The Demographic Transition Model

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History and Purpose of the Model

- Also known as the “DTM” - based on an interpretation of demographic history, developed in 1929 by the American demographer Warren Thompson
- Helps us understand the changes in a country’s demographics and what those changes mean, socially and economically; based around the relationship between birth rate (CBR) and death rate (CDR)
- 4 recognized stages of growth, but some demographers are starting to entertain the idea of a 5th stage
- Even though all countries are experiencing changes in population at different rates, they are all going through the similar process of the DTM and are in one of these stages
- Once a country passes on to the next stage, it cannot go back
- Goes hand-in-hand with the epidemiological transition model - focuses on the distinctive causes of death in each stage of demographic transition
Stage 1: Low Growth

- Most of humanity’s occupancy on this Earth was Stage 1 - no country is still in this stage today.

- Characterized by very high birth rates and very high death rates, causing little to no net growth in the overall population.

- Period when people hunted and gathered food - meant that one bad season could wipe out a population.
  - Population increased with the First Agricultural Revolution, making food less sporadic and instead more stable, but still sometimes unpredictable, keeping them in Stage 1.

- Diseases, like the Black Plague, could spread easily, killing many people (lack of food and clean water, inefficient sewage, wars, etc.) - death rates fluctuated wildly.
Stage 2: High Growth

- After the Agricultural Revolution, population started to grow at a modest pace until around 1750 AD - population started growing very, very rapidly as a result of countries moving into Stage 2 (Europe and North America - 1800s)
- CDR quickly goes down while the CBR stay the same - causing large overall population growth.
- Result of the Industrial Revolution (and Second Agricultural Revolution) - as new inventions made agricultural practices easier, thus making food supplies more stable
  - Created wealth was used to improve sanitation, making people healthier and live longer
- Many LDCs in Africa, Asia, and Latin America (1950s) have moved into Stage 2 because of the medical revolution rather than the Industrial
Stage 3: Moderate Growth

- Characterized by a sharp drop in CBR; the CDR is still dropping, but the gap between them is not as large, making the overall growth more modest
- Decline in CBR is caused by social changes, not new technology like in Stage 2
  - People choose to have fewer children due to dropping infant mortality rate (IMR), do not have to have so many to improve chance of survival
  - New economic changes = more people to live in cities; not enough space, too expensive, and children not needed to work a farm (no longer economic assets)
  - Increased literacy and education for women, marriages postponed
- MDCs - first half of 20th century; countries in Asia and Latin America moved to in last 20 or so years because of the medical revolution
Stage 4: Low Growth

- Characterized by the drop of the CBR to the point where it equals the CDR and NIR approaching zero (zero population growth, or ZPG) - causing little to no growth
- Different social customs create low growth - more and more women are entering the labor force, which makes raising many kids difficult
- CBR also decreases with wider access to birth-control methods and greater incomes, which support a lifestyle of traveling and high-end dining that is not suitable for/with a child.
- Beginning of DTM - very high CBR and CDR (35-40 per 10,000); end of DTM - CBR and CDR very low (10 per 10,000)
Stage 5: Low/No Growth (possible stage)

- Characterized by higher CDR than CBR and irreversible population decline
- Concern to Eastern European countries with negative NIRs (number of deaths exceeds number of births)
  - Higher death rates = result of pollution
  - Lower birth rates = legacy of Communist rule - very prominent family-planning programs and deep-seated pessimism regarding children
- Desolate future of political instability, strife, struggling economy, reemergence of parasitic diseases, etc.
Example 1: Iraq (Stage 2)

**Analysis:** Its growth rate will decline, but its population will adopt a longer life expectancy. This suggests that there will be medical advancements that will extend people’s lives and that there is more of a guarantee that infants will survive to adulthood. (Thus, people will have less children, as shown in the predicted CBR which is about 12 less children per 1,000 population in 2050 compared to 2014.)
Example 2: Poland (Stage 4)

Analysis: Since Poland is already in Stage 4, there will not be much change in the country in general. However, it will have a greater dependency ratio as there is so little growth occurring. There will be no new working class as the current one becomes older, so there will be more elderly dependents. The country may have to emplace pro-natalist policies to encourage its citizens to have children to replace the working class when the time comes and to support the elderly.
Quick Questions

1. What stage is characterized by high growth rates?

2. In what areas did many countries move into Stage 2 of the DTM, as a result of the medical revolution?

3. Which stage, 1 or 4, has low growth rates because the CBR and CDR are both very low?

Answers:

1. Stage 2
2. Asia, Africa, and Latin America
3. Stage 4