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RESEARCH ARTICLE

# Analyse du developpement humain au Kenya : Tendances, facteurs et defis

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# Analysis of Human Development of Kenya

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**ABSTRACT:** *Kenya, like many other countries in Africa, Asia and Latin America, still has problems with poverty, inequality, health, education, and environmental concerns, all of which limit its capacity for full human progress. The aim of this study was to analyse the human development of Kenya using the HDI index. HDI is a composite measurement of human well-being that includes data on life expectancy, income, and education. This study specifically analyzed the trends in HDI of Kenya since 2012 to 2022 and compared it with other countries in East African Community. A multidimensional concept was investigated using both qualitative and quantitative approaches. The research of human development was concentrated on Kenya and the countries of the East Africa Community, basing on secondary data from existing Governmental and Non-Governmental publications. The geometric mean of the normalised indices for life expectancy, GNI, and education makes up the HDI. The life expectancy at birth is used to evaluate the health dimension, while the mean number of years spent in school for persons 25 years and older and the anticipated number of years spent in school for young children are used to evaluate the education dimension. The measure of the standard of life is the gross national income per person. Kenya is a country with a medium level of human development, ranked 152$^{nd}$ out of 189 nations in 2022 with HDI of 0.598. A number of factors, including inequalities, influence the HID in Kenya. The results of this analysis highlight Kenya's accomplishments in terms of human development over the previous ten years. Kenya had the highest HDI score in East African Community, followed by Tanzania and Uganda. For the recommendation the policymakers and stakeholders can apply these findings to design targeted strategies and policies that address regional differences, promote gender equality, and further boost human development in Kenya and East African Community.*

**KEYWORDS***:* analysis, human development, Kenya

## INTRODUCTION

The Human Development Index (HDI) is a statistical composite indicator that assesses a nation's average performance in various areas of human development, such as income, life expectancy, and educational attainment. It serves as a summary indicator of a nation's growth in the three

fundamental areas of human development—health, education, and income (Shah, 2016). The first Human Development Report (HDR) was released by the United Nations Development Programme (UNDP) in 1990. The first HDR was proposed in 1990 by Indian Nobel Prize winner in Economic Sciences Amartya Sen and Pakistani economist Mahbub Ul Haq. Amartya Sen's studies on human potential served as the foundation for the human development philosophy of the Pakistani economist Mahbub ul Haq. Compared to traditional measurements of national income, the HDI offers a more thorough assessment of human progress (Dervis, Klugman,2011).

The HDI is made up of three factors: life expectancy at birth, educational attainment (defined as the average number of years spent in school for persons who are 25 years and older and the anticipated number of years spent in school for children entering school), and Gross National Income (GNI) per capita. It has a possible range of 0 to 1 (lowest to highest).

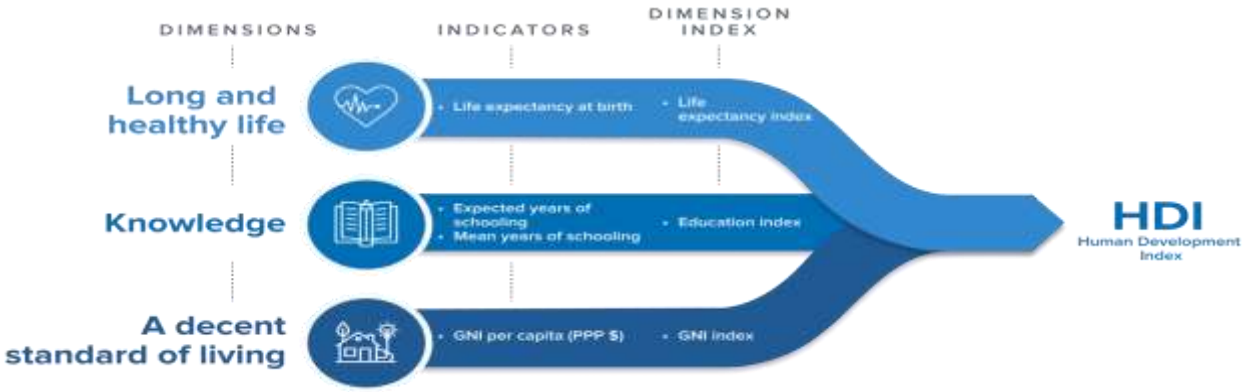


Figure 1: HDI dimensions (source Human Development Index 2022 Report)

This statistic has been updated every year since it was initially created in 1990 as a tool to assess national development. The HDI is used to assess improvements over time and between nations as well as to compare nations and regions (World Bank, 2005). Its goal is to offer a more thorough and accurate assessment of a nation's degree of human development than conventional economic indicators.

The HDI is the accepted metric for classifying nations and determining their level of development. It is an alternate way to evaluate how well a nation is doing in terms of things like health, education, the economy, and civil liberties, among many other things. The HDI enables an international comparison by looking at these three elements of human development, allowing for comparisons between nations and their development. The most recent HDI rankings for 189 countries can be found in the most recent Global Human Development Report (GHDR), which was released in 2021/2022.

According to the study for 2021–2022, the COVID–19 epidemic, which resulted in reversals in nearly every country, it caused the global human development index (HDI) value to drop for two

years. It also asserts that the Anthropocene's destabilizing planetary pressures and inequalities, the pursuit of significant societal transformations to alleviate those pressures, and the pervasive and escalating polarization constitute a new "uncertainty complex" that the world is currently dealing with. The research makes the case that while new uncertainties pose a risk, they also provide promise and a chance for us to rethink our future, update and modify our institutions, and create fresh narratives about who we are and what we value (HDI 2022 Reports).

Human progress in Kenya is seriously hindered by the education system (Chris, 2015). The nation's progress toward providing high-quality education for all citizens is hampered by disparities in access to school between rural and urban areas, gender inequality, and low literacy rates. The provision of high-quality education is further hampered by inadequate finances, inadequate facilities, and lack of motivated teachers. These difficulties restrict people's prospects for personal development and socioeconomic advancement by limiting their ability to acquire the knowledge and skills essential for them to realize their full potential. These problems must be resolved if inclusive and equitable education, human development, and individual potential are to be realized in Kenya.

In Kenya, poverty and income inequality are major obstacles to human growth. Despite advancements, a sizable segment of the population still does not have access to basic amenities or employment prospects, particularly in rural areas. Economic growth and social mobility are hampered by income inequality, which also contributes to a skills gap and a lack of jobs being created (Nhamo, 2017). For Kenya to advance inclusive economic opportunities, combating poverty, and promoting equitable human development are issues which must be resolved.

Life expectancy in Kenya is a critical factor affecting human development, as it reflects the overall health and well-being of the population (Kail & Cavanaugh, 2018). However, Kenya faces challenges in improving life expectancy due to various factors. These include limited access to quality healthcare services, inadequate healthcare infrastructure, a high disease burden, and socioeconomic disparities. Addressing these challenges is crucial in order to enhance life expectancy and promote sustainable human development by ensuring that individuals can live longer, healthier lives and contribute to the social and economic progress of the country.

The goal of this research is to examine how the Human Development Index (HDI) of nations around the world is affected by economic development and social issues like poverty, health, and education. It tries to pinpoint the causes of low HDI scores and evaluate the success of governmental initiatives and plans to raise them. Additionally, a comparison of HDI results across various nations and areas could show whether development methods have been successful or not. In order to determine the key elements affecting Kenya's HDI score, assess its performance, and offer suggestions for enhancement, this research analyzes Kenya as a case study.

The general objective of this study was to explore the of Kenya human development by examining the trends in the HDI and the specific Objectives:

i. To find out the human development index of Kenya over last ten years since 2012,
ii. To compare the human development index of Kenya with other East Africa Communities,
iii. To identify factors that influence the human development in Kenya

The analysis of the Human Development Index in Kenya offers important insights on the development of the nation's economic, social, health, and educational indices. The study of Kenya's Human Development Index can assist policy makers and other stakeholders in identifying areas for improvement and issues that need to be resolved in order to ensure sustainable development and a higher standard of living for all Kenyans by taking into account a variety of economic, social, and health indicators. The results can also be used to compare Kenya's levels of human development to those of other African nations in particular and the rest of the world in general so that lessons may be learnt and improvements in achieving the SDGs made.

This study focuses on examining how different HDI sections, such as those measuring health, education, and income, affect how developed a nation is as a whole (Ghislandi, Sanderson & Scherbov (2019). The study also looks at how national economic policies, international agreements, and other socio-economic issues affect a country's HDI. It goes on to examine how socioeconomic factors like income, education, and health affect regional and national development across the nation. Finally, it examines the success of current efforts to raise HDI levels nationally and offers suggestions for raising Kenya's HDI levels. However, the major limitation of this study is that the effects of outside variables, such as global economic downturns, diseases, and climate change, on Kenya’s HDI has not been fully examined in this study which used the secondary data. Nevertheless, the study will still fulfill its purpose to raise awareness and offer recommendations on the human development of Kenya.

## LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### Literature Review

The Human Development Index (HDI) is a statistic created by the UN to assess the general level of development in various nations. To determine a country's level of development, it measures the population's health, education, and economic well-being (Kelley & Evans, (2017). In order to assess a nation's overall progress, the Human progress Index takes into account factors including life expectancy at birth, the average number of years spent in school, and gross national income per capital (Herrero, Martinez &Villar, 2019). Compared to traditional measurements of national income, the HDI gives a more thorough measure of human advancement (Dervis &Klugman, 2011).

Amartya Sen developed the Human Development Index (HDI) as a simple measure of a nation's progress in three essential areas of human development. These areas are: access to knowledge, as measured by mean years of schooling, a long and healthy life, and a reasonable standard of living, as measured by gross national income (GNI) per capita. After that, the HDI is determined as the geometric mean of the GNI per capita, mean years of education, and mean life expectancy at birth.

The standard of Kenya's healthcare system has also been lacking. The six criteria used by the World Health Organization (WHO) to describe healthcare quality are accessibility, efficacy, efficiency, patient-centeredness, equity, and safety of services (World Health Organization, 2006). In order to comprehend the deficiencies and gaps in Kenya's provision of high-quality health services, three parameters were tracked, and scores were assigned. First came the infrastructure that helped with the distribution and accessibility of medical services (Kimathi, 2017).

A variety of research have looked into the reliability of the HDI as a measure of human development. The HDI is a reliable indicator of overall population outcomes, according to a thorough analysis by the United Nations Development Programs (UNDP) (2017), which also noted that the index takes a broad variety of parameters like income, health, and education into account. According to the results of another study (Luo et al. 2005), the HDI can be used to compare nations because it is a trustworthy predictor of relative welfare levels. Studies have also looked into ways to raise the HDI.

The use of combined HDI indexes in particular, has received more attention as a means of capturing more aspects of human development, such as gender equality, human security, and environmental sustainability (Eriber et al., 2013). While this is going on, other research has looked into the possibility of enhancing the HDI to offer more detailed insights into particular facets of development, such as health (Wang et al., 2008) and education (Gurra et al., 2011).

The relationship between the HDI and other development indicators, such as the Human Poverty Index (HPI) and Millennium Development Goals (MDGs), has also been discussed in the literature. According to studies, the HDI highly connects with the Millennium Goals and HPI, indicating that each of these indicators measures various facets of human development (Cubillos et al., 2009; Henderson et al., 2012). It has also been demonstrated to have significant relationships with other development indicators. As a result, it is a useful tool for decision-makers who want to evaluate how nations are doing with respect to fulfilling their development goals.

It has been widely used to evaluate performance between nations, between continents, and even globally. This review will concentrate on several HDI studies carried out at the continental level. The following are some of the most significant studies that have been done in this area: The World Bank (2018) conducted a study that emphasized the significance of regional differences for human development. According to the HDI, the Middle East and North Africa are the most developed

regions, whereas East Africa and South Asia rank as the least developed. A report on measuring human progress across continents was published in 2014 by the United Nations Development Programme (UNDP). The findings indicated that Northern America, Europe, and Australia are the top three regions with the highest HDI.

Additionally, this study indicated that compared to other regions, Latin America, Eastern Europe, and South Asia had relatively greater levels of human development. The Open Society Foundation's in 2016 study looked more closely at the differences in human development levels between nations. According to the report, Sub-Saharan African nations fared relatively worse than other regions in terms of human development. Conversely, the Middle East and North Africa region has the highest levels of human development. The Asia and Pacific area have the greatest potential for reducing gaps in human development levels, according to research by the United Nations (2020).

The research also mentioned that the HDI values are greater in the Americas, North Africa, and Europe than elsewhere. In conclusion, it is evident that there are significant geographical differences in human development levels between the continents. When it comes to meeting the targets set by the United Nations' Sustainable Development Goals, many nations continue to lag behind. Therefore, in order to lessen these regional differences and attain higher levels of human development, countries need to concentrate more on raising their respective levels of human development. Governments and international organizations should promote the progress by giving funding and resources.

This literature review has examined current research on the effects of economic growth, public spending, institutional governance, policy interventions, and foreign aid on HDI in Africa. It has also surveyed recent research on how these factors interact. According to this data, the promotion of the human development index in Africa is aided by economic growth, public spending, strong institutions, specialized policy interventions, and efficient international support.

Human development refers to an idea that includes all facets of human welfare, including health, education, income, and quality of life. A long and healthy life, access to knowledge, and a decent standard of living are the three main dimensions of human development. Every year, the United Nations Development Program (UNDP) publishes a Human Development Report that assesses and ranks nations based on their Human Development Index (HDI). Kenya's HDI rating for 2022 was 0.58, placing it in the medium human development category and placing it 152$^{th}$ out of 189 countries and territories, according to the most recent Human Development Report (2021-2022).
Kenya has improved its health outcomes in a number of ways, including lowering child mortality, extending life expectancy, and boosting access to medical care (Okech & Lelegwe, 2016). High maternal mortality, infectious diseases like HIV/AIDS, tuberculosis, and malaria, malnutrition, and non-communicable diseases like diabetes, cancer, and cardiovascular diseases are among the

significant health issues the nation still faces. Kenya's health system and population have come under serious threat from the COVID-19 pandemic, which has an impact on both the supply and demand for medical services. Kenya reported to WHO 343,898 confirmed cases of COVID-19 with 5,689 deaths between 3 January 2020 and 19 July 2023 according to the World Health Organization (WHO).

In Kenya, education is a major factor in both human development and social mobility. Through initiatives like free primary education and free daytime secondary school, the nation has made tremendous progress in increasing access to education, particularly at the primary level. However, as shown by subpar learning outcomes, high dropout rates, inadequate resources, shortage of teachers, gender imbalances, and skill gaps, the quality and relevance of education continue to be low. Millions of students' ability to continue their education has been impacted by the COVID-19 pandemic, which has also interrupted the educational system. Approximately 18 million students were absent from school nationally between March 2020 and October 2020, according to UNICEF. Between 2010 and 2019, Kenya's GDP grew at an average annual rate of 5.7%, making it one of the fastest-growing economies in Sub-Saharan Africa. According to World Bank statistics, poverty fell between 2005 and 2019 from 46.8% to 33.4%, with 4.5 million people being regarded to live below the national poverty line. The nation moved from a low to middle income classification in 2014. Kenya continues to experience significant income inequality, high levels of vulnerability, and poor levels of productivity. Kenya's economic performance and way of life have also been negatively impacted by the COVID-19 epidemic, particularly in areas like tourism, trade, transportation, and services. Kenya's GDP shrank by 0.3% in 2020, but recovered to increase by 7.5% in 2021, according to the World Bank.

A thorough examination of the status of human development in Kenya is provided by this empirical evaluation of the literature. The results of numerous studies that have been carried out in the last ten years to look at different aspects of Kenya's human development provided a complete picture of the country's circumstances.

Kenya's HDI (Human Development Index) ranking is 145 out of 189 nations, making it a low human development country, according to the most current Human Development Report (HDR) for Kenya (2019) published by the United Nations Development Programme (UNDP). The inequality-adjusted HDI, which assesses the average degree of human development throughout the population while also accounting for differences in income levels, is lower than the HDI, the report also mentions, suggesting that economic inequality is a significant problem.
Although some districts of Kenya still have high rates of child and maternal mortality, the Kenyan government has made consistent progress over the past 20 years in lowering the country's general death rate and AIDS prevalence. Additionally, Kenya is spending significantly to provide access to services for sanitation, clean water, and nutrition.

This evaluation of the literature highlights Kenya's recent achievements as well as the areas that require additional assistance. In order for all citizens to benefit from the country's progress, the nation needs to continue making investments in its education, water/sanitation, and health systems while simultaneously focusing on the most disadvantaged groups.

Human development is the process of enhancing people's quality of life through enhancing their ability to lead fulfilling lives. This is accomplished through giving people access to resources that promote better physical, cognitive, and emotional wellbeing, such as education, healthcare, and employment possibilities. This process of human growth is multifaceted since a number of circumstances, both personal and environmental (such as poverty, poor environmental quality, political instability, etc.), can affect an individual's development. Therefore, studying human development can offer insightful advice on how to enhance outcomes for people, households, and communities. Effective policies frequently address potential societal problems like inequality, poverty, and violence while also increasing economic opportunity and access to resources like education, healthcare, and technology. An emphasis on advancing human development can also encourage more sustainable development, which in turn promotes greater wellbeing on a global scale.

**Theoretical Framework**

Over the years, Kenyan human development has attracted the attention of many academics and decision-makers. The evaluation of a population's human wellbeing requires a multifaceted methodology. Examining the numerous facets of human development, such as education, health, and advancement, is an element of this multidimensional approach. The theoretical frameworks that are frequently used to examine Kenya's human development will be reviewed in this essay.

**The Theory of Social Capital**

This theory is based on the idea that networks of social connections and interpersonal relationships are a crucial tool for individual and societal advancement (Horak, Taube, Yang & Restel, 2019). Accordingly, social capital theory sees development as an interactive process that entails creating social connections that may be leveraged to obtain the necessary knowledge, abilities, jobs, and other resources for human capital development.

**Post-Development Theory**

Modernization and dependency theories are criticized by post-development theory for being ethnocentric, universalist, and deterministic (Munck, 2021). It refuses the idea that progress is a worthwhile or realistic objective and suggests instead more diverse, inclusive, and considerate to local cultures, knowledge, and values ways of thinking and living.

**Human Development Approach**

According to the human development idea, the main objective of development policy should be to increase peoples' opportunities to lead satisfying lives. This objective acts as a means, not an end, for economic progress. The method became well-known as a broad goal following the 1990 release of the first Human Development Report by UNDP. The strategy was created in reaction to the practically only focus that development policymakers had placed on economic stabilization and growth. It resulted from a protracted series of recommendations in response to the social issues brought on by this emphasis, which included high rates of poverty, inadequate health and education systems, significant inequality, and unemployment. The most successful (though tardy) answer to economist Dudley Seers' call to 'dethrone' GNP was human development. It specifically built on Amartya Sen's capacity approach, which emphasises people's freedom to pursue cherished goals, and the Basic Needs approach, which prioritizes the satisfying of basic needs for survival.

**Conceptual framework**

The following elements make up the conceptual framework for the analysis of human development in Kenya. Amartya Sen, a Nobel Prize-winning economist and philosopher, established the capacity approach, which forms the foundation of HDI and the challenges and opportunities in Kenya.

**Major Factors Influencing Health and Life Expectancy**

Kenya's life expectancy, like that of any other nation, is impacted by a number of variables. These elements can be divided into a number of major categories, such as healthcare, socioeconomic conditions, way of life, and environmental elements. The following are some of the main elements influencing Kenya's life expectancy:

**i. Healthcare System**

Life expectancy is significantly influenced by the accessibility and availability of healthcare services. Life expectancy in Kenya may be significantly impacted by poor access to high-quality healthcare, particularly in rural areas. Reduced life expectancy can be caused by a variety of factors, including poor healthcare infrastructure, a lack of healthcare experts, and a lack of medical supplies and equipment.

**ii. Infectious Diseases**

Life expectancy in Kenya is greatly impacted by the incidence of infectious diseases such HIV/AIDS, malaria, tuberculosis, and respiratory infections. In regions with few medical resources and inadequate hygienic conditions, these diseases can be very destructive. In order to increase life expectancy, efforts must be made to identify, diagnose, and treat these disorders.

**iii. Maternal and Child Health**

High rates of maternal and infant mortality can have a big impact on Kenya's life expectancy. Improving mother and child health outcomes requires access to high-quality reproductive healthcare, prenatal care, trained birth attendants, and child immunization programs. On average life expectancy, lowering maternal and infant mortality rates can have a positive effect.

**iv. Environmental Aspects**

A number of environmental factors, such as air pollution, availability to clean water, and sanitation, can have an impact on a person's health and life expectancy. Air pollution can cause respiratory issues, while inadequate restrooms and unclean drinking water facilitate the spread of waterborne illnesses. In order to increase life expectancy, it is crucial to improve environmental conditions and ensure access to clean water and sanitary facilities.

**v. Education and Awareness**

Health literacy, education, and awareness programs are essential for increasing life expectancy and health outcomes. people can be empowered to make educated decisions about their health by promoting health education, disease prevention, and accurate information about healthcare services.

**Major Factors Influencing Education in Kenya**

In Kenya, a number of factors might affect human growth and education. These elements can be divided into a number of categories, such as government policies, socioeconomic considerations, cultural influences, educational access, and educational quality. The following are some significant variables influencing education and human development in Kenya:

**i. Access to Education**

Poor infrastructure, long travel times, lack of transportation, and financial limitations can make it difficult for people to obtain education, especially in rural areas.

**ii. Quality of Education**

The quality of education in Kenya may be impacted by inadequate school supplies, a lack of trained teachers in some areas, crowded classrooms, and teaching techniques.

**iii. Socio-Economic Factors**

For many Kenyan children, the opportunity to receive an education may be restricted by poverty, socioeconomic disparity, and lack of access to resources such school fees, uniforms, and textbooks.

iv. **Gender Inequality**

Cultural traditions, young marriages, adolescent pregnancies, and discrimination against girls can obstruct schooling and maintain gender gaps in educational attainment and access.

**v. Teacher Quality and Training**

Qualified instructors are in low supply, especially in rural areas. Teaching effectiveness and student learning results may be impacted by a lack of professional development opportunities and teacher training programs.

**vi. Curriculum Relevance**

It's critical that the curriculum be applicable to the demands of the labor market and everyday life. The relevance of the curriculum can be increased, and students can acquire useful information and abilities by having it aligned with practical skills, entrepreneurship education, and vocational training.

**Kenya Economic Growth with Challenges and Opportunities**

In Kenya, a variety of factors might affect economic growth and human development. Due to the fact that it influences people's ability to acquire basic necessities, healthcare, education, and other possibilities, income is a crucial factor in human development. The following are some important variables influencing income in Kenya's human development:

**i. Employment Opportunities**

Access to good, profitable employment options is essential for generating revenue. Employment prospects and income levels can be impacted by elements including economic expansion, job creation, and investment in vital industries. Investments can be attracted, and job opportunities can be created thanks to adequate infrastructure, helpful policies, and a favorable business climate. This encourages income growth.

**ii. Economic Inequality**

Income disparities have a big impact on how people develop. Inequalities in income are present in Kenya, and there is a sizable wealth difference between the various societal groups. Limiting prospects for upward mobility and potentially resulting in social and economic isolation are high income disparity levels. Increased human development and more equitable income distribution can result from reducing income disparity through progressive taxation, social safety nets, and economic policies that are inclusive of all groups.

**iii. Rural versus Urban Divide**

The gap between rural and urban areas can have an impact on income levels and human development. Kenya's rural areas frequently struggle with issues like poor access to markets, infrastructure, and services. For many rural households, agriculture is the main source of income, yet low productivity, weather-related risks, and limited market options can have an influence on rural earnings. It may be possible to close the income gap by addressing rural-urban inequities through investments in rural development, infrastructure, and agricultural output.

**iv. Entrepreneurship and Access to Finance**

Both entrepreneurship and financial access are essential for generating income and advancing humankind. Supporting entrepreneurship by providing access to capital, business development services, and a conducive business climate can enable people to launch and grow their firms, hence

raising their incomes. Individuals and small businesses can invest, grow, and enhance their revenue-generating activities through increasing financial inclusion and access to affordable loans.

**v. Social Protection**

Programs that offer social protection, such as social safety nets and social insurance plans, can act as a cushion against unforeseen economic fluctuations and destitution. Effective social protection mechanisms can help people feel less vulnerable, guarantee a basic income floor, and provide assistance when the economy is unstable. Programs for social safety that are easily accessible and properly thought-out help to stabilize income and advance human development.

**vi. Gender Equality**

Inequalities in income between men and women are pervasive in Kenya. Women frequently encounter obstacles that can limit their ability to earn an income, such as limited access to education, workplace discrimination, and gender-based violence. Income growth and human development can be aided by policies that support women's entrepreneurship, combat discriminatory behaviors, and give equal access to education and work opportunities.

**vii. Agriculture and Natural Resources**

Agriculture and natural resources have a significant role in Kenya's economy. In order to increase income and advance human development, sustainable farming methods should be encouraged together with economic diversification. Investments in agriculture, value addition, and sustainable resource management can increase opportunities for revenue generation and decrease dependency on weaker industries. The following figure shows the relationship between variables. The independence variable is classified in three indicators of life expectancy, education, and GDP of Kenya:

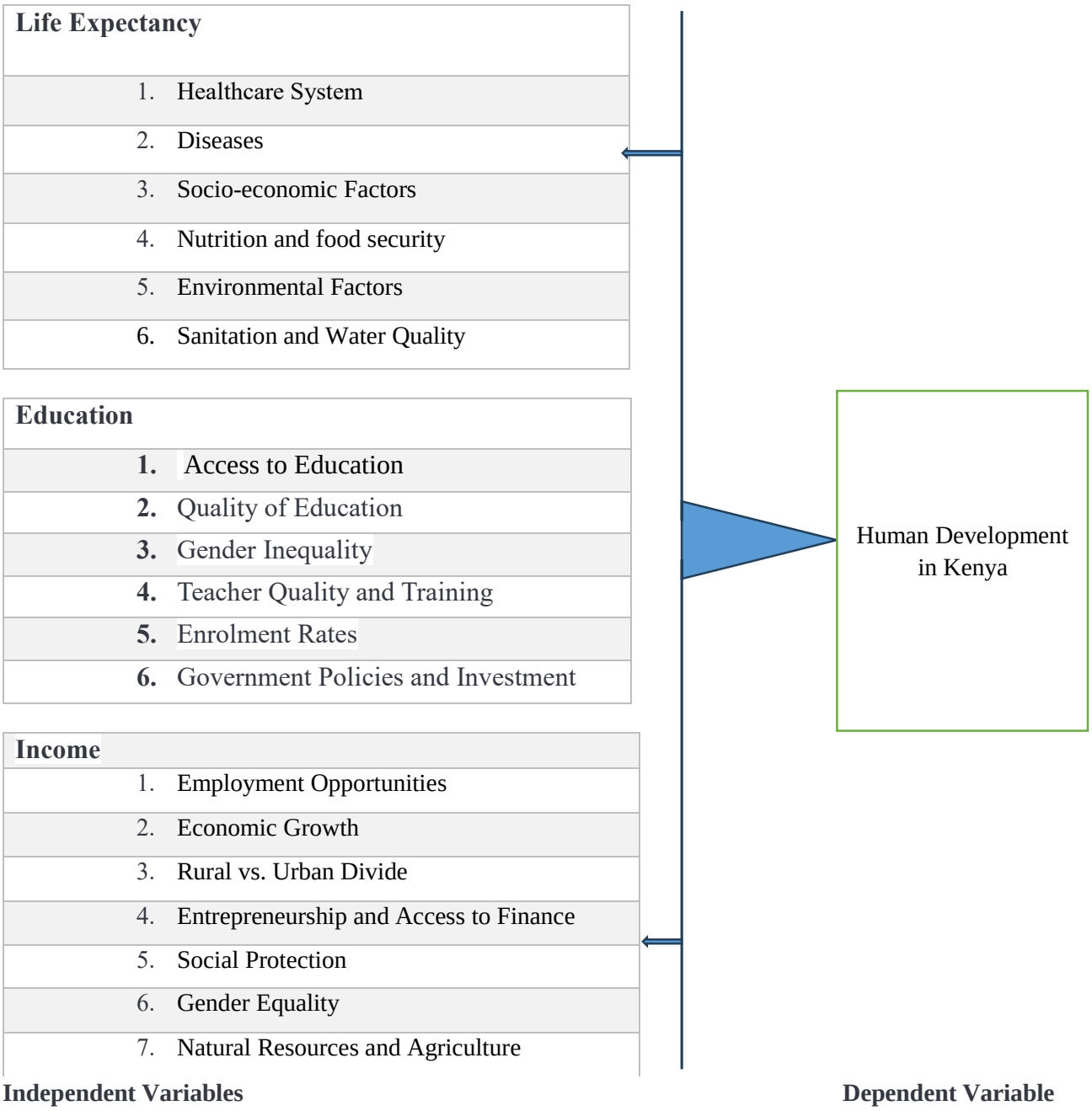


**Figure 2 below displays the conceptualized relationships between variables**

## RESEARCH DESIGN AND METHODOLOGY

### Area of Study
Based on secondary data, a study of human development is focused on Kenya, a country in the East Africa Community.

### Data Collection Procedures
The process of getting data on numerous facets and dimensions of human well-being, including health, education, income, gender, environment, governance, and more, is known as data collection on human development. The secondary data will be used in this research.

### Target Population
This study targeted Kenya and to some extent the other East African Countries namely Tanzania, Uganda, Rwanda, Burundi, South Sudan, DRC.

### Source of Data
This study used secondary data from the publications of World Bank, UNDP, UNICEF, WHO, the Ministries of Health, Education, and Finance, Kenya National Bureau of Statistics among other sources summarized in the table below.
Table 1: Samples of Secondary Data Sources

| NO | TITLE | REFERENCE | REMARK |
|---|---|---|---|
| 1 | The State of the World's Children | https://www.unicef.org/reports/state-of-worlds-children-2020 | investigates the impact of COVID-19 on children's health, education, protection, and nutrition. |
| 2 | Global Education Monitoring Report 2O20 | https://unesdoc.unesco.org/ark:/48223/pf0000373718 | offers a detailed examination of the main reasons why students are excluded from educational systems around the world |
| 3 | World Development Report | https://www.worldbank.org/en/publication/wdr2021 | noting data's potential to open withdrawals that might harm people, businesses, and society, hence looking at the huge opportunity for data to better the lives of the poor. |
| 4 | Education statistics-all indicators 2021 | https://www.oecd.org/education/education-at-a-glance/eag-2021-data-methodology.htm | This World Bank database contains international comparability education indicators for access, progression, |

| | | | |
|---|---|---|---|
| | | | completion, literacy, teachers, population, and expenditures. |
| 5 | Measuring Human Development: | https://www.rff.org/publications/series/development-discussion-paper/rff-dp-02-24.html (2002 | Provides an in-depth overview of the HDI and its components. |
| 6 | Human Development Report 2O22, (UNDP | https://hdr.undp.org/en/content/investing-human-capital-expanding | Explores the concept of investing in human capital development through education and health to generate real opportunities for citizens. |
| 7 | Statistical Update 2018 Human Development Indices and Indicators | https://hdr.undp.org/en/2018 | The statistical update is being released to ensure consistency in reporting on key human development indices and statistics. |
| 8 | Kenya Bureau of Statistics | https://www.treasury.go.ke/ Kenya-National-Bureau-of-Statistics | Kenya Demographic and Health Surveys 2022 |
| 9 | World Health Organization (WHO) | https//www.who.int/gho/en/ | Life expectancy |
| 10 | United Nations Educational, Scientific and Cultural Organization | https://uis.unesco.org/en/country/ke | Education |

## Data Analyses Procedures

For this study, mixed data analysis techniques were employed in order to gauge and analyses trends in Kenya's HDI. The data was presented using the table and figures.

**Life Expectancy at Birth**: Depending on particular demographics like the birth year and current age, the life expectancy index is used to estimate how long and healthy a life will be. The LEI, for instance, is 1 when the life expectancy at birth is 85 years and is 0 when life expectancy at birth is 20 years.

**Education**: Education is the second dimension of the HDI. Education indicators include the projected years of schooling and the mean years of schooling. While the median number of years spent in school and the anticipated number of years are both normalised to a minimum value of 0 and a maximum value of 15, the average maximum number of school years is 18.

**Income**: The GNI index is used in the approach to determine a reasonable level of living. PPP is assumed to have a modest minimum value of $100. The highest value allowed is PPP $75,000 (Prados de la Escosura, 2021).

**Calculation of HDI**: The HDI is a summary indicator of these achievements. A long and healthy life, access to information, and a livable standard of living are the three key elements of human progress. The HDI is the geometric mean of the three-dimensional normalised indices. The HDI's formula is as follows HDI= (LEI×EI×GNI) ^ (1/3) (Alaimo & Seri, 2023).

Table 2: Calculation of HDI

| Dimension | Indicator | Minimum | Maximum |
|---|---|---|---|
| Health | Life expectancy(years) | 20 | 85 |
| Education | Expected years of schooling (years) | 0 | 18 |
| | Mean years of schooling (years) | 0 | 15 |
| Standard of living | GNI per capita (2017 PPP$) | 100 | 75,000 |

There are numerous procedures and calculations used in the Human Development Index calculation. The Life Expectancy Index (LEI), Education Index (EI), and Income Index (II) data are first calculated. The geometric mean of the three normalized indices is HDI, which is the last index.

i. Life Expectancy Index (LEI)= $\frac{(LE-20)}{(85-20)}$

ii. Education Index (EI)= $\frac{(MYSI+EYSI)}{2}$

Mean years of schooling Index=$\frac{MYS}{15}$

Expected years of schooling Index=$\frac{EYS}{18}$

iii. Income Index (II)= $\frac{[In\ (GNI)-In\ (100)]}{[In\ (75000)-In\ (100)]}$

**Ethical Considerations**

The use of secondary data, which encompasses a variety of indicators and concentrates on the country's capacity for self-sufficiency, is essential to Kenya's human development. It is possible to assess the state of the country and make policy decisions that promote equitable growth in all areas by analyzing secondary sources, such as those on economics, health, education, and poverty. Additionally, it is important to think about the ethical implications of these secondary data, and

efforts should be taken to ensure that decisions are made in a way that improves everyone's wellbeing rather than exploiting any particular group. Furthermore, much effort should go into how to evaluate this data so as to avoid drawing conclusions that are skewed or false. Using secondary data offers a trustworthy method for creating the report on the finding for credibility.

## RESULTS

### Human Development in Kenya

Kenya, a nation in Eastern Africa, with a surface area of 580,370 km$^2$. Kenya has a population of 53,005,614 and is rated 27$^{th}$ in terms of population among all 196 nations. Its population density is moderate at 91 persons per km$^2$. Its national currency is the Kenyan shilling, and its capital is Nairobi. that can be used to evaluate the degree of development in various nations.

### a) Life Expectancy Index in Kenya

Table 3 represents the life expectancy from 2012 to 2023 in Kenya for males and females.

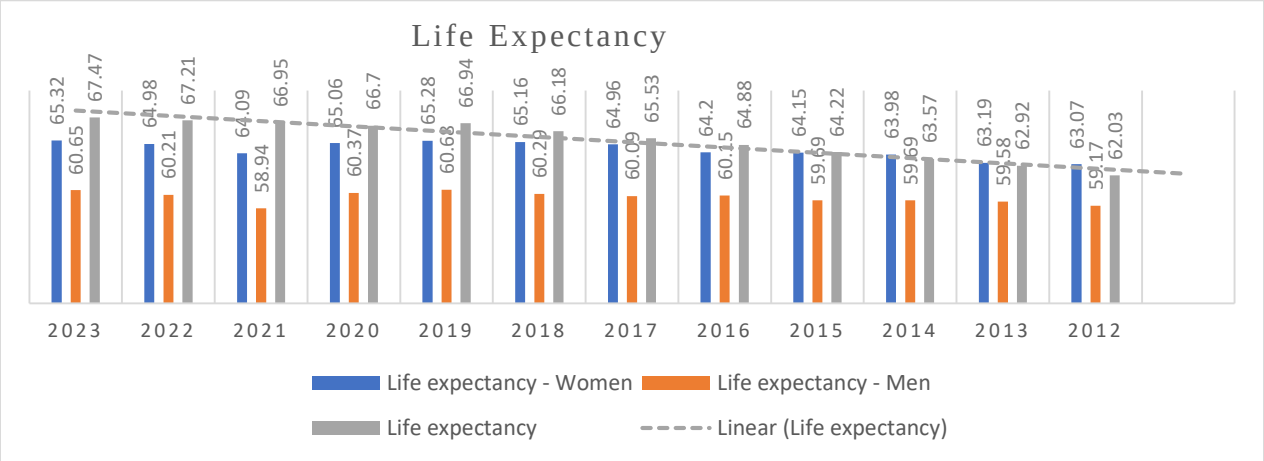


Figure 3: Life Expectancy in Kenya

According to the Figure 3, women live longer than men. In 2012 the life expectancy in Kenya was 62.03 and 2023 was 67.47 showing an increase over the years. The World Health Organization reports that between 2000 and 2019, the life expectancy climbed from 66.8 years to 73.4 years in the World. An increase of more than 6 years. Healthy life expectancy (HALE), which counts the years lived in good health, has improved from 58.3 to 63.7 years, but not by as much. People are living longer, but they may not necessarily be healthier.

Figure 4 below shows the histolical life expectancy in Kenya since 2012 upto 2023

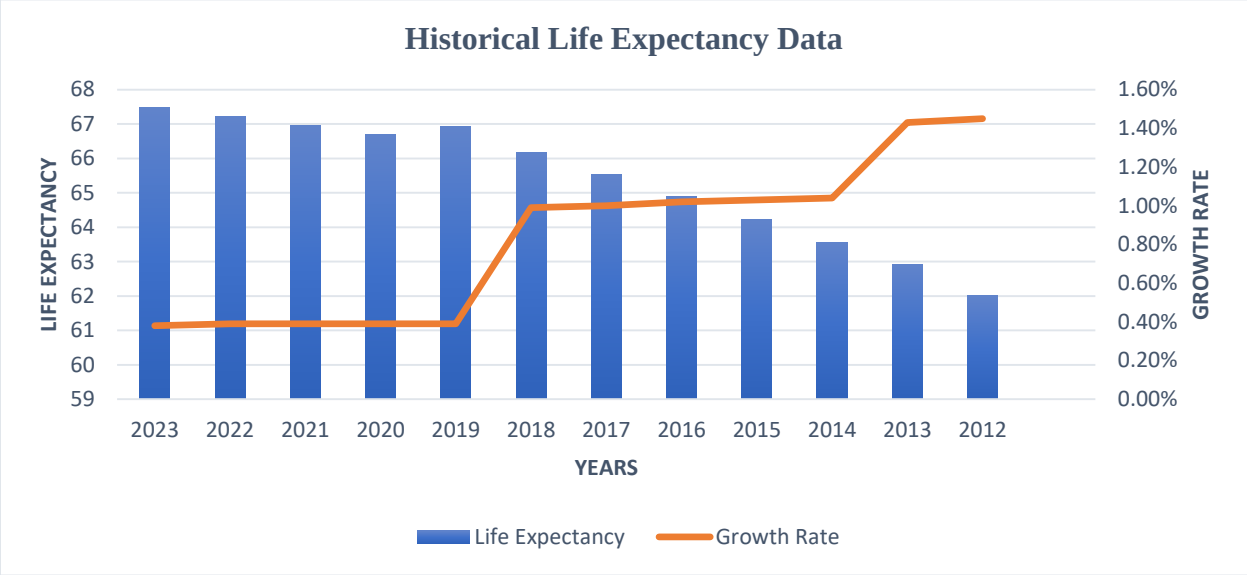


Figure 4: Kenya - Historical Life Expectancy Growth rate

**Education Index in Kenya**

According to UNESCO publications, the adult literacy rate in Kenya is 81.53%. Men have a literacy rate of 84.99%, whereas women only have a literacy rate of 78.19%.

Figure 5 displays Kenya's literacy rate depending on different years.

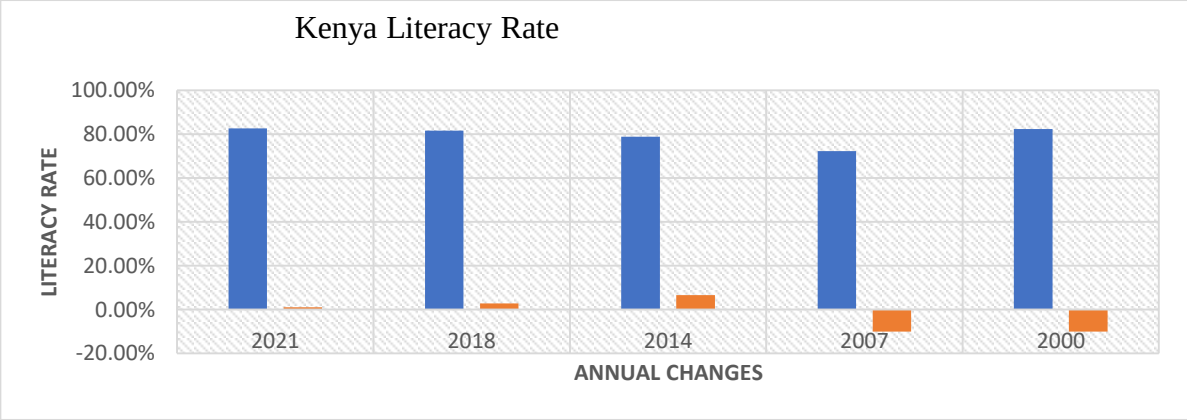


Figure 5: Kenya literacy rate

The enrollments in elementary schools for 2019 and 2020 were roughly 10.72 million and 10.17 million, respectively.

**GDP in Kenya**

The component of GDP expenditures demonstrates how the resources produced by the economy are used for either final consumption or asset acquisition. From Ksh 12,994.0 billion in 2021 to Ksh 14,412.5 billion in 2022, the Kenya's Gross Domestic Product rose. In 2022, private consumption accounted for little more than three quarters (75.6%) of all GDP spending.

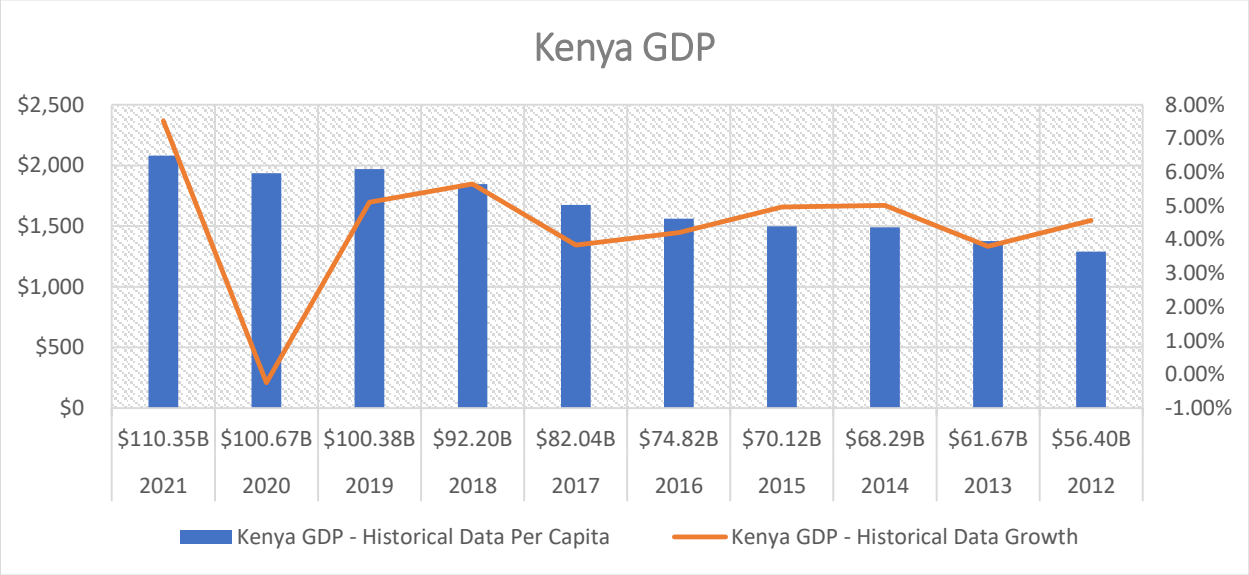


Figure 6: Kenya GDP

**The HDI for Kenya**

The data collected on HDI score and HDI Rank is summarized in Table 3 showing the trend of Kenya index over the last 10 years since 2012.

| years | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 202O | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|
| HDI score | 0.51 | 0.52 | 0.53 | O.54 | 0.55 | 0.56 | 0.57 | 0.57 | 0.58 | 0.57 |
| HDI rank | 147 | 145 | 145 | 143 | 142 | 142 | 147 | 147 | 152 | 152 |

Table 3: HDI of Kenya for the last 10 Years

The HDI values in Kenya have generally shown a positive trend over the past decade, indicating improvements in human development. While specific data points will depend on the latest available information, the general trend showcases progress in various dimensions.
Table 4 below show the three dimensions of HDI of Kenya since 2014 to 2021.

| Years | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|
| Life Expectancy at Birth in years | 61.8 | 61.9 | 62.2 | 62.5 | 62.7 | 62.9 | 62.7 | 61.4 |
| Expected Years of Schooling | 10.5 | 10.5 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 |
| Mean Years of School | 6.3 | 6.3 | 6.4 | 6.5 | 6.6 | 6.7 | 6.7 | 6.7 |
| Gross National Income Per Capita in $ | 3,542 | 3,676 | 4090 | 4,126 | 4273 | 4381 | 4267 | 4274 |

Table 4: HDI indicators since 2014 to 2021

**East Africa Community Countries**

Seven countries make up the East African Community (EAC), a regional intergovernmental body: These countries are Burundi, Kenya, Rwanda, South Sudan, Tanzania, Uganda and Democratic Republic Congo. In a number of areas, including trade, infrastructure, health, education, and security, the EAC seeks to advance regional integration and collaboration.

The 2020 East Africa's average HDI score was 0.547, which was lower than the continent's average of 0.581 and the global average of 0.747. Seychelles had the highest HDI score in East Africa (0.927), followed by Mauritius (0.804), and Botswana (0.713). East African countries recorded the lowest HDI score.

Table 5 illustrates the Human Development Index (HDI) values for Kenya and the countries in East Africa community from 2012 to 2022.

| **Country** | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Kenya | 0.552 | 0.554 | 0.558 | 0.561 | 0.569 | 0.572 | 0.577 | 0.581 | 0.578 | 0.575 | 0.598 |
| Tanzania | 0.504 | 0.510 | 0.515 | 0.520 | 0.524 | 0.528 | 0.538 | 0.548 | 0.548 | 0.549 | 0.561 |
| Uganda | 0.504 | 0.504 | 0.512 | 0.517 | 0.519 | 0.520 | 0.522 | 0.525 | 0.524 | 0.525 | 0.536 |
| Rwanda | 0.506 | 0.508 | 0.513 | 0.515 | 0.524 | 0.526 | 0.528 | 0.534 | 0.532 | 0.534 | - |
| Burundi | 0.416 | 0.421 | 0.426 | 0.428 | 0.480 | 0.428 | 0.428 | 0.431 | 0.426 | 0.426 | - |
| DRC | 0.440 | 0.446 | 0.455 | 0.463 | 0.472 | 0.475 | 0.480 | 0.482 | 0.479 | 0.479 | - |
| South Sudan | 0.397 | 0.411 | 0.410 | 0.412 | 0.402 | 0.395 | 0.395 | 0.393 | 0.386 | 0.385 | |

(UNDP, HDI Report 2021/2022, 8 SEP 2022)
Table 5: HDI of the Countries in East African Community
Table 5 shows that among the EAC communities, Kenya had the highest HDI score, followed by Tanzania and Uganda. Burundi and South Sudan had the lowest HDI scores in the region among the lowest in the World, while Rwanda was behind Uganda by a little margin.

Figure 7: The graphic below displays the HDI trends for these countries within the East African Community over the previous ten years. You can see from the chart that.

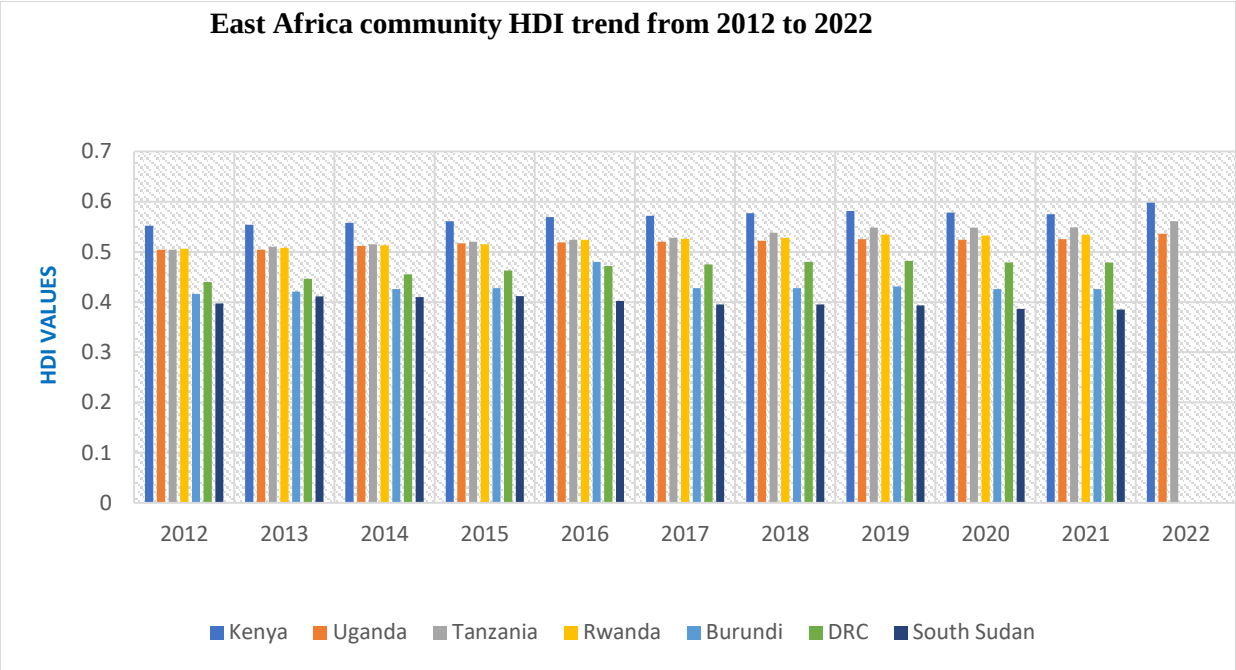


Figure7: EA Community HDI Trend

**Factors affecting the HDI in Kenya**

The extensive desktop literature review of various publications revealed the following factors which influence the HDI of Kenya. Factor related to life expectancy included health care system, diseases, social-economic factors, maternal and child health, environmental factors, and education. Factors related to education included access to education, quality of education, socio-economic factors, gender inequality, teacher quality and training, and government policies and investments. Factors related to income included employment opportunities, economic inequality, rural vs. urban divide, entrepreneurship and access to finance, social protection, gender equality, natural resources and agriculture.

**Interpretation of finding and discussion**

**HDI of Kenya**

The United Nations Development Programme reports that Kenya's HDI was 0.575 points in 2021, placing it in 152$^{nd}$ place out of 191 nations of the World. This is an improvement over Kenya's 2012 score of 0.51 points, which placed it 183$^{rd}$ out of 189 nations. Kenya's HDI rose at an average yearly rate of 1.17% from a score of 0.47 in 2001 to a score of 0.58 in 2020. According to Figure 4, there has been a significant improvement in historical life expectancy statistics for the years,

although the growth was strong from 2012 to 2017 with more than one percent, but starting in 2019, the growth rate has decreased from 0.99% to 0.39% while continuing to increase in the other years. This demonstrates that the HDI of Kenya encountered difficulties like COVID 19.

Kenya has improved access to and the standard of education for children, particularly in the early years, according to UNICEF. A significant portion of the government's budget has been set up for education, and reforms like the Competency Based Curriculum and a 100% transfer from elementary to secondary school have been put in place. Nevertheless, there are still issues including high class sizes, inadequate education, low enrolment and retention rates in some areas, and the COVID-19's effect on learning. Due to menstruation, family duties, and teen pregnancies, many females in Kenya quit school. The instability in female education is also largely due to gender inequality.

The World Bank advises that the best approaches to properly address income and outcome inequality within a nation include improvements in early childhood development, education, healthcare, social protection, infrastructure, and taxation for wealth redistribution.
In general, according to the Human Development Index (HDI) trend over the past ten years, human development has improved throughout the world. However, there have also been some setbacks and discrepancies as a result of various circumstances, such as the COVID-19 pandemic, conflicts, climate change, and inequalities income, education and health.

**Comparison of HDI of Countries in East African Community**

Figure 7 illustrates that over the past ten years, all EAC nations—aside from South Sudan—have seen an increase in HDI scores, although at different rates. Burundi has seen gradual, inconsistent increase in its HDI score, while South Sudan has seen a decrease since 2014. Kenya, Tanzania, and Uganda have all seen constant, moderate rise in their HDI scores, while Rwanda has seen a faster, more consistent development.

Over time, Uganda, a country close to Kenya, has showed progress in its HDI. Both nations have similar difficulties in the areas of education, health, and income, even though specific data points may differ. Comparing the HDI values and trends can show how the countries are developing and point out areas where collaboration and learning may be possible.
Tanzania is a different neighboring country with its own distinct framework for human development. It is possible to identify parallels and variations in development strategies and outcomes by comparing Tanzania's and Kenya's HDIs. Comparing variables like wealth distribution, access to healthcare, and regional differences can help determine areas where each nation might improve.

Over the years, Rwanda has consistently advanced in human development, making impressive gains. Kenya's HDI and Rwanda's HDI can be compared to gain insight into the successful methods and policies that have helped Rwanda advance in terms of development.

**Factors Affecting Human Development in Kenya**

**a) Life Expectancy**

**i. Health care system**

Life expectancy is frequently impacted by the accessibility and availability of healthcare services, including primary care, maternal and child health care, and disease treatment (Ministry of Health, Kenya, 2019).

**ii. Diseases**

Life expectancy is significantly impacted by the presence and treatment of non-communicable diseases like diabetes and cardiovascular disease as well as communicable diseases like HIV/AIDS, malaria, and tuberculosis (KEMRI, 2021).

**iii. Social-economic factors**

Life expectancy is influenced by socioeconomic factors such as income levels, education, employment prospects, and social protection programmes. Longer life expectancy is frequently correlated with higher socioeconomic level and better access to healthcare, education, and better living conditions Kenya (Nyamu & Njambi, 2021).

**iv. Nutrition and Food Security**

A proper diet is essential for human health and longevity. Food security and nutrition are also important. Malnutrition, which covers both undernutrition and overnutrition, can have detrimental effects on one's health. Obesity affects both adults and children and is a frequent, dangerous, and expensive chronic disease. The CDC's efforts to combat overweight and obesity center on legislative and environmental measures that will enable everyone to afford and have access to a balanced diet and an active lifestyle. Life expectancy can be increased by having access to good food, especially for vulnerable populations like children and expecting mothers (KNBS, 2018).

**v. Environmental Factors**

Life expectancy can be impacted by environmental pollution, climatic circumstances, and exposure to hazardous substances (KNBS, 2021).

**vi. Sanitation and Water Quality**

This helps in improving general health and reducing the number of cases of waterborne diseases require access to clean water and adequate sanitation facilities. Diseases like cholera and diarrhea can spread due to a lack of clean water and poor sanitation, which can dramatically reduce life expectancy.

**b) Education**

**i. Access to Education**

The accessibility of education for underprivileged and marginalized people as well as the availability of schools, particularly in rural areas, affects the education index (UNESCO, 2020).

**ii. Quality of Education**

The HDI considers education quality to be extremely important. Quality education includes elements like infrastructure quality, teacher qualifications, and learning results. Education quality is affected by a variety of factors, such as teacher support and training, curriculum revision and implementation, and assessment methods (UNICEF, 2020).

**iii. Gender inequality**

Equal access and opportunity for education for men and women are referred to as gender parity in education. Gender parity must be attained for inclusive and just educational systems. Actions in legislation, encouraging girls' education, and addressing socio-cultural barriers are all factors that affect gender parity (UNESCO, 2019).

**iv. Teacher Quality and Training**

The standard of education given to students is impacted by the availability of qualified and motivated teachers (World Bank, 2018).

**v. Enrollment Rates**

The proportion of children or people in a particular age range who are enrolled in educational institutions is shown by enrollment rates. Higher enrollment rates are essential for human growth because they demonstrate improved access to education. Enrollment rates are impacted by variables like free primary education regulations, infrastructural development, and focused enrollment programs (UNESCO, 2020)

**vi. Government Policies and Investment**

Both the effectiveness and the quality of the educational system are impacted by education policies and reforms of Kenya. Reforms include things like curriculum modifications, teacher training programs, and the use of technology in the classroom. The amount of money spent on education by the government, including money set aside for schools, paying teachers, and building infrastructure, has a big impact on how good and accessible education is (UNESCO, 2017).

**c) GNI Per Capital**

**i. Employment Opportunities**

| Years | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|---|
| Unemployment rate | 5.5% | 5.64% | 5.62% | 5.01% | 4.25% | 3.52% | 2.76% | 2.77% | 2.8% |

Source (Published by Aaron O'Neill, June 1, 2023)

Table 5: Kenya: Unemployment from 2014 to 2022

The levels of income and the total income index are influenced by the work prospects and job availability in various industries and geographical areas. Kenya's unemployment rate was 5.5

percentage in 2022. This represents a steady decline from the increase after financial risk (KNBS, 2020).

**ii. Economic growth**

The Gross Domestic Product (GDP) and economic growth in Kenya are key factors in calculating the income index. An expanding economy often produces more job openings and greater incomes, which raises the standard of living for its population (Oginda, 2019).

**iii. Rural vs. Urban**

In Kenya, there is considerable income differences between rural and urban communities. Rural communities seeking better economic prospects are frequently drawn to urban regions due to the higher incomes and increased employment options (Davis & Mwabu 2015).

**iv. Entrepreneurship and Access to Finance:**

The Gross Domestic Product (GDP) of the nation and overall economic growth can have an impact on income levels, employment prospects, and entrepreneurship opportunities. The ability to access financial services, such as banking and credit options, can have an impact on one's ability to generate revenue and achieve economic empowerment. (World Bank, 2020). This influence the HDI of country.

**v. Social Protection**

Social assistance programmes give recipients access to increased cash, increasing their ability to spend. This enables them to spend more money on necessities, which raises household consumption and raises standard of living (UNDP Reports 2021).

**vi. Gender equality**

The income index can be considerably impacted by gender differences in earnings and employment opportunities. Enhancing gender equality in the workplace can result in higher output and faster economic expansion (World Bank, 2020).

**vii. Natural Resources and Agriculture**

In Kenya, a considerable share of the workforce is employed in the agriculture industry. The productivity of agriculture, which is impacted by elements including weather patterns, access to technology, and market circumstances, can significantly affect rural incomes and the distribution of income generally (KNBS, 2020).

## 5Summary of the Results

The HDI is a composite index that measures a nation's overall development by taking into account variables including life expectancy, education, and income. It offers a number between 0 and 1, where a greater number denotes a higher level of human development. This categorized Kenya as having a medium level of human development. Over time, Kenya's life expectancy at birth has increased. The average lifespan in 2020 was close to 66 years. HDI's education component takes into consideration variables like predicted and mean years of schooling. Kenya has improved access to education in recent years, especially at the primary level. However, there are still issues with access and quality of higher education. The Gross National Income (GNI) per capita is reflected in the HDI's income component. Kenya's income levels have been rising throughout time

because to a variety of industries, including manufacturing, services, and agriculture. However, with differences between urban and rural areas, income inequality continues to be a problem In HDI shows Kenya is leading in East Africa communities as far as the Human Development is concern.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

Kenya's HDI indicates positive progress in life expectancy, income, and education. However, there are still issues with ensuring that everyone has access to high-quality healthcare, education, and income equality.

Comparing Kenya to countries in East African Community nations, the Human Development Index (HDI) shows that Kenya has greater level of human development. There are still room for improvement, with South Sudan, Burundi, and the Democratic Republic of the Congo all facing greater difficulties as a result of persistent conflicts and socioeconomic inequalities.

The Human Development Index (HDI) of Kenya is influenced by many factors including social inequality, security, infrastructure in rural areas, healthcare system, education in some areas, and economic factors such unemployment and cost of living, diseases among others.

### Recommendations

The policy makers should continue to develop, implement and evaluate policies that enhance the human development in Kenya in order to achieve sustainable development goals and make Kenya a high-income country.

The countries in East African community should continue to improve their HDI through various mechanisms including trade, infrastructure, harmonization of education, sharing resources in healthcare systems, collaboration in conflict resolution, security and peace promotion, disease prevention and socio-economic development initiatives among other areas of cooperation.

The government and private sectors should continue to work together to promote the human development in Kenya and East African Community through a multi-sectoral approach that facilitate the elimination of inequalities and improve the quality of life for all the citizens.

### Recommendations for Future Research

There is a need to examine the connection between Kenya's HDI and its healthcare system in so as to check out the infrastructure for healthcare, its accessibility and quality, and how it affects important HDI metrics like newborn and life expectancy rates.There is a need to examine how the Competence Based Curriculum in Kenya will contribute to the HDI.

The second area that would need further research would be to identify the regional HDI differences within Kenya. That is to find the places or regions that are not progressing as quickly as the others in terms of human development, then look into the underlying causes of this imbalance. In order to overcome these inequalities, the findings can result in specific initiatives and policies.

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**APPENDICES**

Appendix 1: Map showing the Countries in East African Community

(Source) Africa View Facts/status/1509229818910588938