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Good Governance and Poverty Reduction: Empirical Evidence from Selected Sub-Saharan Africa

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Approval Sheet

This is to certify that the thesis prepared by Salah Yusuf, titled "Good Governance and Poverty Reduction: New Empirical Evidence from Selected Sub-Saharan Africa" and submitted to the Department of Economics, Addis Ababa University in partial fulfilment of the requirements for the Masters of Science in Economics (Economic Policy Analysis) complies with the regulations of the university and meets the accepted standards for originality and quality.

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Abstract

The purpose of this study is to investigate the impact of good governance on Poverty reduction in selected Sub-Saharan African countries. The study used panel data from 36 Sub-Saharan African countries over the period 2010 to 2022. The data is analyzed using a fixed effect estimation model and a Granger causality test to investigate a possible causal relationship between good governance and Poverty reduction. The result of the study revealed that effective governance has a positive significant effect on Poverty reduction. Moreover, the economic growth and development of human capital are found to contribute to the reduction of Poverty in sub-Saharan Africa. Nevertheless, the Granger causality test suggested that there is no evidence for a causal relationship between good governance and Poverty reduction. The study suggests that improved effectiveness of government, strengthening economic growth, and enhancing human capital contribute to the reduction of poverty in sub-Saharan African countries.

Keywords: *good governance, poverty reduction, fixed effect, sub-Saharan Africa*

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List of abbreviations

FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HDI	Human Development Index
MDG	Millennium Development Goal
SAP	Structural Adjustment Program
SDG	Sustainable Development Goal
UNDP	United Nations Development Programme
VIF	Variance Inflation Factor
WB	World Bank
WDI	World Development Indicator
WGI	World Governance Indicator
OECD	Organization for Economic Co-operation and development
ILO	International Labor Organization
UNCTAD	United Nations Conference on Trade and Development
IMF	International Monetary Fund

Chapter one

Introduction

1.1. Background of the study

Poverty is a complex and multifaceted concept and there is no universally accepted definition, it is generally understood as a condition of having insufficient resources to have goods and services for a minimum threshold of standard of living, the difficult in defining Poverty is highlighted by the lack of universally accepted conceptual framework, different proposals show that people have different various ideas about what makes up a basic standard of living (Yang, 2017). Poverty can also be viewed as a lack of economic, human, political and sociocultural basics for living. It remains a persistent challenge in Sub-Saharan Africa (SSA) where a large number of the population continues to face extreme poverty. The complex nature of poverty in sub-Saharan Africa is influenced by factors like limited access to education, lack of clean water, inadequate infrastructure, healthcare, social inequality and political instability. It is generally determined by multidimensional interplay of factors, such as historical, economic, social, and political aspects (Bonga, 2024). Poverty is the most pervasive and prevalent problem all over the world. The problem is even worse in emerging nations particularly in sub-Saharan Africa, because The number of people living in poverty is steadily increasing, leading trouble trend that highlights the economic growth challenges face by large number of people across the sub-Saharan Africa (Addae-Korankye, 2019).

Poverty continues to be a common problem and challenge of the sub-Saharan population. Most of the populations in the region significantly live in poverty. As a result, achieving poverty reduction in the region necessitates understanding and analyzing its basic causes. Poverty is defined clearly by international human rights law (IHRL) as a violation of several human rights, every individual has the right to an acceptable standard of living, which includes the rights to health care, food, clothing, medical services and social security.

Poverty has many effects on communities, nations, and the global as a whole. it can also be passed to future generations, which can create various cycles of Poverty, where lives are transferred from one generation to another (Bonga, 2024; Olayide, 2021).

living on less than $1.9 a day is defined as extreme poverty. The world banks biennial Poverty and shared prosperity report mentions that extreme Poverty rose in 2020 for the first time in more than two decades as the disruption of the COVID-19 pandemic compounds the force of conflict and climate change that were already hindering Poverty reduction progress. In 2020 extreme Poverty affected between 9.1% and 9.4% of the global population. Although economic growth is considered as one of the key drivers of Poverty reduction and improving the quality of life in developing countries, sub-Saharan Africa has registered rapid economic growth and development in the recent few years, that has not resulted in the reduction of poverty for most of the population in the region.

According to a World Bank report, approximately 35% of Sub-Saharan Africa's population lives in extreme poverty in 2019. The number of populations living in extreme poverty has increased from 284 million in 1990 to 433 million in 2018 (World Bank, 2020). In addition, about 556 million populations are also in multidimensional poverty in 2021 (UNDP, 2021).

Governance quality is crucial role in determining Poverty level so improving the quality of governance in sub-Saharan African countries is important for Poverty reduction, good governance reforms like improving government accountability can effect on redistribution that can have significant effect on Poverty reduction (Saidi et al., 2023). Policymakers and international development organizations acknowledge that governance plays a crucial role in reducing poverty in Africa and other developing nations. This viewpoint is supported by research indicating that effective governance significantly contributes to poverty reduction (Ahmed et al., 2018) .

In recent years, the alleviation of poverty in nations has become important in global and national policy objectives. Particularly emerging economies should also have incorporated the policy reduction strategies and objective to secure grants and loans from international financial institutions. Both multilateral and bilateral aid are also mainly targeted towards poverty reduction strategies and economic development. Law income countries that seek assistance from the international financial institutions (IFIs) are required to prepare poverty reduction strategies that will guide their social and economic policies. Understanding pathways to poverty reduction

involves examining how states are organized and the nature of interventions that promote redistribution and growth. Democratic nations with limited resources can learn a great deal from democratic countries that have effectively transformed their economies and improved well-being of their citizens (Bangura, 2015).

It is widely recognized that poverty is a multidimensional issue, and achieving poverty reduction necessitates several aspects of change (Barder, 2009). Governance and institutions are among the significant factors that can contribute to poverty reduction and sustainable and inclusive economic growth. Poverty reduction requires economic growth which when accompanied with effective macroeconomic management and good governance results in sustainable and socially inclusive development. To achieve this it is crucial to improve the poor's access to education, healthcare, clean water, sanitation and employment opportunities (Ali & Pernia, 2003; Dfid, 2008).

Good governance is determined by the effectiveness and strength of state institutions. Strong and accountable institutions are required to uphold the rule of law, ensure equitable and fair policymaking, and provide effective public services (Nguyen et al., 2021). Weak institutions are characterized by corruption, resource misallocation, and impeding investment. This institutional flaw exacerbates inequality and restricts prospects for economic growth, which directly exacerbates the poverty level. On the other hand, strong institutions with established social safety nets, good policy-making and a stable investment climate, can significantly contribute to the reduction of the poverty level (Coccia, 2021; Houtzager & Moore, 2009).

The role of governance in economic growth and poverty alleviation has recently been recognized. The good governance agenda becomes appealing. This is because researchers have discovered a link between good governance, specifically structural and institutional arrangements, and poverty alleviation. In emerging economies, this agenda is widely supported by governments and non-governmental organizations. Many of them believed that good governance would be essential for economic growth and poverty reduction. It is believed that providing good governance would have to be a prerequisite for poverty reduction. Moreover, the conditions of good governance such as enhancing accountability, reducing corruption, making effective use of public resources, and ensuring equality of service will be a way to address and reach those in need (Grindle, 2004).

Scholars also believed that poor governance would impede structural transformation, slow economic growth, and exacerbate poverty. Given the region's fragility, corruption, and poor governance quality, improving governance would have a major impact on Sub-Saharan Africa (Saidi et al., 2023).

1.2. Research problem

Poverty is a global problem facing human society (Sameti et al., 2012). More than 8.5% of the world's population and 67% of Sub-Saharan Africans live in extreme poverty (World Bank, 2024). The poverty gap in Sub-Saharan Africa remains significant in highlighting stark inequalities in income and access to vital services for many individuals living below the Poverty line which exacerbates vulnerabilities like food insecurity and inadequate health care, ultimately hindering efforts to achieve sustainable development. Although poverty continues to be a major policy objective, it remains an unfilled goal of many of the nations. On the one hand, there has been huge investment in infrastructure, education, and health, while on the other hand, many of the populations are deprived and face the issue of sustaining their livelihoods (Mehta et al., 2018). It is also estimated that poverty issues will continue to be the worldwide economic burden on human society unless there is inclusive and rapid economic growth that boosts investment in infrastructure, education, and employment opportunities (World Bank, 2024).

Poverty reduction strategies have evolved, from a primary focus on economic growth to a more comprehensive approach that takes into account the social, political, and environmental dimensions of poverty (Brady, 2019; Sameti et al., 2012). Policies and initiatives to enhance economic growth, and human capital and address environmental sustainability have supplemented traditional strategies like structural adjustment programs. However, implementing the policy commitments into successful and realistic interventions remains difficult (Asen, 2012).

Recently, poverty reduction has become the international development agenda of every nation. The Sustainable Development Goal (SDG) of the United Nations have also targeted to achieve a poverty reduction of 3% in 2030. Thus, identifying the key drivers that eradicate the poverty level is among the priority areas to be considered (Castaneda et al., 2016).

Economic growth, investment and human capital development are recognized among the key drivers of poverty reduction (Castaneda et al., 2016; Rodrik, 2007). In recent years, good governance, political stability and institutional quality have also been a major emphasis in the eradication of the poverty level (Saidi et al., 2023). Furthermore, the international development community has emphasized the need for effective governance in developing countries in order to reduce poverty. They have developed sound policies by outlining their vision of good governance (Kwon et al., 2014).

Poverty research that examines the experiences of both developed and developing countries has found that economic growth, infrastructure development, institutional quality, geographical location, and governance among others consistently determine the level of poverty. For instance, the study of Adriana (2016); Fajar et al., (2020); Leow and Tan (2019); Muş et al., (2018); Mutmainnah and Paddu (2022); Deris et al., (2021); Kareem (2023) and Andrietya et al., (2020) have concluded poverty level is positively influenced by previous year poverty level, economic growth, corruption control, openness, human capital, government spending, and investment, whereas inflation, unemployment, population growth, political instability, income inequality, and globalization are found to worsen poverty.

There is a disagreement among research scholars to find the relationship between good governance and Poverty reduction in Sub-Saharan Africa. For instance McIntyre-Mills (2019), argues that improving governance in Sub-Saharan Africa will increase economic growth and reduce poverty. Jamil et al., (2022) also looked into the connection between poverty alleviation and governance factors. The results demonstrated the need for strong governance and the greater success of proactive policy implementation in reducing poverty. Against their findings a paper done by Sillah (2012) investigated how political and economic governance affects poverty. The results show that poverty reduction is not a function of political governance. Rather, the study asserts that the key factor in alleviating poverty in Sub-Saharan Africa is the real per capita GDP.

However, previous studies remain scant in exploring the effect of good governance on poverty reduction in the study area. Thus, the goal of this research is to empirically investigate the effects of good governance on poverty reduction. Besides, the study employed a fixed effect estimation model based on recent data evidence from selected sub-Saharan African countries. In addition, the study explored the causal relationship between good governance and poverty reduction. The

research would be critical to comprehending the role of governance in poverty alleviation in sub-Saharan African countries.

1.3. Objectives of the study

The main objective of the study is to examine the effect of good governance on poverty reduction in selected sub-Saharan Africa. Besides, the study intends to achieve the following objectives.

- To investigate the effect of good governance on poverty reduction in selected sub-Saharan Africa, while also considering the effect of economic growth, inflation, foreign direct investment, labor force, trade openness, and human capital development.
- To characterize the poverty status of the selected sub-Saharan African countries.
- To explore the causal relationship between good governance and poverty reduction in sub-Saharan Africa.

1.4. Research questions

- ✓ What is the effect of good governance on poverty reduction in selected Sub-Saharan African countries?
    - How do economic growth, inflation, foreign direct investment, labor force, trade openness, and human capital development influence the poverty reduction in selected Sub-Saharan Africa?
    - What is the current poverty status of the selected Sub-Saharan African countries?
    - What is the causal relationship between good governance and poverty reduction in Sub-Saharan Africa?

1.5.Significance of the study

This study makes multiple contributions to the body of literature and policy making. Firstly, this study employs advanced modelling approaches in an attempt to overcome methodological shortcomings in the previous literature. Second, the study would contribute to the policy framework regarding the prospects of achieving poverty reduction. The study offers implications to stakeholders, including governments, regarding the poverty reduction prospects. Furthermore, it informs the major focus areas and options for better eradication of poverty in sub-Saharan Africa.

1.6. Hypothesis of the Study

The significance of good governance in poverty reduction is paramount. Good governance ensures accountability and transparency in management and administrative affairs, thereby reducing poverty (Kwon et al., 2014). Several previous studies demonstrated that good governance facilitates and promotes poverty reduction (Aloui, 2019; Sumarto et al., 2004). Thus, based on the literature reviewed in this study, the following research hypothesis is proposed.

H1: Good governance has a significant positive effect on poverty reduction in sub-Saharan Africa.

1.7. Delimitation of the study

The study's geographical scope is limited to selected sub-Saharan Africa. The study aimed to examine the determinants of poverty reduction. Primarily, the study looked into the effect of good governance on poverty reduction. A descriptive and econometric model was used in the study's methodology to explore the effect of good governance on poverty reduction in selected sub-Saharan Africa.

1.8. Limitations of the study

The study had many limitations. First, the study uses household consumption as a poverty indicator; however, more precise indicators such as headcount ratio and multidimensional poverty are preferable if used. Furthermore, the study's comprehensiveness may overlook factors

specific to the country, household, or geography. As a result, case studies are proposed as a means of introducing more rigour and reliability into policy.

1.9.Outline of the study

The study is structured into five chapters. The first chapter introduces the topic, research problem, and study objectives, while the second chapter provides a briefly reviewed related literature and empirical studies. The third chapter focused on the data and methodological aspects of the study. In chapter four, the findings have been discussed. Finally, chapter five of the study provides conclusions, policy implications, and limitations for future research.

Chapter Two

Review of Related Literature

2.1.Theoretical review

2.1.1. Poverty: concepts and measurement

Poverty can be regarded as welfare deprivation. A person could be considered poor if he/she has got no enough income to fulfil the minimum livelihood threshold. Inadequate income, poor health and education and lack of freedom of politics could all make up the broadest view of poverty (Decerf, 2022; Haughton & Khandker, 2009).

Yet still there are different ways of defining and measuring poverty. Economists might measure poverty depending on the status of income and welfare of the population. While some social scientists are considering mainly the political, behavioral and social status of human welfare in defining and measuring poverty. Besides, others considered poverty as a lack of basic human needs such as nutrition, literacy and health (Coudouel et al., 2002; Wagle, 2002).

Although the idea of poverty has been viewed from an economic perspective, several political, social, economic, and cultural factors have influenced the creation of poverty indicators (Marques et al., 2008).

Poverty is measured in terms of income level as compared to the necessities needs of shelter food and clothing (Nayler, 2003). Measurement of poverty could also be analyzed through a poverty

line that consists of absolute and relative poverty lines. Absolute poverty lines represent the minimum threshold of income of $1.9 per day. On the other hand, relative poverty lines express the poverty level with the nation's overall income distribution, determined as a proportion of the nation's average income (Coudouel et AL., 2002; Khan, 2009; Yang, 2017).

The most commonly used statistical measurements that exist in measuring and indicating the status of poverty in a nation are the headcount ratio, poverty gap and poverty gap squared. The headcount ratio indicates the share of pollution below the poverty line. It measures the extent of the population below the poverty line. Poverty gap and poverty gap squared, on the other hand, measure the depth or extent to which households are far from the poverty line and the severity of poverty among the poor, respectively (Coudouel et al., 2002).

Modern theories have also taken a multifaceted approach to poverty, taking into account factors like a lack of respect and political rights as well as inadequate access to infrastructure, health care, education, and equitable opportunities (Dube, 2019; Onwuka, 2006).

2.1.2. Theories of poverty

The forces causing poverty are diverse and complex. Different theories recognized various aspects of the problems. The problem appears to originate primarily from economic, social, political, and psychological factors. It is most likely that a combination of these factors contributes to poverty levels. As a result, addressing poverty requires effective policies that take into account the complex and interrelated causes of poverty. Scholars have classified theories that attempt to identify the causes of poverty into various frameworks. Behavioral, structural, geographical disparity and political theories of poverty are the most widely used and testable theories of poverty that can be used to draw conclusions and implications (Brady, 2019; Bradshaw, 2007).

2.1.2.1. Behavioral theories of poverty

The behavioral theory of poverty asserts that poverty is caused by individualized behavior. Individual-specific behavioral decisions, such as unemployment, a lack of education, and participation in counterproductive sectors are the main drivers of poverty. The theory posits that poverty is primarily caused by individual shortcomings and failings, such as menacing morals,

inferior genes, laziness, mental illness, and conflict in thought (Brady, 2019; Turner & Lehning, 2007). Individual attributes such as talent, skills, behaviors or habits, and family status all contribute to an individual's poverty. Furthermore, from a biological standpoint, the causes of poverty could be attributed to the individuals' natural intelligence and cognitive skill differences (Calnitsky, 2018).

Poverty is frequently attributed to individual behavior, implying that those who are impoverished are deemed undeserving because they do not fit in with the expectations of society. This labelling perpetuates stereotypes that portray the impoverished as morally lacking, especially those who have dropped out of school, are unemployed, or are involved in criminal activity (Gans, 1994). Similarly, Sameti et al. (2012) believe that the personal factors contributing to poverty include individual attitude, skills and education, and welfare participation.

According to Bradshaw (2007), personal shortcomings like a lack of education or skills and cultural beliefs are the root cause of poverty. He holds the impoverished accountable for their issues, claiming that they could have prevented and resolved them with diligence and wiser decisions. Additionally, he maintained that poverty results from a lack of genetic traits that are difficult to reverse, like intelligence.

Lewis (2017) is predicated on the idea that the patterns of values, beliefs, and behavioral norms that distinguish the rich from the poor are different. According to this theory, impoverished people acquire certain psychological traits linked to poverty. According to this theory, people in poverty do not learn how to work hard in school, make plans for the future, have protected sex, or handle their money sensibly. This is because children are raised with values and aspirations linked to poverty, poverty is passed down from one generation to the next.

Rank (2004) asserted that the belief in individualism heavily emphasizes personal effort and responsibility to acquire basic needs such as food, shelter and health care services.

2.1.2.2. Structural theories of poverty

Poverty is primarily caused by the country's economic and demographic structures. Economic structures are primarily made up of the level of economic growth, industrialization, and spatial disparities, whereas demographic structures are formed from the context of age and gender composition, urbanization level, and demographic transition (Brady, 2019). The same

perspective is expressed by Sameti et al. (2012) who believe that larger economic and social systems are responsible for poverty. They argue that capitalism creates conditions that perpetuate poverty and that no matter how hard individuals work or how skilled they are, the economic structure of certain countries, such as the United States, ensures that millions of people are in poverty. In other words, a larger body of literature suggests that the economic structure is organized in such a way that the poor fall behind regardless of how competent they are (Bradshaw, 2007).

Poverty is caused by inequalities in the social, economic, and political systems of the society, not by an individual's failure or personal choices. This theory holds that poverty is perpetuated by institutionalized barriers that limit access to essential resources like education, healthcare, and employment, especially for marginalized groups (Brady, 2019; Calnitsky, 2018; Royce, 2022).

Furthermore, racial, gender, and class discrimination persists in many societal institutions, including the criminal justice system, the labor market, and the educational system, and it serves to further strengthen structural inequalities. The structural theory also highlights the intergenerational transmission of poverty, which encourages a cycle of inequality by increasing the likelihood that children born into underprivileged families will live in poverty for the rest of their lives. According to this perspective, poverty is a systemic problem rather than an isolated one, necessitating extensive reforms that deal with the root causes of inequality, such as establishing more equitable access to economic, healthcare, and educational opportunities, rather than just concentrating on personal behavior (Kabeer, 2000; Royce, 2022).

However, Abdulai and Shamshiry (2014) emphasize that addressing structural poverty seeks to enhance the ability of the poor to cater to their livelihoods rather than making them dependent on assistance. They believe that the structural theory of poverty is rooted in Marxist ideology, which argues that the existence of a low-income class is the creation of the capitalist economic system, or the bourgeoisie, designed as a strategy of dominance. When viewed from an Islamic perspective, it needs to be clarified that private ownership of property is permitted in Islam. However, such property must be acquired legitimately. This calls for government interventions to provide a level playing ground for equitable wealth acquisition and redistribution. (Abdulai and Shamshiry, 2014).

2.1.2.3. Political theories of poverty

According to political theory, poverty is primarily determined by a country's political power and institutional structure (Brady, 2019). The theory emphasizes the critical role of decent bureaucracy, effective administration, and taxes in reducing poverty, particularly in least-developed economies which have weak political and institutional structures (Modebadze, 2022).

The political theory of poverty argues that political choices and the allocation of power in society are the main causes of poverty. This theory holds that poverty is a political construct that is influenced by the laws, policies, and power structures that make up society rather than just being an economic or social problem. According to political theorists, wealthy and influential elites frequently use their positions of power to establish and uphold systems that favor them at the expense of the underprivileged. These elites influence government policies in ways that maintain inequality, such as labor laws that maintain low wages and high job insecurity, social welfare programs that ignore the underlying causes of poverty, and tax laws that favor the wealthy (Royce, 2022).

This theory of poverty emphasizes how political influence shapes the outcome of the economy. It argues that political decisions that benefit the elite actively create and sustain poverty rather than being solely the product of structural factors. By concentrating wealth and restricting the poor's access to resources, political leaders and influential interest groups frequently create policies that make poverty worse (Brady, 2003; Royce, 2022).

In addition, political choices about housing, healthcare, and education can either reduce or increase poverty, depending on how resources are distributed. The political theory also emphasizes how oppressed groups are kept in poverty by institutionalized discrimination, such as racism or gender inequality, which is frequently established in law and practice (Kushnick & Jennings, 1999; Tilly, 2017). According to this perspective, the political power disparities directly cause poverty rather than being the product of personal shortcomings or market forces. Therefore, to combat poverty, political change is needed to reform laws, redistribute funds, and guarantee increased democratic participation to build a society that is more just and equal (Mosse, 2013).

2.1.2.4. Geographical disparity theories of poverty

This is poverty caused by geographical inequalities. Attempts to theorize poverty along the line of geographical disparities led to the emergence of the geography of poverty (Abdulai and Shamshiry, 2014). Bradshaw (2007) argues that this kind of poverty encompasses rural poverty, ghetto poverty, urban disinvestment, southern poverty, third-world poverty, and other forms that exist separate from other poverty theories. This perspective highlights that people, institutions, and cultures in certain areas lack the objective resources that are needed to generate well-being and income and that they lack the power to claim redistribution. Some explanations given about the factors responsible for poverty include a lack of investment proximity to natural resources, population density, the spread of innovation, and other factors. It is widely accepted that advantaged areas tend to grow more than disadvantaged areas even during periods of general economic growth. Solutions suggested to address the poverty associated with geographical disparities focus on tracking the key factors that contribute to the decline of depressed areas (Abdulai and Shamshiry, 2014). They suggested that the proximity of poverty creates widespread poverty. When businesses and firms are drawn to specific locations, it often leads to economic decline of surrounding areas. For example, low housing prices in these impoverished areas may attract more low-income individuals, which in turn can lead to housing disinvestment by building owners. Bradshaw (2007) suggested that the fact that poverty is more intense in certain regions than others is old, and explanations in development literature about why some regions lack economic resources need to compete. He identifies factors such as disinvestment, proximity to natural resources, density and diffusion of innovation as contributing to poverty disparities.

2.1.3. Evolution of poverty reduction approaches

The evolution of development goals demonstrates an ongoing improvement in ambition and a greater understanding of the interconnectedness of global issues. In order to reduce poverty in the least developed nations, numerous policies and interventions have been implemented over the past several decades. Approaches to poverty reduction in the middle of the 20th century were mostly centered on infrastructure investments (Singleton, 2003).

Development goals have evolved to reflect a changing understanding of global priorities and challenges. Beginning with the initial development plans, which emphasized economic growth in

the 1960s, the emphasis progressively shifted to include social and environmental aspects (Ravallion, 2020). The poverty reduction program, introduced in 1990, was the World Bank policy initiative of poverty reduction strategies, which primarily targeted ensuring good governance and strengthening institutions (Ali-Akpajiak & Pyke, 2003).

Poverty reduction has been the primary agenda for developing countries since the Millennium Development Goals (MDGs) were established in 2000. The primary goals of the program were to eradicate extreme poverty and hunger. The Millennium Development Goals (MDGs), established in 2000, prioritized poverty reduction, health, education, and environmental sustainability. These goals accelerated progress but also revealed limitations in addressing complex interconnected issues (Halisçelik & Soytas, 2019; Sachs, 2015).

Early development efforts were primarily focused on economic growth, with the assumption that prosperity would benefit everyone. However, this approach was insufficient in addressing inequalities and systemic issues. The Millennium Development Goals (MDGs), adopted in 2000, marked a significant step forward by emphasizing poverty reduction, health, education, and environmental sustainability. This signaled a shift toward a more comprehensive understanding of development, recognizing the interconnectedness of different dimensions. Despite making significant progress, the MDGs demonstrated the need for a more comprehensive and integrated approach (Fehling et al., 2013; Lomazzi et al., 2014).

Although the MDGs made significant progress, they also highlighted the need for a more comprehensive and transformative approach. This resulted in the adoption of the SDGs, which address a broader range of issues, including climate change, gender equality, and peacebuilding. The SDGs emphasize the interdependence of the economic, social, and environmental dimensions to create a more sustainable and equitable future for all. This evolution represents a continuous learning process, reflecting an evolving understanding of global development and a growing commitment to building a better future for future generations (Halisçelik & Soytas, 2019; Pogge & Sengupta, 2015).

The Sustainable Development Goals (SDGs), which cover a broader range of topics like climate change, peace, and justice, were adopted in 2015 as a result of this realization. To create a more resilient and sustainable future for everybody, the SDGs place a strong emphasis on a transformational approach, acknowledging the interdependence of economic, social, and

environmental issues. This development demonstrates a growing dedication to global development, acknowledging the importance of equity, inclusivity, and environmental stewardship in building a better future for everybody (Pradhan et al., 2017; Unicef, 2018).

The SDGs further extended the scope by highlighting the interdependence of economic, social, and environmental challenges and building on the achievements and shortcomings of the MDGs. This evolution reflects a greater understanding of the complex interdependences that influence global development, as well as a commitment to creating a more equitable and sustainable future for all (Allen et al., 2019).

In 2015, the Sustainable Development Goals (SDGs) were adopted, which address a broader range of issues such as inequality, climate change, and peace and justice. The SDGs recognize the interdependence of economic, social, and environmental aspects, emphasizing an integrated and holistic approach. This evolution, driven by a desire to leave no one behind and create a more resilient and prosperous future for all, reflects a growing recognition of the importance of equitable and sustainable development (Halisçelik & Soytas, 2019b).

Poverty eradication was also one of the Sustainable Development Goals introduced in 2015. Sustainable development goals 1 and 2 (SDG1 and SDG2), which entail no poverty and end hunger, are among the direct goals for poverty eradication, though other goals are also in line with achieving poverty alleviation (Sachs, 2015).

2.1.4. Good governance

The UNDP (2002) defines governance as the “implementation of economic, political and administrative authority to manage a country's affairs at every level”. It encompasses the mechanisms and procedures that allow citizens and groups to express their interests, exercise their rights, fulfill their responsibilities and resolve conflicts.

Governance has emerged as a crucial issue over the past decades and it is a vital factor for achieving good economic growth and a human development system (Ahmed and Saleem, 2014). If countries want to enhance the well-being of their citizens, they must focus on improving economic growth and human development. Good governance is the primary element for achieving successful development in any country. To attain better economic growth and human

development, the presence of good governance is crucial, particularly in developing countries (Turner, 2011).

Donors and international financial associations are increasingly emphasizing good governance as a criterion for providing development assistance to less developed and developing countries (Santiso, 2001). It is also assumed that lacking good governance, the benefits of improvements will not reach those in need and funds will not be utilized effectively (Sharma, 2007).

As good governance is a broad concept, various organizations and individuals define it in different ways. Some definitions consider four dimensions, while others emphasize six, yet others eight. Abdellatif (2003) and others describe good governance as consisting of all or some combination of these dimensions: Voice/ Participatory, Consensus-oriented, Accountable, Regulatory Quality, Effective and Efficient, Equitable and Inclusive, Political Stability and Rules of Law/Predictability.

2.1.5. Good governance and poverty reduction

Although many factors, like unstable politics, corruption, and inefficient government, have failed in the majority of African nations, good governance is still the most important prerequisite for attaining prosperity and lowering poverty (Ewane, 2023).

A government's effectiveness can be measured by the quality of its civil and public services, its independence from political pressure, the effectiveness with which its policies are formulated and implemented, and its credibility in committing to them (Kaufmann et al., 2010). Effective government refer to the degree to which a government serves the public interest, which is generally understood to include upholding law and order, collecting taxes, allocating funds to satisfy particular needs, providing infrastructure, and advancing human rights (Aloui et al., 2024).

The link between good governance and poverty reduction remains ambiguous. Some argue that governance can help to reduce poverty if it is pro-poor. Furthermore, democratization, anti-corruption, and the rule of law will contribute to and ensure an equitable distribution of income (Khan, 2009).

Sub-Saharan Africa (SSA) has experienced remarkable economic recovery and growth since the turn of the century. However, it is unclear whether this growth resulted in increased welfare and a decrease in poverty (Thorbecke & Ouyang, 2016).

Among these is a study by Olumide & Olaoye (2023), which identified poor governance, weak political institutions, and corruption as the primary causes of poverty. When governments fail to provide services, resources are wasted, and citizens, particularly those in poverty, are denied social, legal, and economic protection (Grindle, 2004). People living in poverty frequently lack access to education and health care, resulting in lower labor productivity and reduced participation in a variety of programs (Yahie, 2000).

Many studies currently demonstrate a strong correlation between good governance and economic growth highlighting the long-term benefits of this relationship. The authors Ojima and Iimi (2005). And Sharma (2007) also conclude in their studies that good governance is crucial for development as well as a leading factor in a country's ability to efficiently utilize resources to promote economic growth and reduce poverty.

In recent years, developing countries have experienced consistent economic growth. Along with this, the GDP per capita of the population has increased. However, this was not found to be a sufficient condition for poverty eradication. In the early 1970s, the concept of income redistribution emerged as a condition for equitable growth and poverty reduction (Desai, 2000).

In developing countries, the importance of governance in economic growth and poverty reduction was first recognized during the 1980s structural adjustment policies (SAPs). It became clear that the government needed to allocate resources for health care, education, and gender inclusivity to achieve equitable growth. Furthermore, governance will play a role in redistribution and empowering the poor to gain equitable access to their efforts (Desai, 2000; Khan, 2009).

Governance can be collective, corporate, national, or global. It also indicates the state's capability to implement the institutional rules that are crucial for economic growth and poverty reduction. Historically, governments and their governance have not favored the poor (Khan, 2009). In the twentieth century, with the expansion of democracy, government and their governance met the

public needs, particularly the poor, to gain public votes during elections (Desai, 2000). Onwuka (2006) emphasized that poor governance and corruption are major causes of poverty, particularly in Africa.

2.2. Empirical review

In general, several earlier researches have tried to identify the factors that contribute to and determine poverty. The majority of research has indicated that strong institutions, economic expansion, and good governance all contribute to a reduction in worldwide poverty.

The study of Ochi et al., (2024) looked at the relationship between poverty rates and the quality of governance in South Asian and sub-Saharan African nations between 2010 and 2019. Poverty levels are negatively and significantly influenced by the quality of governance, according to dynamic panel threshold estimates. Better governance, however, seems to be associated with higher rates of poverty in sub-Saharan Africa. According to the study, poverty rates in South Asia and Sub-Saharan Africa are positively affected by the unemployment rate and Gini index, but they are not significantly impacted by economic growth, domestic investment, or foreign direct investment.

Nguyen et al. (2021) discovered that there is a positive and nonlinear relationship between governance, public administration, and per capita income. Improved governance and public administration appear to improve income distribution and alleviate poverty. Governance quality has a stronger correlation with poverty severity than with poverty headcount. This suggests that within a province, better governance and public administration benefit the poorest of the poor.

Goff and singh (2014) examined the relationship between trade openness and poverty in Africa, revealing that while trade liberalization is often promoted as an essential strategy for development, its impact on poverty reduction is not straightforward. They suggest that increased trade can raise labor prices in countries with abundant labor, potentially lowering poverty levels. However, if the reallocation of resources is obstructed, the expected benefits may not materialize. Their empirical analysis, which utilized a panel of African countries from 1981 to 2010, shows that the effects of trade openness on poverty vary significantly depending on certain country characteristics, such as the strength of financial institutions, levels of education, and the

effectiveness of governance. This indicates that for trade policies to successfully reduce poverty, they should be accompanied by measures that enhance these critical factors, highlighting the importance of targeted strategies in trade policy development.

The study of A. Ali and Ali (2018) has revealed that the primary causes of poverty are the budget deficit, government spending, unemployment, exchange rate, and inflation. The budget deficit and government expenditure have an inverse relationship with poverty, whereas the unemployment rate, inflation, and exchange rate have a positive effect on poverty.

Talukdar (2012) investigated the effect of inflation on poverty across 115 developing countries from 1981 to 2008. Utilizing a panel dataset with observations taken at three-year intervals, he analyzed the relationship between inflation and poverty while accounting for other influential factors such as income, external debt, educational attainment, and governance quality. Through regression analysis, he found a general positive correlation between inflation and poverty, alongside negative correlations for income, educational attainment, and governance in most cases. Notably, his findings revealed that while inflation typically correlates positively with poverty, this relationship is negative and statistically insignificant in low-income countries under certain conditions. This nuanced understanding contributes valuable insights to the empirical literature on the interplay between inflation and poverty in varying economic contexts.

Tsai (2006) identifies the primary causes of poverty in emerging economies. The study's findings show that income, landlocked ness, tropics, secondary education, and population growth are all important factors in poverty alleviation. Mogess et al., (2023) have also concluded that economic growth is critical to reducing poverty in Sub-Saharan Africa. Furthermore, government expenditure, remittances, trade openness, arable land, credit, and population growth all have a negative impact, while foreign aid exacerbates poverty in Sub-Saharan Africa.

Sodiq et al., (2022) investigated the role of human capital and institutional quality in shaping the impact of FDI on poverty levels in sub-Saharan Africa. The study found that FDI does not directly reduce poverty incidence or intensity; instead, its effectiveness is contingent upon the absorptive capacity of the host country, which includes factors such as human capital and institutional frameworks. The research highlights that FDI can alleviate poverty conditions when coupled with strong human capital and effective institutions. Additionally, the study identifies a bidirectional causality between FDI and poverty, indicating that while FDI can contribute to

poverty reduction, the existing poverty levels can also influence a country's attractiveness for foreign investment. To optimize the benefits of FDI for poverty alleviation, the study recommends that SSA governments invest in human capital and undertake public sector reforms to foster a more favorable investment climate.

According to Akanbi (2015), good governance and social infrastructure were found to have a substantial effect on poverty reduction in Sub-Saharan African countries. In their study of determinants of poverty, Adeyemi et al., (2009) addressed the fact that population growth and poor economic activity are major factors influencing poverty levels in Sub-Saharan Africa. Population growth and poor economic activity have a positive effect on poverty.

Bonuedi et al., (2019) investigated the role of effective institutions in capitalizing on the growing active population in Sub-Saharan Africa (SSA). The study examined a panel dataset from 39 countries covering the years 2002 to 2013. Using the system generalized method of moments estimator, the paper concludes that an increase in the working-age population has no direct impact on growth unless supported by strong, high-quality institutions. The study emphasizes the importance of key institutional factors such as the rule of law, corruption control, and political stability in maximizing the economic benefits of a growing working-age population.

Kilishi et al., (2023) investigated the effects of six governance indicators on multidimensional poverty, poverty headcount ratio, poverty vulnerability, poverty severity, poverty intensity, and poverty inequality. In contrast to earlier studies, this places more emphasis on non-monetary indicators of poverty that account for the different forms of deprivation that impoverished people face. The study also looked into how these six measures of poverty were affected by various aspects of governance. Fixed and Random Effect GLS estimators are used to examine unbalanced panel data from 43 Sub-Saharan African (SSA) nations. The Hausman specification test is used to determine the optimal approach. The findings revealed that voice and accountability are the most important political factors in reducing poverty in SSA. Furthermore, government efficiency is critical in reducing the intensity and severity of poverty, while the rule of law contributes significantly to reducing inequality among the poor. Improving the quality of governance is also essential to lessening poverty. In addition, the study suggests that government effectiveness plays a role in minimizing the intensity and severity of poverty to improve participatory governance and guarantee people's freedom. It also highlights the necessity of

better public service quality to support government efficacy and proposes judicial reforms to increase legal compliance across the SSA region.

Jamil et al., (2022) also looked into the connection between poverty alleviation and governance factors. The World Bank and Worldwide Governance Indicators databases provided balanced panel data from 29 countries between 2004 and 2016 for the study. The results demonstrated the need for strong governance and the greater success of proactive policy implementation in reducing poverty.

According to Salawu et al., (2018), poor governance in Sub-Saharan Africa has significantly hindered the region's economic growth when compared to other regions around the world. The analysis made use of descriptive statistics, principal component analysis, ordinary least squares regression, and the generalized method of moments. The results showed that South Africa and Ghana had better governance than Nigeria. Ghana and South Africa's economic growth were found to be positively impacted by governance, whereas Nigeria's was negatively impacted. The regression analysis of specific governance indicators revealed that political stability and corruption control boost economic growth in South Africa and Ghana, whereas voice and accountability, as well as corruption control, have a negative impact on Nigeria's economic growth. The study recommends citizen freedom of speech, leader accountability, political stability, and corruption control to improve governance and stimulate regional economic growth.

Using the PVECM framework, (Egbetunde & Adedimeji, 2015) also conducted an empirical investigation into the connection between economic growth and governance in sub-Saharan Africa. According to the study, institutional quality significantly and negatively affected the nations' economic activity. Moreover, the findings showed a long-term correlation between regional economic prosperity and effective governance. The study makes the case that governments in the region should put in place strong institutions to maintain economic prosperity and appropriate macroeconomic policies for the countries to benefit from good governance.

Sillah (2012) used cross-sectional data from 39 Sub-Saharan African nations between 2000 and 2007 to investigate how political and economic governance affects poverty. The results show that poverty reduction is not a function of political governance. Rather, the study unequivocally affirms that the most crucial element in reducing poverty in Sub-Saharan Africa is real per capita GDP. The level of poverty decreases as real per capita GDP rises.

Aloui (2019) employed a static model to examine the relationship between governance and poverty reduction in sub-Saharan African countries between 1996 and 2016. The findings show that governance indicators have both a positive and negative impact on poverty reduction in sub-Saharan Africa. This suggests that governance factors are important in poverty reduction. The effect of governance on reducing poverty differs depending on Africa's level of development. In particular, the evidence provides support to the notion that governance has a greater effect on reducing poverty in sub-Saharan Africa's poorer regions than in its wealthier ones. For example, there is a significant and positive correlation between poverty reduction and government effectiveness in Central and Eastern Africa, but not in Southern Africa, and a significant and negative correlation in Western Africa.

Workneh (2020) used panel data from 34 Sub-Saharan African nations to investigate how poverty is driven by gender inequality and governance. Using maximum likelihood estimation of random effect models, it was discovered that a considerable amount of gender inequality raises poverty levels in the area. Additionally, the study suggested that reducing poverty may be greatly aided by efficient governance. Both national and regional data showed consistent results. Furthermore, it has been demonstrated that the combination of gender inequality and a lack of governance may make poverty worse. Improving human development and strengthening institutional frameworks that support accountability and voice, rules, and efficient governance of socioeconomic matters are crucial for reducing poverty. It's also crucial for addressing the region's high levels of gender inequality. This argument supports that of (McIntyre-Mills, 2019), who argues that improving governance in Sub-Saharan Africa will increase economic growth and reduce poverty.

Abdulhakeem (2024) examined the direct relationship between poverty in Sub-Saharan Africa (SSA) and 16 sub-indicators and four governance components. In contrast to the majority of earlier research, this study uses a composite governance index rather than focusing on particular policy variables. This study used the System GMM estimation technique on a panel dataset from 41 SSA countries between 2012 and 2022. The findings showed that poverty in SSA can be considerably decreased by strengthening the four pillars of governance: human development, economic opportunity foundations, participation, rights and inclusion, and security and rule of law. Though not all sub-indicators directly affect poverty, some that do have a significant impact

include public administration, infrastructure, rural development, social welfare, accountability and transparency, anti-corruption initiatives, rule of law and justice, and a sustainable environment. The important indicators help to establish a conducive atmosphere for fruitful endeavors. As a result, it is recommended that policymakers implement judicial reforms, including changes to police services, and civil service reforms. Government operations should prioritize transparency and zero tolerance for corruption.

Besides, Olofin et al., (2015) discovered that population growth, political terror, and democracy all have an impact on poverty. Political terror and democracy were found to have a positive influence, whereas population growth has a negative impact on the level of poverty in Nigeria.

Olatunji (2018) discovered a significant relationship between human capital development and poverty alleviation in Nigeria, emphasizing its crucial policy implications for developing countries. His study examines the connection between various elements of human capital development, specifically health and education and their impact on poverty alleviation, measured by per capita income, from 1995 to 2017. Using a Granger causality test through a vector error correction mechanism (VECM), the study found there no unidirectional or bi-directional causality between government expenditure on education and health, infant mortality, gross enrolment ratio, and per capita income. However, he identified instances of unidirectional causality between literacy rate, life expectancy, and per capita income. These findings suggest that the government should increase investments in education and health, as these are vital factors that can significantly contribute to alleviating poverty in Nigeria.

Girma (2021) investigated the role and determinants of women's labor force participation in reducing household poverty in Debre Birhan town, Ethiopia. The study found that increased participation of women in economic activities significantly correlates with a decrease in household poverty levels. Through a logistic regression analysis of data collected from 291 households, it was revealed that factors such as training, exposure to mass media, access to credit, and educational status of women were positively and significantly associated with their likelihood of participating in the labor force. Notably, the findings indicated that out of the surveyed households, a substantial 62.89% were classified as poor, underscoring the critical role of women's economic engagement in alleviating poverty within households. This highlights the

necessity for initiatives aimed at enhancing women's labor force participation as a viable strategy for poverty reduction.

A review of the literature reveals that several studies have presented theoretical and empirical arguments about the determinants of poverty. Some studies have partially investigated various causes of poverty in the country, while others have been conducted in previous decades, indicating the need for new empirical evidence using the latest and most recent methodology. Given the recent emphasis on the role of governance and institutional aspects of the country in economic growth and development, this study attempted to empirically investigate the effect of good governance on poverty reduction using new evidence from selected Sub-Saharan African countries.

2.3. Conceptual framework

The primary goal of the study is to examine the effect of good governance on poverty reduction. As a result, the following conceptual framework is developed to comprehend the relationship between poverty and good governance, as well as other control variables that were discovered in the theoretical and empirical literature. The framework is primarily built in light of the research conducted by A. Ali and Ali (2018).

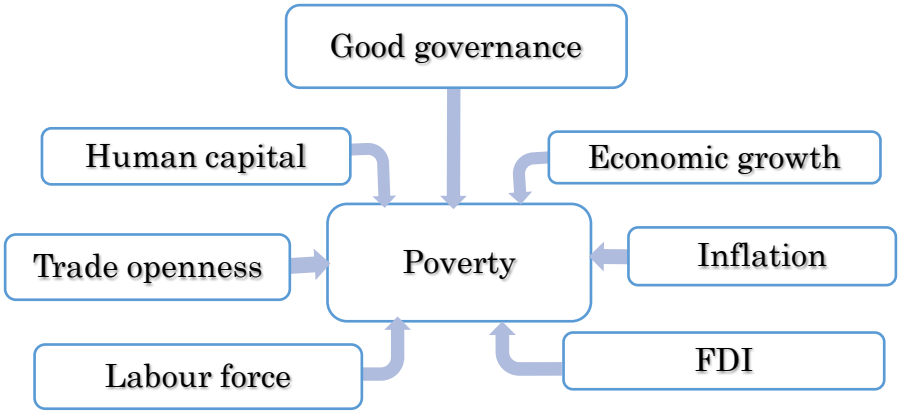

Figure 1. Framework of the study.

Chapter Three

Methodology

3.1. Type and source of data

The study used secondary data from the World Development Indicator (WDI), the World Governance Indicator (WGI), and the United Nations Development Programme (UNDP). The panel data, consisting of 36 selected sub-Saharan African countries over 13 years (2010 to 2022), are included in the study based on data availability. The selected country includes Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, CAF, Chad, Congo Rep, Equatorial Guinea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Madagascar, Mali, Mauritania, Mauritius, Namibia, Niger, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

3.2.Method of data analysis

The study employed both the descriptive and econometric models for data analysis. A multiple linear regression data analysis tool was employed to analyze the effect of good governance on poverty reduction in sub-Saharan Africa. The analysis and discussion of the result of this study

are based on the fixed effect regression model, because it adjusts for unobserved heterogeneity between the countries by focusing on the variations within each country to provide more accurate estimates when analyzing panel data (Wooldridge, 2002). It also helps to control the endogeneity by accounting for time invariant characteristics that can cause biased estimates (Hsiao,2007).

3.2.1. Estimation strategy

The empirical framework of this study was modelled to explore the effect of good governance on poverty reduction. The study follows and adapts the poverty model of A. Ali and Ali (2018) and Adeyemi et al. (2009). Thus, the model that relates poverty and good governance, as well as other control variables are specified as follows.

$$POV = f(GEst, GDP\ growth, INF, FDI, LF, TO, HDI)$$

Where, $POV, GEst, GDP\ growth, INF, FDI, LF, TO\ and\ HDI$ represents poverty, government effectiveness estimate, gross domestic product growth, inflation, foreign direct investment, labor force, trade openness and human development index of country i at time t, respectively. These variables are the key factors that determine the Poverty outcomes and they are widely recognized in the literature for their significant impact on poverty (Dollar & Kraay, 2002; Driffield & Jones, 2013; Easterly, 2001; Kaufmann et al., 2009; UNDP, 2014; Winters, 2004).

The final log-linear and extended poverty model of the study that includes all the control variables of the study is specified as follows.

$$lnPOV_{it} = \beta_0 + \beta_1 GEst_{it} + \beta_2 GDP\ growth_{it} + \beta_3 INF_{it} + \beta_4 FDI_{it} + \beta_5 LF_{it} + \beta_6 TO_{it} + \beta_7 HDI_{it} + \varepsilon_{it}$$

The parameters $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6\ and\ \beta_7$ denotes the coefficients of poverty for all the explanatory variables. The model specified is estimated using the fixed effect model. The fixed effect model is specified as follows;

$$lnPOV_{it} = \beta_0 + \beta_1 GEst_{it} + \beta_2 X_{it} + \mu_i + \varepsilon_{it}$$

Where, the dependent variable, a logarithmic form of poverty ($lnPOV_{it}$), good governance ($GEst_{it}$) and X_{it} represent all other control variables including economic growth, inflation,

foreign direct investment, labor force, trade openness and human capital. On the other hand, μ_i represent a country specific intercept that capture heterogeneities across countries and ε_{it} represent the error term. In addition, the Granger causality test was employed to test the causal relationship between good governance and poverty reduction in sub-Saharan Africa.

3.2.2. Description and measurement of variables

The description, measurement and sources of the model variables of the study are presented in Table 1 below. Though it is strongly suggested to use poverty headcount ratio and multidimensional poverty as a proxy for poverty, because of the lack of data for the selected sub-Saharan Africa countries, the study used household final consumption expenditure as also adopted by Aloui et al. (2024) and Heshmati et al., (2019) to indicate poverty reduction.

Table 1. Description and measurement of variables

Variable	Measurement	Description	Source
Poverty (POV)	Household final consumption expenditure (current USD)	Poverty is measured in terms of household final consumption expenditures. Increased levels of this indicator indicate a poverty reduction.	WDI
Good governance (Gest)	Government effectiveness estimate (-2.5 to 2.5)	Refers to the quality of public services, civil service and independence from political pressures, quality of policy designation, implementation and credibility.	WGI
Economic growth	GDP growth (%)	Defined as growth in the total value of all goods and services produced in the country over the year.	WDI
Inflation (INF)	Inflation rate (%)	It is a percentage increase in the aggregate price level of consumer goods and services in an economy.	WDI

Foreign direct investment (FDI)	FDI net inflows (% of GDP)	It indicates all of the direct investment inflows at a specific point in time.	WDI
Labor force (LF)	Labor force participation rate (%)	Indicate the total active population of the nation and measure the number of working-age population.	WDI
Trade openness (TO)	Trade as % of GDP	It is measured as the summation of both exports and imports as a share of gross domestic product (GDP).	WDI
Human development index (HDI)	Human capital index (0 to 1)	It assesses the health, knowledge, and abilities that people reveal in their daily lives, enabling them to be engaged and productive citizens of the country.	UNDP

3.2.3. Diagnostic tests

The study tested the heteroskedasticity, multicollinearity, endogeneity and Hausman specification.

The heteroskedasticity test employs the modified Wald test to determine whether the model's error variances are constant, addressing any issues of non-constant variance in the error terms (Gujarati, 2021). The multicollinearity test assesses the strong correlation between two or more explanatory variables, making it difficult to isolate the influence of individual variables when they exhibit a nearly perfect linear relationship (Gujarati, 2021; Koop, 2008). The endogeneity test identifies when explanatory variables are correlated with error terms in econometric models, thereby violating the assumption that predictor variables are uncorrelated with error terms and leading to biased estimates (Wooldridge, 2010; Greene, 2018). and finally, the Hausman specification test compares fixed effects and random effects estimators to evaluate reliability and bias, requiring that individual effects remain uncorrelated with regressors for consistency, as bias occurs when these effects are associated with the regressors (Baltagi, 2008).

Chapter Four

Findings and Discussion

4.1. Governance and poverty reduction

Poverty in Sub-Saharan Africa is primarily caused by limited access to education, malnutrition, high child mortality, and social exclusion, despite abundant resources (Hyden, 2007). Furthermore, in many developing nations, poverty reduction depends on effective governance. Decentralization, accountability, transparency, and a strong regulatory framework are all encouraged by good governance. Multifaceted poverty must be reduced through efficient governance (Daoud et al., 2016). However, corrupt and undemocratic governments rule the majority of African nations, especially those in the sub-Saharan region (Grindle, 2011).

Figure 2 below shows that among a few sub-Saharan African countries, there are some notable patterns in household consumption growth indicators of poverty reduction and government effectiveness. Additionally, poverty reduction rates are higher in nations with more effective governance. In contrast, poverty levels tend to be higher in nations with slower growth in good governance.

In 2022, for example, Cabo Verde, Rwanda and Namibia have slightly better governance than other sub-Saharan African countries. At the same time, those countries outperform the selected sub-Saharan African countries in terms of poverty reduction. Notably, the impact of good

governance on poverty reduction is stronger in countries with more effective governance, emphasizing the importance of effective institutions in poverty alleviation. The World Bank report also showed that sub-Saharan African nations with better governance experienced greater economic growth and reduced levels of poverty (Isser et al., 2024).

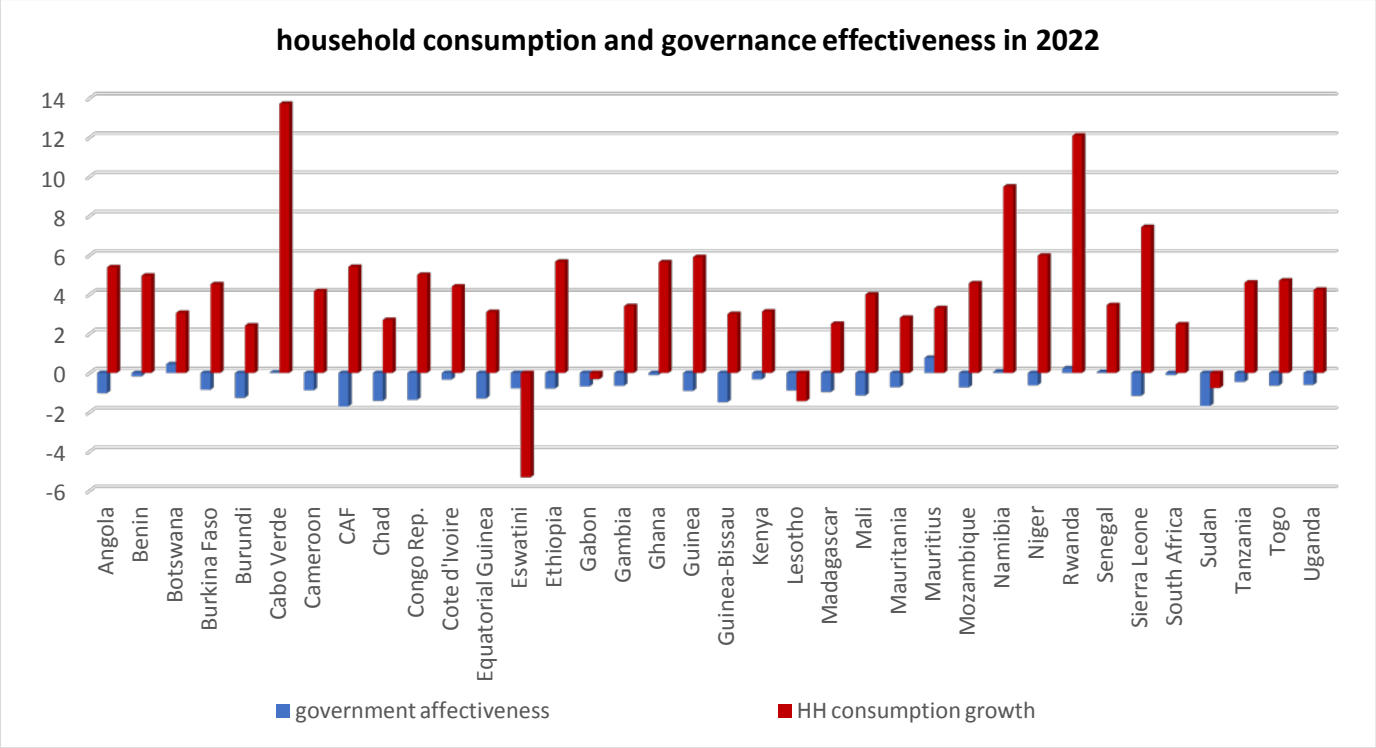

Figure 2: Relationship of government effectiveness and household consumption growth (poverty reduction) among selected sub-Saharan African countries in 2022.

On the other hand, countries with poor governance, such as Sudan, Lesotho, Gabon, Madagascar, Guinea-Bissau, Equatorial Guinea, Burundi, Chad, and Eswatini, achieved lower poverty reduction rates than other selected Sub-Saharan African countries. Furthermore, the correlation suggests that poor governance has a lesser impact on poverty reduction. Empirical evidence also agrees that government effectiveness has a significant positive relationship with growth and poverty (Gani, 2011).

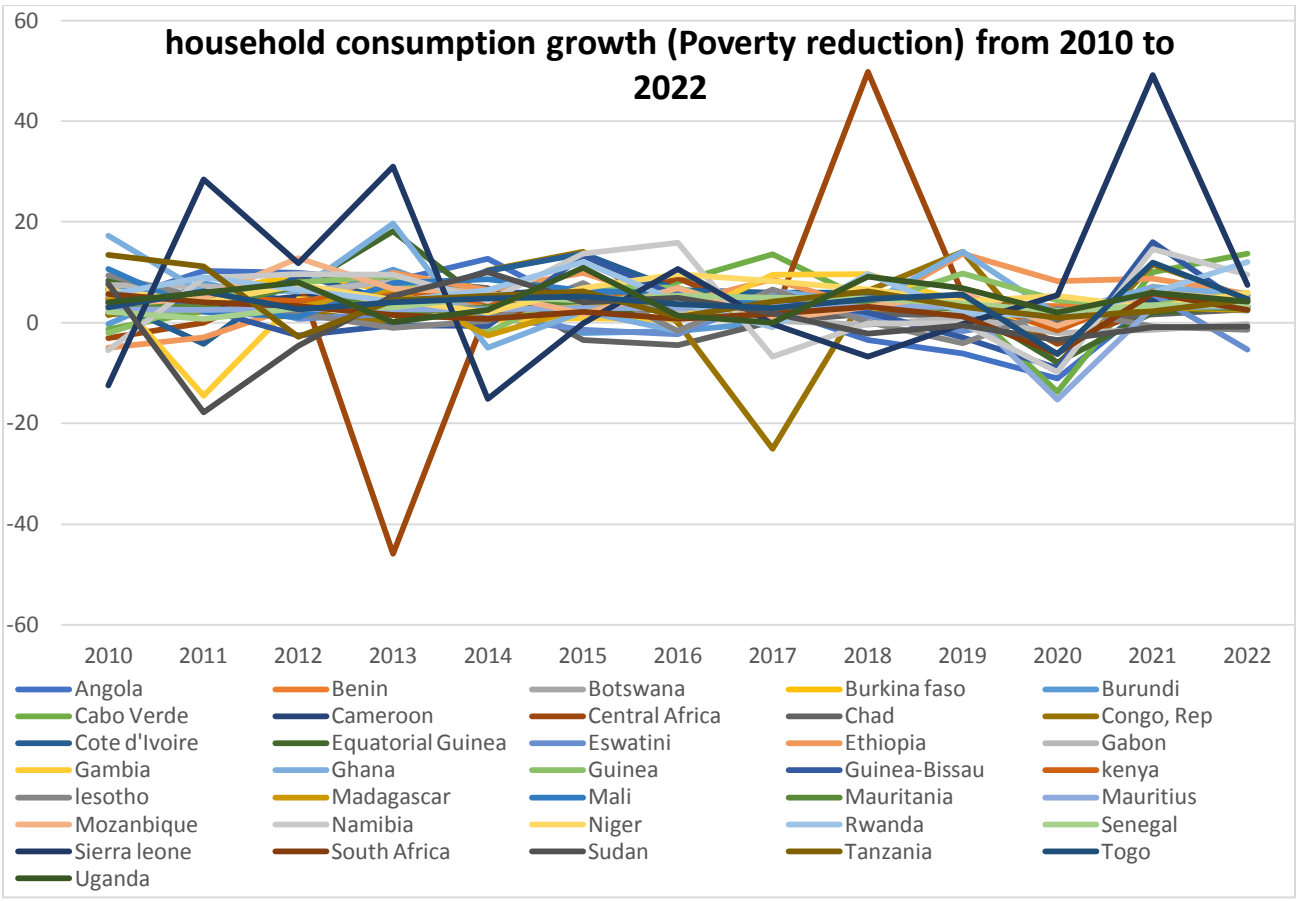

Figure 3: Trends of household consumption growth of the selected sub-Saharan African countries from 2010 to 2022.

The household consumption growth for sub-Saharan Africa countries from 2010 to 2022 reveals significant fluctuations, highlighting the economic challenges and recovery periods.

Sierra Leone experienced significant growth in household consumption in 2011 and 2013. due to post-conflict recovery efforts. After the civil war, the government focused on stabilizing the economy and attracting foreign investments, particularly in the mining sector. This led to increased consumer Confidence and spending. Moreover, favorable global prices for iron ore and Diamond provided a boost to export revenues, further enhancing household incomes. The political environment was relatively stable during this time, facilitating international aid to promote development. However, the country experienced a significant decline of household consumption in 2014, this can be attributed to the Ebola outbreak, which severely affected the economy. The health crisis caused a significant reduction in economic activity, leading to loss of lives and a decrease in consumer confidence. This decline was exacerbated by falling commodity

prices, as Sierra Leone's reliance on mineral exports made it vulnerable to global market fluctuations (World Bank, 2014).

The country achieved a remarkable recovery in 2021, with a projected economic growth largely due to government initiatives like the Quick Action Economic Response Program and increased domestic demand (World Bank, 2014).

In 2011, Gambia faced a drop in household consumption. In Gambia, food insecurity has increased because of the lagging effects of the 2011 crop failure, higher prices, and poor quality, including monotonous diets. Additionally, the country's economy faced challenges from rising fuel prices and external economic pressures (UNECOSOC, 2014).

Sudan experienced a significant economic contraction after the secession of South Sudan in 2011, which caused the loss of 75% of its oil revenues. This severely impacted its economy and household consumption (World Bank, 2011).

The 2013 coup in the Central African Republic led to a sever political and economic crisis that worsened poverty, raising it to about 75 percent, as violence forced many people to flee their homes, government services broke down, and the economy shrank (World Bank, 2020). However, In 2018 the country experienced poverty reduction driven by economic growth, government policies aimed at stability, international aid, increased access to education and healthcare, and urbanization, all contributing to improved living standards and economic opportunities for many households (IMF, 2018).

The Congo Republic's low growth in 2017 may be due to a combination of falling oil prices, political instability, and displacement crises. As a country heavily dependent on oil exports, any downturn in prices directly affects government revenues and household consumption, leading to economic stagnation (FEW NET, 2017)

The decline in household consumption growth rates across many countries during 2020 can be linked to the impact of the COVID-19 pandemic. While there was some degree of recovery, many households continued to grapple with economic uncertainty, rising inflation, and supply chain disruptions. These challenges resulted in a more cautious approach to spending. This pattern was evident worldwide as economies sought to adapt to the new normal in the aftermath of the pandemic (World Bank, 2022). The combination of these factors led households to

prioritize savings and necessary expenditures instead of spending, indicating a significant shift in consumer behavior.

Finally, in 2021, many countries experienced a significant economic recovery from the COVID-19 pandemic, resulting in improved consumer spending and notable reductions in poverty levels (World Bank, 2022).

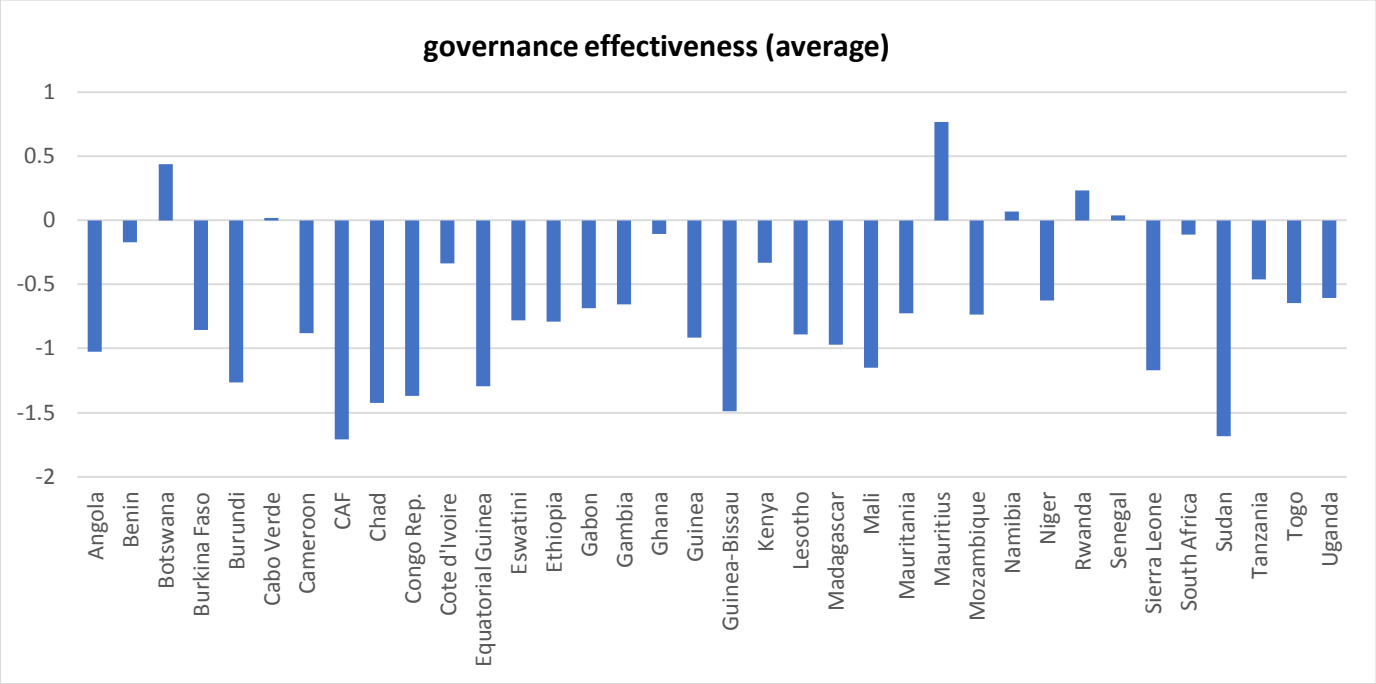

Figure 4: average governance quality in the selected sub-Saharan African countries (2010 - 2022).

Many Sub-Saharan African countries are grappling with significant governance challenges, as reflected in their government effectiveness scores. These scores indicate how well governments deliver services, uphold the rule of law, and manage public resources. A score approaching -2.5 signifies poor governance, while a score closer to 2.5 indicates good governance.

In the region, the majority of countries fall below zero, suggesting that they face serious issues such as corruption, political instability, and inadequate public service delivery. For instance, countries like the Central African Republic, Chad, and Sudan exemplify severe governance challenges, impacting their development and stability. The weak social compact between the state and society, often rooted in historical legacies and colonialism, contributes to these governance issues (Cincotta R, 2023).

Conversely, there are countries within Sub-Saharan Africa that showcase better governance practices. Botswana, Rwanda, and Mauritius stand out as examples of effective governance, characterized by stable political systems, transparency, and accountability oversight of investment, and innovation and technology IMF, (2022). Botswana has developed a good policy framework to manage its wealth from mining resources effectively, while Rwanda has made significant strides in rebuilding its governance structures post-conflict. These countries demonstrate that improvements in governance can lead to better economic performance and stability, as evidenced by their relatively strong economic growth compared to other nations in the region.

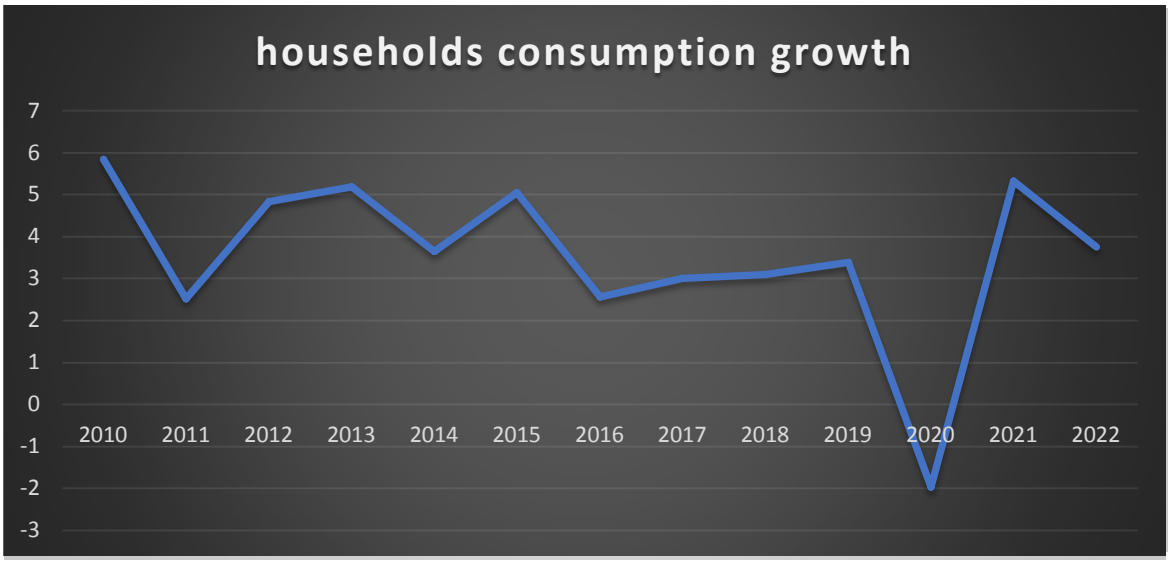

Figure 5. Trends of household consumption growth of Sub-Saharan Africa over the year 2010 to 2022.

Between 2010 and 2015 households in sub-Saharan Africa saw fluctuating trends in consumption expenditure. The region enjoyed high growth because of the recovery from the global financial crisis and rising consumer demand in many countries. However, from 2016 to 2019 these trends faced a gradual recession. This happened due to falling economic slowdowns and lower commodity prices. Political instability in key economies also played a role. Then in 2020 the COVID-19 pandemic caused a sudden contraction of nearly 2%. Lockdowns and income reductions severely affected household spending during this time. The pandemic hit sub-Saharan Africa hard, causing many countries to shrink their trade and worsening poverty and income gaps, according to the OECD (2020).

Bank of England (2020) also noted that the restrictions on movement caused many people to feel uncertain. This uncertainty led to important job losses. As a result, household spending across the continent suffered greatly. In 2021, economies started to recover importantly, but this recovery quickly faded, as high inflation, and political instability once more moderated growth in 2022 and 2023, showing that household consumption is a key driver of economic activity, while at the same time being vulnerable to multiple local and global economic challenges. this is supported by the IMF (2022) report which noted that inflationary pressures, aggravated by global food and energy price increases, contributed to a decline in real incomes, especially in food-insecure areas. Political instability, such as the war in Ukraine, also effects on global commodity prices, affecting food and fuel costs in Sub-Saharan Africa. This highlights the increasing vulnerability of household consumption to global and regional economic challenges, as noted by the OECD (2021).

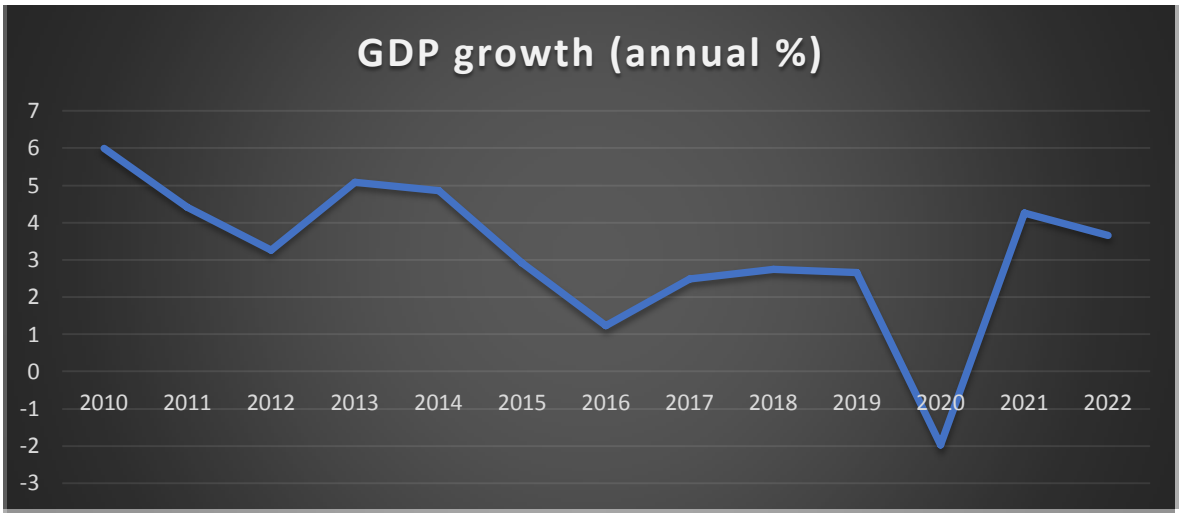

Figure 6: Trends of GDP growth in sub-Saharan Africa over the year 2010 to 2022.

In 2010 there was strong economic expansion and higher GDP growth with 5.99% growth rate. This growth was driven by the post-global financial crisis recovery, as well as rising commodity prices, particularly in oil and minerals, which provided a boost to many African economies. With the help of strong domestic demand and increased foreign direct investment sub-Saharan Africa recovered from the global financial crises with resilience (World Bank, 2015). But in 2011 the growth began to fall this slowdown continued through 2012 and 2015, with a significant decrease when growth dropped to over 1%. This is caused by many factors like regional challenges and global economic shifts. this is supported by the international monetary fund (IMF,

2019) repot which indicated, the fall in oil and mineral prices had a particularly significant impact on the economies of resource-dependent countries in the region, reducing their ability to generate revenue and invest in development.

In the period between 2017 and 2019 the growth started to go up and showed some recovery. improvements in global economic conditions and a rebound in commodity prices, especially oil and metals played a role in this recovery OECD (2017). The significant decline in 2020 is caused by the COVID-19 pandemic. Empirical evidence also agrees that the pandemic not only caused an immediate economic contraction but also exacerbated pre-existing vulnerabilities, including high poverty rates and fragile healthcare systems World Bank (2020).

In 2021 the region began to recover from the pandemic effects. The recovery of consumer spending and the resumption of infrastructure projects is supported by sub-Saharan Africa's economic growth World Economic Forum (2021). By 2022 growth began to rise again reflecting the ongoing recovery efforts. Overall, the GDP growth trend shows the resilience of sub-Saharan Africa's economies and the vulnerability to global and internal issues.

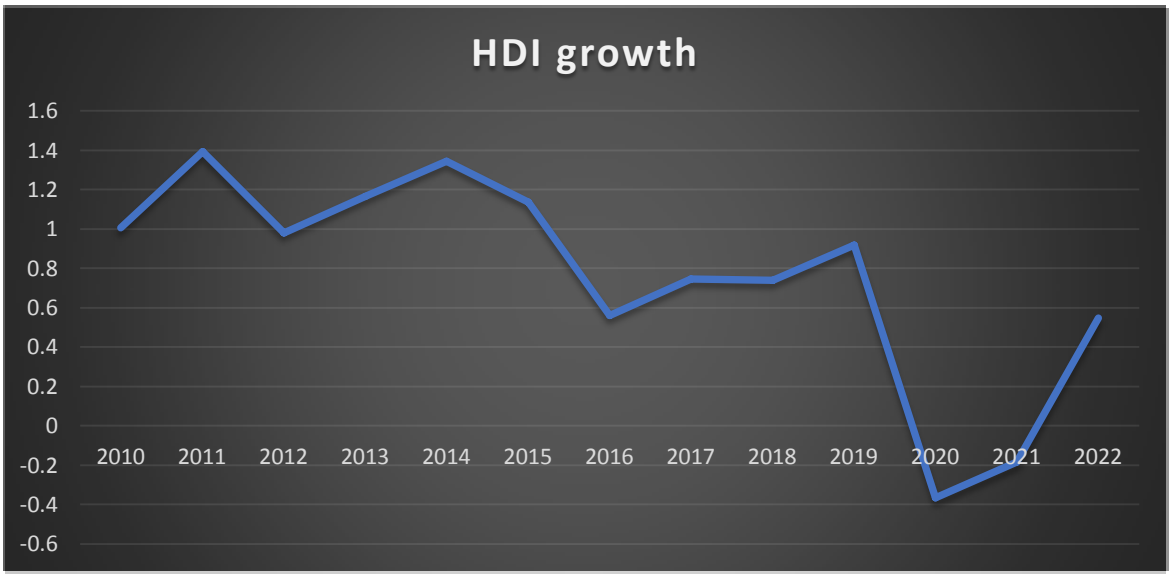

Figure 7. Trends of Human Development Index (HDI) growth of Sub-Saharan Africa from 2010 to 2022.

HDI in sub-Saharan Africa experienced high growth between 2010 and 2014 due to improvement in income, health care, and education. During this period many countries in the region made progress in achieving the millennium development goals (MDGs), which led the

high growth in the HDI (UNDP, 2013). The decline in 2015, 2016 and 2017 resulted from political instability, regional economic challenges and declining commodity prices, which affected the region's key economic sectors.

World Bank (2017) suggested that some countries faced economic recessions, which affected progress in health and education. However, the HDI growth experienced a significant decline with negative growth in 2020 and 2021 which resulted from the impact of the COVID-19 pandemic. This is supported by UNDP (2021) report which says the pandemic exacerbated existing inequalities, unjustly affecting vulnerable populations and causing reversals in development progress across many countries in the region.

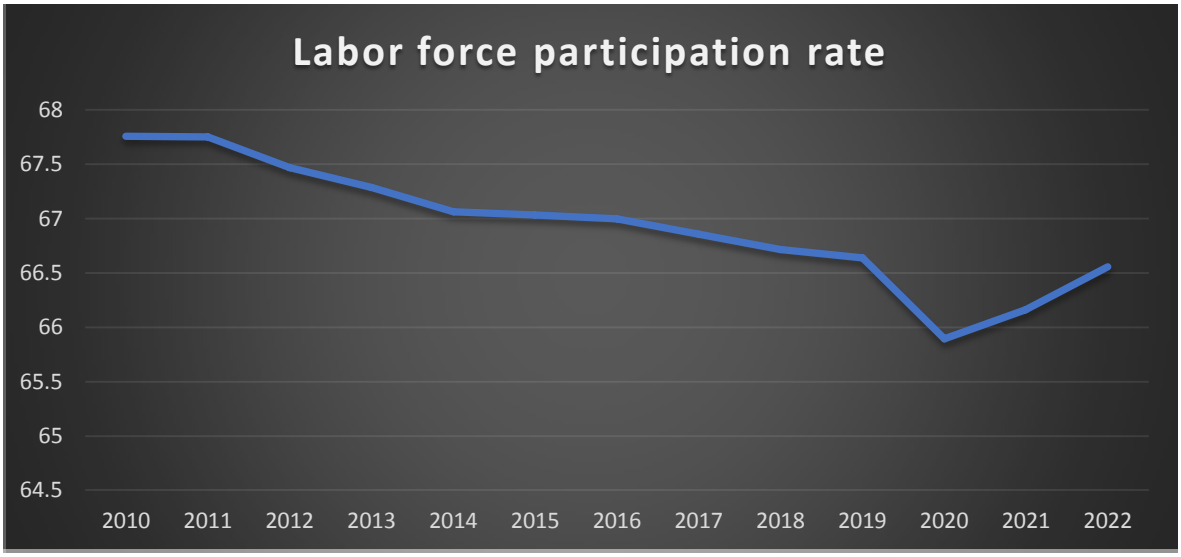

Figure 8: Trends of labor force participation in sub-Saharan Africa from 2010 to 2022.

The figure displays that sub-Saharan Africa experienced a stable trend in labor force participation with small fluctuations in the early years of the period. In this period the participation rate was high, indicating that a significant number of the working age population was either employed or actively seeking work. As the International Labor Organization indicates Sub-Saharan Africa experienced a growing labor force due to urbanization, a youthful population, and education improvement in some countries, which contributed to high participation rates (ILO, 2015).

Between 2016 and 2019 there was a gradual decline in the labor force participation rate, with a small decline observed each year until 2020, when the rate dropped more significantly due to unemployment.

The significant decline between the period 2016 and 2019 Is caused by un employment. World Bank (2017), indicated while Sub-Saharan Africa's working-age population continued to grow, job creation did not keep pace with this growth, leading to a decrease in the participation rate as some individuals may have become discouraged. In 2021 and 2022 the participation rate began to rise as economies started stabilizing the post-pandemic World Bank (2021).

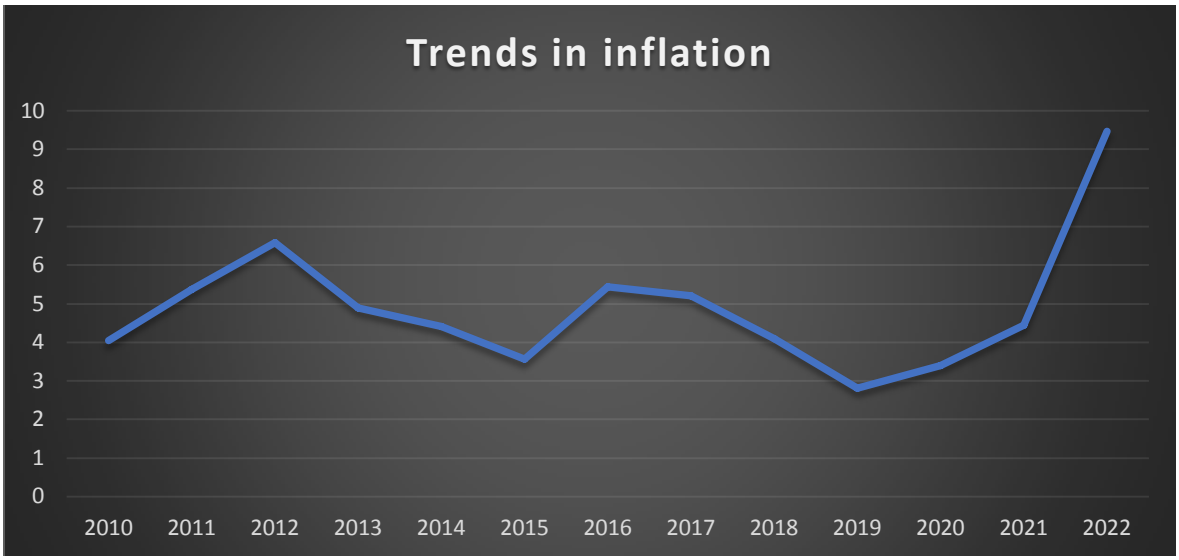

Figure 9: Trends of inflation in sub-Saharan Africa over the year 2010 to 2022.

Inflation remains relatively moderate early in the period with rates between 4% and 5%, reflecting stable economic conditions. However, it started to increase in 2012 reaching over 6% driven by factors like rising commodity prices, currency depreciations and regional economic pressure.

Between 2016 and 2019, Sub-Saharan Africa experience a fluctuated rate between 3% and 5%. In this period inflation was moderate, as global commodity prices stabilized, and many countries focused on economic stabilization. However, the region experienced challenges such as political instability and structural economic weaknesses.

OECD (2017) indicated while inflation rates were moderate, some countries in the region, particularly oil-dependent economies, experienced higher inflation due to fluctuations in oil prices and currency devaluations.

In 2022 the region experienced a significant inflation increase of 9% driven by rising global commodity prices and regional instability which worsened the conflict in Ukraine. Increase in commodity prices across the world is caused by the conflict in Ukraine, further straining economies in Sub-Saharan Africa World Bank (2022).

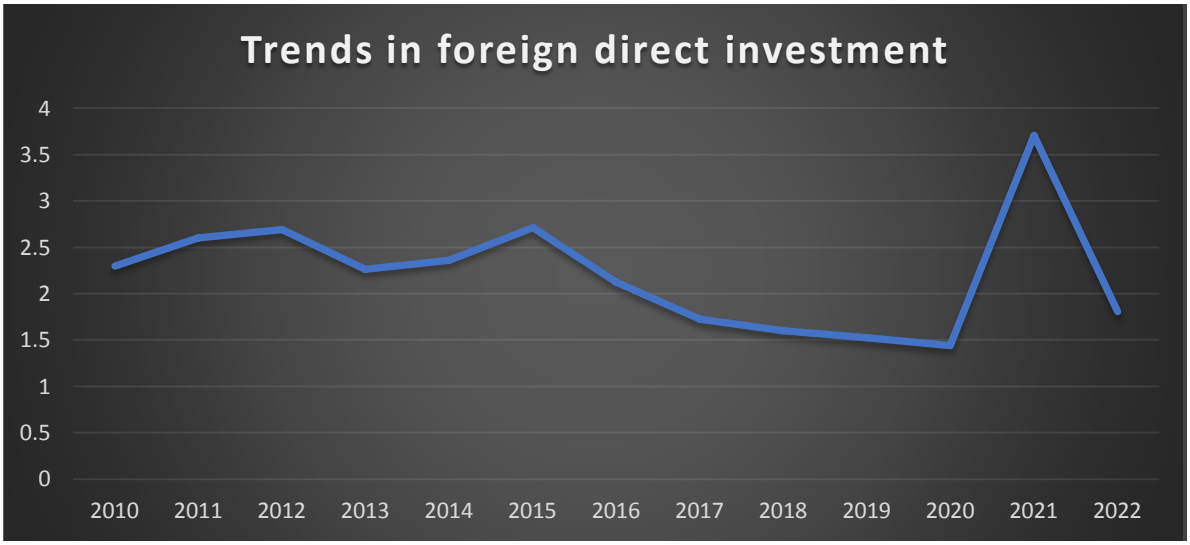

Figure 10: Trend of foreign direct investment in sub-Saharan Africa from 2010 to 2022.

FDI in sub-Saharan Africa increased steadily between 2010 and 2015, peaking in 2015 at 2.71% This increase can be attributed by the region's growing market potential, abundant natural resources, and increasing political stability in many countries. during this period sub-Saharan Africa attracted higher levels of foreign investment due to improvement in infrastructure, expanding economies and the expansion of sectors like telecommunications, energy and extractive industries (UNCTAD, 2015).

The FDI started to fall in the period between 2016 to 2020 due to global economic downturn, the significant decline in 2020, is caused by global reductions and lockdowns driven by the COVID-19 pandemic.

In 2022 FDI experienced decline of 1.81% due to supply chain interruptions, political unrest, particularly the Russia-Ukraine war. Although, FDI inflows to Africa somewhat recovery, in 2021 the world Bank (2022) reported that the geopolitical unrest and driving commodity prices in 2022 created more challenge for attracting foreign investment.

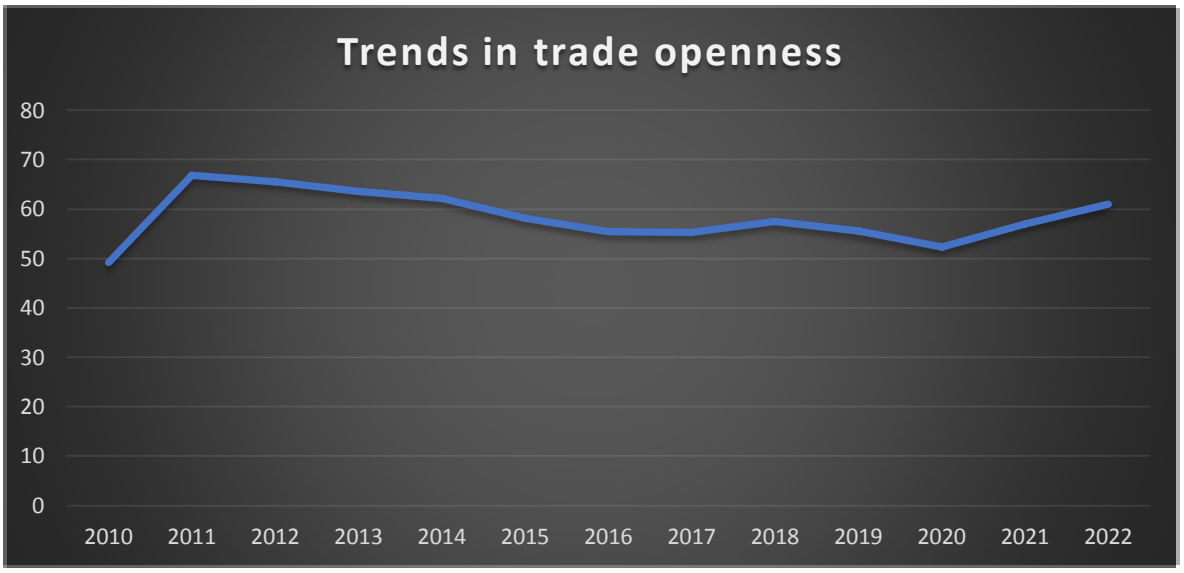

Figure 11: Trends of trade openness in sub-Saharan Africa from 2010 to 2022.

The trade openness in sub-Saharan Africa increased significantly from 49.2% to 66.9% between 2010 and 2011, reflecting economic integration and trade liberalization in this period. This is consistent with the finding of the world Bank (2021) which noted that sub-Saharan Africa experienced higher demand for its export.

The trade openness gradually declined between 2012 and 2015 due to slower global economic growth, decline in commodity prices and uncertainties in trading partners, which are vital for many African economies. IMF (2015) claims the global economic slowdowns in major markets like China and Europe, negatively affecting the demand for African exports, leading to a decrease in trade openness.

Between 2017 and 2019 the regions trade openness stabilized at around 55%. This stability implies that despite regional and global challenges, the region preserved its trade relationships. Many African countries engaged on regional agreements in order to boost intra-Africa trade.

world Bank (2019) suggested that the region focused on improving trade facilitation which helped to maintain stable trade openness.

Trade openness started to rise in 2021 reaching 57.04%, this increase indicates a recovery in trade as global economies started to recover from COVID-19 pandemic. According to the world Bank (2021) region trade agreements promoted economic integrations in the region.

4.2. Descriptive analysis

Poverty is a pervasive and complex phenomenon confronting human populations (Cooke & Lawton, 2008). In sub-Saharan Africa poverty remains the main economic challenge of the population. The poverty level is prevalent in the region, deteriorating the welfare of the people. (Nikitin et al., 2007). Despite faster growth in recent years, the region has not achieved faster poverty reduction (Thorbecke & Ouyang, 2022). The region's economy is primarily based on the low-productivity agricultural sector, and the underdeveloped mining sector has exacerbated poverty levels (Chauvin et al., 2012).

Table 2. Summary statistics of the variables, 2010–2022

Variable	Obs.	Mean	Std. Dev.	Min	Max
Ln POV	468	22.91449	1.202751	20.56392	26.38747
Gest	468	-0.7259237	0.5937937	-1.87946	1.150494
HDI	468	0.5375748	0.1076079	0.336	0.811
TO	468	67.12657	27.2492	2.698834	150.2086
LF	468	42.35813	14.18639	16.467	76.198
FDI	468	3.442453	4.679147	-17.29224	37.32298
GDP growth	468	3.53109	4.906329	-36.39198	21.45206
INF	468	9.60132	34.90946	-3.233389	557.2018

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Table 2, the average household consumption in logarithmic form is $22.9 and also shows a maximum of $26.4 and a minimum of $20.6. On the other hand, the government effectiveness estimate is averaged at -0.7 with maximum and minimum of 1.15 and -1.88, respectively for the selected sub-Saharan African countries. The average annual GDP growth rate registered for the selected sub-Saharan Africa is 3.5%. The highest GDP growth achieved is 21.45% and the minimum economic growth rate is a reduction of 36.4%. The mean value of the human capital index, trade openness, labour force participation rate, inflation rate and foreign direct investment is 0.54, 67%, 42%, 9.6%, 42% and 3.44%, respectively for the selected sub-Saharan African countries.

4.3. Econometric analysis

4.3.1. Diagnostics tests

The study has undertaken a diagnostic test before running the model to get meaningful and reliable results.

i. Multicollinearity test

Multicollinearity tests are used to determine whether two or more predictors are highly correlated or not. Multicollinearity is a potential issue in all regression analyses. It is a statistical phenomenon in which a strong or perfect relationship exists between the predictor variables (Oke et al., 2019). In the presence of a multicollinearity problem, the relationship between the independent and dependent variables is distorted, leading to incorrect relationship interpretation (Daoud, 2017). The most common multicollinearity diagnostic is the variance inflation factor (Thompson et al., 2017). The high Variance Inflation Factor indicates multicollinearity (Murray et al., 2012). Generally, it's recommended that a Variance Inflation Factor less than 10 is acceptable.

Table 3. Multicollinearity test result

Variable	VIF	1/VIF
HDI	1.88	0.531633
Gest	1.54	0.648035
TO	1.38	0.722068
LF	1.3	0.771401
GDP growth	1.13	0.882867
INF	1.08	0.930101
FDI	1.05	0.950126
Mean VIF	1.34	

As shown in Table 3, the mean-variance inflation factor for all independent variables in this study is 1.34, which is acceptable. This demonstrates that the result is free of the multicollinearity problem, with no perfect or strong collinearity among the covariates. The human development index had the highest variance inflation factor among all independent variables, which was due to the index's construction having some related attributions.

ii. Heteroscedasticity test

Homoskedasticity is the condition in which the variance of each error term remains constant. In many cases, this assumption may not be hold, and the variances may not remain constant. Heteroskedasticity occurs when the variances of disturbances do not remain constant across observations (Wooldridge, 2002). This problem impacts the estimation and test procedures, so detecting and addressing the issue is critical (Abdul-Hameed & Matanmi, 2021). Breusch

Pagan Test was introduced by Trevor Breusch and Adrian Pagan in 1979 (Breusch & Pagan, 1979). It checks for heteroskedasticity in a linear regression model, assuming that the error terms are normally distributed. It determines whether the variance of regression errors is affected by the independent variables' values.

Table 4. Heteroscedasticity test result

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model	
chi^2 (36)	975.15
Prob>chi^2	0.0000

The results revealed that there is a heteroscedasticity problem with the fixed effect model. The study considered robust regression to control for the presence of heteroscedasticity in the model.

iii. Test of endogeneity

Endogeneity is a common problem in econometrics and statistics, where an explanatory variable is related to the error term in a regression model. This violates a key assumption of the linear regression model, potentially leading to biased and inconsistent estimates (Wooldridge, 2002).

Table 5. results of endogeneity test

Ho: variables are exogenous		
Durbin (score) chi2(1)	=0.062852	(p=0.8020)
Wu-Hausman F (1,423)	=0.061552	(p=0.8042)

The p-values of Durbin score and Wu-Hausman are greater than the 5% level of significance, indicating that the null hypothesis cannot be rejected and that there is no significant endogeneity problem.

4.3.2. Correlation analysis

In Sub-Saharan Africa, poverty is primarily caused by structural failures and ineffective economic and social systems. Studies have also agreed that ineffective governance has

significantly contributed to the aggravated poverty level (Aloui et al., 2024; Cooke & Lawton, 2008; Yameogo & Omojolaibi, 2021).

Table 6. Correlation matrix

	LnPOV	**Gest**	**HDI**	**TO**	**LF**	**FDI**	**GDP growth**	**INF**
lnPOV	1							
Gest	0.2218***	1						
HDI	0.1984***	0.5329***	1					
TO	-0.3298***	0.2558***	0.4298***	1				
LF	0.2066***	-0.1164**	-0.3908***	-0.3734***	1			
FDI	-0.1458***	-0.013	0.0409	0.1791***	-0.1186**	1		
GDP growth	0.104**	0.1296***	-0.1574***	-0.0216	0.1534***	0.0768*	1	
INF	0.1322***	-0.147***	-0.0111	-0.1618***	0.0031	-0.0578	-0.1555***	1
***p < 0.01, **p < 0.05 and *p < 0.1								

Table 5 indicates that good governance, as measured by government effectiveness, is positively associated with household consumption (poverty reduction). Furthermore, in selected sub-Saharan African countries, human capital, labour force participation rate, economic growth, and inflation are all positively and significantly related to poverty reduction. On the other hand, poverty reduction as measured by household consumption is found to be negatively correlated with trade openness and foreign direct investment.

Positive correlations are also observed between covariates such as government effectiveness and human capital, government effectiveness and trade openness, and government effectiveness and economic growth. Furthermore, there is a negative correlation between government effectiveness and inflation, as well as government effectiveness and labour force participation.

4.3.3. Regression result

The model is then run to assess the effects of other covariates and good governance on household consumption (poverty reduction) after potential model tests have been considered. It is recommended that the fixed regression model be used. As shown in Table 6, the p-values of the Hausman specification test are less than 1%, indicating that the model rejects the null hypothesis (i.e., fixed effect estimating is preferred over the random effects estimator). The results of estimation using the fixed effect model are given in the following table.

Table 7. Estimates of the model using the fixed effect, 2010 – 2022

Dependent variable: ln POV (poverty reduction proxied by household consumption)						
Ind. Variables	Coefficients	Std. Err.	T	P>t	95% Conf. Interval	
Gest	0.3047522***	0.054063	5.64	0.000	0.1984881	0.4110163
HDI	3.786179***	0.466042	8.12	0.000	2.870145	4.702214
TO	-0.0011225	0.0008063	-1.39	0.165	-0.0027072	0.0004623
LF	-0.0251351***	0.0034359	-7.32	0.000	-0.0318886	-0.0183815
FDI	-0.0009634	0.0017561	-0.55	0.584	-0.0044151	0.0024884
GDP growth	0.004112**	0.0016557	2.48	0.013	0.0008575	0.0073664
INF	-0.0002231	0.0002247	-0.99	0.321	-0.0006648	0.0002186
Constant	22.23132***	0.3641789	61.05	0.000	21.51551	22.94714
Sigma_u		1.3570201				
Sigma_e		0.1451425				
Rho		0.9886896				
Observations		468				
Number of countries		36				
Hausman test		Prob>chi^2 = 0.0000				
Note: ***p < 0.01, **p < 0.05 and *p < 0.1						

The primary variable, good governance has a positive and highly significant effect on poverty reduction at the 1% level of significance. This positive effect implies that good governance enhances household consumption, which implies poverty reduction. The finding is consistent

with that of M. Coccia (2021); Jindra and Vaz (2019); Leke and Monisola (2015) and Rizk (2012).

The human development index was also found to have a positive and significant influence on household consumption (so poverty reduction) at a 1% level of significance. A unit improvement in the human development index induces household consumption and so poverty alleviation by 379%. It appears that countries with higher human capital development have a lower poverty level.

The study by Wang et al., (2021) demonstrated that health human capital has a significant effect on poverty reduction in Sub-Saharan Africa in the short run. To break the cycle of poverty in the region, the government must promote national health insurance and strengthen the health system as a whole. The government spends money on health care to treat and prevent diseases, which saves low-income households money and allows them to invest it in other areas, ultimately contributing to poverty alleviation. However, there is no long-term evidence that health human capital can lift Saharan African countries out of poverty. Chikelu (2016) examined the impact of human capital development on poverty reduction in the Nigerian economy between 1986 and 2012. The study found a link between human capital development and poverty reduction in Nigeria, implying that increasing human capital helps to alleviate poverty in the country. The works of Bashir (2018); Olopade et al., (2019) also support the finding.

The labour force participation rate has a negative and significant coefficient of 0.025, implying that each unit increase in labour force participation reduces household consumption and thus raises poverty by approximately 2.5%. This is because the majority of Sub-Saharan labour force participation growth is contributing to consumption (higher unemployment) rather than to production. The World Bank highlights significant issues regarding job quality and underemployment in Sub-Saharan Africa, emphasizing that despite high labor force participation rates, many individuals remain trapped in low-paying jobs characterized by poor working conditions and a lack of job security, particularly within the informal sector, this situation shows that simply having a job is insufficient for escaping poverty, as inadequate income from these low-quality jobs perpetuates high poverty levels (world Bank, 2024).

Furthermore, GDP growth has a positive and significant impact on household consumption, resulting in poverty reduction. A unit increase in GDP growth is associated with a 4% increase in household consumption (or poverty reduction). Ebunoluwa and Yusuf (2018) conducted an empirical investigation into the relationship between economic growth and poverty reduction. The results indicated that economic growth is a crucial instrument for poverty reduction in Nigeria, with the two variables having an inverse relationship. Additionally, Mogess et al., (2023) findings used a new dynamic panel data set to examine how economic growth affected the reduction of poverty in 27 SSA countries. The findings demonstrate that there is strong evidence linking economic growth and poverty alleviation. Therefore, the primary driver of poverty reduction in SSA nations has been economic growth. The conclusion is aligned with the result of Agrawal (2007); Ferreira et al., (2010) and Warr (2000).

Other variables, such as trade openness, foreign direct investment, and inflation rate, were found to have a negative but insignificant effect on poverty reduction in the selected sub-Saharan African countries.

4.3.4. Direction of causality

The direction of causality among dependent variables and other covariates is explored. The study used a Dumitrescu and Hurlin (2012) heterogeneous panel non-causality test. The results of the selected causality test for which there is at least one direction of causality are displayed in Table 7 and the remaining results are indicated in the appendix.

The results demonstrate that, except for inflation and labour force as well as human capital and labour force, the majority of the variables exhibit a unidirectional causal relationship. There is also no proof that household consumption (the reduction of poverty) and good governance are causally related. Furthermore, the results of the study demonstrated a unidirectional causal relationship between household consumption (poverty reduction) and inflation as well as economic growth. Conversely, good governance is caused by human capital, trade openness, and the labour force participation rate. This suggests that investing in education and skill development, liberalizing the economy, and creating more jobs can all help alleviate poverty, supporting the idea that human capital is critical to driving economic growth and individual well-being.

Table 8. Results of Pairwise Dumitrescu Hurlin panel causality test

Null Hypothesis	**W-Stat.**	**Z bar-Stat.**	**Prob.**	**Causality**
GDP growth does not homogeneously cause lnPOV	2.95614	-0.05065	0.9596	Unidirectional
lnPOV does not homogeneously cause GDP growth	5.07937	2.40105	0.0163	
INF does not homogeneously cause lnPOV	2.01932	-1.13239	0.2575	Unidirectional
lnPOV does not homogeneously cause INF	6.7289	4.30576	0.00002	
HDI does not homogeneously cause Gest	5.06793	2.38784	0.0169	Unidirectional
GEst does not homogeneously cause HDI	4.2169	1.40516	0.16	
TO does not homogeneously cause Gest	6.01683	3.48353	0.0005	Unidirectional
GEst does not homogeneously cause TO	4.28012	1.47815	0.1394	
LF does not homogeneously cause Gest	7.14994	4.79194	0.0000	Unidirectional
GEst does not homogeneously cause LF	4.15198	1.3302	0.1835	
GEst does not homogeneously cause GDP growth	3.7776	0.8979	0.3692	
LF does not homogeneously cause HDI	8.03781	5.81717	0.0000	Bidirectional
HDI does not homogeneously cause LF	7.16784	4.81261	0.0000	
GDP growth does not homogeneously cause HDI	3.33382	0.38546	0.6999	Unidirectional
HDI does not homogeneously cause GDP growth	6.94396	4.55409	0.0000	
INF does not homogeneously cause HDI	4.00652	1.16223	0.2451	Unidirectional
HDI does not homogeneously cause INF	6.40689	3.93394	0.0000	
LF does not homogeneously cause TO	6.67191	4.23995	0.0000	Unidirectional
TO does not homogeneously cause LF	3.77263	0.89216	0.3723	
FDI does not homogeneously cause TO	6.00949	3.47506	0.0005	Unidirectional
TO does not homogeneously cause FDI	2.89689	-0.11906	0.9052	
INF does not homogeneously cause TO	3.53458	0.61728	0.537	Unidirectional
TO does not homogeneously cause INF	5.59559	2.99713	0.0027	
GDP growth does not homogeneously cause LF	4.85667	2.1439	0.032	Unidirectional
LF does not homogeneously cause GDP growth	4.11187	1.28388	0.1992	
INF does not homogeneously cause LF	6.60055	4.15756	0.0000	Bidirectional
LF does not homogeneously cause INF	8.23683	6.04697	0.0000	

INF does not homogeneously cause FDI	4.66879	1.92695	0.054	Unidirectional
FDI does not homogeneously cause INF	6.04218	3.5128	0.0004	
INF does not homogeneously cause GDP growth	2.97464	-0.02929	0.9766	Unidirectional
GDP growth does not homogeneously cause INF	8.11322	5.90424	0.0000	

Additionally, it is claimed that human capital growth causes economic growth; however, there is no reverse causality. On the other hand, there is a bidirectional granger causality between inflation and labour force, as well as human capital and labour force.

Chapter Five

Conclusion and Policy Implications

5.1. Conclusion

The national and international development goals have prioritized poverty reduction and good governance in recent years. It is claimed that good governance remains a target and component of economic development goals, which also contributes the poverty reduction (Aloui, 2019). The primary goal of this study is to empirically investigate the impact of good governance on poverty reduction in selected Sub-Saharan African countries. In addition, the study intends to investigate the causal relationship between good governance and poverty reduction. The study used panel data for 36 selected sub-Saharan African countries from 2010 to 2022. The study used a fixed-effect estimation model.

The study found that good governance has a significant positive impact on poverty reduction in sub-Saharan African countries. Furthermore, human capital and economic growth are among the factors contributing to a lower poverty rate in Sub-Saharan Africa. On the other hand, labour force participation, which indicates population growth, worsens poverty in Sub-Saharan Africa. However, inflation, foreign direct investment, and trade openness have no noticeable influence on poverty reduction. The results of the causality test revealed that there is no evidence of a causal relationship between good governance and poverty reduction in Sub-Saharan Africa.

5.2. Policy implications

The study looked into the effects of good governance on poverty reduction, as well as the causal relationship between the two. The study's model was estimated using a fixed effect estimation model. The findings indicated that policies that promote good governance through transparent institutions, reduced corruption, and effective regulatory frameworks are critical for attracting investment, ensuring equitable resource allocation, and poverty reduction. It is also crucial to support inclusive and sustainable economic growth by diversifying the economy and building infrastructure to generate employment and opportunities for everyone, especially the poor. Furthermore, investments in education and healthcare should be prioritized to build human capital and provide individuals with the skills and health they require for productive employment.

These interconnected strategies are essential for reducing poverty comprehensively and moving toward a path of equitable and sustainable development. This necessitates a collaborative effort by government, civil society, and the private sector to establish improved governance, increased human capital, and sustainable economic growth mutually reinforcing each other, resulting in significant and long-term poverty reduction.

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Appendices

1. Pooled OLS

```
. reg lnPOV GEst HDI TO LF FDI GDPgrowth INF
```

Source	SS	df	MS		
Model	225.378337	7	32.1969052	Number of obs	= 468
Residual	450.188496	460	.978670644	F(7, 460)	= 32.90
				Prob > F	= 0.0000
Total	675.566833	467	1.44660992	R-squared	= 0.3336
				Adj R-squared	= 0.3235
				Root MSE	= .98928

lnPOV	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
GEst	.2644487	.095769	2.76	0.006	.0762497	.4526476
HDI	4.674199	.5834578	8.01	0.000	3.527626	5.820772
TO	-.0194405	.001977	-9.83	0.000	-.0233257	-.0155553
LF	.0162962	.0036741	4.44	0.000	.0090761	.0235162
FDI	-.0164398	.010037	-1.64	0.102	-.0361638	.0032842
GDPgrowth	.0329945	.0099301	3.32	0.001	.0134804	.0525085
INF	.0034923	.0013597	2.57	0.011	.0008203	.0061644
_cons	21.11498	.4388876	48.11	0.000	20.25251	21.97746

2. Diagnostic tests: Vif and Heteroscedasticity test

```
. vif
```

Variable	VIF	1/VIF
HDI	1.88	0.531633
GEst	1.54	0.648035
TO	1.38	0.722068
LF	1.30	0.771401
GDPgrowth	1.13	0.882867
INF	1.08	0.930101
FDI	1.05	0.950126
Mean VIF	1.34	

```
. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (36)  =     975.15
Prob>chi2 =      0.0000


. estat endog

  Tests of endogeneity
  Ho: variables are exogenous

  Durbin (score) chi2(1)          =  .062852  (p = 0.8020)
  Wu-Hausman F(1,423)             =  .061552  (p = 0.8042)
```

3. Summary statistics

```
. sum lnPOV GEst HDI TO LF FDI GDPgrowth INF
```

Variable	Obs	Mean	Std. Dev.	Min	Max
lnPOV	468	22.91449	1.202751	20.56392	26.38747
GEst	468	-.7259237	.5937937	-1.87946	1.150494
HDI	468	.5375748	.1076079	.336	.811
TO	468	67.12657	27.2492	2.698834	150.2086
LF	468	42.35813	14.18639	16.467	76.198
FDI	468	3.442453	4.679147	-17.29224	37.32298
GDPgrowth	468	3.53109	4.906329	-36.39198	21.45206
INF	468	9.60132	34.90946	-3.233389	557.2018

4. Correlation matrix

```
. pwcorr lnPOV GEst HDI TO LF FDI GDPgrowth INF, sig
```

	lnPOV	GEst	HDI	TO	LF	FDI	GDPgro~h
lnPOV	1.0000						
GEst	0.2218 0.0000	1.0000					
HDI	0.1984 0.0000	0.5329 0.0000	1.0000				
TO	-0.3298 0.0000	0.2558 0.0000	0.4298 0.0000	1.0000			
LF	0.2066 0.0000	-0.1164 0.0117	-0.3908 0.0000	-0.3734 0.0000	1.0000		
FDI	-0.1458 0.0016	-0.0130 0.7794	0.0409 0.3778	0.1791 0.0001	-0.1186 0.0102	1.0000	
GDPgrowth	0.1040 0.0245	0.1296 0.0050	-0.1574 0.0006	-0.0216 0.6416	0.1534 0.0009	0.0768 0.0971	1.0000
INF	0.1322 0.0042	-0.1470 0.0014	-0.0111 0.8114	-0.1618 0.0004	0.0031 0.9467	-0.0578 0.2119	-0.1555 0.0007

	INF
INF	1.0000

5. Regression results using fixed effects and random effects, respectively

```
. xtreg lnPOV GEst HDI TO LF FDI GDPgrowth INF, fe

Fixed-effects (within) regression               Number of obs      =       468
Group variable: country                         Number of groups   =        36

R-sq:                                           Obs per group:
     within  = 0.4116                                         min =        13
     between = 0.0047                                         avg =      13.0
     overall = 0.0069                                         max =        13

                                                F(7,425)           =     42.47
corr(u_i, Xb)  = -0.4582                        Prob > F           =    0.0000

------------------------------------------------------------------------------
       lnPOV |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        GEst |   .3047522    .054063     5.64   0.000     .1984881    .4110163
         HDI |   3.786179    .466042     8.12   0.000     2.870145    4.702214
          TO |  -.0011225   .0008063    -1.39   0.165    -.0027072    .0004623
          LF |  -.0251351   .0034359    -7.32   0.000    -.0318886   -.0183815
         FDI |  -.0009634   .0017561    -0.55   0.584    -.0044151    .0024884
  GDPgrowth |    .004112   .0016557     2.48   0.013     .0008575    .0073664
         INF |  -.0002231   .0002247    -0.99   0.321    -.0006648    .0002186
       _cons |   22.23132   .3641789    61.05   0.000     21.51551    22.94714
-------------+----------------------------------------------------------------
     sigma_u |  1.3570201
     sigma_e |  .14514248
         rho |  .98868964   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(35, 425) = 598.43                     Prob > F = 0.0000


. xtreg lnPOV GEst HDI TO LF FDI GDPgrowth INF, re

Random-effects GLS regression                   Number of obs      =       468
Group variable: country                         Number of groups   =        36

R-sq:                                           Obs per group:
     within  = 0.4103                                         min =        13
     between = 0.0083                                         avg =      13.0
     overall = 0.0110                                         max =        13

                                                Wald chi2(7)       =    271.23
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
       lnPOV |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        GEst |   .2927864   .0545781     5.36   0.000     .1858152    .3997575
         HDI |    3.71936   .4608904     8.07   0.000     2.816031    4.622688
          TO |  -.0016228   .0008169    -1.99   0.047    -.0032239   -.0000217
          LF |  -.0220988   .0034138    -6.47   0.000    -.0287898   -.0154079
         FDI |  -.0010894   .0018017    -0.60   0.545    -.0046207    .0024419
  GDPgrowth |   .0043756   .0016987     2.58   0.010     .0010463    .007705
         INF |  -.0002125   .0002306    -0.92   0.357    -.0006646    .0002395
       _cons |   22.16294   .4013074    55.23   0.000     21.37639    22.94948
-------------+----------------------------------------------------------------
     sigma_u |  1.0231078
     sigma_e |  .14514248
         rho |  .98027156   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

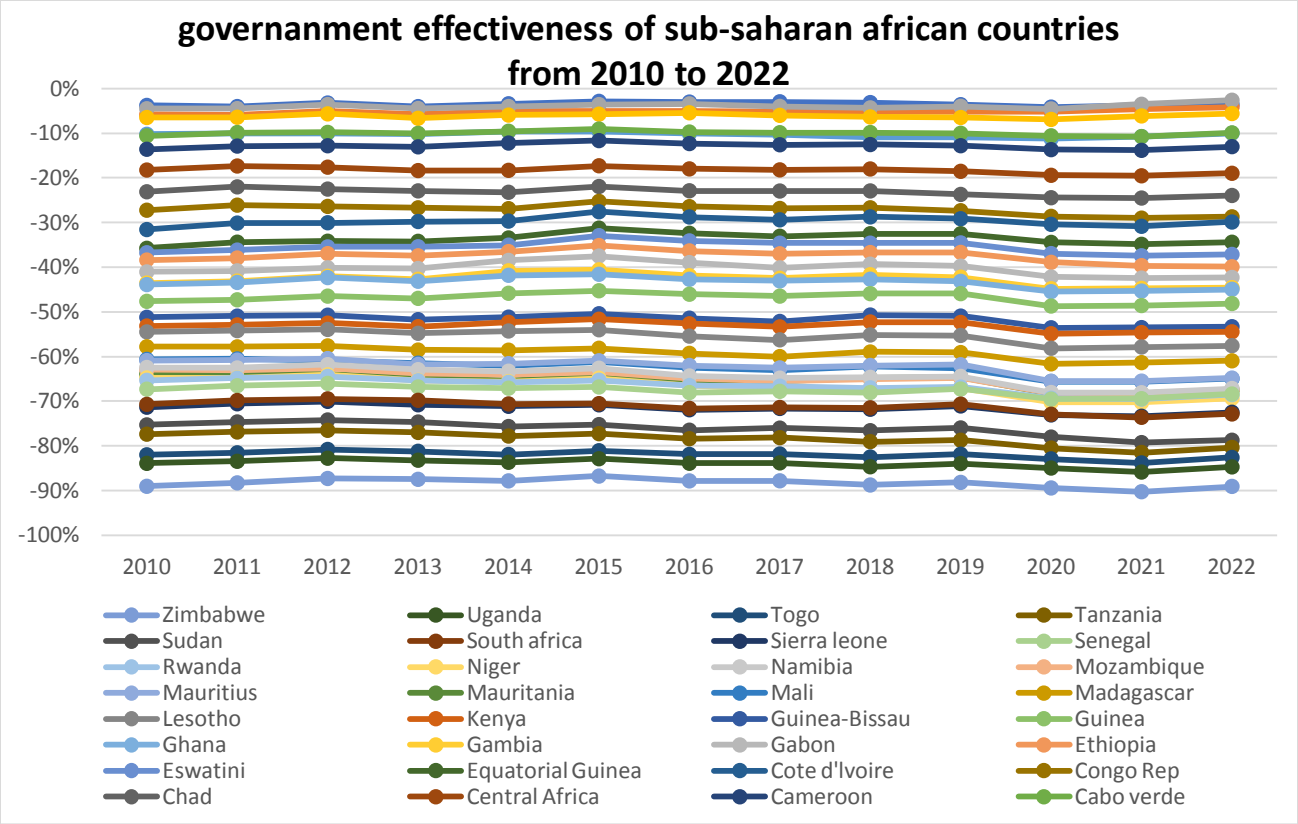
6. Husman test results

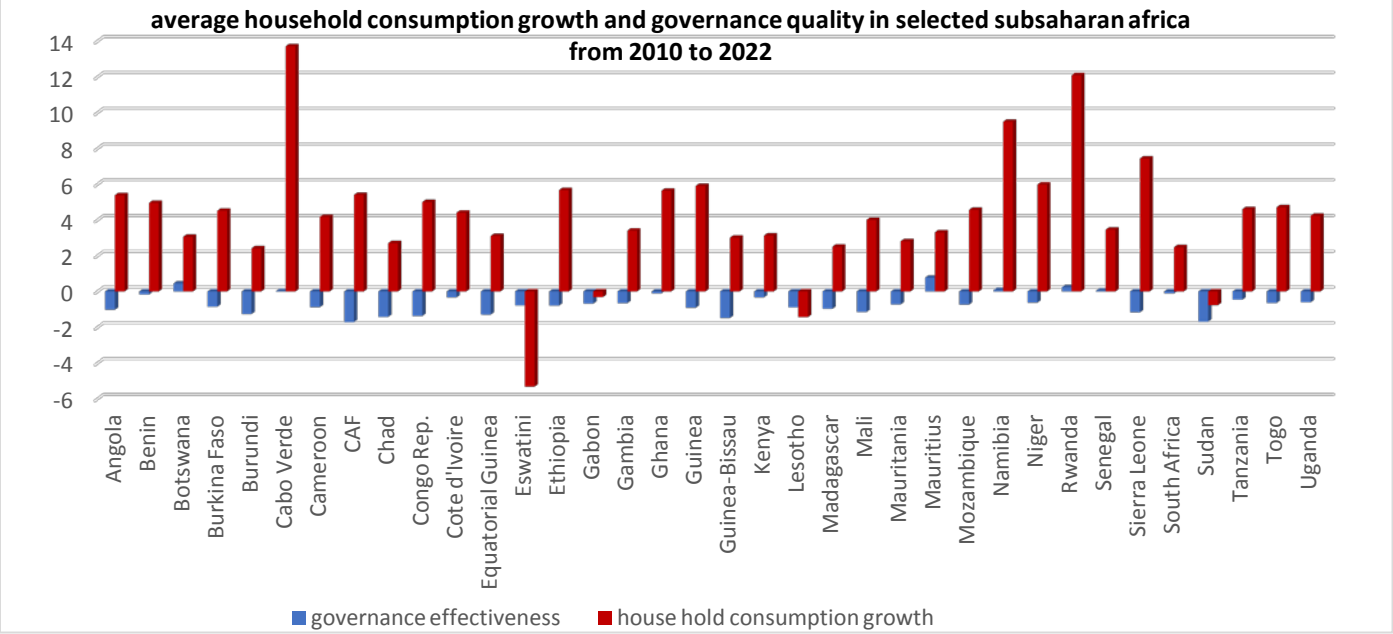
```
.
. hausman fe re
                 ---- Coefficients ----
                 (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
                  fe           re          Difference          S.E.
-------------------------------------------------------------------------------
        GEst |   .3047522     .2927864       .0119658                .
         HDI |   3.786179      3.71936       .0668197        .0691031
          TO |  -.0011225    -.0016228       .0005003                .
          LF |  -.0251351    -.0220988      -.0030362        .0003893
         FDI |  -.0009634    -.0010894       .0001261                .
  GDPgrowth |    .004112     .0043756      -.0002637                .
         INF |  -.0002231    -.0002125      -.0000106                .
-------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =      113.57
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

7. Results of pairwise Dumitrescu Hurlin panel causality test

Pairwise Dumitrescu Hurlin Panel Causality Tests
Date: 06/01/24 Time: 09:15
Sample: 2010 2022
Lags: 2

Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.
FDI does not homogeneously cause LNPOV	3.20185	0.23308	0.8157
LNPOV does not homogeneously cause FDI	3.40571	0.46847	0.6394
GDP_GROWTH does not homogeneously cause LNPOV	2.95614	-0.05065	0.9596
LNPOV does not homogeneously cause GDP_GROWTH	5.07937	2.40105	0.0163
HDI does not homogeneously cause LNPOV	3.82602	0.95381	0.3402
LNPOV does not homogeneously cause HDI	2.64807	-0.40637	0.6845
GEST does not homogeneously cause LNPOV	4.49920	1.73113	0.0834
LNPOV does not homogeneously cause GEST	2.51203	-0.56346	0.5731
INF does not homogeneously cause LNPOV	2.01932	-1.13239	0.2575
LNPOV does not homogeneously cause INF	6.72890	4.30576	2.E-05
LF does not homogeneously cause LNPOV	4.45412	1.67908	0.0931
LNPOV does not homogeneously cause LF	3.14711	0.16987	0.8651
TO does not homogeneously cause LNPOV	4.60346	1.85152	0.0641
LNPOV does not homogeneously cause TO	4.52601	1.76209	0.0781
GDP_GROWTH does not homogeneously cause FDI	3.93827	1.08342	0.2786
FDI does not homogeneously cause GDP_GROWTH	3.98947	1.14254	0.2532
HDI does not homogeneously cause FDI	4.02011	1.17793	0.2388
FDI does not homogeneously cause HDI	4.02752	1.18648	0.2354
GEST does not homogeneously cause FDI	2.92960	-0.08129	0.9352
FDI does not homogeneously cause GEST	3.72261	0.83440	0.4041
INF does not homogeneously cause FDI	4.66879	1.92695	0.0540
FDI does not homogeneously cause INF	6.04218	3.51280	0.0004
LF does not homogeneously cause FDI	3.85899	0.99188	0.3213
FDI does not homogeneously cause LF	2.06359	-1.08127	0.2796
TO does not homogeneously cause FDI	2.89689	-0.11906	0.9052
FDI does not homogeneously cause TO	6.00949	3.47506	0.0005
HDI does not homogeneously cause GDP_GROWTH	6.94396	4.55409	5.E-06
GDP_GROWTH does not homogeneously cause HDI	3.33382	0.38546	0.6999
GEST does not homogeneously cause GDP_GROWTH	3.77760	0.89790	0.3692
GDP_GROWTH does not homogeneously cause GEST	3.19147	0.22109	0.8250
INF does not homogeneously cause GDP_GROWTH	2.97464	-0.02929	0.9766
GDP_GROWTH does not homogeneously cause INF	8.11322	5.90424	4.E-09


governanment effectiveness of sub-saharan african countries from 2010 to 2022
0%
-10%
-20%
-30%
-40%
-50%
-60%
-70%
-80%
-90%
-100%
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Zimbabwe
Uganda
Togo
Tanzania
Sudan
South africa
Sierra leone
Senegal
Rwanda
Niger
Namibia
Mozambique
Mauritius
Mauritania
Mali
Madagascar
Lesotho
Kenya
Guinea-Bissau
Guinea
Ghana
Gambia
Gabon
Ethiopia
Eswatini
Equatorial Guinea
Cote d'Ivoire
Congo Rep
Chad
Central Africa
Cameroon
Cabo verde


average household consumption growth and governance quality in selected subsaharan africa from 2010 to 2022
14
12
10
8
6
4
2
0
-2
-4
-6
Angola
Benin
Botswana
Burkina Faso
Burundi
Cabo Verde
Cameroon
CAF
Chad
Congo Rep.
Cote d'Ivoire
Equatorial Guinea
Eswatini
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Madagascar
Mali
Mauritania
Mauritius
Mozambique
Namibia
Niger
Rwanda
Senegal
Sierra Leone
South Africa
Sudan
Tanzania
Togo
Uganda
governance effectiveness
house hold consumption growth