

## Malthusian theory

The most well-known theory of population is the Malthusian theory. Thomas Robert Malthus wrote his essay on “Principle of Population” in 1798 and modified some of his conclusions in the next edition in 1803. The rapidly increasing population of England encouraged by a misguided Poor Law distressed him very deeply. He feared that England was heading for a disaster, and he considered it his solemn duty to warn his country-men of impending disaster. He deplored “the strange contrast between over-care in breeding animals and carelessness in breeding men.”

His theory is very simple. To use his own words: “By nature human food increases in a slow arithmetical ratio; man himself increases in a quick geometrical ratio unless want and vice stop him. The increase in numbers is necessarily limited by the means of subsistence Population invariably increases when the means of subsistence increase, unless prevented by powerful and obvious checks.”

Malthus based his reasoning on the biological fact that every living organism tends to multiply to an unimaginable extent. A single pair of thrushes would multiply into 19,500,000 after the life of the first pair and 20 years later to 1,200,000,000,000,000,000,000 and if they stood shoulder to shoulder about one m every 150,000 would be able to find a perching space on the whole surface of the globe! According to Huxley’s estimate, the descendants of a single greenfly, if all survived and multiplied, would, at the end of one summer, weigh down the population of China! Human beings are supposed to double every 25 years and a coup/e can increase to the size of the present population in 1,750 years!

Such is the prolific nature of every specie. The power of procreation is inherent and insistent, and must find expression. Cantillon says, “Men multiply like mice in a barn.” Production of food, on the other hand, is subject to the law of diminishing returns. On the basis of these two premises, Malthus concluded that population tended to outstrip the food supply. If preventive checks, like avoidance of marriage, later marriage or less children per marriage, are not exercised, then positive checks, like war, famine and disease, will operate.

**The theory propounded by Malthus can be summed up in the following propositions:**

(1) Food is necessary to the life of man and, therefore, exercises a strong check on population. In other words, population is necessarily limited by the means of subsistence (i.e., food).

(2) Population increases faster than food production. Whereas population increases in geometric progression, food production increases in arithmetic progression.

(3) Population always increases when the means of subsistence increase, unless prevented by some powerful checks.

(4) There are two types of checks which can keep population on a level with the means of subsistence. They are the preventive and a positive check.

His first proposition is that the population of a country is limited by the means of subsistence. In other words, the size of population is determined by the availability of food. The greater the food production, the greater the size of the population which can be sustained. The check of deaths caused by want of food and poverty would limit the maximum possible population.

The second proposition states that the growth of population will out-run the increase in food production. Malthus thought that man's sexual urge to bear offspring knows no bounds. He seemed to think that there was no limit to the fertility of man. But the power of land to produce food is limited. Malthus thought that the law of diminishing returns operated in the field of agriculture and that the operation of this law prevented food production from increasing in proportion to labour and capital invested in land.

In fact, Malthus observed that population would tend to increase at a geometric rate (2, 4, 8, 16, 32, 64, etc.), but food supply would tend to increase at an arithmetic rate (2, 4, 6, 8, 10, 12). Thus, at the end of two hundred years "population would be to the means of subsistence as 259 to 9; in three centuries as 4,096 to 13, and in two thousand years the difference would be incalculable." Therefore, Malthus asserted that population would ultimately outstrip food supply. According to the third proposition, as the food supply in a country increases, the people will produce more children and would have larger families. This would increase the demand for food and food per person will again diminish. Therefore, according to Malthus, the standard of living of the people cannot rise permanently. As regards the fourth proposition, Malthus pointed out that there were two possible checks which could limit' the growth of population: (a) Preventive checks, and (b) Positive checks.

### **Preventive Checks:**

Preventive checks exercise their influence on the growth of population by bringing down the birth rate. Preventive checks are those checks which are applied by man. Preventive checks arise

from man's fore-sight which enables him to see distant consequences He sees the distress which frequently visits those who have large families.

He thinks that with a large number of children, the standard of living of the family is bound to be lowered. He may think that if he has to support a large family, he will have to subject himself to greater hardships and more strenuous labour than that in his present state. He may not be able to give proper education to his children if they are more in number.

Further, he may not like exposing his children to poverty or charity by his inability to provide for them. These considerations may force man to limit his family. Late marriage and self-restraint during married life are the examples of preventive checks applied by man to limit the family.

### **Positive Checks:**

Positive checks exercise their influence on the growth of population by increasing the death rate. They are applied by nature. The positive checks to population are various and include every cause, whether arising from vice or misery, which in any degree contributes to shorten the natural duration of human life.

The unwholesome occupations, hard labour, exposure to the seasons, extreme poverty, bad nursing of children, common diseases, wars, plagues and famines are some of the examples of positive checks. They all shorten human life and increase the death rate.

Malthus recommended the use of preventive checks if mankind was to escape from the impending misery. If preventive checks were not effectively used, positive checks like diseases, wars and famines would come into operation. As a result, the population would be reduced to the level which can be sustained by the available quantity of food supply.

### **Criticism of Malthusian Theory:**

The Malthusian theory of population has been a subject of keen controversy.

#### **The following are some of the grounds on which it has been criticized:**

(i) It is pointed out that Malthus's pessimistic conclusions have not been borne out by the history of Western European countries. Gloomy forecast made by Malthus about the economic conditions of future generations of mankind has been falsified in the Western world. Population has not increased as rapidly as predicted by Malthus; on the other hand, production has increased tremendously because of the rapid advances in technology. As a result, living standards of the people have risen instead of falling as was predicted by Malthus.

ii) Malthus asserted that food production would not keep pace with population growth owing to the operation of the law of diminishing returns in agriculture. But by making rapid advances in technology and accumulating capital in larger quantity, advanced countries have been able to postpone the stage of diminishing returns. By making use of fertilizers, pesticide better seeds, tractors and other agricultural machinery, they have been able to increase their production greatly.

In fact, in most of the advanced countries the rate of increase of food production has been much greater than the rate of population growth. Even in India now, thanks to the Green Revolution, the increase in food production is greater than the increase in population. Thus, inventions and improvements in the methods of production have belied the gloomy forecast of Malthus by holding the law of diminishing returns in check almost indefinitely.

(iii) Malthus compared the population growth with the increase in food production alone. Malthus held that because land was available in limited quantity, food production could not rise faster than population. But he should have considered all types of production in considering the question of optimum size of population. England did feel the shortage of land and food.

If England had been forced to support her population entirely from her own soil, there can be little doubt that England would have experienced a series of famines by which her growth of population would have been checked. But England did not experience such a disaster. It is because England industrialized itself by developing her natural resources other than land like coal and iron, and accumulating man-made capital equipment like factories, tools, machinery, mines, ships and railways, this enabled her to produce plenty of industrial and manufacturing goods which she then exported in exchange for food-stuffs from foreign countries.

v) Malthus gave no proof of his assertion that population increased exactly in geometric progression and food production increased exactly in arithmetic progression. It has been rightly pointed out that population and food supply does not change in accordance with these mathematical series. Growth of population and food supply cannot be expected to show the precision or accuracy of such series.