**S.S. COLLEGE, JEHANABAD**
**( GEOGRAPHY DEPARTMENT )**

***B.A. PART - 3 ( POPULATION GEOGRAPHY : PAPER - 7)***

***TOPIC : THE OPTIMUM POPULATION THEORY***

- **Prof. KUMARI NISHA RANI**

**(DATE: 10/07/2020)**

The Optimum Theory of Population appeared as a reaction to the Malthusian theory. It is also called modern theory of population. In recent years, Prof. Robbins, Dalton and Carr-Saunders have refined and polished the theory and put it in a more presentable form. This theory is an improvement over the Malthusian Theory.

## Statement of the Theory:

The founders of the theory state it as "Given the natural resources, stock of capital and the state of technical knowledge, there will be a definite size of population with the per capita income. The population which has the highest per capita income is known as optimum population".

## Optimum Population:

The economists like Carr Saunders considered 'optimum population' as that which produces maximum welfare. On the other hand, Prof. Cannan defined this theory in terms of 'return to labour'. He remarked, "Knowledge and circumstances remaining the same, there is what may be called maximum return when the amount of labour is such that both an increase and decrease in it would diminish proportionate return." Similarly, Bounding has rightly observed, "Optimum population is that at which standard of living is maximum.

**1. Under Population:**

If the actual population in a country is less than the optimum or ideal population, there will not be enough people to exploit all the resources of the country fully. Thus, the population and the per capita income will be lower. In other words, if the per capita income is low due to too few people, the population is then under population.

**2. Over Population:**

If the actual population is above the level of optimum population, there will be too many people to work efficiently and produce the maximum goods and the highest per capita income. As a result, the per capita income becomes poorer than before. This is the stage of over population. In other words, if the per capita income is low due to too many people, the population under these circumstances would be over population.

## Assumptions:

**The optimum theory is based on two important assumptions:**

1. The proportion of working population to total population remains constant as the population of the country increases.

2. As the population of a country increases, the natural resources, the capital stock and state of technology remain unchanged.

**Diagrammatic Representation of the Theory**:

In the diagram I volume of population is shown along OX axis and income per head along OY-axis. OS is the income per head which gives only subsistence wage rate to the population. This level of wages puts the minimum limit to the income per head.

**The subsistence income per head can prevail with two levels of population:**

1. When population is too small to exploit the country's resources with maximum efficiency. This is the level of OA population.

2. When population is too large and the efficiency falls to give only a subsistence income to the labour force. This is the level of OC population.

OB shows optimum population which uses the available resources to give itself the maximum income per head. For a population less than OB, income per head increases with the increase in population. For a population higher than OB, income per head can increase with the decrease in population through preventive checks.

The dotted curve in the diagram shows the level of income per head with an improvement in technology or expansion of foreign trade. This will help to raise the income curve and generate population growth until wages are once again equal to subsistence level.

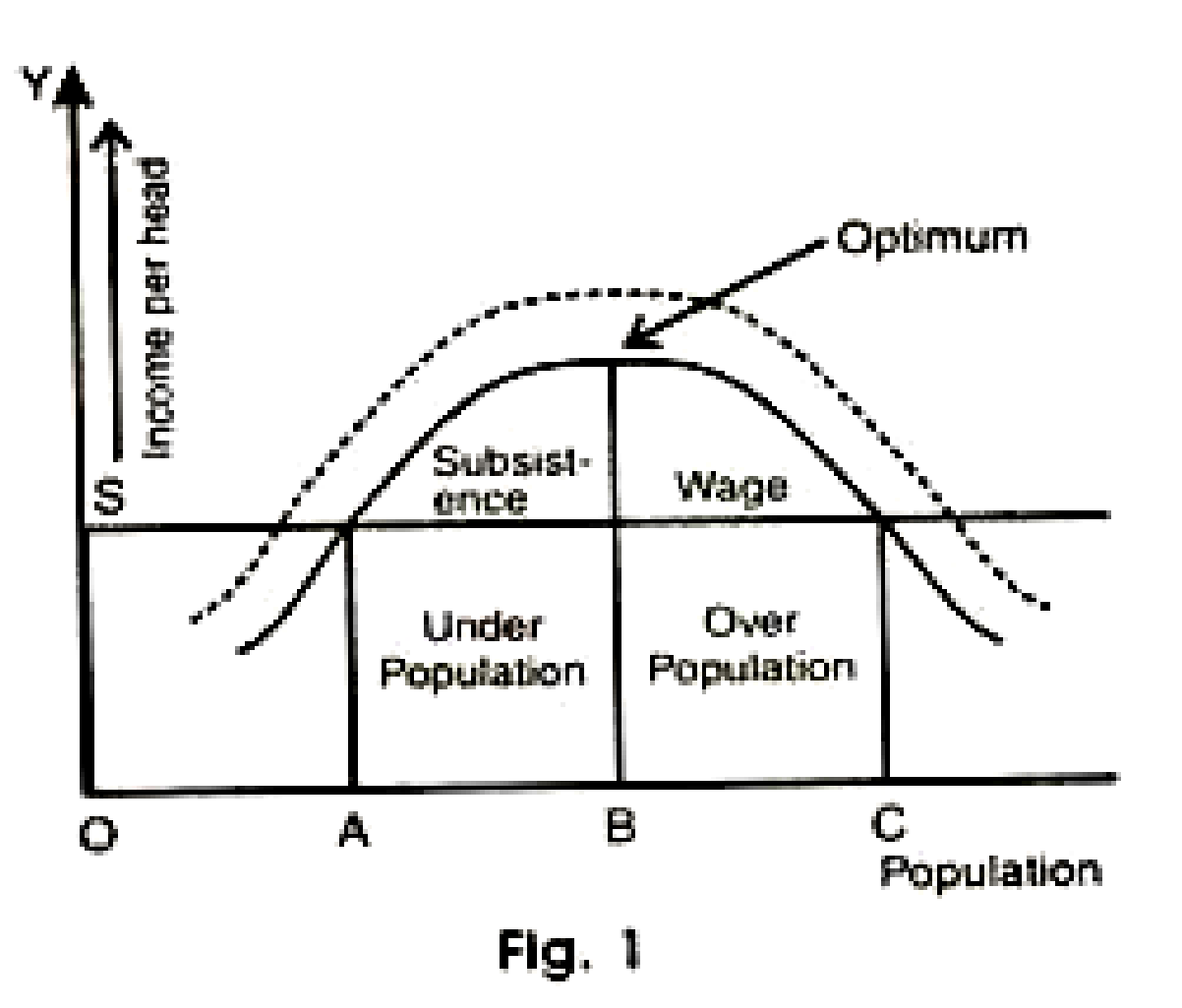


Fig. 1

**Dalton's Formula:**

Prof. Dalton expresses the theory in the form of a formula which is given below:

$$M = \frac{A - O}{O}$$

where :

M — Maladjustment or deviation from optimum population.
A — Actual population
O — Optimum population

If M is zero, population is optimum, when M is positive, it is over population, when M is negative, it is under population. Therefore, optimum population is not fixed and a rigid one. It is rather variable and relative to resources and technology. Optimum population is not just an economic concept but qualitative in nature. Prof. Cannan has correctly remarked, "It is being perpetually altered by the progress of knowledge and other changes affecting the economic system. It is, thus, a dynamic concept. It may be higher or lower as different methods of production are used."

## Merits of the Theory:

The theory is a landmark in the science of demography.

**Its merits are under noted:**

**1. Comprehensive Approach:**

It explains the problems of population in a comprehensive way from the production side. It also explains the relationship between productive efficiency and production.

**2. Qualitative Nature of the Theory:**

Prof. Bye said, "Optimum population is difficult to find because size of population must lead to the fullest development of social and economic life."

**3. Pragmatic Approach:**

This theory is also pragmatic, i.e. it is concerned with practical results.

**4. More Detailed Analysis:**

The optimum theory of population provides more detailed analysis as it considers over and under- population and brings out the evils of both.

## Demerits or Criticism:

The optimum theory of population is not free from defects.

**The critics have criticized the theory on the basis of the following grounds:**

**1. Difficult to Determine Optimum Population:**

It is extremely difficult to know the optimum population of a country at any time. Many factors like technical knowledge, stock of capital, per capita income and natural resources etc. have to be taken into account for this purpose.

**2. A Static Theory:**

The optimum theory is criticized as a static short period theory. It ignores changes in natural and human resources which affect per capita income. This theory is also silent about the important questions of the determinants of population growth.

**3. Neglects Biological and Sociological Factors:**

Some critics also argue that this theory has not taken into account the biological and sociological factors which govern the size and growth of population. Strictly speaking, this theory is not a theory of population. It simply explains the state of population with reference to per capita income.

**4. Not a Realistic Theory:**

It is pointed out that two assumptions on which the theory has been based, are not realistic. So, the practical value of this theory is reduced. In fact, natural resources, technical knowledge and production methods are generally changeable.

**5. Only Economic Factors Considered:**

The critics point out that the theory takes into account purely economic factors which determine the optimum size of the population of a country. This is one side of the picture. We should also consider the social, political and other non-economic factors.

**6. Not Practicable:**

The optimum theory is not practicable as it is not fixed. Thus, it is unable to guide to the formation of any policy. Prof. Robbins says that this theory is the most sterile idea of economics.

**7. Distributional Aspect Neglected:**

The theory neglects the distributional aspect of the problem. This theory considers simple population to income per head. This increase of population and national income cannot be useful to a country if the increased national income is not properly and equitably distributed among the various sections of the society. Therefore, realistic theory must account for income distribution as a factor in determining the optimum population.

Despite of so much criticism leveled against optimum theory, it is surely said that it is an improvement over Malthusian Theory. The optimum theory is an important landmark in the science of demography. It is valuable because it enables us to overcome the bogey of Malthusianism and give us a test of progress (in per capita income). But this theory is not useful in social life due to its static nature. Thus, it is not a guiding principle to any economic policy. It requires to be re-casted in a dynamic setting for making it more successful.

*_____*_____*