

Unit 2 People and the Planet

Population Dynamics

1. Use the glossary and chapter 9 in your text book to define the words below.

A. Demographer = A person who studies population

B. Population= The total number of people living in a place/city/country

C. Overpopulated = When the number of people is too big for the size of the area or available resources e.g. Food

D. Exponential growth = when the population grows by doubling rapidly

E. Birth rate = The number of babies born for every 100 people in one year.

f. Death Rate = The number of people who die for every 1000 people in one year.

g. Natural Increase = When the population grows because the BR is higher than the DR.

h. Population increase = When the population increase naturally or by migration.

i. Population decline =When the population gets smaller.

J. Population balance = When the population stays the same/is in balance.

K. Replacement level = The number of births needed (2.1) to keep the population stable.

L. Demographic Transition model = A model that shows changes in BR, DR and total pop as a country develops.

m. Fertility rate =The average number of children born to a women in her lifetime.

n. Migration =When a person moves home from one place to another.

O. Population Pyramid = Shows the number of men and women in each age group for a country.

2. World Population growth

Year	World population
1804	1 Billion
1927	2 Billion
1960	3 Billion
1974	4 Billion
1987	5 Billion
1999	6 Billion
2011	7 Billion
2027 (est)	8 Billion
2043 (est)	9 Billion

Use the table above to describe world population growth between 1804 and 2043 ((real and estimated)_____

The population took 123 years to double from 1 Billion in 1804 to 2 billion in 1927. It then took 47 years to double to 4 Billion. The next doubling is estimated to take 53 years. This shows population increase sped up dramatically but may be levelling out. In the 1960s nearly every country had an expanding population but from 1971 the number of babies born in developed countries dropped. Many of these countries such as Sweden and Italy now have falling populations. Other countries such as China and India, introduced controls to limit their populations. The number of babies being born in developing countries overall is therefore beginning to level off. The world population passed 6 Billion in 1998 and could grow to 9 billion by 2043.

3. Future projections for population growth.

The United Nations has 3 projections (estimates) for future world population growth. Fill in the projected world pop for 2050 and add an explanation.

1. High 9.6 billion. Based on women having .5 (half) a child more each on average. This means BR are staying high and increasing in some areas. BR may be high due to practical reasons e.g. Lack of contraception or for cultural reasons e.g. Catholicism promotes large families. The population of developing countries will increase from 5.9 billion (2013) to 8.2 billion (2050). Even though the rate of population growth has slowed fertility rates (especially in Africa where in 15 countries it has risen by 5%) in developing countries are still very high.

2. Medium 8.9 Billion people. A combination of the factors discussed above and below.

3. Low 7.4 billion people. Based on women having .5 (half) a child less each. This means BR falling due to practical reasons e.g. Increasing availability of contra-

4. Economic development and population structure. Tanzania a developing country with a youthful population.

GDP= \$526

BR = 42

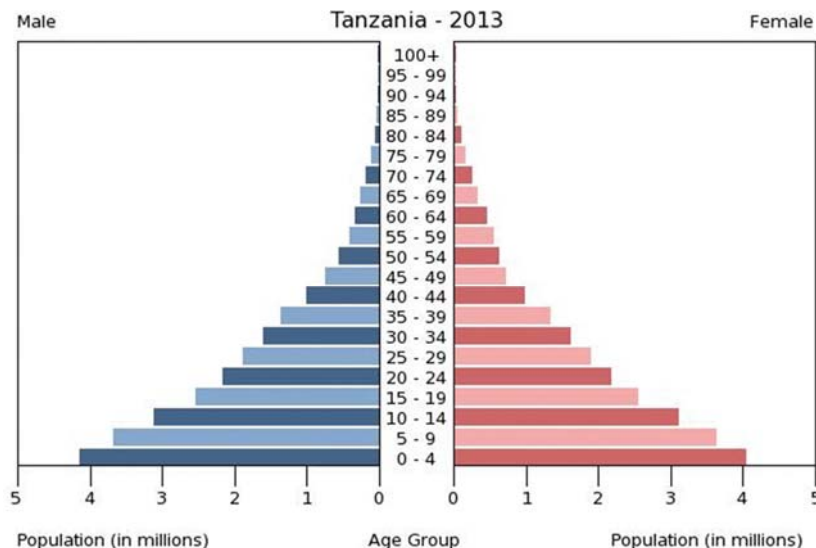
DR= 12

Fertility= 5

Total population = 43 Million people

Population pyramid—Label the population pyramid below to show the characteristics of Tanzania's population structure

Wide base = High BR Very few Older people Low Life expectancy



5. Reasons for a youthful pop in Tanzania

A. Economic Growth Tanzania is an LEDC and 2/3 of people live in the countryside and work in agriculture. People have large families so that children can help support the family by working on the farm, collecting water, housework and child care. In cities children may contribute to the household income by working in the informal sector. E.g. selling small items (chewing gum/tissues) or working as shoe shiners.

B. Demographic Factors The birth rate is high for several reasons.

1. Lack of availability of contraception- especially in rural areas.

2. Tradition—favours large family sizes.

3. Low life expectancy- as 1/10 die before 5 years old people have more children to ensure some survive into adulthood.

4. As pensions aren't available children are needed to look after their parents in old age.

C. Migration and Conflict People of working age may migrate from the countryside to find work in the cities (rural urban migration) contributing to urbanisation. Tanzania is unaffected by conflict.

6. Challenges of a youthful population _____

a. The cost of providing health care/clinics eg childhood vaccinations for babies

b. The cost of providing schooling.

c. Children are dependants and don't (usually) contribute formally to the economy.

d. Providing suitable housing.

e. High unemployment for young people.

7. Opportunities of a youthful population _____ Potentially a large workforce to work and help economic development.

8. Economic development and population structure. The UK is a developed country with an ageing population.

GDP= \$39 000

BR = 12

DR= 9

Fertility= 1.9

Population Change = Decrease

Total population = 62 Million

Population pyramid—Label the population pyramid on the next page to show the characteristics of the UK population structure

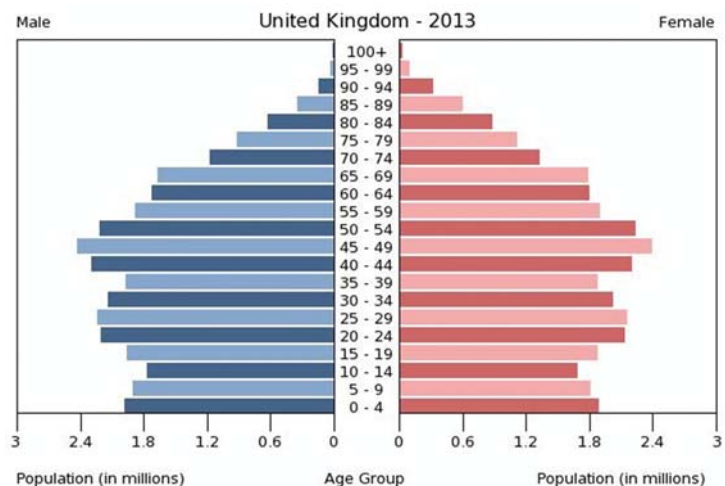
9. UK population pyramid

High life expectancy

Large older/ageing population/
Dependant population

Large middle aged population

Low birth rate but increasing in
the last 10 years



10. Reasons for a ageing population in the UK

A. Economic Growth As the UK is a developed country children are an economic cost. Parents consider the cost of raising children (childcare, clothing, housing, education) when deciding how many children to have. As the UK is an MEDC there is good health care so people have a long life expectancy. Parents do not need to have extra children to ensure some survive into adulthood. Contraception is easily available and free in the UK. This allows people to plan (family planning) how many children they have.

B. Demographic Factors

1As more women attend university and have careers they delay the having their first child. As women have their first child later family size tends to be smaller. Contraception is culturally acceptable and widely used.

C. Migration and Conflict

Baby boomers. People born after WW2 when men returned from the war are now retired causing a larger retired/ageing population. Migrants to the UK are often

11. Challenges of an ageing population. Retired people are given state pensions. These are paid by people who are working. If there are lots of retired people and less working people it is difficult to have enough money to pay pensions. Older people do not pay taxes if they are retired. This means they don't contribute to the economy. This means they are dependants rather than economically active. Older people have particular needs. These can be a cost to the state/government. These needs include specialist housing e.g.. Bungalows/sheltered housing/retirement homes/nursing homes. Health care for example joint (knee/hip) replacements or hearing aids/eye operations.

7. Opportunities of an ageing population. They can look after grandchildren/childcare whilst parents work. Voluntary work e.g. reading with children in primary schools or in charity schools.

12. Anti natalist population policies—China.

Countries introduce anti natalist population policies to manage their populations due to pressure on resources (energy and food) and overcrowding (especially in cities) .

A. Reasons for 1 child policy. 1959-1963. Between 1949 and 1958n the government encouraged population growth to increase the size of the workforce. The birth rate was 5.8 per 1000. However the population grew more quickly than food, water and energy supply. Between 1959 and 1963 there was a famine and the government decided to control the size of the population by supplying contraceptives, encouraging late marriage and low birth rates.

B. The one child policy

China total population = 1.3 Billion

GNI per person = US\$ 4 940

Birth Rate = 12.31 per 1000

Death Rate = Natural Increase = 7.17 per 1000

Date 1 Child policy introduced = 1978

Who does the policy apply to? = Urban population

Incentives for having only 1 child =

1. Extra pension during retirement

2. A certificate

Penalties for having more than 1 child

1. Fines

2. State officials loose their job

Describe Chinas fertility rate using the graph on page 160.

The fertility rate was high in 1960– the average number of births per women was 5.5. it increased slightly and peaked in 1970. It dropped steadily to 2.5 in 1980 and has continued to drop to 2 in 2010.

Positive impacts of the policy

The birth rate has dropped– although it was dropping before the policy wa introduced in 1978.

People in rural areas are still allowed to have more than 1 child to help them with farm work.

Negative Impacts of the policy

1. There is a gender imbalance. Female babies are often aborted (sex selective abortion) or abandoned at birth. Many girls are left in orphanages. Many adults are single as there are not enough women to marry. 1 in 10 men will be unable to marry.

2. There could be a shortage of workers for the rapidly growing economy. The number of people starting work between the ages of 20 and 24 will drop by half from 2010 to 2020.

3. Babies born under the 1 child policy will have 2 parents and 4 grand papernts to look after as they reach old age.

4. The fertility rate had already fallen to 2.7 before the policy was introduced.

Evaluation of the policy

The population of China has stabilised but it has created serious problems including the gender imbalance and few young people to care for the elderly. The population may have stabilised without the policy. Is it right for the government to control peoples fertility?

13. Singapore a country with a pro natalist policy

Singapore total population = 5 Million

GNI per person = US \$ 40 099

Birth Rate = 7.72 per 1000

Death Rate = Natural Increase = 3.4 per 1000

Natural increase = 4.31 per 1000

Describe the fertility rate for Singapore using the graph on page 159.

The fertility rate was at a high of 2.1 in 1900. It has fluctuated since and is predicted to fall steadily to 1.25 in 2040.

Reasons why Singapore is introducing a pro natalist policy.

The number of people over 65 is estimated to triple to 900 000 by 2030. This will leave a smaller working population. There will be less people paying tax and contributing to the economy. Older people are dependents and not economically active. Older people have specific health care needs and may put a strain on health services.

What is the policy

Name of policy = Marraige and Planned Parenthood Package

Year introduced = 2008

How it encourages people to have 2 children.

1. Helping people find partners (husband/wife) by holding social interaction opportunities e. Government sponsored speed dating.
2. Providing housing schemes to help couples set up home so that they can start a family.
3. Offering economic incentives. The baby bonus scheme. Couples are given a \$20 000 can bonus per child. They get \$53 000 in infant care and child subsidies. 4 months paid maternity leave. 6 days per child paid child care each year.

14. Migration Policy. Russia an example of an open door policy.

A. Reasons for the policy.

Russia has a decreasing population due to :-

a. High death rate = Due to alcoholism

b. Low Birth Rate .

c. High abortion rate.

d. Out migration = young people moving to western Europe for better job opportunities- economic migrants.

B. How the policy works.

(i) Cash Baby bonus = £7000 on a Childs third birthday. To encourage a higher birth rate.

(ii) Encourage immigration from Russian speaking countries

C. Success of the policy

The baby bonus has helped increase the birth rate but children will not become economically active for at least 18 years. Some migrants have come to the country but this has caused some conflicts with the local population. Few Russians have returned to Russia as the opportunities are greater elsewhere.

15. Migration Policy. The UK an example of a quota/skills test migration policy.

A. Reasons for the policy.

To avoid rapid population growth that would put strain on housing and public sector services e.g.. The NHS.

To avoid competition for jobs between migrants and British born workers.

To encourage in migration of skilled workers– especially where there is a shortage of a particular skill.

B. How the policy works.

People from the EU are allowed to live and work in the UK.

The government is trying to reduce the number of immigrants from outside of the EU to 100 000 a year. Migrants applying for a visa to enter the UK are awarded points for skills that they have. E.g. a highly skilled person– top scientist or entrepreneur will have enough points to stay in the UK permanently. They will have high earnings and contribute to the economy and though their work. Visas for lower skilled jobs e.g. in catering or agriculture are not available for people from outside of the EU. Some people are only offered short term visa e.g. a musician, sport person or student.

C. Success of the policy.

This is a good way to manage the number people coming into the country and make sure new residents make an economic contribution to the country.

However some people on short term visas may remain in the country illegally after their visa has run out. Many illegal immigrants are forced to work on the black market/illegally and therefore do not have protection from their employers e.g. they work in dangerous conditions or be paid below the minimum wage.

16. Migration and population policy vocabulary

A. Open door policy = When a country encourages migrants to move in, often for economic reasons.

B. Quota = based on migration where a country sets limits on the number of legal migrants that it is prepared to allow in each year.

C. Skills Tests = are used to assess the qualifications and skills that potential immigrants have –to see if they will match the jobs and skills that are needed in a country.

D. Population Policy= Measures taken by a government to influence population size, growth, distribution or composition.

E. Pro natalist policy= Encourage people to have more children by offering rewards e.g. financial incentives.

F. Anti natalist policy= Encourage people to have fewer children by offering incentives, such as only free state education for the first child in the family.

