

Population Growth

by Sophia Tutorial



WHAT'S COVERED

This tutorial will cover the topic of population growth, through the definition and discussion of:

1. Demography
2. Population Formula
3. Factors Affecting Population Growth
4. Factors Affecting Population Decline
5. Life Expectancy

1. DEMOGRAPHY

There are many factors that affect population growth or population stability in the long term. Many social scientists also consider themselves to be demographers. **Demography** is the empirical study of groups of people, of populations. Demographers study the characteristics of a population as a whole. It's a more quantitative way to look at the social world--demographers are interested in population and factors that affect population.



TERM TO KNOW

Demography

The empirical study involving the structure of human populations.

2. POPULATION FORMULA

Demographers have a formula for population in society

$$P = (B - D) + (I - E)$$

In this formula, Population (P) equals births (B) minus deaths (D), plus a variable for migration, which is immigration (I) minus emigration (E).

Immigration represents people coming in to an area or country, and emigration is the outflow of people--people going out of a country. Demographers are interested in social variables that might affect birth rates, such as education, job opportunities for women, and the availability of contraceptives. Similarly, the level of medical advancement might affect death rates. As you can see, there are many social factors that sociologists are interested in that affect the variables in this equation.

3. FACTORS AFFECTING POPULATION GROWTH

Breaking the formula down into its component parts, there are several factors that contribute to increase populations.

- **Fertility:** is the ability of an individual or a group--a population--to conceive children. It follows that fertility can increase population.
- **Birth Rate:** is the rate of births over a specific time--typically, births in a single year per 1,000 people. For instance, if 100 babies are born in American society in 2012 per every 1,000 people, this equates to a birth rate of 100 births per 1,000, or a birth rate of 10%.
- **Immigration:** Immigration is a form of **migration**, or the movement of people either into or out of a population. Immigration is defined as the movement of people into a population, which can affect population as well.



TERMS TO KNOW

Fertility

The ability to conceive children, which is measured statistically and referred to as birth rates.

Birth Rate

A rate of births over a specific time (normally expressed as x per 1,000 people).

Migration

Movement of people into or out of an area.

4. FACTORS AFFECTING POPULATION DECLINE

What are the factors that might decrease a population?

- **Mortality:** is a measurement of how frequently death occurs within a population
- **Death rate** is the measure of deaths over a specified period of time. Similar to the calculation of birth rate, it's typically the number of deaths per 1,000 people.

- **Infant mortality rate** is a specific kind of mortality that measures the rate of death for children that are under one-year-old.



DID YOU KNOW

The United States does not have a very high infant mortality rate. Infant mortality rate, like the other variables under discussion, is related to societies. It's related to social progress and evolution.



BIG IDEA

Circling back to the formula, population equals the number of births minus the number of deaths, which provides one variable, added to the migration variable (immigration minus emigration).



TERMS TO KNOW

Mortality

Measuring how frequently death occurs in a given population.

Death Rate

A rate of deaths over a specific time (normally expressed as x per 1,000 people).

Infant Mortality Rate

A rate of deaths of children under 1 year old over a specific time (normally expressed as x per 1,000 people).

5. LIFE EXPECTANCY

Finally, balancing everything, there is the measure of life expectancy. **Life expectancy** is the average year to which somebody will live in a given society. It varies by society and also between men and women.



EXAMPLE In the United States, women have a longer life expectancy than men by a few years.

However, this statistic might be different in other societies. Life expectancy is a social variable—it's related to society and the level of social advancement.



TERM TO KNOW

Life Expectancy

The average years of life for a person within a group or population.



SUMMARY

Today you explored a descriptive overview of **demography** and the **population formula**, and the **factors affecting population growth or decline** in society. You also learned about **life expectancy**, the average year to which somebody will live in society.

Source: This work is adapted from Sophia author Zach Lamb.

**Birth Rate**

A rate of births over a specific time (normally expressed as x per 1,000 people).

Death Rate

A rate of deaths over a specific time (normally expressed as x per 1,000 people).

Demography

The empirical study involving the structure of human populations.

Fertility

The ability to conceive children, which is measured statistically and referred to as birth rates.

Infant Mortality Rate

A rate of deaths of children under 1 year old over a specific time (normally expressed as x per 1,000 people).

Life Expectancy

The average years of life for a person within a group or population.

Migration

Movement of people into or out of an area.

Mortality

Measuring how frequently death occurs in a given population.