income from all sources by its equivalent size, which is calculated using the modified OECD equivalence scale. This scale attributes weight to all members of the household:

- 1.0 to the first adult;
- 0.5 to the second and each subsequent person aged 14 and over;
- 0.3 to each child aged under 14.

The equivalent size is the sum of the weights of all the members of a given household.

2.1.2   Conceptualization of Poverty and Income Inequality

The Concept of Poverty

There is no consensus among development economics scholars on a universally acceptable definition of poverty because poverty affects many aspects of human conditions including physical, moral, and psychological; a concise and generally accepted definition of poverty is therefore elusive. However, there are four major conceptualizations of poverty are summarized in the table below:

Table 2: Schematic Overview of the Concept of Poverty

A: Concept of Poverty

Conceptual Basis	Approaches	Indices
Poverty as a consequence of deficiency provision of goods	Absolute approach or conventional economic approach	Consumer-oriented indices: income, achievable consumption level, food supply, medical care; basic needs: food, clothing, accommodation, etc
Poverty as a consequence of deprivation and lack of right	Relative deprivation, earning capacity, and entitlement approaches	Income from wage labour, income from the sale of assets, resources from own production, the cost of purchasing resources (food), social security claims, lack of rights or opportunities, control of resources, etc.
Poverty as a consequence of insufficient capabilities	Capability approach	How goods are used (e.g. market for goods, products, and labour) and benefits derived from goods, freedom, and capability of transforming resources to a higher quality of life
Poverty as a consequence of social and economic exclusion mechanism	Socio-economic exclusion mechanism based on the paradigm of solidarity, specialization and monopolization; vulnerability and short-term shocks	Participation in social, economic and political (e.g. democratic processes, development, net asset investment, shares and claims.

Source: Anyanwu, C.A. (1997)

B: Typology of Poverty

Classification: Basic	Typology I	Typology II
Basic needs	1a. Absolute Poverty - Primary Absolute Poverty - Secondary Absolute Poverty	1b. Relative Poverty - Objective Relative Poverty - Subjective Relative Poverty
Individual Circumstances	2a. Conjectural/Transitory/Stochastic Poverty	2b. Structural Poverty
Microeconomic vs Macroeconomic	3a. Microeconomic Concept of Poverty	3b. Macroeconomic Concept of Poverty
Location	4a. Urban Poverty	4b. Rural Poverty
Nature of Society	5a. Generalized Poverty 5b. Island Poverty	5c. Case Poverty

Source: Anyanwu, C.A. (1997)

The above tables are meant to illustrate the fundamental problem of determining the scale of poverty and deriving effective measures to alleviate it on one hand and the basic types (typology) of poverty based on different criteria.

Given all these, the appropriate question to ask is whether there is a right answer to the concept of poverty. The answer is certainly 'no', but current thinking does allow some simplification. First, poverty needs to be understood first and foremost as a problem at the individual rather than the household level. Second is the use of income or food measure of poverty. Third is the settled consensus that people move in and out of poverty and that seasonal, cyclical or stochastic shocks are important in poverty conceptualization and measurement. Beyond these areas of agreement, there are different views on whether assets, including social claims, should be counted in a poverty matrix, on the importance of vulnerability, and on the relative prioritization of monetary and non–monetary variables.

What is becoming clear in contemporary literature on poverty is that the most radical proponents of a participatory approach would deny the validity of standardized, so–called objective measures of poverty, whether based on income or wealth. Chambers, for example, has argued that these approaches are reductionist. On the basis of the above, it becomes clear that conceptualizing poverty itself is problematic. But the exercise is necessary for the proper identification of the poor and their effective targeting in a more pragmatic approach to poverty alleviation.

2.1.3   The Measurement of Poverty

The literature has identified a number of desirable properties for poverty measures. Basic among these are *the monotonicity axiom, the transfer axiom, and additive decomposability*. The measure of poverty should increase when the income of the poor household, for instance, decreases (monotonicity) or when income is transferred from a poor to a less poor household (the transfer axiom). These properties imply that one desires the measure of poverty to take into account of the distribution of living standards among the poor, not simply to indicate how many people are poor. Another desirable property is that the measure of poverty be additively decomposable by population subgroups so that aggregate poverty can be represented as an appropriately weighted sum of poverty levels in the subgroups of a population. This feature facilitates the construction of a poverty profile – showing how poverty varies across subgroups of a population – and it also ensures that when poverty changes in the subgroup, without any other changes, aggregate poverty will also increase.

According to Ajakaiye and Adeyeye (2002), Poverty measurement is undertaken to: (i) Determine a yardstick for measuring the standard of living. (ii) Choose a cut-off poverty line, which separates the poor from the non-poor (indication of how many people are poor), (iii)Take account of the distribution of standard of living among the poor, (iv) Comparison of poverty over time, among individuals, group or nations, (v) Guide policy on poverty alleviation. They further stated that there are certain desirable properties of the measure of poverty. They are: (i) the Monotonicity axiom (i.e measure of poverty should increase when the income of the poor household decreases), (ii) the transfer axiom i.e poverty of a household should increase when income is transferred from a poor to a less poor household. · Demonstrate the distribution of living standards among the poor, (iii) The measure should be additively decomposable by population subgroups. The measurement of poverty is complex and varied. Discussion of poverty measures has, therefore, commenced with the simple living standard measure, poverty line determination, and array of measures involved in absolute and relative poverty measures.

The table below presents a summary of the various poverty measures adopted in the theoretical and empirical literature.

Table 3: A Schema of the Measurement of Poverty

1. Absolute Poverty Measures			2. Relative Poverty Measures		
Kinds	Criteria	Index/Measures	Kinds	Criteria	Index/Measures
a. The headcount ratios/incidence of poverty	Income criteria	Headcount index/headcount ratio	a. Average Income	Income, subsistence, or a combination of both criteria	Average income
b. The poverty gap/income shortfall	Income criteria	Income gap ratio/poverty gap ratio	c. Number or proportion of people whose income is less than or an equal predetermined percentage of mean income	Income, subsistence, or a combination of both criteria	Percentage population below a threshold mean income
d. Disparity of income distribution	Income criteria	Lorenz curve and Gini co-efficient			
e. Composite poverty measures i. The Sen Index ii. The P class of measures	Income criteria Income criteria	Sen index P measures			
f. The physical quality of life index (PQLI)	Subsistence criteria	PQLI			
g. Augmented physical quality of life index (APQLI)	Subsistence criteria	APQLI			
h. Human development index (HDI)	Subsistence criteria	HDI			

Source: Anyanwu, C.A. (1997)

2.1.4   Inequality as a Social and Economic Concept

Inequality can be viewed from different perspectives, all of which are related. The most common metric is *Income Inequality*, which refers to the extent to which income is evenly distributed within a population. Related concepts are *lifetime Inequality* (inequality in incomes for an individual over his or her lifetime), *Inequality of Wealth* (distribution of wealth across households or individuals at a moment in time), and *Inequality of Opportunity* (impact on the income of circumstances over which individuals have no control, such as family socioeconomic status, gender, or ethnic background). All of these inequality concepts are related and offer different yet complementary insights into the causes and

consequences of inequality, hence providing better guidance to governments when designing specific policies aimed at addressing inequality.

2.1.5   Measurement of Income Inequality

The **Gini coefficient** is a measure of the inequality of a distribution. It is defined as a ratio with values between 0 and 1: the numerator is the area between the Lorenz curve of the distribution and the uniform distribution line; the denominator is the area under the uniform distribution line. The Gini index is the Gini coefficient expressed as a percentage and isequal to the Gini coefficient multiplied by 100. (The Gini coefficient is equal to half of the relative mean difference.)

The Gini coefficient is often used to measure income inequality. Here, 0 corresponds to perfect income equality (i.e. everyone has the same income) and 1corresponds to perfect income inequality (i.e. one person has all the income, while everyone else has zero income). The Gini coefficient can also be used to measure wealth inequality. This use requires that no one has a negative net wealth. It is also commonly used for the measurement of the discriminatory power of rating systems in credit risk management.

The main advantage of the Gini coefficient is that it is a measure of income inequality by means of ratio analysis, rather than a variable unrepresentative of most of the population, such as per capita income or gross domestic product. It can also be used to compare income distributions across different population sectors as well as countries, for example, the Gini coefficient for urban areas differs from that of rural areas in many countries (though the United States urban and rural Gini coefficients are nearly identical).

Figure 1: Graphical Representation of the Gini Coefficient
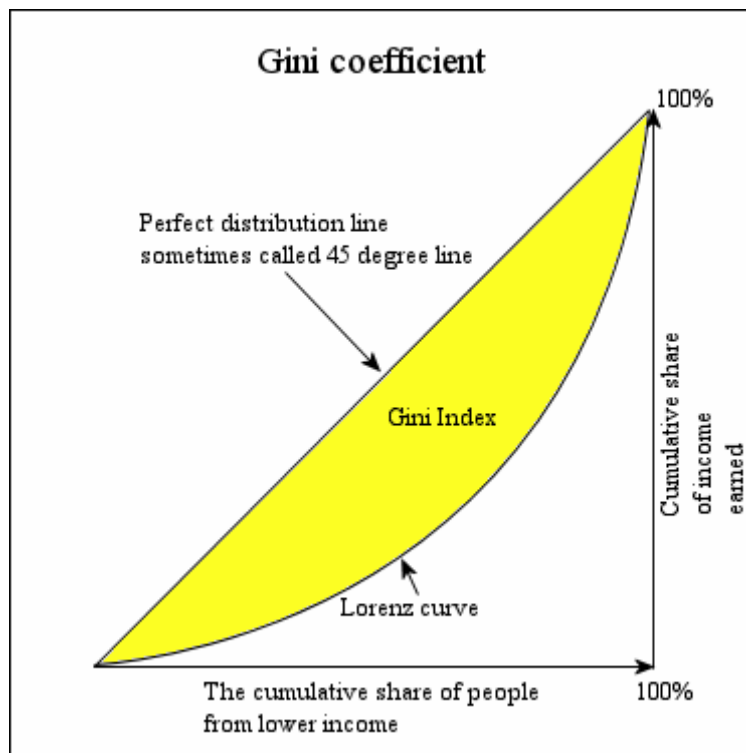
Source: Wikipedia Free Online Dictionary

The Gini coefficient satisfies four important principles:

o *Anonymity*: it does not matter who the high and low earners are.

o *Scale independence*: the Gini coefficient does not consider the size of the economy, the way it is measured, or whether it is a rich or poor country on average.

o *Population independence*: it does not matter how large the population of the country is.

o *Transfer principle*: if income (less than the difference), is transferred from a rich person to a poor person the resulting distribution is more equal.

2.1.6 Causes and Consequences of Income Inequality

In the economic literature, increasing and excruciating income inequality has been linked with numerous negative outcomes which impacted adversely on human welfare. On the economic front, negative results transpire beyond the obvious poverty and material deprivation that is often associated with low incomes. Income inequality has also been shown to reduce growth, innovation, and investment. On the social front, it has been found that societies that are more unequal have worse social outcomes on average than more egalitarian societies. A 30-year summary of the Index of Health and Social Problems by Wilkinson and Pickett (2009) revealed a host of different health and social problems (measuring life expectancy, infant mortality, obesity, trust, imprisonment, homicide, drug abuse, mental health, social mobility, childhood education, and teenage pregnancy) as being positively correlated with the level of income inequality across rich nations and across states within the US.

Economic Consequences: Foremost economically speaking, increasing income inequality has been linked with reduced growth, investment, and innovation. OECD cross-national study found that once a country's income inequality reaches a certain level it reduces growth. The growth rate in these countries would have been one-fifth higher had income inequality not increased, while the greater equality of the other countries included in the study helped to increase their growth rates. Consumer spending is good for economic growth but rising income inequality shifts more money to the top of the income distribution, where higher-income individuals have a much smaller propensity to consume than lower-income individuals. The wealthy save roughly 15–25% of their income, whereas low-income individuals spend their entire income on consumer goods and services.

Therefore, greater inequality reduces demand in an economy and is a major contributor to the 'secular stagnation' (persistent insufficient demand relative to aggregate private savings) that the largest Western economies have been experiencing since the financial crisis. Inequality also increases the level of debt, as lower-income individuals borrow more to maintain their standard of living, especially in a climate of low-interest rates. Combined with deregulation, greater debt increases instability and "was a major contributor to, if not the underlying cause of, the 2008 financial crash" (Brown 2017: 35–36).

Health Consequences: Economists have found key associations between income inequality for both physical and mental health. For example, they discovered that on average the life expectancy gap is more than four years between the least and most equitable richest nations (Japan and the US). Since their revelations, overall life expectancy has been reported to be declining in the US. Moreover, Marmot's famous Whitehall studies found an inverse relationship between salary grade and ill health, whereby low-grade workers were four times as likely as high-grade workers to suffer from ill health. Health steadily improves with rank

and the correlation is little affected by lifestyle controls such as tobacco and alcohol usage. However, the leading factor that seems to make the most difference in ill health is job stress and a person's sense of control over their work, including the variety of work and the use and development of skills.

'Psychosocial stresses,' like those appearing in the Whitehall studies, have been found to be more common and frequent amongst low-income individuals, beyond just the workplace. Wilkinson and Pickett (2019) posit that greater income inequality engenders low self-esteem, chronic stress and depression, stemming from status anxiety. This occurs because more importance is placed on where people fit in a hierarchy with greater inequality. For evidence, they outline a clear relationship of a much higher percentage of the population suffering from mental illness in more unequal countries. Meticulous research has shown that huge inequalities in income result in the poor having feelings of shame across a range of environments.

Income inequality also impacts happiness and well-being, as the happiest nations are routinely the ones with low inequality, such as Denmark and Norway. Happiness has been proven to be affected by the law of diminishing returns in economics. It states that higher income incrementally improves happiness but only up to a certain point, as any individual income earned beyond roughly $70,000 US dollars, does not bring about greater happiness. The negative physical and mental health outcomes that income inequality provokes, also impact key societal areas such as crime, social mobility, and education.

Social Consequences: Research has found that the rates of violent crime are lower in more equal countries. This is largely because more equal countries have less poverty, which leads to fewer people being desperate about their situation, as lower-income individuals have been shown to commit more crimes. Relatedly, according to strain theory, more unequal societies place higher social value in achieving economic success, while providing lower means to achieve it. This generates strain, which may lead more individuals to pursue crime as a means of attaining financial success. At the opposite end of the income spectrum, the wealthy in more equal countries are also less likely to exploit others and commit fraud or exhibit other anti-social behaviour, partly because they feel less of a need to cut corners to get ahead, or to make money. Homicides also tend to rise with inequality. Daly (2016) reveals that inequality predicts homicide rates better than any other variable and accounts for around half of the variance in murder rates between countries and American states. Roughly 90% of American homicides are committed by men, and since the majority of homicides occur over status, inequality raises the stakes of disputes over status amongst men.

2.2 THEORETICAL FRAMEWORK

Several theories abound in economic literature which seek to examine the nexus between income growth, poverty and inequality and their impact on human welfare. On the distributional consequences of growth, several recently published micro-economic based case studies indicate clearly that the relationship is at once strong and complex. This is in contrast to the large number of cross-country regressions which find no significant relationship between growth and inequality and on the basis of which it would be tempting to conclude that 'growth is good for the poor', whatever its nature. Cross-country studies are also mostly inconclusive regarding the effects of inequality on growth, and it is difficult to conceive of direct microeconomic evidence that would identify that relationship with precision (Bourguignon, 2004).

However, to bring the study within a manageable range and to put it in a proper perspective, only the Growth-Inequality-Poverty (GIP) triangle model shall be reviewed in the present study.

The Growth-Inequality-Poverty (GIP) Triangle Model

There is extensive theoretical literature examining the relationship between poverty and economic growth within developing countries. In low-income countries, growth has been shown to be an important driver for absolute poverty reduction. Many studies test the relationship between poverty and growth by estimating the growth elasticity of poverty – how much a given rate of economic growth reduces poverty or how much poverty declines in percentage terms for a given percentage rise in economic growth. A poverty-inequality-growth triangle (sometimes called the growth-inequality-poverty triangle was first used by Bourguignon (2004) to describe the fact that a country's change in absolute poverty can be fully determined by its change in income growth and income inequality (Figure 2).

The model states that a change in the distribution of income can be decomposed into two effects. First, there is the effect of a proportional change in all incomes that leaves the distribution of relative income unchanged, i.e. a growth effect. Second, there is the effect of a change in the distribution of relative incomes which, by definition, is independent of the mean, i.e. a distributional effect. The following definitions help to clarify these linkages:

• "Poverty" is measured by the absolute poverty headcount index, i.e., the proportion of the population below a particular poverty line (e.g. 1$ a day) as derived from household survey data.

• "Inequality" (or "distribution") refers to disparities in relative income across the whole population, i.e., disparities in income after normalizing all observations by the population mean so as to make them independent of the scale of incomes.

• "Growth" is the percentage change in mean welfare level (e.g. income or consumption) in the household survey (Bourguignon, 2004).

**Figure 2: The Growth-Income-Poverty Triangle**
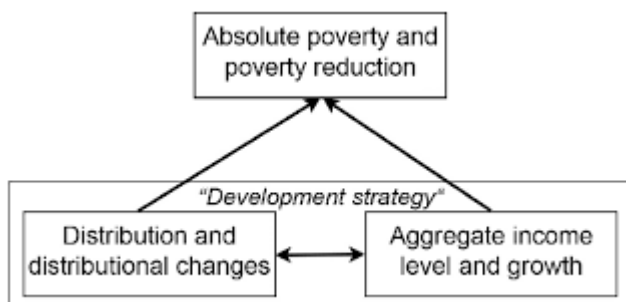
Source: Bourguignon (2004), p.4. (reproduced)

Bourguignon (2004) also introduces a useful identity which expresses the change in absolute poverty as a function of: (a) the growth in mean income and (b) changes in the distribution of relative income (Change in Poverty ≡ F(growth, distribution, change in distribution)). He illustrated this identity using a diagram (Figure 3).

A large-scale empirical study covering 138 countries over the period 2005–2010 (Khan et al., 2014), tested for empirical evidence of a poverty-growth-inequality triangle and found that:

➢ The impact of economic growth and income inequality on poverty reflects the fact that income inequality increases poverty while economic growth decreases poverty;

➢ The impact of inequality on increasing poverty is somewhat greater than the effect of growth in average income in reducing overall poverty in a sample countries;

➢ Poverty itself is also likely to be a barrier for poverty reduction [see more on this below];

➢ Inequality seems to predict lower future growth rates.

Figure 3: Decomposition of Change in Income Distribution and Poverty into Growth and Distributional Effects
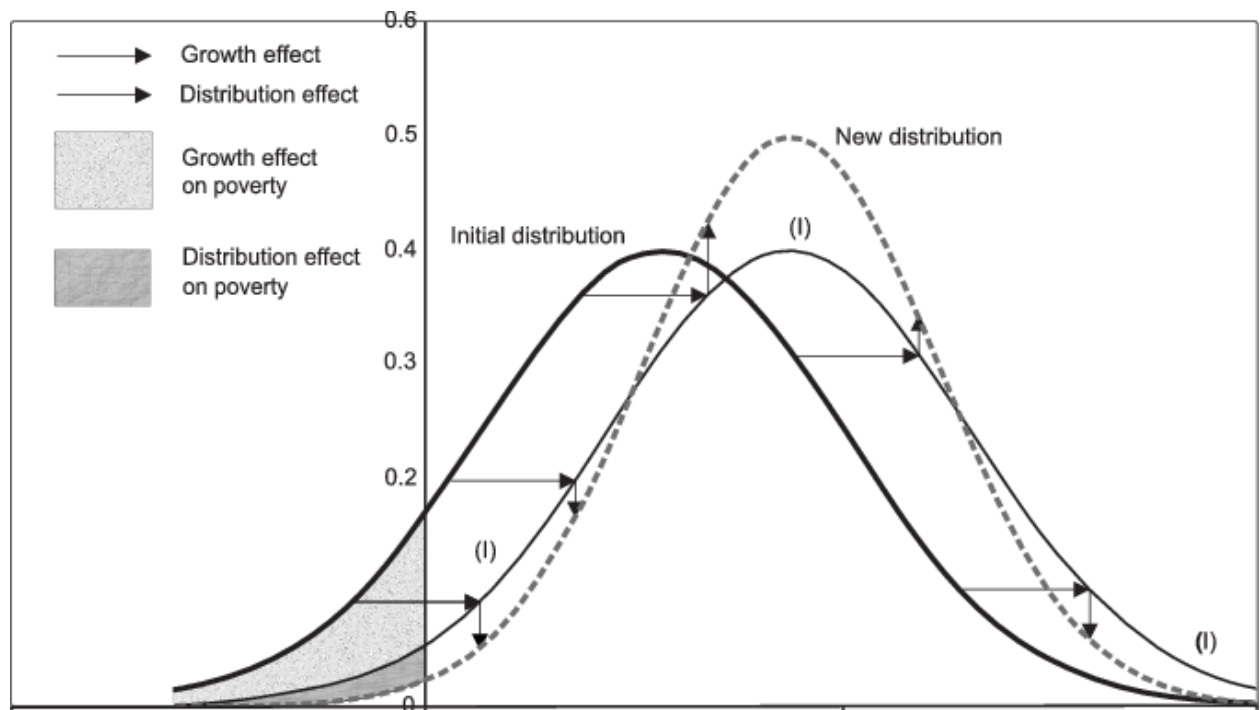
Source: Bourguignon (2004) Figure 1, p.7. (reproduced).

A change in poverty can then be shown to be a function of growth, distribution and the change in distribution. This is illustrated in Figure 3, where the poverty headcount is simply the area under the density curve at the left of the poverty line (here set at US$1 a day). This figure shows the density of the distribution of income, that is the number of individuals at each level of income represented on a logarithmic scale on the horizontal axis. The move from the initial to the new distribution goes through an intermediate step, which is the horizontal translation of the initial density curve to curve (I). Because of the logarithmic scale on the horizontal axis, this change corresponds to the same proportional increase of all incomes in the population and thus stands for the pure growth effect' with no change taking place in the distribution of relative incomes. Then, moving from curve (I) to the new distribution curve occurs at constant mean income. This movement thus

corresponds to the change in the distribution of 'relative' income, or the 'distribution' effect.

Furthermore, as argued by Kanbur (2016), inequality intermediates the impact of growth on poverty through three channels. First, increasing inequality while holding the mean constant will usually increase poverty; and when a rising mean is accompanied by rising inequality, the poverty reduction power of economic growth will be diminished. But when growth is accompanied by lower inequality, the poverty-reducing power of growth is boosted. The second channel is the level of inequality. In distribution-neutral growth, even when inequality is constant, at a high level of inequality, the poverty-reducing power of growth is less. The third channel is through intra-household inequality (e.g. between men and women or young and old in per capita income or consumption). The inability of national statistics to capture this dynamic often overestimates the responsiveness of poverty to growth (Odusola, 2003).

Again, the link between growth and inequality is the basis of the theoretical postulation of Arthur Lewis in 1954, which argued that savings rise as income rises. It shows that in egalitarian societies raise national savings that help propel investments, which consequently boosts economic growth. Conversely, the propensity to save is lower at the bottom income level. At this level, the credit constraint limits the capacity (either of the poor or low-income earners) to invest in their human capital (including health and education) or entrepreneurial development, which limits growth.

3.0   REVIEW OF EMPIRICAL LITERATURE

There are several studies in the literature investigating the relationship between income growth, poverty, income inequality and human welfare both at the global and continental levels. These studies are methodologically diverse and therefore come up with divergent findings on how the trends of income growth, poverty and income inequality interact to affect the quality of human welfare. A few of these studies are considered in the present study to put the work in a proper perspective with a view to identifying the research loophole to be addressed by the current work.

The poverty-reducing effect of growth has been corroborated in several studies. Dollar and Kraay (2002) investigate the systematic relationship between economic growth and poverty reduction for a sample of 92 countries from 1950 to 1999. These authors find a robust pattern across countries where the share of income of the first quintile of the population varies proportionally to average incomes. They uncover a strong and positive relationship between these two variables, with a correlation coefficient that is not statistically different from one. Dollar and Kraay also evaluate the extent to which policies and institutions that have been identified in the literature as promoting growth can play a role in reducing poverty by increasing the share of income of the poorest quantile. The main conclusion of this analysis is that growth-enhancing policies and institutions do benefit the poor and the rest of society in equal proportions.

Building on this work, using data from a panel of 80 countries, Kraay (2006) decomposes the changes in absolute poverty into three potential sources: the growth rate of average income; the sensitivity of poverty to growth; and a poverty-reducing pattern of growth (changes in relative income). In the short term, growth in average income accounts for 70 percent of the variation in poverty changes, while in the long term, it accounts for 97 percent. This study

reemphasizes that growth-enhancing policies and institutions are central to alleviating poverty.

Dollar, Kleineberg, and Kraay (2016) update their analysis on the systematic relationship between average growth and growth of the poorest groups, examining 151 countries from 1967 to 2011. Similar to the result in Dollar and Kraay (2002), they find that the income in the poorest deciles varies in equal proportions with average incomes. They also find that on average, the shares of income accruing to the poorest 20th percentile and 40th percentile are fairly stable over time. These results emphasize the idea that policies aimed directly at increasing economic growth rates are indeed "pro-poor," in the sense that they lift the average income in the lowest deciles of the income distribution.

Similarly, Kwasi (2010) shows that there are many countries where GDP or income growth may not translate to poverty reduction, with a number of countries registering only modest poverty reductions despite strong growth. Hull (2009) shows that growth in one sector of the economy will not automatically translate into poverty reduction as much depends on the profile of growth (in terms of employment or productivity intensity), the sectors in which those in poverty are employed, and the extent of mobility across sectors. Bhalla (2002) challenged the previous use of changes in mean income (or consumption) to measure economic growth rather than changes in GDP per capita and shows that this led to underestimates of the relationship between growth and inequality. Another methodological consideration is whether initial levels of inequality should be controlled.

Fosu (2009) also finds that initial inequality differences can lead to substantial cross-country disparities in the income-growth elasticity of poverty. He finds that initial inequality negatively affects the impact of GDP growth on poverty reduction for countries in Sub-Saharan Africa. Ravallion (1997) finds that if inequality is very high, countries that would have very good growth prospects at low levels of inequality may see very little growth and poverty reduction (or even a worsening in both).

However, there is no consensus on the role of inequality in mediating the relationship-between growth and poverty. Ravallion (2012) suggests that it is initial poverty rather than income inequality that affects economic growth. Ravallion questions why we do not find poverty convergence; countries starting with higher poverty rates do not see higher proportionate rates of poverty reduction. His research suggests that, at mean consumption, high initial poverty has an adverse effect on consumption growth and also makes growth less poverty-reducing. Thus, for many poor countries, the growth advantage of starting out with a low mean is lost due to a high incidence of poverty. In other evidence, Breunig and Majeed (2016) find that the negative impact of inequality on growth is concentrated in countries with high rates of poverty.

There is also research exploring why poverty can be harmful to growth. If individuals living in income poverty are more likely to suffer poor health and low productivity as a result (Perotti, 1996; Galor and Moav, 2004), then labour productivity and therefore economic growth could be lower than they would have been if poverty had been lower (Stiglitz, 2012).

Another reason why poverty may hamper economic growth is explored by Bell *et al* (2017) who examine the relationship between family background and innovation. They find that children of low-income parents are much less likely to become inventors than their higher-income background counterparts (as are minorities and women). Decompositions using

education outcomes indicate that this income-innovation gap can largely be accounted for by differences in human capital acquisition during childhood. They also identify "innovation exposure effects" during childhood by showing that growing up in an area with a high innovation rate in a particular technology class is associated with a much higher probability of becoming an inventor specifically in that technology class.

Evidence that economic growth has not benefited disadvantaged groups or disproportionately benefited the already well-off has led to calls for, and a policy focus on, pro-poor or 'inclusive growth'. However, although it sounds counter-intuitive, it is possible to have pro-poor growth alongside rising inequality and increasing poverty rates due to re-ranking; those moving up the income distribution are simply replaced by new entrants (Van Kerm and Pi Alperin, 2015; Jenkins and Van Kerm (2006) contrast the USA with West Germany over the 1980s and 1990s).

In a study of selected African countries, Odusola (2019) examined the analytical and empirical relationships between growth, poverty, and income inequality with a view to determining policy actions that make the relationship mutually reinforcing. The study adopted a quantitative approach using secondary data for African countries for the period of 1980 – 2007 and found through income and inequality elasticities of poverty by region that countries with low levels of elasticities (or high in absolute terms) are often associated with high inequality elasticity of poverty (e.g. Tunisia, Egypt, and Algeria). However, these countries are also among the countries with high investments in social protection. Both the correlation index and the coefficient of determination are better with inequality elasticity than the level of Gini. The study concludes that the growth-inequality-poverty gap in Africa is relatively wider than those of other regions of the world and the world's average performance.

Overall, we can conclude that the impact of income growth on poverty and inequality depends on how growth is distributed across the rich and poor which in turn affects the quality of human welfare. But there is a dearth of studies to corroborate or refute this hypothesis using recent socioeconomic metrics for Sub-Saharan African countries along their economic affiliations and comparing their performance with other regions of the world and with the world average performance. This study, therefore, represents a unique attempt to contribute to the existing body of knowledge on the growth-income-poverty nexus by evaluating the trends of income growth, poverty income inequality, and human welfare in selected countries in Sub-Saharan Africa using empirical secondary data from 2012 – 2021.

4.0   DATA AND METHODOLOGY

This study utilizes a quantitative research approach based on numbers. Ratios and percentages were used to determine commonalities or patterns in the data. The results are reported in graphs and tables to confirm or refute our assumptions and establish generalizable facts on income growth, poverty, inequality and human welfare in the selected sub-Saharan African countries.

Secondary data is used in this study. Economic output data - the real GDP (RGDP) annual growth and real GDP per capita (GDPC) growth; poverty dimensions data – poverty headcount ratio and poverty gap; and inequality measures – income share held by the highest 20%, income share held by the lowest 40% and the Gini index – were sourced from the World Bank's World Development Indicators database at https://data.worldbank.org/indicator. Data for the human welfare measures – Life expectancy at birth, HDI Ranking, and HDI Classifications were obtained from the United Nations Development Programme (UNDP) database at https://hdr.undp.org/data-center/human-development-

index#/indicies/HDI, while data on poverty and inequality indicators were obtained from the World Bank Poverty and Inequality Platform on www.pip.worldbnk.org/poverty-calculator. The data utilized captures the period from 2012 to 2021.

5.0 ASSESSING THE PATTERN OF INCOME GROWTH, POVERTY, INEQUALITY AND HUMAN WELFARE IN SELECTED SUB-SAHARAN AFRICAN COUNTRIES

This section shall discuss the current pattern of income growth, inequality, poverty, and human welfare through a descriptive analysis to identify the association among the variables on the basis of the data obtained from selected countries in Sub-Saharan Africa between 2010 and 2021 and make a comparison with the world average figures for the selected indicators. For the purpose of this study and to bring the analysis within a manageable range for the researcher, twelve (12) countries were selected in Sub-Saharan Africa based on their regional geographical location and membership of the four main regional economic organizations. The reasons for the selection of the countries are (i) they represent samples from the three geographical classifications of Sub-Saharan Africa and make it possible to make inferences from the population because it makes data more convenient, manageable, and practical and (ii) countries in the same regional economic organizations tend to have similar economic structure and macroeconomic and financial policy with active co-operation in the areas of trade, investment and domestic/international trade regulation. The selected countries are as follows:

West Africa/ECOWAS   -   Nigeria, Burkina Faso, and Guinea Bissau

East Africa/ EAC   -   Democratic Republic of Congo, Tanzania, and Kenya

Central Africa/ECCAS   -   Central African Republic, Chad, and Cameroon

South Africa/COMESA   -   Botswana, Namibia, and South Africa.

Note: ECOWAS – Economic Community of West African States; ECCAS – Economic Community of Central African States; EAC – East African Community and COMESA – The Common Market for Eastern and Southern Africa.

Table 4 shows the income growth and poverty indicators for the selected countries and the world average figures for the selected indicators. Except for Botswana, Burkina Faso, DR Congo and Kenya which have annual percentage growth of GDP above the world average of 5.9%, all the other countries selected have low (some with negative) GDP growth for the period which implies that the growth process in Africa in 2021 even though positive in most countries is slower than in many parts of the world. This corroborates the finding of Ibi-Ajayi (2002) that "the growth performance of many African countries has been disappointing (or dismal) over several years, the isolated cases of Botswana, Mauritius, and Morocco notwithstanding. Africa, as a whole, suffered from what Easterly and Levine (1997) calls the "growth tragedy". The sharp economic slowdown could be attributable to such challenges as high international food and fuel prices, financial shocks owing to the stronger-than-anticipated tightening of monetary policies in advanced countries, and the acute risks of food insecurity in many parts of the region.

Table 4: Income Growth and Inequality Indicators for Selected Sub-Saharan Africa Countries

S/N	Country	GDP Growth (Annual %) (a)	GDP per Capita Growth (Annual %) (b)	Income Share held by the highest 20% (c)	Income Share held by the lowest 20% (d)	Gini Index (e)
1	Nigeria	3.6	1.2	42.4	7.1	35.1
2	Burkina Faso	6.9	4.1	54.3	5.5	47.3
3	Guinea Bissau	3.8	1.5	43.0	7.8	34.8
4	DR Congo	6.2	2.8	48.4	5.5	42.1
5	Tanzania	4.3	1.2	48.1	6.9	40.5
6	Kenya	7.5	5.4	47.5	6.2	40.8
7	Central Africa Rep.	0.9	-1.2	60.9	3.3	56.2
8	Chad	-1.2	-4.3	45.2	7.1	37.5
9	Cameroon	3.6	1.0	51.7	4.5	46.6
10	Namibia	2.7	1.0	63.7	2.8	59.1
11	South Africa	4.9	3.9	68.2	2.4	63.0
12	Botswana	11.4	9.6	58.5	3.9	53.3
13	World Average	5.9	5.0	N/A	N/A	N/A

Source: The World Bank Indicators (2022). Accessed on www.data.worldbnk.org/indicator/

++NOTE: The figures in (a) and (b) in the table above is for 2021, while those quoted in (c), (d) and (e) are for various years between 2010 – 2020.

Similarly, the GDP Per Capita growth rate which indicates sustained economic growth and growth in average income which is strongly linked to poverty reduction is lower in most of the selected countries compared to the world average. With the exception of Botswana and Kenya which recorded GDP per capita growth of 9.6% and 5.4% respectively against the global average of 5.0%, all other countries selected in the Sub-Saharan region recorded growth rates less than the world average. This substantiates the view of the International Monetary Fund (IMF) that the income gap between Sub-Saharan Africa and the rest of the world, based on real GDP, grows wider. However, Botswana stands out as it has been able to achieve a substantially higher average income than the other countries due to its significant mineral (diamond) wealth, good governance, prudent economic management, and a relatively small population of about 2.4 million (2021) which has made it an upper-middle income country with an agenda of becoming a high-income country by 2036.

In the same vein, the poor performance of average income growth (low and negative growth rates) in other selected countries has been attributed to a wide range of factors. One of the factors is the depth of Africa's poverty compared to poverty elsewhere. In other words, poor people in Africa start further behind the poverty line. So even if their income is growing, it is rarely enough to push them over the $1.25 threshold. In 2011, the average person living in extreme poverty in Africa lived on 74 cents a day, whereas for the rest of the developing world, it was 98 cents. Another factor is that even though inequality is not rising in most African countries, inequality is already at unusually high levels. Where initial inequality is high, it is to be expected that economic growth delivers less poverty reduction, since the absolute increases in income associated with rising average incomes will be that much smaller for the have-nots versus the haves. Moreover, the degree of inequality that exists on the continent is worse than it looks. The fact that Africa is divided into so many countries masks big differences in income between them.

The income inequality situation in the selected countries is depicted by three variables – income share by the highest 20%, income share held by the highest 20% and the Gini Index. From the figures, it is evident that there is a wide and growing gaps between the income

shares held by the upper and lower income groups in the countries which is responsible for the high coefficient recorded for the Gini Index for all the countries. The most striking incidence of income inequality is found in the Central Africa Republic, Namibia and South Africa. In fact, according to the Gini coefficient, Africa is the second most unequal continent after Latin America as 8 African countries are among the 10 most unequal countries in the world in 2021 with South Africa and Namibia occupying the first and second positions respectively. The effects of increasing income inequality have manifested in the form of political polarization (recipe for political instability), negative attitude towards the wealthy (recipe for class struggle and conflict), slower GDP growth, lack of income mobility, higher poverty rates, and greater household debts. This consistent trend, therefore, provides a very worrying picture and shows how crucial the inclusive growth agenda is for Africa and the need for policymakers to take action to make progress toward the reduction of poverty and less unequal income distribution which are critical factors in promoting human welfare.

Table 5: Poverty and Human Development Indicators for Selected Sub-Saharan Africa Countries

S/N	Country	Poverty headcount ratio at $2.15 /day (2017 PPP) % of Population (a)	Poverty Gap at $2.15 /day (2017 PPP) (%) (b)	HDI Index Value (2021) (c)	Life Expectancy at Birth (Years) 2021 (d)	HDI Rank (2020) (e)	HDI Classification (f)
1	Nigeria	30.9	9.0	0.535	52.7	163	Low
2	Burkina Faso	30.5	8.4	0.449	57.3	185	Low
3	Guinea Bissau	21.7	4.7	0.483	59.7	177	Low
4	DR Congo	69.7	32.6	0.479	59.2	180	Low
5	Tanzania	44.9	13.6	0.549	66.2	160	Low
6	Kenya	29.4	8.6	0.575	61.4	150	Low
7	Central Africa Rep	61.9	29.7	0.404	53.9	188	Low
8	Chad	30.9	8.4	0.394	52.5	190	Low
9	Cameroon	25.7	8.3	0.576	60.3	150	Medium
10	Botswana	15.4	4.1	0.693	61.1	43	Medium
11	South Africa	20.5	6.9	0.713	62.3	102	High
12	Namibia	15.6	5.4	0.615	59.3	134	Medium
13	World Average	8.4	2.6	6.0	-	-	-

Source: (i) The World Bank Indicators (2022). Accessed on www.data.worldbnk.org/indicator/and (ii) The UNDP Human Development Index and its Components (2022). Accessed onhttps://hdr.undp.org/data-center/human-development-index#/indicies/HDI

**NOTE: The figures in (a) and (b) in the table above are for 2021, while those quoted in (c), (d), and (e) are for various years between 2015 – 2021.

The data on poverty and human development indicators for the selected countries between 2015 and 2021 are presented in Table 5 above. While the average percentage of the world population living below $2.15 (2017 PPPs) poverty line stands at 8.4%, the percentage of the population of the selected Sub-Saharan African countries living in abject poverty is in double digits with the Democratic Republic of Congo and the Central Africa Republic recording 69.7% and 61.9% respectively to seal their first and second spot in Africa. Meanwhile, other countries in the sample have ratios between 44.9% (Tanzania) and 15.4 (Botswana) which are still far higher than the world average estimated at 2017 purchasing power parities. The trend corroborates the view of the Africa Development Bank (2011) that "… close to 50% of the population in Sub-Saharan Africa lives on less than US$ 1 a day, which constitutes the

highest rate of extreme poverty in the world. The number of impoverished people has indeed doubled since 1981. The share of people living on less than US$ 2 a day reaches close to 60% of the population in Liberia and close to 50% in the Central African Republic. In North Africa, only 2.2% of the population lives on less than US$ 1 a day, and 23% on less than US$ 2."

Similarly, the data on the poverty gap at $2.15 per day on the basis of 2017 purchasing power parity for the selected countries show that the shortfall in income or consumption from the poverty line of $2.15 per day (counting the nonpoor as having zero shortfalls) expressed as a percentage of the poverty line in Africa is high which indicates the pervasiveness of the depth as well as the incidence of poverty in Sub-Sahara Africa. While the world average poverty gap stands at 2.6% in 2021, the poverty gap at $2.15 (2017 PPP) for the Democratic Republic of Congo stands at 32.6% (over 12 fold of the world average), and the best country in Sub-Saharan Africa in terms of poverty gap (Botswana) records a value of 4.1% which is a little above the world average. Nonetheless, within Africa, most poverty is concentrated in the Sub-Saharan Africa region. Central Africa has the highest extreme poverty rate of 54.8%, followed by Southern Africa at 45.1%. Rates in Western and Eastern Africa are 36.8% and 33.8% respectively. It can thus be stated that Sub-Sahara Africa stands out as the worst affected region in the world in terms of loss of income for poor households and the precipitating factor could be traced to the outbreak of the Covid-19 global pandemic in 2019 which, according to UNCTAD, resulted in three percentage point increase compared to the pre-pandemic levels.

In the same token, the data presented in Table 4 captures the human development and related components for the selected countries in various years between 2015 and 2021 to measure their overall achievements in social and economic dimensions such as health (life expectancy), knowledge (education) and real per capita income (standard of living). Concretely, the HDI measures the capacity to lead a long and healthy life, to be knowledgeable and to have access to resources necessary for a decent standard of living. For the selected countries in Sub-Sahara Africa, only one (South Africa) falls within the "high HDI" countries with an index 0f 0.713 and a rank of 43, while three countries (Botswana, Namibia and Cameroon) fall within the "medium HDI" with HDI index ranging between 0.576 and 0.693. The remaining nine countries are classified as "low HDI" countries with Chad being the lowest-ranked with a position of 190 globally. The reasons for the abysmally low and declining HDI in most African countries could be the lack of inclusive growth and tangible development and its subsequent ramifications in the areas of quality of life, literacy, and standard of living which are basically the end result of abject and endemic poverty and growing income inequalities.

By and large, the figures in Table 5 indicate that the gap between low and high human development in African countries is closing over time based on the recent performance of the selected countries. The rate of progress in African countries with poorer conditions in relation to income, health, and education is faster than the average of all developing countries combined. However, the rate of human progress in all African countries has declined in recent years from the high growth rates achieved between 2000 and 2010. This decline is a reflection of the slowdown in increases in income per capita relative to improvements in education and health outcomes. This slowdown is of concern as most African countries still remain in the low human development category. Declining and consistently slow income growth (due to low labour and capital productivity), endemic poverty, and increasing income inequality combined to decelerate living standards across Africa and whittle down key human development indices leading to low human welfare. Even though significant strides have

been made to extend life expectancy through concerted efforts to reduce child and maternal mortality, improve food security and nutrition, halt deaths from HIV/AIDS and provide access to anti-retroviral drugs, and reduce conflicts, the state of human development and life satisfaction in the Sub-Saharan African countries is considered to be abysmal and low compared to the world average and to other regions of the world.

To wrap up this discourse, another practical way of establishing the link between growth, poverty and inequality is the use of elasticities. Evidence from Table 6 reveals that income elasticity of poverty play a key role in poverty reduction. Sub-Saharan Africa has the lowest income elasticity of poverty compared to the other regions and to the world. This shows the poverty-reducing power of economic growth is the least globally. This is a validation that economic growth in sub-Saharan Africa has not been as inclusive as in the rest of the world. This tends to suggest that growth has not really been taking place in sectors where much of the population has been eking their livelihoods like agriculture, informal sector activities and small-scale enterprises.

Table 6: Income Elasticity of Poverty for Selected Sub-Saharan African Countries

S/N	Country	$1.9 poverty rate, 2011 PPP, %	$2.15 poverty rate, 2017 PPP, %	annual rate of poverty decline, (DP), %	annual rate of growth of GDP per capita (GY) %	Income elasticity of poverty (DP/GY) (-)
1	Nigeria	39.09	30.86	1.3	1.2	1.08
2	Burkina Faso	33.66	30.54	-7.0	4.1	1.71
3	Guinea Bissau	24.67	21.66	-1.0	1.5	0.5
4	DR Congo	77.15	69.69	-5.1	2.8	1.82
5	Tanzania	49.37	44.95	-1.8	1.2	1.5
6	Kenya	37.08	29.37	-0.9	5.4	0.17
7	Central African Rep.	65.93	61.88	-3.9	-1.2	3.25
8	Chad	33.19	30.88	-8	-4.3	1.86
9	Cameroon	25.97	25.66	-0.3	1.0	0.3
10	Namibia	13.79	15.62	-17.0	1.0	17.0
11	South Africa	18.72	20.49	-16.0	3.9	4.1
12	Botswana	14.49	15.43	-2.1	9.6	0.22
13	Sub-Sahara Africa	38.76	34.89	-0.3	9.35	0.03
14	Latin America & the Caribbean.	10.45	10.45	-7.2	5.0	1.44
15	World Average	10.71	10.50	-8.6	5.0	1.72

Source: Author's compilation, based on data from the World Bank Poverty and Inequality Platform (2023) on www.pip.worldbnk.org/poverty-calculator.

Note: All data represent the most recent figures for each country/region.

The above analysis provides how economic growth and inequality directly affect poverty reduction. While the initial level of income inequality matters for poverty reduction, its measure of elasticity is even stronger. As indicated in Figure 6, countries with low levels of elasticities (or high in absolute terms) are often associated with high inequality elasticity of poverty (e.g. Cameroon, Kenyaad Guinea Bissau). However, these countries are also among the countries with high investments in social protection. It is also instructive to note that the income elasticity of poverty computed for all the selected countries in Sub-saharan Africa is lower than the world average and the average for Latin America and the Caribbean indicating

that changes in the level of income growth have not been associated with the percentage change in poverty rates which points to high income inequalities in the countries.

6.0 CONCLUSION AND POLICY RECOMMENDATION

In this paper, attempts have been made to examine the nexus among the key variables of income growth, inequality, poverty and human welfare by exploring empirical data for 12 selected Sub-Saharan Africa countries between 2005 – 2021 and we have shown that while Africa countries experience modest income growth in the turn of the millennium due largely to sustained and faster economic growth, there are still wide cases of abject poverty and increasing income inequality across selected Sub-Saharan African countries with attendant negative consequences on human capital development indices which are indicators of poor and declining human welfare. We have shown that compared to the other regions of the world (Latin America) and the world average performance, income growth in Sub-Sahara Africa has not translated into an appreciable decline in poverty rates and deceleration in income inequality condition but has rather further exacerbated poverty and inequality criteria, leading to a sharp decline in all indices of human welfare.

Empirical research has also examined the three-way relationship between poverty, inequality and growth. It has been established that a country's change in absolute poverty can be fully determined by the change in income growth and income inequality. However, this identity does not hold for poverty measured in relative terms. While growth may be a key factor in reducing absolute poverty in low-income countries, the idea held by some that inequality will promote growth and this growth will mean that the benefits from growth will 'trickle down' and thus reduce poverty, is disproved in the literature. Evidence suggests that in many cases (and as has been proven in the case of Sub-Sahara Africa) growth benefits the already well-off and that poverty, in fact, has a negative impact not only on the prospects of growth but also on even income distribution which is crucial for inclusive growth and development.

Hence, we recommend that for inclusive and poverty-and-inequality-reducing growth in Sub-Saharan Africa policymakers and development strategists should focus on policies that are not only limited to economic growth as the primary driver of poverty reduction but also emphasize the need to target inequalities in order to eliminate its negative consequences for growth. There is the dire need for policy implementation to favour inclusive growth by tackling the drivers of inequality should which transmits widespread poverty. Income growth can be made to translate into reduced poverty rates and lower scale of income inequality when policy efforts are directed at human development strategies which promote the quality of life such as moderating fertility, improving education, boosting investment in health infrastructure, and reducing gender imbalances. A market-based approach for tackling poverty and inequality to improve the quality of human conditions can be adopted by providing the appropriate institutional and macroeconomic framework to increase access to markets for the poor, thereby eliminating pervasive cases of socioeconomic disempowerment in most countries in the Sub-Saharan Africa region. Finally, development policy formulation and implementation should be directed to use social safety nets as an instrument to change attitudes, skills, and knowledge for the poor to leverage opportunities, and contribute more meaningfully to the development of their communities and themselves.

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