**SOURCES OF POPULATION DATA**

Primary sources of the demographic data are the census, the surveys, the registrations, migration reports, estimates and projections of which the census continues to be the most important single source of basic data for population geographers.

ii. Egypt, Babylonia, China, Rome and Palestine were the countries where the census was begun during ancient times.

iii. The first census is believed to have been done to count the number of able-bodied men who could be used for war.

iv. The modern census is defined as the process of collecting, compiling and publishing demographic, economic, and social data pertaining to a specific time, to all persons in a country or delimited territory.

v. The modern census has many features-

(a) Each individual is separately but only once enumerated,

(b) Takes place in a precisely defined territory,

(c) It covers majority of population,

(d) Is taken at regular intervals,

(e) Should be completed within a given period of time and

(f) Should be published after due verification.

In Europe, Sweden's census of 1749 is sometimes regarded as the first but the first complete census of population was conducted in 1881 on a uniform basis throughout India.

Indian census is recognised as one among the well thought and well-planned census of the world.

The general problems associated with census include-the use of terms, shortage of trained personnel, extremely tedious fieldwork people do not give correct information and there are wide gaps left while finalising performas.

National population statistics are usually collected by conducting a [census](http://en.wikipedia.org/wiki/Census). However, because these are usually huge logistical exercises, countries normally conduct censuses only once every five to 10 years.

Between censuses, administrative data collected by various agencies about population events such as births, deaths, and cross-border migration may be used to produce [intercensal estimates](http://en.wikipedia.org/wiki/Intercensal_estimate).

**Population estimates and projections**

**Population estimates** are usually derived from census and other administrative data. Population estimates are normally produced after the date the estimate is for.

Some estimates, such as the *Usually resident population* estimate who usually lives in a locality as at the census date, even though the census did not count them within that locality. Census questions usually include a questions about where a person usually lives, whether they are a resident or visitor, or also live somewhere else, to allow these estimates to be made.

Other estimates are concerned with estimating population on a particular date that is different from the census date, for example the middle or end of a calendar or financial year. These estimates often use birth and death records and migration data to adjust census counts for the changes that have happened since the census.

**Population projections** are produced in advance of the date they are for. They use time series analysis of existing census data and other sources of population information to forecast the size of future populations. Because there are unknown factors that may affect future population changes, population projections often incorporate high and low as well as expected values for future populations. Population projections are often recomputed after a census has been conducted. It depends on how conjusted the area is in the particular demarcation.

SOURCES OF VITAL STATISTICS IN INDIA

The important sources of vital statistics in India besides the Population Census are (1) Civil Registration System;(2) Demographic Sample Surveys such as those conducted by the National Sample Surveys Organization(NSSO); (3)Sample Registration System (SRS) and (4) Health Surveys, such as National Family Health Surveys, (NFHS) and District Level Household Surveys (DLHS ‐ RCH ) conducted for assessing progress under the Reproductive and Child Health programme.

# ****Malthusian Theory of Population****

## Malthus hypothesized that unchecked population growth would quickly exceed carrying capacity, leading to overpopulation and social problems.

#### Key Points

* Thomas Malthus warned that population growth would exceed resource growth, leading to catastrophic checks on [overpopulation](https://www.boundless.com/definition/overpopulation/). This would occur because population grew exponentially while food supply grew arithmetically.
* Without population control, the population would be reduced by catastrophes such as famine or war according to Malthusian theory.
* As a solution, Malthus urged moral restraint: people must practice abstinence, sterilization, and have criminal punishments for those who have [more](https://www.boundless.com/definition/more/) children than they can support.
* [Malthusian catastrophes](https://www.boundless.com/definition/malthusian-catastrophes/) refer to naturally ocurring checks on population growth such as famine, disease, or war.
* These Malthusian catastrophes have not taken place on a global scale due to progress in agricultural technology. However, many argue that future pressures on food production, combined with threats such as global warming, make overpopulation a still [more](https://www.boundless.com/definition/mores/) serious threat in the future.

Thomas Robert Malthus was the first economist to propose a systematic theory of population.  He articulated his views regarding population in his famous book, Essay on the Principle of Population (1798), for which he collected empirical data to support his thesis. Malthus had the second edition of his book published in 1803, in which he modified some of his views from the first edition, but essentially his original thesis did not change.

In Essay on the Principle of Population,Malthus proposes the principle that human populations grow exponentially (i.e., doubling with each cycle) while food production grows at an arithmetic rate (i.e. by the repeated addition of a uniform increment in each uniform interval of time). Thus, while food output was likely to increase in a series of twenty-five year intervals in the arithmetic progression 1, 2, 3, 4, 5, 6, 7, 8, 9, and so on, population was capable of increasing in the geometric progression 1, 2, 4, 8, 16, 32, 64, 128, 256, and so forth.  This scenario of arithmetic food growth with simultaneous geometric human population growth predicted a future when humans would have no resources to survive on.  To avoid such a catastrophe, Malthus urged controls on population growth.

On the basis of a hypothetical world population of one billion in the early nineteenth century and an adequate means of subsistence at that time, Malthus suggested that there was a potential for a population increase to 256 billion within 200 years but that the means of subsistence were only capable of being increased enough for nine billion to be fed at the level prevailing at the beginning of the period. He therefore considered that the population increase should be kept down to the level at which it could be supported by the operation of various checks on population growth, which he categorized as "preventive" and "positive" checks.

The chief preventive check envisaged by Malthus was that of "moral restraint", which was seen as a deliberate decision by men to refrain "from pursuing the dictate of nature in an early attachment to one woman", i.e. to marry later in life than had been usual and only at a stage when fully capable of supporting a family. This, it was anticipated, would give rise to smaller families and probably to fewer families, but Malthus was strongly opposed to birth control within marriage and did not suggest that parents should try to restrict the number of children born to them after their marriage. Malthus was clearly aware that problems might arise from the postponement of marriage to a later date, such as an increase in the number of illegitimate births, but considered that these problems were likely to be less serious than those caused by a continuation of rapid population increase.

He saw positive checks to population growth as being any causes that contributed to the shortening of human lifespans. He included in this category poor living and working conditions which might give rise to low resistance to disease, as well as more obvious factors such as disease itself, war, and famine. Some of the conclusions that can be drawn from Malthus's ideas thus have obvious political connotations and this partly accounts for the interest in his writings and possibly also the misrepresentation of some of his ideas by authors such as Cobbett, the famous early English radical.  Some later writers modified his ideas, suggesting, for example, strong government action to ensure later marriages. Others did not accept the view that birth control should be forbidden after marriage, and one group in particular, called the Malthusian League, strongly argued the case for birth control, though this was contrary to the principles of conduct which Malthus himself advocated.

The Demographic Transition Model and its 5 stages

Stage 1: High fluctuation - high birth rate and death rates - however population growth is small.

Reasons for high birth rate include:

* Limited birth control
* high infant mortality rate encourages the birth of more children
* children are seen as a future source of income, therefore it would be more economically beneficial to have more kids.

Reasons for high death rate:

* high incidence of disease
* poor nutrition and famine
* poor levels of hygene

Stage 2: High birth rate but falling death rate. The total population begins to expand rapidly.

Reasons for falling death rate:

* Improved public health
* Better nutrition
* Lower child mortality

Stage 3: Falling birth rate, continuing falling death rate. The population growth slows down.

Reasons for falling birth rate include:

* Preferences for smaller families (cheaper)
* Changes in social trends and fashions
* Rise in materialism (i.e. would rather spend money on expensive goods than pay for more kids)
* Lower infant mortality rate

Stage 4:low fluctuating, low birth rate and low death rate. The population growth is small, and fertility continues to fall. There are changes in personal life styles, and more women are in the work force, therefre less couples are having kids (they'd rather get their careers sorted out first).

Stage 5: Death rate slightly exceeds the birth rate, and this causes population decline. This stage has only been recently recognised, and there are very few countries that are considered in stage 5.

Reasons for low birth rate include:

* A rise in individualism
* Greater financial independence of women
* lack of resources for future generations
* an incease in non traditional lifestyles.

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