



## POPULATION

Population refers to the number of people living in a given area at a particular time. It's normally taken after the 10 years and carrying out population census helps the government to plan the social services for the population e.g. hospital, schools, roads, etc. The world's total population is all the time changing rapidly and this could be as a result of great advances in modern health and hygiene which has reduced death rates and infant mortality rate.

### POPULATION CONCEPTS

1. **Birth rate:** This is the number of live births per 1000 of the population per year.

$$B.R = \frac{\text{No. of birth} \times 1000}{\text{Total population}}$$

2. **Death rate:** This is the number of deaths per 1000 people of the population per year.

$$D.R = \frac{\text{No. of deaths} \times 1000}{\text{Total population}}$$

3. **Population distribution:** This is the way people are spread out on the earth's surface. This distribution is uneven and it changes over time. It is usual to show population distribution by means of a dot map.

4. **Population density:** This is the average number of people per sq.km

**OR**

This is the ratio between the sizes of an area to the number of people living there. It is found by dividing the total population of a place by its area. It is usually shown by a choropleth map.

$$P.D. = \frac{\text{Total population}}{\text{Total land area}}$$

5. **Life expectancy:** This is the number of years that an average person is expected to live given the social, economic and political situation of the area.

6. **Dependency ratio:** This is the ratio of the non-working population to the working population

Or

Number of unresourceful people per 1000 of resourceful people. Population explosion. This refers to the increase in population at the fast rate. It results from reduced mortality rates and high ratio of immigration into a country.

**OR**

This is the number of non-economically active people compared to the economically active people.



**NB.**

- Economically active people between 15 – 65years.
- Non- economically active are less than 15 years and more than 65 years.

$$D.R = \frac{\text{Children (0 – 4) + Elderly (65 above)}}{\text{Those of working age}} \times 100$$

7. **Fertility rate:** This is the rate at which children are born to females of child bearing age of a given population

**OR**

Number of children a female is capable of bearing throughout a productive life span.

**OR**

This is the number of children in the population of an area related to the number of women of a child bearing age.

$$F.R = \frac{\text{No. of children under 15 years}}{\text{No. of women aged 15 – 50 years}} \times 1000$$

8. **Population census:** This is the process of determining the number of people in an area at a time per head.
9. **Population growth rate:** This is the rate at which population increases over a given period of time usually one year.

$$\text{Population rate} = \frac{\text{Crude birth rate} - \text{Crude death rate}}{1000} \times 100$$

**(i) Natural increase:** This refers to the increase in total population by natural production.

**(ii) Annual growth rate:** This is when population increases by natural reproduction + migrants.

$$G.R = \frac{B.R - D.R}{1000} \times 100$$

10. **Mortality rate:** This is the number of deaths per 1000 of total population.

**(i) Infant mortality rate:** This refers to the number of children who die before age of 5 years per 1000 of total population.

**(ii) Maternal mortality rate:** This refers to the number of women who die during delivery.



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**(iii) Under population:** This refers to a state of the population of a country being

too small to exploit and develop its resources effectively.

11. **Optimum population.** This refers to the population that can be sustained by the available resources.

**OR**

It is that point of equilibrium in the economy in which the annual population growth rate is at par with annual rate of economic growth.

**Over Population.** This is a state of population where there is excess of country's population in relation to its resources at a given time.

12. **(i) Migration:** This is the movement of people (migrants) from one place to another.

**(ii) Net migration.** This is the balance between emigrants and immigrants.

13. **Ageing population.** This refers to the proportion of the total population in the age group of 64 years and above.

14. **Population structure.** It is also known as population composition. It emphasizes the age and sex of a given population. It is represented using the population pyramid.

15. **Standards of living.** It is the quality of life of a given population.

**S.O.L =  $\frac{\text{Natural resources e.g. minerals}}{\text{Total population}} \times \text{Technology}$**

**Total population**

## POPULATION GROWTH

This is the increase in the number of people over time. It is also the situation where the birthrate exceeds death rate.

$$P.G. = \frac{BR - DR}{1000} \times 100$$

## FACTORS THAT HAVE FAVOURED /LED TO THE RAPID POPULATION GROWTH



1. **Improved medical and health services**, this will reduce on death rates, improve people's health and prolong their life expectancy. Such improvements on health care have accelerated population growth.
2. **The varying social practices in nature of marriage** including acts of polygamy, early marriages which prolong the child bearing period and thus increase the rate of population growth as seen commonly in Egypt, Ethiopia, Algeria.
3. **Soil fertility and increased production.** This determines the ability of a given area to support a given size of population. Fertile areas like the Nile valley, East Africa highlands, Rhine basin, Amazon basin, Cong basin etc. support dense population while desert areas and semi-arid areas as with low food production only support sparse population.
4. **Religious factors** where by Christian church discourages family planning, abortion, have encouraged more birth. Among the Muslims, polygamy is encouraged on population growth.
5. **Cultural factors where in some continents** like Africa, Asia, people put much emphasis on producing sons who inherit their fathers' property. People may not mid giving birth to many girls because they don't bother their parents when they grow up. In some cultures, there is also a tendency of marrying widows while in some societies e.g. among the Itesots of Uganda, girls are considered as a source of wealth and it's difficult to convince them to reduce or give birth to few girls.
6. **The sex ratio**, this applies when the number of females exceed that of males and this will encourage polygamy , adultery, defilement leading to high population growth rate but when females are fewer than men, the rate of population growth will be checked.
7. **High fertility rate.** The fertility rate of women will depend on medical health care and standards of nutrition. High fertility rates are seen in areas like China, India, N.A, Nigeria hence high population growth rate.
8. **Influence of migrations**, areas which receive many immigrates experience high population growth rate e.g. Nigeria, Cairo, Johannesburg and areas people migrate from experience low population growth rate.



9. **Population growth is also influenced by the level of education** in that highly educated families have fewer children. This is due to their knowledge about child spacing i.e. the use of different family planning methods while the uneducated families are ignorant and have more children hence contributing to population growth.
10. **Historical events** e.g. places which were hit by slavery e.g. parts of West Africa have low population growth rate as compared to regions like American, Britain which were never affected by slavery hence contributing to high population growth rate.
11. **Levels of income.** Poor people usually have less ambitions and a lot of time. This explains their high birthrate compared to highly rich families that look at a big family as an obstacle for achieving their goals.
12. **The climatic factor**, very cold areas like Kigezi because people spend most of their time indoors hence increasing chances of child bearing which contributes to high population growth rate.

#### **MEASURES BEING TAKEN TO CHECK ON INCREASING POPULATION**

1. **Encouraging monogamy.** The Christians teaching advocating monogamy reduces on population growth rate because it limits the number of children produced in the family.
2. **Encouraging use of family planning methods** include use of contraceptives like pills, condoms, etc. Family planning helps in child spacing hence reducing on the number of children (birth rate).
3. **Sensitizing the masses on importance of small families.** This may be through the media like TV such as CNN, BBC, Aljazeera and other local channels, radios, newspapers, magazine, brochures etc. This is also done through giving incentives/ rewards to small families.
4. **Prolonging the education period.** This will also help to prolong the child bearing period especially among the women thereby lowering the fertility rate and birth rate e.g. in Africa, most girls complete school at the age of 24 which helps to check on population increase.
5. **Discouraging immigration and encouraging emigration.** Limiting immigration will help to reduce the number of people entering the country while



encouraging emigration will increase on the number of people going out of the country thereby checking on population increase.

6. **Encouraging forced abortion.** e.g. countries like China where people are expected to produce a maximum of 2 children.
7. **Government policy of two children or one.** This is applied in countries like China, India. This helps to reduce on the number of children produced in a particular family hence checking on rapid population increase.
8. **Increase the age of marriage.** In most countries, the age of marriage /consent is at 18 years. This helps to decrease on the child bearing period of women which reduced on the number of children produced.
9. **Inacting policies on certain cultural and traditional** practices e.g. restricting polygamy and early marriages in societies which look at producing girls as a source of wealth e.g. Itesots of N.E Uganda.
10. **Developing appropriate population redistributions** program from areas of dense population and concentration to areas of sparse population concentration.

### **EFFECTS OF RAPID POPULATION GROWTH**

#### **Positive effects**

- ✓ Provides labour force for full utilization of resources.
- ✓ Encourages development thus provision of social services.
- ✓ Widens the tax base.
- ✓ Encourages competition and innovation.
- ✓ Provides large market for both agricultural and industrial production.
- ✓ Provides man power for defense.
- ✓ It is an index/indicator of economic development e.g. it shows that the government is able to provide social services and support the large population. It also includes enterprising men and women.
- ✓ It creates a kind of people with leadership skills, entrepreneurship skills, business skills which are essential for economic development.

#### **Negative effects**

- ✓ Promotes high crime rate
- ✓ Leads to shortage of social services
- ✓ It strains existing infrastructure
- ✓ Leads to over utilization of resources e.g. land, minerals, forests etc.
- ✓ Leads to increased government expenditure.



- ✓ Leads to low saving due to high dependence ratio thus low investment and economic development.
- ✓ Promotes juvenile delinquencies e.g. drug abuse
- ✓ Leads to high rates of unemployment due to large number of people compared to the available job opportunities.
- ✓ Leads to easy spread of diseases.
- ✓ Leads to congestion and overcrowding leading to poor shortages, land fragmentation and land disputes.
- ✓ Shortage of accommodation facilities leading to development of slums and overcrowding.
- ✓ Leads to brain drain or emigration of skilled people.

### Questions

1. Examine the effects of rapid population increase on resource utilization in either India or China.
2. (a) Explain the causes of rapid population increase in Asia.  
(b) Explain the measures being taken to check on the population in China.
3. Discuss the factors that have led to the population growth of either a developed or developing country.

### POPULATION STRUCTURE

Refers to the composition of the population terms of sex and age. According to sex, we have males and females. According to age, we have three groups i.e. the young dependents (0 – 18 years), middle working people (18 retirement age), old dependents (retirement age and above).

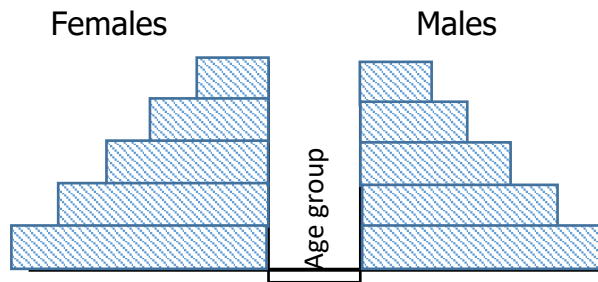
The population structure of any country can be portrayed on a graph called a population pyramid/population graph/age –sex graph.

The population structure of developing countries like Nigeria, Rwanda, Burundi, Brazil, and China. It is characterized by;

1. Large number of young dependents.
2. Few people in the working class
3. Short life expectancy
4. Few old dependents



5. More females than males.
6. The population has a triangular shape i.e.

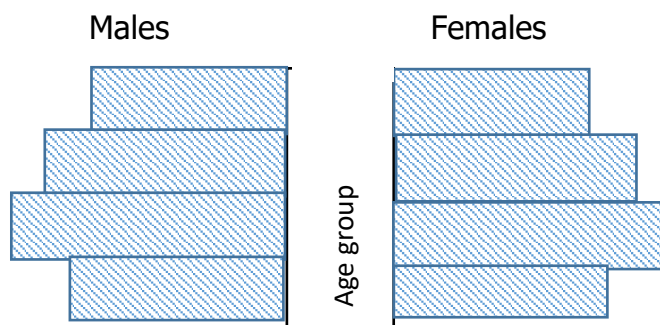


### PROBLEMS FACING POPULATION IN DEVELOPING COUNTRIES

- ✓ Shortage of high food due to the large population
- ✓ High rates of unemployment due to limited employment opportunities.
- ✓ High crime rates due to unemployment.
- ✓ Shortage of adequate social services
- ✓ Land shortage, fragmentation and disputes.
- ✓ Low standards of living and economic development
- ✓ Political instabilities.
- ✓ High dependency burden because there are few people in the working age group.
- ✓ Congestion and overcrowding leading to easy spread of diseases.
- ✓ High levels of juvenile delinquency
- ✓ More land is used for growth of substance crops than cash crops.

Population structure of developed countries like Canada, USA, UK, Germany is characterized by;

- ✓ Few young dependents
- ✓ A large number of working class
- ✓ A large number of old dependents
- ✓ Long life expectancy
- ✓ The population graph is rectangular in shape i.e.





### **PROBLEMS FACING POPULATION IN DEVELOPED COUNTRIES**

- ✓ Large number old dependents leading to low savings.
- ✓ High unemployment rates
- ✓ High crime rates
- ✓ Congestion and shortage of adequate accommodation
- ✓ High levels of juvenile delinquency
- ✓ High costs of providing social services.
- ✓ Rural depopulation as many occupy urban centres.

### **POPULATION AND RESOURCES**

According to Malthusian theory when an area has got a certain number of people who can fully utilize the available resources, it is considered to be optimum population. When the population in areas is below the optimum, it is said to be under populated. When the population exceeds the optimum it is said to be over populated.

However, optimum population is difficult to attain because of the following;

- ✓ Change in population structure
- ✓ Change in technology
- ✓ Change as new resources are developed
- ✓ Unequal distribution of resources

### **OVER POPULATION**

This is a situation where the population exceeds the available resources. It is when there are more people relative to the technology and resources available to maintain an adequate standard of living. Over populated countries include; China, India, Nigeria, Rwanda etc.

### **CONSEQUENCES /IMPACTS /EFFECTS OF OVER POPULATION**

#### **Positive effects**

1. A large population provides cheap labour force for the full utilization of resources. This has made it possible for the people to use natural resources promoting economic development. The large population has led to effective use of the country's natural resources like minerals, forests, land, and water etc. hence encouraging large scale production.
2. A large population provides adequate manpower for defense (security). Because of large population, many people can be recruited in the army for defensive purposes e.g. China has 2.3m people in the army, Rwanda has approx. 61,000 people in the army and because of this large man power in defense, other countries can't easily attack such countries.



3. Large population provides a large tax base the taxation of the people hence generating revenue for the government. The revenue obtained by the government is used to develop other sectors of the economy e.g. agriculture, transport, mining etc. leading to economic development e.g. China has a population of over 2 billion people, India has over 1.2B people, Nigeria has over 140million people while Rwanda has over 10million people providing large tax base.
4. Large population encourages competition, a spirit of hard work and innovation. Because of a large population individuals and because of competition, people tend to work harder and innovate in order to survive the agriculture sector e.g. there has been innovation of improved seed varieties, animal feeds, use of modern farming methods all aimed to increasing output to feed the large population .
5. A large population is a measure or index of development.
6. It shows that the government has done much to improve on the lives of its people by developing better medical and health facilities, recreation facilities, well development transport and communication lines etc.
7. A large population also encourages development of social services, when many people are concentrated in urban areas, the government is forced develop social services to meet the ever increasing demand by the population. Such social services include; Schools, piped water, electricity.
8. Large population has led to growth and development of urban centers compared to the rural areas leads to urban development. This is because such areas have better security, employment opportunities which attract many people leading to development of urban centers e.g. India (Delhi, Mumbai), Nigeria (Abuja, Lagos, and Onitsha), China (Beijing), and Rwanda (Kigali).

### **Negative effects.**

1. Large population leads to unemployment because the existing jobs will be inadequate for the large population. This only represents a waste of human resources contributing to increased poverty leading to high crime rate, jobs become scarce because of large population thus people without jobs will have no means of livelihood hence encouraging crime e.g. robbery, murder, human sacrifices etc.



2. A large population has led land fragmentation and shortage and disputes, many people compete for space because of this, there has been pressure on land leading to land shortage and encouraging land fragmentation i.e. continuous sub-dividing of land into increasing the smaller plots among the family members hand fragmentation has had advanced/ negative effects e.g. limits use of machines. It has led to practice poor farming methods and land disputes which is the major problem in countries like Rwanda, China, Nigeria etc.
3. A large population leads to shortage of social services or strain on the existing social services. Because of the large population, the social services initially established become less or inadequate for the population e.g. health centers, transport and recreation facilities. Because of this, there has been heavy strain on government expenditure in provision of social services.
4. A large population has also led to high dependency burden due to the large number of young people. Because of the rapid population increase, there is a large number of non- economical active group of people especially children below 18 years. The high dependence burden has led to low saving, low capital accumulation, low in sentiment and thus slow rate economic development.
5. A large population has led to congestion especially in urban areas leading to growth and development of slums and their associated problems. E.g. Drug abuse, prostitution, poor sanitation, defilement, etc.
6. A large population has further led to increase government expenditure especially on provision of the following to the population; health facilities housing, education. Due to the increased government expenditure, there has been no saving by the government leading to low standards of living of the people.
7. Has led to easy spread of contagious disease especially in urban centers. Overcrowding such areas makes the population susceptible to contagious disease e.g. TB, rod eye disease, Ebola, Chicken pox, etc. leading to death.
8. A large population promotes a problem of famine and high costs of living. The large population encourages land shortage, land fragmentation and degradation.
9. It has further encourage rural urban migration which has resulted in the decline in agricultural productivity leading to food shortages and malnutrition in the long run. The high costs of living means that the masses can` t be adequately fed, clothed, sheltered and educated because the people can` t afford.



10. A large population has also promoted juvenile delinquency as many young people move from rural areas to towns because of the benefits/advantages offered by the urban centers e.g. piped water, electricity, security, trading activities, etc. However when they reach towns they indulge in crime e.g. theft, rape, drug abuse, alcoholism, etc.
11. U disadvantages e.g. brain drain i.e. this involves the movement of highly skilled and trained man power to other countries especially developed countries for greener pasture/ better pay, space and clean environment. This is encouraged by lack of adequate employment opportunity because of the large population.
12. A large population in countries like China, India, Rwanda, Nigeria, has led to over utilization of resources leading to their depletion/exhaustion.
13. A large population has encouraged over exploitation of natural resources e.g. fisheries, land minerals, forests, etc. leading to their depletion.
14. It has promoted frequent unrest/instabilities. This is because of the discontentment among the unemployed, opposition, tribal conflicts, and land conflicts leading to political unrest.

### **UNDER POPULATION**

This is a situation where the existing population is smaller than what is necessary to maximize the available resources. It is a situation where there are fewer people than the technology and resources available to maintain an adequate standard of living.

Under pop can be seen in Botswana, Mali, Chad, Ethiopia, Somalia, Mauritania, Eritrea, and Canada.

### **EFFECTS OF UNDER POPULATION.**

#### **Positive**

- ✓ Under population encourages large scale farming and mechanization.
- ✓ It reduces dependence burden and thus high standards of living.
- ✓ More revenue will be available for the investment.
- ✓ More land will be utilized for future development
- ✓ Under population leads to low levels of unemployment, congestion and crime etc.
- ✓ It reduces incidences of juvenile delinquency.
- ✓ It reduces on the spread of diseases.
- ✓ There's limited pressure on the available resources. e.g. medicine.
- ✓ The infrastructure available is not strained e.g. schools, hospitals, roads.
- ✓ There is enough accommodation facilities provided.

#### **Negative**



- ✓ There's shortage of manpower to exploit the available resources.
- ✓ There are low levels of economic development because of the underutilized resources.
- ✓ There's small market for both agricultural and industrial products.
- ✓ It is a measure /indicator of underdevelopment.

### **POPULATION DISTRIBUTION**

It is the scatter of people /the way people are spread out across the earth's surface. It is expressed as sparse, moderate and dense.

Some areas in the world like China, Nile valley, East and Southern Nigeria, Niger delta, the Rhine basin, Rwanda, New England, largest mining and industrial centres are densely populated while some areas like Sudan, Gabon, Congo basin, Central Nigeria, Chad, Mali, Botswana, Northern Canada, etc. have sparse population.

This variation is due to both physical and human factors as discussed below;

#### **Physical factors**

1. **Relief.** The steep gradient in highland areas makes it difficult to establish settlement and transport lines and it also encourages high rates of soil erosion and landslides limiting population distribution and settlement.
2. **Highland areas in the tropics** e.g. Mt. Elgon, Rwenzori Kenyan highlands are densely populated because of their cool climate, heavy rainfall while the highland areas in the temperature regions e.g. Scandavia area sparsely populated.
3. **Drainage.** River valleys, Lake basins and swampy areas through are unstable for settlement because they are liable to periodic of floods and are breeding grounds for water borne disease vectors e.g. mosquitoes, snails etc. which transmit malaria ad bilharzia respectively e.g. the shores of L. Kyoga and Victoria but well drained areas attract dense settlement e.g. the Rhine and Nile valleys.
4. **Climate.** It influences the ability to produce food and the capacity of people in an area can be able to support. Areas with more reliable rainfall and moderate temperatures are densely populated e.g. East Africa, highlands, the Swiss plateau, Rhine valley etc.



5. **Areas with hot and dry conditions** like deserts and semi deserts are sparsely populated. The Polar regions because of the very cold conditions, long and severe winter, short summers, which limit economic activities in these area like Northern Canada, Iceland, Northern Russia etc. the hot humid climate in the equatorial areas favour the breeding of mosquitoes and tsetse flies hence scaring away people.
6. **Vegetation.** Equatorial rain forests are sparsely settled because they are impenetrable making the construction of settlement and transport networks difficult. These areas are also not suitable for animal rearing because they lack grass cover for pasture. The Savannah areas are more suitable for the pastoralists because of the presence of natural pasture for their animals and the sparse population which leaves more land available for pastures. The forested areas also harbor wild animals which are dangerous to man, his animals and crops leading to sparse population.
7. **Soils.** Soil fertility tends to encourage food production and the capacity of an area to maintain a large number of people. Areas with fertile soils like East Africa highlands, thin valley, and Niger delta have dense population while those with infertile soils like Sahel region, Turkana land, Northern Kenya, Somalia, Central Tanzania, and N.E Uganda are sparsely populated.
8. **Pests and diseases and wild animals.** The equatorial forests are sparsely populated because of the presence of tsetse flies and mosquitoes which spread sleeping sickness and malaria respectively. They also harbor dangerous wild animals like snakes, leopard, tigers etc. The animals also threaten people to settle near NPs game reserves etc.

### **Human factors/Social economic factors**

1. **Employment opportunities.** The industrial region and mining areas and urban centres are densely populated since they attract many people cause of employment opportunities, available in these areas e.g. the Ruhr region of Germany, N.E part of USA, the Rand region, New York, Nairobi, and Arusha etc.
2. **Transport.** A good transport network is vital for transportation of produce to markets and delivery of social services like education and health care. In Europe and Asia, dense population occurs along lines of transport e.g. the Rhine Valley because of cheap water transport and this leads to development of linear settlement pattern.
3. **Political environment.** A suitable political environment attracts settlement and in particular areas. The political environment in Kenya and Tanzania attracted



many refugees from the neighbouring countries like Somalia, DRC, and Sudan etc. In other words, political instability tends to force to migrate to other areas of security. Many people especially in developing country prefer to stay in urban centres and their suburbs cause of security.

4. **Historical factors.** These include slave trade, war and defensive settlements. Many parts of West and central Africa where depopulated cause of a large number of people who were sold away into slavery. Internal tribal wars also forced people to move from areas of weaker political organization. To those with strong armies for protecting e.g. in Nigeria, some people settled at the Jos plateau in order to escape from the slave traders and the Sotho people settled in the Baluti hills in order to escape from the Zulu warriors.
5. **Government policy.** The government canal also influences settlement in some areas by improving on transport, irrigation and resettlement schemes. The government can also gazette some areas for protections of the environment e.g. N.Ps, game reserves, press reserves, etc. Decentralization of industries may reduce rural-urban migration hence encouraging settlement in areas formerly sparsely populated. The distribution of social services also attracts people because they make life better and easier.
6. **Cultural belonging.** This keeps people in the same location mainly due to attachment to culture e.g. Baganda, igbo, Yoruba have a dense population in those areas.
7. **Trade and commerce.** Heavily urbanized areas with trade will attract a large population because of the endless prospectus there e.g. Cairo with 12 million people, Dubai with application of 15 million, Lagos 8million etc.
8. **The level of remoteness of an area.** Remote areas like the deep villages are sparsely populated due to lack of number of facilities like roads, electricity, piped water, hospitals hence causing migrations to urban centres like Moscow, Nairobi to enjoy better standards of living hence increasing the population there.
9. **Natural resources.** These comprise mainly of minerals which encourage mining hence attracting dense settlement e.g. Niger delta of Nigeria, oil fields of Liberia, coal mining centres of S.A, great lakes region of USA, because of such minerals, people are attracted seeking for employment. However this is not the case with most of the arid and semi-arid regions of Sahara and Karahari.

## POPULATION DISTRIBUTION IN NIGERIA



Population distribution of Nigeria can be divided into three i.e. densely populated areas, these are in the South experiencing equatorial type of climate, at the coast and a few urban areas such areas include; Kanu plains, Sokoto. Moderately populated areas found in the North of the country around Kastima and some parts of the Kanu plains in Sokoto. Areas of low population are found especially in the central part of the country with a low mining potential.

Nigeria is the most populated country in Africa whose total population is over  $\frac{1}{4}$  of Africa's population. Currently the country has approximately 160m people therefore it is referred to as the super power of Africa. The over populated areas include towns like Lagos, Kanu plains, Niger delta, Abuja etc. However the middle belt is sparsely populated.

## **FACTORS**

### **1. Climate**

The South experiences equatorial type of climate with hot temperatures and heavy rainfall which encourages agriculture e.g. growing of cocoa, palm oil, cotton and food crops like ground nuts leading to dense population.

The North experience Arid and semi-arid climate which attracts moderate population.

The central /middle belt experience very hot temperatures of desert conditions discouraging settlement and agriculture sparse population.

### **2. Drainage**

The Niger delta is covered by mangrove swamps which scare away settlement though with fertile soils leading to sparse population in some areas.

The dry areas of the Southern part are well drained hence attracting dense population. Nigeria is grained by River. Niger and its main tributary, River Benue. During the peak rainy season, the rivers tend to flood affecting the surrounding areas which will scare away settlement from these areas.

### **3. Vegetation**

Areas in the South have equatorial belt and so they are densely populated because of the grasslands which attract dense settlement. In the equatorial region there are heavy jungles/thick forests which scare away population settlement. In the middle belt with the neighborhood of Bauchi there is existence of dry Savannah which has encouraged breeding of tsetse flies hence discouraging settlement.

### **4. Soil types**



The south has fertile soils which encourage agriculture which enables growing of g.nuts, palm oil, cocoa which attract dense settlement. Areas in the North and Central part of the country have these infertile soils which encourage the growth of short grass promoting pastoralism and discouraging agriculture leading to a sparse population.

## **5. Relief**

The jobs plateau, Adamawa ranges and the highlands are sparsely populated because of the steep slopes which discourage agriculture and settlement. People are more settled in the plateau areas which are gently sloping because of easy construction of settlement and communication networks.

## **6. Historical factors**

Nigeria is inhabited by 3 major ethnic groups like the Igbo, the Yoruba in the South East and East Muslim Hausa in the North who are polygamous with high birth rates and have also attracted dense settlement. The western part of Nigeria is sparsely populated due to the slave raiders from the North and South.

## **7. Trade and Commerce**

Urban areas experience high population growth rates e.g. Abuja, Lagos, Port Harcourt, Onugu, Onitsha etc. These areas have better social services, better infrastructure, better employment opportunities, better trade and commerce which attract large population through rural-urban migration.

## **8. Mineral resources**

The Southern tip of the country especially around the Eastern part of the Niger delta has minerals e.g. coal, limestone, natural gas and oil fields. This called for commercial mining which attracted dense population because of employment opportunities, better social services. The presence of oil and refineries around Port Harcourt also attracted dense population.

## **9. Industrialization**

The Southern parts and some other parts of Nigeria like Kanu, Sokoto, Abuja, Lagos, Port Harcourt have developed into major independence centres with industries like cement industries, food processing, textiles, petro-chemical industries etc. which have attracted a dense population through, rural-urban migration because of better employment opportunities.

## **10. Government policy**

The government of Nigeria has influenced population distribution in that it has restricted settlement in some areas by gazetting land for rational parts and forests thus low population in such areas. The government has established industries in



areas like Benin, Katsna, Port Harcourt, and Lagos so as to provide employment opportunities to the people thus attracting dense settlement.

### **11. Political stability**

The establishment of extensive and powerful state during the 16<sup>th</sup> century to 18<sup>th</sup> century in different regions especially in the South East at Lagos, Port Harcourt provided stable conditions favouring economic development leading to dense settlement in such areas. On the other hand, insecurity in the middle belt caused by slave raids and also some parts of the Kwara states has led to low population in such areas.

## **POPULATION DISTRIBUTION IN EGYPT**

In Egypt, this is in the Nile basin and the oases areas that are densely populated and this is due to the fertile soils that promote agriculture. Over 90% of the total population occupies the Nile Delta and the rest of the country is sparsely populated due to the hot conditions brought by Sahara desert. Egypt is among the North African countries is the most barren i.e. just  $\frac{1}{4}$  of the land can be used for agriculture by irrigation. Currently, approximately 4% of the total land area is used for agriculture and settlement supporting over 50m people.

The country nevertheless is the 3<sup>rd</sup> most industrialized country in Africa and the largest receiver of aid from the world bank therefore its distribution is largely centred and water bodies like R.Nile, oases in Kongoi and in urban centres like Cairo, Asyut etc.

### **FACTORS INFLUENCING POPULATION DISTRIBUTION IN EGYPT**

1. **The nature of soils** e.g. the fertile soils of the Nile valley and Delta region has made farming possible especially rice growing, wheat and cotton attracting dense settlement. Other areas like the western parts of the country comprises of sandy soils which are barren therefore discouraging settlement leading to low population density.
2. **Drainage.** The presence of R. Nile and oases in Kongai which provide water used for domestic and industrial use as well irrigation for growing of rice, cotton and wheat has attracted dense settlement on the other hand, the western part of the country with limited surface water has led to sparse population.



3. **Relief /Topography.** Most parts of Egypt are hilly, rugged however the low lands and the valleys especially the Nile valley is densely population because of easy construction of settlements and transport routes as well as encouraging economic activities like agriculture, industry, mining etc.
4. **Climate.** Egypt experiences drought for over 8 months in a year. However areas bordering the Mediterranean Sea experience Mediterranean climate and also near the oases and River Nile e.g. around Kongai have population densities because cultivation of crops is possible. On the other hand, the Eastern desert is sparsely populated due to the low rainfall received of less than 2mm per annual which is unreliable making arable farming impossible.
5. **Industrial development.** The establishment of industries e.g. food processing industries, textile industry in towns like Cairo, Elgiza, Tanta etc. have attracted many immigrants especially the youth of the rural areas of the country like El-Kharga, Bawitrin in search for employment opportunities leading to increase in population within the towns.
6. **Accessibility.** The cheap water transport based on R.Nile eased movement of people and goods to the near towns around the Delta region e.g. Elgiza, Cairo, and Alexandria etc. The presence of the Mediterranean Sea has eased movement to Europe and Asia and for a long time Cairo has been used as a meeting place for Caravans crossing from North Africa to Asia. The modern railway and road network and air routes around the cities and towns have all attracted dense settlement. However, the inaccessible deserts have remained unsettled.
7. **Mining activities** especially mining of iron ore around the Aswan high dam plus other minerals like phosphate and manganese have also attracted dense settlement in such areas because of the employment opportunities in the mines, better trade, modern social services like roads, hospitals, schools etc. attracting a number of youths from other rural districts leading to high population.
8. **Prevailing trade and commerce in towns** like Suez, Port Said, Cairo, and Alexandria etc. have also attracted dense settlement because of the available market and the modern transport network. On the other hand, the western part of the country has remained unsettled due to the remoteness and inaccessibility.
9. **Government policy.** The Egyptian government has established industries e.g. the chemical industries, food processing, fertilizers manufacture around Port Said, Alexandria etc. in order to promote employment opportunities to the youth attracting dense settlement. Emphasis has also been put on the Nile Delta and Nile Valley, the construction of Aswan highland the Suez Canal and other



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economic infrastructure have all attracted settlement therefore areas without economic development are not settled in.

10. **Historical factors.** e.g. Cairo and Alexandria have been for the long time centres of dense population settlement since they used to act as meeting for Camel Caravans crossing from North Africa into Asia thus becoming meeting grounds for many people all over the world especially middle East, Asia and Africa leading to high population densities.

### **POPULATION DISTRIBUTION IN KENYA**

Kenya's population is evenly distributed and can be categorized into three i.e. Kikuyu land, Nyeri, Embu, Kiambu around Lake Victoria region like Busia, Kericho, Nyanza and Nandi region, the coastal region stretching from Mombasa to Malindi and all the major cities and towns like Nairobi, Nakuru, Eldoret etc.

Areas of moderate population density include areas around Mt. Elgon, Kitale, Nakuru, Naivasha, Kissi, Machakos and Kituyu. Areas of low population density include the Nyika plateau, North and Eastern Kenya (Masabiti), Garisa and the Western parts of the River valley.

### **FACTORS INFLUENCING POPULATION DISTRIBUTION IN KENYA**

1. **Climate**, areas which receive heavy rainfall of over 1000 – 1500mm have attracted dense settlement e.g. Kenya highlands, Lake Victoria region like Busia, Kisumu, encouraging farming i.e. growing of beans, coffee, sugarcane.

Areas which receive low rainfall distribution i.e. Northern and North East Kenya have led to low population distribution e.g. Turkana land.

2. **Soils**, fertile soils around Kenya highlands which support the growing of crops like bananas, maize have attracted dense settlement especially the Kikuyu, Kamba, Kissi, Embu and the Meru cultivators.



The Northern parts of Kenya with infertile soils is sparse population is mainly occupied by nomadic pastoralists e.g. the Turkanas.

3. **Relief**, areas with steep slopes and mountains and rugged landscape have been avoided for settlement because they hinder the construction of communication networks and other economic activities e.g. agriculture i.e. the escarpments of the Eastern area of the River Valley areas around Mt. Kenya like Cherangani hills, Bawiti have all discouraged settlements. Other areas include Aberdare rangers, Mau escarpments etc. However the plains in Kenya e.g. Malindi, Wachandima plains etc. are densely populated because of the gentle slopes.
4. **Altitude**, Altitude has influenced population distribution in Kenya in that highland areas which are above 200m sea level especially around Mt. Kenya in areas like Nyamberia, Londiani etc. have limited settlements thus the low population. This is because of very low temperatures and several soil erosion etc. on the other hand, low lying areas and plateau regions tend to attract a large number of people hence dense population e.g. Mombosa, Nakuru, Nyanza, Kisumu etc.

The existence of minerals like soda ash at Magadishu, salt, limestone at Mombasa (Bamburi), copper Embu, gold and silver near Kisumu and Kakamega have attracted large number of people in search for employment opportunities within in the mines thus dense settlement in such areas. Areas without mineral potential e.g. around Marsabiti, Wajir, etc. have long population.

5. **Vegetation**, areas which are covered by grasslands are densely populated because it was easy to clear for settlement e.g. areas around Embu, Thika, Nyeri, Nakuru, Nairobi, Meru etc. areas which are covered by equatorial forests especially highlands like Lamu, Gembe hills, Simambaya have a low population since the thick vegetation is associated with tsetse flies. The swampy areas e.g. along Lake Victoria shores and the coastal areas also have low population.
6. **Drainage**, areas that are well drained with water resource i.e. which are not water logged e.g. Embu, Nairobi, Nakuru, Kericho etc. are densely populated because agriculture is possible in such areas. On the other hand areas with limited surface water like the arid areas e.g. Turkana land as well as water logged areas especially the coastal plains, the Boji plains have discouraged settlement thus low population.

The presence of industries in areas like Nairobi, Kisumu, Eldoret, Mombasa, etc. e.g. food processing industry, textile industry, cement industry etc. have attracted a large number of people in search for employment opportunities thus



encouraging rural-urban migration on the other hand, the low population in the N.E and Western Kenya and Turkana land, Marsabiti is attributed to low industrial development.

7. **Infrastructure development**, areas with development transport network e.g. roads, railways, electricity, piped water especially in town and ports like Nairobi, Kisumu, Malindi, Mombasa, Malaba are densely populated since people tend to migrate from the rural areas to towns for improved standards of living whereas areas that are accessible e.g. Turkana land and N.W Kenya have low populations.

The government of Kenya has also influenced population distribution in that it has established irrigation schemes in formerly sparsely populated areas e.g. Ahero, Mwea-tebere etc. This has attracted human settlement in such areas in search for employment opportunities e.g. areas around Nakuru, Nairobi, Kakamega, Kisumu etc. On the other hand, the government has restricted settlement in some areas and gazette them as N.Ps and game reserves e.g. Tsavo, Marsabiti, Masai, Mara, Ambosell etc. thus the low population.

8. Historical factors. In the pre-colonial periods, the British colonial government divided Kenya into White lands and African lands. The White lands were mainly fertile lands around Kenya high lands which became settlements for Europeans and later developed into trading and administration centres e.g. Eldoret, Nairobi, Embu and the coastal parts like Mombasa, Malindi, Lamu hence becoming densely populated. Some areas like Meru, Garissa became densely populated because they were settlement reserves for Africans. On the other hand, the dry areas like Turkana land, Marsabiti, have remained with low population because they were avoided in the pre-colonial periods.

## **POPULATION DISTRIBUTION IN CANADA**

Canada is the 2<sup>nd</sup> largest nation in the world yet it is less than 30m people. Slightly, over 75% of the population is concentrated on the land of about 320km. These people live predominately around the Great lakes region especially around Quebec, Ontario and St. Lawrence Seaway. Moderately populated areas are the Western coast, the Prairies and the Maritime province. A small population lives around the Vancouver areas in the west while the rest of the country is almost inhabited with much of the land area in the North being covered with snow nearly the whole year.

### **FACTORS INFLUENCING POPULATION – DISTRIBUTION IN CANADA**

#### **1. Climate**

Areas to the North experience Tundra condition and are covered by snow hence sparsely populated. Areas to the south experience cool climate of temperature type



encouraging settlement hence dense population. Cool and dump climate in the Maritime province encourages moderate population.

## **2. Soils**

Areas in the North have thin soils subjected to physical weathering discouraging agriculture thus are sparsely settled. In the Arctic region the soil is permanently frozen discouraging settlement and agriculture. The South has fertile soils encouraging agriculture and attracting dense settlement.

## **3. Relief**

The Western part of the country has Rocky Mountains which have steep slopes discouraging settlement leading to sparse population. The plains and plateau around the great lakes regions are suitable for settlement hence dense population.

## **4. Trade and commerce**

In areas like Ontario, Winnipeg, Montrael, Kingstone, Ottawa, Edmonton etc. have attracted dense settlement because of employment opportunities, trade, better social services, and social amenities etc. The Eskimos and Indian tribes who depend on hunting, fishing, discourage settlement in the North and Western parts of Canada because of absence of employment opportunities.

## **5. Accessibility**

Proximity of the South to USA has led to dense settlement. This has encouraged industrial development in Toronto, Kingstone, Montreal, Ontario, due to the presence of ready market in the USA. These industries provide employment opportunities leading to dense population.

## **6. Mineral resources**

Mines are found at Kingstone, Montreal, and Winnipeg with minerals like crude oil, phosphate, and iron ore which support large scale commercial mining attracting a number of people for employment opportunities leading to dense population. The absence of minerals in the North has discouraged population settlement hence low population.

Population distribution of Canada is also influenced by the social, economic and cultural adv. in that the Eastern Sea Board especially around Quebec where the fast to be settled by the immigration leading to dense population. This is because of the social amenities like entrepreneurship, trade etc. Areas around Quebec and Ontario are being occupied by Catholics with high birth rates leading to dense population.

## **7. Industrialization**



Areas around the great lakes region in the South offer potential sites for industrial development of their proximity to USA which attract dense settlements leading to high population.

NB. Because of the sparse population in the North and existence of the vast resources the country has not obtained optimum population necessary to exploit the various resources.

### **GUIDING QUESTIONS**

1. Account for the varying population densities in either Nigeria or Canada.
2. To what extent have physical factors influence population distribution of either Egypt or China?
3. The pattern of population distribution of Kenya is large attributed to physical factors." Discuss.