

**What is population structure?**

“Population structure is the composition of a given population, which is broken down into categories such as age and gender. Population structure can be used to categorise populations into many subsections and demonstrate population demographics on a local, regional or national scale.” – <https://goo.gl/lpno5t>

**Population Indicators**

There are a number of population indicators which tell a person about the demographics of a specific country. You do not need to know them all. Complete the list below by filling in the definitions for the population indicators listed below:

- Population size – \_\_\_\_\_  
\_\_\_\_\_
- Percentage of the population 15 years or younger – \_\_\_\_\_  
\_\_\_\_\_
- Percentage of the population 60 years or older – \_\_\_\_\_  
\_\_\_\_\_
- Total fertility – \_\_\_\_\_  
\_\_\_\_\_
- Life expectancy – \_\_\_\_\_  
\_\_\_\_\_
- Infant mortality rate – \_\_\_\_\_  
\_\_\_\_\_
- Percentage of obese adults ages 20 years or over – \_\_\_\_\_  
\_\_\_\_\_
- Number of people living with HIV – \_\_\_\_\_  
\_\_\_\_\_
- Population density – \_\_\_\_\_  
\_\_\_\_\_
- Urban population – \_\_\_\_\_  
\_\_\_\_\_
- Annual urban growth rate – \_\_\_\_\_  
\_\_\_\_\_
- Annual rural growth rate – \_\_\_\_\_  
\_\_\_\_\_



**POPULATION PYRAMIDS:  
POWERFUL PREDICTORS  
OF THE FUTURE**



<https://goo.gl/9KAIWc>

- Net migration rate – \_\_\_\_\_  
\_\_\_\_\_
- Birth rate – \_\_\_\_\_  
\_\_\_\_\_
- Death rate – \_\_\_\_\_  
\_\_\_\_\_
- Adult literacy rate – \_\_\_\_\_  
\_\_\_\_\_
- Age dependency ratio – \_\_\_\_\_  
\_\_\_\_\_
- Population growth – \_\_\_\_\_  
\_\_\_\_\_
- Natural increase – \_\_\_\_\_  
\_\_\_\_\_
- Age structure – \_\_\_\_\_  
\_\_\_\_\_
- GDP per capita – \_\_\_\_\_  
\_\_\_\_\_

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URBANIZATION AND THE  
FUTURE OF CITIES



<https://goo.gl/TcnMj0>

**Factors affecting population indicators**

Population indicators are generally affected by the development of a country. In a country like South Africa, the birth rates and death rates are much higher in rural areas than what they are in urban areas; but when South Africa is compared to another developing country such as Mozambique the birth rates and death rates are significantly lower; similarly, when compared to a developed country such as Japan the birth rates and death rates are significantly higher.

There are many other factors that affect population indicators. Below is a list of some of these factors:

- |                          |                           |                                 |
|--------------------------|---------------------------|---------------------------------|
| • Status of women        | • Migration               | • Industrialisation             |
| • Political systems      | • Medical care            | • Urbanisation                  |
| • Literacy               | • Access to contraception | • Quality of life               |
| • Education              | • Culture and tradition   | • War and conflict              |
| • Job opportunities      | • Religion                | • Diet (nutrition/malnutrition) |
| • Marrying age           | • Polygamy                | • Disease                       |
| • Natural disasters      | • Access to medical care  | • Economic conditions           |
| • Hygiene and sanitation | • Famine                  |                                 |

GRADE 10	TERM 3	<b>SOCIAL SCIENCES (GEOGRAPHY) UNIT 2: POPULATION STRUCTURE</b>
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### Discussion Activity

In groups of no more than 4 people discuss how the factors above could impact population indicators. You should discuss no less than 5 different factors.

### Population Structure

The structure of a population refers to the age and sex of a population. This means that when looking at the structure of a population you are looking at different genders in different age groups. The most common way of showing the population structure of a country is by using a population pyramid.

### AGE STRUCTURE

Populations can be divided into THREE different age groups:

#### Youthful age group

- 15 years or younger.
- Economically dependent on the economically active group.
- In developing countries, 40 – 49% of the total population is under 15 years old.
- In developed countries less than 30% of the total population are under 15 years old.

#### Adult age group

- 16 – 64 years.
- More economically productive.
- Supports both old and young people.
- In developed countries this is the largest proportion of the population.

#### Ageing group

- 65 years and older.
- Economically unproductive – most are retired.
- Have special requirements – frail care, nursing and so forth
- In developing countries, the increase in the number of old people is slow.
- In developed countries this group is increasing rapidly.

The dependency ratio refers to the number of people who are dependent on the economically active group of the population. It is calculated using the following equation:

$$\text{Dependency ratio} = \frac{\# \text{ of youthful people} + \# \text{ of aged people}}{\text{Adult population}} \times 100$$

The figure below shows how population structure could be depicted.

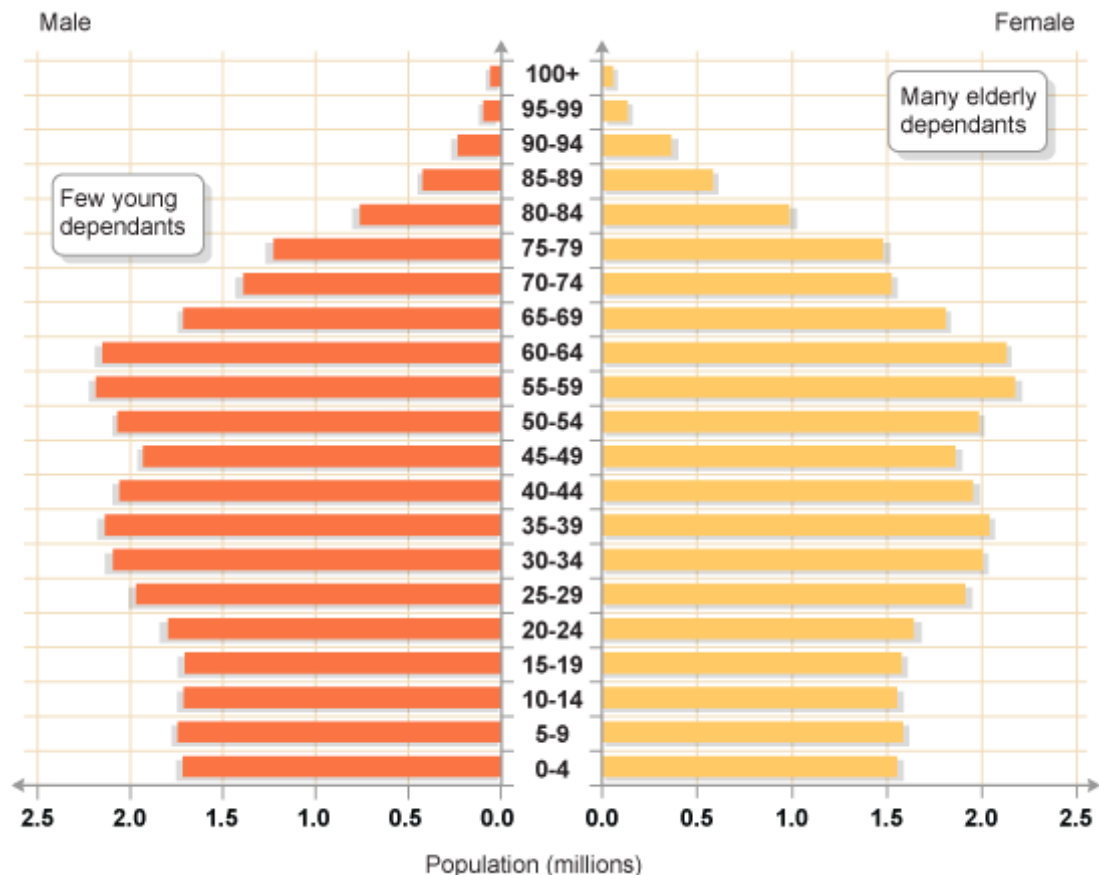


Figure 1: Population Structure (<http://goo.gl/pfxlTi>)

## THE SEX RATIO

**The sex ratio is expressed at the number of males per 100 females.**

- A sex ratio of 100 means that there are many males as there are females.
- A sex ratio of a country normally lies between 94 and 102. This means that there are 94 – 102 males per 100 females.
- Sex ratios below 90 and above 115 indicate an imbalance in the sex ratio of a population.

**What is the significance of the sex ratio of a country?**

- Marriage
  - An even sex ratio favours monogamy.
  - An uneven sex ratio can lead to polygamy...this can lead to an increase in sexually transmitted diseases.
- Immigration policies
  - Generally, males migrate first.
- Economic considerations
  - The sex ratio determines the magnitude of the labour force in many countries.
  - In developing countries where males tend to migrate to the urban areas, women are left to tend the land...this resulted in the degradation of farming lands.

- Social problems
  - A predominance of males may lead to:
    - Militant gangs
    - Rape
    - Drugs and alcohol abuse
    - Loneliness
    - Prostitution

What influences the sex ratio of a country?

- Male births may outnumber female births.
- Migration – males tend to migrate in search of work first
- Wars – men are sent to fight.
- Life expectancy is higher for women.
- Men have a higher status in many countries.

Generally, developing countries have a larger number of males than females.

### Population Pyramids

A population pyramid is a special type of bar graph that shows the age and sex structure of a population.

The horizontal base line is divided in half. The left side shows the percentage of males in the population, whereas the right side shows the percentage of females in a population.

The vertical axis shows the age of the population - usually in 5-year age groups.

Each “bar” on a population pyramid is known as a cohort. It shows the percentage of males/females in each age group.

Population pyramids have different shapes. Each shape tells us a story about a country's population.

1. Rapid growth or expanding population
  - High BR and High DR
  - High IMR
  - Low LE
  - Fewer old people
  - Female LE Lower
  - E.g. Kenya
2. Slow growth gradually expanding population
  - Decrease in DR and DR
  - $BR > DR$
  - More middle aged people
  - Females generally live longer than males
  - E.g. USA



3. Stable, static population
  - BR and DR both declining
  - Constant number of people in each age group
  - Longer LE
  - Females live longer than males
  - E.g. Sweden
4. Declining, diminishing population
  - BR and DR low
  - DR can exceed BR
  - More middle aged and older people
  - Long LE
  - Population is shrinking over time
  - E.g. Austria

**Let's have a closer look:**

- World War I – more than 1 million men born before 1900 were killed
- Women have a longer life expectancy than men
- There is a decreased number of people in the 20 year age group and the 50 year age group due to decreased birth rates during the World Wars
- Deficits of births when the decreased number of people born during World War I reached the age of fertility
- Baby booms occurred after both World Wars

**Important dates to remember:**

World War I	1914 – 1918
World War II	1939 – 1945
Great Depression	1929 – 1939
Sharpeville	1960
Soweto Massacre	1976
State of emergency in South Africa	1984
Unbanning of political parties	1989
Democratic elections	1994

**General pointers on population pyramids:**

- The shape of the population pyramid depicts the level of development in a country. A triangle shape is associated with a developing country and an oblong shape with a developed country
- A population pyramid with a broad base shows a country with a youthful population and a high birth rate
- A population pyramid with a narrow base and a broader middle shows a country with good birth control resulting in less young people and more middle aged people
- The shape of a country's population pyramid will change with time
- You are able to calculate a country's dependency ratio using a population pyramid.

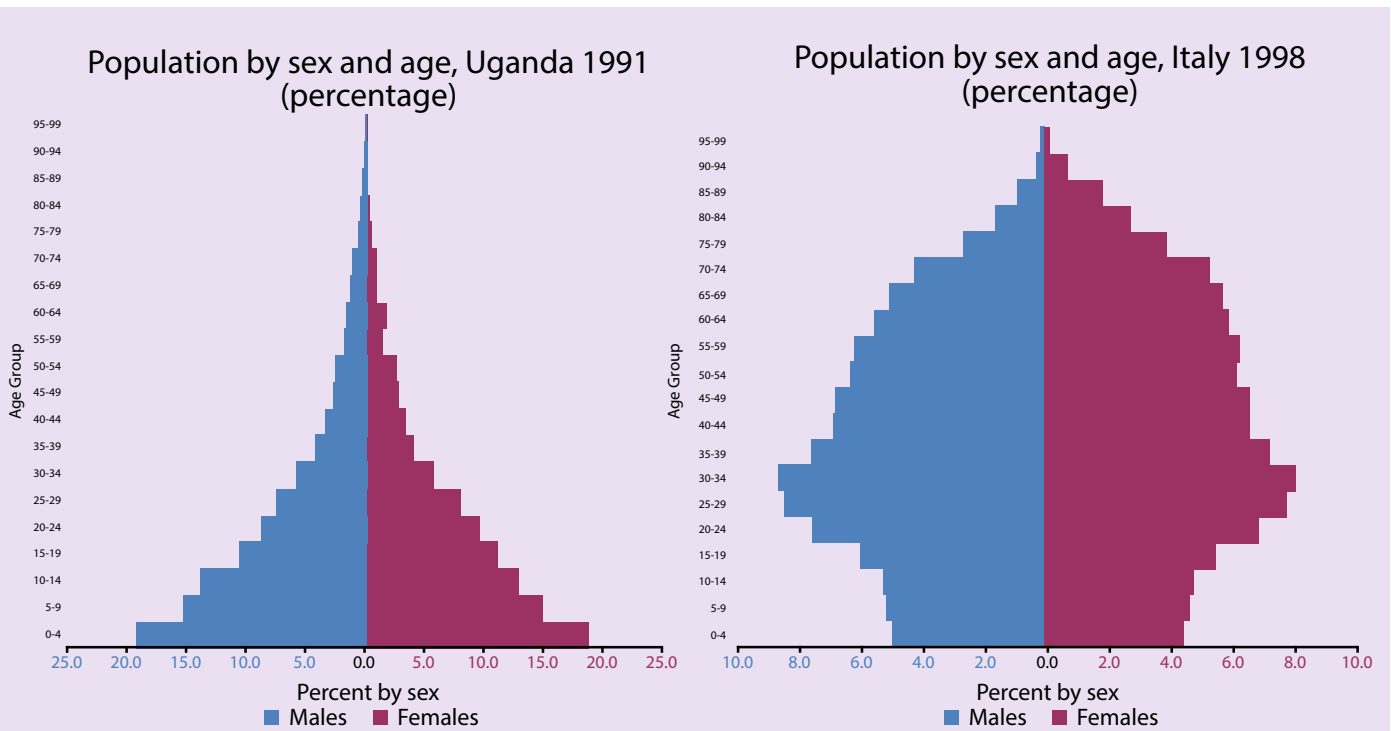


Figure 2: Population pyramids for Uganda and Italy (<http://goo.gl/22f8p5>)

## Population Pyramids: Kenya, United States and Italy, 1995

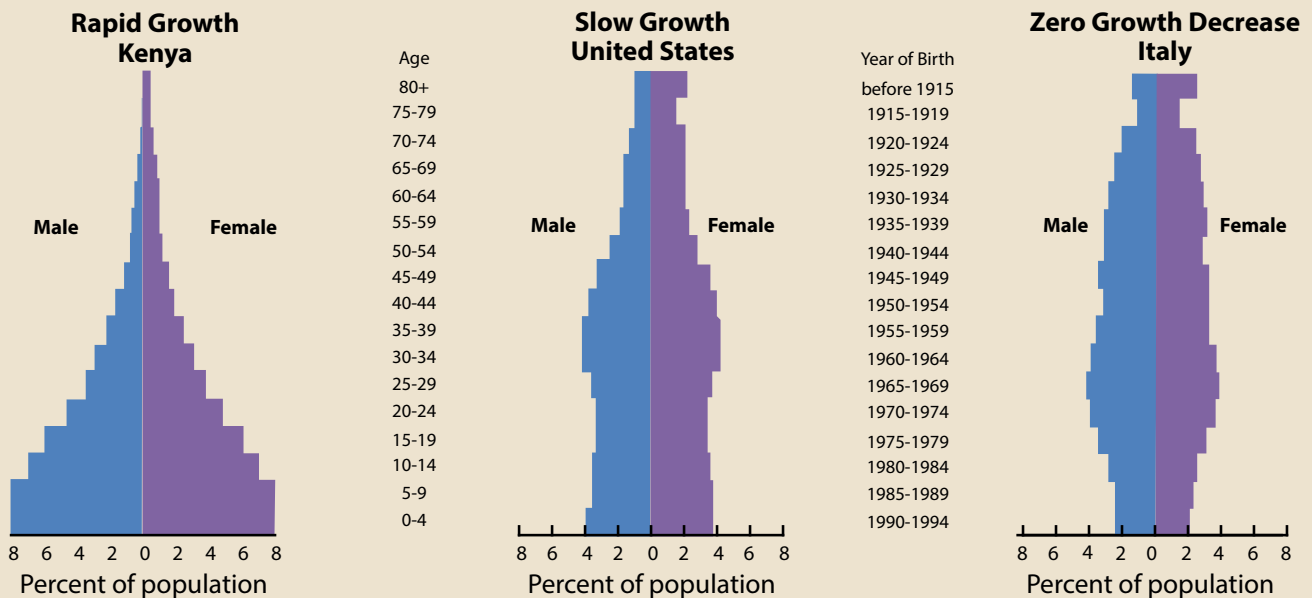


Figure 3: Population pyramids showing growth. (<http://goo.gl/Dj5yYT> )