

Population dynamics

2022年11月29日 18:31

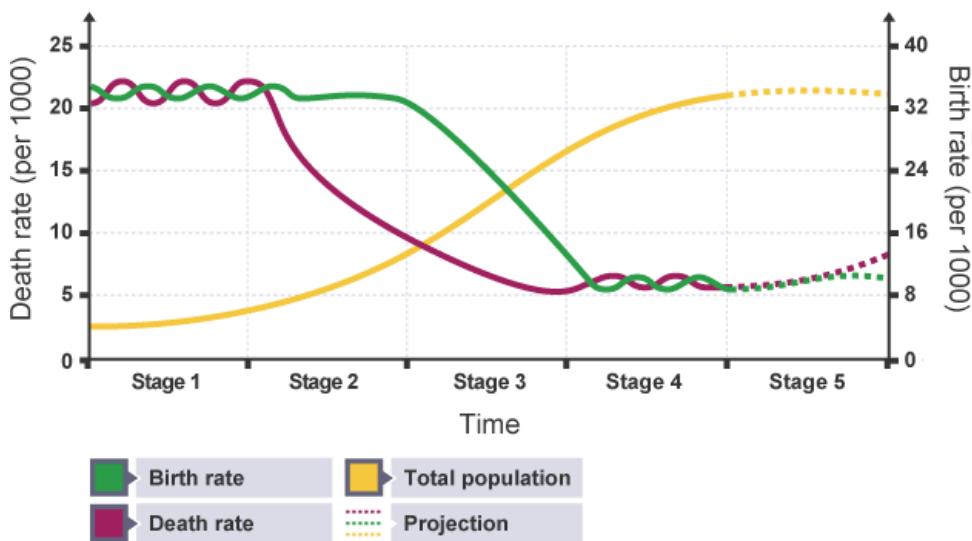
Keywords

- <https://quizlet.com/cn/751161163/flash-cards/>

Global population change overview

- Population reached 1 billion in 1804
- Rose slowly to reach 2B, by 1927
- It then rose rapidly, 7B in 2012 and 8B in 2022
- Still increasing but at a slower rate
- Predicted to level off at 10-11B

Demographic transition model



- Stage 1
 - Tribes in the Amazon
 - High, fluctuating birth rate
 - High, fluctuating death rate
 - Low natural increase
- Stage 2
 - LEDCs in Sub-Saharan Africa
 - Birth rate stays high
 - Death rate falls
 - Increasing natural increase
- Stage 3
 - NICs
 - Birth rate decreasing rapidly
 - Death rate continues to fall but slower
 - Natural increase getting smaller
- Stage 4
 - MEDCs
 - Low birth rate
 - Low death rate
 - Low natural increase
- Stage 5
 - Germany, Japan
 - Decreasing birth rate
 - Death rate slightly increasing
 - Negative natural increase

- Birth rate takes longer to start decreasing because parents take some time to realise the changes

Global distribution of birth rates

- Countries with high birth rates of more than 35/1000 are mostly in Sub-Saharan Africa e.g. DR Congo
- Afghanistan also has high birth rates but not in Africa so it is an exception
- Countries with low birth rates of less than 10/1000 are mostly in Central Europe + Eastern Europe e.g. Germany
- Japan + South Korea in Asia also have low birth rates

Reasons for high birth rate

- Lack of education on family planning
- People do not use contraception as they may be too expensive
- Children are an economic asset so they can work on the farm or earn income
- High infant mortality so people have many children to ensure that some survive
- Children needed to look after parents in old age if there is no pension
- A son is needed to pass on the family name or inherit family business
- Region or culture encouraging giving birth
- Women uneducated leading to early marriage, weak emancipation of women

Global distribution of death rates

- Countries with high death rates of more than 16/1000 are mostly in Sub-Saharan Africa
- Afghanistan also has high death rates but not in Africa so it is an exception
- Countries with low death rates are mostly in Americas, e.g. Brazil

Reasons for high death rate

- Poor healthcare - few doctors nurses and hospitals per person
- No vaccination programme so people die from diseases e.g. polio or TB
- Unclean drinking water so people die from water borne diseases like cholera
- Poor hygiene in homes and lack of sanitation system
- Poor diets due to unreliable food supply so people die from malnutrition or starvation
- More wars or conflicts

Population structure

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Keywords

- <https://quizlet.com/cn/751625622/flash-cards/>

Demographic groups

- 0-14: Young dependents
 - School age
 - Depend on other for resources
- 15-64: Economically active
 - Potential working population
 - Pay taxes to support the dependents
 - The productive part of the population
- Over 65: elderly dependents
 - Do not usually work
 - Depend on others for resources

Dependency ratio

$$\frac{\% \text{ of young dependents} + \% \text{ of old dependents}}{\% \text{ economically active}} \times 100$$

- Dependency ratio of 100 means that for every person of working age there is 1 person who is dependent
- Dependency ratio over 100 means that for every person of working age there is more than 1 person who is dependent
- Lower dependency ratio is better
 - More economically active people take care of 1 dependent on average

Population pyramid

- Australia (MEDC)
 - Beehive shape
 - Narrow base, few young dependents - birth rate is low
 - Wide apex - death rate is low
 - High % of people over 70 - life expectancy is high
 - More women elderly dependents than men - women have a higher life expectancy than men
 - Same number of children in 0-4 and 5-9 age group - birth rate is remaining low
- Bangladesh (LEDC)
 - Wide base with a large number of young dependents - birth rate is high
 - Narrowing base shows decreasing birth rate
 - Narrow top - death rate is high
 - Small % of people over 70 - life expectancy is low

Ageing populations

- MEDCs usually have an ageing population with a high % of elderly dependents (above 65).

Population distribution

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Describe distribution

- Unevenly distributed
- Areas of high population density
 - South Asia
 - East Asia
 - Western Europe
 - NE USA
- Areas of low population density
 - Polar regions north of 60° N
 - Central Asia
 - High mountain regions e.g. Himalayas
 - Arid deserts e.g. Sahara
 - Rainforests e.g. Amazon

Physical factors

- Climate
 - Polar
 - Sparsely populated
 - Too cold for comfortable living, many months below 0°C
 - Difficult to construct buildings or transport networks on permafrost
 - Very short growing season (over 5°C to grow crops) so limited food production
 - e.g. Siberia, most of Canada
 - Tropical deserts
 - Sparsely populated
 - Low rainfall and infertile sandy soil so limited food production
 - Unstable sandy/rocky ground so difficult to construct buildings and transportation links
 - e.g. Sahara in North Africa
 - Temperate
 - Encourage dense populations
 - Average temperature and reliable rainfall so easier to grow food
 - Long growing season
 - e.g. Western Europe, Eastern USA, North East China
- Fertile soil
 - Contains many minerals and is well drained
 - Important in determining how much food can be grown
 - e.g. river floodplains and deltas
 - Support dense populations
- Natural resources (including energy sources like coal + minerals)
 - Area with natural resources available are usually densely populated
 - Settlements in areas with extreme climate to extract the resources
- Relief
 - High population densities in low altitude and flat land
 - More moderate climate
 - Easier to construct buildings for economic activities
 - e.g. coastlines and river valleys
 - Low population densities in places with steep gradient and high altitude
 - Cold climate with higher rainfall and snowfall
 - Thin and infertile soil
 - Difficult to use machinery
 - Thin air lacks oxygen
 - Difficult to build houses and roads so often inaccessible

Human factors

- Economic
 - Job opportunities
 - Fast, reliable transport encourages industry to locate there, providing more job opportunities
 - Transport links
 - Income
- Social
 - People migrate to areas with better social services (housing, healthcare, education etc.)
- Political
 - The government have an important role in deciding where industry, transport, housing, public, services, etc. are located
 - This will affect where people choose to live
 - Encourages people to move out of overpopulated areas by building new settlements

Densely populated areas found in sparsely populated regions

- Oasis in the desert
- Near rivers in hot, dry regions
- Mining settlements in areas with extreme environment e.g. oil attraction in Alaska
- Tourist settlements in extreme environments e.g. Sharm El Sheikh in Egypt
- Dry areas which are surrounded by marsh land
- A sheltered valley surrounded by mountains

International migration

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Key words

- <https://quizlet.com/cn/891659197/flash-cards/>

Push and pull factors

Push factors	Pull factors
<ul style="list-style-type: none">• Natural disaster event e.g. volcanic eruption, earthquake or drought• Unemployment• War• Poverty• Political or religious intolerance• Housing shortages• High crime rates• Food shortages	<ul style="list-style-type: none">• Employment• Higher wages• Food available• Better housing and education• Higher standard of living• Political and religious tolerance• More attractive environment e.g. better climate• 'bright lights' of a city (media portrayal)

Barriers to migration

Human barriers	Physical barriers
<ul style="list-style-type: none">• Border controls and police• Language barrier• High cost of journey• Visa required	<ul style="list-style-type: none">• Wall or fence at the border• Extreme natural environment to cross• Long distance between countries• Sea or ocean between countries

Challenges new immigrants might face

- Not being able to speak local language so difficulty communicating
- Not having enough money to afford housing or food
- Not finding it easy to find a job / not having the skills needed to get a job
- Not understanding the local culture or laws

Underpopulation Australia

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Basic information

- Population total: 23 million in 2017
- Natural increase = 0.4% (4/1000)
- Resources available:
 - Mining
 - World leading producer of iron ore and the second largest producer of gold, lead and zinc
 - Major producer and exporter of coal.
 - Agricultural products
 - Wheat, sugar cane and cattle
 - Land
 - The country is sparsely populated (very low population density) with large areas of land unused

Reasons for low population growth

- Birth rates are low at 12/1000 because:
 - High cost of raising children
 - High education standards for women
 - Many decide to have careers, marry later and have fewer children
 - High use of birth control methods: 95% of women of fertile age
- Death rates low 8/1000
- Life expectancy is long 82 years on average
- Decreasing birth rates and an increase in death rates as the population becomes older in recent years
- The birth rates are not significantly higher than the death rates

Problems caused by under-population

- Shortage of workers
 - The resources are not fully exploited
 - Large reserves of iron ore in the western desert region and coal in the 'outback' in the east not exploited
- Not enough tax
 - The working population who pay tax is low
 - The government does not have enough financial resources to pay for all the public services
 - 43% of the labour force will retire in the next 20 years
 - This will reduce the tax collection even further
- Public services close
 - Schools and hospitals in the less populated regions may have to close because there are not enough demand to support them
 - This will leave some people without easy access to public services.
- Small market to sell goods and services
 - Less demand means businesses are not so successful and there is less production
- Difficult maintain military services
 - There are not enough people or finances to set up a defence force to defend the country

Problems with low population growth

- Depopulation of some parts of the country
 - There is an increasing migration from the countryside to the cities
 - The 'outback' is experiencing depopulation
- Not enough people for the future workforce
 - A need to increase the number of immigrants into the country of working age.
 - This has led to disagreements as some Australians oppose increased immigration
- All the problems caused by under-population

Ageing population Australia

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Evidence of ageing population

- Elderly population over 65 years is high at 13% of population
- % over 65 is increasing and it is predicted to reach 25% by 2050
- % of elderly is increasing because the death rates are low and life expectancy is high (82 years)
- Low % of young dependents (only 19%) as birth rate is low (12/1000)

Problems with ageing population

- Not enough working population
 - There are few young economically active people, the birth rates are low.
 - There is a shortage of economically active people working in agriculture, manufacturing and armed forces
 - In the next 10 years, Australia's labour force is expected to decrease significantly
 - → there are less economically active people to pay taxes to pay for government services
- High government cost
 - The elderly have a greater need for medical services
 - More money will need to be invested in medical care
 - Longer waiting lists for hospital treatments
 - There is a high cost to pay for pensions for the elderly
- Taxes on the working population will increase

Government actions on ageing population

- Increase immigration of young people
 - Relax immigration policy and attract highly skilled workers from abroad
- Increase the age of retirement
 - They can increase the number of working age group
 - Less pension paid and more tax income
 - Current 67 but will increase to 70 soon
- Raise taxes to pay for public services
- Introduce a pro-natal policy
 - Offering money to families who have more than two children
 - This might increase the birth rate and the percentage of young dependents.

Pro-natal policy + immigration Australia

2023年1月11日

23:07

Why is pro-natal policy needed

- Australia is under-populated
- Low population density of less than 3 people per km²
- Population is growing slowly
 - Birth rate is low at only 12/1000 and decreasing
- High education standards for women
 - Have careers
 - Marry later (average age for having first child is now 31 years old)
 - Have fewer children
- High use of birth control methods
 - 95% of women of fertile age
- Fertility rate is only 1.6 children per female

Policies taken since 1996

- The government provided financial support for families to encourage them to have more children e.g. the Baby Bonus introduced in 2004: Cash incentive of \$5000 for any couple having children
- Government paid for child-care costs e.g. spent of \$3.2 billion per year to help with child-care costs, including paying parents maternity/paternity leave for 18 weeks at the national minimum wage.
- Tax-rebate for those with children (tax paid back to parents)
 - the size of the rebate is based on the parent's earnings (high rebate for those who earn less).
- Result
 - Fertility rate increased slightly to 1.8 per woman.
 - Most increase in the outback where government financial support was most needed.
 - Still not enough to increase the population
 - Australian population is ageing so the birth rate continues to decrease
- Problems
 - The scheme did not have a significant influence on the population growth
 - It was very expensive to the tax-payers
 - Scrapped in 2014

Immigration policy

- Now 28% of Australia's population was born abroad, most immigration comes from China, India or the UK.
- \$53 billion income was paid in tax by foreign born workers in 2016
- Skilled migration means skill gaps are met in important industries such as accountants, doctors and engineers.
- Increasing the cultural diversity in the workplace makes Australia more attractive to global partners, ensuring future investment and economic growth.
- Migrants are mostly young adults who marry and have children. This may increase the birth rate in future

Sparsely populated Australia

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General distribution

- Population density: 3 / km²
- Uneven distribution
- More densely populated in SE cities
 - e.g. Brisbane, Sydney, Gold Coast
- Also dense around Perth in SW
- Sparsely populated in centre and north, less than 1 / km² due to hot desert environment

Higher density in SE and SW corners

- Temperate climate
 - Summer 25°C, winter around 10°C
 - Rainfall about 800mm
 - Suitable for agriculture
 - Enough water for domestic and industrial use
- First settled by Europeans in Sydney
 - Led to most of the significant economic developments along the east coast
- Several cities located close together
 - e.g. Sydney, Canberra, Melbourne
 - Close trading connections with each other

Low density in central Australia

- Desert climate
- 45% of Australia is hot desert (Great Sandy + Victorian)
- Low rainfall with less than 250mm per year
 - Not enough water for domestic use, industries and agriculture
- Isolated area
 - Great distances between small communities

Low density in northern Australia

- Tropical wet climate
- Extremely high rainfall, over 2000mm per year
- Distinct wet and dry season
- Difficult to build infrastructures because of flooding in wet seasons

Higher density in some sparsely populated areas

- Raw materials
 - e.g. coal and iron in the 'outback'
 - Creates job opportunities
- Transport links
 - e.g. Port Hedland
 - e.g. highway 1 built along the west coast to link mining settlements with coastal ports

Overpopulation + youthful population Bangladesh

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Basic information

- Population total: 160 million
 - It grew from 80 million in 1980 so doubled in 50 years
- Land size: almost 144,000 km²
- Predicted growth: to 200 million by 2050
- Natural increase: 1.2%

Reasons for population growth

- Death rates have fallen to 6/1000 because:
 - Improvements in health care
 - More trained doctors and nurses
 - More health clinics
 - Infant mortality has decreased to 30/1000 per year
 - Babies are vaccinated
 - Water supply is cleaner so less water borne diseases e.g. cholera
 - Only 13% of population now do not have access to clean water.
 - Food supply has improved particularly the production of rice
- Birth rates remain high (18/1000) because:
 - High % of population are women in child-bearing age
 - Limited use of birth control methods - only 62%
 - Young age of marriage - 1/3 girls married by 18 years old
 - Bangladesh has a youthful population
 - When they reach adulthood they will have children themselves

Problems with rapid population growth / youthful population

- Poor health care and education services
 - Government does not have enough money to invest in public services for everyone
 - Most people do not have access to these services
 - 0.5 doctors per 1000 people.
- Not enough clean water for everyone - 13% do not have access to clean water which is around 20 million people
- Periodic food shortages
 - The amount of resources e.g. land, water and food have to be shared between a higher number of people
 - The amount available per person decreases
 - 33% of children under 5 are underweight
- Rapid rural urban migration
 - Many young people living in rural areas are forced to move to urban areas because there is not enough farmland available
 - This causes rapid urbanisation in the cities
 - 1000 people migrate to Dhaka each day from rural areas
- Poor sanitation facilities in urban areas - 42% of people living in Dhaka do not have a sanitation system
- Youth unemployment is high
 - The growth in population is faster than the growth of job opportunities

Causes of over-population

- High fertility rates due to the lack of availability and knowledge regarding contraception
- The majority of the population work as subsistence farmers
 - Children are regarded as an economic asset
 - People have lots of children to help them work on the farms

- There is no state pension system in Bangladesh
 - People also have lots of children to take care of them when they get old
- Bangladesh is a poor country with 25% population living below poverty line of £1.25 per day
 - Government lacks suitable medical facilities and vaccinations.
 - Infant Mortality Rate is high at 30/1000 per year
 - People have lots of children to replace those that die at a young age.
- Females are not fully emancipated

Problems caused by over-population

- Bangladesh lacks sufficient resources to meet the needs of its Population, which leads to a lowering of standards of living
 - Many people (25%) are below poverty line of \$1.25 per day
 - Government does not have enough money to pay for the public services
- Rapid growth of urban areas
 - People forced to live in poor quality housing in slums
 - Urban areas have severe traffic jam
 - Air pollution from traffic and water pollution from waste thrown into the rivers
- Overcrowded living conditions and insufficient medical services increases the spread of diseases
 - Life expectancy is only 52 years
- Insufficient clean water supply for everyone
 - An increase in water borne diseases
- Over cultivation of the land to grow rice for growing population
 - Taking too many nutrients from the soil - reducing soil fertility
 - This has caused food insecurity and malnutrition for many people
- Deforestation
 - 50% of forests have been cut down for fuel wood
- Vulnerable to climatic hazards
 - Bangladesh suffers from the tropical cyclones from the Indian Ocean, which brings flooding to where dense populations live on the fertile floodplains of the Ganges Delta

Anti-natal policy Bangladesh

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Reasons for anti-natal policy

- High population density of over 1000 per km²
- Over-populated
- Population is growing rapidly because death rate reduced to 6/1000 when birth rate still high at 18/1000
 - Large % of population women at child-bearing age which is keeping birth rate high
- Population doubled between 1970 and 2000

Government action

- National Policy on population started in 1975
- Educated people on the problems caused by rapid population growth
- Encouraged small family size through an advertising campaign on TV and posters
- Increased people's access to birth control and made it affordable
- Minimum age of marriage was increased to 18 years for women and 21 for men.

Evidence of success

- Increase in % population using contraception from 18% in 1980 to 60% in 2015
- Average number of children per family decreased from 6 to 2.
- Population growth rate decreased to 1.2%

Problems of anti-natal policy

- Went against the religious belief of rural people, especially Muslims
- Some said that the campaign was very aggressive
- Rural people prefer larger families because they need children to work on their farms
- Difficult to enforce the law in rural areas
 - 65% of girl married by 18 and most had a child by 19 in traditional societies

Densely populated Bangladesh

2023年1月11日 23:08

General distribution

- Average population density about 1000 people / km²
- Uneven distribution
 - 75% in rural areas
 - 25% in cities
- Highest population density in Dhaka 50000/km², highest in the world
- High population density on Ganges river delta 500/km²
- Lowest population density in SE Chittagong hills and south coast, less than 250/km²

High density in Dhaka

- 17m live in Dhaka
- Over 1000 people migrate from rural areas to Dhaka each day
 - Attracted by potential for job opportunities and better services
- Forced to leave rural areas on south coast that are becoming flooded due to climate change

High population on Ganges river delta

- Flat land
 - Easy to build on
 - Most accessible land with road / rail networks and airports built
- Easier to grow crops
 - Fertile soil due to annual flooding and deposit of alluvium
 - Monsoon climate with high temperatures and high rainfall (over 2000mm) during wet season for intensive rice farming
- River is used to trade
 - Import raw material
 - Export manufactured goods
 - Develop industry
- Links Dhaka with Chittagong (second largest city)

Lower population density in SE border with Myanmar

- Steep sided hills rising to 900m altitude
 - Difficult to construct transport routes, less accessible
 - Thin and infertile soil, difficult for intensive agriculture
- Border with Myanmar is not secure
 - Over 0.5m Rohingya Muslim refugees have crossed the border into Bangladesh and live in refugee camps in east Bangladesh

Lower population density in south coast region

- Extremely low lying land, altitude < 10m
 - Dangerous sea water floods almost every year due to cyclones
- Natural vegetation is thick
 - Mangrove forests are unsuitable land for agriculture
- Sea level rise due to climate change
 - Even higher risk of flooding
 - Encourage people to migrate to the cities

USA Mexico immigration

2024年3月9日 15:16

Data

- According to the U.S. Department of Homeland Security, Mexico is the country of origin for the largest numbers of illegal immigrants in the USA
- 6,570,000 migrants (57% of all illegal migrants)
- More than half of the 11 million Mexican living in the US are there illegally, according to a report by the Mexican government

Push factors from Mexico

- High crime rate (10-14 homicide per 100,100)
- High unemployment and poverty rate (47%)
- Water shortage
- Drug gangs
- Low minimum wage

Pull factors from USA

- Much higher quality of life
- Existing migrant communities to seek help from
- Better education (86% literacy rate in Mexico vs. 99% in USA)
- Diverse economy for both high and low skilled jobs
- Informal jobs available

Impact on Mexico (source country)

- Positive
 - About \$13 billion sent back to Mexico as remittances per year
 - One of Mexico's most important sources of income
 - Second only to oil, surpassing the traditional tourism industry
 - When migrants return back to Mexico they are more skilled and have greater work experience which could help to develop the Mexican economy
- Negative
 - Mexican countryside has a shortage of workers
 - Certain villages have lost 2/3 of its inhabitants
 - Many men emigrate leaving a majority of women who have trouble finding marriage partners
 - Fathers and husbands are absent for years on end, women are left alone to raise the children
 - The community is growing increasingly dependent on money made elsewhere
 - Young adults tend to migrate, leaving ageing communities behind. With fewer children these communities will gradually die out
 - Hundreds of illegal immigrants who cross into the US from Mexico have died in the scorching heat of the Arizona desert

Impact on USA (destination country)

- Positive
 - Mexican migrants benefit the US economy by working for low wages
 - Mexican culture has enriched the US border states with food, language and music
 - The Mexicans supply the need for cheap labour working in low paid jobs
- Negative
 - Illegal migration costs the USA millions of dollars for border patrols and prisons
 - Tensions have risen between Mexican immigrants and Americans
 - Increasing concerns over the availability of working-class jobs
 - Mexicans are seen as a drain on the USA economy.
 - Migrant workers keep wages low which affects the wages of American citizens
 - They can cause problems in cities due cultural and racial issues
 - The incidents of tuberculosis has been increasing greatly due to the increased migration
 - Money sent back to Mexico by the immigrants (remittances) is money that is lost from the American Economy