Tasks

1. Data exploration. Choose selected datasets. Clean and analyze. Note any issues with the datasets.
2. <https://data.humdata.org/dataset/kenya-population-per-county-from-census-report-2019> ---- dataset of the Kenyan Population cencus on 2019.

* <https://www.knbs.or.ke/download/rural-population-households-density-by-county/--> dataset of urban and rural population by Knbs
* <https://www.knbs.or.ke/download/economic-performance/--> -- dataset of the economic performance (GDP)

1. VISUALIZE URBANIZATION TRENDS

URBANIZATION IN KENYA

The share of urban population in Kenya increased by 0.5 percentage (+1.76%) in 2022 in comparison to the previous year. The urban population referes to the share of the total population living in urban centres. Each country has their own definition of what constitutes an urban center (based on population size, area, area, or space between dwellings, among others) and therefore international comparisons may be inconsistent.

* Create visualizations to showcase trends in urbanization over time.
* How has the urban population grown in comparison to rural areas?

<https://data.humdata.org/dataset/kenya-population-per-county-from-census-report-2019> ---- dataset of the Kenyan Population cencus on 2019.

Urban areas In Kenya are Nairobi, Kiambu, Kakamega, Nakuru, Thika, Malindi etc while rural areas are Lamu, Isiolo, Tharaka-Nithi, Samburu.

The urban population will continue being on the rise as compared to the rural areas.

The five counties with the highest population are as of 2023 Nairobi City (4,396,828), Kiambu (2,417,600), Nakuru (2,162,107), Kakamega (1,867,539) and Bungoma (1,670,535) while the five counties with the least population are lamu (143,916), Isiolo (267,993), Samburu (310,320), Tana River (315,941) and Taita Taveta(340,664).

* Are there noticeable patterns or anomalies?
* Scatter plot. With years on the x-axis and the percentage of population living in urban areas on the y-axis. Look for trends, clusters, or anomalies in the data points.
* Box plot. Use box plots to visualize the distribution of urban population percentages over time.
* Heatmap. Data for multiple variables e.g urban population, GDP, infrastructure development to visualize correlations and patterns between between these variables over time.
* Geospatial visualization. Create choropleth map to show regional variations in urbanization trends. This can identify regional anomalies or disparities.

1. IMPACT ON SOCIO-ECONOMIC INDICATORS

* Analyze how urbanization has affected socio-economic indicators such as GDP per capita, education, and healthcare access.
* The essential economic performance of a country is reflected by the gross domestic product, the total of all goods and services sold. Worldwide GDP in 2022 was at about 12,607 USD percapita. GDP in Kenya, on the other hand, reached usd 2,099 per capita, or 113.42 billion USD for the whole country. Kenya is therefore ranked 66 of the major economies. <https://www.worlddata.info/africa/kenya/economy.php>
* Are there correlations between urbanization rates and these indicators? Please describe

1. REGIONAL DIFFERENCES

* Investigate regional variations in urbanization rates and their impact.
* Faster urbanization in coastal areas. In many countries, coastal regions tend to urbanize more rapidly than inland areas. This is often driven by economic opportunities related to ports, trade and tourism.
* Capital cities and major metropolises. Capital cities like Nairobi often experience faster urbanization rates comoared to smaller towns and rural areas like Lamu and Isiollo. These urban centres tend to attract a large influx of people seeking employment and better amenities.
* Industrial and economic hubs. Regions with a strong industrial or economic base often urbanize faster. For example, areas with manufacturing, technology, or services industries may see rapid urban growth.
* Are there some regions urbanizing faster than others? Yes, the capital cities and the coastal regions.
* How do these differences affect local communities?
* Economic opportunities: faster urbanization can bring economic opportunities, including/8 job prospects and access to a wider range of goods and services. This can improve the standard of living for local communities.
* Infrastructure development. Urban areas often benefit from improved infrastructure, including transportation, healthcare, and education facilities. However, neighboring rural areas may lag behind in terms of infrastructure development.
* Social and cultural challenges. People from diverse backgrounds and regions are coming together. Local communities may experience both positive cultural exchange and challenges related to social integration.
* Income disparities within a region. While some residents may enjoy higher incomes and a better quality of life, others may struggle with poverty and lasck of access to basic services.
* Housing and land use: rapid urbanization often leads to increased demand for housing and changes in land use. Local communities may face challenges related to housing affordability, displacement and land conflicts.
* Please compare more than one city

Lets compare two major cities in Kenya: Nairobi and Mombasa. These cities have distinct characteristics , roles, and regional importance within the country.

Nairobi

1. Capital and Largest city. It serves as the political, economic, and cultural center of the country.
2. Economic hub. It is the home to numerous multinational corporations, financial institutions and technology startups.
3. Transportation. Nairobi is well connected with a network of roads, inclusing expressways, and it has Jomo Kenyatta International Airport, the largest and busiest airport in East Africa
4. Education and healthcare. Nairobi boasts several prestigious universities, research institutions, and world class healthcare facilities
5. Cultural diversity. Nairobi is culturally diverse, with residents from various ethnic backgrounds and expatriate communities. It has a vibrant arts and music scene.

Mombasa

1. Coastal city. Mombasa is kenya’s second largest city and the country’s main coastal city. It serves as a major port and gateway to east Africa.
2. Port city. Mombasa’s Kilindini port is one of the busient ports in East Africa, handling a significant portion of the region’s trade.
3. Tourism. Mombasa is a popular tourist destination known for its beautiful beaches, historical sites e.g Fort Jesus and wildlife reserves e.g Shimba hills National RReserve
4. Cultural heritage: the city has a rich cultural heritage influenced by centuries of trade and interactions with various cultures including Arab, Inidan, and European
5. Economic activities: besides its port and tourism, Mombasa also has industries like manufacturing, agriculture and fishing

COMPARATIVE ANALYSIS

* **Economic Role:** Nairobi is the primary economic center, housing the headquarters of many businesses and financial institutions. Mombasa's economy is more trade-oriented, with a focus on its busy port.
* **Transportation:** Both cities have busy transportation hubs, but Nairobi's airport is the major international gateway, while Mombasa serves as the main maritime gateway.
* **Cultural Diversity:** Nairobi's cultural diversity is a result of its status as the capital and economic hub, attracting a wide range of ethnic groups and expatriates. Mombasa's diversity is influenced by its history as a coastal trading city, with strong Arab and Indian cultural influences.
* **Tourism:** Mombasa is a top tourist destination due to its coastal attractions, historical sites, and wildlife reserves. Nairobi also offers cultural and wildlife attractions but is not primarily known for its beaches.
* **Urban Development:** Nairobi's urbanization is driven by its role as the capital and economic center, leading to rapid growth and urban challenges. Mombasa's growth is influenced by trade and tourism, with a different set of urbanization dynamics.

1. CHALLENGES AND OPPORTUNITIES

* Identify challenges and opportunities associated with urbanization in Kenya
* What are the potential benefits of urbanization, and what issues should policymakers address?

Urbanization presents both challenges and opportunities for policymakers and society as a whole. Here are some of the key challenges and opportunities, alomng with the issues that policymakers should address and the potential benefits:

Challenges & what issues policymakers should address:

1. Infrastructure development. Rapid urbanization often strains existing infrastructure, leading to issues like inadequate transportation, housing, and sanitation.

Opportunity: invest in infrastruscture development can create jobs and improve the quality of life in cities

1. Housing Affordability. Rising urban population can lead to increased housing demand and higher costs, making housing unaffordable for many residents.

Opportunity: policymakers can implement affordable housing programs and zoning reforms to address housing affordability issues.

1. Traffic congestion: Urbanization leads to traffic congestion which negatively affects productivity and air quality.

Opportunity: developing efficient public transportation systems and promoting sustainable urban planning can mitigate traffic congestion

1. Social inequality: urbanization can exacerbate social inequalities, leading to disparities in access to education, healthcare, and job opportunities.

Opportunity: policymakers can implement social programs and policies to reduce inequality and ensure inclusive growth.

1. Informal settlements: rapid urbanization often results in the growth of informal settlements with inadequate srrvices and infrastructure.

Opportunity: governments can work on upgrading informal settlemets and providing essential services to residents.

Opportunities:

1. Economicc growth. Urbanization can drive economic growth by concentrating in industries, businesses and markets, leading to increased economic opportunities and innovation.
2. Human capital. Cities attract a diverse and skilled workforce, fostering innovation and entrepreneurship, which can lead to economic prosperity.
3. Access to services. Urban areas typically have better access to healthcare, education, and cultural amenities, leading to improved quality of life.
4. Technological advancement. Urbanization often goes hand in hand with technological advancement, including smart city initiatives like Konza City which can enhance efficiency and sustainability.
5. Cultural diversity. Cities are melting pots of cultures, leading to cultural exchange, creativity, and a vibrant cultural scene.

Potential benefits of urbanization

1. Economic growth. Urbanization can stimulate economic growth through increased productivity, innovation, and entrepreneurship.
2. Improved living standards. Access to better healthcare, education, and services can lead to improved living standards for urban residents.

INTRODUCTION

More than half the world’s population lives in urban areas. Due to the ongoing urbanization and growth of the world’s population, there will be about 2.5 billion more people added to the urban population by 2050, mainly in Africa and Asia. The world’s urban areas are highly varied, but many cities and twons are facing problems such as lack of jobs, homelessness and expanding squatter settlements, inadequate services and infrastructure, poor health and educational services and high levels of population.

URBANISATION TRENDS

Urbanization results from a natural increase in the population and rural to urban migration. People migrate to towns and cities in hope of gaining a better standard of living.

Urbanization occurs mainly because people move from rural areas to urban areas and it results in growth in size of the urban population and the extent of urban areas. These changes in population lead to other changes in land use, economic activity and culture.

Historically, urbanization has been associated with significant economic and social transformations. For example, urban living linked with higher levels of literacy and education, better health, lower fertility and a longer life expectancy, greater access to social services and enhanced opportunities for cultural and political participation. However, urbanization also has disadvantages caused by rapid and unplanned urban growth resulting in poor infrastructures such as inadequate housing, water and sanitation, transport and health care services.

Kenya: introduction

Kenya is a republic located in Eastern Africa and the 7th most populous country in Africa. Nairobi is the capital as well as the largest city followed by Mombasa and Nakuru. The population growth rate has been increasing as has the fertility rate in Kenya. It is actually close to average compared to those of other African countries. However, life expectancy has been increasing significantly over the past ten years, so people in Kenya live longer and presumably healthier lives.

Kenya is the biggest economy and the most industrialized country in East and Central Africa. Since 2010, the Kenyan economy has consistently maintained a growth rate of over 5 percent. Kenya is the fist East African country to grow from low-income status to middle-income status and finally turn into one of Africa’s top 10 economies. The major contributors to the economy are small-scale consumer goods, agricultural products, processing and tourism.

The highlands of Kenya are one of the regions with the highest agricultural production in Africa, with tea and horticultural produce being the most valuable exports. Agroiculture, including forestry and fishing, generates a third of the country’s GDP and provides employment for over three quarter of Kenyans.

URBANIZATION IN KENYA

<https://data.worldbank.org/indicator/SP.POP.TOTL?locations=KE--> Kenyan population dataset from 1962 to 2022.

INFLATION RATE IN KENYA

Kenya’s market-based economy is considered East Africa’s finance and transportation hub. Most of Kenya’s GDP is generated by services, especially tourism and travel, but agriculture is also quite successful, as it contributes about a third to GDP. The country exports less than it imports, and its leading exports are mostly coomodities like tea and coffee. Imports incluse petroleum, machinery, and metals. Subsequarntly, Kenya’s trade balance is in the red, however national debt in decreasing.

Kenya’s economic growth has been quite steadt these past few years and is still on the rise – except for a little dip in 2017, which is no real reason for concern. Gross domestic product (GDP) is forecast to almost double in 2024, and unemployment , although still above 10 percent is on the decline. Although Kenya may not be among the leading countries on the Human Development Index (HDI) yet, but these economic trends plus demographic key factors like a declining infant mortality rate and life expectancy at birth that has increased by a decade over the same time span show Kenya is definitely on the way.

SHARE OF ECONOMIC SECTORS IN THE GDP IN Kenya by 2021

This statistic shows the share of economic sectors in the gross domestic product (GDP) in Kenya from 2011 to 2021. In 2021, the share of agriculture in Kenya’s gross domestic product was 22.43 percent, industry contributed approximately 16.99 percent and the services sector contributed about 54.41 percent

GDP OF KENYA

It is the standard measure of the value added created through the production of goods and services in a country during a certain period. As such, it also measures the income earned from that production, or the total amount spent on final goods and services(less imports).

<https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=79940&printable=1#:~:text=Urbanisation%20results%20from%20a%20natural,them%20dissatisfied%20with%20rural%20living>.

<https://www.worlddata.info/africa/kenya/economy.php>