

## Population explosion and Malthusian theory of population

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### Abstract

Overpopulation is an undesirable condition where the number of the existing human population exceeds the carrying capacity of earth. Every nook and corner of India is a clear display of the increasing population. According to the Indian census, carried out in 2011, the population of India was exactly 1,210,193,422, which means India has crossed the 1-billion mark. Thomas Robert Malthus, an English cleric and scholar, published this theory in his 1798 writings, An Essay on the Principle of Population. According to his theory, human populations grow exponentially whereas the food production grows at an arithmetic rate.

**Keywords:** population explosion, causes its effects, introduction of Malthusian theory, elements, criticism

### Introduction

Prime Minister Narendra Modi warned against the "Population explosion" that was holding back India's development. While it's true that India is still in a phase of population growth, that phenomenon is heavily concentrated in states like Uttar Pradesh, Bihar. Thanks largely to the North, by 2027; India is expected to overtake china as the world's most populous nation.

### What is Population Explosion?

Population Explosion refers the sudden and rapid rise in the size of population. A drastic growth in population beyond normal limits is called population explosion. It is more prominent in under-developed and developing countries.

### Causes of rapid growth of India's population

- High birth rate and decrease in death rate.
- Poverty is believed to be the leading cause of overpopulation.
- Early marriage
- Child marriage, universal marriage
- Lack of family planning.
- Traditional customs and beliefs.
- Absence of social security.
- Unawareness
- Infant mortality
- Religious impacts
- Inability to achieve plans.
- Illegal migration

### Effects of over population

Even after 67 years of Independence, the scenario of our country is not good, due to over population. Some major impacts of the high population are as follows

1. **Unemployment:** The number of illiterate persons increases every year. The unemployment rate is thus showing an increasing trend.
2. **Pressure on infrastructure:** It leads the lack of transportation, communication, housing, education, etc. There has been an increase in the number of slums, overcrowded houses, traffic congestion etc.

3. **Resource utilization:** Land areas, water resources, forests are over exploited.
4. **Depletion of natural resources:** The earth can only produce a limited amount of water and food, which is falling short of the current trends.
5. **Degradation of Environment:** The rise in the number of vehicles and industries has badly affected the quality of air.
6. **Food shortage:** While the population has been rising as a result of increased food production. This could cause war and collapse of many developing nations. Like, due to shortage of food, more people will be hungry, especially those who are unfortunate in life.
7. **Increases more malignant diseases:** Having a big population can lead to new viral diseases. Diseases that may spread due to overpopulation are cholera, H-fever, Typhoid fever.
8. **Over population could lead to higher prices.**
9. **Extinction:** The effect of overpopulation on the world's wildlife is also a major issue. As demand for land grows, so too does the destruction of natural habitats such as forests.

### What is the Malthusian theory of Population?

Malthus examined the relationship between population growth and resources in one of his works. He then proposed the Malthusian theory of population where he said that the population grows exponentially and the food supply grows arithmetically and that a balance between the two can be established through positive and preventive checks.

### Major elements of the Malthusian theory

#### a. Population and Food supply

Thomas Malthus theorized that populations grew in geometric progression. A geometric progression is a sequence of numbers where each term after the first is found by multiplying the previous one by a fixed, non-zero number called the common ratio.

For example, in the sequence 2, 10, 250, 1250, the common ratio is 5.

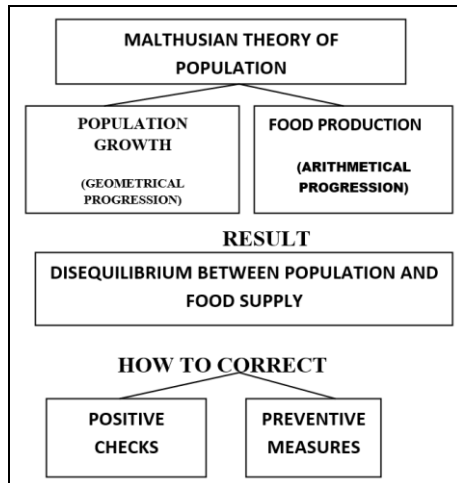
Additionally, he stated that food production increases in

arithmetic progression. An arithmetic progression is a sequence of numbers such that the difference between the consecutive terms is constant. For example, in series 2, 5, 8, 11, 14, 17, the common difference of 3. He derived this conclusion due to the Law of Diminishing Returns.

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**b. Checks on Populations**

According to Prof. Malthus, a disequilibrium situation arises when the rise in population is more than the rate of increase in growth of food supply. As a result, many people will not get even subsistence food.



**c. Natural or Positive Checks**

He believed that natural forces would correct the imbalance between food supply and population growth in the form of natural disasters. The positive checks includes famines, earthquakes, wars, etc. When human fail to control excessive population growth, nature plays its role.

**d. Preventive Checks**

To correct the imbalance, Malthus also suggested using preventive measures to control the growth of the population. The preventive checks include self-control, simple living, late marriage, etc.

**Criticisms of the Malthusian Theory**

The Malthusian theory was criticized based on the following observations

- Population has not increased as rapidly as predicted by Malthus; on the other hand, production has increased because of rapid advances in technology. As a result, living standards of the people have risen instead of falling as was predicted by Malthus.
- Malthus compared the population growth with the increase in food production alone.
- Malthus theory stated that one of the reasons for limited food supply is non-availability of land. However, the amount of food supply in various countries has increased due to increased globalization.
- Malthus had a narrow vision and was particularly influenced by local conditions in England.
- Malthus neglected the manpower aspect in population.

**References**

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