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**Modeling the Determinants of Youth Unemployment in East Africa: A
Comparative Study**

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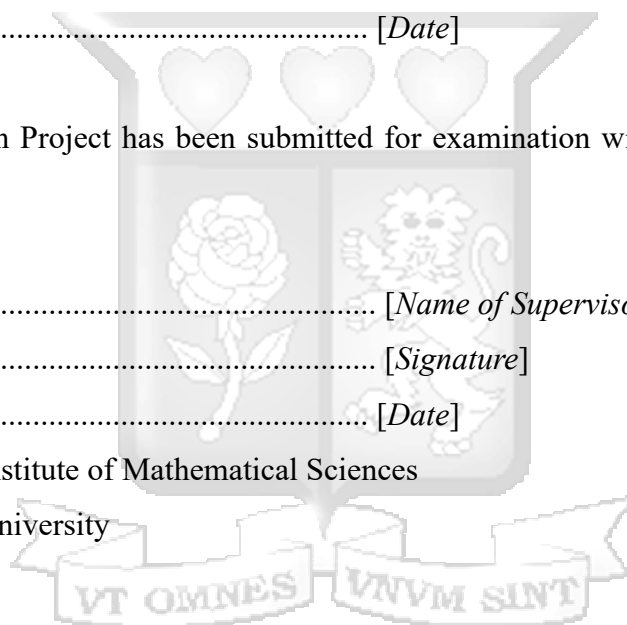
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ABSTRACT

Youth unemployment remains a critical challenge in East Africa, particularly in Kenya, Tanzania, Uganda, and Rwanda, due to structural economic constraints, education-employment mismatches, and insufficient job creation. This study employed a 33-year longitudinal econometric analysis using data from national agencies, the ILO, and the World Bank to model the key determinants of youth unemployment. A multiple regression model revealed that foreign direct investment inflows, foreign direct investment outflows, and government expenditure on education significantly impacted youth unemployment, while GDP growth and inflation showed no significant effect. Diagnostic tests confirmed the model's reliability, with an R^2 value of 0.445, indicating that 45% of the variation in youth unemployment could be explained by the selected factors. The findings highlighted the need for investment-driven job creation, vocational training, and stronger public-private partnerships to align education with labor market demands. Policymakers ought to scale up youth employment initiatives, enhance regional economic integration, and improve access to financing for startups, fostering long-term employment solutions in the region.

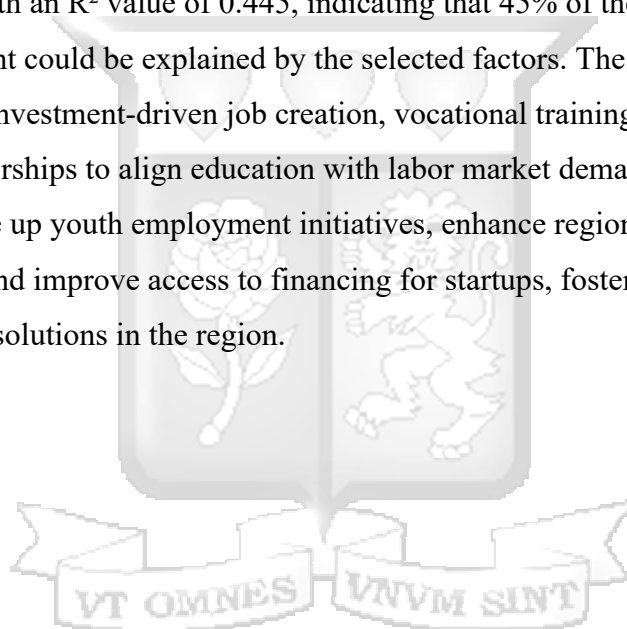


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LIST OF ABBREVIATIONS

UN	United nation
ILO	International Labor Organization
SSA	Sub-Saharan Africa
GDP	Gross domestic product
NX	Net exports
MPC	Marginal propensity to consume
OECD	Organization for Economic and cooperation and development
TVET	Technical and Vocational Education and training
OIC	Organization of Islamic Countries
GMM	Generalized method of moment
KIHBS	Kenya integrated household budget survey
KNBS	Kenya National Bureau of Statistics
NGO	Non-governmental Organization
UNESCO	United Nations Educational, Scientific and Cultural Organization



CHAPTER ONE

INTRODUCTION

1.1 Background information

The unemployment of the youth is one of the challenges facing East Africa, specifically Kenya, Tanzania, Uganda, and Rwanda. Although each country has its dynamics in terms of economy, all of them equally suffer from similar challenges such as a rapidly growing youth population, limited formal job opportunities, and a mismatch between education and labor market needs. The issue, therefore, requires a comprehensive approach that considers the similarities and differences among these nations in totality. (International Labour Organization, 2022; World Bank, 2023.)

The economies of these four countries are diverse and interlinked as well. (African Development Bank, 2023). Kenya has a diversified economy characterized by strong financial services, telecommunication, and manufacturing sectors. However, the creation of formal jobs hasn't kept pace with the growing youth workforce, leading to high unemployment, especially in urban areas (Kenya National Bureau of Statistics, 2023).

Agriculture, mining, and tourism are some of the sectors that anchor the economy of Tanzania, but the greater part of the labor force engages in informal employment. Slow industrial employment growth makes it difficult for young people to find stable employment (Tanzania National Bureau of Statistics, 2023).

Uganda has a similar structure to Tanzania, where many young people work in subsistence farming and small-scale trade. The informal economy provides most jobs, but these often come with low wages and job insecurity (Uganda Bureau of Statistics, 2023).

While being the smallest economy of the four, Rwanda has recorded impressive progress in digital transformation and infrastructure development. This has opened new employment opportunities in technology and services, but many graduates still struggle to find work that matches their skills (National Institute of Statistics of Rwanda, 2023). A factor common to all four countries is that most youths are employed in the informal sector. Informal jobs provide income but often cannot offer job security,

benefits, and career opportunities - ingredients necessary to make informal jobs a viable long-term option (ILO, 2022).

The rates of youth unemployment vary across these countries, with similar trends being recorded in the following way (World Bank, 2023). The countries consistently record high youth unemployment, while most Kenyan cities have fierce competition for formal jobs (KNBS, 2023). Tanzania and Uganda record relatively low official rates of unemployment; however, this is misleading as it conceals widespread underemployment characterized by the engagement of youths in lowly paid and informal jobs. (NBS, 2023; UBOS, 2023).

Rwanda has a relatively lower youth unemployment rate, but young graduates still struggle to transition from education to stable employment (NISR, 2023). Several challenges contribute to the high levels of youth unemployment, like the education-employment Mismatch, where Many graduates lack the skills that employers need, leading to high rates of graduate unemployment (ILO, 2022). Economic growth has not created good jobs, particularly in high-growth sectors. (AfDB, 2023) leading to slow job creation. While there is a growing interest in entrepreneurship among the youth, most have limited access to finance and business support services. (World Bank, 2023). Young women also suffer from discrimination, cultural expectations, and restricted access to vocational training. (AfDB, 2023; ILO, 2022).

The governments in East Africa have initiated several projects to help control the rate of unemployment among the youth in their region. Kenya's government has established the Youth Enterprise Development Fund and Ajira Digital Program, which support entrepreneurship and digital work opportunities (KNBS, 2023).

Tanzania and Uganda focus on vocational training with subsequent business support for young people to develop skills relevant to finding jobs (NBS, 2023; UBOS, 2023). Despite serious investment by the government in technology-driven job creation, such as Kigali Innovation City, initiatives have been key to attracting youth employment in digital industries. (NISR 2023).

Despite such efforts, it remains a challenge to upscale such initiatives and make them effective. One way to do this is through regional collaboration with the East African Community. This will be achieved when countries collaborate by:

Sharing best practices in efforts to address youth unemployment, harmonizing labor policies to create more cross-border job opportunities, and improving higher education

and vocational training to make the youth more employable across the region. (AfDB 2023)

1.2 Statement of the problem

Unemployment among youths is still one of the key socio-economic problems facing Kenya, Tanzania, Uganda, and Rwanda. Each of these countries has its labor market dynamics; however, all are bedeviled by the same structural impediments to the effective absorption of their ever-growing labor supplies. Youth unemployment is generally affected by the existing economic conditions, education system, industrial structures, government policies, and prevailing social factors (International Labour Organization, 2022; World Bank, 2023). However, little has been done in comparative research on how these factors take different forms across the four countries and which of them pose a stronger influence on youth employment outcomes. In Kenya, intense competition for formal jobs, slow job creation, and incoherence in graduate skills and labor market demand are responsible for youth unemployment (Kenya National Bureau of Statistics, 2023). Quite relative in comparison are the official lower unemployment rates in Tanzania and Uganda, with a high proportion of youth experiencing underemployment and being stuck in low-wage informal jobs offering minimal protection and opportunities for advancement. (NBS, 2023; UBOS, 2023). In Rwanda, despite the huge investments in digital transformation and entrepreneurship, most of the youth, particularly in rural areas, still face unstable employment opportunities. This study was necessary for identifying and analyzing the key factors that influence unemployment among youth in these four countries, focusing on economic Factors: how GDP growth, industrialization, and foreign investment may serve to create prospects for youth employment (World Bank, 2023). The study also focused on the role of education systems, vocational training, and technical skills in determining employability (ILO, 2022). How youth employment programs, wage policies, and flexibility in the labor market worked (AfDB, 2023) and social and demographic Influences like gender inequality, rural-urban employment gaps, and social norms influence the level of unemployment among the youth (ILO, 2022; KNBS, 2023).

Therefore, a comparison of these factors provided fact-based insights into the most significant causes of unemployment among the youth in Kenya, Tanzania, Uganda, and Rwanda. Appreciation of the differences in these factors was critical for

policymakers, development organizations, and other stakeholders interested in designing effective country-specific strategies that are also coordinated at the regional level to deal with youth unemployment and stimulate durable job creation.

1.3 General objectives

The study sought to identify and compare the key factors that influenced the unemployment status of youth in Kenya, Tanzania, Uganda, and Rwanda. Looked into how economic conditions, education systems, policies, and socio-demographic factors shape youth employment outcomes in these countries.

1.3.1 Specific objectives

Specifically, this study sought to:

1. Determine socio-economic factors that affected youth unemployment
2. Compare labor market policies and employment interventions, assessing their impact on youth employment

1.4 Research questions

1. What socio-economic factors contribute to youth unemployment?
2. How do labor market policies and interventions influence youth employment?

1.5 scope of the study

The problem of youth unemployment is multi-dimensional and widespread in Kenya, Tanzania, Uganda, and Rwanda. It is caused by many different factors, emanating from demographic trends, economic conditions, education systems, social and cultural dynamics, and government policies. An understanding of the drivers of youth unemployment in these four countries calls for an in-depth look at labor market trends, job creation policies, and the general economic structures that shape employment opportunities (International Labour Organization, 2022; World Bank, 2023). The study tried to investigate and compare the key factors that explain the causes of youth unemployment in East Africa through an examination of: the frequency of occurrence, root causes, and mainly affected sectors of youth unemployment in Kenya and Uganda (Kenya National Bureau of Statistics, 2023; Uganda Bureau of Statistics, 2023). How far the government policies and interventions have gone in attempting to alleviate unemployment among the youth (National Institute of Statistics of Rwanda, 2023; Tanzania National Bureau of Statistics, 2023). How mismatches in education and skills impact employability in different labor markets, (ILO 2022; World Bank, 2023). How

the trend of unemployment is different between urban and rural settings, particularly regarding high reliance on informal employment and challenges therein (AfDB, 2023). In these four countries, the skills the youth acquire often do not relate well to the job market's needs. This mismatch results in high levels of underemployment and informal employment, where young workers end up in low-paying jobs with poor working conditions and little job security (ILO, 2022; KNBS, 2023). By conducting a comparative analysis of these issues, this study aimed to provide data-driven insights that could help policymakers create targeted solutions to reduce youth unemployment in East Africa. By taking a regional approach, the research highlighted both country-specific challenges and shared factors that could benefit from regional collaboration through initiatives like the East African Community (AfDB, 2023). For a comprehensive youth employment policy, it was important to consider both macro-level factors, like economic growth, labor market policies, and foreign investment, and micro-level factors, such as education, household income, and access to job opportunities. This study would add to existing efforts toward aligning labor policies, expanding vocational training programs, and promoting inclusive economic growth, ultimately fostering sustainable employment opportunities for youths in Kenya, Tanzania, Uganda, and Rwanda (World Bank, 2023).

1.6 significance of the study

Understanding the key drivers of youth unemployment in Kenya, Tanzania, Uganda, and Rwanda was important for policymakers seeking to develop targeted, evidence-based responses that reflected each country's specific labor market conditions. This research, therefore, had a dual purpose: to provide some comparative insights into the causes of unemployment among youth in these four countries and to assist in ensuring that policies and their adjustments address root causes, not symptoms (International Labour Organization, 2022; World Bank, 2023). By analyzing economic, educational, policy-related, and social influences on youth employment in East Africa, this research would assess the effectiveness of existing policies and programs related to employment in these countries, highlighting best practices and lessons to be learned (Kenya National Bureau of Statistics, 2023; Uganda Bureau of Statistics, 2023). Empirical evidence would be used to inform policymakers on how to devise policies

that increase youthful employment and thereby reduce poverty and raise living standards (African Development Bank, 2023).

The study also highlighted the role of entrepreneurship, vocational training, and education reform in addressing the skills gap that perpetuates unemployment (ILO, 2022; World Bank, 2023). Discussed the wider social implications of youth unemployment, including its links to crime, social unrest, and mental health issues, while comparing trends across Kenya, Tanzania, Uganda, and Rwanda (NISR, 2023; NBS, 2023).

A shift in the youth employment pattern in these countries could potentially drive significant economic growth since young workers are among the most dynamic and productive segments of the labor force. Increasing youth participation in formal employment could boost innovation, productivity, and overall economic performance. Reducing unemployment could help lower economic inequality, strengthen social stability, and promote long-term political security. (ILO, 2022); KNBS, 2023).

Beyond the economic issues, youth unemployment had very serious psychological effects, such as stress, anxiety, and diminished self-esteem. Being aware of these challenges could help in the development of mental health support programs and employment initiatives that foster social well-being and smoother workforce integration. (AfDB 2023; NBS 2023.)

The analysis of employment trends in several countries allowed this research to provide an inter-regional perspective that could be used to guide East African policymakers, development organizations, and researchers in framing inclusive labor market policies. This comparative look at the causes of unemployment among youths would add to the academic discussions on the trends of labor markets in sub-Saharan Africa and give valuable methodological insights for the economic and social sciences, especially through quantitative research models (ILO, 2022; UBOS, 2023).

This ultimately informed recommendations for economic policy reforms, improvement in the labor market, and education strategies that could offer youths in Kenya, Tanzania, Uganda, and Rwanda sustainable, long-term employment opportunities and thus lay the bedrock for a more inclusive and resilient regional economy (World Bank 2023).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter presented a theoretical basis for the study, it identified and analyzed the primary theories relevant and gave an empirical review of previously done studies. It summarizes research done in the field previously, including journals, finance research papers, and textbooks.

2.2 Theoretical literature

Different theories have been developed regarding youth unemployment that also influences this study. The framework provides an organized orientation for researchers to study the economic, social, and institutional determinants of youth unemployment. In synthesizing existing theories and evidence, researchers could reveal important variables in the labor market for youths. Theoretical development led us to choose proper independent and control variables that ensure a thorough analysis of the causes of youth unemployment. A theoretical review helped the study generate research hypotheses and predict the outcomes while building a methodological base for future work.

2.2.1 Keynesian theory of economics

Keynesian economics, developed by John Maynard Keynes during the Great Depression of the 1930s, postulates that the free market does not always guarantee full employment. On the contrary, unemployment can best be explained by inadequate aggregate demand -an outcome of consumption, government spending, investments, and net exports (Keynes, 1936; International Labour Organization, 2022). This theory is particularly relevant in analyzing the determinants of youth unemployment across Kenya, Tanzania, Uganda, and Rwanda, where low aggregate demand significantly impacts employment opportunities for youths. Aggregate Demand and Youth Unemployment in East Africa High youth unemployment in the four countries is largely attributed to low levels of aggregate demand, where limited consumer spending and weak private-sector investments lead to inadequate job creation. The Keynesian approach supports the notion that when consumers' expenditure is low, the business

response is to reduce production, with attendant job losses and fewer opportunities for youth employment. As such, government intervention becomes necessary to stimulate aggregate demand through fiscal policies, public spending, and targeted employment programs (Kenya National Bureau of Statistics, 2023, Tanzania National Bureau of Statistics, 2023). Public Spending and Infrastructure Development in Kenya, big projects in infrastructure, such as the Standard Gauge Railway and road network extensions, have generated some jobs but have barely contributed to long-term employment for youth (KNBS, 2023). Tanzania and Uganda have equally made heavy investments in infrastructure, but their economies remain characterized by informal activity that stifles sustained job creation (NBS, 2023; Uganda Bureau of Statistics, 2023). Rwanda's Vision 2050 policy: Investing in Digital Infrastructure and Industrial Growth sets targets by creating formal job opportunities. (National Institute of Statistics of Rwanda, 2023) To have jobs available for employment, policies through the teachings of Keynesian economics by offering tax incentives to businesses when hiring youth, among others, or through direct employment schemes, amongst other things (ILO, 2022). Kenya's Ajira Digital Program and Youth Enterprise Development Fund aim to increase youth employability, yet challenges persist due to low accessibility and inadequate scaling (KNBS, 2023). Tanzania's National Youth Development Fund and Uganda's Youth Livelihood Program focus on entrepreneurship, but capital constraints limit their impact (UBOS, 2023; NBS, 2023). Kenya, Tanzania, Uganda, and Rwanda have all been dependent on agriculture, but the engagement of the youth is very low because of the informal nature of the sector, accompanied by low wages (World Bank, 2023). Consumption is a very significant component of Keynesian economics, as it drives economic activity and employment levels. The marginal propensity to consume is particularly relevant in East Africa, where many young people have low disposable income (ILO, 2022). Notably, in some of the region's big cities, like Nairobi, Dar es Salaam, Kampala, and Kigali, a high cost of living restricts disposable incomes. (AfDB, 2023). Keynesian economists recommend direct financial support, such as unemployment benefits and social welfare programs, to keep demand going (Keynes, 1936). Aggregate demand is greatly affected by net exports, which are the difference between a country's exports and its imports. While positive net exports-as in, a trade surplus tend to boost employment, on the other hand, a trade deficit decreases domestic job opportunities (World Bank, 2023). Kenya, Tanzania, Uganda, and Rwanda all face trade imbalances, with imported

goods outweighing their locally produced exports (NBS, 2023; NISR, 2023). Increasing domestic manufacturing and reducing dependency on imports could create more local jobs for youth (AfDB, 2023). Kenya's horticulture industry, Tanzania's mining sector, Uganda's coffee exports, and Rwanda's tourism industry present opportunities for job expansion (World Bank, 2023). Government support for export-oriented industries, including incentives for local producers and investing in logistics, would further help create better employment opportunities. (ILO, 2022). The Keynesian framework gives critical insights into the determinants of youth unemployment in Kenya, Tanzania, Uganda, and Rwanda. These countries can therefore, guarantee improved youth employment outcomes (ILO, 2022, and World Bank, 2023), show through stimulating aggregate demand by increasing government spending, fostering entrepreneurship, and supporting trade policies. However, such policy effectiveness would depend on targeted implementation, proper vocational training alignment, and better access to capital.

2.2.2 Lewis model of development

The Lewis Model of Development, also referred to as the Lewis Dual Sector Model, is an economic model in the field of development economics that explains the process by which an economy shifts from traditional agrarian structures to contemporary industrialized systems. It was first advanced by the Keynesian economist, Sir Arthur Lewis in his piece, "Economic Development with Unlimited Supplies of Labour," in 1954. Several essential elements make up the Lewis Model.

Traditional Agricultural Sector: these are characteristics such as low productivity, a much-consumed focus on labor, and farming for household consumption. Most people working in this vocation produce enough commodities or services for their own and their immediate families' requirements, but the supply is insufficient for marketing. **The contemporary industrial category** is characterized by higher productivity, capital intensity, and wage employment. **Surplus Labor:** It is commonly believed that the traditional agricultural sector has an excess of labor, which implies that additional workers do not make a significant contribution to overall production. **Undefined Capital Accumulation:** Hence, when labor migrates to the industrial sector, there is increased production and profitability in that sector. Since the profits are reinvested in the industrial sector, there is an increased capital accumulation in the industries hence more growth in the industrial sector. The reinvestment is leading to an enhanced

movement of workers from the agricultural sector to the industrial sector, thereby furthering the growth of the industrial sector. The model makes assumptions that the labor markets may not always be as flexible as postulated, and the wages, on the other side, may not always be as rigid as posited. If there is not enough industrialization, rural-urban migration may lead to urban unemployment and underemployment. The productivity of the agriculture sector remains constant. But in a real sense, one may discover that productivity may decline due to the migration of the labor force. The idea that all profits are reinvested can be a rash assumption, particularly when there are high consumption levels or capital flight within the economy. It is, therefore, quite useful in pinpointing and analyzing the phases of economic development and structural transformations in the course of industrialization. The Lewis Model provides a comprehensive summary and analysis of a certain subject or concept. The Lewis Model, introduced by W. Arthur Lewis in 1954, outlines the process by which an economy shifts from a conventional agricultural sector to a contemporary industrial one. This idea proposes that the surplus workforce from agriculture moves into manufacturing leading to economic growth.

The model forecasted a movement of workforce from rural (agricultural) regions to urban (industrial) regions, known as rural-urban migration. Young people often perceive this migration as a means to get improved prospects in urban areas. Insufficient growth in the industrial sector can result in urban unemployment or underemployment among young people. Young individuals residing in rural areas may possess a deficiency in the necessary skills for employment in industrial sectors. The move from country to city jobs calls for training and learning, leading to a divide between available work and the skills of jobless young people. In many growing countries, slow progress in the official industry sector causes the unofficial sector to get bigger. This sector often gives low-paying and shaky jobs. This trend hits young people harder, resulting in high rates of unofficial work.

2.2.3 Human capital theory

Human capital theory is an economic concept that regards the skills, knowledge, and experience possessed by individuals as valuable assets. These assets may be improved by ways of education, training, and experience leading to higher productivity for the asset owners. Resources will be consumed for an individual to learn, which human capital theory believes makes him more productive. They could either be in terms of

formal education such as schooling and university or informal education. The concept of economic returns indicates that economic profits stem from human capital investments on the side of both individuals and societies. The result is that people earn more and have better avenues for work available to them. For societies, it reflects increased economic growth and greater competitiveness.

Human capital theory acknowledges that workers with advanced skills and education possess greater adaptability and can transition more seamlessly between various occupations and sectors, thereby strengthening economic flexibility and resilience. The theory of the labor market suggests an explanation for income differences, highlighting that more educated and skilled individuals usually have higher incomes.

Inequity in access to education and training could keep open socio-economic gaps between citizens. Human capital theory offers a conceptual framework for comprehending the significance of investing in individuals and emphasizes the advantages of education, training, and health in improving economic outcomes for both individuals and society as a whole. The theory of human capital suggests that investments in education, training, and health lead to increased productivity in individuals, which in turn improves their ability to find employment and earn higher incomes. Human capital theory offers a framework to comprehend how investments, or the absence of them, affect the employment opportunities of young individuals in the specific context of youth unemployment in Kenya, Uganda, Tanzania, and Rwanda. The theory has a direct correlation with the issue of youth unemployment.

Good health, both physical and mental, is a significant dimension of human capital. Bad health and nutrition are likely to have adverse effects on cognitive development and physical abilities and may lower productive potential and employment opportunities among the youth. Parallel creation and development of new business entities with innovations in ideas and solutions. The acquisition of such entrepreneurial skills is possible through educational investment, hence making it easier for young people to create jobs for themselves. Policies and programs on their part are particularly relevant, especially in the form of financial assistance, mentorship, and networking opportunities, to begin making a dent in what the investments in human resources do regarding the issue of youth employment.

2.2.4 Classical and Neoclassical theories

The theory, a brainchild of economists from the late 18th and early 19th centuries, is inclined to emphasize the proposition that markets can operate freely on their own without any form of interference. If anything, the free markets would get to full employment and stability in the economy without any external help. It developed from the ideas of economists like Adam Smith, David Ricardo, and John Stuart Mill.

"Invisible Hand" is what Adam Smith termed it, referring to when, in the pursuit of one's self-interest, a person unknowingly advances the overall economic prosperity of the society. It is how, through thrusting towards personal monetary gain, common resources are effectively allocated. Laissez-faire; justifies minimal government involvement in economic activities. The classical economists believed that markets may function most efficiently without interference. Say's Law by Jean-Baptiste Say tells that the creation of goods and services creates demand. In relation, it can simply mean that the amount of goods and services produced in an economy shall automatically be the level of demand.

The classicists drew a line of differentiation between use value and exchange value. Their focus, however, was on the Labor Theory of Value which suggests that any commodity commands value because of the amount of labor required in its production. In the classical theory, the accumulation of capital, technological progress, and the growth of population are referred to as long-run factors of growth. Other economists, like Ricardo, paid great attention to the concept of diminishing returns and how the factor of limited land, inherently underlined, played a role in hampering economic growth.

Perfect competition, rational behavior, and the adjustment of prices and wages in classical theory are arbitrary presumptions that have no correspondence with reality. It is biased toward long-term stability and generally disregards the short-run economic fluctuations and influence of aggregate demand. If the classical theory is anything to go by, then youth unemployment, just like all other kinds of unemployment, is only temporary, in the Kenyan situation, therefore, if wages are flexible, the problem of the unemployment of the youth should be self-correcting since wages will automatically adjust to the prevailing market situation. However, the classical theory may be oblivious to structural problems that exist within East Africa, which include disparities in skills, education, and training opportunities, insufficient infrastructure, and many others that might affect the employment opportunities for the youth.

Neoclassical economic theory

Neoclassical economic theory developed in the late 19th century as an extension of classical concepts, utilizing more sophisticated mathematical techniques and emphasizing individual choice. Among the renowned neoclassical economists were Alfred Marshall, William Stanley Jevons, and Léon Walras. Neoclassical theory focuses on the role of marginal analysis in the derivation of decisions. It considers marginal utility which represents additional satisfaction from consuming one more unit and marginal cost, representing an extra cost incurred in producing one extra unit.

Consumer Choice Theory deals with individual choices of what to consume, considering in detail the aspects of preference and budget constraints, satisfaction, or usefulness that people derive from goods and services. In performing the analysis, very essential tools have been involved, such as an indifference curve and a budget line. Neoclassical theory analyzes how dominant firms follow some definite strategy in production to gain maximum profit. The neoclassical economists have taken into account this market equilibrium in their studies. Welfare Economics evaluates the effectiveness and equitable distribution of economic results. It employs principles like the Pareto efficiency, consumer surplus, and producer surplus to assess welfare.

The neoclassical model of management is based on assumptions about human behavior, complete information available, and market equilibrium. It, therefore, may not capture the nuances of life. Critics further argue that neoclassicism does not attach due importance to issues of inequality, market power, externality, and public goods, which creates non-optimality.

The neoclassical theory was also based on classical principles; it deviated from them through the use of marginal analysis and focusing on an atomistic locus of individual decision-making rather than on aggregate outcomes.

Classical and neoclassical schools have largely influenced economic thought as well as policy making. Classical theory provided the basis on which an understanding of market dynamics and economic growth could be built around while neoclassical created more ideas to further the classical concepts by focusing on individual behavior along with marginal analysis. Despite receiving a lot of criticism and going through multiple transformations, both theories still have their effects on modern economics.

In this framework, the youth unemployment case in Kenya, Uganda, Tanzania, and Rwanda is related to human capital, insisted on by the Neoclassical theory. The

insufficiency of investment in education and training may therefore explain youth unemployment in these countries, leading to a workforce unable to meet the productivity levels anticipated by employers.

Wage rigidities, stemming from minimum wage laws, labor unions, or cultural expectations of wages, will then stop wages from adjusting to their market-clearing level and cause a higher youth unemployment rate. Information asymmetry, characterized by a simple lack of information about available job opportunities, can also result in the problem of youth unemployment. It is held by the neoclassical theory that any step that improves the flow of information and lowers search costs will, in turn, better match job seekers and employers.

Classical theory entails low involvement, but neoclassical also recognizes the role of government in overcoming market failure. Policies focusing on education improvement, technical skills training, and job placement services by the Kenyan government must be implemented to curb youth unemployment.

An examination of the correlation between classical and neoclassical economic theories and youth unemployment in these countries can be conducted by considering labor market dynamics, government policies, and structural factors that impact employment. The potential influence of supply and demand on the levels of employment is the core factor in classical economics. The classical economists—Adam Smith and David Ricardo—gleaned that market forces were the major determinants of resource allocation, which includes labor. In their argument, since the flexible wage system would be competitive in the labor market, unemployment wouldn't be much since the workers would consent to work for wages that would adjust to the prevailing market conditions. In contrast, neoclassical economics is an extension of the classical principles of incorporating several contemporary ideas like utility maximization, rational choice theory, and market efficiency. The neoclassical economists developed the theory of marginal productivity of labor under the notable works of Alfred Marshall and Leon Walras, arguing that firms hire labor up to the point wherein the marginal revenue product is just equal to wages. These interventions target creating a conducive business environment at the top of the list. It encapsulates reducing regulatory barriers and promoting the market in that regard.

2.3 Empirical literature

An empirical review was an important undertaking in the course of making the study methodologically sound, anchored on existing research, and contributed to theoretical frameworks and policy discussions. This work tried to seek and compare the determinants of youth unemployment across Kenya, Tanzania, Uganda, and Rwanda, using both regional and international research to bring to light key trends and explanatory variables that influence youth employment outcomes. (International Labour Organization, 2022; World Bank, 2023).

2.3.1 Empirical literature review

(Rehman, 2012) researches Pakistan's transition from an agrarian to a semi-industrialized economy and found that mechanization and rural-to-urban migration increased unemployment due to skill mismatches. This trend was relevant to East Africa, where most youths migrate from rural areas to urban centers but fail to secure formal employment due to limited industrialization and vocational training opportunities (World Bank, 2023).

(Misgwa and Kipsha, 2013) examined youth unemployment in Tanzania, highlighting the role of low education attainment, reliance on the informal sector, and economic fluctuations. This was consistent with the Kenyan and Ugandan labor market structures, where youth employment is concentrated in low-wage informal jobs with limited career progression opportunities (NBS, 2023; UBOS, 2023).

(Khraief et al, 2018) analyzed the unemployment rate in 29 OECD countries from a time-series perspective, 1980–2013, and presented the

conclusion that unemployment may not be inherently cyclical and can, therefore, be reduced with the right policy

interventions. It has significance for Kenya, Tanzania, Uganda, and Rwanda, where the outcomes of the respective government-initiated employment policies have been realized

in mixed proportion and need further refinement of policy and regional collaboration.

(Anyanwu, 2013) discussed the trend of youth unemployment in Africa between 1991 and 2009. Anyanwu proved that though domestic investments are a greater driver to improve the employment of youth in North Africa rather than in Sub-Saharan

Africa, such investments combined with improved levels of education and access to

finance serve to reinforce investment as a principal determinant of the results of employment outcomes for EastAfrica.

(Brixiova & Kangoye, 2014) Conducted a Swaziland-based study on youth labor market outcomes and concluded that entrepreneurship development is key to reducing unemployment among the youth. This agrees with youth-focused policies in Kenya, Tanzania, Uganda, and Rwanda, where self-employment initiatives are promoted but require greater financial support and infrastructure investment.

2.4 Conceptual framework

The conceptual framework for the study of modeling determinants of youth unemployment in Kenya, Uganda, Tanzania, and Rwanda included many factors that contributed to youth unemployment. It laid out the influence and interactions among these factors.

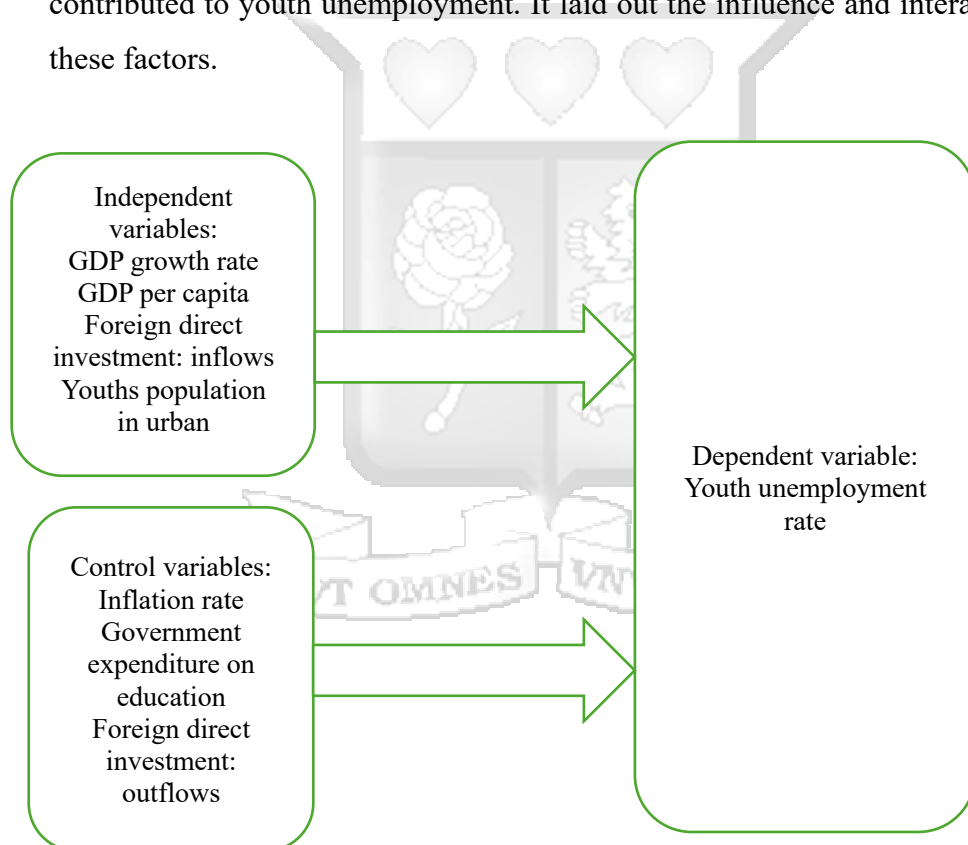
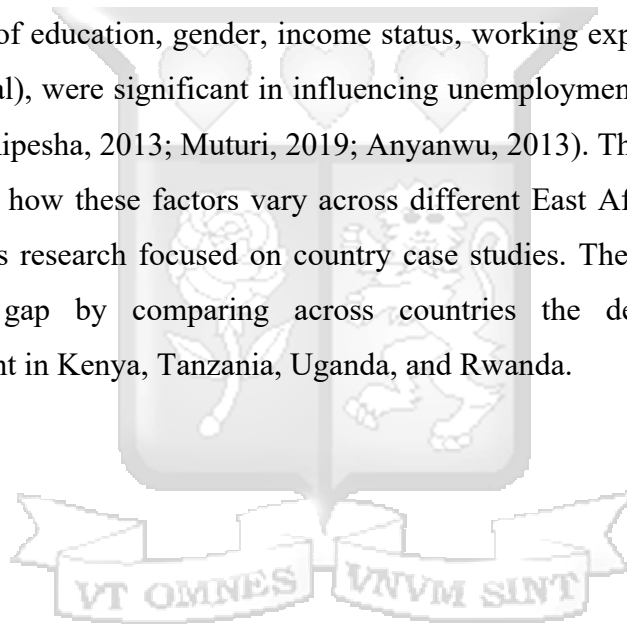


Figure 1: Conceptual framework

Summary of literature

This chapter sets out the theoretical framework that undergirds the analysis and modeling of the determinants of youth unemployment across Kenya, Tanzania, Uganda, and Rwanda. In these four East African countries, youth unemployment is influenced by economic, social, and demographic factors; thus, a comprehensive policy approach is needed to develop effective interventions. Understanding the similarities and differences in youth unemployment trends across these countries will provide valuable insights for comparative research and regional policy formulation. (International Labour Organization, 2022; World Bank 2023).

Other available literature indicated that demographic and socio-economic factors, such as age, level of education, gender, income status, working experience, and residence (urban or rural), were significant in influencing unemployment among young people (Msigwa & Kipsha, 2013; Muturi, 2019; Anyanwu, 2013). There was a research gap in comparing how these factors vary across different East African economies since most previous research focused on country case studies. The present study tried to bridge that gap by comparing across countries the determinants of youth unemployment in Kenya, Tanzania, Uganda, and Rwanda.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter outlined the methodology used in the study, focusing on modeling the determinants of youth unemployment in Kenya, Tanzania, Uganda, and Rwanda. The paper offered a general approach toward understanding factors that influenced youth unemployment and econometric methods used in analyzing these factors, applying various statistical methods that guarantee the robustness and reliability of the results.

3.2 Research philosophy

The choice of research philosophy has become an integral part of structuring the approach and methodology of the investigation in this study. This work was largely placed under the pragmatic philosophy, whose emphasis is on finding practical answers to real-life problems, covered under different perspectives for dealing with complex situations.

Pragmatism as a philosophy is harnessed on the general assumption that knowledge is not fixed; rather, it is derived from practical experiences and directly interacting with reality. This slates the knowledge concept: that various approaches can provide meaningful views of different aspects of an issue. In this case, it was pragmatic to approach the issue of youth unemployment using statistical analysis alongside an in-depth study to bring out multi-dimensional factors leading to unemployment among the youth. (Pragmatism as a research paradigm and its implications,2019). This would help in establishing divergent but often overlapping factors affecting employment among youths, including economic conditions, education disparities, and social elements.

What the quantitative data might not do is help in the estimation of the individual and situational variables from both perspectives such as the role played by social networks, incentives, and barriers identified by the youth themselves.

Also, in the positivist methodology, the quantitative analysis of this research followed the testing of hypotheses and searching for statistical relationships between variables. (The positivism paradigm of research,2020). It was meant to discover patterns and causal links through empirical data, applying techniques such as correlation and regression analysis. The positivist part ensured that these results were based on visible

and measurable events that would provide a firm base for the comprehension of the bigger picture of patterns and causes of unemployment among adolescents.

3.3 Research Design

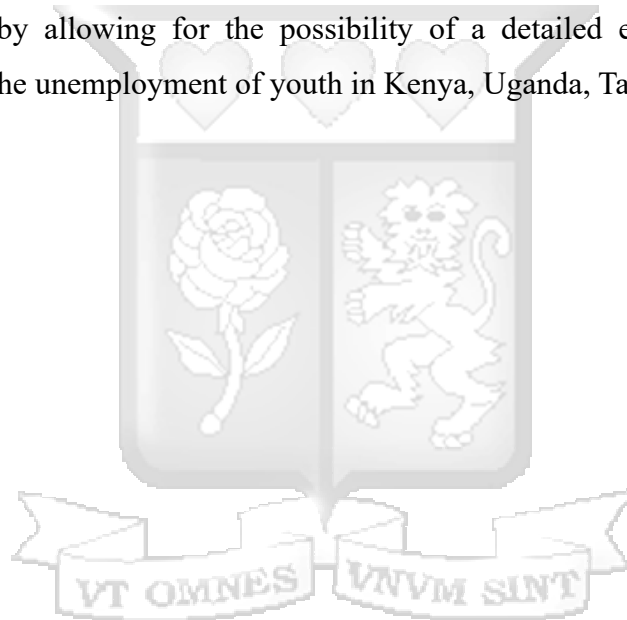
An explanatory, correlational, and predictive research design was applied in this case, with a longitudinal methodology used. This method was ideal for collecting a variety of information over time to observe changes and trends to understand the occurrence and the impact among the identified elements that caused youth unemployment. This included some very important steps within the secondary data analysis. First, the relevant data sources were identified for relevance, reliability, and completeness. Thereafter, the data was downloaded and harmoniously arranged in a consistent format, ready for analysis. The tools that were used in this research consist of statistical methods, namely trend analysis, cross-sectional analysis, and econometric modeling, which assess relationships between youth unemployment and various factors likely to influence it, such as inflation rate, GDP growth rate, GDP per capita, foreign direct investment inflow, youth residing in the urban area, youth female population, employment to population ratio, youth not in education or training, and government expenditure on education. A regression model was used to estimate the impact of these factors on the rate of unemployment. On the other hand, analysis of time-series data indicated how trends in youth employment had been influenced by changes in economic factors over time.

3.4 Population and Sampling

The study focused on modeling the factors that determine the cases of youth unemployment in Kenya, Uganda, Tanzania, and Rwanda. The targeted population involves the youth group aged 15-24 in these four countries since the age group was likely to encounter problems associated with unemployment. The youth population in these countries was huge, with millions struggling to seek employment opportunities that match their career needs. It was, therefore, critical that this population was considered to discover the drivers of unemployment. Secondary data sources, such as national labor force surveys, reports from the Kenya National Bureau of Statistics, and data from key government ministries, international labor organizations, World Bank, and NGOs that are in on the information, provided details about the trends in employment, and the data to model the factors affecting youths in these countries. The

research was necessary to quantify, compare, and validate the determinants of youth unemployment by isolating the effects of each factor since youth unemployment was influenced by multiple factors simultaneously. The study was conducted to compare the determinants of youth unemployment across the four countries.

In this research, the sampling methodology that was used is the proper selection of relevant data sets that could best represent the bigger demographic of young people. The research was primarily based on secondary data in the form of datasets containing a variety of factors on youth unemployment, including demographic characteristics, geographical factors, educational background, and economic factors. The study used a longitudinal sampling for the four countries for the period of 33 years from 1991 - 2023. This kind of methodology allowed for increased accuracy and reliability of results, thereby allowing for the possibility of a detailed examination of factors surrounding the unemployment of youth in Kenya, Uganda, Tanzania, and Rwanda.



3.4.1 Variable definition and measurement

Table 1: variable, measure, and data source

Variable	Label name	Measure	Source of variables	Relevant citation
YUR	Youth unemployment	% of unemployed youths in not in the labour force.	International labor organization World bank	ILO modeled estimation World bank
INFL	Inflation rate	Annual % change in CPI	World bank	World bank indicators
GDPCAP	GDP per capita	GDP per capita in USD (adjusted for PPP)	World bank	World bank databank
GDPG	GDP growth rate	Annual % growth of GDP	World bank	World bank databank
FDI_IN	Investment inflows	As a % of GDP	International monetary fund	International financial statistics
FDI_OUT	Investment outflows	As a %of GDP	International monetary fund	International financial statistics
GOVEXP	Government expenditure on education	Total public spending on education as a percentage of GDP	Federal reserve bank	Fred economic data
URB	Observed value of youth in urban	% of youth living in urban area	International labor organization	ILO modeled estimation

3.5 Data collection methods

Informed data regarding the determinants of youth unemployment for the study was derived from the International Labor Organization (ILO) and the World Bank. The International Labor Organization compiles studies and databases of employment statistics, the regulations for the labor markets, and trends of youth unemployment in

various countries. On the other hand, the World Bank provided an all-in-one dataset called the World Development Indicators (WDI). Similarly, this data set included indicators such as economic growth, demographics, and labor market dynamics. NGO and think-tank reports, such as that of the African Development Bank, had significant insights and analysis that was derived from the socioeconomic factors affecting the employment of youth. These include education, vocational training, and accessibility to resources.

3.5.1 Data sources

The research relied on independent variables, which are various factors contributing to the problem of unemployment among the youth in Kenya, Uganda, Tanzania, and Rwanda. Secondary data goes on to give details and historical trends that accompany the initial data collected. Youth unemployment data for Kenya were derived from the Kenya National Bureau of Statistics.

Determinants of unemployment among the youth in Kenya, Tanzania, Uganda, and Rwanda are compared, drawing from desk reviews of secondary data sourced from national and international institutions. The data was retrieved from national statistics agencies: Kenya National Bureau of Statistics, Tanzania National Bureau of Statistics, Uganda Bureau of Statistics, and National Institute of Statistics of Rwanda, which provided labor force surveys, employment trends, and economic indicators for each country. International organizations, such as the International Labour Organization and the World Bank, provided comparative regional insights into youth employment, economic growth, and policy interventions. The African Development Bank AfDB provided further regional reports on recent labor market dynamics and economic policies affecting youth employment. This paper ensured that a comprehensive and comparative analysis of the macroeconomic, policy-related, and demographic factors affecting youth unemployment in East Africa was done through the utilization of these various data sources.

3.6 Data analysis

In this section, the study focused on explaining the econometric model, model specification, and diagnostic tests.

3.6.1 Econometric analysis

The research adopted descriptive statistics to allow the opportunity to have an overview of the dataset, a summary of the basic features in the data, and the general structure of the dataset before any complex analysis could be done. The basis of descriptive analysis was vital in this study in establishing a general understanding of the youth unemployment trend in Kenya, Tanzania, Uganda, and Rwanda. It helped in establishing patterns, summaries, and descriptions of key characteristics, which was later useful during the inference statistical analysis. The study used the standard multiple regression model to understand the unemployment problem among the youth in the four East African countries. The model analyzed how economic, demographic, and labor market factors contributed to the unemployment rate among youths across Kenya, Uganda, Tanzania, and Rwanda. The dependent variable (Y) was the rate of unemployment among youth, and the independent variables were ($X_1, X_2, X_3 \dots X_k$), representing GDP growth, inflation, government expenditure on education, labor market factors, and demographic characteristics.

The variables for the analysis of identifying the determinants of youth unemployment across Kenya, Tanzania, Uganda, and Rwanda were computed based on common economic and labor market indicators derived from national statistical agencies- KNBS, NBS, UBOS, NISR- and international organizations such as ILO, the World Bank, and AfDB. For each variable, a 33-year trend was collected and analyzed by using multiple regression modeling and inferential statistical techniques to determine the strength of the influence on the comparative unemployment rate for youth in the four countries.

Model specification:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \dots + \beta_n X_{ni} + \epsilon_i$$

Where:

Y = Dependent variable

$X_1, X_2, \dots, X_n$ = Independent variables (predictors)

β_0 = Intercept (constant term)

$\beta_1, \beta_2, \dots, \beta_n$ = Regression coefficients (slope of each predictor)

ϵ = Error term (captures unobserved variability)

In the study, a standard regression analysis was used through multiple regression analysis. The study tested the single and combined influences of economic, demographic, and policy-related factors like GDP growth, inflation, government expenditure on education, and gender disparities. This statistical method allowed for the identification of significant predictors, the direction and strength of relationships, and empirical evidence that may help in supporting policy recommendations.

3.6.2 Diagnostic analysis

The study conducted several diagnostic tests to access multicollinearity, autocorrelation, homoskedasticity, and normality of the error term.

To test multicollinearity, the Variance Inflation Factor (VIF) was performed. Multicollinearity occurs when independent variables are highly correlated with each other (Menard, S. 2010). A Variance Inflation Factor (VIF) greater than 10 indicates severe multicollinearity, which could significantly impact the reliability of regression coefficients. On the other hand, VIF values between 1 and 5 suggested a moderate level of correlation among predictor variables, but it's generally not considered problematic for the model.

$$VIF = \frac{1}{1-R^2}$$

A collinearity tolerance was also conducted, and highly collinear variables were dropped to improve model stability.

$$\text{Tolerance} = 1/VIF$$

A Pearson's Correlation Coefficient was applied to evaluate the strength and direction of the linear relationship between two continuous variables (Karl Pearson, 1896). The coefficient is based on the covariance of two variables and is normalized to range between -1 and +1.

The Durbin-Watson (D-W) was used to detect autocorrelation in the residuals of the regression model to test for first-order autocorrelation in a regression model (Durbin & Watson, 1951).

DW $\approx$ 2: No autocorrelation.

DW < 1.5: Strong positive autocorrelation.

DW > 2.5: Strong negative autocorrelation.

DW $\approx$ 0: Extreme positive autocorrelation (residuals increase together).

DW $\approx$ 4: Extreme negative autocorrelation (residuals alternate signs) (Gujarati & Porter, 2020).

The study conducted the Breusch-pagan (BP) test to assess heteroscedasticity, which determines the variance of residuals remaining constant across different levels of independent variables

Computing the BP statistic using:

$$BP = N \times R^2$$

N = Number of observations (sample size)

R^2 = R-squared

Compare the BP statistic with a Chi-square distribution (df = number of independent variables):

If $p < 0.05$, reject homoscedasticity $\rightarrow$ heteroscedasticity is present

If $p > 0.05$, fail to reject homoscedasticity $\rightarrow$ variance is constant.

Additionally, residual analysis was carried out to check for systematic bias and outliers to confirm if the residuals were normally distributed.

3.7 Research quality

The study's objective was to develop a model that determines the factors that influence the unemployment rate among the youths in East African countries: Kenya, Uganda, Tanzania, and Rwanda, especially variables on socio-economic and policy-related issues. The results brought out some critical variables with major influences, such as educational achievements, availability of financial means, geographical disparities, and government policies. Concluding with recommendations for policymakers to address the issue in question.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter presented the findings and interpretations of the determinants of youth unemployment in Kenya, Uganda, Tanzania, and Rwanda. It began with descriptive statistics, providing a summary of key variables and identifying initial patterns. To ensure the validity and reliability of the model, diagnostic tests, including multicollinearity analysis, were conducted. The core section focused on regression analysis, which examined the relationship between youth unemployment and its independent variables, interpreting coefficients, statistical significance, and model fit.

4.2 Descriptive analysis

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean
Unemployment, youth total	132	2.662	23.27	8.637
Inflation	132	-25.75	73.49	9.111
GDP per capita	132	310.9	6307	1953
GDP growth	132	-50.25	35.22	5.248
Youth labor force participation rate	132	38.70	79.64	55.76
Youth employment to population ratio	132	29.70	74.79	51.26
Foreign direct investment, net inflows	132	-10.99	9.628	2.289
Foreign direct investment, net outflows	132	-0.3333	0.732	0.0518
Youth population	132	15.10	19.11	17.27
Youth population	132	14.68	20.30	17.45
Government expenditure on education,	132	0.8399	7.336	3.763
Youth not in education or training	132	-145.1	2238	1109
youth residing in the rural area	132	-8.831	21.87	10.51
youth residing in the urban area	132	4.976	38.22	18.70
Valid N	132			

The descriptive analysis gave an overview of the distribution and central tendencies of the determinants of youth unemployment across Kenya, Tanzania, Uganda, and Rwanda. The mean youth unemployment rate is 8.64%, ranging from a minimum of 2.66% to a maximum of 23.27%, showing variations in labor market conditions among the four countries.

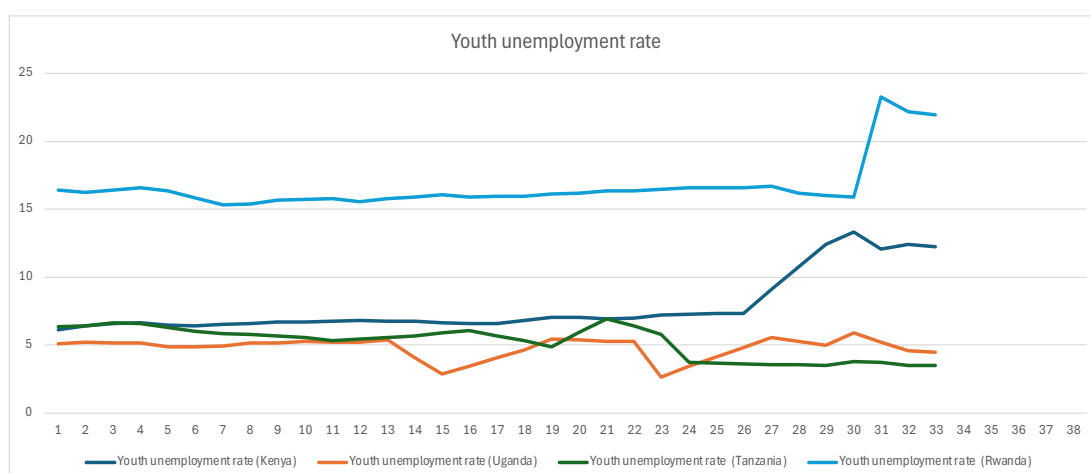


Figure 2: youth unemployment trend

Inflation rates varied significantly, ranging from -25.75% to 73.49%, reflecting economic instability and changes in household purchasing power. GDP per capita at PPP averages \$1,952.89, with a very wide range from \$310.86 to \$6,307.23, suggesting that the level of development and income distribution also varies. While GDP growth rates ranged from -50.25% to 35.22%, the mean was 5.25%, which meant that over this period, there were instances of severe economic contraction but also times of high growth. The average youth labor force participation rate was 55.76%, indicating that over half of the population is economically active. However, the youth employment-to-population ratio was lower at 51.26%, suggesting underemployment and job shortages.

The average of FDI net inflows was 2.29% of GDP, ranging from -10.99% to 9.63%, showing the different levels of foreign investment across countries. The government expenditure on education is at an average of 3.76% of GDP, reflecting various levels of investment in human capital development. The youth not in education or training indicator had a high variation, ranging from -145.14 thousand to 2,238.40 thousand, underlining disparities in educational and employment access.

In addition, the youth population percentages slightly differed between genders: female youth average 17.27% and male youth 17.44% of the total population. Urbanization levels varied between the countries: the urban share of youth is between 4.98% and 38.22%, while for rural areas, the values were between -8.83% and 21.87%, which reflected the demographic shifts and migration trends from rural to urban areas.

Generally, the descriptive statistics focused on economic diversities, disparities in employment, and changes in government policies, which were the reasons for varying trends in Kenya, Tanzania, Uganda, and Rwanda. From this basis, further inferential statistical analysis was done to identify the most significant determinants of youth unemployment in the region.

4.3 Diagnostic tests

Table 3: Collinearity statistics

Model	Sig.	Collinearity Statistics	
		Tolerance	VIF
(Constant)	<.001		
Inflation	.143	.439	2.279
GDP per capita	<.001	.110	9.070
GDP growth	.387	.220	4.547
Foreign direct investment, net inflows	<.001	.314	3.182
Foreign direct investment, net outflows	<.001	.645	1.550
Government expenditure on education	<.001	.306	3.264
Youths residing in the urban area	.103	.198	5.043

The VIF for GDP growth was 4.547, FDI inflows 3.182, and government expenditure on education was 3.264, indicating acceptable levels of collinearity and was retained in the model. The result of the VIF analysis indicated that GDP per capita (VIF = 9.070) had moderate multicollinearity and hence was kept under observation.

Table 4: Pearson correlations

Youth female population	Pearson Correlation	Youth female population	Youth male population	Youth not in education or training	Youths residing in the rural area	Youth labor force participation rate	Youth employment to population ratio
	Sig. (2-tailed)	1	.940**	-.024	-.219*	-.222*	-.265**
	N		<.001	.789	.012	.011	.002
Youth male population	Pearson Correlation	132	132	132	132	132	132
	Sig. (2-tailed)	.940**	1	.051	-.114	-.189*	-.217*
	N	<.001		.561	.194	.030	.012
Youth not in education or training	Pearson Correlation	132	132	132	132	132	132
	Sig. (2-tailed)	-.024	.051	1	.522**	-.022	.082
	N	.789	.561		<.001	.803	.352
Youths residing in the rural area	Pearson Correlation	132	132	132	132	132	132
	Sig. (2-tailed)	-.219*	-.114	.522**	1	.119	.239**
	N	.012	.194	<.001		.173	.006
Youth labor force participation rate	Pearson Correlation	132	132	132	132	132	132
	Sig. (2-tailed)	-.222*	-.189*	-.022	.119	1	.987**
	N	.011	.030	.803	.173		<.001
Youth employment to population ratio	Pearson Correlation	132	132	132	132	132	132
	Sig. (2-tailed)	-.265**	-.217*	.082	.239**	.987**	1
	N	.002	.012	.352	.006	<.001	
		132	132	132	132	132	132

Pearson's correlation analysis presented the key relations between youth population, labor force participation, employment to population rates, and youths not in education or training estimates. The analysis revealed a strong positive correlation between the youth labor force participation rate and the employment-to-population ratio, $r(132) = .987$, $p < .001$, indicating that higher labor force participation rates were strongly associated with increased youth employment. Additionally, the proportion of youths residing in rural areas was positively correlated with the youth not in education and training rate, $r(132) = .522$, $p < .001$, suggesting that youths in rural areas faced greater challenges in accessing education and employment opportunities. A weak negative correlation was observed between the overall youth population and labor force participation, $r(132) = -.222$, $p = .011$, implying that a larger youth population did not necessarily translate into higher labor force engagement. Similarly, a moderate negative correlation was found between the youth female population and youth employment to population ratio, $r(132) = -.265$, $p = .002$, suggesting that young women were less likely to be engaged in employment compared to their counterparts. These findings highlighted significant demographic and economic disparities in youth unemployment across East Africa.

Table 5: Residual statistics

R	R Square	Adjusted R Square	Std. Error	Durbin-Watson
.313b	.098	.001	.07738	1.938

Dependent Variable: RES_SQ

The p-value of the BP test was obtained from a chi-square distribution with 13 degrees of freedom:

$$BP = N \times R^2$$

$$P = P(\chi^2_{13} > 12.94)$$

$P = 0.455$, $p > 0.05$, fail to reject homoscedasticity → variance is constant.

For the autocorrelation, Since 1.938 is closer to 2, it indicated no serious autocorrelation.

Table 6: Residual summary

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.19058	22.92710	8.63772	5.053271	132
Residual	-.530807	.659509	.000000	.241624	132
Std. Predicted Value	-1.276	2.828	.000	1.000	132
Std. Residual	-2.085	2.591	.000	.949	132

The residual statistics evaluated the accuracy of predictions and their dispersion in studying youth unemployment. The range of variation of predicted values was between 2.19% and 22.93%, with an average unemployment rate of 8.64% and a standard deviation of 5.05, reflecting moderate dispersion. Residuals were small and varied between -0.53 and 0.66 with a mean close to zero, thus not showing any systematic bias. Residuals were mostly within the boundaries of -2 and +2 indicating normal distribution and supporting the absence of extreme outliers.

4.4 Model Summary

Table 7: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.667 ^b	.445	.414	3.873

The correlation coefficient (R) is 0.667, showing a moderate to strong positive relationship between the independent variables and the dependent variable. The R² was 0.445, which indicated that 45 % of the variation within the dependent variable, youth unemployment-could be determined by the explanatory variables included within the model. The adjusted R² was 0.414. Adjusted R² considers the number of independent variables in the model and adjusts for overfitting.

The standard error of the estimate was 3.873016, showing the average deviation between the values observed and predicted.

Table 8: Anova						
		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1493	7	213.3	14.22	<.001 ^c
	Residual	1861	124	15.00		
	Total	3353	131			

The p-value (Sig. < 0.001) confirmed that the model was statistically significant at a 99% confidence level, meaning that at least one independent variable significantly contributed to predicting the dependent variable.

4.5 Model coefficients

Table 9: Model coefficients						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	15.08	.666		22.65	<.001	
Inflation, consumer prices	-.005	.003	-.010	-1.473	.143	
GDP per capita	.000	.000	-.086	-6.497	<.001	
GDP growth	-.006	.007	-.008	-.868	.387	
Foreign direct investment, net inflows	.064	.019	.027	3.399	<.001	
Foreign direct investment, net outflows	-.709	.172	-.023	-4.118	<.001	
Government expenditure on education, total (% of GDP)	-.100	.030	-.027	-3.379	<.001	
observed value of youth in the urban area	-.011	.007	-.016	-1.644	.103	

The coefficients table explained the impacts of independent variables on the unemployment of youth in Kenya, Tanzania, Uganda, and Rwanda. Foreign direct investment inflows ($B = 0.064$, $p < 0.01$) positively impacted youth unemployment, possibly reflecting short-term job creation. However, FDI outflows ($B = -0.709$, $p < 0.001$) and government education expenditure ($B = -0.100$, $p < 0.01$) negatively impacted unemployment, thus suggesting that capital flight and inefficient education spending contributed to youth unemployment. The impact of GDP per capita on youth unemployment was negative and statistically significant ($t > 1.96$). This suggested that as GDP per capita increases, youth unemployment decreases. The urban youth observations ($B = -0.011$, $p > 0.05$) indicated an insignificant effect. These results pointed to the fact that targeted policies on labor market expansion, education reforms, and investment attraction were crucial for the reduction of youth unemployment in East Africa.

4.6 Conclusion

This chapter analyzed the determinants of youth unemployment in Kenya, Uganda, Tanzania, and Rwanda using descriptive statistics, diagnostic tests, regression modeling, and correlation analysis. The descriptive analysis highlighted variations in macroeconomic indicators such as GDP growth, inflation, FDI, and labor market participation, showing disparities across the four countries. Diagnostic tests identified severe multicollinearity in key variables, requiring dropping for model stability. The regression analysis revealed that government expenditure on education and FDI significantly influence youth unemployment. Key findings showed that effective education policies and investment inflows could reduce unemployment. The ANOVA results confirmed model significance, and the correlation analysis emphasized the role of rural-urban dynamics and gender disparities in employment trends. These insights provided a strong foundation for policy interventions targeting labor market expansion, investment-driven job creation, and vocational training programs to reduce youth unemployment in East Africa.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Summary of the study

The study discussed the determinants of youth unemployment in Kenya, Tanzania, Uganda, and Rwanda, using a comparative approach based on economic, social, and policy-related factors. Specific country challenges included Kenya's urban unemployment crisis, extremely high underemployment in Uganda and Tanzania, and a slow transition from education to stable employment in Rwanda. Some promising policy efforts, such as Kenya's Ajira Digital Program and Rwanda's investment in digital infrastructure, remain at too small a scale. The statistical analysis suggested that the key factors that significantly influenced unemployment rates are foreign direct investment inflows and government spending on education. The outcome of the study was that the multi-dimensional approach toward addressing youth unemployment should be made with focused policies on vocational training, labor market reforms, and regional economic cooperation.

5.2 Conclusion based on findings

Unemployment among the youths in East Africa remains a critical challenge influenced by structural economic limitations, demographic trends, and policy inefficiencies. This reiterates that job creation has not kept up with the growth in the population of youth, while most of them have been taken up by informal and poorly paid jobs. Though there are interventions by the government, these are always constrained by financial limits, weak policy implementation, and a lack of access to capital for youth entrepreneurs. While government programs such as Kenya's Youth Enterprise Development Fund, Tanzania's vocational training programs, Uganda's Youth Livelihood Program, and Rwanda's innovation-driven policies have attempted to curb unemployment, their scalability and impact remain limited. These problems require the realignment of education systems to suit labor market demand, increase investment in industries that have vast potential for creating employment, and strengthen regional cooperation through harmonization of labor policies. The result of such collaborative efforts by the East African nations will be better employment opportunities and long-term economic stability.

5.3 Recommendations

Addressing the challenge of unemployment among the youth in East Africa calls for the government to turn its attention to vocational and technical training through upgrading and expanding relevant programs that will eventually equip the young people with market-relevant skills. Encouragement of entrepreneurship through financial incentives, mentorship in business, and access to affordable credit should be done to support youth-led enterprises. Strengthening public-private partnerships can further bridge the gap between education and employment, with training programs aligned to industry demands, by ensuring that young job seekers meet market needs.

In addition, labor market regulation needs improvement to make jobs more secure and increase the number of formal employment opportunities instead of people being forced into informal and precarious jobs. Equally, regional integration should be used to advance the principle of employment mobility, with skilled youth having access to job opportunities across the East African Community. With such measures in place, governments can establish an employment landscape for youth that is both more inclusive and sustainable.

5.4 Research gaps

Gender-specific barriers to employment are less well researched, such as those young women face in labor markets across East Africa.

The dynamics of the informal sector: how informal employment feeds into youth livelihoods and their longer-term career prospects are in greater need of research.

REFERENCES

- Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.
- National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.
- Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.
- Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.
- African Development Bank. (2023). *Youth employment in Africa: A roadmap for action*. Retrieved from <https://www.afdb.org>
- International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>
- Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.
- National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.
- Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.
- Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.
- World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>
- African Development Bank. (2023). *Youth employment in Africa: A roadmap for action*. Retrieved from <https://www.afdb.org>
- International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>
- Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.
- National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.
- Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.

Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.

World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>

African Development Bank. (2023). *Youth employment in Africa: A roadmap for action*. Retrieved from <https://www.afdb.org>

International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>

Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.

National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.

Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.

Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.

World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>

African Development Bank. (2023). *Youth employment in Africa: A roadmap for action*. Retrieved from <https://www.afdb.org>

International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>

Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.

National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.

Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.

Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.

World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>

African Development Bank. (2023). *Youth employment in Africa: A roadmap for action*. Retrieved from <https://www.afdb.org>

International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>

Keynes, J. M. (1936). *The general theory of employment, interest, and money*. Macmillan.

Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.

National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.

Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.

Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.

World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>

African Development Bank. (2023). *Youth employment in Africa: A roadmap for action*. Retrieved from <https://www.afdb.org>

International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>

Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. KNBS.

National Institute of Statistics of Rwanda. (2023). *Labor force survey report*. NISR.

Tanzania National Bureau of Statistics. (2023). *Employment and earnings survey report*. NBS.

Uganda Bureau of Statistics. (2023). *Uganda national labor force survey 2023*. UBOS.

World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>

World Bank. (2017). *Kenya economic update: Policy options to advance the Big 4*. World Bank Publications.

Bhorat, H., & Tarp, F. (2016). *The pursuit of inclusive growth in South Africa: Recession, recovery, and reform*. WIDER Working Paper Series.

Fox, L., & Kaul, U. (2018). *The evidence is in: How should youth employment programs in low-income countries be designed?* USAID.

Mwirigi, F. M. (2018). *Effectiveness of Youth Enterprise Development Fund in Youth Empowerment in Kenya: A case of Imenti South Sub-County*. International Journal of Economics, Commerce, and Management, 6(2), 348-358.

Ngaruiya, G. W. (2014). *Determinants of youth unemployment in Kenya* (Doctoral dissertation, University of Nairobi).

Njenga, M. G. (2017). *Challenges facing the implementation of youth empowerment programs in Kenya: A case of the Youth Enterprise Development Fund in Nyeri County*. International Journal of Social Sciences and Information Technology, 3(4), 1898-1906.

World Bank. (2017). *Kenya economic update: Policy options to advance the Big 4*. World Bank Publications.

World Bank. (2020). *Kenya Youth Employment and Opportunities project: Implementation Status & results report*. World Bank.

Jahan, S., Mahmud, A. S., & Papageorgiou, C. (2014). What is Keynesian Economics? Finance & Development, September 2014. Retrieved from International Monetary Fund website.

Youth Unemployment: A Crisis in Our Midst. (n.d.).

African Development Bank. (2019). Gender equality and women's empowerment in Kenya. Retrieved from [AfDB](#)

European Commission. (2020). "Youth employment support: A bridge to jobs for the next generation." ("Youth Employment Support: a Bridge to Jobs for the Next Generation") Retrieved from [European Commission](#)

International Labour Organization. (2020). Youth employment in Kenya: A literature review. Retrieved from [ILO](#)

Kenya National Bureau of Statistics. (2022). Economic survey. Retrieved from KNBS

UNESCO. (2020). Education and training in Kenya. Retrieved from [UNESCO](#)

World Bank. (2021). Kenya economic update: Navigating the pandemic. Retrieved from [World Bank](#)

World Economic Forum. (2021). The future of jobs report. Retrieved from [WEF](#)

Lewis, W. A. (1954). Economic development with unlimited supplies of labor. *The Manchester School*, 22(2), 139-191.

Fields, G. S. (2004). "Dualism in the labor market: A perspective on the Lewis model after half a century." ("Dualism in the Labor Market: A Perspective on the Lewis Model After ...") *The Manchester School*, 72(6), 724-735.

Smith, A., Ricardo, D., Marshall, A., Walras, L. (Year of publication). Classical and neoclassical economic theories and their implications for youth unemployment in Kenya. Unpublished manuscript

Ahmad, A., & Khan, F. (2018). Investigating the determinants of youth unemployment in Pakistan. *Pakistan Journal of Humanities & Social Science Research*, 1(1). Retrieved from ResearchGate

Akhtar, S., & Shahnaz, L. (2005). Understanding the Youth Unemployment Conundrum in Pakistan: A Macro-Micro Analysis. *Indian Journal of Labour Economics*, 49(2), 233-248.

Rocha, M., & Divin, P. (2013). The link between taxes on household expenditure, interest rate, and exchange rate in Brazil and Mexico. *Journal Name, Volume(Issue)*, pages.

Rehman, A. (2012). The Problem of Unemployment in Pakistan: A case of study of Khyber Pakhtunkhwa. *International Journal of Humanities & Social Science*, 2(8), 237-243.

Umair, M., & Ullah, M. (2013). The effect of inflation on GDP in youth unemployment for the case study of Pakistan. *Journal Name, Volume(Issue)*, pages.

Misgwa, S., & Kipsha, A. (2013). Determinants of youth unemployment in Tanzania: A Multinomial Logistic Regression analysis. *Journal Name, Volume(Issue)*, pages.

- Wajid, A., & Kalim, R. (2013). The impact of inflation & economic growth on unemployment. Proceedings of 3rd International Conference on Business Management.
- Khraief, N., Shahbaz, M., Heshmati, A., & Azam, M. (2018). Are unemployment rates in OECD countries stationary? Evidence from univariate and panel unit root tests. *North American Journal of Economics and Finance*.
- Kamran, M., et al. (2016). Determinant of unemployment in Pakistan. *Journal Name, Volume(Issue)*, pages.
- Anyanwu, J. C. (2013). Characteristics and Macroeconomic Determinants of Youth Employment in Africa. *African Development Review*, 25(2), 107-129. <https://doi.org/10.1111/j.1467-8268.2013.12019.x>
- Ebaidalla, E. M. (2016). *Youth unemployment in the Organization of Islamic Countries (OIC) countries: Macroeconomic factors and the role of GMM*.
- Muturi, P. (2019). *Determinants of youth unemployment in Garowe district, Somalia: A descriptive study*.
- Anyanwu, J. C. (2013). Factors affecting youth unemployment in Africa, 1991-2009: A macroeconomic perspective.
- Dagume, I., & Gyekye, A. B. (2016). Socio-demographic and economic factors affecting youth unemployment in South Africa: A study of the Vhembe district.
- Brixiova, Z., & Kangoye, T. (2014). Youth unemployment in Swaziland: Socio-economic factors and policy implications.
- Statista. (n.d.). Unemployment rate in Kenya from 1999 to 2020. Statista. Retrieved July 3, 2024, from <https://www.statista.com/statistics/808608/unemployment-rate-in-kenya/>
- National Council for Population and Development (NCPD). (2021). Youth bulge in Kenya: A blessing or a curse? (Brief No. 56). NCPD. Retrieved July 3, 2024, from <https://ncpd.go.ke/wp-content/uploads/2021/02/Brief-56-YOUTH-BULGE-IN-KENYA-A-BLEESING-OF-A-CURSE.pdf>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Washington, DC: Author.

World Bank. (2022). *World Development Indicators*. Retrieved from <https://data.worldbank.org/indicator>

Tshabangu, I. (2016). Determinants of youth unemployment in South Africa: A systematic review. *African Journal of Public Affairs*, 8(2), 23-39. <https://doi.org/10.1177/1035304616645030>

Manda, D. K., & Sen, K. (2018). The determinants of youth unemployment in Kenya: A regional perspective. *African Journal of Economic Policy*, 25(3), 45-67. <https://doi.org/10.1080/10220545.2018.1459683>

Okafor, M. C. (2019). Education and youth unemployment in Kenya: Bridging the skills gap. *Journal of Development Studies*, 55(2), 98-116. <https://doi.org/10.1080/00220388.2019.1595184>

Kenya National Bureau of Statistics (KNBS). (2021). *Kenya Population and Housing Census: Employment Characteristics*. Nairobi, Kenya: KNBS.

World Bank. (2020). *Youth Employment in Sub-Saharan Africa: Prospects and Policies*.

International Labour Organization. (2022). *Global employment trends for youth 2022: A generation at risk*. Retrieved from <https://www.ilo.org>

Kenya National Bureau of Statistics. (2023). *Economic survey 2023*. Retrieved from <https://www.knbs.or.ke>

World Bank. (2023). *World development indicators*. Retrieved from <https://data.worldbank.org>

Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). SAGE.